

Volume 1: Site Descriptions

The State Route 188– Cottonwood Creek Project

The Sedentary to Classic Period
Transition in Tonto Basin



Edited by Richard Ciolek-Torrello, Eric Eugene Klucas, and Holly Warner



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Tucson, Arizona, and Redlands, California



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Richard Ciolek-Torrello, general editor

Volume 1: Site Descriptions

Edited by Richard Ciolek-Torrello, Eric Eugene Klucas, and Holly Warner

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ABSTRACT

This document is the first of three volumes presenting the results of a two-phase data recovery program conducted by Statistical Research, Inc. (SRI), at nine prehistoric sites and segments of a historical-period road along a 3.8-mile segment of State Route 188 (SR 188) near Jakes Corner. The investigations were undertaken under contract with the Arizona Department of Transportation (ADOT) (ECS Contract 99-60, TRACS H4476-03D) because of anticipated impacts to cultural resources located within the SR 188 right-of-way (ROW). The project area is located in western Gila County, mostly within the administrative boundaries of the Tonto National Forest (TNF) (Special-Use Permit Number 2700-4), although a small portion of one archaeological site extends onto private property. The project begins near Milepost 269.8, about 3 km north of Slate Creek, and ends at Milepost 273.6, near Jakes Corner. The area encompasses portions of Sections 17, 18, 20, 21, 22, 26, 27, 34, and 35 of Township 8 North, Range 10 East; and Sections 2, 3, 10, 15, 22, 23, 26, and 27 of Township 7 North and Range 10 East.

The project corridor is oriented north-south, roughly parallel to Tonto Creek. The investigated prehistoric sites were situated along three small drainages near the boundary between the upper and lower Tonto Basin. Two limited-activity sites were located along Hardt Creek near Jakes Corner. AZ O:15:41/583 was a pre-Classic period *horno* and nearby AZ O:15:103/2061 was a low-density artifact scatter of unknown prehistoric age. A single small field house, AZ U:3:404/2011, that dated to the early Classic period was located on a ridge above Gold Creek. The remaining sites were located in the vicinity of Cottonwood Creek on a terrace adjacent to the Tonto Creek floodplain. In terms of both the number and diversity of features, the Vegas Ruin (AZ U:3:405/2012) provided the most extensive sample of the Cottonwood Creek Project (CCP) sites. This sample included one cobble-adobe-foundation compound associated with at least one habitation structure, granary, and bounded extramural area. There were also five Miami/Roosevelt phase pit structures of which four were likely habitations and one a shallow specialized structure, 38 burials, and dozens of extramural features. In addition, there were 4 Archaic period

roasting features. The Crane site (AZ U:3:410/2017) consisted primarily of an early Classic period, cobble-adobe-foundation room block, granary, midden, and 7 burials. We also found a pit house dating to the late Sedentary period or Miami phase. The Rock Jaw site (AZ U:3:407/2014) was a late Sedentary period farmstead with two superimposed pit houses and several extramural pits. Site 408/2015 was an extensive multicomponent site covering a large terrace area north of Cottonwood Creek between the Mazatzal piedmont and Tonto Creek floodplain. The site consisted of several small masonry structures, a small compound, and a large midden area that may represent an extensive pre-Classic period settlement. The remaining two prehistoric sites were two low-density artifact scatters (AZ U:3:406/2013 and AZ U:3:409/2016) that may date to the Late Sedentary–Classic periods.

The final site investigated were segments of the historical-period Forest Highway 9 (FH9) (AZ U:3:246/1381), also known as the historical Globe-Payson highway. The road runs approximately parallel to the current SR 188 alignment through the entire project area. Five roadbed segments were identified within the ROW, in addition to several associated road cuts and retaining walls. We also documented three bridges associated with this road, but these were located outside of the ROW. Two of the roadbed segments may have been in use at least as early as 1907, when the road followed the course of Gold Creek to Hardt Creek, and they may have continued in use until the modern, paved highway was constructed in 1960. Two other segments may have been constructed by 1919, when the road veered away from Gold Creek and headed around Tonto Hill. These two segments appear to have been abandoned by 1941. Our investigations proved inconclusive regarding the age of the fifth segment and the road cuts and rock retaining walls associated with the other segments.

In this volume, we present the results of field investigations at these 10 sites, and include the results of chronometric determinations. Volume 2 presents results from analysis of recovered human remains, cultural materials, and ecofacts. Project syntheses and conclusions are presented in Volume 3.

Introduction

Eric Eugene Klucas and Richard Ciolek-Torrello

This document is the first of three volumes presenting the results of the State Route 188–Cottonwood Creek Project (CCP). Statistical Research, Inc. (SRI), conducted archaeological investigations at nine prehistoric sites and one historical-period site along Tonto Creek in the northern portion of Tonto Basin, Gila County, Arizona (Figure 1). This work was carried out for the Arizona Department of Transportation (ADOT) under Contract Number 99-60 (TRACS No. H4476-03D), in preparation for road improvements along a 3½-mile segment of State Route (SR) 188 near Jakes Corner, Arizona (Figure 2).

The investigated sites are primarily on lands administered by Tonto National Forest (TNF), although an indeterminate portion of one site extends onto private property. The sample includes portions of four prehistoric habitation sites; five prehistoric limited-activity sites; and a segment of the Globe-Payson Highway (AZ:U:3:246/1381), the precursor of SR 188 (Table 1). The habitation sites included two multicomponent hamlets dating to the late pre-Classic and early Classic periods, a multicomponent site consisting of a pre-Classic period component of unknown extent, a small cobble-adobe-foundation compound most likely dating to the Classic period, and a Classic period cobble-adobe-foundation field house. The limited-activity sites included three dispersed artifact scatters and a site containing a large *horno*. The *horno* site is probably related to the nearby Ushklish Ruin (AZ O:15:31 [ASM]), a multicomponent habitation site approximately 100 m to the northwest. In terms of both the number and diversity of features, the Vegas Ruin (AZ U:3:405/2012) provided the most-extensive sample of the CCP sites. This sample included most of a single cobble-adobe-foundation compound with at least 1 habitation structure with an associated granary and bounded extramural area; 5 pit structures, including 4 likely habitations and 1 shallow, specialized structure; 38 burials; dozens of extramural features; and extensive midden areas.

Project History

In 1991, Archaeological Research Services (ARS) conducted a survey along a 7.4-mile segment of SR 188 near Jakes Corner (Hoffman 1991). ARS recorded 21 archaeological sites and concluded that all of the sites appeared to be eligible for listing in the National Register of Historic Places (NRHP). Of these, 10 sites were located within the 100-foot right-of-way (ROW) along the 3.8-mile-long segment of SR 188 from Claypool to Jakes Corner. SRI developed a research design and treatment plan to mitigate the potential impacts of construction activities along this segment of the highway (Ciolek-Torrello and Klucas 1999).

In accordance with the TNF's Cultural Resource Management Plan (Wood, Sullivan, et al. 1989), our research strategy focused on the identification of historic contexts, themes, and property types. We highlighted several themes that are relevant to prehistoric cultural resources in the project area: subsistence and settlement; demography; and exchange, trade, and commerce. These themes are further developed in Volumes 2 and 3. The development of transportation and communication in the region, and their possible association with the TNF and Civilian Conservation Corps, are identified as the most appropriate research themes for the historical-period road.

As a first step in implementing our research design, the first phase of data recovery was conducted by SRI archaeologists under the direct supervision of Dr. Eric Klucas. These investigations were completed on November 18, 1999. Six of the prehistoric sites were selected for further investigation. The second phase of data recovery was completed on March 23, 2000. This volume provides detailed descriptions of the sites and the excavated features we investigated during both phases of fieldwork. During the analysis phase of the project, we examined recovered ceramics, lithics, vertebrate faunal remains and worked bone, shell artifacts,

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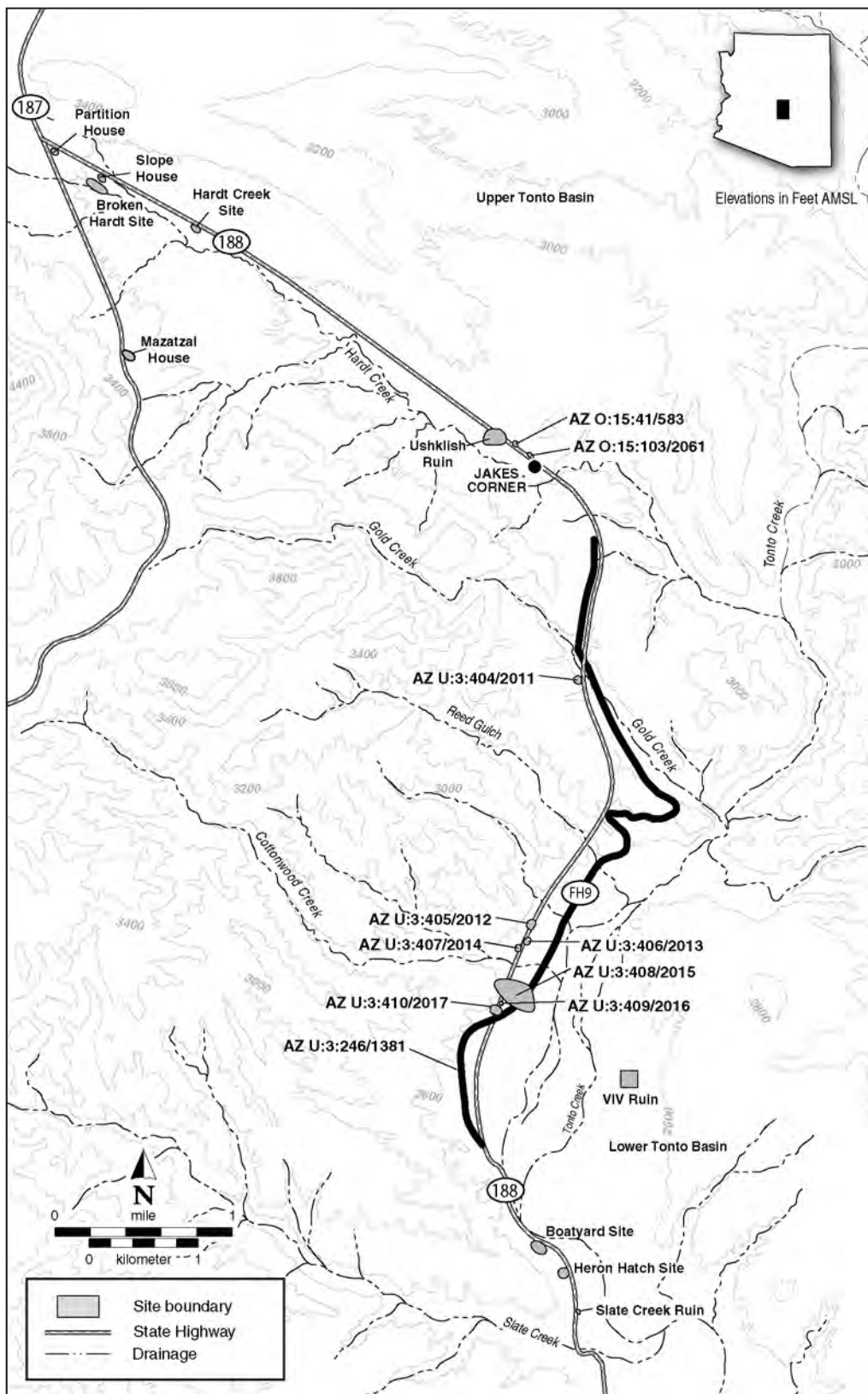


Figure 1. The SR 188-Cottonwood Creek Project area.

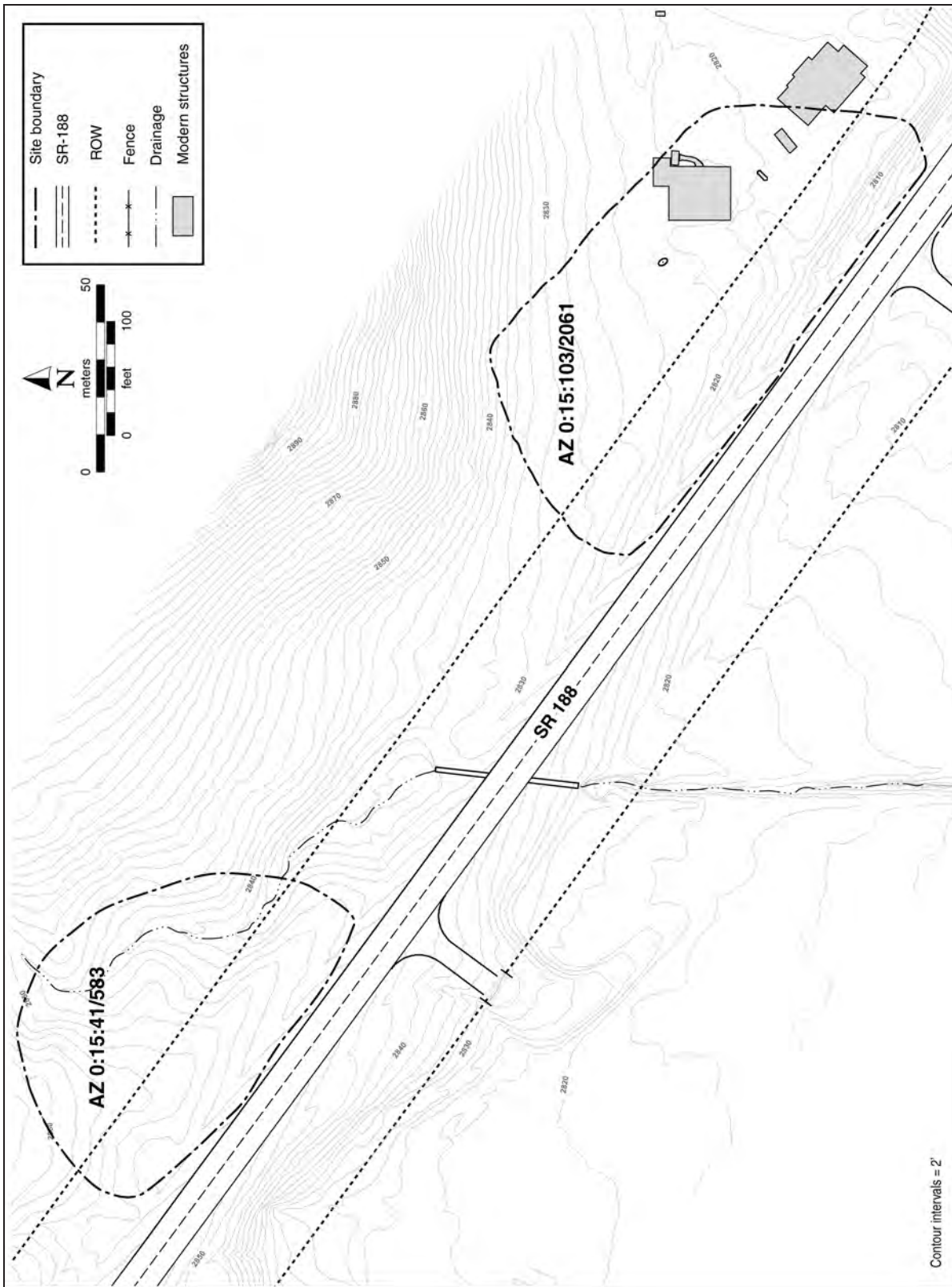


Figure 2. Project sites in the Hardt Creek area.

Table 1. Cottonwood Creek Project Sites and Features in the ROW

ASM No.	TNF No.	SRI Designation	Site Name	Location	Occupation
AZ O:15:41	AR-03-12-06-583	Site 41/583		Hardt Creek	pre-Classic period <i>horno</i> , possibly early Classic
AZ O:15:103	AR-03-12-06-2061	Site 103/2061		Hardt Creek	Archaic-Formative period lithic scatter
AZ U:3:404	AR-03-12-06-2011	Site 404/2011		Gold Creek	early Classic period field house
AZ U:3:405	AR-03-12-06-2012	Site 405/2012	Vegas Ruin	Cottonwood Creek	4 Archaic period roasting features, 5 late Sacaton–Miami phase pit structures; early Classic period compound and burial ground
AZ U:3:406	AR-03-12-06-2013	Site 406/2013		Cottonwood Creek	late Sedentary–early Classic period artifact scatter
AZ U:3:407	AR-03-12-06-2014	Site 407/2014	Rock Jaw	Cottonwood Creek	late Sedentary–early Classic period farmstead
AZ U:3:408	AR-03-12-06-2015	Site 408/2015		Cottonwood Creek	2 pre-Classic period middens, extramural features, and 1 burial; early Classic period rock alignment
AZ U:3:409	AR-03-12-06-2016	Site 409/2016		Cottonwood Creek	late Sedentary–early Classic period artifact scatter
AZ U:3:410	AR-03-12-06-2017	Site 410/2017	Crane	Cottonwood Creek	1 possibly Archaic hearth; 1 late Sacaton–early Miami phase pit structure; early Classic period compound, 2 granaries, midden, and burial ground
AZ U:3:246	AR-03-12-06-1381	Site 246/1381	Globe-Payson Highway (FH9)		5 segments of a historical period road and associated features

Key: ASM = Arizona State Museum; SRI = Statistical Research, Inc.; TNF = Tonto National Forest.

botanical remains, and human remains. The methods and results of those analyses are presented in Volume 2, and our syntheses and conclusions are presented in Volume 3. Our research on the Globe-Payson Highway is discussed separately in Chapter 9 of this volume. Archival research related to this historical-period site was conducted by SRI historian Matt C. Bischoff in October 1999.

Site Inventory

The 3½-mile-long corridor defining the project area begins in the north in the small upland valley around Hardt Creek, a medium-sized tributary of Tonto Creek, and extends southward into the northern portion of the lower Tonto Basin. The nine prehistoric sites investigated during the course of the project are distributed between three distinct physiographic zones within this short corridor: the Hardt Creek valley, formed by an intermittent stream draining the Mazatzal piedmont within the upper Tonto Basin; the area of the Mazatzal piedmont drained by Gold Creek; and the Cottonwood Creek locality, which is located at the upper edge of the zone in the Tonto Creek arm of the lower Tonto Basin (Figures 1–4; Table 1). The two northernmost sites, AZ O:15:41/583 (see Table 1 and “Note on Site Designations” below) and AZ O:15:103/2061, are located on the terrace edge to the east of the Hardt Creek floodplain. AZ U:3:404/2011 is located on the summit of a broad ridge above Gold Creek. The remaining prehistoric sites (Vegas Ruin; the Rock Jaw site; the Crane site [AZ U:3:410/2017]; and Sites 406/2013, 406/2015, and 409/2016) are located in the lower Tonto Basin centered on Cottonwood Creek, a large seasonal stream draining the Mazatzal Mountains along the western side of the basin. Finally, the old Globe-Payson Highway parallels SR 188 through most of the project area (Figure 5), crossing the current roadbed just south of the Crane site and again at Gold Creek north of Site 404/2011. From this point, the old road leaves the project area but intersects it again at Jakes Corner near Sites 41/583 and 103/2061.

Environmental Setting

The project area is located at the transition between the upper and lower portions of Tonto Basin that, in turn, are located in the Transition Zone between the mountains of central Arizona and the Sonoran Desert to the southwest. Tonto Basin itself is defined by two parallel northwest–southeast-trending mountain ranges, the Sierra Ancha to the east and the Mazatzal Mountains to the west, typical of the

Basin and Range Province south of the Mogollon Rim. The southern boundary of the basin is defined by the smaller Pinal and Salt River Mountains, and the northern boundary is formed by the Mogollon Rim. Tonto Basin itself is divided into several discrete sections reflecting local geology and drainage patterns. The Salt River arm, also referred to as the Roosevelt Basin (Steen 1962), runs east–west for approximately 27 km along the Salt River at the southern end of the basin. The larger Tonto Creek arm, defined by Tonto Creek and its tributaries, extends approximately 50 km north from the confluence of Tonto Creek and the Salt River. Tonto Basin is further subdivided into upper and lower sections, separated by a large schist outcrop south of Jakes Corner and immediately north of the confluence of Tonto and Gun Creeks (Fuller et al. 1976). The northern limit of the basin is generally placed at the confluence of Tonto and Rye Creeks (Jeter 1978:10).

Tonto Basin has a semiarid climate with an average annual precipitation about twice that of the Phoenix Basin but significantly less than the adjacent mountains and the Mogollon Rim (Sellers and Hill 1974:408). The principal rainfall occurs during the summer months and is associated with surges of moist tropical air that originate in the Gulf of Mexico. Significant rainfall also occurs in the winter months, when moist air comes from the Pacific Ocean. The climatic history recorded by the weather station at the old Reno Ranger Station offers an ideal proxy for the lower part of the project area. Sellers and Hill (1974:408) recorded a mean daily maximum temperature of 26.9°C (80.4°F) and a mean daily minimum of 10.3°C (50.5°F). Mean annual precipitation is 425 mm (16.75 inches) in winter with 23 mm (0.9 inches) of snow. Jeter (1978:16) noted that the implication of the climatic regime “is that growing seasons of more than 200 frost-free days would be quite common . . . affording aboriginal agriculturalists the possibility of staggered cropping, if not double cropping.” He added that the period of more than 300 frost-free days recorded at weather stations in the lower Tonto Basin has probably been extended in modern times by the presence of Theodore Roosevelt Lake and is probably not characteristic of the prehistoric period.

The distinction between the Salt and Tonto Creek arms of the basin reflect the dominant drainage in each. The criteria used to divide the basin into upper and lower segments, however, have broader behavioral implications. Largely because of differences in elevation, the two areas are characterized by slightly different plant communities. The lower basin contains the full suite of Sonoran desert species, including both mesquite and palo verde; a wide variety of cacti, such as saguaro, prickly pear, and cholla; and numerous desert grasses and forbs. Juniper is not uncommon in the southern portion of the basin, perhaps reflecting the influence of latitude over elevation. As one moves northward into the upper basin, however, the number and variety of desert species decreases, with a corresponding

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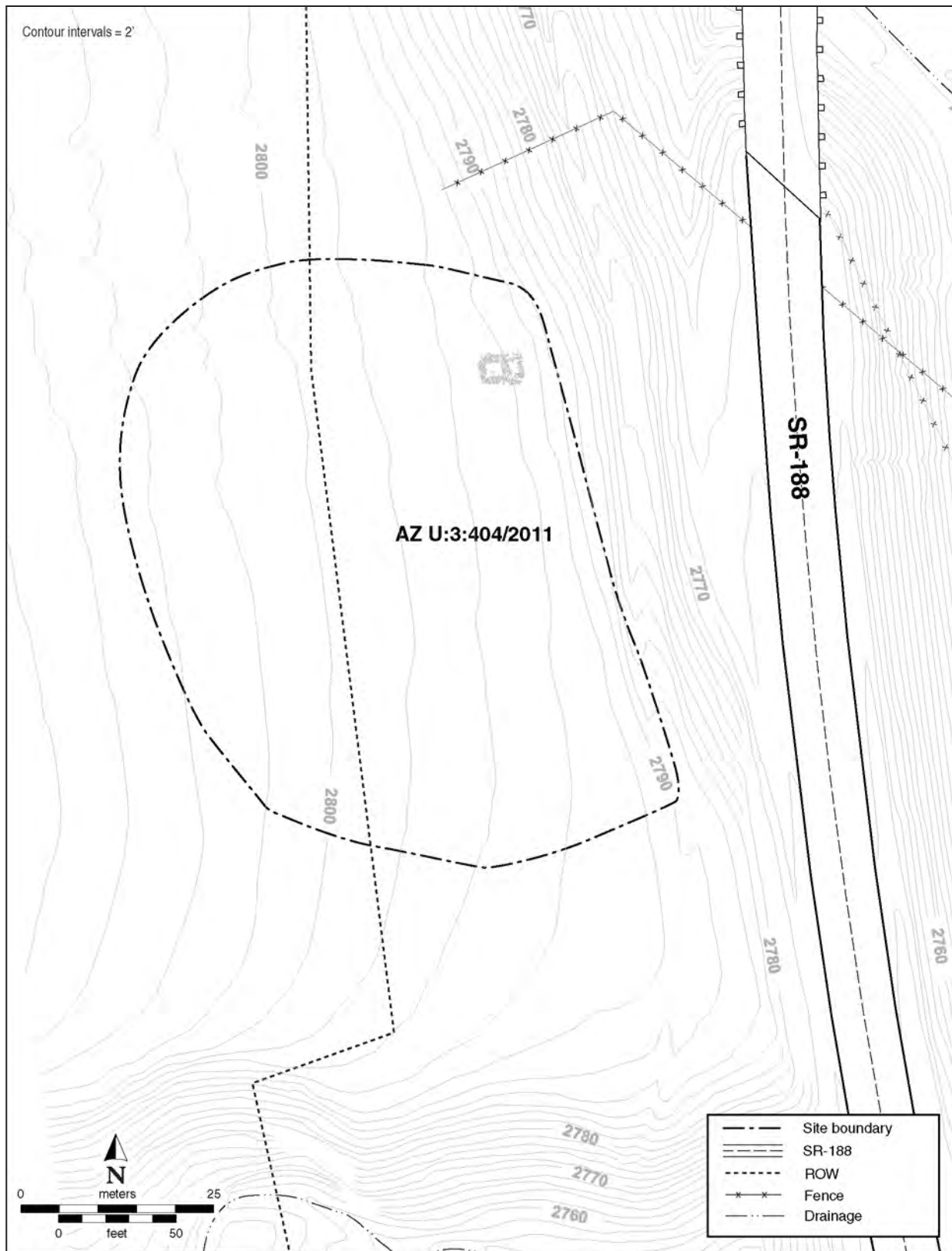


Figure 3. Project site in the Gold Creek area.

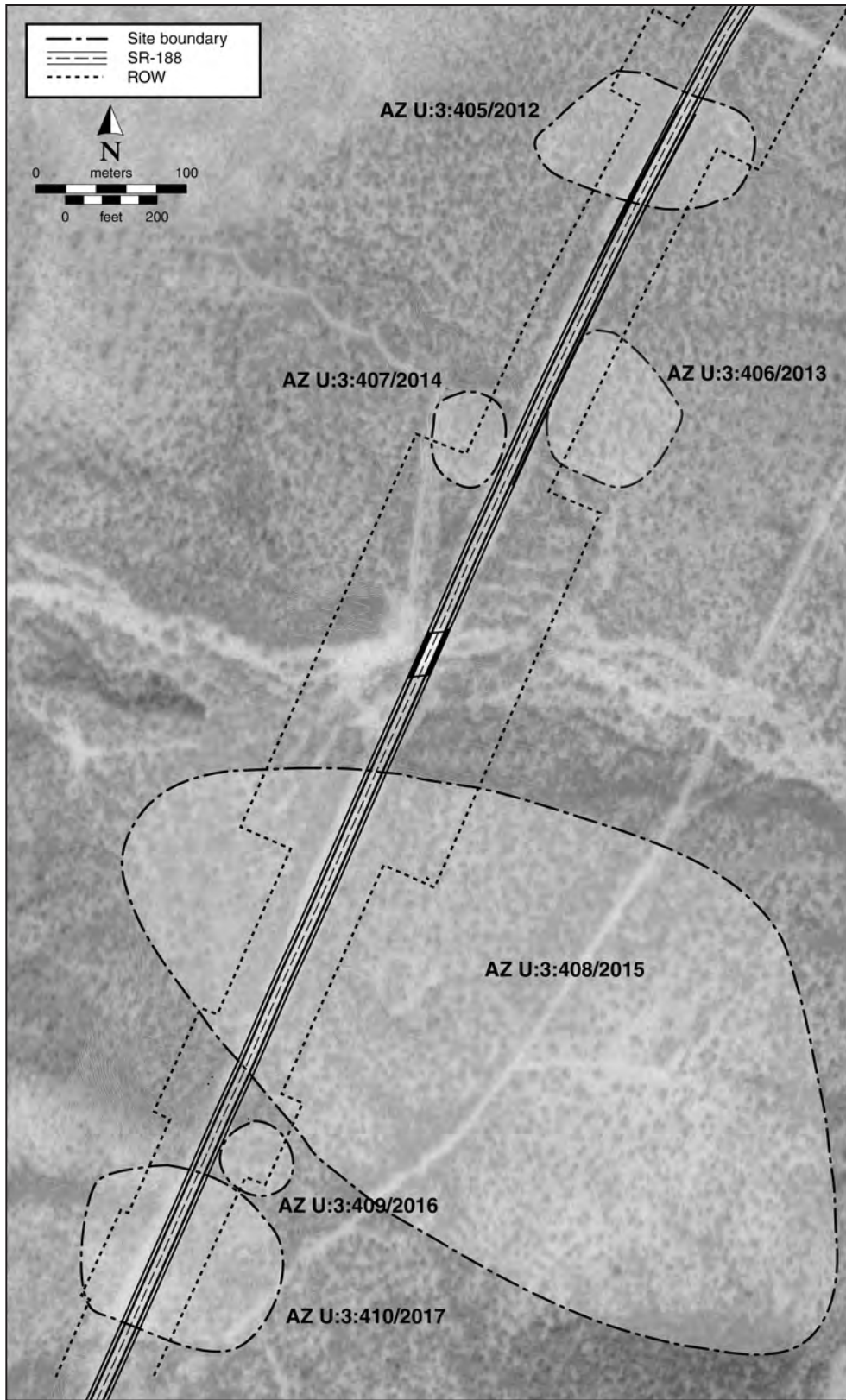


Figure 4. Project sites in the Cottonwood Creek area.

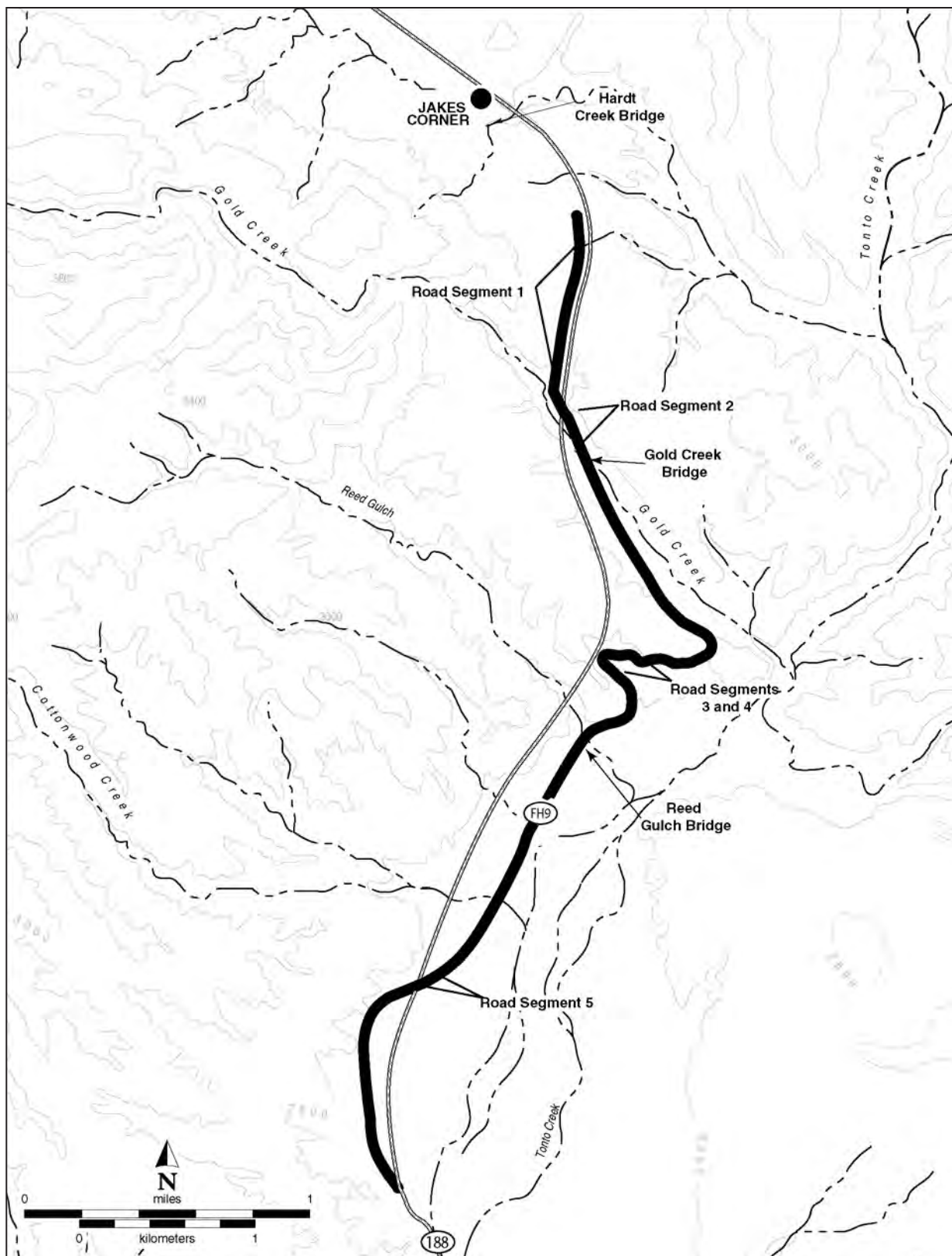


Figure 5. Map of the existing FH 9 roadbed segments and bridges near and within the project area.

increase in juniper, piñon, and grasses. Notably, saguaro is rare in the upper basin.

In addition to their respective plant communities, the upper and lower basins are physiographically distinct, further impacting the economic choices available to the inhabitants of the area. The lower basin is dominated by the channels and floodplains of the major drainages, the Salt River and Tonto Creek. These, along with the numerous tributaries, have created several discrete alluvial fans over the basin-fill deposits. The movement of the channels over time has resulted in considerable diversity in soil types across the basin that, because of the resulting variability in such attributes as moisture retention, have affected both natural plant distributions and agricultural potential. In general, however, the permanent flows in both Tonto Creek and the Salt River provided ample water for localized canal-irrigation agriculture, albeit on a smaller scale than contemporary systems in the Phoenix Basin. The much narrower floor of the upper portion of Tonto Basin provided more-limited opportunities for agriculture, and diversion dams represented the most-common water-control features.

Although emphasizing the environmental differences between upper and lower Tonto Basin, it must be remembered that, as is typical of the Transition Zone, distances between adjacent ecological zones within Tonto Basin are minimal, providing relatively easy access to several ecological zones and the resources contained within them. Although the distribution of specific resources is likely to have impacted the location of limited-activity sites, such as resource-procurement and -processing localities, wild-resource availability is likely to have had limited impact on the location of habitation sites, for which proximity to agricultural lands would have been of greater concern.

Previous Investigations

The CCP is the latest in a series of archaeological mitigation efforts associated with improvements to SR 188, the main north–south transportation artery through Tonto Basin (Figure 6). These projects, coupled with the Reclamation-sponsored research in the vicinity of Theodore Roosevelt Lake and other ADOT-sponsored research, have created a substantial comparative database that was summarized in 2000 (Dean 2000).

Bureau of Reclamation Theodore Roosevelt Lake Projects

Much of our current knowledge of the lower Tonto Basin is based on the results of three projects sponsored by

Reclamation in the early 1990s. These projects were started in advance of modifications to Theodore Roosevelt Dam that were to raise lake levels to approximately 676 m (2,218 feet) above mean sea level (AMSL), inundating a significant portion of the existing floodplain (Ciolek-Torrello et al. 1990:1). As a means of facilitating this project, Reclamation divided the archaeological work among three institutions, each responsible for a specific portion of the overall research program. Arizona State University (ASU) was awarded a contract to investigate three Classic period platform-mound communities along the shore of the lake (Jacobs 1994, 1997; Lindauer 1995, 1996, 1997; Oliver and Jacobs 1997; Redman et al. 1992; Rice 1990). Desert Archaeology, Inc. (DAI) conducted the second portion of the project, studying community development through the investigation of a number of multicomponent sites at the eastern end of the lake that were occupied during the pre-Classic and Classic periods (Doelle et al. 1992; Elson and Clark 1995a, 1995b; Elson and Swartz 1994; Elson et al. 1995). Finally, SRI was awarded the contract to investigate small habitation and agricultural sites in the areas surrounding the platform-mound complexes (Ciolek-Torrello et al. 1990; Ciolek-Torrello and Welch 1994; Ciolek-Torrello et al. 1994). Taken together, these three complementary projects have provided one of the most comprehensive pictures of the prehistory of any geographical area of the Southwest.

Roosevelt Platform Mound Study

The Roosevelt Platform Mound (RPM) study was the largest of the three projects contracted by Reclamation in the vicinity of Theodore Roosevelt Lake. In the context of the study, three communities of platform mounds and associated sites were investigated: the Pinto Creek, Cline Terrace, and Rock Island complexes. The research goals of the RPM included the investigation of Salado cultural identity, community development, social organization, and the nature and operation of the local economic system. The ASU research team approached the data with the assumption that the Salado manifestation in Tonto Basin expressed considerable socioeconomic complexity, with the platform-mound communities serving as homes to groups of elites who, through the acquisition of surplus subsistence items, were able to exert political control over the rest of the population. The ASU researchers began the project with the assumption that the extraction of surpluses was made possible through what has come to be known as the “Sonoran advantage” (Rice 1990:32), which refers to the potential for the extraction of abundant wild and domesticated resources from the Sonoran Desert and the connection between riverine farming communities and upland settlements that provided wild resources in exchange for agricultural products. Subsequent observations indicating greater similarities between the riverine and upland subsistence systems led them to abandon the hypothesis.

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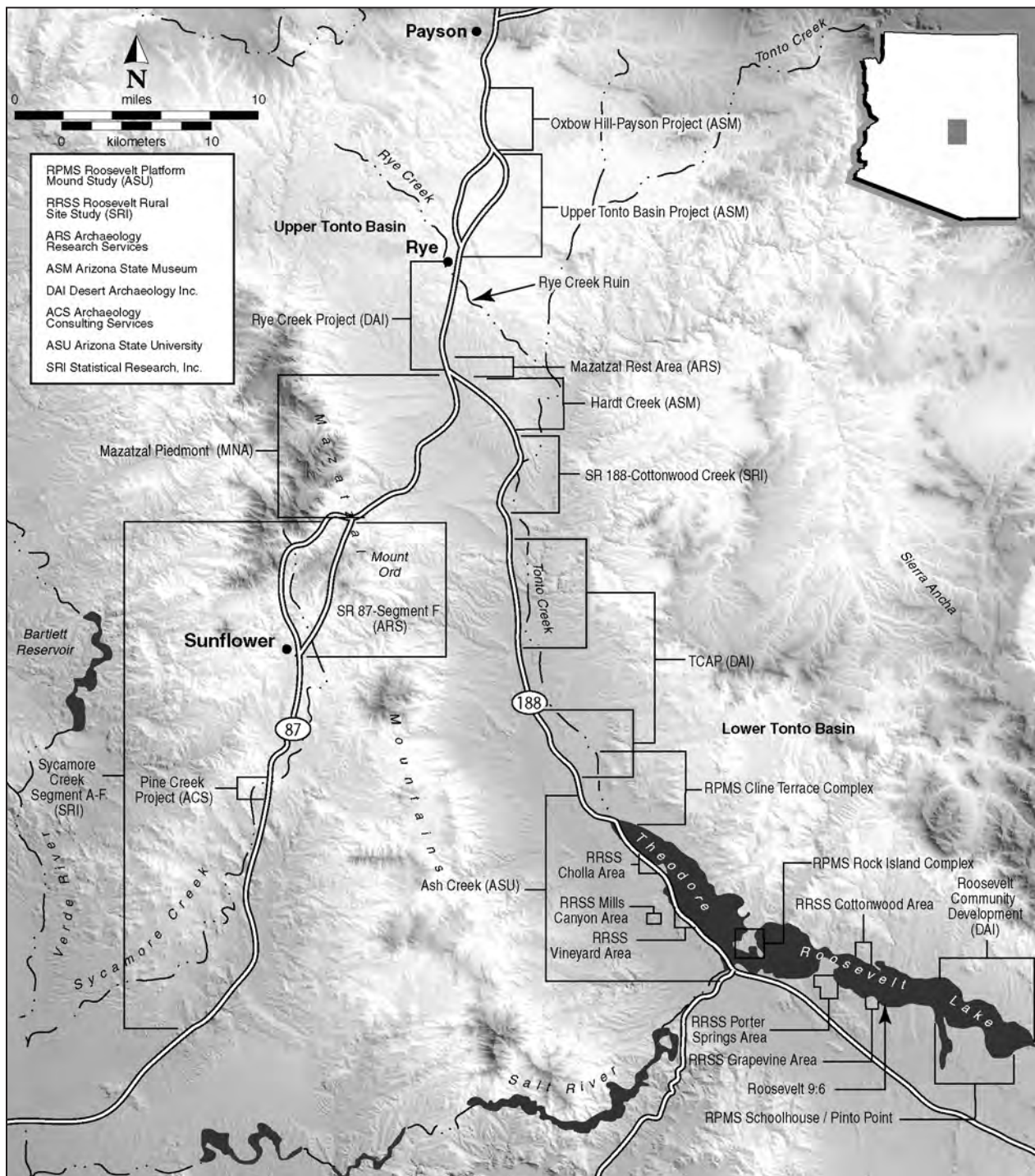


Figure 6. Previous archaeological projects in the vicinity of SR 188.

Roosevelt Community Development Study

The second component of the Reclamation-sponsored Theodore Roosevelt Lake research, DAI's Roosevelt Community Development Study (RCD), involved the investigation of 29 sites constituting a single, long-lived community along the Salt River arm of the basin. This study sought to elucidate the developmental sequence of agricultural communities in Tonto Basin. In pursuit of this goal, a number of related research issues were explored, including the production, distribution, and consumption of craft items; chronology; demography; and cultural affiliation. Major excavations were started at the Pyramid Point site (AZ V:5:1/25), a complex of compounds and a small platform mound dating to the Roosevelt phase; the Meddler Point site (AZ V:5:4/26), a multicomponent site containing a large pre-Classic period pit-house occupation and a Roosevelt phase platform mound with 12 associated residential compounds; and the Griffin Wash site, a Roosevelt phase pueblo with approximately 100 rooms distributed in 3–4 room blocks together with a small pre-Classic period component. In addition, substantial excavations were also conducted at the Eagle Ridge site (AZ V:5:104/1045), a multicomponent habitation site with Sacaton and Early Formative period occupations, and the Hedge Apple site (AZ 5:V:189/1605), a small Hohokam settlement dating to the Gila Butte phase.

In addition to the descriptive reports, a number of synthetic studies of Tonto Basin prehistory were also prepared as part of the RCD. Two of these studies, Clark's (1995) analysis of architecture and social organization at Meddler Point and Doelle et al.'s (1995) study of platform mounds across southern Arizona, documented evidence of prehistoric migrations into Tonto Basin. In the first study, Clark identified two distinct architectural styles, room blocks and compounds, that differed in the ways that they organized space. He went on to suggest that this distinction reflected the presence of two different ethnic groups, each with its own architectural tradition, that concurrently inhabited the Meddler Point community. In the second study, Doelle et al. concluded that the Griffin Wash site was settled by puebloan peoples, most likely as a result of environmental and social stresses in the puebloan area. Similar conclusions were also reached by Whittlesey and Reid (1982) in their analysis of data collected during the Cholla Project and Ciolek-Torrello et al. (1994) during the Roosevelt Rural Sites Study (RRSS).

Roosevelt Rural Sites Study

The data collected by SRI during the RRSS are perhaps the most relevant for direct comparisons to the CCP sites. During the course of the RRSS, data recovery operations were

conducted at 29 small pre-Classic and Classic period sites located between the floodplain and the upland areas adjacent to Theodore Roosevelt Lake. The sample included examples of four types of sites: artifact scatters, field houses, farmsteads, and hamlets. Chronologically, the sample was dominated by Classic period sites; the pre-Classic period sample was limited to 3 Sedentary period farmsteads, of which 2 were intensively investigated.

Both of the intensively investigated pre-Classic period farmsteads, the Riser site (AZ U:8:225 [ASM]) and the Grapevine Vista site (AZ U:8:224 [ASM])—the latter also containing a Classic period component—reflect permanent, year-round occupations that apparently housed one or two extended family households. Based on sample excavation data, none of the identified houses formed obvious courtyard groups, suggesting that they may have been occupied sequentially rather than concurrently or that they adhered to a non-Hohokam pattern. Significant effort was expended in the construction of the habitation structures, best evidenced by the existence of raised floors in a number of structures at the Riser site (Vanderpot et al. 1994), which were built in a fashion similar to the houses at Roosevelt 9:6 (Haury 1932), located nearby along the Salt River arm of the basin.

The Classic period farmsteads exhibited a more formalized use of space than their pre-Classic period counterparts, with the extramural spaces at the habitation sites defined by masonry walls as opposed to the proximity of the habitation structures. These sites, although generally possessing significantly lower artifact densities than the pre-Classic period settlements, also appear to represent full-time, year-round occupations, as suggested by the energy expended in construction and the presence of large storage facilities at a number of the sites. As with the pre-Classic period farmsteads, those dating to the Classic period appear to have housed one or two extended-family households.

There was an implicit assumption in the way that the research domains were divided between the three institutions participating in the Roosevelt project. The rural sites investigated by SRI were believed to be part of a broader regional system linking the large, riverine settlements with smaller sites in a presumed hinterland. This view was only partially supported by the data from the RRSS. Although some relationship most certainly existed between the riverine and upland areas throughout the Formative period, the available data indicate that the nature and intensity of this relationship shifted through time. Subsistence data suggest that during the Sedentary period, the small hamlets and farmsteads in the transition to the upland areas were largely self-sufficient, practicing a diverse subsistence strategy based on the exploitation of both domesticated and wild plant species. Although located some distance from the river, the inhabitants of these sites appear to have had maintained access to the prime farmlands in the nearby riverine settings. It is possible that

the decision to locate the settlements away from the agricultural fields may reflect an attempt to place the habitation sites strategically, so as to exploit multiple ecological zones better. As indicated above, the level of effort put into the construction of the habitation structures and the extent of the associated trash middens suggest that these small hamlets and farmsteads served as year-round, permanent habitation sites.

The Classic period sites investigated during the RRSS revealed substantially different settlement and subsistence strategies when compared with the pre-Classic period sample. In terms of subsistence strategies, the Classic period inhabitants of the upland areas depended to a greater extent on wild resources, particularly agave. This trend has also been observed in other areas of Tonto Basin and central Arizona. The Classic period also saw fluctuations in settlement densities in the upland areas. During the Miami phase, settlement in the upland areas increased dramatically, perhaps in response to improved climatic conditions, which allowed for successful dry farming in the areas away from the river (Ciolek-Torrello 1994a:677). Although the architectural evidence suggests permanent occupation, the absence of significant midden deposits suggests that the Miami phase sites were occupied for a shorter duration than the earlier Sacaton phase sites in the area (Ciolek-Torrello 1994a:685). With the worsening of climatic conditions at the start of the Roosevelt phase came an aggregation of people into a smaller number of settlements closer to the Salt River floodplain and a greater dependence on irrigation agriculture. This pattern of aggregation was accompanied by an influx of migrants from the Colorado plateau seeking to exploit the riverine settings of Tonto Basin. These trends continued throughout the remainder of the Classic period. By the Gila phase, many of the upland areas had been abandoned and the population became concentrated in a small number of large, aggregated settlements along Tonto Creek and the Salt River.

ADOT-Sponsored Investigations in Tonto Basin

A large number of archaeological projects in Tonto Basin, especially in the Tonto Creek arm and upper Tonto Basin, were sponsored by ADOT in advance of improvements to SR 88 and SR 188, the main arteries crossing the basin, as well as SR 87 in the upper Tonto Basin.

Ash Creek

The Ash Creek project involved excavations at 13 prehistoric and 2 historical-period sites to the north and west of Theodore Roosevelt Lake. The project was conducted jointly by the Office of Cultural Resource Management,

ASU, and Soil Systems, Inc. (SSI), as part of mitigation efforts necessitated by the realignment of SR 188 (Hohmann 1985). The prehistoric sample, investigated by archaeologists from ASU, included pre-Classic period sites that are best associated with the Hohokam cultural tradition based on material culture, whereas the Classic period remains more closely reflect the Salado tradition. The majority of the prehistoric sites investigated as part of the Ash Creek project proved to be small hamlets and farmsteads whose inhabitants are likely to have farmed the floodplain along Tonto Creek. The smaller historical-period sample was investigated by SSI.

The principle research focus of the Ash Creek project concerned the transition from the pre-Classic to the Classic period or, in cultural terms, the emergence of the Salado phenomenon. The research design was constructed to collect the requisite data to address four primary issues (Rice 1985a:4–5). The first issue concerned the relative importance of wild- and domestic-plant resources to the diet and how this relationship changed through time. The second issue was chronology, specifically whether or not an occupational hiatus could be identified between the Hohokam and Salado occupations. The third issue concerned the nature of the Red-on-buff ceramic tradition in Tonto Basin and how it compared with the Red-on-buff tradition in the Phoenix Basin. Finally, the researchers intended to analyze community patterns by comparing the Hohokam and Salado settlements to test the hypothesis that the walled compounds of the Salado functioned as centers for redistribution. This latter point reflected the guiding assumption of the research, namely that the Hohokam to Salado transition reflected the emergence of a complex, hierarchical society controlled by a class of managerial elites.

The relatively small sample of sites investigated during the Ash Creek project, if not providing adequate data to resolve the above issues, did fuel the debate. The subsistence data collected from the Ash Creek project sites were consistent with a mixed economy typical of the Formative period in the Southwest. These data further suggested that with the Salado came a more intensive exploitation of wild resources, especially cheno-ams and grass seeds, and such upland resources as yucca, prickly pear, and saguaro (Rice 1985b:252). This apparent shift toward a more broad-based subsistence strategy may have been prompted in part by the demands of the growing and increasingly aggregated population of the Classic period that was perhaps augmented by migrants from the Colorado plateau.

Architectural variability observed at the Ash Creek project sites suggested a concomitant diversity in settlement strategy and land use. The dominant domestic architectural form associated with Colonial period sites was the subrectangular house-in-a-pit, often containing well-made plaster hearths, similar to those documented by Haury (1932) at Roosevelt 9:6, located to the southeast along the Salt River

arm of Theodore Roosevelt Lake. The labor input evident in these structures is indicative of long-term occupation. By contrast, the architectural features identified at the Sedentary period sites were largely oval or circular in plan and exhibited far less care and effort in their construction. In spite of the apparent temporal variability, the ASU archaeologists interpreted the observed pattern as representing two contemporary community patterns, perhaps reflecting functional differences between the sites (Rice 1985b). These data were used to further argue for the hierarchical organization of the Classic period Salado, which in part owed its development to what was described as the “Sonoran advantage,” which referred to the high productivity possible with the mixed subsistence economy practiced throughout the Formative period. According to the researchers at ASU, this increasing complexity was expressed in the form of a settlement hierarchy, the appearance of craft specialists, the production and storage of surplus foodstuffs, and status differentiation as reflected in mortuary data (Rice 1985b:255).

Miami Wash

The Miami Wash project, conducted under the auspices of the Arizona State Museum (ASM), involved excavation at eight sites within the SR 88 corridor in the Globe-Miami area of east-central Arizona (Doyel 1978). One of the first projects in the region to focus its attention on “small” sites, the investigators were interested in determining what relationship, if any, existed between these small habitation and limited-activity sites and the large pueblos that had been the focus of much of the previous, although largely unpublished, research (Gladwin 1957; Vickrey 1939). An additional research goal was to investigate the spatial and temporal relationship between the pre-Classic period Hohokam and the Classic period Salado, resulting in the delineation of a “transitional” cultural manifestation designated as the Miami phase.

Based on data collected from the eight investigated sites, the earliest recognizable occupation within the project was assigned to the Gila Butte phase of the Hohokam Colonial period (ca. A.D. 500–900). Although a Colonial period Hohokam presence in the area has been recognized since Haury’s pioneering work at Roosevelt 9:6 (Haury 1932) and supported by subsequent excavations at Inspiration I (Vickrey 1945), only scant evidence of the Gila Butte phase was observed, and the bulk of the securely dated Colonial period materials were attributed to the Santa Cruz phase. By the Sedentary period, a Hohokam presence was well established, although the extent and intensity of this presence within the Miami Wash area remains unclear.

AZ U:9:57 (ASM), the type site of the Miami phase, was described by the excavators as transitional between the clearly Hohokam pre-Classic period and the Classic period

Salado (Doyel 1978:194–195). Dating from A.D. 1150 to 1200, the Miami phase was characterized by a mixture of both Hohokam and puebloan elements, including extended and flexed primary inhumations; a diverse shell artifact assemblage; surface pit-room structures within enclosing walls; a ceramic assemblage containing indigenous Gila Plain and Gila Red as well as a variety of imported wares, including Snowflake Black-on-white, St. Johns Polychrome, McDonald Painted Corrugated, Little Colorado White Ware, San Carlos Red-on-brown, and Reserve-Tularosa Black-on-white; and an economy based on a combination of agriculture and the exploitation of wild resources (Doyel 1978:194–195). According to Doyel, the implication of this admixture of traits is that the pre-Classic to Classic period transition in the Globe-Miami area represents cultural change within an indigenous population rather than one cultural tradition simply being supplanted by another (Doyel 1978:213). This local population had its closest affinities to the pre-Classic period Hohokam, although it appears that the population in the Miami Wash area were only weakly integrated with the Hohokam heartland (Doyel 1978:208). This is reflected in local developments in material culture that diverged from those in the Phoenix Basin. Also notably absent were ball courts, the principal public architecture of the Phoenix Basin and many of the other regions that were integrated into the pre-Classic period Hohokam regional system (Wilcox 1979).

The Tonto Creek Archaeological Project

The Tonto Creek Archaeological Project (TCAP), conducted by DAI under contract to ADOT, involved data recovery operations at 27 prehistoric sites along a 13.3-km (approximately 8-mile)-long segment of SR 188 (Clark and Vint 2000a, 2000b). The project was divided into three segments. Beginning in the south, the Sycamore Creek section encompassed a 3.3-km (approximately 2-mile)-long segment of the highway from just south of Sycamore Creek north to the vicinity of Walnut Canyon Spring (Clark 2000:13). A total of seven sites was investigated in the Sycamore Creek area, all but one dating to the early Classic period. The early Classic period sites included three masonry compounds: the Middle-of-the-Road site (AZ U:3:276/202), Butcher Hook (AZ U:3:273/1376), and Prickly Saguaro (AZ U:3:277/203). The remaining Classic period sites consisted of a poorly preserved masonry room (AZ U:3:274/1374) and an artifact scatter (AZ U:3:279/1375). The final site investigated in the Sycamore Creek section was the Sliver site (AZ U:3:275/1373), a Sedentary period farmstead containing three pit houses, a roasting pit, and a small extramural pit of indeterminate function.

The Punkin Center section included the largest number of sites within the TCAP area. Several of these sites contained multiple temporal components, allowing the DAI

archaeologists to address questions of changes in settlement structure during the pre-Classic–Classic period transition. The individual components investigated in the Punkin Center section included 9 pre-Classic period pit-house farmsteads and 5 early Classic period compounds (Clark 2000:18). Sites within the Punkin Center section also contained the vast majority of the burials encountered during the project, including 20 cremations and nearly 90 percent of the 294 inhumations encountered and excavated during the TCAP.

The northernmost section of the TCAP area centered on Slate Creek, located a short distance south of the CCP, and encompassed seven sites. Most of the field effort focused on the Boatyard site (AZ U:3:286/1352), which contained an Early Agricultural period component, and at the Heron Hatch site (AZ U:3:224/2064), a Pioneer–early Colonial period pit-house farmstead. The remaining sites investigated in the Slate Creek section included an early Classic period *horno* (AZ U:3:287/1353), a small habitation site containing a pair of features described as either a small compound or two sequentially occupied structures (AZ U:3:285/1350), and a section of a historical-period canal (AZ U:3:223/2062).

TCAP provided an excellent body of comparative data for the Tonto Creek arm of the lower Tonto Basin, especially for the pre-Classic to Classic period transition, and is most relevant to the CCP. In terms of site structure, habitation sites with transitional pre-Classic–Classic period components were dominated by houses with an easterly orientation, which did not form the courtyard groups typical of “Hohokam” sites. This suggests closer affinities with the Mogollon, whose pit-house villages exhibited a similar spatial patterning, perhaps reflecting similar models of domestic organization. The later Classic period settlements, characterized by aboveground architecture with cobble-masonry foundations, exhibited a shift to a more formalized division of space, with extramural areas enclosed within walls. These compounds generally were composed of one to three rooms, occasionally incorporating an earlier pit room into its construction.

The large burial population displayed similarities to cultures in the mountain areas to the northwest as well, both in terms of mortuary behavior and the biological traits exhibited in the skeletons themselves. The most common type of inhumation consisted of a large, rectangular pit with a narrower pit for the body either centered at the bottom of the pit or along one side. The burial chamber itself was usually sealed beneath a layer of wooden cribbing. There was also evidence that this cribbing was occasionally covered with a woven mat. Grave goods included a wide variety of ceramic vessels, carved bone and shell ornaments, and a few instances of painted wooden artifacts and clay-covered painted baskets. The ceramic vessels included Salado Red and a variety of imported white wares.

In terms of the skeletons themselves, occipital flattening was evident on several of the skulls, a trait observed across the southwest during the late prehistoric period. Lambdoidal flattening, more common in the Mogollon and Anasazi areas, was observed in the case of only three individuals (Minturn 2001). An analysis of dental traits, however, revealed that the TCAP population had its closest affinities with the Grasshopper region (Lincoln-Babb 2001).

The Rye Creek Archaeological Project

This project was conducted by DAI, and involved mitigation efforts at 19 sites along the existing SR 87 corridor between Hardt Creek and Rye (Elson and Craig 1992). Of these, 13 sites were subjected to intensive investigations, whereas efforts at the remaining 6 sites were limited to testing. The intensively investigated sample included an even mix of pre-Classic and Classic period sites ranging in size from small, limited-activity loci to large, multiroom pueblos. The earliest attested occupation of the project area dates to the Middle Archaic period, reflected in the recovery of four Middle Archaic period projectile points during the project. The Late Archaic period was also minimally represented, with unequivocal evidence similarly limited to a few temporally diagnostic projectile points. Following the Hohokam cultural sequence, the Formative period sample included sites dating from the Colonial period through the late Classic period Gila phase.

The research focus of the Rye Creek Archaeological Project addressed several issues divided among six general historic contexts, including (1) field methods as they relate to evaluating archaeological contexts, (2) chronology building, (3) subsistence and settlement systems, (4) community organization, (5) exchange and interaction, and (6) cultural affiliation (Elson and Doelle 1992:40–49). A seventh context addressing the limited presence of protohistoric and historical-period materials at the project sites was added following the initial phase of fieldwork.

Subsistence data collected from the Rye Creek sites revealed a mixed economy based on the exploitation of both domesticated and wild resources, with sites most commonly located near tracts of arable land. Paleobotanical data revealed the importance of maize in the diet, a characteristic that carried through the entire Formative period. The relative dependency on domesticated species did not remain static, however. By the Sedentary period, the exploitation of agave became increasingly important, a trend that continued throughout the Classic period.

In terms of settlement structure, the larger pre-Classic period sites investigated as part of the Rye Creek project exhibited many similarities with contemporary Hohokam hamlets to the south. The largest of these hamlets investigated in the Rye Creek area, the Deer Creek site (AZ O:15:52/538), contained an estimated 17 pit houses in a core

area covering approximately 2,000 m² (Swartz 1992a:163). Feature superpositioning and associated chronological data suggested that there were three discrete occupational episodes at the site. The first of these episodes included six houses clustered in the southwestern area of the site. However, these houses, which were superimposed by later Gila Butte phase features, did not form courtyard groups and may in fact have been occupied sequentially. In contrast, several of the subsequent Gila Butte phase houses, located in the central and northern portions of the site, were apparently paired to form typical Hohokam-like courtyards. This period represents the main occupation at the site and included the establishment of a cemetery area that intruded on two houses of the preceding occupation. Following the abandonment of the Gila Butte phase occupation, a much smaller Santa Cruz/Sacaton phase settlement was established at the site. Unlike the Gila Butte phase occupation, when agriculture appears to have been the primary subsistence activity, archaeobotanical data from the later Santa Cruz/Sacaton phase occupation suggested greater reliance on wild resources.

The pre-Classic period farmsteads in the Rye Creek project area included the Clover Wash site (AZ O:15:100/704), a Sedentary period hamlet consisting of five pit houses and associated features (Swartz 1992b). All of the pit houses were intruded by extramural pits, which suggested that a later Classic period occupation may have been represented as well (Swartz 1992b:209). All five of the pit houses were oriented around a single courtyard area, suggesting continuity in the use of space. Variability in the density of trash recovered from the houses, however, suggested that several of the houses may have been occupied sequentially rather than concurrently. These data were consistent with a repeated, seasonal occupation of the site, an interpretation suggested by the excavators (Swartz 1992b:209). A similar interpretation was offered for the Redstone site (AZ O:15:91/1108), a small farmstead only partially contained within the ROW (Craig 1992a).

The settlement history of this portion of Tonto Basin was interpreted as reflecting periodic changes in the direction and intensity of outside influences on a local population. During the Colonial period Gila Butte phase, settlement in the project area consisted of several small, independent hamlets located near plots of arable land along Rye Creek. Both the ceramic and architectural data indicated that during this time period, the local Rye Creek population was interacting most closely with the Hohokam, although the recovery of Lino Gray sherds from the nearby Ushklish Ruin site (Haas 1971) suggested contact with northern groups as well. The quantity of these nonlocal ceramics was quite small, suggesting that the contact with both of these areas was minimal. By the late Colonial period Santa Cruz phase this situation apparently changed; higher percentages of imported ceramics from the Tusayan and Little Colorado areas sug-

gested increasing contact with northern groups. This period also saw an increase in population density, as attested by higher site densities across the project area.

The subsequent Sedentary period experienced a dramatic decrease in population, leading early investigators in Tonto Basin to posit a Sacaton phase “hiatus” for the region (Gladwin and Gladwin 1935). The much-reduced Sacaton presence in the basin was characterized by smaller, widely scattered farmsteads replacing the hamlet-sized settlements characteristic of the Colonial period. Writing on the settlement of Tonto Basin, Elson argued that few of the Sedentary period farmsteads were occupied concurrently, further reducing the Sedentary period population (Elson 1992a:141). He acknowledged, however, that this proposed transition in settlement strategy may simply have been an artifact of the restricted sample.

Elson (1992a:151) interpreted the pre-Classic period data collected from the Rye Creek project sites as representing a distinct, indigenous culture interacting with both the Hohokam to the south and northern peoples on the Colorado plateau. Elson suggested that this indigenous culture lacked its own painted ceramic tradition and that the painted wares in the area reflect interaction with both the Hohokam and northern pueblo groups. Toward the end of the pre-Classic period, Hohokam Buff Ware was replaced by Cibola White Ware as the dominant intrusive ceramic, likely reflecting the growing cultural influence of peoples to the north. Further evidence of the unique character of this local culture can be seen in the mortuary behavior—the formally constructed rectilinear “crematoria” identified at the Deer Creek site, to date found nowhere in the Phoenix Basin, and the reappearance of inhumations in the latter part of the period. Although not formally defined until after subsequent DAI work on the RCD (Elson and Gregory 1995:71–73; see below), this transitional period, dating roughly from A.D. 1050 to 1150, has been termed the Ash Creek phase. The transition to the Classic period in the Rye Creek area saw further dramatic changes in settlement distribution and population. The apparent decrease in population characteristic of the Sedentary period was reversed, as reflected in the appearance of a number of village-sized, multiroom pueblos. These large sites apparently replaced the smaller hamlets and farmsteads, reflecting not only an increase in population but an increase in the degree of settlement aggregation as well. One of the largest of these Classic period sites, the Rye Creek Ruin, was briefly investigated as part of the Rye Creek Project (Craig 1992b). This site, initially settled during the Colonial period, is presumed to have been occupied until the mid-fifteenth century A.D., with its maximum occupation occurring during the fourteenth century A.D. when the site was composed of as many as 150 rooms (Craig 1992b:117). The main ruin consisted of two possible platform mounds, two discrete groups of multistory, contiguous rooms, and a plaza area defined by the rooms to the

south and an enclosing wall to the north. A number of additional features were associated with the main ruin, including several middens, burials, and a group of smaller, and earlier, compounds and masonry structures extending approximately 1 km to the west (Craig 1992b:107).

Of the Classic period sites investigated by the Rye Creek project, however, by far the most common were single-room masonry field houses, similar in many respects to those identified in the Sycamore Creek area. The field houses were generally square to rectilinear in plan and consisted of dry-laid masonry foundation walls, presumably supporting brush superstructures. Occupation of these sites was transitory, reflected in extremely low artifact densities. An exception to this pattern was seen at the Overlook site (AZ O:15:89/1103), located in the Hardt Creek drainage (Elson 1992c:82–89). Here, the higher artifact densities and apparent level of effort that went into the construction of the field house suggested to the excavators that the site was used repeatedly, with the absence of an internal hearth perhaps reflecting that it was used primarily during the warm summer months. Check dams and other similar features located in the vicinity of many of these sites further attest to their agricultural focus.

The Mazatzal Piedmont Project

This project was conducted by the Museum of Northern Arizona for ADOT (Ciolek-Torrello, ed. 1987) along a 12-km segment of SR 87 between Ord Mine Road and the junction with SR 188. This project is particularly relevant to the CCP as it encompassed the upper reaches and headwaters of drainages—Hardt, Gold, and Cottonwood Creeks—in which the CCP sites are located. A total of 63 sites were investigated during the project, with 23 subjected to data recovery. Of these 23 sites, 16 contained architecture and/or other features. The remaining sites consisted of surface artifact scatters. Most of the sites fell into three broad temporal groups: the Middle Archaic period, represented by a number of artifact scatters; the Classic period, represented by small settlements and field houses; and the historical period, including both Apachean resource-processing sites and two Civilian Conservation Corps (CCC) camps.

Several research themes were pursued as part of this project (Ciolek-Torrello 1987b:59–76). These included settlement and subsistence, chronology, cultural affiliation, and typological and technological studies of lithics and ceramics. A major concern with respect to the Classic period sites was a functional study of small habitation sites and their possible relationships in nucleated and dispersed settlement systems. An additional area of research was the investigation of the Hohokam-Salado transition in Tonto Basin. This also entailed addressing some of the points of debate concerning the ethnic affiliation of the inhabitants of Tonto

Basin. The data that were available suggested that for much of the prehistoric period, Tonto Basin was a meeting ground of several cultural traditions, each bringing with it its own distinctive ceramics, architectural styles, and subsistence strategies.

Prior to the work conducted as part of the Mazatzal Piedmont project, the nature of the Archaic period presence in the upper Tonto Basin was understood largely from data collected from the Hardt Creek site (AZ O:15:32 [ASM]), a resource-procurement and -processing locality near Jakes Corner about 1 km west of the CCP project area (Huckell 1973). Archaeological investigations of the Corral Creek site (NA16,935 [MNA]) in the Mazatzal uplands provided important new data on the Archaic period, supporting the designation of the Corral Creek phase (Ciolek-Torrello 1987a:346–350). The Corral Creek phase, dating approximately 5000–1500 B.C., is characterized by Pinto Basin and Gypsum points as the most-common temporally diagnostic types, a flaked stone industry demonstrating considerable selectivity in raw material types, with cherts and fine-grained basalts being preferred, and a ground stone industry consisting of crude, unshaped milling stones and one-hand manos. The settlement strategy reflected a mobile hunting and gathering economy, with small camps and activity areas located on terraces above the major drainages near springs.

Not surprisingly, site diversity was much greater for the Classic period sample. As a means of facilitating comparisons, a three-tiered hierarchy was developed for these sites. The largest and most complex were characterized by multiple masonry rooms either fully or partially enclosed within a masonry wall, thus formally defining a courtyard area. These courtyard sites are likely to have served as the primary residences of one to two domestic groups engaged in an agriculturally based economy. Three of these sites were investigated during the project, the largest and most diverse being the Mazatzal House (NA16,486 [MNA]). This site consisted of a single, square masonry compound, approximately 25 m to a side, with a number of dense middens. The compound contained three distinct types of masonry architecture: a free-standing oval room with a pit hearth interpreted as the main habitation room; a rectilinear storage room attached to the compound wall; and three, three-sided rooms in a linear arrangement adjacent to the eastern wall of the compound. The courtyard area contained a diverse array of extramural features, including storage facilities and roasting pits. Although the courtyard area itself contained significant quantities of artifacts, two extramural middens are likely to have served as the primary loci of trash deposition. These midden areas also served as the primary burial ground for this settlement. A total of 12 burials were recovered from the site in a limited excavation of the midden areas. Half of the burials were found in the midden outside the compound, and the remainder was found within the compound; surprisingly none was recovered from subfloor

contexts, a common location for Salado burials. Most of the burials were associated with Gila Red, a local red ware, and black-on-white pottery suggesting a Miami phase age. However, the last burial, which was placed in a common burial pit within the compound, contained a Pinto Polychrome bowl and another Pinto-Gila Polychrome bowl indicating a Roosevelt or early Gila phase use of the site that apparently postdated its occupation.

Although not containing the same diversity of features, the remaining two courtyard sites, La Piedra House (NA16,487 [MNA]) and the Limestone House (NA16,929 [MNA]), adhered to the same general pattern. La Piedra, which was disturbed during the construction of SR 87, consisted of three rectilinear rooms, two of which incorporated sections of the compound wall in their construction. The eastern portion of the site was destroyed by the road, and as a result, the original size and extent of the compound could not be determined. It appeared, however, that the northernmost of the three rooms was free standing; no evidence of a compound wall was observed in its vicinity. A similar situation was observed at the Limestone House, where two discrete architectural elements were observed, one containing at least one room and the other containing at least two.

The second class of sites, referred to as homesteads, consisted of one to two rectilinear masonry rooms without the enclosing walls that defined the courtyard sites. The apparent effort put into the construction of the rooms, as well as the associated intramural features, indicated that the homesteads served as habitation sites, each perhaps housing a single nuclear or small extended family. Finally, the third class of sites, field houses, consisted of one to two masonry rooms generally lacking intramural features and associated refuse deposits. These sites likely served as seasonal occupations, providing temporary shelter during times of intense subsistence activities. By definition, therefore, those responsible for the construction of the field houses maintained more-permanent facilities, presumably at the nearby courtyard sites and homesteads or at a greater distance in the Rye Creek Ruin or one of its outliers.

Subsistence data collected from Mazatzal Piedmont project sites indicated that the Classic period inhabitants of the Upper Tonto Basin practiced a mixed economy of both wild and domestic resources, with maize being the most ubiquitous of the domesticates. The archaeological record revealed interesting patterns in the kinds of subsistence activities carried out at the three classes of sites as reflected in the archaeobotanical record. Whereas the courtyard and farmstead sites all contained a mix of wild and domesticated plant remains, subsistence activities at the smaller field house sites appear to have been geared toward the exploitation of either wild or domesticated species but not both (Halbirt and Gasser 1987:324). There was also variability in the kinds of field house sites found in different areas of the project, with those in the Corral Creek area apparently

devoted exclusively to agricultural pursuits, whereas the Hardt and Gold Creek areas contained both the agricultural and wild-resource exploitation sites. This variability was interpreted as most likely reflecting environmental factors and distance relationships between different field houses and habitation sites.

Other Archaeological Projects

Several other smaller projects have been completed along SR 188 in the Hardt Creek Valley west of Jakes Corner. Most important is the Ushklish Ruin, located about 100 m west of Site 41/583 near Jakes Corner. The full extent of the Ushklish Ruin is unknown, but Haas (1971:5) excavated 12 pit houses, which he estimated represented about two-thirds of the total that were present. These houses are very variable in size and shape, although moderate-sized squarish houses were the most common. This was an archaeological salvage excavation, and only a preliminary report of findings was prepared (Haas 1971). Despite this shortcoming, these excavations have contributed much to our understanding of pre-Classic period occupation in the upper Tonto Basin. Most significantly, the project revealed that Colonial period occupation in this area exhibited a mixture of Hohokam and Mogollon cultural traits and practices that reflect an indigenous cultural pattern that was subsequently modified by interaction with Hohokam migrants into Tonto Basin (Elson 1992b; Gregory 1995).

Huckell reported on another nearby site that was investigated at roughly the same time as the Ushklish Ruin. The Hardt Creek site (Huckell 1973) was a Middle Archaic period campsite located between the Ushklish Ruin and the junction of SR 188 and SR 87. Ciolek-Torrello (1987a) considered this to be the type site for the Corral Creek phase (see above).

More recently, archaeologists from ARS investigated three small Classic period field house sites and an Archaic period camp at the junction of SR 87 and SR 188 (Bilsbarrow and Woodall 1996). The Broken Hardt site contained the diffuse remains of a small hunting camp or limited-activity area occupied in the Middle and Late Archaic period and two loci representing Classic period field houses. The western locus contained a cobble-foundation masonry field house, *horno*, and other extramural features dating to the early Classic period, whereas the eastern locus contained one or two field houses and 10 extramural features dating to the late Classic period. The Partition House contained another cobble-masonry foundation field house, a pit structure and possible extramural roasting and storage pits. The Slope House contained another field house and a possible rock alignment. Artifacts and plant and animal remains suggested that the inhabitants of these sites exploited both wild and domesticated plant foods, with little attention to hunting. These results supported the findings from other nearby field houses inves-

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tigated nearby as part of the Mazatzal Piedmont project (see above) and confirmed that agave was an important constituent of the Classic period diet in the Hardt Creek valley.

Huckell (1977) excavated another small pre-Classic period habitation site, the Slate Creek Ruin, along SR 188 about 2 km south of the southern end of the project area and just north of the point where Slate Creek crosses the highway. Huckell investigated several Colonial period features at this site that may have represented the remains of a field house, although these features were disturbed by a later Classic period farmstead, making interpretation difficult.

Other relevant ADOT-sponsored testing and data recovery projects are the Upper Tonto Basin (Hammack 1969) and Oxbow Hill-Payson projects (Huckell 1978) in the upper Tonto Basin; the Pine Creek (Green 1990) and Sycamore Creek (Ciolek-Torrello et al. 2008; Klucas et al. 2003; and Vanderpot et al. 1999) projects in the Mazatzal Mountains; and the Reno-Park Creek (Jeter 1978) project on the Tonto Creek arm of the basin. Together, these numerous ADOT-sponsored projects have contributed immeasurably to our understanding of Tonto Basin prehistory from the Archaic through the Classic periods.

Unlike most of the projects excavated on the Tonto Creek arm of the basin, the VIV Ruin was not excavated as part of an ADOT-sponsored study. The VIV ruin is the only major ruin in the CCP vicinity that has been intensively excavated. This work, however, was carried out privately by avocational archaeologists, and only a brief descriptive report of the results was prepared and no analysis of the recovered materials was undertaken (Mills and Mills 1975). This large Classic period settlement was located on the east side of Tonto Creek about 1 km east of the CCP sites in the lower Tonto Basin. Mills and Mills (1975) reported on the excavation of the Gila phase component of this site, which consisted of a possible platform mound and masonry room block. Several smaller cobble-foundation compounds surrounding this room block appeared to represent an earlier Miami or Roosevelt phase occupation. Although little detailed information is available concerning this site, it undoubtedly represented the center of Classic period occupation in the CCP area.

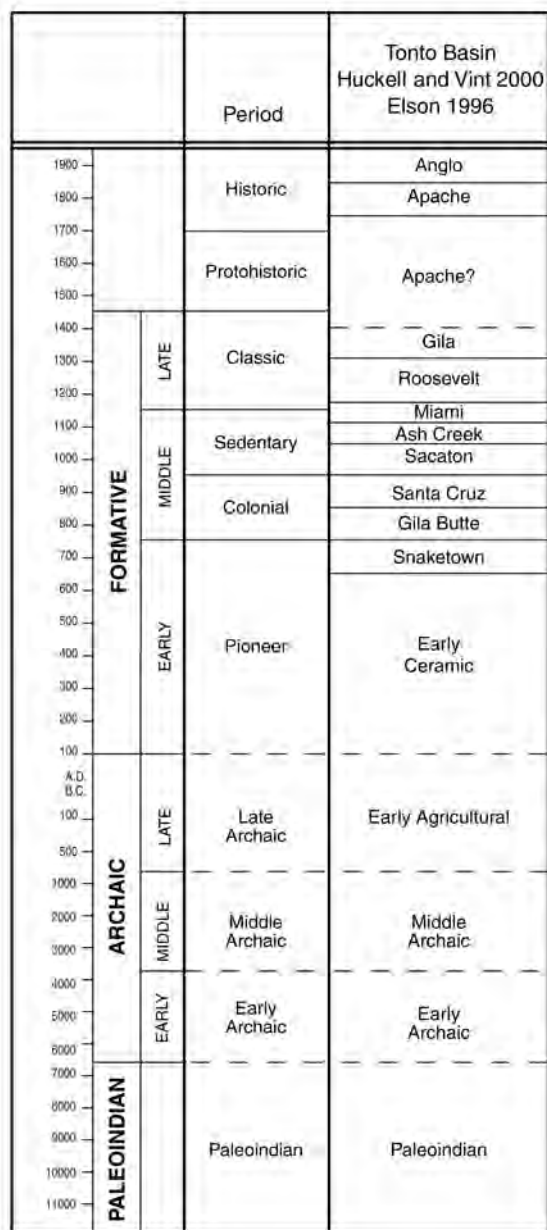


Figure 7. Chronology of Tonto Basin.

Cultural Setting

In this section we present a brief outline of the culture history of Tonto Basin and its immediate environs (Figure 7). Because several detailed treatments of this topic have been presented in recent years, our goal is to provide only the information relevant to the questions raised in the research design and to place the project sites in their proper cultural contexts. For expanded treatments of these periods, the reader is directed to the cited reports.

Preceramic Periods (ca. 11,000 B.C.–A.D. 100)

In spite of the recent archaeological work in Tonto Basin, relatively little data have been collected on the Preceramic periods. Given the relatively poor visibility of sites dating to these periods, this apparent dearth of information may not accurately reflect the prehistory of the region. The earliest evidence of human occupation in this portion of the Transition Zone is a single fluted projectile point identified as a Clovis type and four scrapers recovered from the Silk-

tassel site south of Payson (Huckell 1978). Closer to the project area, a single Clovis point was recovered from secondary contexts near Punkin Center (Huckell 1982:3–8). This ephemeral evidence of Paleoindian occupation is typical of the Southwest and probably reflects the highly mobile nature of the Paleoindian adaptation.

Little unequivocal evidence of an Early Archaic period occupation has been recovered in Tonto Basin, again perhaps reflecting the ephemeral archaeological signature of the hunting-and-foraging adaptation of the period. By the Middle Archaic period, archaeological evidence of human occupation of Tonto Basin is more apparent, reflected in a local adaptation referred to as the Corral Creek phase (Ciolek-Torrello 1987a:348–350). Sites assigned to this phase are generally interpreted as either small base camps or resource-procurement and -processing locales commonly found at the transition between the desert-scrub and juniper woodland biomes in the Payson Basin (Huckell 1978), upper Tonto Basin (Ciolek-Torrello, ed. 1987; Huckell 1973, 1993, 1996), and in the Black Mesa area of the southern Sierra Ancha range (Reid 1982). Although few features have been identified that can be assigned confidently to the Corral Creek phase, limiting our ability to assess such behavioral categories as social organization and settlement, lithic assemblages containing numerous projectile points and a vast array of ground stone tools suggest a highly diversified foraging-and-hunting economy. In the lower Tonto Basin, Middle Archaic (3500–800 B.C.) and Late Archaic/Early Agricultural (ca. 800 B.C.–A.D. 100) period remains have been identified at the Boatyard site (Huckell and Vint 2000), a multicomponent site situated on the Pleistocene terrace west of the current channel of Tonto Creek, less than 1 km south of our project area. With the exception of the Boatyard site, there has been scant evidence of a Late Archaic period occupation in Tonto Basin, although a few small floodplain settlements have been identified west of the lower Tonto Basin along Sycamore Creek in the Round Valley and Sunflower Valley areas in the Mazatzal Mountains (Klucas 1999; Vanderpot 1999). These sites, containing a diverse suite of features, including inhumation burials, informal surface structures, and pits, appear to reflect a more intensive use of the narrow floodplains in the Transition Zone, although no evidence of maize agriculture was identified.

The Early Formative Period (ca. A.D. 100–700)

Before the recent ADOT- and Bureau of Reclamation (Reclamation)-sponsored projects in Tonto Basin and adjacent areas, the prevailing opinion was that the region was first settled by agriculturists during the late Pioneer or early Colonial period of the Hohokam cultural chronology. This

was seen as part of a regionwide pattern of colonization by Hohokam peoples from the Phoenix Basin (Pilles 1976; Wood and McAllister 1980). The data now indicate that the adoption of agriculture in the region was largely a local phenomenon, appearing among an indigenous population (Elson et al. 1992). This is reflected in burial practices, architecture, and material culture that are distinct from contemporary sites in the Phoenix Basin.

The earliest evidence for settled village life in Tonto Basin was found at Locus B of the Eagle Ridge site (Elson and Lindeman 1994), which contained the archaeological remains of a small agricultural settlement dated to the first centuries A.D. (Elson 1996). A contemporary component was also identified at the Boatyard site (Huckell and Vint 2000). Although they represent a relatively small sample, their similarities to early Mogollon sites that were more extensively investigated suggest that they may serve as a model for interpreting Tonto Basin remains and may in fact represent a more generalized, early agricultural adaptation (Ciolek-Torrello 1998; Gregory 1995). Typically, habitation sites dating to this period consist of several small, round or bean-shaped houses with entryways facing to the east. Courtyard groups, settlements defined by several houses opening onto a shared extramural space and typical of later Hohokam, are absent from these sites. Instead, the small habitation structures are often associated with larger structures that are suggested to have served a communal function (Gregory 1995).

By A.D. 700, ceramic data suggest the beginning of a Hohokam presence in Tonto Basin, reflected in a small number of ceramic artifacts recovered from Deer Creek village in the upper Tonto Basin (Elson and Craig 1992) and at the Heron Hatch site located near Slate Creek in the lower basin (Hall et al. 2000). The limited nature of the Pioneer period remains at both of these sites precludes an assessment of settlement behavior and land use, although it can be inferred that the occupation was transitory at best.

The Hohokam Pre-Classic Period in Tonto Basin (ca. A.D. 700–1150)

A Colonial period Hohokam presence in Tonto basin has long been acknowledged. Indeed, it was at the Roosevelt 9:6 site, located along the south bank of the Salt River in the lower portion of the basin, that Haury first defined the period (Haury 1932). During the early portion of the period, corresponding with the Gila Butte phase of the Phoenix Basin Hohokam chronology, habitation sites were commonly established on the lower terraces of major drainages, most likely reflecting the importance of floodwater and irrigation agriculture to the economy of the period. In addition to Roosevelt 9:6, examples of this land-use pattern can be seen

at Deer Creek Village (Swartz 1992a), located near Rye Creek in the upper Tonto Basin, and the Hedge Apple site (Swartz and Randolph 1994), located near Theodore Roosevelt Lake. An exception to this pattern of floodplain occupation is the Ushklish Ruin, located near Hardt creek in the upper basin. Subsistence data collected from these sites indicate the mixed nature of the economy typical of the Formative period in the Southwest, which was characterized by the exploitation of wild and domesticated plants supplemented by hunting.

The structure of settlements dating to the early portion of the Colonial period in the upper Tonto Basin suggests that elements of Hohokam culture were adapted by an indigenous people rather than these settlements being the product of migrations from the Hohokam “core” area in the Phoenix Basin. Arrangement of houses into courtyard groups, if present, are far less formal than contemporary settlements on the Salt River arm of the lower Tonto Basin. Gregory (1995:149–151) has argued that this is most evident at the sites of Ushklish and Deer Creek village, where the spatial arrangement of the settlements are reminiscent of the Early Formative period sites known from the Mogollon area. As with the earlier sites, settlements assigned to the early Colonial period appear to reflect occupations with both seasonal and year-round occupation, all of short duration.

Settlement diversity increased through the Colonial period with the appearance of a range of site types from small, limited-activity sites to large, permanent villages. Elements of Hohokam material culture, such as buff ware pottery, stone palettes and censers, and mortuary practices centered on cremation, are common, especially at sites in the Salt River arm in the southern portion of the lower basin. Here, large, irrigation-based communities were established, such as at Meddler Point, that in many ways were indistinguishable from Santa Cruz phase settlements in the Phoenix Basin (Craig and Clark 1994). The absence of ball courts, the most conspicuous integrative symbol of the Hohokam regional system, however, calls into question the degree to which Tonto Basin settlements were influenced by the Phoenix Basin (Wilcox 1979). The level of integration into the Hohokam regional system is also variable across Tonto Basin, with sites in the Salt River arm of the lower basin sharing the greatest number of features with contemporary sites in the Phoenix Basin.

By ca. A.D. 950, a time corresponding to the Sedentary period in the Phoenix Basin, significant changes in settlement were taking place in Tonto Basin. Few of the large villages that characterized the preceding Colonial period remained, having been replaced by scattered individual farmsteads. This less conspicuous archaeological signature prompted early researchers to suggest that the region was abandoned during the Sedentary period (Gladwin and Gladwin 1935). Although current data clearly illustrate that this regional abandonment did not take place, the range of

permanent, agricultural settlements contracted, focusing along the Salt River arm of the lower basin, evidenced by the Riser and Grapevine Vista sites (Shelley and Ciolek-Torrello 1994) and at the Eagle Ridge and Meddler Point sites (Craig and Clark 1994; Elson and Lindeman 1994). Sites in the remaining portion of the basin appear to have been occupied less intensively, lacking the well-developed middens and formal pit house architecture indicative of long-term occupation.

By ca. A.D. 1150, the Hohokam presence in Tonto Basin waned, reflected in the disappearance of Hohokam Buff Ware ceramics and the cremation burial complex. Concurrently, Cibola White Ware ceramics and a mortuary complex centered on inhumation appeared, reflecting a more northern cultural focus. This transition period, roughly dating from A.D. 1100 to 1150, has been termed the Ash Creek phase.

The Classic Period in Tonto Basin (ca. A.D. 1150–1450)

The earliest phase assigned to the Classic period is the Miami phase (A.D. 1150–1200), known primarily from small, scattered farmsteads composed of two to three oval, adobe-walled pit rooms, an architectural style with roots in the preceding Sedentary period (Ciolek-Torrello 1987a; Clark and Vint 2000a, 2000b; Elson and Craig 1992). It should be mentioned, however, that the creation of Theodore Roosevelt Lake predates much of the archaeological work conducted in Tonto Basin, including the recognition of the Miami phase. As such, the absence of large settlements during the period may be more illusory than real, as unidentified riverine settlements may have been inundated by the lake.

The subsequent Roosevelt phase is much better known, largely because of the Reclamation-sponsored projects along Theodore Roosevelt Lake carried out during the early 1990s. It is during the Roosevelt phase, dating from A.D. 1250 to 1325, that Tonto Basin had its largest prehistoric population, with the establishment of several large villages along Tonto Creek and the Salt River and a concurrent expansion of rural settlement throughout the basin. The villages, such as the Meddler Point, Schoolhouse Point (Lindauer 1996), and Livingston communities (Jacobs 1994), were composed of several clusters of aboveground masonry- and adobe-walled rooms within compounds, suggesting a more formalized control of domestic space. Clark (1995) has argued that the shift to aboveground architecture represented an indigenous development, with the compounds representing extramural space functionally equivalent to the pre-Classic period house clusters. Community integration is reflected in the appearance of platform mounds, which are found at village sites throughout the riverine zone of the lower basin. Changes in

material culture are also evident in the appearance of Pinto Polychrome and the Salado Red ceramic types.

The population expansion and increased community integration that characterized the Roosevelt phase was apparently reversed during the subsequent Gila phase (ca. A.D. 1325–1450) with the abandonment of large portions of the Transition Zone. Most of the platform mounds fell out of use, and settlement in the lower basin was focused at a small number of large, nucleated pueblos, many placed in defensible locations. This suggests an increase in conflict, or at least the perception of potential conflict, during the Gila phase. This may reflect a general trend in the basin, evidenced by catastrophic burning at many sites of the preceding Roosevelt phase (Clark and Vint 2000b; Shelley and Ciolek-Torrello 1994).

The Salado

No discussion of the Classic period in Tonto Basin is complete without considering one of the longest-standing arguments in the archaeology of the Southwest: the argument concerning the Salado. Although several competing explanations of the Salado phenomenon have been offered, all acknowledge the importance of events in Tonto Basin. Because of the existence of numerous syntheses (e.g., Ciolek-Torrello, ed. 1987; Lange and Germick 1992; Lincoln 2000; Rice 1990; Whittlesey and Reid 1982; Wood and McAllister 1980, 1982, 1984; Wood, Sullivan, et al. 1989), the finer points of the argument will not be discussed here. Owing to the importance of the Salado concept to the present project—and, indeed, all projects dealing with Classic period data in Tonto Basin—a brief summary of the major points of the Salado “debate” is warranted. For more complete treatments of the issues, the reader is directed to the sources cited below.

In brief, the Salado is a Classic period phenomenon whose most apparent archaeological signature is the presence of Roosevelt Red Ware ceramics, especially Pinto, Gila, and Tonto Polychrome; an architectural pattern dominated by rectilinear, aboveground, cobble and mud, masonry rooms contained within a compound wall; and a mortuary tradition characterized by supine inhumation and the inclusion of several ceramic vessels (Dean 2000:4). Centered on Tonto Basin, Salado elements, specifically painted ceramics, have been identified to the south as far as the Casas Grandes area of northern Chihuahua, to the east to the Mimbres region of New Mexico, to the west to Gila Bend, and to the north to above the Mogollon Rim.

Adhering to the dominant cultural-historical paradigm of the time, most early interpretations saw the Salado as a distinct cultural group. Although differing on particulars, the Salado were believed to have emerged as the result of population movements leading to a hybridization of cultural traits best reflected in the painted ceramics. Although not

the first to work in the Salado area, archaeologists from Gila Pueblo were perhaps the first to publish this idea, arguing that the Salado phenomenon was the result of an invasion of peoples from the Little Colorado and Kayenta areas to the north (Gladwin and Gladwin 1930). This was followed by Florence Hawley’s proposition of multiple migrations, first from the upper Gila River area to the east, followed by a second wave from the Little Colorado area (Hawley 1932). The individuals within this second migration brought with them the characteristic Roosevelt Red Ware ceramics.

Emil Haury’s work with Gila Pueblo, specifically his excavation at Roosevelt 9:6 (Haury 1932), provided some of the first data suggesting a Hohokam component to the prehistory of Tonto Basin. Haury argued that the basin was settled first during the Colonial period by Hohokam people from the Phoenix Basin and abandoned sometime during the Sedentary period. By ca. A.D. 1100, a migration of people from the Little Colorado River area entered the basin, bringing with them the cultural attributes that came to define the Salado. Haury believed that the Salado represented a melding of cultural elements from the Mogollon and the Anasazi that were in place prior to the recolonization of Tonto Basin.

At the heart of these early interpretations was the understanding that the Salado represented a discrete “culture,” a view reflected in the trait-list approach that typified much of the archaeological research at the time. With the advent of processual archaeology in the late 1960s and early 1970s, alternate explanations using a more diverse body of data began to appear in the literature. Migration as a causal factor in culture change fell out of favor. Attention instead turned to adaptive processes, with researchers investigating questions of environmental, social, and economic interaction across wide areas. For the next two decades, most archaeologists working in the Southwest acknowledged a close association between the Salado and the Hohokam, with many viewing the Salado simply as the Classic period manifestation of the Hohokam. In this view, Tonto Basin was no longer the “heartland” of the Salado but rather part of a broader regional adaptation with roots in the pre-Classic period Hohokam (Rice 1990). Others emphasized the development of Salado culture from the interaction of various ethnic groups in an environmentally diverse region (Ciolek-Torrello, ed. 1987; Pilles 1976; Whittlesey and Reid 1982).

Predictably, the strongly materialist focus of much of processual archaeology produced a backlash within the discipline, with critics arguing that many of the models “dehumanized” the past by minimizing the importance of the idiosyncratic decision-making processes and symbols that constitute human culture. Taking a decidedly nonmaterialistic approach to the Salado question, Crown (1994) has proposed the existence of a “Southwestern Cult,” with the Salado Polychrome ceramics serving as integrative

symbols (see also Ciolek-Torrello, ed. 1987:368–369). In this model, the Salado phenomenon crosscut cultural boundaries, because what may otherwise be considered separate ethnic groups shared a single ideology expressed materially in the painted ceramics. Other researchers have revisited the effects of migration and regional interaction as mechanisms of culture change, emphasizing the interconnectedness between the distinct culture areas of the Southwest. More recently, others have revisited the earlier migration hypothesis, arguing that Classic period (particularly late Roosevelt and Gila phase) Salado was greatly affected by the immigration of Western Pueblo groups into Tonto Basin (Clark 1995; Doelle et al. 1995; Whittlesey and Ciolek-Torrello 1992).

Protohistoric Period

The exact date the Apache and Yavapai groups entered into the region is unclear. Western Apache oral traditions hint that these groups may have resided in east-central Arizona since A.D. 1300 (Forbes 1966). Published archaeological and historical data suggest that the Athapaskan-speaking people began migrating into the Southwest around A.D. 1525 (Gunnerson 1956) and that the Western Apache had settled into their prereservation territories by the mid-1700s (Schroeder 1952). At the latest, the Western Apache were firmly established in Tonto Basin by the seventeenth century (Goodwin 1942). The Apache were not densely populated in this area; prereservation estimates indicate that the Sierra Ancha and Tonto Basin may have been inhabited by no more than 800 or 900 individuals (Stebbins 1987:51).

The Southern Tonto were comprised of one band and six additional amorphous groups called semibands. Most of the latter were merely made up of several clans claiming local origin or legendary settlement in their own territories (Goodwin 1942:35). Although all considered themselves to be Apaches, each such territorial band was autonomous (Baldwin 1965:23). The various bands and semi-bands that made up the Southern Tonto were diffusely scattered in favorable locations within their territories, organized in household groups of 12–20 individuals. The minimum residential unit was the *gowa*, which refers to both the occupants of the residence and the dwellings they occupied (Basso 1970:24). Typically a group of four to five matrilineally related households constituted a *gota*, which provided the basic organizational framework for all economic activities (Basso 1970:26; Goodwin 1942:127). Each such *gota* was associated with one particular farming locale (Baldwin 1965:91). The Mazatzal band occupied the eastern slopes of the Mazatzal Mountains, an area that includes the project area. The third, fourth, and fifth semibands occupied the Payson, East Verde, Star Valley, and Green Valley areas at the northern limits of Southern Tonto territory (Goodwin 1942:4–5). The people of the first semiband occupied the southern and

central Sierra Ancha. This group sometimes distinguished itself from the other Tonto Apache, claiming closer affiliation with their southern neighbors in the San Carlos group with whom they often interacted (Goodwin 1942:37). The second semiband, which occupied the northern Sierra Ancha and upper Tonto Creek, was composed of three related clans and one unrelated clan. Clan 15 farmed the Spring Creek area, whereas clan 16 farmed near Turkey Creek between Spring Creek and Gisela, clan 17 farmed the Gisela area, and Clan 51 farmed the junction of Tonto and Rye creeks. The sixth semiband farmed the area north of Pleasant Valley and extended their range over the Mogollon Rim (Goodwin 1942:37–42).

The Southern Tonto engaged in many economic activities, including gathering wild-plant resources, raiding, hunting, and farming (Baldwin 1965:58). The latter included both dry-farming and small-scale ditch irrigation; corn was the main crop, along with several varieties of beans and squash. Exploited wild-plant resources included mesquite, pigweed, lambs-quarter, sunflower, saguaro, manzanita, nopal, walnut, juniper, piñon, wild berries, yucca, and especially agave or mescal (Baldwin 1965). The Southern Tonto also hunted rabbits, deer, and some kinds of reptiles (Stebbins 1987:52).

Archaeological evidence of Western Apache occupation in the region is ephemeral (Gunnerson 1979), possibly because of their nomadic lifestyle and reuse of prehistoric materials (Gerald 1958; Gifford 1980; Gunnerson 1979; Schroeder 1960; Whittlesey et al. 1998). Early Western Apache groups often built their residences within the crumbled rooms of prehistoric pueblos and collected prehistoric projectile points, ground stone implements, and other artifacts for their own use (Ciolek-Torrello, ed. 1987; Ciolek-Torrello and Lange 1979:126; Gifford 1980; Hohmann and Bradley 1988; Shelley and Ciolek-Torrello 1994). Their residences, called a wickiup or *gowa*, were domed or conical-shaped structures built of a series of upright poles placed in a circle 3–5.5 m in diameter and bound together at the top at a height of 2–4 m (Baldwin 1965:91; Whittlesey and Benaron 1998:172–173). The wickiups usually had east-facing entryways. The exterior of the structure was covered with small branches in the summer and skins in the winter. Often, the foundations of these wickiups were supported by single-coursed rock rings that surrounded the base of the structure (Hohmann and Bradley 1988). In addition to wickiups, the Apache also constructed storage cellars, ramadas, sweathouses, and windbreaks (Whittlesey and Benaron 1998). Perhaps the most ubiquitous indicator of Apachean occupation are mescal pits, which were stone-lined rings up to 6 m in diameter and composed of fire-cracked rock (Mails 1974:97). The household inventory consisted of many baskets, a few ceramic vessels, gourd cups and dishes, skin bags of all sizes, manos and metates, bone awls, and fire drills (Baldwin 1965:76–77). Lithic technology involved a

generalized, rudimentary flake-core technology, a preference for white chert and obsidian (later glass) for arrow points, and the collection and reworking of prehistoric artifacts (Whittlesey and Benaron 1998:177).

American Period

In the years of Spanish and Mexican occupation of the Southwest, the Sierra Ancha remained an isolated and inaccessible region. Except for their raiding activities deep into Sonora, the inhabitants of this region were largely unknown to the outside world. Following the Civil War, the U.S. Army decided that the greatest source of Apache resistance in Arizona lay in Tonto Basin (Schreier 1992). To subdue the resistance, the Army began building outposts in the region. Fort McDowell was permanently established in 1865, and Camp Reno was established 2 years later. This instigated a period of intensive conflict with the Tonto Apache in which the Army took the offensive to the Apache in their strongholds in the Sierra Ancha (LeCount 1976:3–4; McClintock 1916:153).

By 1875, the surviving Tonto Apache were forcibly removed to Camp Grant on the San Carlos Reservation (Goodwin 1942:42–43). They were sequestered until 1898, when some petitioned to return to their former homes. By 1937, Southern Tonto lived in Payson, Gisela, and Camp Verde. Several families returned to live in Greenback Valley alongside the Conway family, which operated a large ranch in the valley. A homestead entry was filed by Henry Chilchua for 10 acres along Greenback Creek just below the Conway Ranch in 1912 (Forbes 1916). Although identified simply as “Indian” in the land classification book (Forbes 1916), he is known to have been a Tonto Chief whose clan and semi-band originated in the Greenback area (Michael Sullivan, personal communication 1998). During the early twentieth century, the Apaches traded with the white settlers and often worked with them. E. C. Conway (personal communication 1998) has stated that several Apache families resided at Greenback Valley into the 1940s and served as laborers at the ranch. The land classification book (Forbes 1916) also reveals that Ed L. Gilson, an educated Apache, filed an entry for 68.03 acres near the head of Salome Creek, claiming that he and his ancestors had held this land for about 40 years (Forbes 1916). Gilson apparently built a cabin and a number of campsites along Salome Creek (E. C. Conway, personal communication 1998).

With the pacification of the Apaches during the 1870s, Tonto Basin became safe for American settlement. Miners, Mormons, cattlemen, and ranchers entered the area. The National Homestead Act of 1862 allowed individuals to claim 160 acres of unclaimed public lands, which encouraged settlement of Tonto Basin, particularly along drainages. The vitality of these settlements was limited by the region’s remoteness, inadequate transportation links, and intermittent communication with the outside world. Starting with Reno

Road, which was originally constructed by the military in the 1860s, through the construction of the Globe-Payson Highway, and finally the construction of SR 87, the developmental trajectory of the region has always been entwined with the history of road building and transportation (discussed further in Chapter 9).

Although Tonto Basin was settled largely by cattlemen, who have had perhaps the greatest impact in molding its historical character, the federal government has played a significant role in its development. The establishment of the TNF and construction of the Theodore Roosevelt Dam were perhaps the most important government activities that affected the Sierra Ancha region. Construction projects undertaken by the CCC, which was established during the Great Depression, also had an important impact on the economic development of the region.

Numerous forest reserves were established in Arizona following the introduction of the Forest Reserve Act of 1891. This and other acts introduced in the following years were designed to promote timber production and protect watershed areas and resulted in the first efforts to manage grazing, hunting, water, and other land uses on these reserves (Dosh and Klinner 1993:37). Although grazing was not allowed on these reserves, such restrictions were not enforced, and forest lands continued to be overburdened and overgrazed. Damage to the land caused by overgrazing and other destructive activities in the severe drought of 1904–1905 made additional regulatory measures necessary. It was these measures that led to the establishment by presidential proclamation of the TNF on October 3, 1905, although some sections within its current boundaries had been reserved earlier as parts of adjacent forests (Macnider and Effland 1989:3). By 1989, the boundaries of the TNF had increased from 1,115,000 acres to 2,873,375 acres (Dosh and Klinner 1993:37; Forbes 1916; Wood, McAllister, et al. 1989).

The TNF, which contained little marketable timber, was established primarily as the watershed for Phoenix and the Salt River Project. Its primary purpose was to protect the source of water for the irrigation systems in the Salt River Valley. The flow of the Salt River was highly variable, frequently suffering from either droughts or floods. Following severe floods between 1891 and 1900 that destroyed diversion dams in the Salt River Valley, the residents of Maricopa County decided they needed a reservoir at the confluence of the Salt River and Tonto Creek to provide a reliable source of water for the vast farms of the Phoenix area (Wood, McAllister, et al. 1989; Zachariae 1991:79). The National Reclamation Act of 1902 enabled them to use money from the sale of western lands for such projects. One of the earliest results of this act was the construction of Theodore Roosevelt Dam and the inundation of a large portion of the lower Tonto Basin with a large reservoir.

To halt conflicts over the range between local ranchers and shepherders who drove their herds across the range,

the TNF marked off a sheep trail across the mountains, the Heber-Reno Driveway, and established a system of grazing allotments for the cattlemen (LeCount 1976; Zachariae 1991). Grazing fees were enacted and restrictions were placed on the number of head of cattle allowed in each allotment. Initially, TNF lands were closed to further homesteading. But under pressure from local Congressmen, Congress passed legislation allowing homesteading within the forest's boundaries in 1912, leading to a flurry of homestead applications in the Pleasant Valley, Sierra Ancha, and Tonto Basin between 1914 and 1916. It was at this time that the last ranches were established in the region, eventually being scattered throughout the mountains where sufficient water and pasturage were available to maintain a homestead. Many homestead applications were taken out but few were proven, and most reverted to U.S. Department of Agriculture Forest Service (Forest Service) control.

The CCC was established in 1933 during the Great Depression as an attempt by the government to resolve the widespread joblessness of the time. President Franklin Roosevelt requested and received from Congress permission to establish the CCC as a volunteer army that was to employ thousands of young men to construct public works and preserve natural resources. Within months of its establishment, the CCC had enrolled almost 275,000 young men, experienced workers, and veterans (Stebbins 1987:56). The CCC was open to Americans from all avenues of life. The Office of Indian Affairs estimated that a total of 88,000 men of Native American ancestry served in the CCC (Clark and Vint 2000b).

The primary projects undertaken by the CCC in Arizona consisted of improvements in forest grazing areas, roads, and recreational facilities (Clark and Vint 2000b; Merrill 1981). Although there were up to 300 different types of projects undertaken by the CCC in their 9-year history, they can be divided into 10 general categories: structural improvement, transportation, landscape, and recreation, range, wildlife and miscellaneous. The CCC also established camps on lands controlled by federal agencies such as the Forest Service or National Park Service. Many of these camps were temporary facilities, but others were more permanent (Ciolek-Torrello, ed. 1987; Stebbins 1987). After the program was terminated with the onset of World War II, these camps reverted to the federal agencies that managed the lands on which they were situated. In some cases, these agencies used the abandoned camps for their own purposes, whereas in other cases the land was reclaimed (Dosh and Klinner 1993:38).

The CCC had a tremendous economic impact on the areas within which it operated. According to the Forest Service directors of the Southwest Region, this army of volunteers accomplished the work of a generation within its brief existence (Stebbins 1987). The CCC also funded a technical staff that directed the efforts of the volunteer crews. The

CCC also employed local residents with experience in the type of project to be undertaken and to teach the enrollees and assist the technical staff (Merrill 1981:9). The economic assistance provided to its volunteers was also of great importance, especially to underprivileged minorities such as Native and Latin Americans. The CCC also played an important role in the assimilation of these underprivileged minorities into the mainstream society by providing them with opportunities to learn economic skills and English as a second language (Merrill 1981:49).

Methods: Prehistoric Sites

In this section, we present a brief summary of the treatment plan developed prior to fieldwork and the methods we followed during fieldwork. This section focuses on the investigation of prehistoric sites; the methods used during our investigation of the Globe-Payson Highway are discussed separately in Chapter 9.

Treatment Plan

As outlined in the treatment plan (Ciolek-Torrello and Klucas 1999), we planned two phases of fieldwork. During the first phase, our goals were to assess the nature of the cultural remains at the individual sites, verify the site boundaries and their relation to the ROW, identify those sites that have the greatest potential to contribute relevant data, and determine the level of effort needed for the second phase. To accomplish these goals, we proposed several strategies, including controlled surface collection, hand-stripping of features visible on the surface, mechanical trenching, and digging test pits in probable habitation areas. We expected that the research potential of some sites would be exhausted during this initial investigation, and therefore no additional work would be necessary. During the second phase, we planned to expand the excavation of a sample of features identified during the first phase. Site-specific data recovery methods were developed for the sites investigated during the second phase. For more-detailed information, see the treatment plan (Ciolek-Torrello and Klucas 1999).

Data Recovery

In the remaining portion of this chapter we present a discussion of the general goals of data recovery during the CCP and the methods used to meet these goals. The field methods used generally followed those proposed in the treatment plan

(Ciolek-Torrello and Klucas 1999). Any changes to the treatment plan were implemented only after consultation with representatives from ADOT and TNF. Our field methods moved from the general to the specific, initially delineating the extent of the cultural deposits at the project sites and ultimately moving to the excavation of individual features.

Phase 1

The primary goals of the first phase of data recovery were reconnaissance and discovery, which entailed the delineation of the spatial extent of the project sites and assessing their potential for the presence of subsurface cultural deposits within the ADOT ROW. This was done through the systematic collection of artifacts from the surface and the mechanical and hand excavation of a series of test trenches. Analyses of the collected artifacts also allowed for a refinement of each site's occupational history. In some cases, these activities effectively exhausted the research potential of the portion of a site that was within the ROW; no further work at these sites was recommended. For the remaining sites, data collected during Phase 1 were used to determine the level of effort required to complete mitigation.

Site Mapping and Brushing

The first task of the mapping process entailed the creation of individual site maps that showed the location and the relationship of the site to the ADOT ROW. These data were then used to create a base map for the entire project. As a means of facilitating spatial control, we began by establishing a grid over the project area. To enable us to tie our work into ADOT's project maps and plans, the grid was based on the Universal Transverse Mercator (UTM) designations for the project area, with grid corner designations shortened to the last four digits of the UTM designation. Elevations were calculated in meters AMSL. Permanent site datums in the form of rebar stakes were then set at each site. These site datums were later used to establish all additional reference points (northings, eastings, and elevations) at the sites.

Mapping was followed by the clearing of brush within the ROW. In order to limit the impact of this activity on the spatial distribution of surface artifacts, much of the brushing was done by hand. As stated in the treatment plan, we hoped to completely clear-cut sites within the ROW. However, this proved costly and unnecessary for most of the sites. At the Vegas Ruin and the Crane site, we clear-cut all areas containing exposed architecture and then selectively cleared brush in areas with high concentrations of surface artifacts. At Site 41/583, all of the large brush was cleared. At the remaining sites, clearing was limited to areas within the ROW with high densities of surface artifacts. Outside of the ROW, trees and large bushes were trimmed on an ad hoc basis to allow the total station to acquire the prism. These minor changes

to the treatment plan were agreed to by TNF and ADOT archaeologists at the September 18, 1999, project meeting.

Surface Artifact Collection

Following the creation of the base site maps and the establishment of the grid, collections were made of the surface artifacts for each of the project sites. The goals of this operation were twofold. First, the surface artifact collection provided important chronological data to assist in formulating the Phase 2 data recovery plan. Second, for those sites consisting exclusively of surface artifact scatters, or for which only peripheral portions were contained in the ROW, surface artifact collection was designed to exhaust the research potential of the site, allowing us to concentrate our Phase 2 efforts at those sites with greater research potential. In such cases, greater attention was given to maintaining horizontal control during the collection process.

Several sampling strategies were used based on the goals of the collection process and the density of artifacts observed on the surface during the initial reconnaissance. At sites with low artifact densities and at which we anticipated completing data recovery during Phase 1, an attempt was made to collect all surface artifacts from within the ROW. As stated in the treatment plan, we aimed to collect a 100 percent sample from sites expected to produce less than 5,000 surface artifacts. At Site 103/2061, all surface artifacts were point-located, with positions in three-dimensional space recorded with the total station. At the larger sites, surface artifacts were collected from within 5-by-5-m collection units tied to the site grid. A third technique was used at the Vegas Ruin and the Crane site, both habitation sites that were to be the focus of the bulk of the Phase 2 activities. We expected to recover far more than 5,000 surface artifacts from these sites, so in addition to placing 5-by-5-m collection units in areas of surface artifact concentrations, we also collected a judgmental sample of ceramic artifacts from along a shallow ADOT-constructed erosion-control feature that bisected the sites. Although this sample did not provide spatial data, we hoped that these diagnostic artifacts could be used to estimate the temporal parameters of the sites. This departure from the treatment plan was also discussed in the September 18, 1999, project meeting. Outside of the ROW, only diagnostic artifacts and formal tools were point-located and collected.

Subsurface Evaluation

Following the collection of surface artifacts, we evaluated the potential for buried cultural deposits within the ROW through a two-part strategy involving both mechanical and controlled hand excavations. This allowed for the collection of data on feature locations and subsurface artifact densities that were then used to assist in determining the appropriate level of effort for Phase 2. Locations of excavation units,

both mechanical and manual, were selected judgmentally, with priority given to those portions of the sites with high artifact concentrations and the highest potential for soil deposition. Specific sampling strategies and unit locations are presented with the individual site descriptions. Mechanical excavation entailed the use of a backhoe, with trenches excavated to a maximum depth of 5 feet. For all sites except the Vegas Ruin, these trenches were excavated well into the sterile substrate. The depth of the cultural deposits at the Vegas Ruin, however, exceeded this arbitrary 5-foot limit in several areas. As a result, evaluation of these areas could not be completed until Phase 2. Mechanical excavation was supplemented at several sites by the excavation of screened test pits in areas of suspected buried cultural deposits. The locations of these test pits were selected to achieve two primary objectives. First, the excavations allowed for a more effective assessment of the areal extent and integrity of the buried deposits. Second, data from these test excavations were used to help confirm or reject hypotheses pertaining to the kinds of features present at the site. Finally, at Site 404/2011, the Vegas Ruin, and the Crane site, wall trenches were dug around the visible cobble-adobe foundations in an effort to delineate the extent of the surface architecture.

Surface Screening

One of the inherent difficulties in investigating surface artifact scatters concerns the effectiveness of the collection strategy. This problem is especially acute for sites that are on dynamic surfaces subject to both continuing depositional and erosional processes. In such cases, it is likely that the composition of even a 100 percent collection strategy would be different following such natural events as a heavy rain. As stated in the treatment plan, we planned to excavate a number of 1-by-1-m test pits in arbitrary 10 cm levels and screen the fill through ¼-inch-mesh hardware cloth. This procedure was followed at all but three sites. At the Vegas Ruin, the Crane site, and Site 41/583, we took the opportunity during Phase 1 to explore a methodological issue raised by our lithic and faunal analysts. The analysts expressed their concerns that our recovery strategy would miss small bones and microdebitage, thereby skewing our sample and limiting the analytical potential of the collections. To mitigate this problem, we dug a 2-by-2-m test pit within one of the established 5-by-5-m surface collection units at each of the sites listed above. We dug the test pits to a depth of 3–5 cm and screened the fill through ⅛-inch-mesh hardware cloth, which produced about 4 liters of screened material.

Phase 2

Phase 2 included the bulk of our data recovery activities, which were geared toward excavating a representative

sample of the features at each of the project sites. At most sites, however, we excavated all identified features within the ROW, because the feature population within the ROW was so small. This was not the case at the Vegas Ruin, where hundreds of features were identified in the ROW. Selecting a sample of features for excavation at the Vegas Ruin required obtaining as accurate an inventory of features as possible. This was accomplished by removing as much of the mixed deposits overlying the sites as possible. In most cases, this was done mechanically, with the aid of a backhoe. A small number of selected areas were hand stripped. During this procedure, a judgmental sample (i.e. diagnostic artifacts, rim sherds, painted sherds, and complete tools) of artifacts was collected, and all features were marked and registered in the provenience log.

Feature Excavation

Feature location and identification was followed by the controlled excavation of a sample of the different feature types present at the project sites. Features were selected for expanded excavation based on their perceived ability to provide data to address the research questions discussed in the treatment plan (Ciolek-Torrello and Klucas 1999:17–22). Our initial goal was to excavate all architectural features completely. If sampling was deemed necessary, we were to concentrate on those architectural features that burned as part of the abandonment process. Extramural features were also selected based on their potential to provide data relevant to the research questions. Priority was given to features likely to provide data on subsistence, such as hearths and roasting pits.

Architectural Features

The investigation of the architectural features began with the collection of a controlled sample of the fill artifacts, accomplished through the excavation of a test pit placed within the suspected interior of the structure. The goals of this procedure were twofold. First, the test-pit excavation produced artifact collections that were more directly comparable. Second, the test pits facilitated the removal of the mixed fill deposits by exposing the depositional history of the features. This was especially important for those features not bisected with the backhoe. The dimensions of the test pit depended on the size of the feature. In most cases, the test pits measured 1 by 2 m; a few of the larger structures were tested with 2-by-2-m units. The test pits were excavated in a series of arbitrary, 10-cm levels, stopping when the floor was exposed. All of the excavated fill was screened through ¼-inch-mesh hardware cloth. Flotation samples were also taken from each level. If not completed during Phase 1 of fieldwork, wall trenches were dug around the visible architecture to determine the number of courses and extent of the rooms.

Following the excavation of the test pits, the remaining fill within the structures above an arbitrarily defined 10-cm “floor-fill” level was removed without screening, and a selection of artifacts was judgmentally sampled (e.g., diagnostic artifacts or complete tools that were observed). The sediments composing the floor-fill level were screened through ¼-inch-mesh-hardware cloth. The precise location of all artifacts discovered in contact with the floor surface was also recorded.

Extramural Features

The treatment of extramural features depended on their size and the nature of their fill deposits. Larger features were excavated in arbitrary levels, with the fill screened through ¼-inch-mesh-hardware cloth. Flotation samples were taken from each unit. The fill from the smaller features was often collected in its entirety as a flotation sample, with artifacts retrieved during the flotation process.

Feature Mapping

During excavation, a series of field drawings was created for each feature. Minimally, these drawings included both plan views and cross sections as well as the location of all excavation units associated with the exploration of the feature. For those features with complicated depositional histories, profiles were also drawn. Spatial control was achieved during this process through the use of a set of mapping nails placed by the excavator. These points were then used to set a baseline for the features from which measurements were taken. Minimally, two of these points were used, although larger features occasionally required additional points. The locations of the mapping nails were also plotted on the feature drawings. Following the completion of the hand drawing, the locations of the mapping nails were calculated with a total station. Field drawings were subsequently digitized and the mapping nails used to fix the features in space. The grid coordinates reported in this volume are based on the UTM coordinates of each feature. Our grid coordinates correspond to the last four digits of the UTM northing coordinate and the last 3 digits of the easting coordinate.

Burial Identification and Mitigation

As per the burial memorandum of agreement (BMOA) negotiated between TNF and the concerned Native American tribes, a good-faith effort was made to identify and remove all human remains and associated funerary items within the ROW. This entailed the mechanical removal of over 1.6 m of overburden within the portion of the two main habitation sites, the Vegas Ruin and the Crane site, contained within the ROW. We also mechanically stripped selected areas of AZ

U:3:408/2015, at which an isolated inhumation was identified during Phase 1, and the Rock Jaw site (AZ U:3:407/2014), a pre-Classic period farmstead. It was necessary to carry out these stripping procedures both deeper and more extensively than proposed in our original treatment plan, because the outlines of many burial pits could not be defined until at least 1.5 m of fill had been stripped. This change was made in consultation with TNF, ADOT, and the project peer reviewer, Jeff Clark, in January 2000. As discussed in our monthly report dated March 3, 2000, several burial pits at the Vegas Ruin also extended past the eastern edge of our stripping area and beneath the existing SR 188 roadbed. We terminated our excavation for safety reasons several meters west of SR 188 and left several apparent burial pits under the roadbed, following advisement from ADOT (Klucas 2000).

Once identified, burials and their associated funerary objects were completely exposed and removed. Although the treatment plan was very detailed and specific concerning the treatment and disposition of human remains and associated funerary objects, it proved insufficient in dealing with the complex discovery situation at the Vegas Ruin and the Crane site, where we encountered multiple graves, reinterments, and burial chambers excavated deep into the sides and bottoms of pits. For example, the treatment plan did not specify the method of excavation of suspected burial pits, especially in a situation where we encountered hundreds of pit features, only some of which were burials, and where the actual location of the skeletal remains and associated funerary items were often inconsistent with the outline of the pit. Hand excavation was our preferred method, and we limited the use of the backhoe whenever possible. Often, however, it was not immediately clear whether we had encountered burial pits or other types of features such as borrow pits. In these cases, it was necessary to continue mechanical stripping until a definite burial pit was defined. This was often indicated by remains of cribbing that covered a lower burial shaft, or burial goods resting on cribbing or on benches above the lower shaft.

When excavators identified the lower burial shaft or otherwise determined that a burial was present, we ceased mechanical excavation and proceeded to excavate by hand, screening all remaining fill through ⅛-inch-mesh hardware cloth as specified in the treatment plan (Ciolek-Torrello and Klucas 1999:33). If the pit was immediately recognizable as a burial, however, we were able to screen the upper fill as well. In seven instances at Vegas Ruin, excavators probed the upper fill of a suspected burial feature by hand until they encountered clear evidence of a burial. They then removed the remainder of the upper fill mechanically, collecting any observed artifacts. Only the fill directly around the burial was screened with ⅛-inch mesh in these instances. It is important to note that this strategy is consistent with that used by DAI in identical circumstances during the TCAP project (Hall et al. 2001).

We intended to expose and document each burial within a single working day, following the guidelines in the treatment plan. Because of the great depth of many of the burial pits, however, the amount of time needed to excavate the highly consolidated clays and sediments and large numbers of burial goods, it was rarely possible to expose, document, and remove each burial in a single day. To minimize security risks, we opened each pit and recorded and removed all visible burial furniture in a single day and took all the artifacts to our laboratory in Payson. The human remains themselves were covered, recorded, and removed on the following day by trained palaeoanthropologists from Bioarch, under contract with SRI. Once excavated, human remains were wrapped in cotton cloth and stored in curation boxes. As stipulated in the BMOA, all artifacts from the burials were stored with the human remains in our secure facility in Payson. For onsite security, we hired a guard to be onsite during all daylight hours when the crew was not present. In addition, we alerted local law enforcement agencies to watch the sites during their routine patrols of the area.

Analyses

All recovered materials were initially processed in the field at our field laboratory in Payson. The materials were then transported to SRI's laboratory in Tucson for further, more-detailed processing. Laboratory processing was carried out following procedures established in SRI's laboratory manual, which is based on repository requirements of ASM and the Central Arizona Project Repository (CAPR). Further details on laboratory processing, curation, and repatriation of human remains are provided in the treatment plan (Ciolek-Torrello and Klucas 1999). The analyses of recovered materials—ceramics, lithics, vertebrate faunal remains and bone tools, shell, paleobotanical materials, and human remains—closely followed procedures in the treatment plan. In-depth methodological and procedural discussions of the various analyses are provided with individual analyses in Volume 2, although chronometric analyses are presented in Volume 3.

Volume Organization

This volume presents the results of fieldwork at 10 sites along SR 188. In Chapter 2, we discuss the 3 prehistoric sites whose research potential was exhausted during the first phase of the project. In the following chapters, we discuss the 6 prehistoric sites that were further investigated during the second phase. We describe the excavated features in detail and provide general site summaries. Chapter 9 is devoted to the only historical-period site in our project area,

the Globe-Payson Highway. In Chapter 9 we discuss our research methods, the historic context of the highway, and results of our field investigations.

Note on Site Designations

All of the project sites carry multiple designations. These include registration numbers conforming to systems managed by TNF and the ASM, as well as project-specific recording systems used by the various institutions and cultural resource management firms that have conducted work in the area. The multiplicity of site designations can result in confusion, especially when referring to sites already described in the literature under other designations. As a means of reducing this confusion, we use the following conventions in this report. In addition, we gave names to several sites to simplify our narrative descriptions and interpretive discussions.

Most sites are described by a composite number incorporating both the TNF and ASM designations. All of the project sites are located in the Tonto Basin Ranger District of TNF, which uses the designation AR-03-12-06. Sites within this district are assigned sequential site-specific identifiers appended to the Tonto Basin District number. The project area also lies in two site-survey quads used by ASM—AZ U:3 and AZ O:15. For the sake of brevity, we use a variety of abbreviations throughout the report. In section headings and the initial reference to a site in any chapter, a composite number that includes the complete ASM designation followed by the site-specific TNF identifier is used—for example, “AZ U:3:404/2011.” We use the complete ASM designation in these instances in order to distinguish between the two quads. The TNF prefers that the district designation also should be used in the abbreviated site identifier. Because all the project sites are in the same district (designated as 06-2011 for the above site), however, we omitted the district designation to simplify the identifier. The “ASM/TNF” suffix is not used for site designations in the remainder of this report. For named sites, the name precedes the number in the initial mention and section headings; only the name is used in subsequent references—for example, “the Vegas Ruin (AZ U:3:405/2012)” and then “Vegas Ruin.” Subsequent references in the text to unnamed sites include only the site-specific number—for example, “Site 404/2011.” For the title and body of tables and for figure captions, named sites are identified by the name and the site-specific number (e.g., Vegas Ruin [405/2012]); for unnamed sites, we use only the site-specific number (e.g., “Site 404/2011”). A concordance of the various site designations for the CCP sites is presented in Table 1.

CHAPTER 2

Phase 1 Sites

Eric Eugene Klucas

The Treatment Plan developed by SRI for the CCP (Ciolek-Torrello and Klucas 1999) called for a two-phase investigation of the project sites. During Phase 1, data recovery operations were geared toward assessing the site's potential for providing relevant data for the investigation of the proposed research questions. In order to make this assessment, data on occupational history, artifact densities, and the extent of subsurface cultural deposits contained within the ROW were required. These data were gathered by collecting samples of the surface artifacts, hand excavating a selected number of screened units, and mechanically excavating a series of backhoe trenches. These activities effectively exhausted the research potential of three of the project sites described in this chapter, precluding the need for expanded data recovery activities during Phase 2.

AZ U:3:406/2013

Site AZ U:3:406/2013 is located to the east of the current alignment of SR 188 on the first terrace above Tonto Creek at an average elevation of 780 m (2,560 feet) AMSL (Figure 8). The site covers approximately 3,570 m², and an estimated 35 percent of this area is contained within the ADOT ROW. The landform on which the site is situated is generally flat, with a number of small, east-west-trending rills at the eastern margin of the site. Many of these rills develop into larger arroyos as they approach Tonto Creek. Site 406/2013 was initially described as encompassing a low- to moderate-density artifact scatter with two discrete concentrations (Hoffman 1991:41). The presence of areas of ashy soil and a small number of buff ware sherds on the site surface indicated that the presence of subsurface cultural

deposits, although unlikely given the observed artifact densities, could not be ruled out. This assessment was reinforced by the identification of an area of deeply buried, ashy soil exposed by one of the small drainages east of the ROW that indicated that buried cultural deposits were likely to exist east of the existing ROW. Data recovery at Site 406/2013 began with the collection of all surface artifacts from within the ROW. As a means of maintaining horizontal control, collections were made from a series of 65 contiguous 5-by-5-m units. Although several of the collection units were completely obscured by brush, the low artifact density across the site suggests that few, if any, artifacts were missed. Surface artifact collection was followed by the mechanical excavation of two trenches, totaling approximately 95 linear meters, as a means of assessing the potential for the presence of buried cultural deposits. These excavations revealed that there were no buried cultural deposits within the ROW. The absence of subsurface cultural deposits coupled with the collection of all surface artifacts from within the ROW effectively exhausted the research potential of the site, precluding the need for expanded data recovery operations during Phase 2.

A total of 166 lithic artifacts from surface contexts were collected and analyzed. Of these, the vast majority were classified as unmodified flakes and shatter. A small number of modified flakes and 2 hammer stones were also collected. The ceramic collection consisted of 289 ceramic sherds, also exclusively from surface contexts. Of these, 88 percent were classified as brown plain. The remaining sherds were evenly divided between brown corrugated, red plain, and Salado Red ceramic types (see Volume 2, Table 3, for concordance between SRI pottery types and the Tonto National Forest typology [Wood 1987]). Fifteen sherds were painted, of which 8 were classified as indeterminate Tusayan White Ware and 1 as indeterminate Little Colorado White Ware.

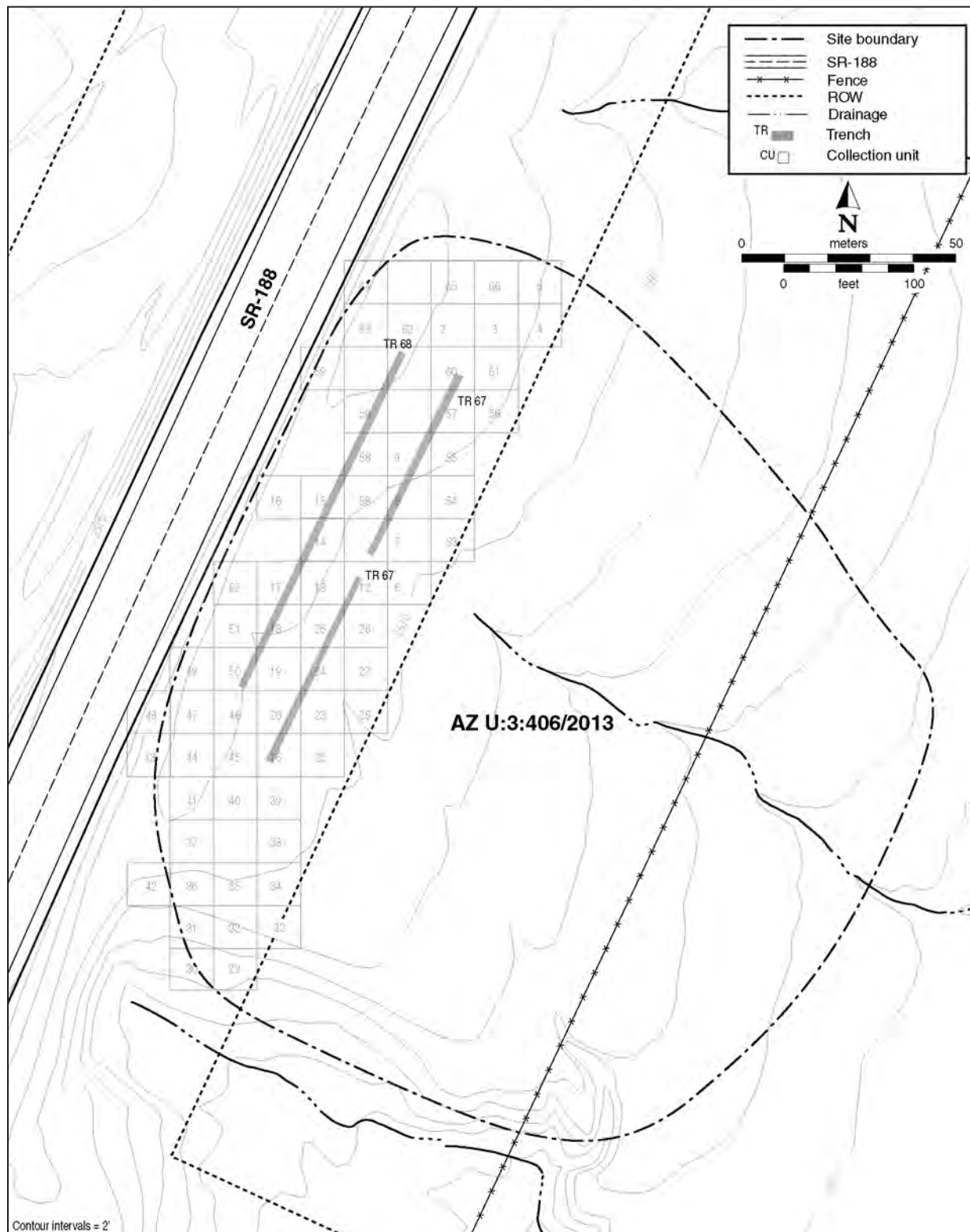


Figure 8. Site map of Site 406/2013.

AZ U:3:409/2016

Site AZ U:3:409/2016, initially described as a low-density artifact scatter with an associated small masonry structure (Hoffman 1991:49), is located east of the current alignment of SR 188 on the colluvial terrace immediately below the ridge containing the Crane site (AZ U:3:410/2017) at an approximate elevation of 780 m (2,560 feet) above mean sea level (AMSL) (Figure 9). The proximity of Site 409/2016 to the Crane site suggests that they may best be characterized as a single site. Site 409/2016 covers approximately 638 m² and is completely contained within the ADOT ROW.

Phase 1 operations at Site 409/2016 entailed the collection of all surface artifacts from within the ROW. As a means of maintaining horizontal control, collections were made from a series of 58 contiguous 5-by-5-m collection units. Surface artifact collection was followed by the excavation of a single 15-m-long backhoe trench that revealed no buried cultural deposits, thus supporting the assessment that the portion of the site within the ROW was entirely surficial in nature. The possible masonry structure described by Hoffman could not be relocated.

A total of 7 ceramic sherds, all brown plain, and 29 lithic artifacts were recovered from surface contexts at Site 409/2016. The lithic collection reflected informal and limited tool production.

AZ O:15:103/2061

Site AZ O:15:103/2061 is located to the northeast of the current alignment of SR 188 opposite Jakes Corner. The

site is located at the edge of a flat terrace above Hardt Creek at an elevation of 859.7 m (2,820.7 feet) AMSL (Figure 10). The site covers more than 400 m², and an unknown portion extends onto private property outside of the project ROW. The site was initially characterized as a surface artifact scatter with several rock alignments that may have represented masonry structures (Hoffman 1991:36). The surface artifacts identified during the initial survey included a reworked Pinto projectile point, suggesting that the site may have contained an Archaic period component (Hoffman 1991:35–37). This artifact, which was not collected during the survey, could not be relocated.

Following brush removal, Phase 1 operations at Site 103/2061 began with the collection of all surface artifacts from the portion of the site within the ROW. Given the low density of artifacts within the portion of the site contained in the ROW, the point locations of all collected artifacts were recorded with a total station. Surface artifact collection was followed by the excavation of a single backhoe trench and the excavation of three 1-by-1-m test pits in areas of relatively high artifact concentration. These activities confirmed the assumption that the portion of Site 103/2061 within the ROW was surficial in nature and that the collection of surface artifacts effectively exhausted the site's research potential.

A total of 131 lithic artifacts were recovered from surface contexts at Site 103/2061. Most of these reflected stone-tool production and included hammer stones, cores, unmodified flakes, modified flakes, and shatter. A single projectile point of an Archaic period type made from Hardscrabble Mesa dacite was collected by Greg Woodall of ARS prior to SRI's field operations. The small ceramic collection consisted of 1 brown plain sherd, 2 red plain sherds, and 1 Salado Red Corrugated sherd.

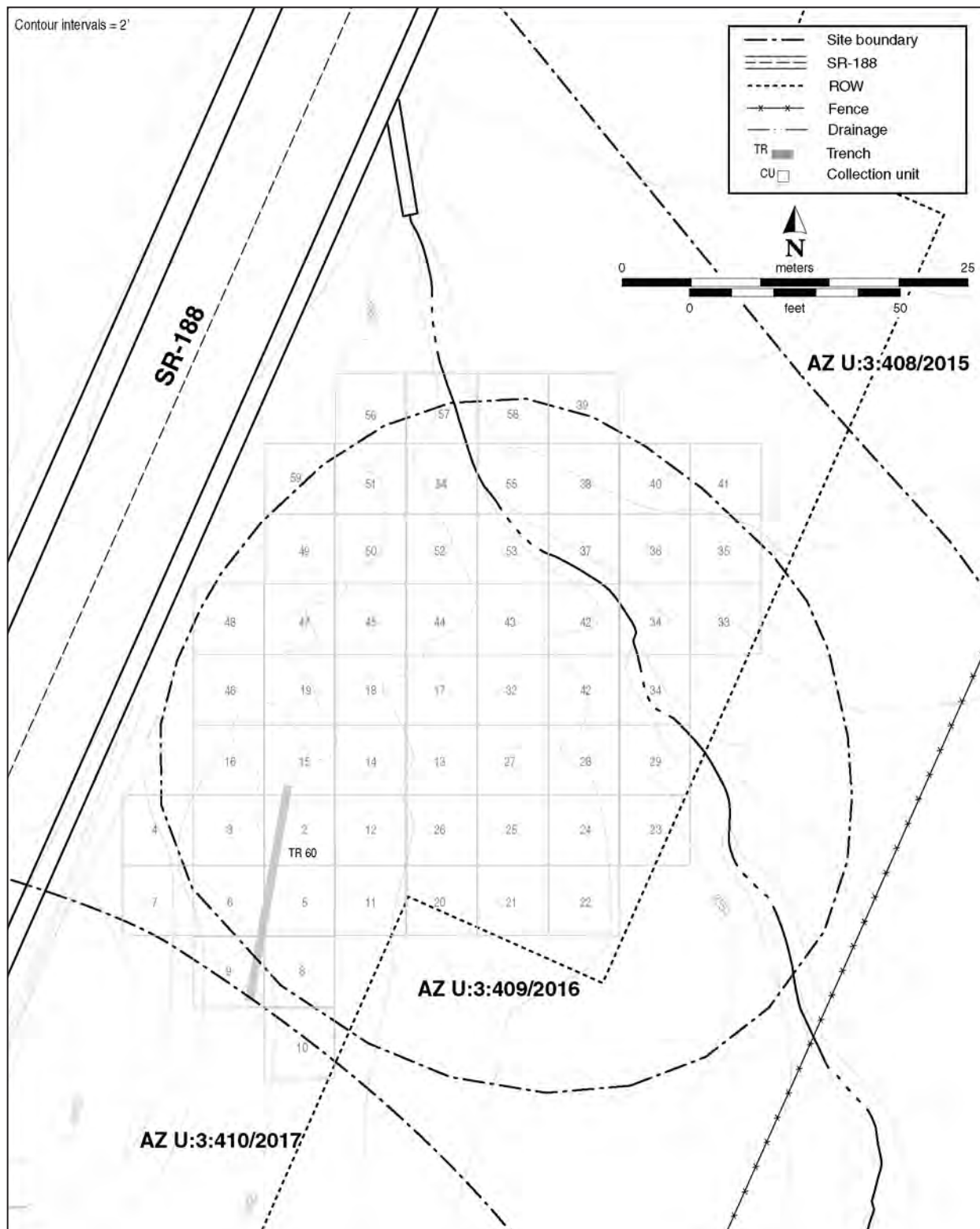


Figure 9. Site map of Site 409/2016.

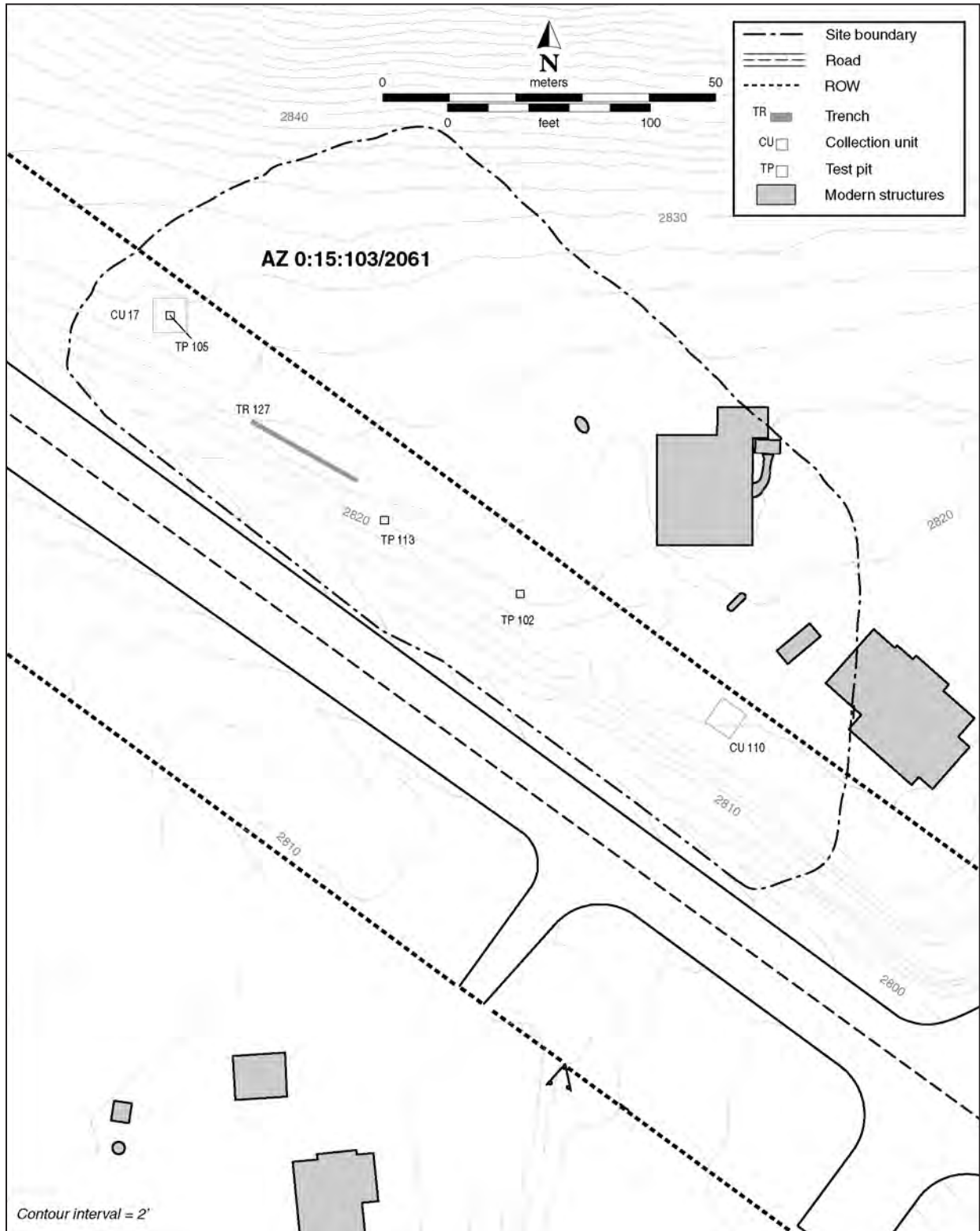


Figure 10. Site map of Site 103/2061.

AZ O:15:41/583

Robert Wegener and Eric Eugene Klucas

Site 41/583 consists of a limited-activity plant-processing locality at the northern end of the project area, approximately 100 m southeast of the Ushklish Ruin (AZ O:15:31 [ASM]), a multicomponent site composed of a Colonial period hamlet and a smaller Classic period habitation component (Haas 1971; Hoffman 1991). The portion of Site 41/583 within the ROW encompasses a large *horno* surrounded by the debris of roasting activities and a moderate scatter of surface artifacts. The site is situated northeast of the current alignment of SR 188 near the terminus of a broad ridge above Hardt Creek at an elevation of approximately 866 m (2,840 feet) AMSL (Figures 11 and 12). Two small drainages approximate the eastern and western edges of the site. The ridge is composed of a series of colluvial and alluvial sheetwash deposits overlain by a thin anthropogenic deposit that represents the cultural horizon at the site. Test excavations conducted during Phase 1 revealed that much of the eastern portion of the site is covered by a thick layer of disturbed sediments cutting across the easternmost of the two small drainages, diverting the runoff to a small ditch running parallel to the highway. It is likely that this disturbance reflects erosion control efforts by ADOT.

Site 41/583 was initially characterized as a small habitation locus covering approximately 893 m², of which an estimated 45 percent was contained within the ROW. Given its proximity to the Ushklish Ruin, it is possible that Site 41/583 may have been a locus of that site. Following the initial survey, the site was characterized as encompassing a single masonry structure and an associated artifact scatter (Hoffman 1991:33–35). An artifact scatter that was described as being located northeast of the ROW fence could not be relocated. Despite the presence of the possible structure, the surveyors suggested that the probability of subsurface cultural deposits within the ROW was low.

Phase 1

Phase 1 operations began with the collection of all surface artifacts within the ADOT ROW. Horizontal control was maintained through the use of 17 contiguous 5-by-5-m collection units (see Figure 11). Surface collection was followed by the excavation of 63 linear meters of backhoe trenches placed parallel to the ROW and the hand excavation of 3 test pits as a means of assessing the potential and extent of subsurface cultural deposits at the site. At the end of Trench (TR) 45, we discovered a large *horno* and an associated scatter of ash, charcoal, and artifacts, the latter of which probably resulted from the cleaning of the roaster following its use. In addition to the *horno*, an ashy stain interpreted as a possible pit structure was identified in backhoe-excavated TR 49.

A small number of painted sherds were identified among the ceramic artifacts collected during Phase 1 at Site 41/583. These included 17 sherds identified as Hohokam Buff Ware, 13 sherds of indeterminate Tusayan White Ware, and 4 sherds of indeterminate Cibola White Ware. The Hohokam Buff Ware sherds identified to type included 1 Santa Cruz Red-on-buff and 2 Sacaton Red-on-buff. These data suggest a pre-Classic period date for Site 41/583, which would be roughly contemporary with the primary habitation component at the Ushklish Ruin. A single archaeomagnetically derived date of A.D. 1010–1315 (dated against SWCV595; LaBelle and Eighmy 1997) (Appendix A, Table A.1) was obtained from the Feature 1 *horno*, suggesting a later, Classic period use of the site.

Phase 2

Phase 2 operations at Site 41/583 centered on the excavation of the *horno* (Feature 1) and the exploration of the possible pit

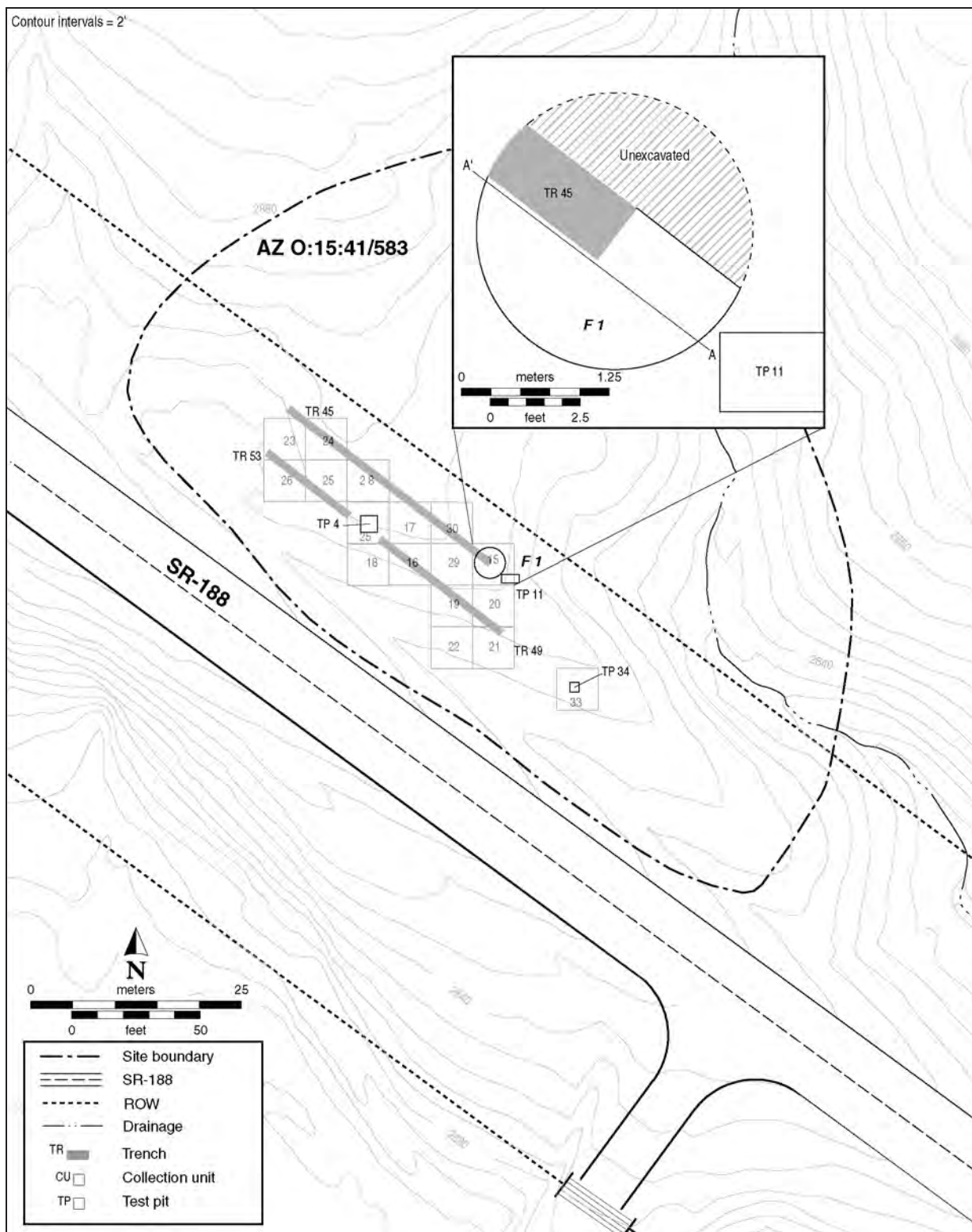


Figure 11. Site map of Site 41/583 with plan view of Feature 1 *homo*, inset.



Figure 12. Overview of Site 41/583.

structure. Excavation of the latter feature revealed that it was simply a large area of disturbed soil, probably reflecting the activities of a burrowing animal. Feature excavation was followed by the mechanical stripping of approximately 430 m² to ensure that all cultural features within the ROW had been identified. Although no additional features were identified, the stripping operation allowed us to fully define the extent of the rake-out deposits associated with Feature 1.

Feature Descriptions

Feature 1

Feature type: *horno*

Location: This feature was discovered at the southeastern end of TR 45.

Grid coordinates (m): N 3432.6, E 296.6

Date: Sedentary or Classic period, based on ceramics

Elevation: The originating elevation of 868.0 m (2,847.7 feet) AMSL corresponds to the modern ground surface.

Depth: 0.80 m

Dimensions: about 2.80 m north–south by 2.50 m east–west

Excavation Methods

The western end of the *horno* was discovered in profile during the mechanical excavation of TR 45 (Figures 13–15). The surface associated with Feature 1 rested 3–10 cm below the modern ground surface. The portion of the feature preserved south and east of the backhoe trench was excavated in four 20-cm levels. Sixteen-liter flotation samples were collected from Levels 1–3; the fill from Level 4 (the basal level) was collected in its entirety as a flotation sample. The rake-out accumulation on the eastern side of the *horno* was further sampled through the excavation of a 1-by-2-m control unit, designated Test Pit (TP) 11. Six 10-cm levels were removed from TP 11, and 4-liter flotation samples were collected from Levels 2 to 6.

Stratigraphy

The feature fill consisted of up to 80 cm of very dark, grayish brown sandy loam surrounding thousands of fire-cracked rocks. This fill was uniformly ash enriched, contained numerous charcoal fragments, and exhibited Stage I carbonate development in the form of coatings beneath clasts and numerous fine filaments.

Construction Details

Roughly in plan view, the upper 60 cm of the feature had 35°–70° walls. The lower 20 cm of the feature was vertical,



Figure 13. Photograph of Feature 1 horn, Site 41/583, view south, prior to excavation.

terminating at a flat bottom, where a large fire-cracked metasedimentary cobble was placed. This large cobble likely functioned to retain heat during the roasting process. The walls and bottom of the feature exhibited a 2–10-cm-thick rind of oxidized soil, indicating that the feature had been repeatedly used and that extremely high temperatures were achieved.

Associated Artifacts

Ceramic sherds were common throughout the fill of Feature 1; brown plain ceramic types predominated. Some indeterminate Tusayan White Ware sherds and one Cibola White Ware sherd were collected, along with a small number of buff ware sherds identified as either Santa Cruz or Sacaton Red-on-buff. The lithic collection included the fragments of three manos, two metate fragments, and three projectile points, as well as numerous utilized flakes and debitage. A few sherds recovered from the rake-out appeared to be burnt. The excavators also noted charcoal and a high percentage (65–75 percent) of fire-cracked rock in the *horno* fill, which further supports our interpretation of this feature.

Botanical Remains

Flotation samples collected from the *horno* contained charcoal from both juniper (*Juniperus* sp.) and mesquite (*Prosopis* sp.) species that likely served as the primary fuel source.

The botanical record is somewhat more equivocal on what plant species were prepared in the *horno*. Several charred seeds were recovered from the flotation samples. Represented species included manzanita (*Arctostaphylos* sp.), vetch (*Astragalus* sp.), tansy mustard (*Descurainia* sp.), hedgehog cactus (*Echinocereus* sp.), and globe mallow (*Sphaeralcea* sp.). A single charred seed of little barley (*Hordeum pusillum*), a likely domesticate, was also recovered. In addition, a charred leaf base of an agave (*Agave* sp.) was also recovered. The pollen record derived from samples collected from Feature 1 exhibited a similar diversity of species, although it was dominated by grasses and cheno-ams. Unlike the macrobotanical record, the pollen record contained evidence of maize (*Zea mays*) use as well.

Faunal Remains

Numerous burnt and heavily fragmented bones were recovered from the fill of Feature 1. Of those that could be assigned to species, most were identified as rabbits. A small number of bone fragments from deer-sized species were also collected.

Chronology

A single archaeomagnetically derived date of A.D. 1010–1315 (dated against SWCV595; LaBelle and Eighmy 1997) was obtained from the *horno* (see Table A.1). Temporally diagnostic ceramic artifacts recovered from the fill of the *horno*

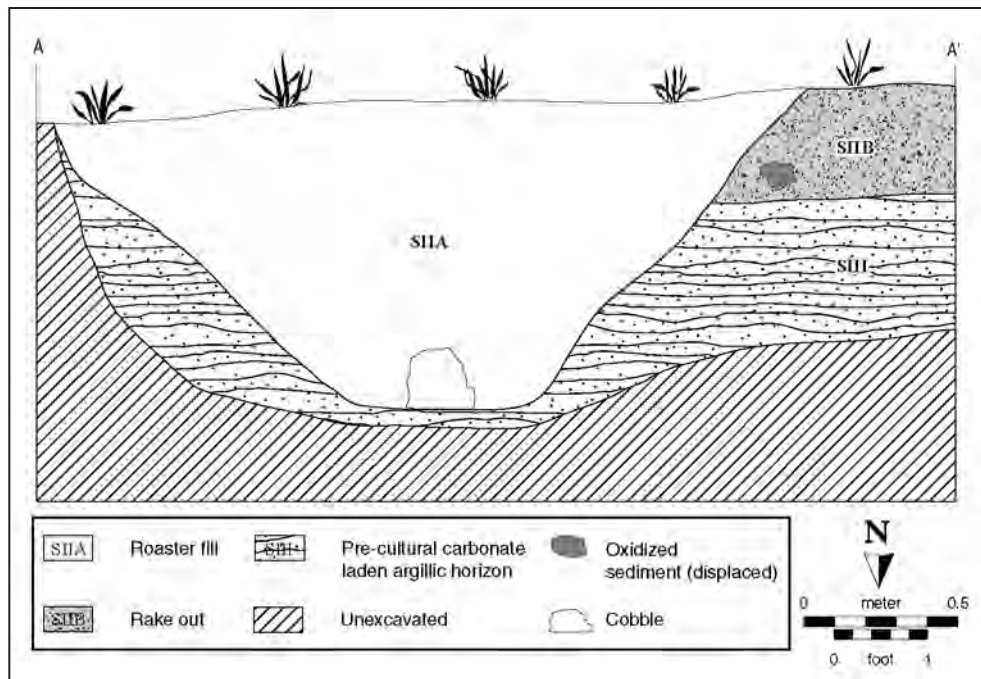


Figure 14. Profile of the Feature 1 *homo*, Site 41/583, view south.



Figure 15. Photograph of Feature 1 *homo* and Trench 45, Site 41/583.

suggest a pre-Classic period date, implying that the ceramic artifacts were not associated with the use of the feature.

Associated Features

There were no associated features.

Site Summary

Keeping in mind that a large portion of the site extended beyond the ROW, Site 41/583 is best described as a food-processing locale, perhaps associated with the nearby Ush-

klish Ruin. Activities centered around a large *horno* that is likely to have been used for plant processing. The size of the feature suggests bulk processing, and agave was the most likely product. The temporal discrepancy between the ceramic collection and the archaeomagnetically derived date from the Feature 1 *horno* suggests that the site was occupied during both the pre-Classic and the Classic periods, much like Ushklish. The diversity of artifacts recovered from the fill of the *horno*, similar in kind to a typical midden deposit, suggests that a much wider range of activities were carried out in the vicinity of the feature. The presence of a habitation component at the site therefore cannot be discounted, although none could be identified within the ROW. It is also possible that the habitation refuse derived from the Ushklish Ruin.

AZ U:3:404/2011

Robert Wegener and Eric Eugene Klucas

Site AZ U:3:404/2011 consists of a small Classic period field house and associated very low-density surface artifact scatter located on the summit of a large ridge immediately south of Gold Creek and west of the current alignment of SR 188 at an approximate elevation of 853 m (2,800 feet) above mean sea level (AMSL) (Figures 16 and 17). The ridge is cut on the eastern edge by an access road leading to the summit, exposing the natural stratigraphy of the ridge. The site was initially described as encompassing an area of approximately 589 m², roughly 31 by 19 m, with only a small portion extending within the ROW (Hoffman 1991:38–40). SRI's reassessment of the site at the beginning of Phase 1 expanded the site dimensions to approximately 150 m north–south by 120 m east–west. Adjustments to the ROW also significantly expanded the portion of Site 404/2011 that fell within the ROW, totally encompassing the field house.

Phase 1

Phase 1 operations at Site 404/2011 began with the collection of surface artifacts from within the ROW. One brown plain sherd, 1 core, and 18 pieces of debitage were collected in four 5-by-5-m collection units located south of the suspected field house. A single mano was point provenienced north of the house. Surface collection was followed by the excavation of two test pits placed within the suspected field house (TP 2 and TP 6) and in a third test pit in an area of higher surface artifact density (TP 44). The latter test pit was excavated as a means of assessing the potential for buried cultural deposits at the site. The test pit revealed that, with the exception of the field house, the site was largely surficial in nature. The data obtained from the test pit indicated that mechanical trenching would yield no additional information. Test pits

placed within the field house revealed that it consisted of a single room with foundations of rounded river cobbles set in a single row. A walled exterior space measuring approximately 2.8 by 2.3 m was observed adjacent to this room to the south. The quantity of rubble indicated that the structure most likely possessed a superstructure of organic materials. These data indicated that efforts during Phase 2 would be most profitably expended on the excavation of the field house.

Few temporally diagnostic artifacts were recovered during Phase 1. A small number of corrugated and obliterated corrugated sherds identified for the Phase 1 collection indicated a Classic period age for the site. This is consistent with the aboveground cobble-adobe architecture observed at the site.

Phase 2

Phase 2 investigations at Site 404/2011 centered on the excavation of the field house and its immediate environs. Pollen and flotation samples were taken from within the feature and from its immediate environs. The area immediately north of the structure was hand stripped in an effort to identify extramural features. No additional features were identified.

Feature Descriptions

Feature 1

Feature type: cobble-adobe-foundation field house (Figures 18 and 19)

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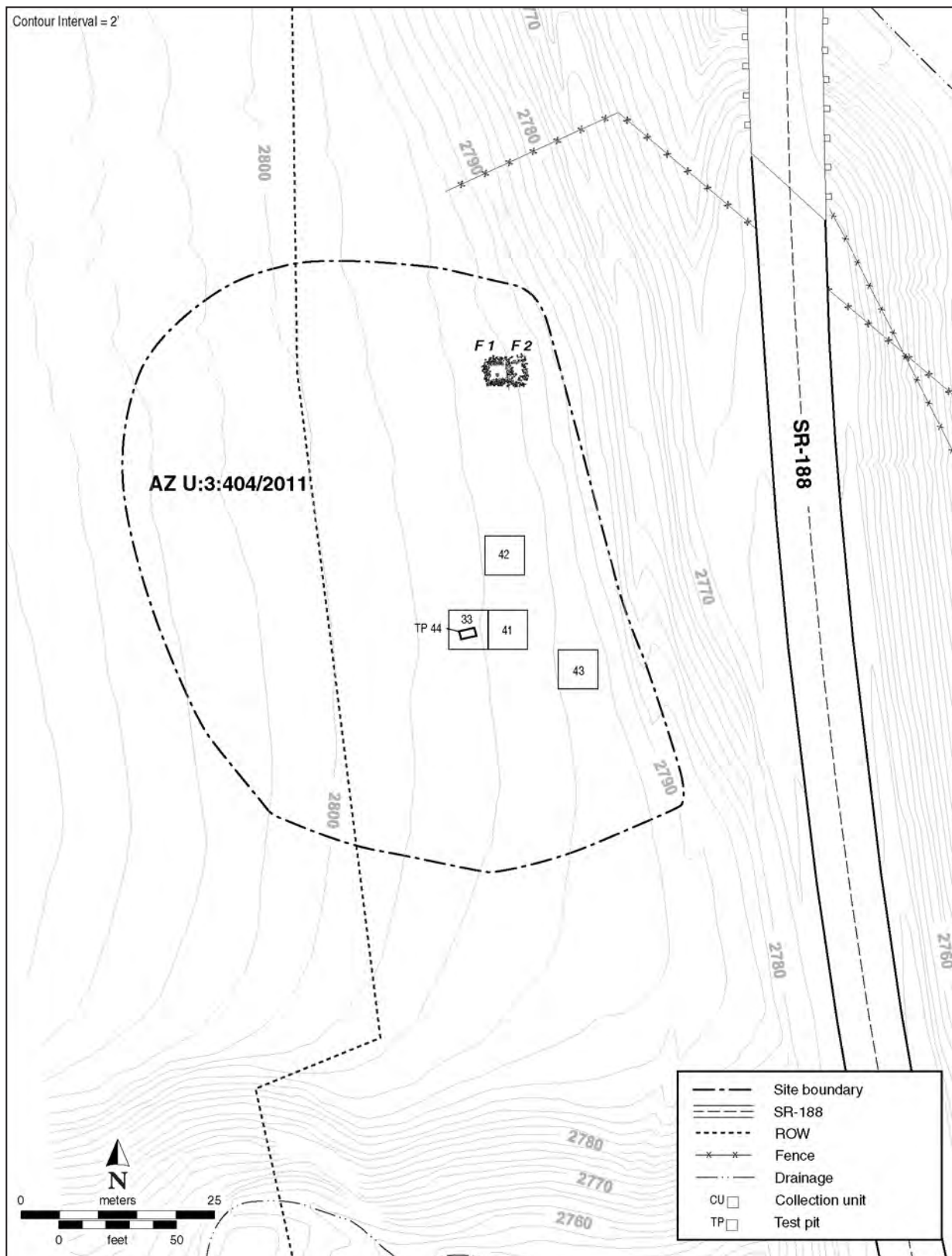


Figure 16. Site map of Site 404/2011.



Figure 17. Overview of Site 404/2011 after brush clearing.

Location: This feature was previously described by Hoffman (1991:38–40, Figure 13) as occupying the north-central portion of the site. This location provided a commanding view of Gold Creek, situated approximately 100 m to the north.

Grid coordinates (m): N 1259.2, E 931.7

Date: Classic period, based on ceramics

Elevation: The originating elevation of 851.9 m (2,794.9 feet) AMSL corresponds to the modern surface. The average floor elevation of Feature 1 was 851.7 m (2,794.3 feet) AMSL.

Abandonment processes: abandoned

Dimensions: 2.98 by 2.39 m

Orientation: 354° long axis

Floor area: 7 m²

Shape: rectangular

Excavation Methods

The walls forming Feature 1 were clearly visible at the surface. Controlled sampling of Feature 1 began with the excavation of a 1-by-2-m test pit (TP 2) placed in the eastern half of the feature. The house fill consisted of loose, pale brown (10YR 6/3) sands that contained few artifacts and some dispersed charcoal fragments. This fill was removed with pick and shovel, and a judgmental sample of artifacts was collected.

Stratigraphy

Stratum I

Stratum I consisted of a postoccupational overburden, approximately 30 cm deep, characterized by loose surface sands and gravels that covered the remains of the structure. Very few artifacts were recovered from these sediments.

Stratum IIa

Stratum IIa consisted of feature fill, approximately 17 cm deep, including loose, light brown sands and silts likely representing postabandonment accumulation. This stratum contained few artifacts, but occasional pockets of charcoal-stained sediment were present.

Stratum IIb

Stratum IIb consisted of roof fall and near-floor fill, approximately 8 cm deep, representing the charred and collapsed remains of the walls and roof. This stratum included a charcoal-stained fine sandy loam that in places surrounded charcoal fragments 1–3 cm in diameter. Numerous rounded gravels and granules were also noted, along with many fine to medium-sized rootlets. Artifact density increased with depth in this stratum. Several point-located artifact clusters were found resting on the floor of the feature.

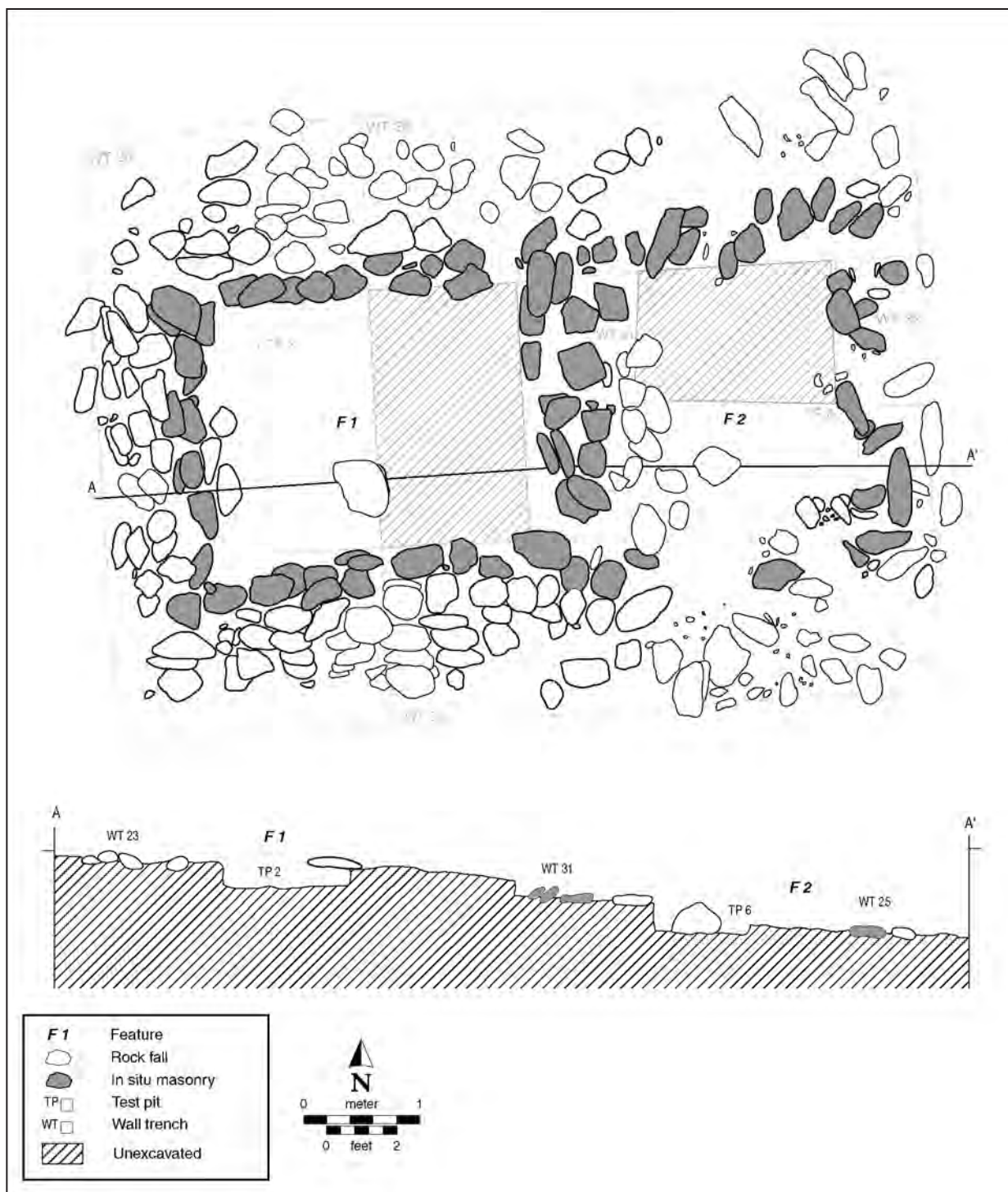


Figure 18. Plan view and cross section of cobble-adobe foundation Features 1 and 2, Site 404/2011.



Figure 19. Photograph of Feature 1 field house, Site 404/2011, after excavation. Feature 2, a partially enclosed space, is in the foreground.

Construction Details

Walls and Roof

The structure was defined by four cobble-adobe-foundation walls surrounded by extensive wall fall. A maximum of three courses of stone were found in place. The rocks constituting the wall were predominantly rounded, basalt cobbles averaging approximately 40 cm in length, 30 cm in width, and 15 cm in thickness. Given the extent of the wall fall surrounding the wall remnants, it appears that the cobble-adobe portion of the walls consisted of 5–7 courses and was no more than 1 m in height. The walls collapsed outward from the structure to the north, south, and west. It appears that the walls were largely dry laid, although in places there was evidence of the use of a mud plaster.

Floor

There was no evidence of a prepared floor, and the surface below the remains of the roof was the uneven clay substrate onto which the house was built.

Hearth

There was no hearth.

Other Floor Features

There were no other floor features.

Entry

There were no openings or gaps in the cobble-adobe walls that might represent an entryway. This house may have been entered from the roof.

Evidence for Remodeling

There was no evidence for remodeling.

Associated Artifacts

A small number of ceramic sherds were recovered, including examples of brown plain (the dominant ware observed at the site), brown corrugated, and Salado Red Corrugated. No painted sherds were recovered. The lithic collection contained one hammer stone, two manos, and one metate fragment. No formal flaked stone tools were recovered.

Botanical Remains

Two pollen samples from Feature 1 were submitted for analysis. Both contained maize pollen. Other potential

economic species included cheno-ams and agave. A single flotation sample submitted for analysis did not produce any identifiable plant remains.

Faunal Remains

No faunal remains were identified.

Chronology

No archaeomagnetic or radiocarbon dates were obtained. The presence of Salado Red Corrugated and brown corrugated sherds suggests a Classic period date. No additional temporally diagnostic artifacts were recovered.

Associated Features

Features 1 and 2 share a common cobble-adobe-foundation wall.

Feature 2

Feature type: partially enclosed extramural space (see Figures 18 and 19)

Location: Feature 2 abuts Feature 1 to the east.

Grid coordinates (m): N 1259.2, E 933.9

Date: Classic period, based on ceramics

Elevation: The originating elevation of 851.5 m (2,793.8 feet) AMSL corresponds to the surface of the stripping unit (SU 124). The average floor elevation was 851.3 m (2,792.9 feet) AMSL.

Abandonment processes: abandoned

Dimensions: 2.8 by 2.3 m

Orientation: 354° long axis

Enclosed area: 6.91 m²

Shape: ovate

Excavation Methods

The walls of Feature 2, which protruded above the modern ground surface, were clearly visible. A controlled sample of the feature was obtained through the excavation of its northern half, as defined by the extant walls. This unit measured approximately 1.4 by 1.2 m. All excavated soil was screened through ¼-inch-mesh-hardware cloth. Flotation samples were also taken of the feature fill.

Stratigraphy

Stratum I

Stratum I consisted of a postoccupational overburden, approximately 30 cm deep, characterized by loose surface

sands and gravels that covered the remains of the structure. Very few artifacts were recovered from these sediments.

Stratum II

Stratum II consisted of feature fill that varied in depth from 10 cm in the southwestern portion of the feature to 36 cm in the northwest portion. The fill was characterized by a light brown, silty clay loam with medium- to large-sized gravels throughout. Artifact density within the fill was low, and disturbances were limited to numerous small- to medium-sized roots.

Construction Details

Walls and Roof

Evidence of the walls of Feature 2 consisted of the cobble-adobe foundation of the northern, eastern, and southern walls. The western wall of Feature 2 was shared with the eastern wall of Feature 1, some of which had fallen into Feature 2. The northern and eastern walls of Feature 2 was poorly defined, with only a single course remaining in place and a small amount of wall fall. A possible southern wall was even more poorly defined and may simply represent rubble from Feature 1. As with Feature 1, the stones used in the construction of the foundation of Feature 2 were rounded, basalt cobbles averaging 40 cm in length, 30 cm in width, and 15 cm in thickness. In contrast to Feature 1, there was no evidence of a roof.

Floor

There was no evidence of a prepared floor, and the surface below the fill of the structure was the uneven clay substrate onto which the feature was built.

Hearth

There was no hearth.

Other Floor Features

There were no other floor features.

Entry

There was no entry defined, although this feature may have been entered from the south.

Evidence for Remodeling

There was no evidence for remodeling.

Associated Artifacts

As with Feature 1, a small number of ceramic sherds were recovered, including examples of brown plain, brown corrugated, red plain, and Salado Red Corrugated. No painted sherds were recovered. The lithic collection contained one hammer stone and two manos.

Botanical Remains

A single pollen sample from Feature 2 was submitted for analysis. The sample contained maize pollen. Other potential economic species included cheno-ams and *Boerhavia*. A single grain of *Carya* (pecan) and several grains of *Eriogonum* suggest some degree of contamination by nonindigenous plants.

Faunal Remains

No faunal remains were identified.

Chronology

No archaeomagnetic or radiocarbon dates were obtained. The presence of Salado Red Corrugated and brown corrugated sherds suggests a Classic period date. No additional temporally diagnostic artifacts were recovered.

Associated Features

Features 1 and 2 were separated by a cobble-adobe-foundation wall.

Site Summary

Site 404/2011 was a Classic period field house that consisted of a small room, an attached enclosure, and an associated low-density artifact scatter. The room was constructed of cobble-adobe-foundation walls up to 1 m in height and was roofed with perishable materials. The enclosure was ill-defined with only one or two courses of cobble-adobe-foundation walls and lacked any evidence of a roof. This field house may have been used primarily for storing agricultural products. The recovery of maize pollen from all three analyzed samples may reflect the storage of this important resource. The presence of agave pollen is also notable, as it is rare even where agave is known to grow (Homburg 1998:125). This house is very similar in size and construction to what were identified as granaries in the nearby Mazatzal project (Ciolek-Torrello, ed. 1987:328–338). Its very small size, the absence of a prepared floor, hearths or other thermal features suggests that the site was not used as a habitation. The limited quantity and diversity of artifacts observed at the site is consistent with the limited suite of activities assumed to be carried out at sites of this type.

The Vegas Ruin (AZ U:3:405/2012)

William L. Deaver and Eric Eugene Klucas

Site AZ U:3:405/2012, also referred to as the Vegas Ruin, was a multicomponent habitation and limited-activity site located on a flat terrace west of Tonto Creek between two small east–west-running drainages (Figures 20–25). The site covers an estimated 4,087 m² and is cut by the current alignment of SR 188. An ADOT erosion-control feature, Feature 2, bisects the portion of the site west of the highway ROW. Approximately 80 percent of the site is contained within the ADOT ROW. During the course of Phase 2 operations, changes to the ROW brought an additional 400 m² of the northwest portion of the site into the impact area. The Vegas Ruin was initially described as a high density sherd and lithic scatter with several masonry structures (Hoffman 1991:40–42). It was suggested that the site may have encompassed as many as 40 rooms in several discrete architectural units. This estimate is likely based on a more pueblolike architectural style than the compound architecture that typifies the early Classic period in Tonto Basin (see Clark and Vint 2000a, 2000b).

The Vegas Ruin encompassed three occupational episodes. The earliest consisted of a dense scatter of rock and ashy soil representing a roasting feature or extramural hearth. These deposits were identified below an approximately 40-cm-thick layer of sterile, calcic soil, suggesting that this occupational episode significantly predates the later architectural remains. This was followed by a small settlement comprising 5 pit structures that preliminary data suggest date to the pre-Classic to Classic period transition. The third episode is represented by a small cobble-adobe-foundation compound encompassing 1 cobble-adobe-foundation room and a collection of 38 inhumation burials. Indications of a second compound were observed to the west of the ROW. Preliminary data indicate that this third episode dates to the early Classic period. In addition to the architectural features and the burials, a total of 133 extramural features were identified, most during the course of mechanical stripping.

Phase 1

Following brush removal, Phase 1 investigations at the Vegas Ruin began with the collection of a sample of the surface artifacts. Because it was clear that significant Phase 2 work was going to be done on the site, the collection strategy was geared toward obtaining chronological information. Toward this end, collections were made within and along the edges of the ADOT erosion-control feature, which had exposed the subsurface cultural deposits across the length of the site. The collections were judgmental in nature, with an emphasis placed on decorated ceramics and rim sherds.

The collection of surface artifacts was followed by the excavation of 327 linear meters of backhoe trenches on both sides of the highway and the hand excavation of 6 screened test pits. The trenches to the east of the highway revealed no subsurface cultural deposits within the ROW. To the west of the highway the trenches revealed 23 buried features, including 8 suspected pit structures, 12 extramural pits, 6 extramural ovens and hearths, 1 midden, and 1 inhumation burial.

In addition to the trench and test pit excavations, a series of hand trenches were excavated along the exposed foundations as a means of determining the number of preserved rooms present within the ROW. These revealed that the visible architecture represented a single compound with one or two rectilinear cobble-adobe-foundation rooms. An unknown portion of the compound was destroyed during the construction of SR 188.

Phase 2

Phase 2 at the Vegas Ruin was geared toward excavating a representative sample of the features at the site as directed

by ADOT. The BMOA, negotiated between TNF and interested Native American groups, however, required that all burials within the ROW were to be identified and excavated in their entirety. Because many of the burials were located within houses, it became clear in Phase 2 that we would have to excavate all of the houses in their entirety, rather than just a representative sample, to identify all of the burials. As a result of the need to fully excavate all burial features and houses, we restricted sampling to the extramural features. All extramural features within the ROW were identified and mapped, and we selected a sample for further, subsurface investigation. We placed greater emphasis on excavating or sampling the less common features and those that had the greatest research potential (such as middens, borrow pits, and caches) rather than common pits that contained redundant information. We excavated roughly one-third of the suspected roasting features, adobe-lined pits, and extramural hearths; we recovered samples from another third and left the remaining third unexcavated. In the case of the excavated features, we often only excavated half of the feature. In order to inventory all of the features at the site, select the excavation sample, and excavate all of the burials, it was necessary to strip the entire ROW, often to a depth in excess of 1.5 m below the original ground surface, using a combination of hand and mechanical stripping. In this process, we delineated 4 pit structures, 1 extramural surface, 1 compound with 1 cobble-adobe-foundation room and enclosure, 38 burials, 2 middens, and 133 extramural pit features within the ROW. Some of the suspected pit houses proved to be other types of pit features.

Site Stratigraphy

The Vegas Ruin is situated on the surface of Holocene alluvium that resulted from fan development on the surface of a Pleistocene terrace of Tonto Creek. The depth of this alluvium is unknown, but our exposures indicate that it is in excess of 2 m. Five stratigraphic units were identified in this alluvium at this settlement. The alignment of fossil channels in these strata indicates that the alluvium derived from development of the Cottonwood Creek fan to the south. The drainage immediately to the north of the site is characterized by large-boulder debris flows and bars, with little fine-grained alluvium. These deposits indicate that the flow of this wash was too great for the deposition of the finer grained alluvium such as we documented at this site. We identified three temporally distinct occupational horizons at this site. These strata were important aids in distinguishing the human occupations at this site.

Stratum I

Stratum I refers to the disturbed deposits of recent origin, which we identify as Occupation I (see below). During construction of SR 188, the ground surface was modified and sediments were redeposited. The ADOT erosion-control ditch (Feature 2) was cut diagonally through the ruin, including the eastern side of the compound and southeastern part of the burial area (see Figure 20). This ditch originates to the south and diverts some of the tributary flow of Cottonwood Wash to the channel immediately to the north of the settlement. The ditch is V-shaped and was approximately 2 m across. The soil removed in the excavation of this ditch was used to create a berm on the east side of the ditch. The berm contains a mixture of Strata II–IV. During construction of SR 188, the roadbed to the north of the compound also was elevated on fill dirt to a height of up to 1 m above the natural grade. In addition, evidence of recreational activities was also found. All of these modern features were designated Stratum I.

Stratum II

Stratum II defines the primary culture-bearing horizon at the site and corresponds to Occupation II. The deposits were heavily compacted from road construction along the eastern margin of the excavation area.

Stratum III

Stratum III approximates the surface of the site at the time of its primary occupation. Most features associated with Occupation II (see below) originate at or near the surface of this stratum. No in situ material culture was seen in this deposit. This stratum consists of a gravelly sandy clay loam with medium to coarse gravels and weak carbonate development. Several small drainage channels trending southwest–northeast were also observed in this stratum.

Stratum IV

This stratum represents the calcic horizon, characterized by a fine silty clay loam with Stage I carbonate development and localized fines interbedded in coarser channel deposits. Stratum IV also contains several features assigned to Occupation III, the Archaic period component at the site.

Stratum V

Stratum V represents channel deposits below fine silty clay.

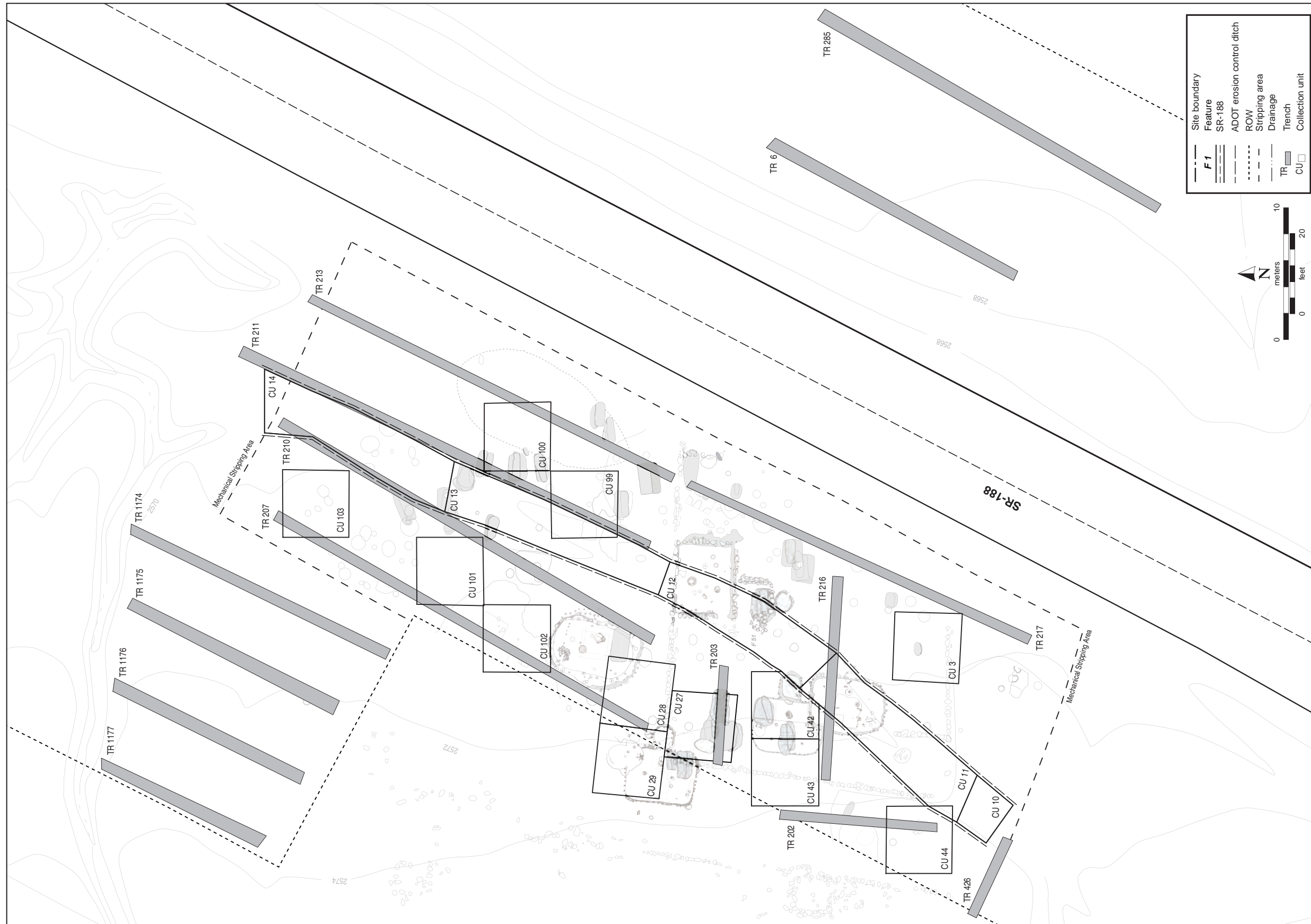


Figure 20. Site map of the Vegas Ruin (405/2012), showing collection units and mechanical trenches.

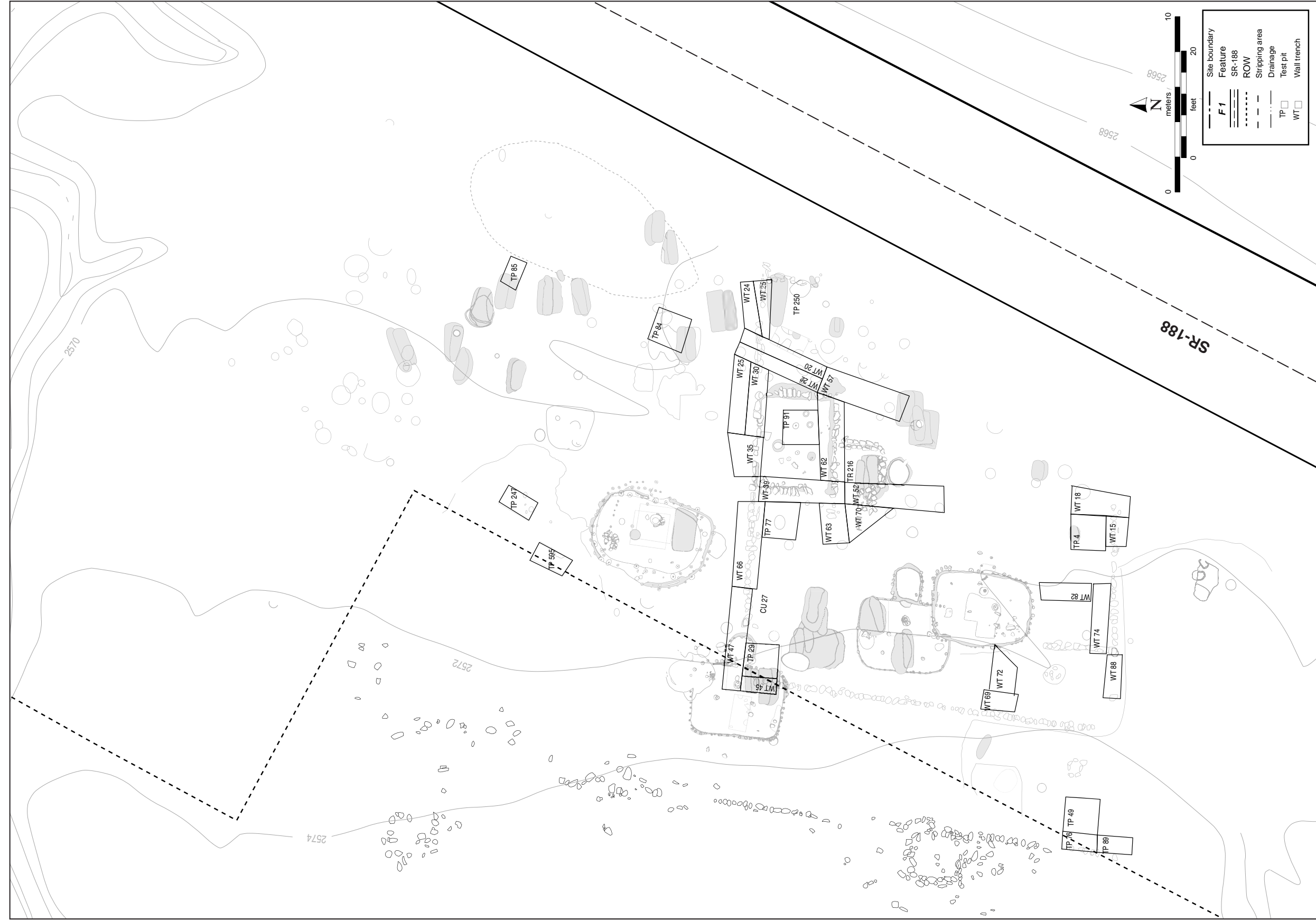


Figure 21. Site map of the Vegas Ruin (405/2012), showing wall trenches and test pits.

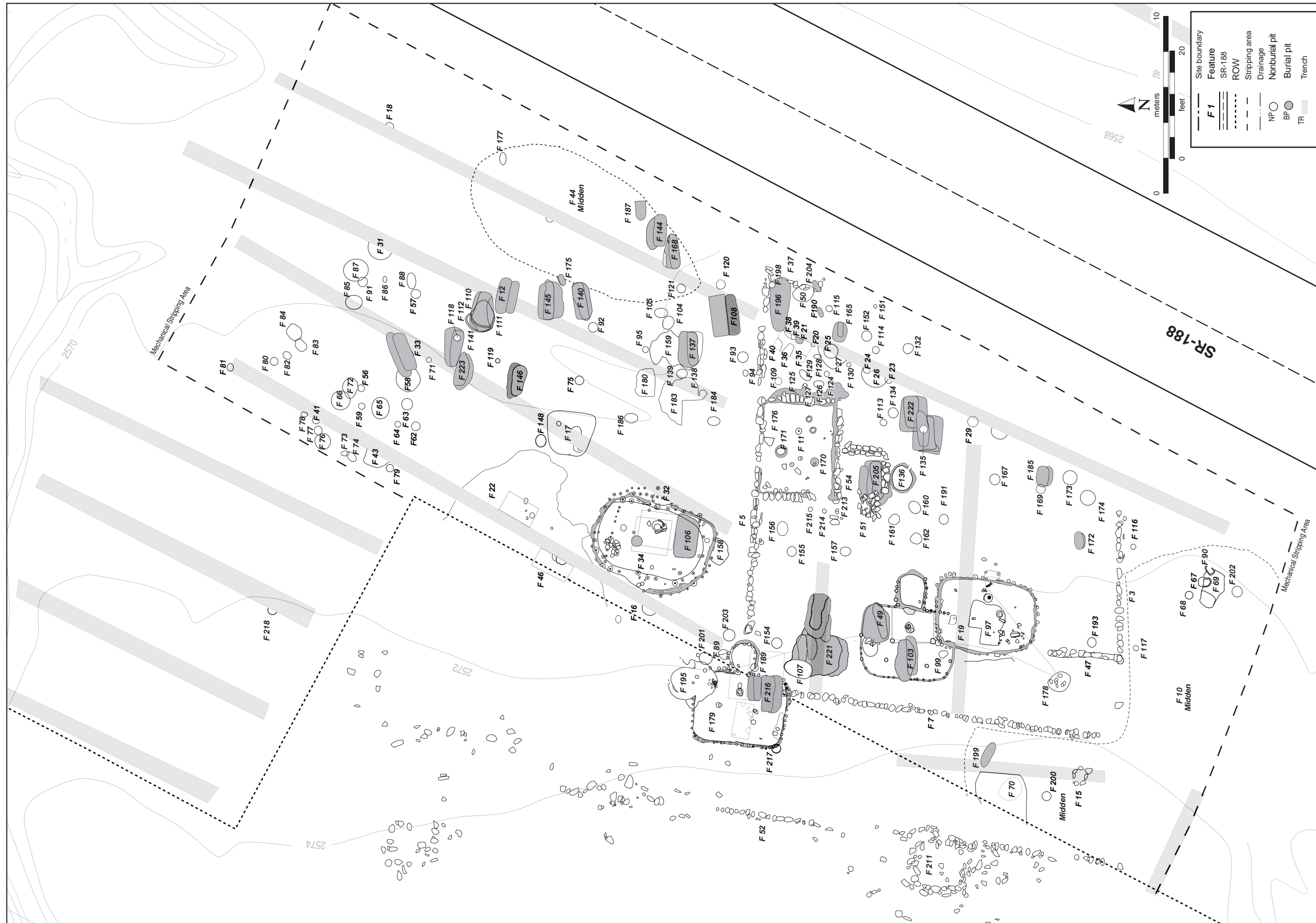


Figure 22. Site map of the Vegas Ruin (405/2012), showing features.

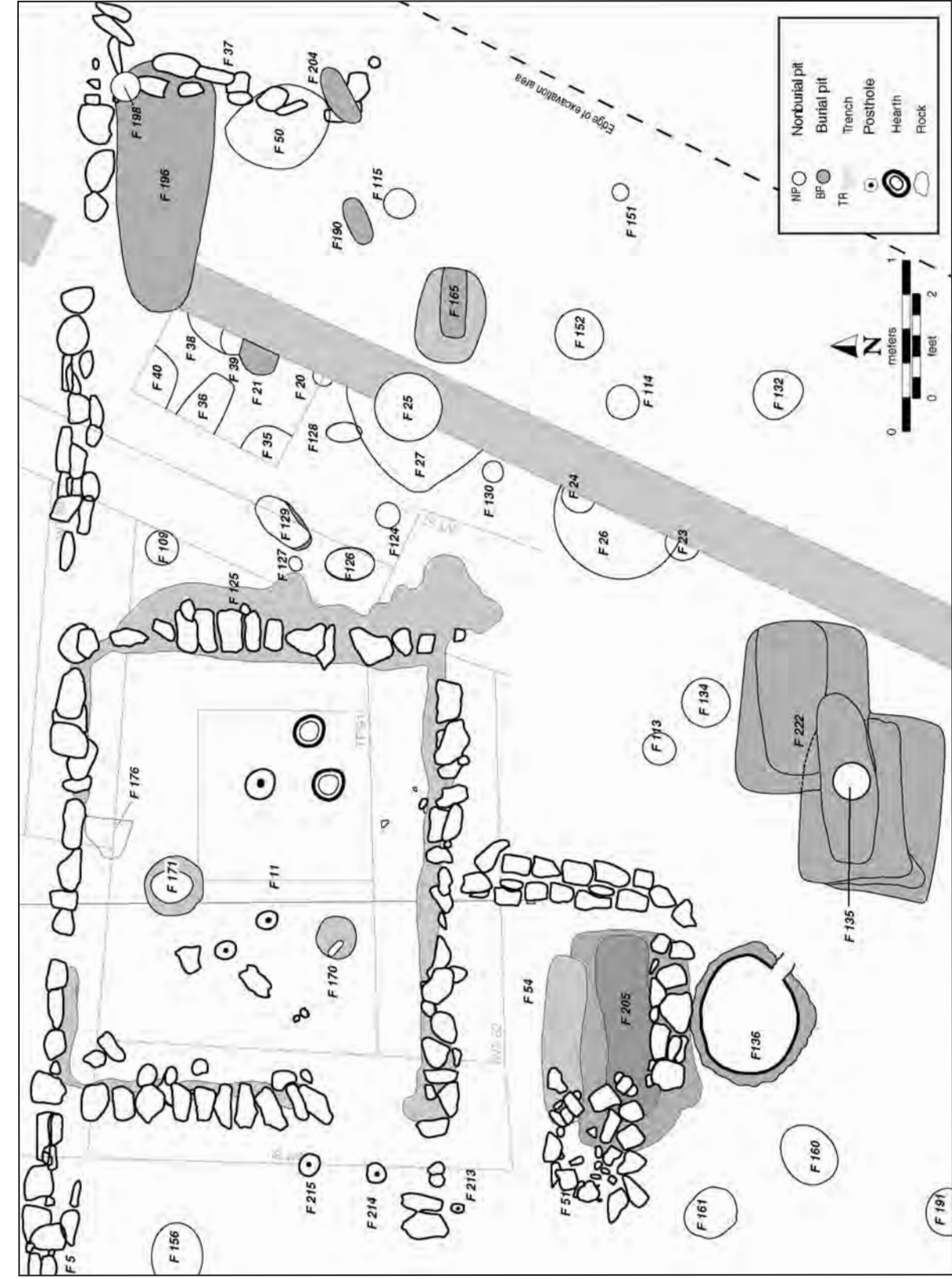


Figure 23. The northeast corner of the Feature 1 compound at the Vegas Ruin (405/2012).



Figure 24. Overview of the Vegas Ruin (405/2012) before brushing, view east.

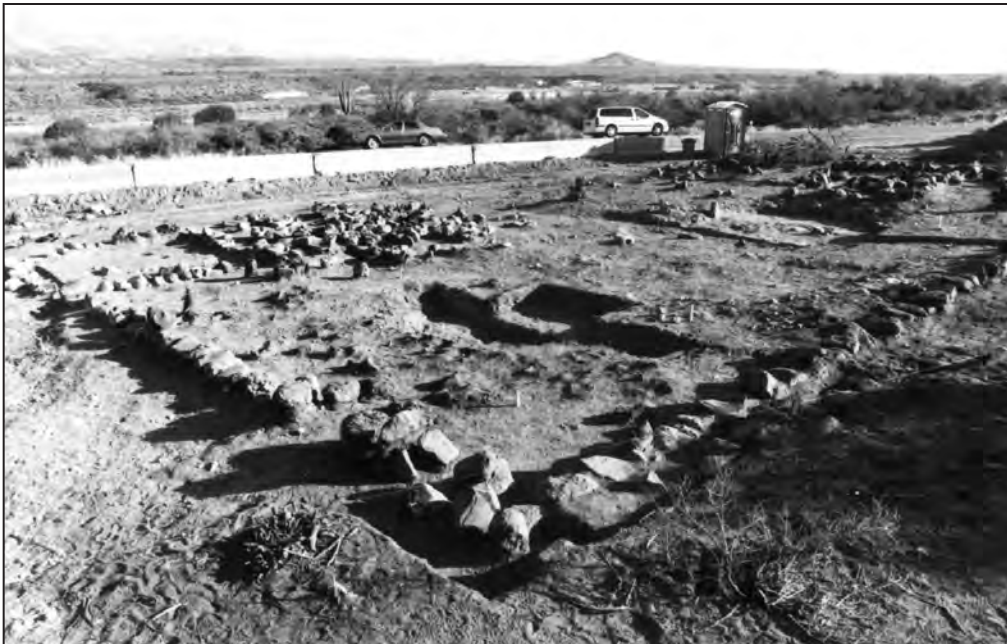


Figure 25. Photograph of the Feature 1 compound during excavation, view southeast.

Relationship of Soil Strata to Human Use and Occupations

As indicated above, three temporally distinct occupations were identified at this site. Occupation I represents modern activities related to the construction and maintenance of SR 188 and recreational use of the area. Evidence of this occupation consists of artifacts, ash deposits that may have been campfires, and soil deposits discussed above as Stratum I, as well as the ADOT erosion-control ditch (Feature 2) and the berm on which the road was constructed. Modern artifacts typically were found on the surface or in the top 0.10–0.15 m of the soil. Occasionally, modern items were found at a greater depth; these were usually attributed to intrusions into underlying soil horizons by burrowing animals. Occupation II is the prehistoric settlement originally targeted by the excavation efforts. This settlement is preliminarily dated to the interval A.D. 1150–1300. This occupation is contained within Stratum II. Prehistoric artifacts on the surface of the site are the result of animal disturbances, erosion of the surface, and construction activities. This prehistoric occupation originated at the surface of Stratum III and continued during much of the accumulation of Stratum II. Stratum III separates Occupation III from Occupation II. Occupation III is embedded in the calcic soil horizon, Stratum IV. This occupation is evidenced by hearths and piles of fire-cracked rocks. A large San Pedro point recovered from Feature 137 and an Elko point recovered from wall rubble near the northeast corner compound may be attributed to this occupation but were not found in Archaic period features. Based on the carbonate development in the soils overlying the evidence of these features, Occupation III is tentatively dated to an interval of about 2,500 years B.P. plus or minus 500 years. Burial pits associated with Occupation II penetrate to depths below and through Occupation III.

Architectural Features

Pit Structures

Five pit structures, representing two distinct types, were discovered and excavated at the Vegas Ruin (Table 2; see Figure 22). The two different types appear to represent functionally distinct structures. Four of the structures are interpreted as residential structures. Their large size, substantial superstructure, plastered floors, adobe-lined hearths, and consistent arrangement of the principle interior features lead to this inference. The fifth structure (Feature 17) is interpreted as a limited-activity structure. It was substantially

smaller, less regular in shape, and less substantially built than the other four structures.

Residential Structures

Four large pit structures (Features 19, 34, 99, and 179) showed a remarkable consistency in size, construction details, and arrangement of interior features. All were post-reinforced pit structures, although the later-constructed houses had adobe and even cobbles incorporated in their wall construction. These pit structures were a variation on the house-in-pit theme. The floor plan and framework of the superstructure were similar to this pit structure style; the main difference was how the walls were constructed.

The house pits were excavated into the native soils to a depth that penetrated the gravelly loam horizon and into the upper few centimeters of the calcic soil. This calcic soil provided the foundation for the house and the substratum for the floor. The framework for the walls consisted of a series of upright posts set in deep postholes around the interior perimeter of the house pit. These posts were set about 0.25 m apart, on average, and were typically about 0.10 m in diameter. The posts set in these holes were probably one-half to two-thirds the diameter of the posthole, judging from the size of the post fragments and post molds observed in many of these holes. Juniper was a common construction material, as indicated by unburnt remains of posts found in many of the postholes. These posts may have been tied together with horizontal stringers, as indicated by the evidence from Feature 34. A gravelly adobe was then puddled over this framework to complete the construction of the walls in the later houses. The resulting wall was about 0.15–0.20 m thick, as indicated by evidence from Feature 179. In the case of Feature 19, several large stones were set into the interior surface of the adobe wall around the structure. These appear to have been placed in locations where the walls were built against the fill of the earlier house, Feature 99, and in places where the sides of the house pit appears to have sloughed off during construction. The intent in this case may have been to reinforce the walls in these locations. The roofs were probably supported by two interior posts located along the midline of the structure and by the exterior walls. Whether the roof was flat, gabled, or of some other configuration is a matter of speculation. None of the adobe materials in the fill retained any impressions of the roof structure, thus we can only speculate from the general mass of adobe in the fill that the roofs were also adobe-covered brush frameworks.

Features 99 and 179 had vestibule entryways in the center of the eastern walls, perpendicular to the long axis of the house. Walls of these vestibules were also post-reinforced adobe. The vestibule of Feature 99 was generally subrectangular, but the vestibule of Feature 179 was bulbous. Access to Features 19 and 34 was also attained through the center

Table 2. Architectural Features at the Vegas Ruin (405/2012)

Feature No. ^a	Feature Type	Comments
1	masonry compound	Masonry compound.
3	wall	South wall of compound (Feature 1).
5	wall	North wall of compound (Feature 1).
6	wall	Perpendicular to and abutting Feature 5; west wall of room space Feature 11.
7	wall	West wall of compound (Feature 1).
8	wall	Perpendicular to Feature 6; south (front) wall of room space Feature 11.
11	room	Bounded by walls of Features 5, 6, 8, and 13.
13	wall	Perpendicular and abutting walls of Features 5 and 8; east wall of room space Feature 11.
17	pit structure	Small secondary structure.
19	pit structure	Post-reinforced, adobe-walled pit structure, intrusive into south wall of Feature 99.
34	pit structure	Post-reinforced, adobe-walled pit structure, remodeled into a smaller post-reinforced, adobe-walled pit structure.
37	wall	Short wall remnant perpendicular to Feature 5.
47	wall	Possible entry wall into compound (Feature 1).
48	wall	East wall of activity space Feature 54.
51	granary	Associated with activity area Feature 54.
52	wall	Long wall outside ROW, parallel to Feature 7; room space Feature 211 partly bounded by this wall.
53	wall	South wall of activity space Feature 54.
54	partially enclosed space	Cobble-adobe-foundation walls south of Feature 11.
99	pit structure	Cut by Feature 19.
179	pit structure	Below Feature 1 compound.
208	wall	Cobble-adobe foundation outside the ROW; north wall of room space Feature 211.
209	wall	Cobble-adobe foundation outside the ROW; west wall of room space Feature 211.
210	wall	Cobble-adobe foundation outside the ROW; south wall of room space Feature 211.
211	room	Room space bounded by Features 52, 208, 209, and 210, located outside the ROW.

^aFeatures 4 and 9 were voided.

of the eastern long walls, but no vestibule entries were observed. There was, however, evidence indicating that these structures also had east-facing entryways at one time, but the exact form of these vestibules remains unknown.

The calcic soil horizon into which the house pit was excavated formed the substratum for the floor in each of the houses. On top of this surface, a thin layer of adobe varying from 2 to 5 cm in thickness was applied. The hearths in each structure were placed inside the doorways about one-half the distance between the doorway and the central roof supports. Other interior features in these structures consisted of informal hearths and ash pits.

Feature 19

Feature type: pit structure

Function: habitation

Location: Feature 19 was the southernmost of the pit structures identified at the Vegas Ruin. It was located within the confines of the Feature 1 compound.

Grid coordinates (m): N 9083.0, E 502.5

Date: Miami/Roosevelt phase, based on archaeomagnetic dates, construction style, and ceramics

Remodeled: yes

Abandonment processes: Abandonment of the structure appears to have been planned. There was no evidence of burning, and the contents were removed. Remnants of wooden posts in many of the postholes indicate that the structure was probably not dismantled but either decayed and collapsed or razed. The large masses of adobe materials in the fill indicate that most of the structure collapsed inward.

Dimensions: 5.20 by 3.70 m and 0.42 m deep

Orientation: entry of structure faced east

Floor area: 19.0 m²

Shape: oval to subrectangular

Excavation Methods

Feature 19 was discovered in TR 216 (Figures 26 and 27). Two 1-by-2-m test pits (TPs 340 and 345) were excavated on either side of the trench to obtain a sample of the house deposits from the present surface to the floor. After completion of the test pits, the fill from the ground surface to within 0.10 m above the floor was removed as a single level; this was not screened. The lower fill within 10 cm of the floor level was screened through ¼-inch-mesh hardware cloth. Any artifacts found in contact with the floor surface were collected separately. All interior floor features were excavated. After the interior of the structure had been cleared and fully documented, the gravelly loam into which the structure had been built was removed to the top of the calcic horizon by a combination of mechanical and hand excavations. This operation exposed the exterior of the adobe

walls and revealed the perimeter postholes. All postholes along the southern, eastern, and northern walls were excavated, but only some of the postholes along the western wall were excavated. After these postholes had been excavated and fully documented, the walls and floor were mechanically stripped away to explore for additional features below the floor of the house. Several additional postholes in the western wall, some with wood in them, were observed during this operation. The approximate locations of these were drawn on the feature plan map.

Stratigraphy

The fill was a brown, gravelly clay loam, similar to the cultural horizon (Stratum II). Embedded in this matrix were large, irregular, light brown, gravelly, calcic, clayey masses. These large masses of light-colored clayey soil were similar in all regards to the adobe used in the wall and are interpreted as structural debris. The ADOT erosion-control ditch (Feature 2) crossed this structure from the southwestern to northeastern corners, removing up to two-thirds of the fill of Feature 19 to within 1–5 cm above the floor. A borrow pit, Feature 97, also intruded through the fill in the center of the structure as deep as the floor. The outline of this pit was not detectable during removal of the house fill, thus the sediments removed represent a mixture of the house fill and the borrow pit fill.

Construction Details

Walls and Roof. The main framework of the walls consisted of a series of upright posts set in deep postholes around the interior perimeter of the house pit about 0.25 m apart, on average. We identified and excavated 49 perimeter postholes, but there may have been as many as 6 more in the western wall that were not excavated. The postholes averaged about 0.10 m in diameter. The posts set in these holes were probably one-half to two-thirds the diameter of the posthole. These posts may have been tied together with horizontal stringers, as indicated by horizontal grooves observed in the walls of Feature 34. A gravelly adobe wall was then puddled around this framework. Below the extant ground surface, this adobe was packed between and over the interior of the posts. Several large stones were set into the interior surface of the adobe wall around the structure. These were placed in locations where the walls were built against areas where the gravelly soil into which the house was built appears to have slumped and across the loose sediments representing the fill of Feature 99. The intent may have been to reinforce the walls in these locations.

No direct evidence of the roof was found. The large mass of adobe inside the structure suggests that the roof may have had an adobe coating similar to the walls. The roof, whatever its composition, was probably supported upon the exterior walls by two interior posts set along the central long axis

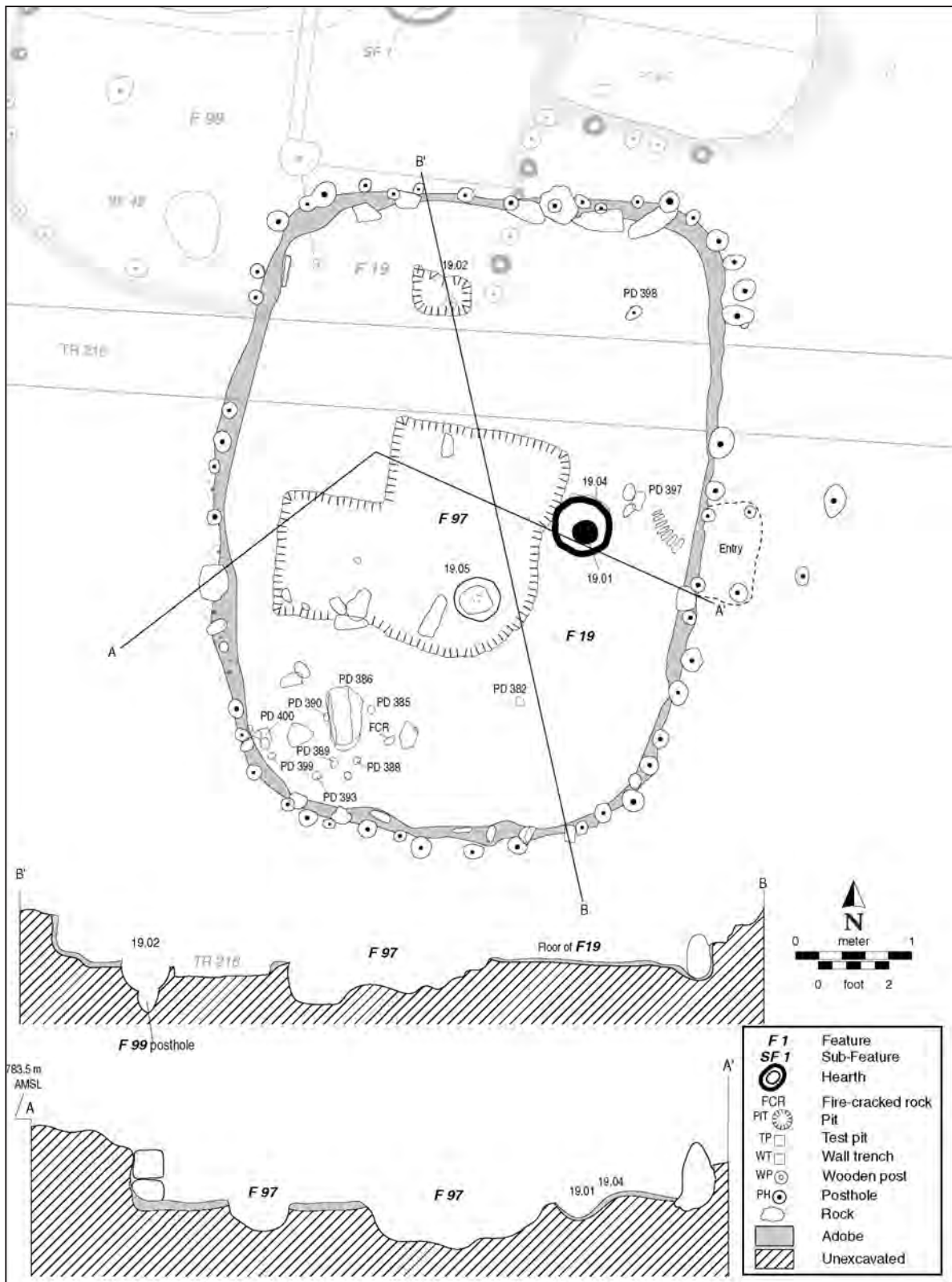


Figure 26. Feature 19 pit structure at the Vegas Ruin (405/2012).



Figure 27. Overview of Feature 19 pit structure at the Vegas Ruin (405/2012), view west.

of the house. Only the southern main roof-support posthole was discovered (Subfeature 19.05); assuming a symmetrical pattern, the other post would have been in the portion of the house destroyed by the backhoe trench (TR 216). Whether the roof was flat, gabled, or of some other configuration is a matter of speculation.

Floor. The calcic soil horizon into which the house pit was excavated formed the substratum of the floor. On top of this surface, a thin layer of adobe varying from 2 to 5 cm in thickness had been applied.

Hearth. There were two hearths located in the east-central part of the structure. The original hearth (Feature 19.04) was oval, measuring 0.44 by 0.40 m and 0.16 m deep. This hearth was clay-lined with a 0.05-m-wide collar at the floor level. It had been cleaned out and filled with a brown gravelly loam prior to construction of the later hearth. The later hearth (Feature 19.01) was built entirely within the original hearth. This hearth was oval, measuring 0.28 by 0.22 m and 0.19 m deep. It was clay-lined but did not have a collar. Plaster remained only on the upper one-third of the sides. Archaeomagnetic dating samples were obtained from both hearths.

Other Floor Features. A single intramural pit (Feature 19.02) was also identified. The pit was a shallow basin-shaped depression in the northwestern corner of the structure. The pit was roughly oval, measuring 0.71 by 0.45 m and 0.09 m deep. This pit overlay a posthole associated with the exterior wall of Feature 99.

Entry. No vestibule entryway was found; however, the position of the hearth and other evidence indicates that the entryway was in the eastern wall of the structure. A large, upright stone in the eastern wall appears to mark the south side of the entryway. Several postholes discovered outside the eastern wall suggests that the structure may have had a vestibule entry similar to Features 99 and 179. These postholes surrounded a small rectangular area of mixed adobe chunks and dark brown loam. This may have been remains of an entry pad just outside the house walls.

Evidence for Remodeling

The only evidence of remodeling of the pit structure was replacement of the original hearth.

Associated Artifacts

Although the structure had not burned there was a partial assemblage of stone tools remaining on the floor. This included seven hammer stones, three manos, and one large trough metate (Table 3). Several miscellaneous sherds were also recovered from the floor, dominated by red wares.

Botanical Remains

Flotation samples were taken from each of the hearths identified in Feature 19, both containing charred maize

Table 3. Artifacts Recovered In Situ from Architectural Features at the Vegas Ruin (405/2012)

Feature No.	ID	Artifact	
Pit Structures			
19	PD 382	basalt hammer stone	
	PD 385	quartz mano	
	PD 386	sandstone trough metate	
	PD 388	basalt hammer stone	
	PD 389	basalt hammer stone	
	PD 390	sandstone hammer stone	
	PD 393	sandstone hammer stone	
	PD 397	granite mano	
	PD 398	granite mano	
	PD 399	sandstone hammer stone	
	PD 400	basalt hammer stone	
	34	PD 537	basalt mano
		PD 544	mano
PD 553		granite mano	
PD 555		basalt core	
PD 569		argillite pendant	
PD 572		granite mano	
PD 573		basalt core	
99	PD 635	hoe	
	PD 815	basalt hammer stone	
179	PD 1260	brown plain sherds	
	PD 1639	granite mano	
	PD 1762	andesite mano	
Cobble-Adobe-Foundation Structure			
11	PD 449	basalt mano	
	PD 450	rhyolite core	
	PD 475	basalt flakes	
	PD 476	quartz metate	

Note: All artifacts were recovered from Stratum IIb.

Key: PD = provenience designation.

cupules. Maize pollen was also identified in a sample from the later hearth (Feature 19.01). Juniper and mesquite charcoal was also identified. A sample of one of the extant post fragments was identified as juniper.

Faunal Remains

Mammal bone fragments were recovered from controlled excavations in Feature 19. Of these, only one could be assigned to species, that being Black-tailed jackrabbit. A small number of fragments were identified as belonging to deer-sized species. Most of the collection included squirrel- to rabbit-sized species.

Chronology

Archaeomagnetic dates were taken from both of the hearths (see Appendix A). The original hearth returned two alternate dates: A.D. 935–1140, and A.D. 1160–1315 (dated against SWCV595; LaBelle and Eighmy 1997). The later hearth also returned a pair of alternate dates; A.D. 1010–1115, and A.D. 1160–1215. No radiocarbon dates were obtained.

Associated Features

Feature 19 appears to have been a replacement for Feature 99. The northwestern corner of Feature 19 truncates the southeastern corner of Feature 99. Several postholes related to the walls in the southeastern corner of Feature 99 were found beneath the floor plaster of Feature 19. A cobble-adobe-foundation wall segment, Feature 47, abutting the southern compound wall was aligned with the western wall of Feature 19. This alignment suggests that this wall connected Feature 19 to the compound wall, forming an extramural enclosure. The ADOT erosion-control ditch (Feature 2), however, truncated the northern end of Feature 47 (see Figure 20) and removed any direct evidence of this connection.

After abandonment, a borrow area, Feature 97, intruded into the floor of Feature 19. The borrow pit was about 2 m in diameter and 0.30 m in depth. The fill of the feature was brown sandy loam, with many subangular to rounded gravels and a few small charcoal flecks. A darker, organic area was noted in the southeast corner of the pit. The base of the pit was uneven. The fill was judgmentally sampled for artifacts, which included some flakes, sherds, and a turquoise pendant.

Feature 34

Feature type: pit structure

Function: habitation

Location: Feature 34 was located immediately north of the Feature 1 compound, along the western limit of the excavation.

Grid coordinates (m): N 9012.0, E 507.0

Date: late Sedentary period/Miami phase, based on construction styles and archaeomagnetic dates

Remodeled: four superimposed structures

Abandonment processes: planned, contents removed and structures collapsed or demolished

Dimensions: 7.00 (maximum) by 5.20 m and 0.56 m deep

Orientation: entry of Features 34B–34D faced east

Floor area: Feature 34A floor area could not be determined, Feature 34B was 29.15 m², Feature 34C was 26.05 m², and Feature 34D was 19.93 m²

Shape: oval

Excavation Methods

These four superimposed structures were originally recognized in the east side of TR 207 (Figures 28–32). Overburden above the top of the extant walls was removed mechanically. A 2-by-2-m test pit (TP 420) was excavated in the approximate center of the structure to obtain a sample of the fill deposits and to ascertain the depth of the structure. Once the test pit was completed, the fill to within 10 cm of the floor level was removed as a single level; this was not screened. The house was then bisected along the north–south axis and the lower fill from within 10 cm of the floor to the floor was excavated in two horizontal units. The lower fill in the eastern half of the structure was sifted through ¼-inch-mesh hardware cloth. Because the house had not burned and no floor assemblage had been discovered in the eastern half of the structure, the lower fill in the western half was not screened. Any artifacts found in contact with the floor surface were collected separately. All interior floor features were excavated. Because it was clear that the house had been remodeled at least once, a second 2-by-2-m test pit (TP 1503) was excavated in the center of the structure to remove the later floor and to explore for the original floor surface and hearth. After the interior of the house had been completely cleared and documented, the gravelly loam stratum into which the structure had been built was removed to the top of the calcic horizon by a combination of mechanical and hand excavations. This operation exposed the exterior of the adobe walls and revealed the perimeter postholes. All postholes were excavated. After these postholes had been excavated and fully documented, the walls and floor were mechanically stripped away to explore for additional features below the floor of the house. A line of small postholes was discovered beneath the floor in the northern half of the structure. These additional postholes were mapped but not excavated.

Stratigraphy

The fill was a brown gravelly clay loam similar to the cultural horizon (Stratum II). Embedded in this matrix were

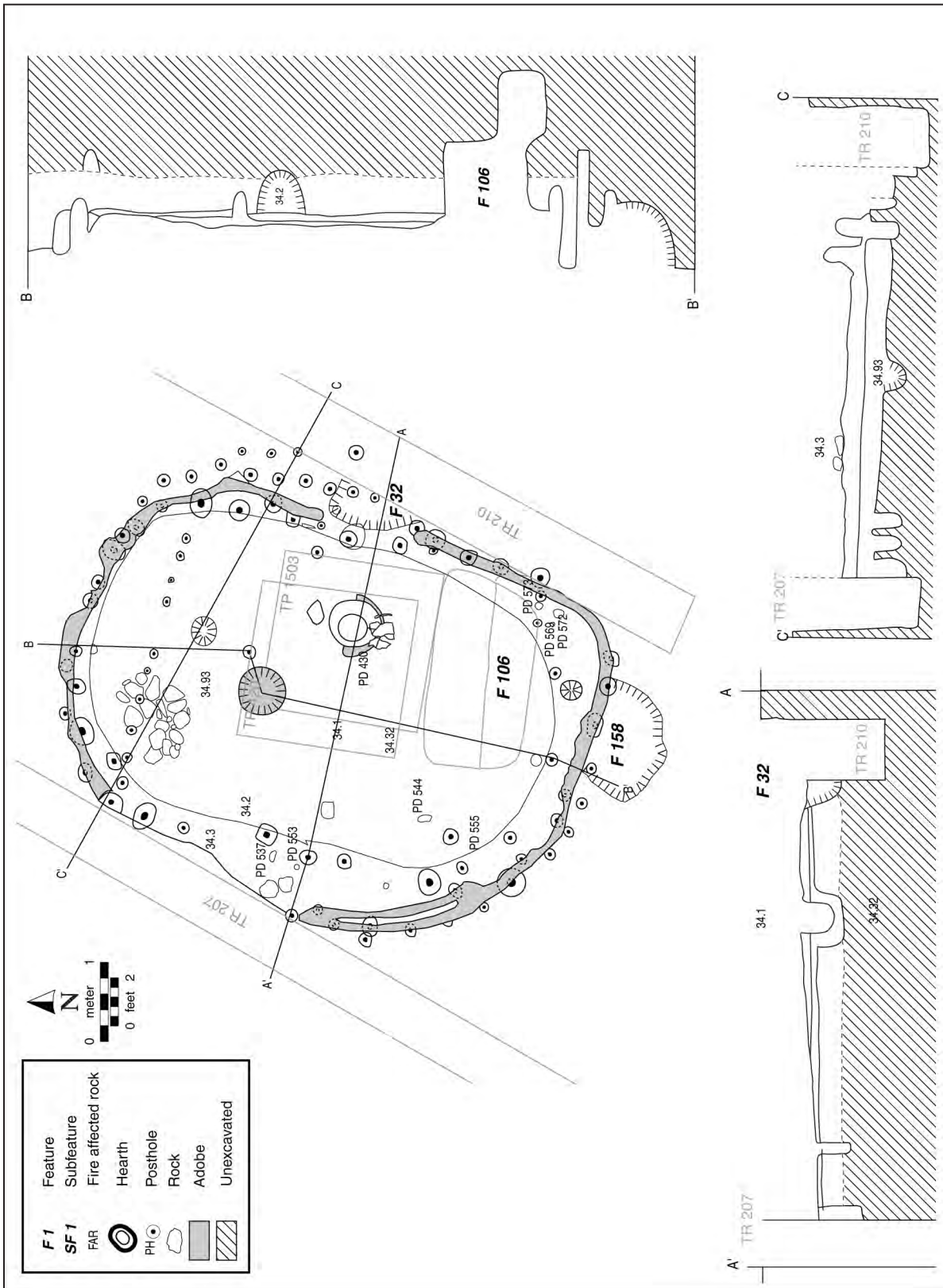


Figure 28. Feature 34 pit structure at the Vegas Ruin (405/2012), all phases.

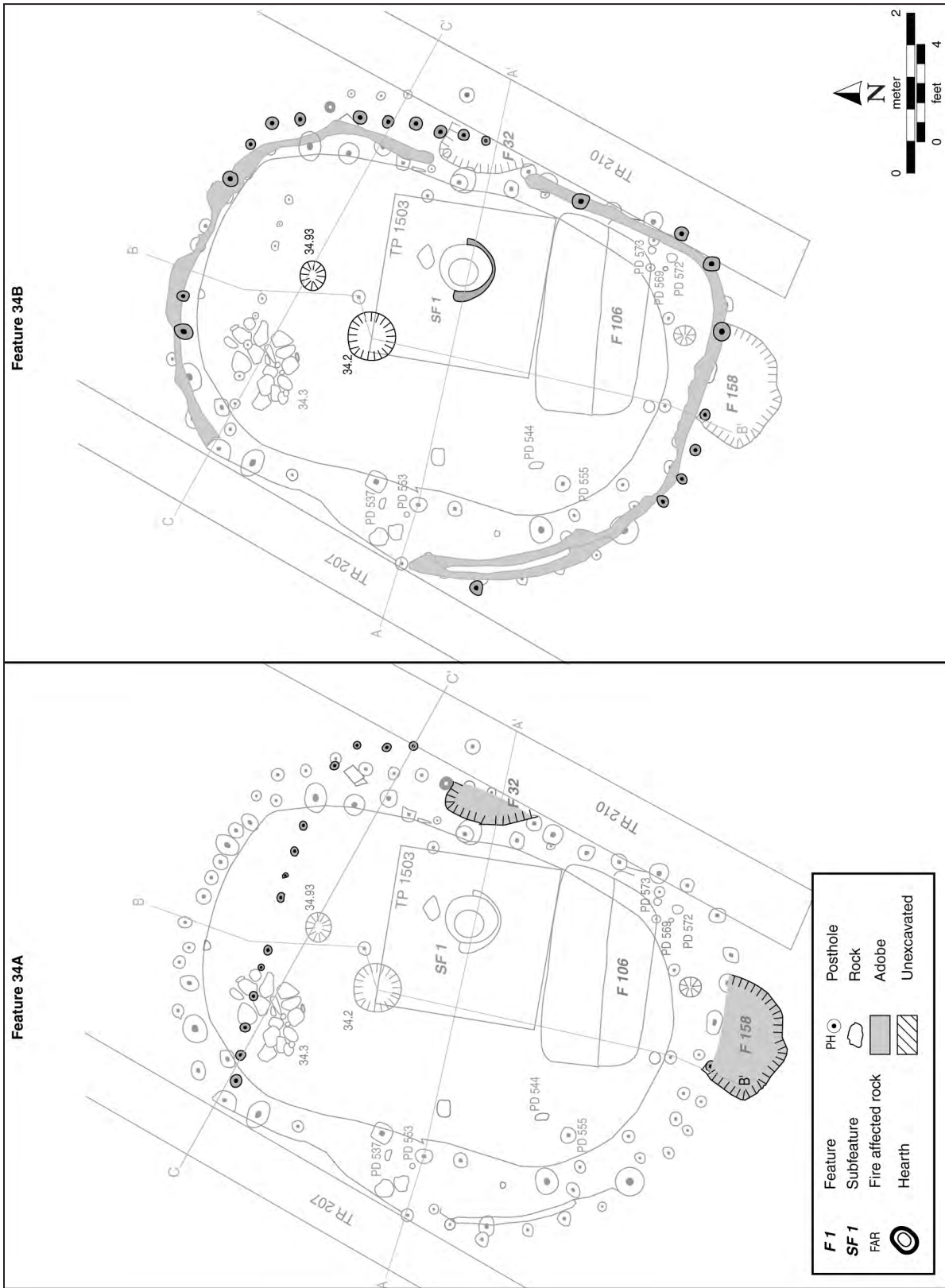


Figure 29. Feature 34 pit structure at the Vegas Ruin (405/2012), Features 34A and 34B.

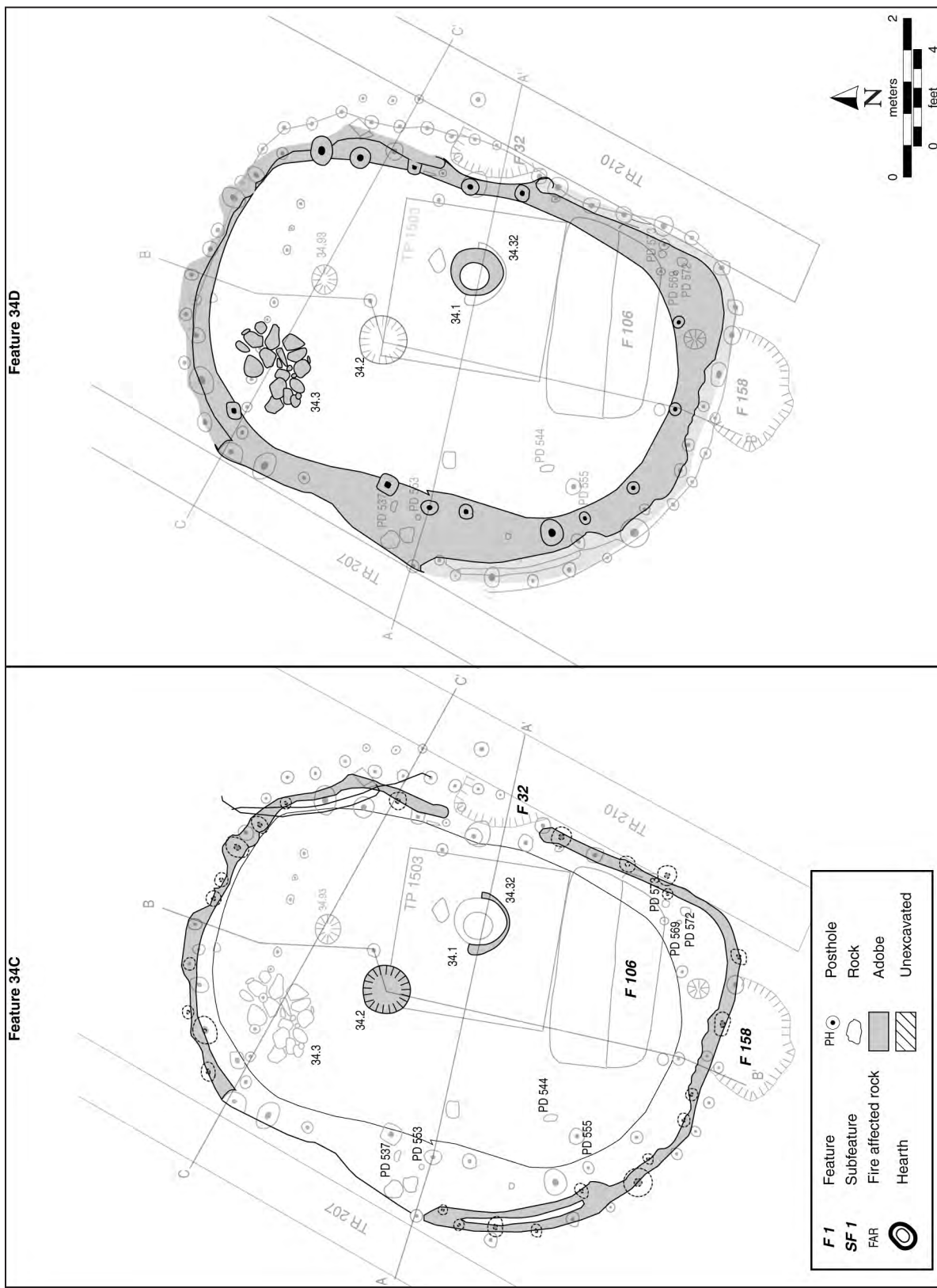


Figure 30. Feature 34 pit structure at the Vegas Ruin (405/2012), Features 34C and 34D.



Figure 31. Feature 34 pit structure postholes and adobe reinforcement: (a) Houses D, C, and B, from left to right in photograph and (b) Houses C and B, from top to bottom in photograph.



Figure 32. Feature 34 pit structure, view southeast toward north compound wall.

large, irregular, light brown, gravelly, calcic, clayey masses. These large masses of light-colored clayey soil are similar in all regards to the adobe used in the wall and are interpreted as structural debris. A burial pit, Feature 106, intruded through the fill and the floor in the southeastern quarter of the structure. The outline of this pit was not detectable during removal of the house fill, thus the sediments removed represent a mixture of the house fill and the burial-pit fill.

Construction Details

Walls and Roof. These structures all represent variations on the house-in-pit theme (see Figures 28–31). The only evidence of Feature 34A was a segment of the north wall, indicated by a series of 15 postholes and associated segment of the floor. The walls of Feature 34B were constructed with at least 21 wooden posts covered with brush and earth, with no evidence of adobe. The builders of Feature 34B dug the house pit into the natural slope to a depth that penetrated through the gravelly loam horizon and into the upper few centimeters of the calcic soil. This calcic soil provided the foundation for the floor and the house. The main framework of the walls consisted of a series of upright posts set in deep postholes around the interior perimeter of the house pit about 0.25 m apart, on average.

The floor plan and framework of the Features 34C and 34D superstructures were similar to the house-in-pit style, but the wooden framework was covered with adobe rather

than brush and earth. We identified 25 postholes for Feature 34C and 14 postholes for Feature 34D; there were 19 postholes that we could not ascribe to a specific construction phase, plus 13 postholes that were part of Feature 34A (see below). The postholes averaged about 0.10 m in diameter. The posts set in these holes were probably one-half to two-thirds the diameter of the posthole. These posts may have been tied together with horizontal stringers. Horizontal grooves were observed connecting several postholes in the western wall of Features 34C and 34D. Several large stones were set into the interior surface of the adobe wall around the structure. These were placed in locations where the walls were built against areas where the gravelly soil into which the house was built appears to have slumped. The intent may have been to reinforce the walls in this location. The large mass of adobe inside the structure suggests that the roof may have had an adobe coating similar to the walls. The roof of Features 34B–34D, whatever its composition, was probably supported upon the exterior walls and two interior posts set along the central long axis of this remodeled house. One of these postholes was found in the northern portion of this house, and the other (if it existed) would have been within the area disturbed by the intrusive burial pit (Feature 106). This posthole does not appear to be associated with Feature 34A, and there is no other evidence of how the roof of this structure was supported.

No direct evidence of the roofs of the structures was found.

Floor. The floor of Feature 34A was 24 cm below the floor of Feature 34D and was dug into the calcic substratum (Stratum IV). Using Feature 34A as a base, the builders of Feature 34B coated this surface with an adobe plaster 3–5 cm in thickness. This plaster was made from the same calcic soil that comprised the substratum. When the structure was remodeled for Feature 34B, the central section of the floor was replastered, covering the original hearth. At its thickest point, this floor was no more than 3 cm thick. The plaster was “feathered” away from the hearth, eventually blending into the level of the original floor near the walls of the later structure.

Hearth. A hearth was located in the east-central part of the structure. The original hearth in Feature 34B (Subfeature 34.32) was a large, unlined, circular basin measuring 0.6 m in diameter and 0.17 m deep. The rim and walls of this hearth were oxidized. A portion of the circumference of this hearth was disturbed on the northern side. This disturbance may have occurred when the second house was remodeled and the new hearth was constructed directly above it. The later hearth (Feature 34.01) in Feature 34D was roughly circular, measuring 0.31 by 0.30 m and 0.13 m deep. The walls and base of this later hearth were well plastered with a 2–3-cm-thick clay-rich material. This plaster and the subsoil were well oxidized from use. The fill of this hearth consisted of a 5-cm-thick deposit of ash on the bottom and continuing partially up the sides, capped by a layer of fallen structural debris.

Other Floor Features. Three floor features were identified in addition to the hearths and postholes: two pits and one granary pedestal. One of the pits, Subfeature 34.2, originated at the level of the later floor (Feature 34C floor) but had been abandoned and capped during the occupation of Feature 34D. This pit was a large, hemispherical basin located near one of the main roof supports, measuring 0.65 by 0.64 m and 0.39 m deep. The bottom and sides of the pit had been coated with a 2–3-cm-thick adobe. The fill of the pit was a light brown sandy clay loam. After abandonment, the pit was capped with a thick layer of adobe and stones. This pit probably was an adobe puddling basin associated with the remodeling episode that was sealed upon completion of the construction. The other pit, Subfeature 34.93, was discovered during mechanical removal of the floor of Feature 34B. It appeared as a large, circular stain 0.36 by 0.35 m. Located under the lowest floor, this pit was probably about 0.30–0.35 m deep. The granary platform (Feature 34.3) was a roughly circular area of flat-laying tabular stones plastered into the upper floor, Feature 34D. Some stones appear to have been removed on the northern portion of the circumference; originally, it may have measured about 1.0 m in diameter. Samples of the sediments between and below the rocks were collected for palynological analysis.

Entry. No vestibule entryway was found; however, the position of the hearth and other evidence indicates that the entryway of the two later structures was in the eastern wall of the structure. Two factors contributed to the uncertainty about the entryway. After the latest version of the house was abandoned, a large pit (Feature 32) intruded the eastern wall about where the entryway would have been. During our preliminary excavations, TR 210 cut the eastern wall of the structure at the probable location of the entryway. Several postholes to the east of this structure may represent an entryway; however, no clear pattern was discovered.

Evidence for Remodeling

Feature 34 represents the remains of four structures. We found limited evidence of the earliest structure, Feature 34A (see Figure 28), consisting entirely of a row of 13 postholes; there were no other associated features. This was probably a brush and earth structure, as there was no evidence of adobe. The limits of the structure extended beyond the floor plan of the later structures. The second structure was built in the same location. Feature 34B was a large, oval brush and earth structure that was subsequently remodeled. Features 34B and 34C largely followed the same plan, and their walls overlapped to a great degree. Feature 34C, however, was an adobe-walled pit structure. This structure either fell into disuse and collapsed or was dismantled and razed. Within the remains of the larger structure, a smaller oval adobe-walled pit structure (Feature 34D) was constructed. Both structures shared a common entry location and the later hearth was aligned directly above the original hearth.

Associated Artifacts

The near-floor fill from Feature 34C contained a wide range of flaked stone and ground stone artifacts, including tool manufacturing and maintenance debris. The ceramic collection contained no decorated sherds that could confidently be assigned to type. Four manos, two basalt cores, and one argillite pendant were recovered from the floor of the feature (see Table 3).

Botanical Remains

Samples of several of the posts were identified as juniper. Maize pollen was recovered from the upper hearth and the granary platform.

Faunal Remains

Several specimens identified as black-tailed jackrabbit and cottontail were recovered from the fill of Feature 34.

Chronology

Two archaeomagnetically derived dates were obtained from the hearths (Feature 34.01 and 34.32) in Feature 34 (see Appendix A). The original hearth, which was associated with the later Feature 34D, returned a date of A.D. 935–1690 (dated against SWCV595; LaBelle and Eighmy 1997). The sample from the lower hearth, associated with the earlier Feature 34B, produced a date of A.D. 935–1690. These dates add little to the precise chronological placement of the various houses in this feature.

Associated Features

The small, informal structure, Feature 17, may be an ancillary structure associated with this pit structure. This former structure is located to the north of Feature 34 and is oriented at approximately a right angle to Feature 34. If Feature 17 did open to the south as suspected, it would have opened onto a common area with Feature 34.

Two features were intrusive into the structure. A burial pit (Feature 106) intruded into the southeastern quadrant of the structure. The fill of this burial pit was not recognized until floor level, but it is quite likely that this burial postdated the collapse and infilling of the structure. A large pit (Feature 32) intruded through the probable location of the entryway in the eastern wall. A large, moderately deep (0.34 m) pit (Feature 158) was intruded by the south wall of Feature 34. This pit contained a small amount of refuse; otherwise, its function is unknown.

Feature 99

Feature type: pit structure

Function: habitation

Location: Feature 99 was located within the area defined by the Feature 1 compound and was intruded by Feature 19.

Grid coordinates (m): N 9084.9, E 502.4

Date: Miami phase, based on archaeomagnetic dates, ceramics, and construction style

Remodeled: yes

Abandonment processes: planned, contents removed and house collapsed

Dimensions: 5.18 by 3.88 m and 0.50 m deep

Orientation: entry of structure faced east

Floor area: 19.0 m²

Shape: subrectangular

Excavation Methods

This structure was originally observed in the south wall of TR 216 but was recognized as a structure during mechanical and hand clearing of the interior surface of the compound

(Figures 33 and 34). Overburden deposits to the top of the extant walls were removed by a combination of mechanical and hand excavations. A 2-by-2-m test pit (TP 649) was excavated in the front-center of the structure to obtain a sample of the fill deposits and to ascertain the depth of the structure. The fill of the entryway was also excavated and screened to bolster the test pit sample. These excavations indicated that the structure had not burned and that the contents of the house had been removed at abandonment. Also, it was evident at this time that the structure had been intruded by one burial pit (Feature 49) and perhaps another (Feature 103). The remainder of the house fill was removed to the floor as a single level. This fill was not screened, but a judgmental sample of artifacts were collected. All interior floor features were excavated. After the interior of the house had been completely cleared and documented, the gravelly loam stratum into which the structure had been built was removed to the top of the calcic horizon by a combination of mechanical and hand excavations. This operation exposed the exterior of the adobe walls and revealed the perimeter postholes. All postholes were excavated. After these postholes had been excavated and fully documented, the walls and floor were mechanically stripped away to explore for additional features below the house.

Stratigraphy

The fill in the eastern portion of the structure was a brown gravelly clay loam, similar to the cultural horizon (Stratum II). Toward the west, and against the western wall, the fill was a light brown, gravelly, calcic, clayey material that was similar in all regards to the adobe used in the walls. Two burials, Feature 49 and Feature 103, intruded through the fill and into the floor of the structure. The fill of the burial pits was noticeably different from the house fill; it consisted of a mixed sand and gravelly loam with interspersed masses of calcic soil. Feature 49 was completely excavated before the house fill was removed. The upper fill of Feature 103 was removed during removal of the house fill in this portion of the structure. The southeast corner of Feature 99 was intruded by Feature 19. The floor of Feature 19 rested directly on top of the floor of Feature 99 in this location (see Figure 33).

Construction Details

Walls and Roof. The floor plan and framework of the superstructure are similar to the house-in-pit style; the main difference is how the walls were constructed. The house pit was excavated into the natural slope to a depth that penetrated through the gravelly loam horizon and into the upper few centimeters of the calcic soil. This calcic soil provided the foundation for the floor and the house. The main framework of the walls consisted of a series of upright posts set

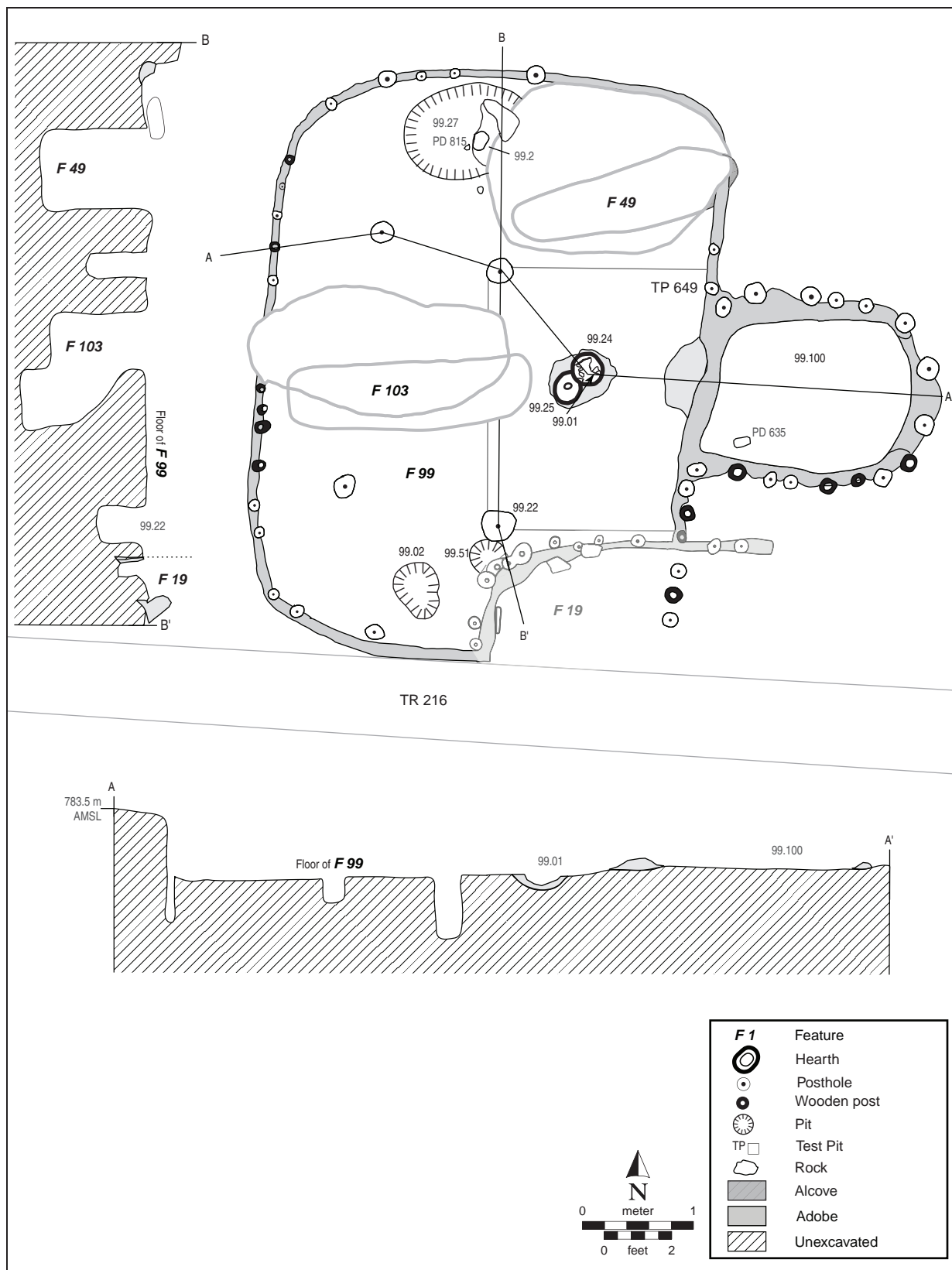


Figure 33. Feature 99 pit structure at the Vegas Ruin (405/2012).

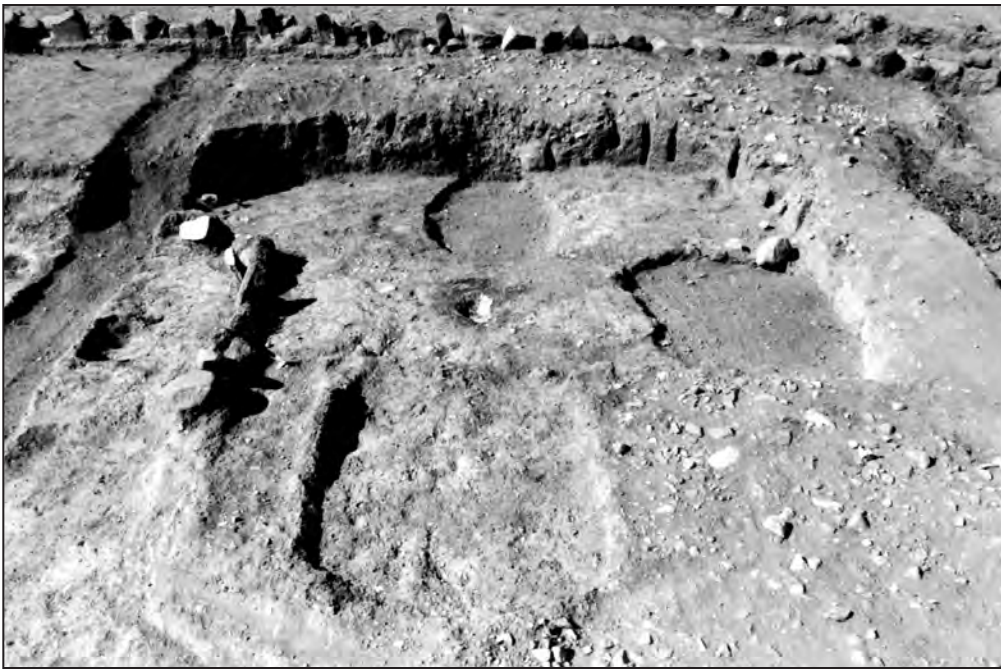


Figure 34. Overview of Feature 99 pit structure at the Vegas Ruin (405/2012), view west to compound wall.

in deep postholes around the interior perimeter of the house pit about 0.25 m apart, on average. We identified and excavated 49 perimeter postholes, but there may have been as many as 6 more in the western wall that were not excavated. The postholes averaged about 0.10 m in diameter.

No direct evidence of the roof remained. The roof was probably supported by four interior posts and the exterior walls. Two of the interior posts were located along the central long axis of the structure. Two additional interior posts were located in similar positions in the back half of the house and may have been ancillary supports for the roof.

Floor. The builders dug the house pit into the upper portion of the calcic substratum (Stratum IV). In the center of the structure, however, was a fossil channel filled with unconsolidated coarse sands and gravels. The entire floor area was leveled and coated with a 3–5-cm-thick adobe plaster. The adobe plaster was well preserved in all places where it had been applied above the calcic substratum but was poorly preserved and heavily fractured where it overlay the unconsolidated channel deposits.

Hearth. Two hearths were located in the east-central part of the structure in front of the entryway. The original hearth (Subfeature 99.25) was circular, measuring 0.20 by 0.19 m and originally was probably about 0.18 m deep. The hearth was clay lined and well oxidized from use. The remaining portion of the hearth was filled with a gray ash. The upper

part of the original hearth was removed when a later hearth was built. Immediately above the original hearth was a large oval pit (Subfeature 99.24) that measured 0.55 by 0.47 m and was also about 0.18 m deep. The walls of this pit show little oxidation and probably was not used as a hearth but rather was part of the preparation for building the second hearth. This pit was filled with adobe. Within this pit, the later hearth (Subfeature 99.01) was constructed. This latest hearth was a circular basin 0.3 by 0.3 m and 0.11 m deep. The walls and base of this hearth were coated with a 2–3-cm thick plaster that was well oxidized from use.

Other Floor Features. Inside the house were three shallow pits (Subfeatures 99.02, 99.27, and 99.51). These pits were of various sizes, but all were filled with ash. A similar phenomenon was observed in the floor of nearby pit structure Feature 179. The floor surface beneath two of these (Subfeatures 99.27 and 99.51) was lightly oxidized, suggesting that these were informal hearths or that the ash was hot when placed in these pits. One of the main roof supports (Subfeature 99.22) intruded upon the eastern edge of Subfeature 99.51. It seems unlikely that hot ash or an informal hearth would have been placed next to a roof-support post. This pit may have predated construction of the house or may have predated a remodeling episode.

Entry. A large, subrectangular vestibule entryway (Subfeature 99.100) was constructed in the approximate center of the eastern wall. The walls of the entryway were post-

reinforced adobe like the walls of the body of the house. Curiously, the posthole pattern in the entry way was continuous with a posthole located in a position where it would have interrupted entry and exit from the structure. The location of this posthole suggests that the post anchored in it was not head high, and may have served to support or brace a sill.

Evidence for Remodeling

There was no evidence for remodeling of the pit structure, but the main hearth was rebuilt on at least one and perhaps two occasions.

Associated Artifacts

Lithic artifacts recovered from the floor and near-floor fill included a small number of rhyolite flakes, one basalt core, one basalt hammer stone, and one hoe (see Table 3). The ceramic collection contained a single sherd of Walnut Black-on-white. The rest of the collection was dominated by brown plain, red plain, and Salado Red Corrugated.

Botanical Remains

Several fragments of the extant wall posts were identified as juniper. A flotation sample taken from the hearth contained a single identifiable species, a single charred cheno-am seed. With the exception of amaranth, no economic species were identified in the pollen sample.

Faunal Remains

Most of the faunal specimens recovered from Feature 99 were from squirrel- to rabbit-sized species—several fragments were identified as black-tailed jackrabbit. A small number of deer-sized specimens were also recovered.

Chronology

Archaeomagnetically derived date ranges of A.D. 1010–1290 and A.D. 1010–1190 (dated against SWCV595; LaBelle and Eighmy 1997) were obtained from the original and later hearths, respectively (see Appendix A).

Associated Features

Feature 99 appears to have been one of the first structures associated with the Miami/Roosevelt phase occupation at the site. Feature 19 overlaps a portion of the southeastern corner of Feature 99. Postholes representing this portion of the wall of Feature 99 were found sealed beneath the floor plaster of Feature 19. Two burial pits (Features 49 and 103) intruded through the fill and the floor of the structure.

Feature 179

Feature type: pit structure

Function: habitation

Location: Feature 179 was located at the western edge of the excavated area below the northwestern corner of the Feature 1 compound.

Grid coordinates (m): N 9097.0, E 497.3

Date: Miami phase, based on archaeomagnetic and radio-carbon dates, construction style, and ceramics

Remodeled: yes

Abandonment processes: planned, contents removed and house slowly collapsed

Dimensions: 5.22 by 3.76 m and 0.40 m deep

Orientation: entry of structure faced east

Floor area: 19.2 m²

Shape: subrectangular

Excavation Methods

This structure was originally discovered during mechanical and hand excavations of the interior surface of the compound (Figures 35–37). Several upright wooden posts, a portion of an adobe wall, and the floor of a structure were observed in the profile of the sediments beneath the western wall of the compound (Feature 7) (Figure 38). Also observed in this profile was the upper portion of a pit that intruded this structure; this pit was also overlain by the western wall of the compound. Several pieces of uncharred wood in the fill of this pit suggested that it may have been a burial pit. Most of the structure lay to the west outside the ROW. Because of its stratigraphic relationship with the compound and because of the potential that the intrusive pit was a burial, the entire structure was excavated, even though the bulk of it extended outside of the ROW. The excavation area defined for the structure was limited to an area about 0.5–0.75 m beyond the walls. A 1-by-2-m test pit (TP 1653) was excavated in the estimated center of the structure. This test pit included a sample of the fill deposits from the present ground surface to the floor of the structure. All of the fill was removed in 0.1-m levels and sifted through ¼-inch-mesh hardware cloth. The extent of the walls was defined by hand trenching and following the top of the extant adobe walls. None of the overburden sediments removed during this excavation was screened, but artifacts were collected on sight. The wall definition occurred concurrently with excavation of the test pit. During this procedure, another large pit (Feature 195) that intruded the northeastern corner of the structure was discovered. Because this pit was filled with a dense midden deposit, it was also excavated to obtain a large sample of ceramics to help date the occupation of the structure. After completion of the test pit, wall definition, and excavation of the intrusive pit, the fill to the top of the collapsed structural debris was removed as a single level

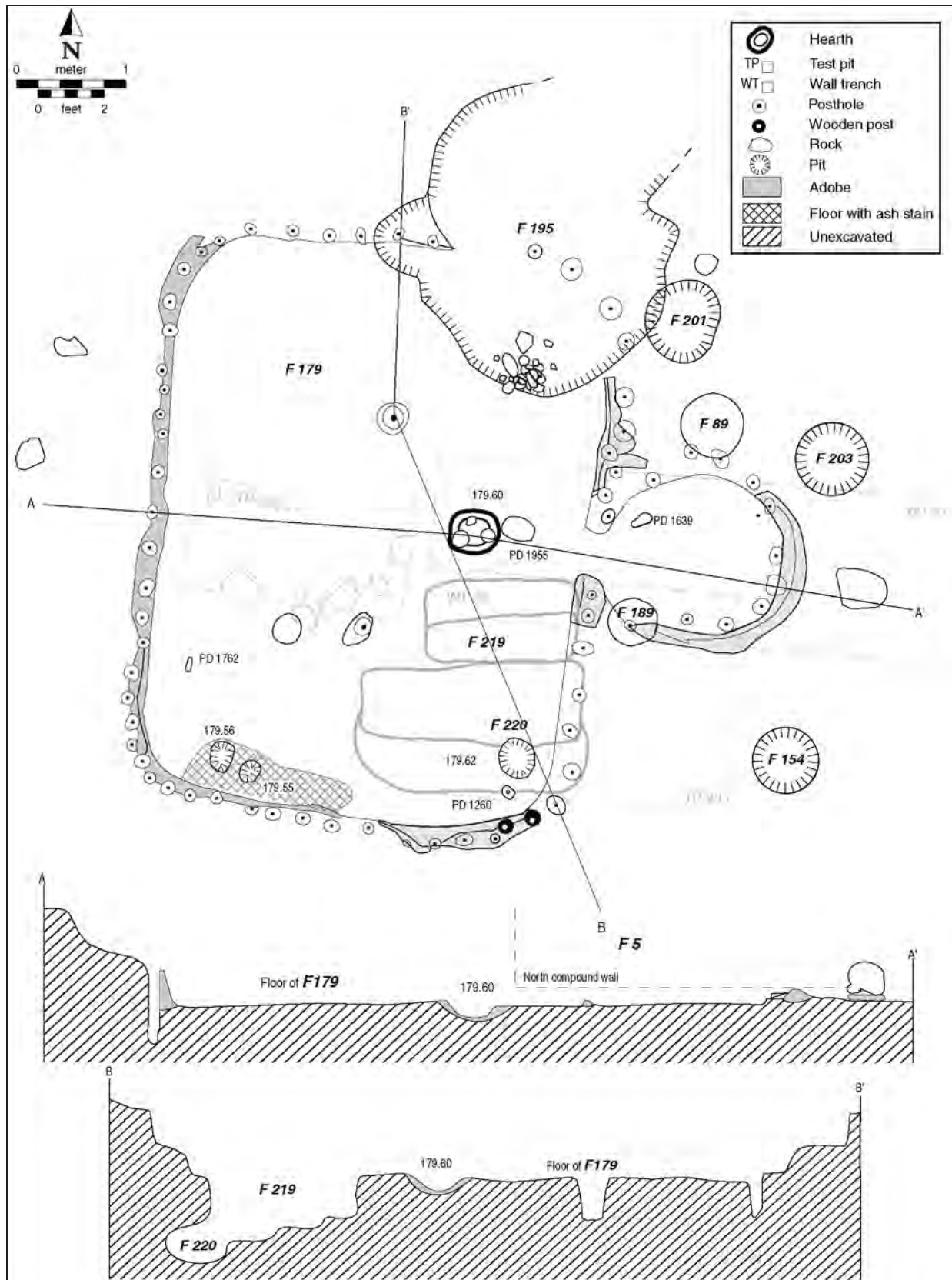


Figure 35. Feature 179 pit structure at the Vegas Ruin (405/2012).



Figure 36. Overview of Feature 179 pit structure at the Vegas Ruin (405/2012) before removing compound wall, view northwest.

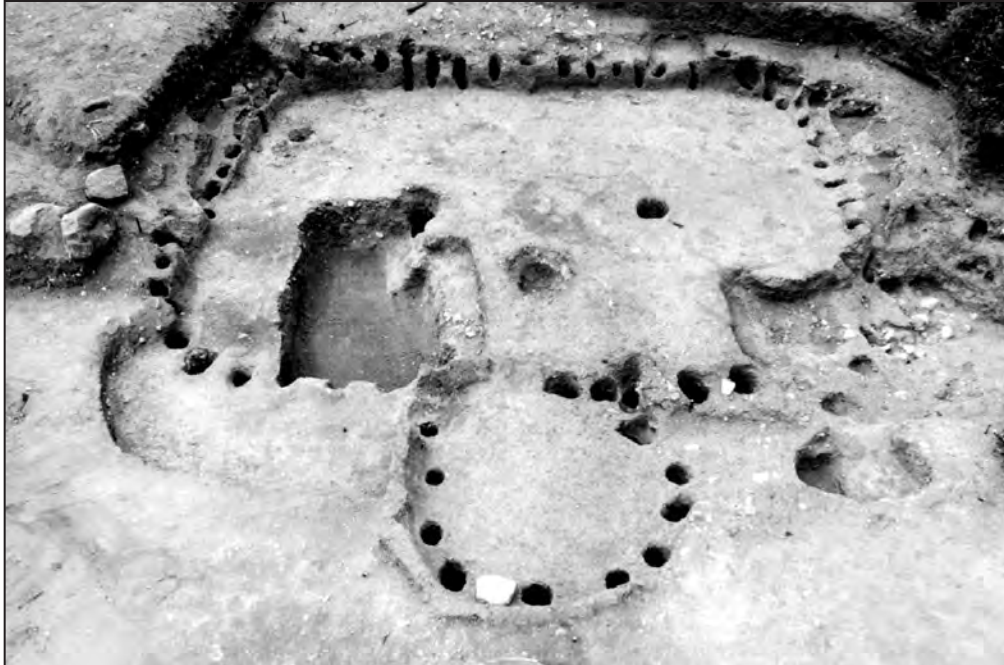


Figure 37. Overview of Feature 179 pit structure at the Vegas Ruin (405/2012) following removal of compound wall, burials and intrusive pits; view west.

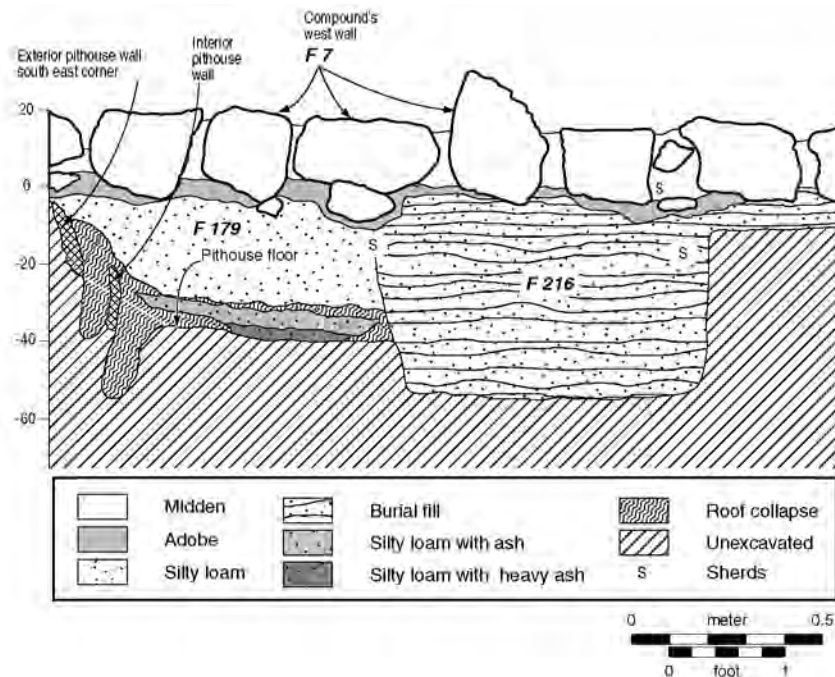


Figure 38. Profile of the west wall of TP 29, showing intrusion of burial plot Feature 216 into pit house floor of Feature 179 and construction of west compound wall over Feature 216.

across the remainder of the house. This deposit was not screened, but artifacts were collected on sight. Once this deposit was removed, the house was divided into three excavation units. The area north of the test pit was designated as the north half. The southern half was divided into two additional units: one to the west of the compound wall and the other from the western edge of the compound wall to the eastern wall of the house. The structural debris in the lower fill of the northern half and the southwestern quadrant was sifted through ¼-inch-mesh hardware cloth. The southeastern quadrant of the structure was not screened, because much of the house fill had already been removed during the discovery activities. Any artifacts found in contact with the floor surface were collected separately. All interior floor features and intrusive features were excavated.

Stratigraphy

The fill of this structure consisted of four distinct deposits. There was a thick ash accumulation in the southern portion of the house. This ash extended almost across the entire width of the structure. The ash accumulation was as much as 0.11 cm deep in places. These ash deposits accumulated directly on the floor and was overlain by structural debris. Over most of the structure and over the ash deposit in the southern portion was a layer of mixed brown sandy loam with large masses of gravelly, clayey loam. This was interpreted as a layer of structural debris. Above this deposit was

a dark grayish brown sandy loam with abundant artifacts that was interpreted as part of the same deposit that filled the large, intrusive pit at the northeastern corner of the structure. This deposit was thickest across the northern half of the house surrounding the intrusive pit where it extended to within 0.1 m of the floor. In the southeastern quadrant of the house we recognized a fourth deposit that was the fill of the intrusive pit. This deposit consisted of a mixture of the structural debris, the midden deposit, and coarse sands and gravels consistent with the underlying channel deposits at this site. This type of mixed deposit was characteristic of the burial pits throughout the remainder of the site. Although, it was possible to recognize this deposit, no distinct boundaries were evident. The screened lower fill from this quadrant, therefore, is a mixture of the structural debris and the mixed fill of this burial pit.

Construction Details

Walls and Roof. The floor plan and framework of the superstructure were a variation on the house-in-pit style characteristic of pre-Classic period architecture in the region. The house pit was excavated into the natural slope to a depth that penetrated through the gravelly loam horizon and into the upper few centimeters of the calcic soil. This calcic soil provided the foundation for the floor and the house. The main framework of the walls consisted of a series of upright posts set in deep postholes around the interior perimeter of

the house pit about 0.25 m apart, on average. We identified and excavated 68 perimeter postholes. The postholes averaged about 0.10 m in diameter. It was evident in places along the western wall above the house pit that the interior and exterior of the framework was covered with a layer of adobe 0.10–0.15 m thick.

The roof was probably supported by two interior posts located along the midline of the structure and by the exterior walls. Two large postholes were located along the central long axis of the structure. The location of these postholes divided the house into three spans of roughly equal size.

Floor. The calcic soil horizon into which the house pit was excavated formed the substratum of the floor. On top of this surface, a thin layer of adobe varying from 2 to 5 cm in thickness was applied.

Hearth. The hearth (Subfeature 179.60) was located in the east-central part of the structure in front of the entryway. The hearth had been remodeled at least twice. The latest hearth was a subrectangular plastered basin measuring 0.63 by 0.58 m and 0.12 m deep. The sides were well plastered and well oxidized from use. After the archaeomagnetic sample had been taken, the hearth was sectioned. Two other hearth episodes predating the latest hearth were evident. All three originated at the same surface. The plastered surfaces of the first and second episodes had been entirely removed by subsequent hearth episodes. The only indications remaining of the original hearth was a small portion of its bottom, and the only remaining portions of the second hearth was the plastered apron that surrounded the latest hearth.

Other Floor Features. Two other features were identified beneath the ash deposit in the southern portion of the house. Both (Subfeatures 179.55 and 179.56) were shallow, irregular pits dug into the floor. Subfeature 179.55 measured 0.23 by 0.19 m and 0.06 m deep. The surface of Subfeature 179.55 and the floor area around it was oxidized. The second pit, Subfeature 179.56, measured 0.26 by 0.22 m and 0.13 m deep. Although it was filled with fine gray ash, the surfaces of the pit and the floor around it were not oxidized. These features may have been informal hearths or simply areas where ash was disposed of in the house.

Entry. Feature 179 had a large bulbous vestibule entryway in the center of the eastern wall. The walls of the entry way were constructed of adobe and posts but of a different technique than the body of the house. The perimeter posts in the entryway were set around the interior of the adobe wall. It seems that the adobe wall was constructed inside the excavated pit and then the upright posts for the walls were set inside this perimeter. The entryway, like the body of the house, was filled with a gravelly clay loam, suggesting that the entryway superstructure was covered with adobe. Near the center of the entryway at the point of access was a small, rectangular stone set in adobe. This may have been intended

as a step. The entryway was separated from the body of the house by a short adobe sill.

Evidence for Remodeling

There was no evidence for remodeling of the pit structure, but the hearth was replastered.

Associated Artifacts

Because of its subsequent use as a midden, Feature 179 contained an exceptionally diverse collection of ceramic and lithic artifacts. Unfortunately, few floor-contact artifacts were identified (see Table 3). Decorated sherds recovered from the fill include examples of Holbrook Black-on-white, Walnut Black-on-white, St. Josephs Black-on-white, Padre Black-on-white, Leupp Black-on-white, Snowflake Black-on-white, Showlow Black-on-red, and several indeterminate Cibola and Little Colorado White Ware sherds. The lithic collection was dominated by flakes and cores of chert, basalt, and rhyolite. Two side-notched projectile points were also recovered from the fill.

Botanical Remains

Several flotation samples were taken from an ashy area against the south wall of the structure. Charcoal from several woody species was identified, including juniper, mesquite, and creosote. Several maize cupules and charred cotton seeds were also identified. A number of fragments of charred monocotyledon tissue may reflect agave consumption or processing. Maize pollen was also recovered.

Faunal Remains

A large and diverse faunal collection was recovered from the fill of Feature 179, reflecting the use of the feature as a midden following its abandonment, as well as the disturbance caused during the excavation of the Feature 195 borrow pit. Because of this, the collection reflects site-level activities rather than any associated with the feature. Of the specimens that could be identified to the species level, most were classified as black-tailed jackrabbit or cottontail. Bones from large species such as deer were represented in far fewer numbers.

Chronology

A single archaeomagnetically derived date of A.D. 935–1315 (dated against SWCV595; LaBelle and Eighmy 1997) was obtained from the latest hearth (see Appendix A). A radiocarbon date of 890 ± 40 B.P. (cal A.D. 1030–1220; calibrated at 2σ with program OxCal 3.10) was obtained from a charred maize cupule also recovered from the hearth (see Appendix A).

Associated Features

No other features can be attributed to a time approximately coeval with the occupation of this structure. It is likely, however, that this is one of the earlier structures associated with the Miami/Roosevelt phase occupation at the site. The reconstruction of the stratigraphic sequence of events follows. After Feature 179 had collapsed and infilled to the original ground surface, two burial pits (Features 219 and 220) were dug into the fill and intruded through the floor. Both of these burial pits were capped by the western compound wall. The fill of these burial pits show a mixture of the underlying native soils, structural debris, and midden accumulations. The presence of the organic-rich sediments indicates that accumulation of the overlying midden deposit that caps Feature 179 may have begun prior to construction of the compound wall.

Next in the sequence, the northern end of the western compound wall (Feature 7) was constructed over the southeastern corner of this structure and burial plot Feature 216, whereas the western end of the northern compound wall (Feature 5) was built over the entryway of the house. The remainder of the house was filled with midden materials, most of which accumulated after the compound had been built. A small area (Subfeature 179.62) of well-oxidized floor in the southeastern quadrant of the house was built on top of the fill of the burial Feature 220. This deposit measured 0.39 by 0.20 m; it had no discernable depth and was covered with a layer of fine white ash 3 cm thick. A small adobe-lined pit (Feature 189) intruded the south wall of the entryway to Feature 179. One of the entryway postholes was sealed by the adobe lining of this pit. This feature, in turn, was overlain by the northern wall of the compound. This small pit was filled with adobe and was probably an adobe mixing basin. These two features may have been associated with the use or construction of the compound.

The large pit (Feature 195) that intruded the northeastern corner of Feature 179 was a borrow pit that measured almost 3 m in diameter (Figure 39). The upper fill of Feature 195 was a dark, gray, ashy deposit with numerous artifacts, including flakes, manos, and fire-cracked rock. Large quantities of ceramics were recovered, including red plain, brown plain, Brown corrugated, indeterminate Cibola White Ware, Roosevelt Black-on-white, Salado Red, and Snowflake Black-on-white wares. An inverted trough metate was resting on top of the upper fill. The lower fill was a light brown, sandy clay loam with some gravels. The borrowing activities created a large irregular pit that sloped gradually upslope toward Feature 179. The materials borrowed included some of the structural debris in the northern half of the structure. The materials from this borrow pit were probably used to construct the cobble-adobe-foundation compound and related features. When the borrow pit was abandoned, it

became a repository for trash and a thick midden accumulated in this feature. The midden accumulation appears to have continued to grow and eventually cover the layer of structural debris in the earlier Feature 179. This midden accumulation, however, was restricted to the area outside the northwestern corner of the walls; most likely the midden deposit accumulated after the compound walls were in place.

Limited-Activity Structure

A single, small pit structure, Feature 17, is interpreted as an ancillary structure associated with Feature 34. This structure was smaller and less formal in floor plan and construction details than the residential structures. The structure had a generally rhomboidal outline with rounded corners and no formal entryway. No postholes were discovered in the floor area or around the exterior perimeter of the house. Even though postholes would have been difficult to identify in the gravelly loam horizon into which the house was constructed, no postholes were observed intruding into the underlying calcic horizon. If posts had been set in place to support the walls and roof, they were not deeply anchored. Furthermore, no adobe material, such as those found in the larger pit structures, was observed in the fill. This negative evidence leads to the conclusion that the superstructure was a predominantly brush superstructure. Unlike the larger pit structures, the house pit for this small structure did not penetrate into the calcic horizon. The floor surface was, therefore, an unprepared gravelly surface. The arrangement of interior features lacked the symmetry of those in the other structures. Three interior features were identified: an informal hearth and two shallow pits. The hearth was placed to the side of the structure, off-line with the inferred entry axis. This hearth had been remodeled once, but neither episode was clay lined.

Feature 17

Feature type: pit structure

Function: storage or specialized use

Location: Feature 17 was located approximately 4 m north-east of the Feature 34 pit structure.

Grid coordinates (m): N 9016.5, E 512.8

Date: late Sedentary period, based on construction style and association with Features 34A and 34B

Remodeled: yes

Abandonment processes: planned, contents removed and house collapsed

Dimensions: 2.40 by 2.30 m and 0.08 m deep

Orientation: entry of structure possibly faced south

Floor area: 5.8 m²

Shape: irregular rhomboidal

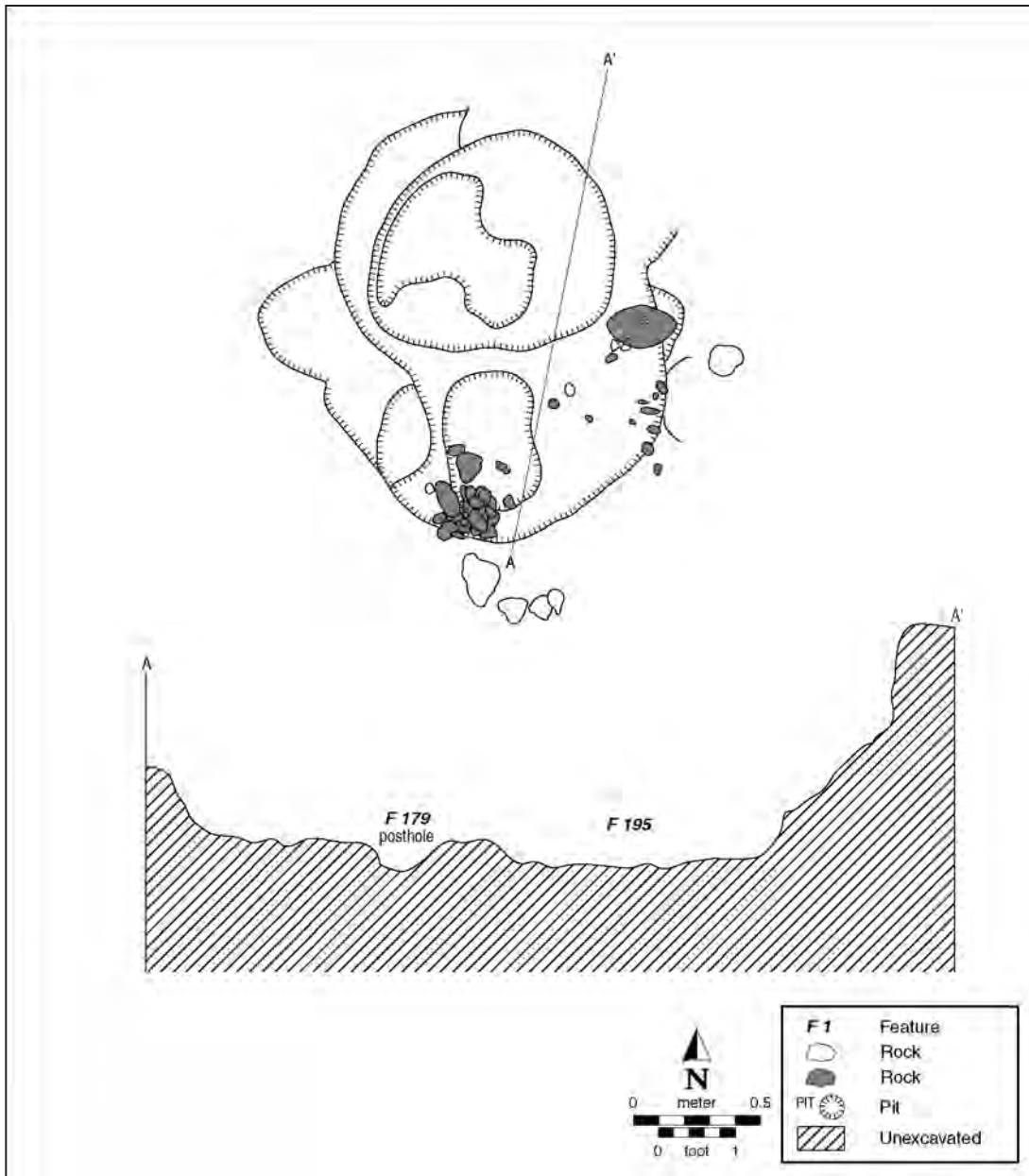


Figure 39. Feature 195 borrow pit intrusive into house Feature 179 at the Vegas Ruin (405/2012).

Excavation Methods

This structure was discovered in TR 210, which bisected the house (Figures 40 and 41). The overlying soil was removed with a backhoe to a depth where the outline of the house pit was visible. The house outline was further defined by shovel skimming. Because the house was small, both halves were excavated as a single horizontal recovery unit, and because it was shallow, the fill was removed as a single level. Any artifacts found in contact with the floor surface

were collected separately. Identified intramural features were excavated as discrete units. After completion of excavation and documentation, the pit structure was subsequently removed during backhoe stripping to locate and identify burials.

Stratigraphy

The house fill was uniform in characteristics and could not be distinguished from the overlying cultural horizon

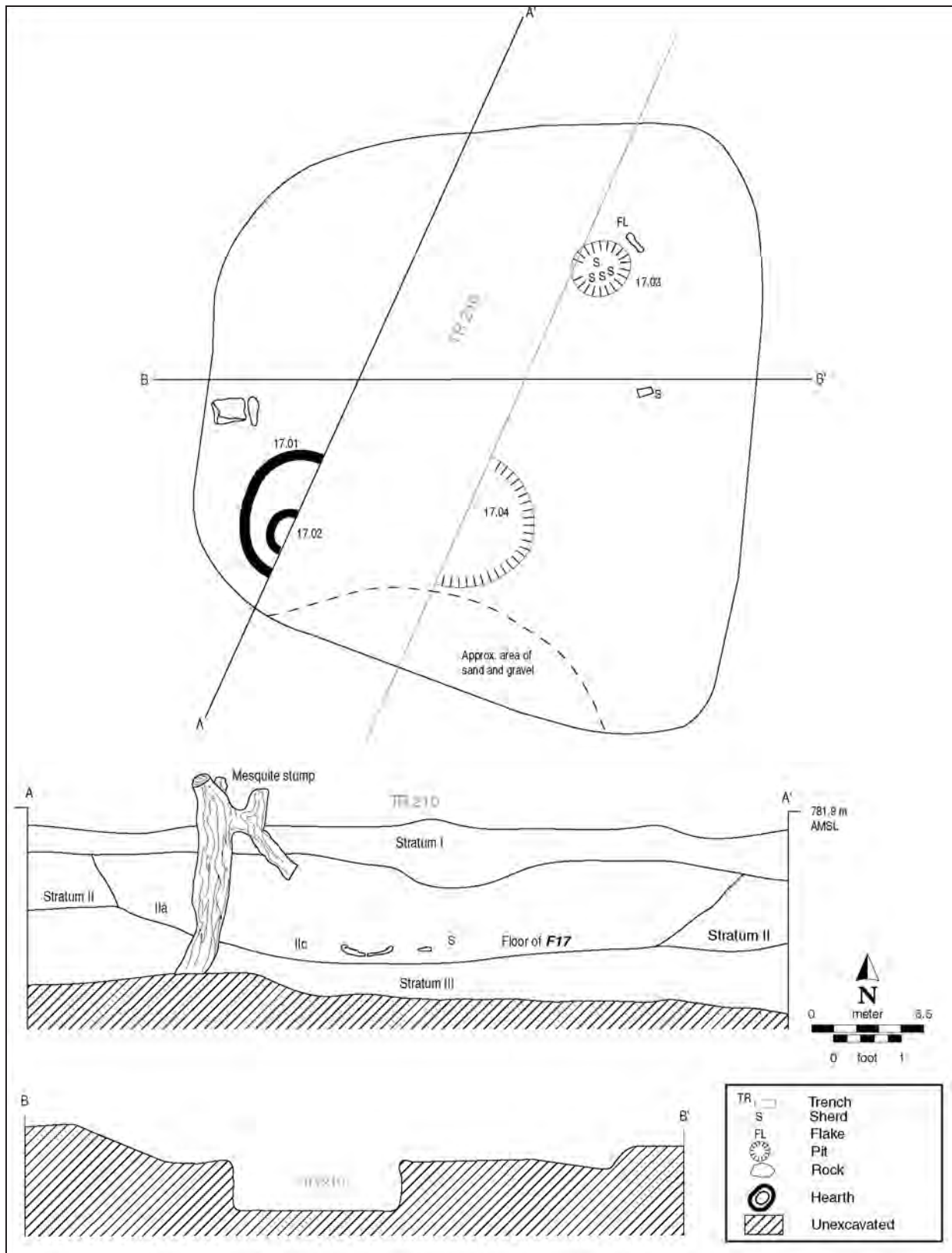


Figure 40. Plan view, profile, and cross section of Feature 17, a limited-activity structure, at the Vegas Ruin (405/2012).

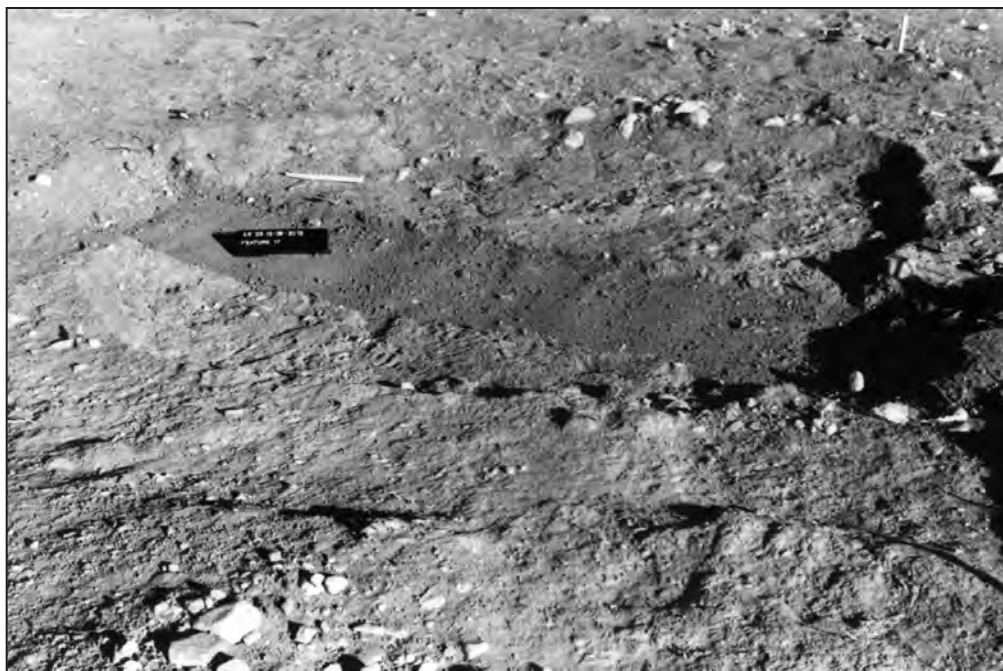


Figure 41. Overview of pit structure Feature 17 at the Vegas Ruin (405/2012), view east.

(Stratum II). This deposit was a brown to dark brown, poorly sorted gravelly loam with scattered charcoal flecks and artifacts. The portion of this deposit below the top of the house pit was designated as the house fill (Stratum IIa) but probably represents materials that accumulated after the house was abandoned and in disrepair. The fill of the two intramural pits was indistinguishable from the house fill. The hearths, however, contained ashy deposits with charcoal. Within the house, a localized deposit of very coarse sands and fine gravels was found on the floor near the center of the southern wall. This deposit appears to be the result of a single erosional event that washed these coarse sediments into the structure after abandonment. Because they are localized in the center of the southern wall, we speculate that they were flushed into the house through the entryway after abandonment. Disturbance of the fill deposits and floor surface by roots and rodents was evident throughout the structure.

Construction Details

Walls and Roof. The lack of adobe materials in the fill, such as those found in the other pit structures, suggest a predominantly brush superstructure. No postholes, however, were discovered in the floor area or around the exterior perimeter of the house to indicate characteristics of the walls and roof. Postholes would have been difficult to identify in the gravelly loam horizon into which the house was constructed; nevertheless, no postholes were observed intruding

into the underlying calcic horizon (Stratum IV) when the house was removed by subsequent backhoe stripping. If posts had been set in place to support the walls and roof, they were not deeply anchored. No direct evidence of the roof was found and no interior postholes were found to indicate any support for the roof. However the walls were constructed, we can speculate that the roof was of similar construction and integrated with the walls.

Floor. The floor was an unprepared irregular surface created when the house pit was dug into the native gravelly loam horizon (Stratum III).

Hearth. This informal hearth was a shallow excavation into the native subsoil near the southwestern corner of the structure; the sides were unlined. It had been sectioned by the backhoe and more than half of the feature had been destroyed. The remaining portion measured 0.62 m across. The hearth had been remodeled once. The original hearth (Feature 17.02) was 0.05 m deep. A thin layer of silty clay soil, 1–2 cm thick, capped a 5-cm layer of ash. The later hearth (Feature 17.01) was a larger hearth, built over the original hearth. It was at least 0.20 m in diameter, 0.13 m deep, and was filled with ashy sediment.

Other Floor Features. Two additional floor features were identified. A shallow basin-shaped pit (Subfeature 17.03) in the northeastern corner of the house measured 0.41 m long, 0.30 m wide, and was 0.18 m deep. Another shallow pit (Subfeature 17.04) in the southern half of the house

measured 0.56 m long and 0.20 m deep. It had been sectioned by the backhoe so its width is unknown. Both pits were unlined and were filled with deposits indistinguishable from the house fill.

Entry. No entryway was defined, but the deposit of coarse sands and fine gravels along the southern wall suggests that the entry may have been in this wall.

Evidence for Remodeling

The only evidence of remodeling of the pit structure was replacement of the original hearth.

Associated Artifacts

No artifacts were found in contact with the floor. A total of 55 ceramic artifacts were recovered from screened contexts within the fill of Feature 17. Of these, 23 were identified as brown plain, 10 as Salado Red Corrugated, 18 as red plain, and 3 as Brown corrugated. The final sherd could not be assigned to type. No lithic artifacts were recovered.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

No faunal remains were identified.

Chronology

No archaeomagnetic or radiocarbon dates were obtained from Feature 17. No temporally diagnostic artifacts were recovered from strong contexts. It is likely, however, that Feature 17 is contemporary and perhaps associated with Feature 34, owing to its proximity, specialized function, and orientation.

Associated Features

Feature 17 may be an ancillary structure associated with pit structure Feature 34. If Feature 17 did open to the south as suspected, it would have opened onto an area common with Feature 34.

Cobble-Adobe-Foundation Structures

The latest prehistoric occupation at the Vegas Ruin consisted of a rectilinear cobble-adobe-foundation compound containing a single room with a similarly constructed foundation.

A line of cobbles protruding from the modern ground surface immediately west of the ROW probably represents a second compound.

Feature 1

Feature type: cobble-adobe-foundation compound

Function: habitation

Location: The Feature 1 compound dominated the southern half of the excavated portion of the site.

Grid coordinates (m): N 9085.0, E 505.0

Date: Miami/Roosevelt phase, based on radiocarbon dates and ceramics

Abandonment processes: planned, contents of houses and courtyard removed, and architecture collapsed

Dimensions: 23+ by 20 m

Orientation: presumed long axis of compound oriented east-west

Interior area: unknown

Shape: rectangular

Excavation Methods

Feature 1 was visible from the surface as a set of several alignments of stone and scatters of rubble (see Figure 22). The compound was bounded on the east by the present alignment of SR 188, on the south, north, and west by cobble-adobe-foundation walls (Features 3, 5, and 7 respectively). The southeastern corner of the compound was missing, presumably the result of impacts caused by the construction of SR 188. Excavations of the compound proceeded from a series of hand excavations intended to locate and outline wall foundations that may have subdivided the interior space into smaller areas to mechanical trenching within the extramural space within the compound to locate and identify features. Excavation was completed with the mechanical and hand stripping of the interior fill within the extramural space to a level approximating the prehistoric occupational surface. After the interior of the compound had been cleared and the excavation of interior features was complete, the entire area of the compound was removed to a level 0.5–1.0 m below the occupational surface in an effort to ensure that all burials within the compound had been located. Four 2-by-2-m test pits, placed inside the walls of the compound, constitute the only screened control units of the fill deposits above the occupational surface of the compound. These test pits were excavated in 0.1 m levels, and all sediments removed were sifted with ¼-inch-mesh hardware cloth. Test Pit 4 was placed inside what we suspected was the southeast corner of the compound; Test Pit 29 was similarly placed inside what we suspected was the northwest corner of the compound; Test Pit 77 was placed inside what initially appeared to be a room along the southern wall of the structure; and Test Pit 91 was placed inside the only

room (Feature 11) identified in the compound. In addition to these test pits, several wall trenches were excavated along observed and suspected wall alignments. Four mechanical trenches, TRs 203, 216, 217, and 1125 were excavated within the interior space of the compound. TRs 203, 216, and 217 were excavated during Phase 1. TR 1125 was excavated toward the end of Phase 2, after the interior of the compound had been cleared to further ascertain characteristics of the soils comprising the landform on which the compound was situated.

Stratigraphy

The walls of the compound were constructed into the upper portion of the gravelly loam horizon (Stratum III) that underlies the Miami/Roosevelt phase occupation at the site. The natural fill of the compound was a brown sandy clay loam with subangular to subrounded gravel inclusions (Stratum II). The only other postoccupational and postabandonment deposits associated with the compound originated from construction of SR 188 and its related features. The large, ADOT erosion-control ditch (Feature 2) crossed the compound from southwest to northeast, removing a portion of the north wall and the southwest corner of the compound. The construction of SR 188 removed much of the southeast corner of the compound. In areas alongside SR 188 within the compound, there were several piles of gravelly sands. These were probably the remains of fill materials used to construct the modern SR 188 roadbed.

Construction Details

Walls

Feature 1 was a rectangular cobble-adobe-foundation compound. The landform on which the compound was constructed sloped generally from southwest to northeast. There was approximately a 1-m drop in elevation between the southwestern and northeastern extents of the compound. The walls of the compound conformed generally to this surface. The only exception was a portion of the northern compound wall near the northwestern corner of the attached room (Feature 11). In this portion there was a 0.3 m drop in the wall presumably created by the leveling of the floor for the room.

For convenience sake, the excavators divided the compound and associated cobble-adobe-foundation structures into a series of individual features. Feature 3 represents the remaining segment of the south wall; Feature 5 represents the north wall, and Feature 7 is the west wall. Feature 37 is a wall segment perpendicular to the east end of Feature 5; it is not clear whether this is the northeasternmost corner of the compound. Feature 47 is a wall segment perpendicular

to the west end of Feature 3 in the southwest corner of the compound and may represent a walled entryway into the compound. Two cobble-adobe-foundation structures are associated with the compound. Feature 11 is a room abutted to the north wall, and Feature 54 is a partially enclosed activity area abutted to the south wall of Feature 11.

Only the lower course of stones remained for most of the walls of the compound, but the amount of rubble around the walls suggests that the exterior walls may have stood as many as eight courses high in places. The stones used for the walls were cobbles of various types of rock. Most were a dark grayish igneous rock most likely obtained in the debris flows associated with the small wash just to the north of the site. Banded quartzites were also present. Similar types of cobbles are present in Cottonwood Wash just to the south of the site. The stones were probably originally held together with an adobe mortar. Remnants of this adobe were found around the base of many of the stones. The adobe was a light brown, calcic clayey loam similar in many regards to the native calcic horizon underlying the site. The type and quality of the foundations varied along the course of the walls. Most of the stones were large unshaped cobbles of various sizes, but some had been modified on one or two sides by flaking. Most sections of the walls were constructed of large, subrectangular boulders set partially into the underlying substratum. One portion along the southern part of the western compound wall (Feature 7), however, was constructed of several elongated stones set on end with smaller, blocky stones set in between. Another section along the northern compound wall (Feature 5) near the single room space (Feature 11) showed considerably more care in the selection and placement of the stones. In this portion, the stones were laid in such a manner to provide a flush interior surface. Even in this section, however, the builders fitted the stones based largely on their natural shape. All of the remaining wall segments abut one another, but because only a single course of the walls remained, the construction order of the walls could not be determined. Although it is clear that the compound and associated features were constructed over pit structures and burials from a preceding occupation, it is unclear whether or not all of the cobble-adobe foundations were built at the same time. Four interior walls abutted the compound walls. A short wall segment (Feature 47) abutting the southern compound wall (Feature 3) has already been mentioned. The other three walls abutted the northern compound wall (Feature 5). Two of these walls (Features 6 and 13) are the western and eastern walls of a cobble-adobe-foundation room (Feature 11). The third wall (Feature 37) was a short remnant of a wall that juts perpendicularly into the compound area off to the east of the cobble-adobe-foundation wall. This wall was truncated by grading associated with construction of the present alignment of SR 188. Construction of SR 188 truncated the eastern ends of the northern and southern compound walls. The ADOT erosion-

control ditch (Feature 2) destroyed the southwestern corner of the compound, and impacted the western wall of the room (Feature 11) and the northern compound wall. A large scatter of rubble was discovered south of the room, but no other wall remnants were found among this rubble. This rubble may be some of the remains of the eastern compound wall disturbed during construction of SR 188.

Floor

There was no floor or discernible surface on the interior of the compound. The interior surface was probably the natural ground surface at the time the compound was built. Based on the highest stratigraphic position that interior features were found, the occupational surface was the top of the gravelly loam (Stratum III). Remnants of a light brown adobe were found to the east, southeast, and west of the single room (Feature 11). This adobe may have been the remains of a plastered surface surrounding this structure; however, this is merely speculation.

Entry

A break in the southern wall (Feature 3), near where the southwestern corner would have been, may have served as the entry access to the compound. Although the southwestern corner was disturbed by the ADOT erosion-control ditch (Feature 2), there are several pieces of evidence to suggest that this gap in the wall was the entryway. Despite the modern disturbance, two large stones continuing the wall alignment were found on the east side of the ditch. One stone had been dislodged by erosion sometime after the ditch had been constructed, but the other stone was still in place. On the eastern side of the gap, the southern compound wall joins a short wall segment (Feature 47) that juts perpendicularly into the compound. Between the junction of these two walls and the remaining in situ stone near the erosion-control ditch there was a linear scatter of small stones and chunks of adobe. These may have been the remains of an adobe sill across the opening.

Evidence for Remodeling

There was no evidence for remodeling.

Interior Features

Numerous features were identified within the compound. Some of these may be associated with the pit structure occupation that preceded construction of the cobble-adobe features; nevertheless, the features discovered included stone-filled hearths or roasting pits, stone-lined hearths, adobe-and-stone-lined hearths, burials, clay-lined pits that

may have been used for mixing adobe, pits of indeterminate function, and caches.

Associated Features

Several cobble-adobe-foundation features are probably associated with the construction and occupation of the compound. These include two short wall segments (Features 37 and 47) abutting the compound walls, a rectangular room (Feature 11), an activity area (Feature 54) bounded by two cobble-adobe-foundation walls associated with the room, and a granary platform (Feature 51) associated with the room and activity area. The western compound wall (Feature 7) overlay pit structure Feature 179, as well as two burials (Features 219 and 220) that had intruded Feature 179. The wall segment (Feature 37), abutting the northern compound wall, was constructed over burial Features 196 and 204. There was a large complex of pits, hearths, and burials north of the compound that may be associated with the compound. The modern ADOT erosion-control ditch (Feature 2) crossed the compound and destroyed portions of the southern and northern compound walls, as well as portions of cobble-adobe features inside the compound. The modern route of SR 188 truncated both the southern and northern compound walls; the eastern wall was probably in the area now covered by SR 188. No evidence of architecture was observed east of the current SR 188 alignment.

Feature 11

Feature type: cobble-adobe-foundation room

Function: habitation

Location: Feature 11 was located along the northern wall of the Feature 1 compound.

Grid coordinates (m): N 9093.6, E 512.0

Date: Miami/Roosevelt phase, based on radiocarbon dates and ceramics

Abandonment processes: planned, contents removed and house collapsed

Dimensions: 5.0 by 4.0 m and 0.48 m deep

Orientation: possible entrance in southern wall

Floor area: 19.0 m²

Shape: rectangular

Excavation Methods

Excavation of this room occurred in two phases (Figures 42 and 43). This room was not evident from the present ground surface. The existence of the room was suggested by evidence unearthed in wall trenches along the northern wall (Feature 5) of the compound (Feature 1). These wall trenches exposed the junctions of the western (Feature 6) and eastern (Feature 13) walls of the room. Additional wall

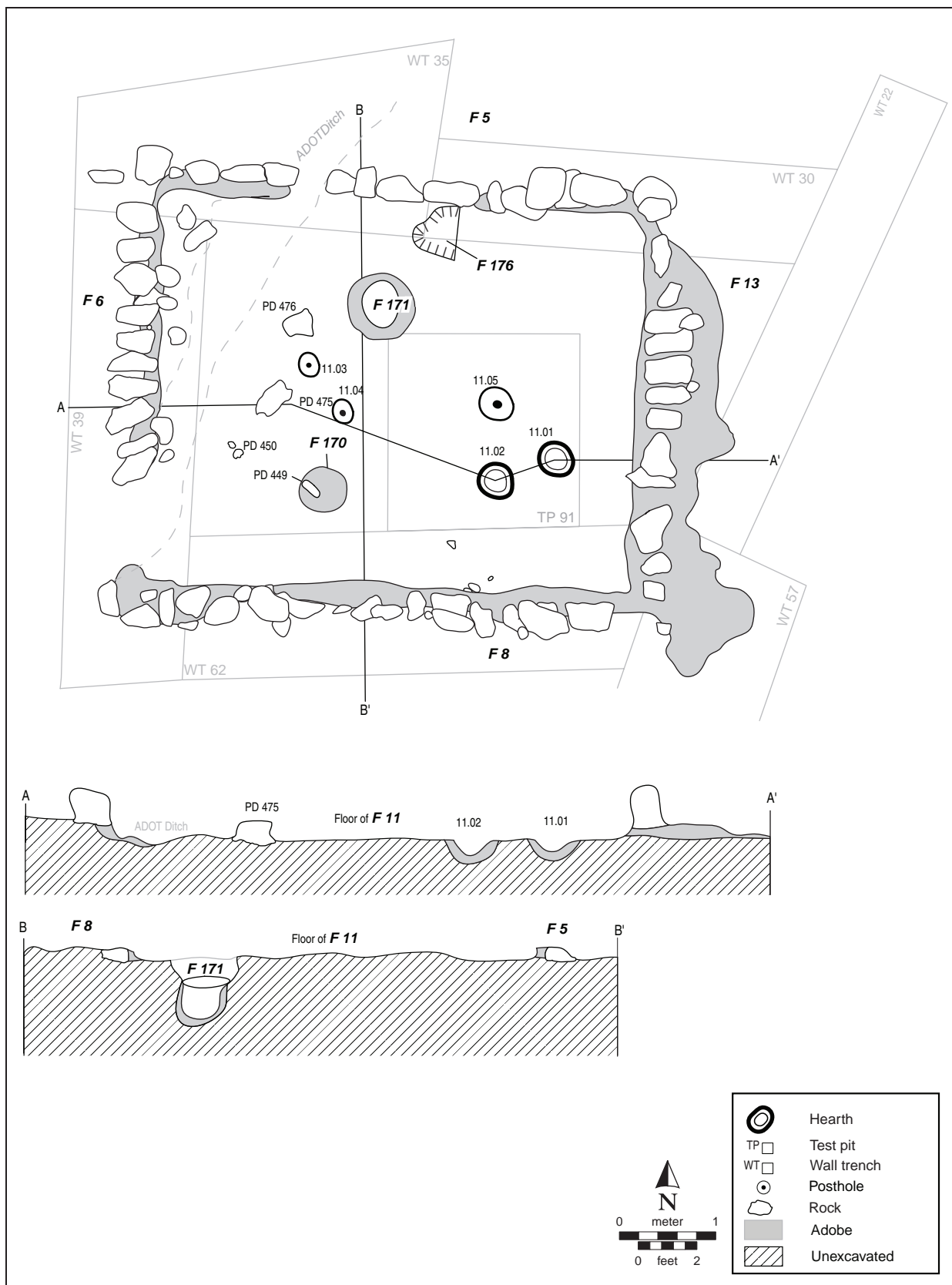


Figure 42. Room Feature 11 at the Vegas Ruin (405/2012).



Figure 43. Cobble-adobe foundation Features 11, 54, and the northwest corner of the compound.

trenching exposed the junction of the southern wall (Feature 8) with the western wall. A 2-by-2-m test pit (TP 91) was placed in the approximate center of this structure. This test pit originated at the present ground surface and ended at the room floor. The first level in this test pit removed a thick layer of redeposited cultural materials and coarse gravelly sands resulting from construction of SR 188 and related features. This level was not screened. The underlying intact fill of the room was removed in 0.1-m levels. All of the fill from level 2 to the floor was sifted through ¼-inch-mesh hardware cloth. Profiles of the test pit walls were drawn to document the fill deposits. After completion of the test pit, the upper fill to within 0.1 m of the floor was removed as a single level. This level was not sifted, but artifacts observed were judgmentally sampled and all exposed rubble was mapped. The remaining fill was excavated as a single level across the entire structure and was screened through ¼-inch-mesh hardware cloth. Any artifacts found in contact with the floor surface were collected separately.

Stratigraphy

The builders excavated into the calcic horizon (Stratum IV) to construct the floor of the structure. During the occupation or immediately after abandonment, a thin lens (less than 1 cm) of sand accumulated across the floor of the structure. Abandonment appears to have been planned.

Few usable items were left on the floor; those that were abandoned would have been easy to replace. Above this thin, sandy deposit was a 0.4–0.5-m-thick accumulation of stone rubble within a brown sandy clay loam. The rubble fill was then covered in part by redeposited cultural materials and natural soils derived from the construction of the ADOT erosion-control ditch (Feature 2) and by deposits of coarse, gravelly sand that were probably the remains of materials used in the construction of the SR 188 roadbed.

Construction Details

Walls and Roof

The room space was bounded on all four sides by cobble-adobe-foundation walls. Although the walls of this structure were essentially freestanding above the surface, the floor was partially subterranean. After leveling the excavation, the builders coated the floor with a layer of adobe mud. The thickness of this adobe varied across the floor but was typically no more than 3–5 cm in thickness. This adobe coating extended up the walls, covering the interior of the rocks and the exposed native subsoil beneath the western wall. The northern wall was a portion of the northern compound wall (Feature 5). The western (Feature 6) and eastern (Feature 13) walls abutted the compound wall, and the

southern wall (Feature 8) abutted the eastern and western walls. The foundation construction style in this room was as eclectic as that used for the compound walls. The remaining course of stones in the western wall were all elongated, subrectangular stones set edge to edge with their long axes perpendicular to the length of the wall. These stones were set in a light brown adobe. The southern and western walls were constructed of large, subrectangular and blocky cobbles. The stones were set in a light brown gravelly adobe that was probably derived from the calcic horizon (Stratum IV) that underlies the site.

No evidence of the roof itself could be identified in the rubble. The roof was probably supported by the exterior walls and two interior posts. No perimeter postholes were found around the structure. Two large postholes (Subfeatures 11.04 and 11.05) along the central long axis of the structure probably served as the main interior supports for the roof. Another posthole, Subfeature 11.03, may have also served as a roof support at one time.

Floor

The floor was indicated by an irregular, compacted surface and the presence of hearths and postholes. There is no evidence that the floor was plastered or prepared in any fashion.

Hearth

Two hearths were identified in association with Feature 11. The hearths were at floor level in the eastern half of the house. Both hearths were basin-shaped pits coated with a 2–3-cm-thick clay lining. About one-third of each hearth was missing as a result of rodent burrowing. The remaining plaster, however, was well oxidized from use. One hearth (Subfeature 11.01) was oval and measured 0.38 by 0.31 m and 0.23 m deep. The extant plaster lining was preserved on the southern and western sides. This plaster extended 9 cm below the floor level. Two fill episodes were observed. The upper 9 cm was a brown sandy clay loam with dispersed small flecks of charcoal that appears to have been postabandonment fill. The lower 14 cm, however, was filled with a dark gray ashy loam with small flecks and chunks of charcoal. The other hearth (Subfeature 11.02) was nearly circular and measured 0.29 by 0.27 m and 0.15 m deep. Again, the plaster coating was preserved on the southern and western portions of the feature, and where it remained, it was well oxidized from use. This hearth was filled with a yellowish brown sandy loam with some mottling of ash near the bottom. The low percentage of ash and light color of the fill suggests that this hearth may have been cleaned and intentionally filled during the occupation of the structure. There was no indication, however, that this hearth had been sealed with floor plaster.

Other Floor Features

There were no other floor features.

Entry

The entry appears to have been in the center of the southern wall. The probable location of the entryway is indicated by a large, subrectangular flat stone in the center of the southern wall.

Evidence for Remodeling

Evidence for remodeling was limited to the existence of multiple hearths that could have been used simultaneously, as none was sealed or intruded upon.

Associated Artifacts

Three temporally diagnostic white ware sherds were recovered from near-floor fill contexts: two Holbrook or Walnut Black-on-white and one Snowflake Black-on-white. The lithic collection consisted of cores, flakes, and shatter of basalt, chert, and quartzite (see Table 3). One basalt mano was recovered from the near-floor fill. The only formal tool recovered from the near-floor fill was a schist knife.

Botanical Remains

Flotation samples were taken from the near-floor fill of the structure and from both hearths. The near-floor fill contained juniper, mesquite, and creosote charcoal, as well as charred maize cupules and cotton seeds. Maize cupules were also recovered from both hearths and one of the hearths (Subfeature 11.02) contained a single charred cotton seed.

Faunal Remains

Faunal remains recovered from the near-floor fill of Feature 11 were limited to specimens identifiable only to the rabbit-hare size class.

Chronology

Feature 11 produced three absolute dates (see Appendix A). A charred cotton seed from the room returned a date of 740 ± 40 B.P. (cal A.D. 1210–1390; calibrated at 2σ with program OxCal 3.10). Charred maize cupules from the Subfeature 11.02 hearth returned a radiocarbon date of cal A.D. 1030–1220. The archaeomagnetic sample from the Feature 11.02 hearth returned two possible date ranges

(A.D. 935–1115 and A.D. 1135–1315). Another archaeomagnetic sample from Feature 11.01 was off the curve.

Associated Features

Feature 11 was the only habitation room space discovered within the compound. The similarity in the construction style of the room and the compound walls suggests that this room was built at the same time as the compound. Two other features in the compound were immediately associated with Feature 11. The doorway opened into a small area bounded on the east and south by short cobble-adobe-foundation walls (Feature 54, see below). This appears to be a small activity area or entry associated with Feature 11. At the western edge of this enclosure, there was a circular area of flat lying stones (Feature 51). The present interpretation is that this feature represents the remains of a granary platform (see below). West of Feature 11, an alignment of three postholes (Features 213, 214, and 215) were identified during subsequent mechanical clearing of the compound interior. All three contained remnants of unburnt wood. These postholes could not be confidently attributed to any other features but may be related to the complex of Features 51 and 54, south of Feature 11.

To the south of Features 51 and 54 was a large area of rubble. Excavations in this area and removal of the rubble did not expose any indications of other architectural features, but these excavations also failed to provide an explanation for the quantity of rubble present. The floor of Feature 11 covered three features. Two were adobe-lined pits (Features 170 and 171), and the third was a small pit of unknown function (Feature 176). Feature 170 may have been used as an adobe puddling basin, perhaps associated with the construction of Feature 11 and the compound walls. Feature 171 was a relatively deep pit, lined with only a coating of calcium carbonate and capped with a complete trough metate. The function of Feature 171 is unclear. Feature 176 abutted the compound wall and was filled with brown sandy silty soil, gravel, and charcoal flecks.

Feature 51

Feature type: granary platform

Function: storage

Location: Feature 51 was located immediately south of the Feature 11 room.

Grid coordinates (m): N 9089.5, E 508.8

Date: Miami/Roosevelt phase, based on association with Feature 11

Abandonment processes: planned

Dimensions: 1.20 by 0.90 m

Orientation: n/a

Floor area: n/a

Shape: circular

Excavation Methods

Feature 51 was discovered during wall trenching along Feature 6, south of the southwestern corner of Feature 11 (Figure 44). It was found in an area littered with rubble and along the margins of the ADOT erosion-control ditch (Feature 2). The feature was distinct from the rubble surrounding and overlying it in two ways. First, the fill within the feature was a dark grayish brown silty clay that was noticeably more clayey and crumbly than the remainder of the fill. Second, most of the stones beneath this fill were flat-lying tabular stones unlike the subrectangular and blocky stones in the remainder of the rubble. Most of the fill of this feature was removed during the wall trenching activities before the feature was discovered. The remaining excavations consisted of mapping the feature and recovering soil samples from above, between, and beneath the flat-lying stones comprising this feature.

Stratigraphy

As noted above, the fill of this feature was a dark grayish brown silty clay. This was surrounded and overlain by the more typical brown sandy clay loam that comprises the sediment accumulation during and after the Miami/Roosevelt phase occupation. Later excavations revealed that the granary was constructed over the upper fill of a burial plot.

Construction Details

Walls and Roof

No evidence for the roof or walls was observed.

Floor

The floor consisted of several tabular stones set against one another. The spaces between these stones were filled with the same dark grayish brown silty clay that was observed immediately above the stones.

Hearth

There was no hearth.

Other Floor Features

There were no other floor features.

Associated Artifacts

The artifact collection from Feature 51 consisted of a single Reserve Black-on-white sherd.

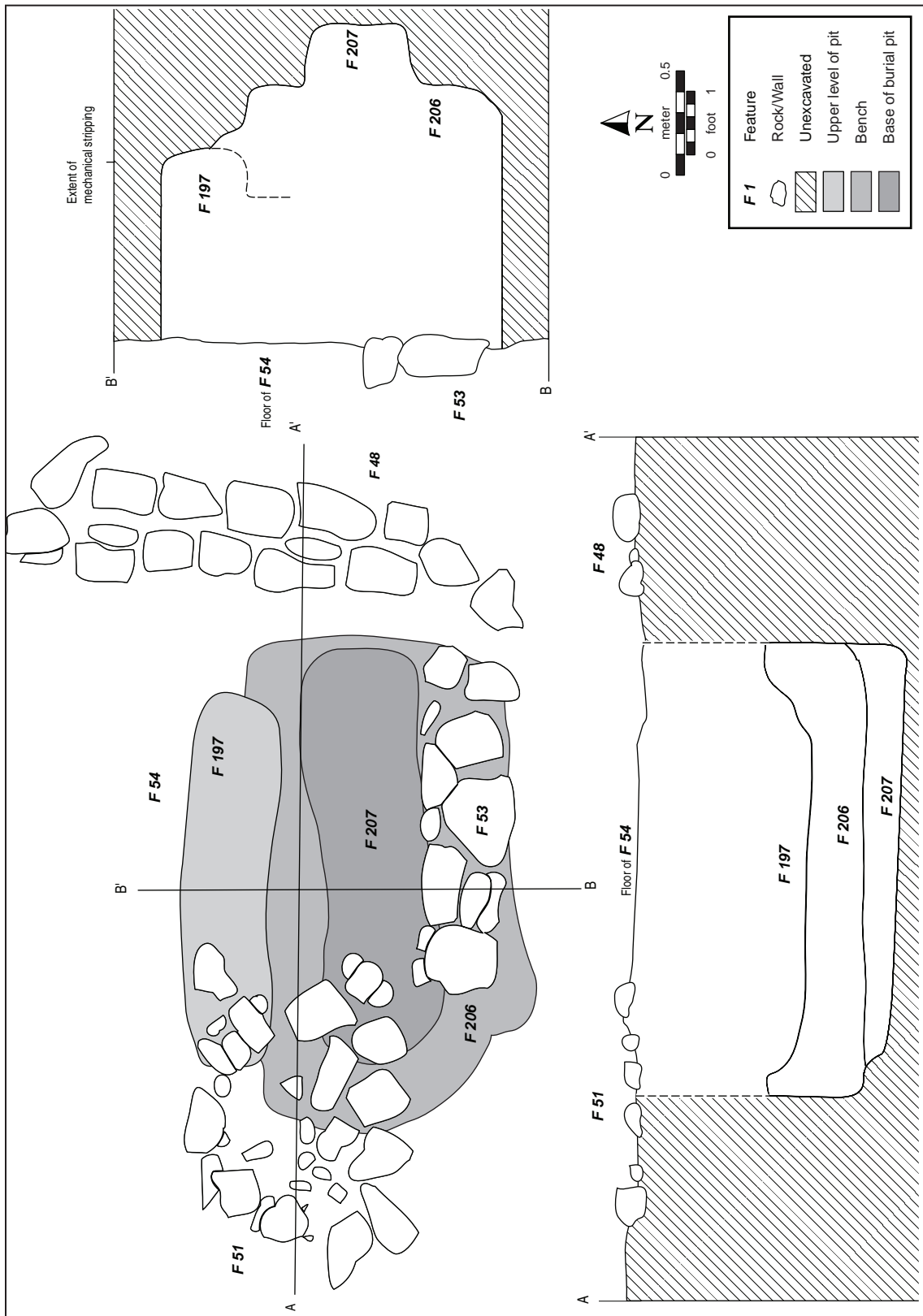


Figure 44. Plan and profiles of granary Feature 51, the partially enclosed space Feature 54, and burial plot Feature 205 at the Vegas Ruin (405/2012).

Botanical Remains

A pollen sample taken from Feature 51 contained evidence of maize. No macrobotanical remains were recovered.

Faunal Remains

No faunal remains were identified.

Chronology

With the exception of the single white ware sherd, no direct chronological indicators were found in association with Feature 51.

Associated Features

Feature 51 is located just over 1 m south of Feature 11 and in the opening defined by the walls of Feature 54. The location and stratigraphic position of Feature 51 with respect to Features 11 and 54 suggests that it was likely associated with the use of these features. Features 51 and 54 were constructed over the fill of a burial plot (Feature 205) that contained the remains of three individuals (Features 197, 206, and 207).

Feature 54

Feature type: partially enclosed space

Function: activity area or entryway

Location: Feature 54 was located immediately south of the Feature 11 room and east of the Feature 51 granary.

Grid coordinates (m): N 9090.0, E 510.5

Date: Miami/Roosevelt phase, based on association with Feature 11

Abandonment processes: planned

Dimensions: 2.4 by 1.8 m

Orientation: unknown

Floor area: approximately 4 m²

Shape: rectangular

Excavation Methods

Feature 54 was discovered while hand clearing the interior of the compound (Feature 1) south of Feature 11 (see Figure 44). During mapping and removal of rubble, the basal courses of two walls were found. Most of the fill had been removed during the clearing activities, and only 2–4 cm of fill remained. This thin layer of fill was removed as a single level and sifted through ¼-inch-mesh hardware cloth.

Stratigraphy

The fill of this feature was a brown sandy clay loam (Stratum II) that comprised the sediment accumulation during

and after the Miami/Roosevelt phase occupation. Later excavations revealed that the surface of this feature partially overlay the upper fill of a burial plot.

Construction Details

Walls and Roof

Two cobble-adobe-foundation walls enclosed this space on the south and east, whereas the south wall of F 11 bound the north side. Only a single basal course of both walls remained. The eastern wall (Feature 48) was distinctive in that there were two parallel alignments of stones. Gaps between these stones suggest that there may have been wooden posts set within the walls; however, no postholes were discovered during subsequent clearing excavations in this part of the compound. The southern wall (Feature 53) was constructed similar to the walls of Feature 11 and the compound. No firm evidence that this space was roofed was found.

Floor

The floor was an unplastered, compacted yellowish brown clayey loam. Later excavations revealed that some of this material was the fill of an underlying burial plot.

Hearth

There was no hearth.

Other Floor Features

There were no other floor features.

Entry

The area was unwallled on the west side.

Evidence for Remodeling

There was no evidence for remodeling.

Associated Artifacts

The small artifact collection from Feature 54 included 28 ceramic sherds, most identified as brown plain. Three unmodified lithic flakes were also present: two were identified as basalt and the third as metasandstone.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

No faunal remains were identified.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

Feature 54 was a roughly rectangular area defined by two perpendicular walls in front of the entryway to Feature 11. The southern wall (Feature 53) was parallel with the front wall (Feature 8) of Feature 11, and the eastern wall (Feature 48) was perpendicular. The eastern wall of Feature 54 did not, however, abut the front wall of Feature 11. The suspected doorway of Feature 11 opened directly into the area defined by these two walls. Even if the walls were not substantial enough to block access to Feature 11, they may have formerly directed the access into and out of the structure.

The location of Feature 54 with respect to Feature 11 and nearby Feature 51 suggests that it was likely associated with the use of these features. Feature 51 and Feature 54 were constructed over the fill of a burial plot (Feature 205) that contained the remains of three individuals (Features 197, 206, and 207).

Other Cobble Foundation Features

Several other architectural features were identified at the Vegas Ruin; all were outside the excavation area (see Figure 22). All were defined based on alignments of cobbles and rubble visible from the present ground surface. All features were surface mapped, but no subsurface excavations were conducted to evaluate or verify these features.

Feature 52

Feature 52 was a stone alignment that paralleled the western wall (Feature 7) of Feature 1 but continues several meters north of Feature 1. The only other walls that were associated with Feature 52 were three alignments near the southern end (Features 208, 209, and 210) that, along with a portion of Feature 52, defined the room space Feature 211. A small segment of the southern end of Feature 52 extended into the excavation area and was exposed when clearing outside the compound. This wall segment was constructed in a similar fashion to the walls associated with Feature 1. There was no evidence found to indicate that there were ever any connecting walls between Feature 52 and Feature 1. The space between these two walls, however, had a higher than aver-

age quantity of trash that suggests that this area was principally used for refuse disposal. A large midden (Feature 10) was defined in the southern end of this area. The boundaries of Feature 10, however, were not well defined and diffuse refuse was identified to the north across the pit structure (Feature 179) and into the fill deposits of a borrow pit (Feature 195) that intruded Feature 179. One possible function of this wall may have been to deflect the flow of surface runoff away from the occupational area that included the compound and the activity areas to the north of the compound. It is also possible that Feature 52 represents the eastern wall of another compound.

Feature 211

Feature 211 was a small, roughly square room bounded on all sides by cobble-adobe-foundation walls (Feature 208 on the north, Feature 209 on the west, Feature 210 on the south, and a portion of the long wall Feature 52 on the east). The room space was approximately 3 by 3 m. These features were located outside the ROW and were mapped but not excavated.

Extramural Features

A total of 133 extramural features were encountered during data recovery operations at the Vegas Ruin, including a variety of pits, thermal features, and discrete trash deposits. Many of these features were encountered during the mechanical stripping associated with the delineation of burial features. Because of the large number of extramural features that were encountered, we used a sampling strategy to provide a representative cross section of each feature type. Expanded descriptions of some of the excavated features, as well as feature-specific excavation methods, are presented below. All available data on the remaining features are presented in Table 4. It should be noted, however, that like all features identified by mechanical stripping, feature depth is an arbitrary measurement largely because an unknown portion of the feature is removed during the discovery process.

Adobe-Lined Pits

Twenty-five adobe-lined pits were identified, with 19 located north of the Feature 1 compound, 2 located to the south, and 4 inside the compound (see Figure 22 and Table 4). Of these, 7 were completely excavated, 5 were sampled, and 13 were measured and mapped. These features were small

Table 4. Extramural Features at Vegas Ruin (405/2012)

Feature No. ^a	Type	Location ^b	Dimensions (l × w × d) (m)	Effort	Artifacts or Samples ^c	Figure	Comments
2	modern ditch	ADOT ditch				20	
10	midden	southwest end of compound	20 (min.) × 12 (min.) × ?	sampled	FB, FL, GS, S, SHL	22	Extended under southwest corner of Feature 1.
15	roasting pit	2 m west of southwest corner of compound	1.10 × 0.76 × 0.73	excavated	FB, FL, FS, SHL	53	FAR and charcoal noted in fill. Oxidation noted. Stone-rimmed and within the large midden.
16	roasting pit	5 m north of compound	approx. 1.10 × approx. 1.10 × 0.57	excavated	FB, FL, FS, S, WB [PS]	54	West of Feature 34 and between Features 34 and 179.
18	roasting pit	north of compound	0.48 × ? × 0.6	unexcavated		22	Truncated by TR 213.
20	pit	inside compound	0.23 × 0.11 (min.) × ?	sampled	FB, FL, FS, O, PS, S	22	Truncated by TR 217.
22	borrow pit	west edge of ROW, north Feature 1	approx. 10 × 6 (min.) × 1.03	excavated	FB, FL, GS, S, WB [FS]	48	Truncated by TR 207.
23	pit	inside compound	0.42 × ? × 0.35	unexcavated		22	Truncated by TR 217. Ovate cobble, 20 × 4 cm at base.
24	hearth	inside compound	0.40 × ? × 0.22	unexcavated		22	Truncated by west wall of TR 217, intrusive to Feature 26.
25	pit	inside compound	0.80 × ? × 0.70	unexcavated		22	Truncated by west wall of TR 217, intrusive to Feature 27.
26	pit	inside compound	1.55 × ? × 0.21	unexcavated		22	Truncated by west wall of TR 217, intruded by Feature 24.
27	pit	inside compound	approx. 2.6 × ? × 0.45	unexcavated	S	22	Truncated by west wall of TR 217, intruded by Feature 25.
29	roasting pit	inside compound	0.70 × ? × 0.44	sampled	S	22	Charcoal noted in fill. Truncated by west wall of TR 217.
30	roasting pit	north of compound	0.80 × 0.40 × 0.41	sampled	S	55	Charcoal, oxidation, and FAR noted in fill. Located 5 m north of Feature 177.
31	pit	north of compound	1.41 × ? × 0.57	sampled	FL, S	22	Truncated by TR 211 and visible on both sides.

Table 4. Extramural Features at Vegas Ruin (405/2012) (continued)

Feature No. ^a	Type	Location ^b	Dimensions (l x w x d) (m)	Effort	Artifacts or Samples ^c	Figure	Comments
32	pit	north of compound	1.12 × 0.46 (min.) × 0.19	sampled	S	22	Some charcoal noted in fill. Truncated by TR 210, intrusive to entry of Feature 34.
36	pit	inside compound	0.66 (min.) × 0.53 × ?	unexcavated		22	Discovered in TP 250.
38	pit	inside compound	0.76 × 0.27 (min.) × 0.19	sampled	FS, PS	22	Truncated by TR 217, sectioned by Features 21 and 39.
39	pit	inside compound	0.28 × 0.27 × 0.18	sampled	FS, PS	22	Sectioned by Feature 38.
40	pit	inside compound	1.22 × 0.96 × ?	unexcavated		22	Discovered in northwest corner of TP 250.
41	pit	north of compound	? × ? × ?	unexcavated		22	Truncated by TR 207, in calcic horizon.
43	pit	north of compound	1.40 × 0.80 × ?	unexcavated		22	Truncated by TR 207.
44	midden	northeast of compound	10.0 (min.) × 9.0 × 0.20	sampled	S	22	Truncated by TR 213, overlaid Feature 187 burial.
46	pit	north of compound	? × 0.65 × 0.90	unexcavated		22	Truncated by TR 207, at the base of Feature 22.
50	pot break	inside compound	1.10 × 0.70 × 0.06	excavated	PS, S, SHL	22	Point-located artifact.
56	adobe-lined pit	north of compound	0.42 × 0.35 × 0.12	excavated	FB, FL, FS, SHL [PS, S]	45	Located 0.58 m West of Feature 59.
57	cache	north of compound	0.55 × 0.52 × 0.38	excavated	S [FS, PS]	22	Contained broken pot with large rock in the middle of it.
58	pit	north of compound	1.65 × 1.20 × 0.14	excavated	FB, FL, FS, PS, S	22	Intruded by Feature 61, overlaid Feature 33, and was adjacent to Feature 60.
59	adobe-lined pit	north of compound	0.38 × 0.35 × 0.13	excavated	O [FS, PS, S]	46	Located 0.58 m East of Feature 56.
62	pit	north of compound	approx. 0.50 × approx. 0.50 × ?	unexcavated		22	No artifacts noted.
63	pit	north of compound	approx. 0.73 × approx. 0.73 × ?	unexcavated	FB	22	No artifacts noted, large tree stump in center.
64	adobe-lined pit	north of compound	approx. 0.34 × approx. 0.34 × ?	unexcavated		22	No artifacts noted.

Table 4. Extramural Features at Vegas Ruin (405/2012) (continued)

Feature No. ^a	Type	Location ^b	Dimensions (l x w x d) (m)	Effort	Artifacts or Samples ^c	Figure	Comments
65	pit	north of compound	1.20 × approx. 0.97 × ?	unexcavated	FL, FS, S	22	May be a hearth, contained ashy soil and FAR.
66	pit	north of compound	approx. 0.57 × approx. 0.57 × ?	unexcavated		22	No artifacts noted. Abutted Feature 72 and intersected by Feature 67.
67	pit/hearth	south of compound	0.84 × 0.62 × 0.51	sampled	FL, S, SHL	49	Intrusive to Feature 69. Located 0.35 m west of Feature 90.
68	pit/hearth	south of compound	0.60 × 0.60 × ?	unexcavated		22	Possibly contained FAR.
69	borrow pit	south of compound	2.60 × 1.40 × 0.67 (max.)	sampled	FB, S, SHL [FL]	49	Covered by Feature 10, intruded by Feature 67 and intrusive to Feature 90.
70	pit	northwest of southwest corner of compound	1.35 × 1.03 × 0.36	excavated	FB, FL, GS, S [FS, PS]	22	Charcoal and FAR noted in fill. Located 3 m north of Feature 15.
71	pit	north of compound	0.50 × 0.50 × ?	unexcavated		22	No artifacts noted.
72	pit	north of compound	1.00 × 1.10 × 0.32	sampled	FL, GS, PS, S	22	Adjacent to Features 56, 59, and 66.
73	adobe-lined pit	north of compound	0.45 × 0.28 × ?	unexcavated		22	Ash laden.
74	pit	north of compound	0.65 × 0.40 × ?	unexcavated		22	Ash laden.
75	pit	north of compound	approx. 0.50 × approx. 0.50 × ?	unexcavated		22	Ash laden.
76	pit	north of compound	0.90 × 0.90 × ?	unexcavated		22	Ash laden. Appears intruded by Feature 77.
77	pit	north of compound	0.50 × 0.45 × ?	unexcavated		22	Ash laden. Appears to be intrusive to Feature 76.
78	adobe-lined pit	north of compound	0.38 × 0.28 × ?	unexcavated		22	Ash laden. Truncated by TR 207.
79	adobe-lined pit	north of compound	approx. 0.40 × approx. 0.40 × ?	unexcavated		22	Ash laden.
80	adobe-lined pit	north of compound	0.45 × 0.45 × ?	unexcavated	S	22	Contained charcoal flecks.

Table 4. Extramural Features at Vegas Ruin (405/2012) (continued)

Feature No. ^a	Type	Location ^b	Dimensions (l x w x d) (m)	Effort	Artifacts or Samples ^c	Figure	Comments
81	pit	north of compound	0.30 x 0.20 x ?	unexcavated		22	Contained two large cobbles.
82	pit	north of compound	0.50 x 0.40 x ?	unexcavated	FL, S	22	Contained charcoal flecks.
83	pit	north of compound	0.60 x 0.52 x 0.49	sampled	FL, S	22	Ash laden with a fair amount of sherds.
84	pit	north of compound	0.88 x 0.73 x 0.49	excavated	FB, FS, PS, S, WB	22	Ash laden with sherds and charcoal flecks.
85	pit	north of compound	0.95 x 0.80 x ?	unexcavated		22	Ash laden with charcoal flecks.
86	adobe-lined pit	north of compound	0.34 x 0.22 x 0.12	sampled	FS, PS	22	Ash laden with charcoal flecks.
87	pit	25 m north of compound	1.40 x 1.25 x 0.34	sampled	S [FL, GS, PS]	62	Adjacent to Features 91 and 2, 1.40 m from Feature 86.
88	pit	north of compound	0.90 x 0.50 x ?	unexcavated		22	Ash laden with charcoal flecks and sherds.
89	adobe-lined pit	north of compound	0.55 x 0.55 x 0.12	unexcavated		35	Adobe mixing basin north of the entryway of Feature 179.
90	pit/hearth	south of compound	0.69 x 0.45 x ?	partially excavated		49	Ash laden. Truncated by Feature 69.
91	adobe-lined pit	north of compound	0.54 x 0.54 x ?	unexcavated	S	62	Ash laden with charcoal.
92	roasting pit	north of compound	0.55 x 0.55 x 0.27	sampled	FL, O, PS, S	22	Contained cobbles, ash, and burnt logs.
93	adobe-lined pit	north of compound	0.31 x 0.29 x 0.23	sampled	PS	22	Adobe mixing pit.
94	adobe-lined pit	north of compound	0.35 x 0.30 x 0.19	excavated	PS	22	Ash laden with charcoal flecks.
95	adobe-lined pit	north of compound	0.25 x 0.25 x 0.20	excavated	PS	22	Ash laden.
97	borrow pit	inside compound	2.10 x 1.85 x 0.30	sampled	FL, O, S	26	Intrusive to Feature 19 floor.
104	adobe-lined pit	north of compound	0.76 x 0.63 x 0.22	sampled	FL, FS, PS, S	22	Cobbles and large rock on bottom.

Table 4. Extramural Features at Vegas Ruin (405/2012) (continued)

Feature No. ^a	Type	Location ^b	Dimensions (l × w × d) (m)	Effort	Artifacts or Samples ^c	Figure	Comments
105	slab-lined pit	north of compound	0.74 × 0.54 × 0.18	excavated	S [PS]	59	Capped with adobe.
107	pit	inside compound	1.60 × 1.01 × 0.97	excavated	GS, S [FL, FS]	68	Trash-filled pit intrusive into Burial Plot 221.
109	adobe-lined pit	north of compound	0.36 × 0.36 × ?	unexcavated		22	Adobe puddling basin.
110	adobe-lined pit	15 m north of compound	1.20 × 0.91 × 0.31	sampled	S [FS, PS]	47	Intrusive to Features 111 and 112 and overlaid Feature 141.
111	adobe-lined pit	15 m north of compound	1.5 × 1.0 × ?	unexcavated		47	Intruded by Feature 110 and overlaid Feature 141.
112	roasting pit	north of compound	0.50 × 0.50 × ?	unexcavated	FS	47	Intruded by Features 110 and 111 and overlaid Feature 141.
113	adobe-lined pit	north of compound	0.40 × 0.35 × ?	unexcavated		22	Possible mixing basin.
114	pit/hearth	north of compound	0.40 × 0.40 × ?	unexcavated		22	Intermittent ring of oxidized soil.
115	pit/hearth	northeast corner of compound	0.50 × 0.50 × ?	unexcavated		22	Ring of lightly oxidized soil.
116	adobe-lined pit	south of compound	0.30 × 0.30 × ?	unexcavated		22	Possible mixing basin. Located at base of Feature 3 wall.
117	adobe-lined pit	south of compound	0.30 × 0.30 × ?	unexcavated		22	Adobe puddling basin. Located just outside Feature 3.
118	pit/hearth	north of compound	0.45 × 0.45 × ?	unexcavated		22	Small cluster of FAR and ashy soil. Located northwest of Feature 112.
119	pit	north of compound	0.25 × 0.25 × ?	unexcavated		22	Contained single cobble approx. 20 × 20 cm.
120	pit	north of compound	0.52 × 0.52 × 0.20 (min.)	unexcavated		22	Large stone in bottom found by backhoe.
121	pit	north of compound	0.50 × 0.50 × 0.20 (min.)	unexcavated		22	Dark brown loam intruded into reddish brown loam.

Table 4. Extramural Features at Vegas Ruin (405/2012) (continued)

Feature No. ^a	Type	Location ^b	Dimensions (l x w x d) (m)	Effort	Artifacts or Samples ^c	Figure	Comments
124	adobe-lined pit	inside compound	0.30 x 0.30 x ?	unexcavated		22	Disturbed by backhoe.
125	pit/hearth	inside compound	0.38 x 0.21 (min.) x ?	unexcavated		22	Extended under east wall of Feature 11, beneath Feature 13.
126	pit	inside compound	0.60 x 0.38 x ?	unexcavated		22	South of Features 127 and 129.
127	cache	northeast corner of compound	0.19 x 0.17 x 0.08	excavated	S [PS]	51	In proximity to Feature 129.
128	pit	inside compound	0.43 x 0.23 x ?	unexcavated		22	Fill consisted of a light brown sandy loam.
129	pit	inside compound	0.82 x 0.46 x 0.40	excavated	FB [FL, S]	51	Possible burial pit containing a large rock approx. 22 cm wide by approx. 40 cm tall.
130	cache	inside compound	0.25 x 0.25 x 0.27	excavated	GS	22	Ground stone cache.
132	roasting pit	inside compound	0.55 x 0.53 x 0.30	excavated	FB, FL, FS, O, SHL	22	Ash laden and filled with fist-sized cobbles.
134	slab-lined pit	inside compound	0.58 x 0.56 x 0.27	excavated	GS, O, S [FS, PS]	60	Located 2 m south of southeast corner of Feature 11.
135	pit	inside compound	0.60 x 0.60 x ?	unexcavated		22	Overlaid burials Features 164, 181, and 182.
136	pit	inside compound	1.7 x 1.3 x 0.9	excavated	FB, FS, O, PS, S [GS]	63	Large pit containing a plain ware vessel and other artifacts. Located south of Feature 54.
138	pit	north of compound	0.60 x 0.50 x 0.09	excavated	FS, PS	22	Bottom lined with rocks.
139	pit	north of compound	0.40 x 0.40 x ?	unexcavated		22	Fill consisted of a light brown sandy loam.
148	pit	north of compound	0.70 x 0.60 x ?	unexcavated		22	Circular area of brown sandy clay loam.
151	pot break	inside compound	0.20 x 0.20 x ?	excavated		22	Point-located artifact.
152	adobe-lined pit	inside compound	0.59 x 0.59 x 0.13	excavated	S	22	Contained small red ware bowl.
154	roasting pit	inside compound	0.60 x 0.60 x 0.20	sampled	FB, FL, FS, SHL	35	Stone lined and ash laden with large cobble at the base.
155	pit/hearth	inside compound	0.56 x 0.53 x 0.20	sampled		22	Large 10-cm-high cobble on bottom.

Table 4. Extramural Features at Vegas Ruin (405/2012) (continued)

Feature No. ^a	Type	Location ^b	Dimensions (l × w × d) (m)	Effort	Artifacts or Samples ^c	Figure	Comments
156	pit	inside compound	0.80 × 0.60 × ?	excavated		22	Adjacent to compound wall.
157	pit/hearth	inside compound	0.60 × 0.50 × 0.22	excavated	[S]	52	Flat, oval cobble, 35 cm by 30 cm, in base.
158	pit	north of compound	1.20 × 1.02 × 0.34	excavated	FB, FL, O, S	28	Intrusive to Feature 34.
159	Archaic period roasting feature	5 m north of compound	1.55 × 0.95 × 0.10	excavated	FL, FS, PS, SHL	57	Probable clean-out of Feature 183.
160	pit	inside compound	0.75 × 0.62 × 0.20	sampled		22	Located 2 m south of Feature 54.
161	pit	inside compound	0.30 × 0.30 × ?	excavated		22	Large river cobble at bottom.
162	Archaic period roasting feature	inside compound	2.10 × 1.90 × 0.25	excavated	FB, FL, FS, O	22	FAR and dispersed charcoal and ash. Located 1 m east of Feature 99 entryway.
167	roasting pit	inside compound	0.60 × 0.60 × 0.10 (min.)	excavated	[FS]	56	Located 5 m south of Feature 54 and 4 m east of Feature 19.
169	pit	inside compound	0.60 × 0.60 × 0.02	sampled	FS	22	Ash laden.
170	adobe-lined pit	inside compound	0.45 × 0.50 × 0.25	sampled		42	Ash and charcoal filled puddle basin beneath Feature 11 floor.
171	adobe-lined pit	inside compound	0.33 × 0.27 × 0.37	excavated	GS [PS]	42	Capped by trough metate; beneath Feature 11 floor.
173	roasting pit	inside compound	0.80 × 0.80 × 0.22	excavated	FS, S	22	Located 4 m north of southern compound wall.
174	roasting pit	inside compound	0.85 × 0.85 × 0.20	excavated	S	22	Located 3 m north of the southern compound wall.
176	pit	inside compound	0.56 × 0.44 × 0.29	excavated	FS	42	North edge adjacent to compound wall and beneath Feature 11 floor.
177	roasting pit	north of compound	0.70 × 0.35 × 0.09	excavated	FS, S	22	Ash laden and contained FAR.
178	roasting pit	north of compound	1.06 × 0.85 × 0.66	excavated	FL, FS, GS, O, S	22	Truncated by drainage channel.

Table 4. Extramural Features at Vegas Ruin (405/2012) (continued)

Feature No. ^a	Type	Location ^b	Dimensions (l x w x d) (m)	Effort	Artifacts or Samples ^c	Figure	Comments
180	Archaic period roasting feature	north of compound	1.57 × 0.96 × 0.07	excavated	FL, FS, SHL	57	Probable clean-out of Feature 183.
183	Archaic period roasting pit	5 m north of compound	2.40 × 2.10 × 0.31	excavated	FL, FS, PS, SHL	57 and 58	Ring of FAR located below calcic horizon. Features 159 and 188 may be clean-out episodes of Feature 183.
184	pit/hearth	north of compound	0.48 × 0.48 × ?	unexcavated		22	Roughly circular area of gray ashy soil.
186	pit/hearth	north of compound	0.70 × 0.50 × 0.08	unexcavated		22	Contains a charcoal-stained sandy loam.
189	adobe-lined pit	outside north edge of compound	0.54 × 0.54 × 0.33	excavated	FB, FL, S	22	Intrusive to entryway of Feature 179.
191	pit/hearth	inside compound	1.04 × 0.96 × ?	sampled	FS, PS	22	Truncated by backhoe.
193	pit/hearth	inside compound	0.50 × 0.42 × 0.06	sampled	S	22	Charcoal laden and contained sherds.
195	borrow pit	north of compound	2.85 × 2.75 × 0.76	sampled	FB, FL, GS, S, WB	35	Intrusive to Feature 179.
198	pit	northeast corner of compound	0.25 × 0.23 × 0.18	unexcavated		22	Located beneath compound wall Features 5 and 37.
200	pit/hearth	west of compound	0.50 × 0.50 × ?	unexcavated		22	Roughly circular area of dark gray ashy loam.
201	pit	north of compound	0.76 × 0.60 × 0.28	sampled	S	35	Could be part of borrow pit Feature 195.
202	pit/hearth	south of compound	0.60 × 0.60 × ?	unexcavated	S	22	Truncated by backhoe during mechanical stripping.
203	pit	north of compound	0.66 × 0.66 × ?	unexcavated		35	Circular area of dark brown loam.
213	posthole	inside compound	0.20 × 0.19 × 0.19	excavated		22	South of Features 214 and 215, one of three regularly spaced at 50–55 cm.
214	posthole	inside compound	0.25 × 0.24 × 0.20	excavated	O	22	Between Features 213 and 215, one of three regularly spaced at 50–55 cm.
215	posthole	inside compound	0.28 × 0.22 × 0.25	excavated		22	North of Features 214 and 215, one of three regularly spaced at 50–55 cm.

Table 4. Extramural Features at Vegas Ruin (405/2012) (continued)

Feature No. ^a	Type	Location ^b	Dimensions (l x w x d) (m)	Effort	Artifacts or Samples ^c	Figure	Comments
217	pit	west of compound	? x ? x ?	unexcavated		22	Intrusive to south wall of Feature 179.
218	pit	north of compound	? x 0.60 x 0.55	unexcavated		22	Truncated by TR 1175.

Key: FB = faunal bone; FL= flaked stone; FS = flotation sample; GS = ground stone; O = other artifacts; PS = pollen sample; S = shell; SHL = shell; WB = worked bone.

^aFeatures 28, 42, 45, 55, 60, 61, 96, 98, 122, 123, 131, 147, 149, 150, 153, 163, 192, 194, and 212 were voided. Feature 188 was combined with Feature 183.

^bAll references to "compound" refer to the Feature 1 compound.

^cArtifacts listed within brackets were noted in the feature but not analyzed. Samples listed within brackets were collected but not analyzed.

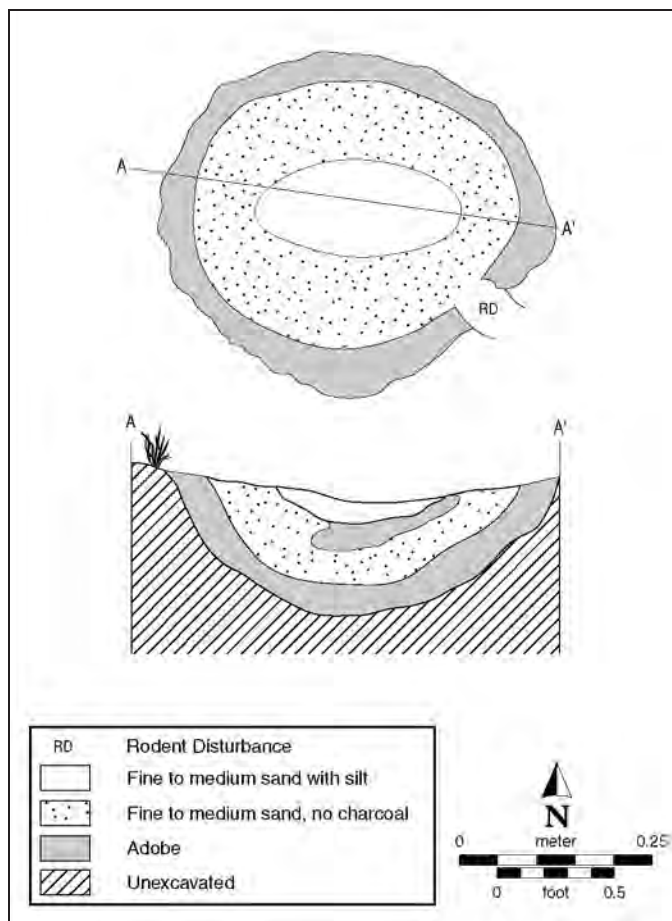


Figure 45. Adobe-lined pit Feature 56 at the Vegas Ruin (405/2012).

to medium-sized pits, round to oval in plan, with basin-shaped cross sections. Eighteen of the features were small, less than 0.50 m in diameter, and the minimum diameter was 0.22 m. Features 110 and 111 were over 1 m in diameter (see description below). Of the excavated and sampled features, the depth was usually less than 0.25 m but ranged from 0.12 to 0.37 m. As the name implies, the pits were lined with a layer of adobe of varying thickness, which typically was 3–4 cm thick but could be as thick as 8 cm. Many of these features were distinguished from hearths, because they exhibited no evidence of in situ burning, although 9 of the pits contained ash or charcoal. Seven of the excavated and sampled adobe-lined pits are described individually below. In addition, there were other adobe-lined pits that were directly associated with house floors; these are described under the appropriate structure descriptions.

Feature 56

Location: Feature 56 was one of a cluster of extramural features in the northwestern corner of the excavated portion of the site.

Grid coordinates (m): N 9118.2, E 515.3
 Date: unknown
 Elevation: 782.3 m (2,566.6 feet) AMSL
 Depth: 0.12 m
 Dimensions: 0.42 by 0.35 m

Excavation Methods

This feature was first defined during hand stripping in the northeastern area of the site. The feature was first divided in half along its east–west axis (Figure 45). The north half of the feature was excavated as a single unit, with all of the fill collected as a flotation sample—a separate pollen sample was taken from the bottom of the feature. A profile of the feature was then drawn. The fill in the southern half of the feature was removed but not collected, and a photograph was taken.

Feature Fill

The fill consisted of medium-sized to fine sandy silt with few artifacts. No charcoal or ash was observed. A few scattered

roots and a small rodent burrow were encountered in the southern half of the feature.

Construction Details

Feature 56 was oval in plan view and basin-shaped in cross section. The adobe lining was approximately 5 cm thick, evenly covering the entire inner surface of the pit.

Associated Artifacts

The artifact collection from Feature 56 consisted of one unmodified chalcedony flake, one unmodified quartz flake, and one plain ware sherd that was not analyzed.

Botanical Remains

A flotation sample from Feature 56 contained creosote charcoal, a charred maize cupule, a charred cheno-am seed, and charred monocotyledon tissue.

Faunal Remains

Faunal remains from Feature 56 included one unburnt fragment of a mouse- to squirrel-sized animal, probably representing a postabandonment intrusion and one unworked shell fragment (*Succinea* sp.).

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

Feature 59, another adobe-lined pit, was located 0.58 m to the west.

Feature 59

Location: Feature 59 was one of a cluster of extramural features in the northwestern corner of the excavated portion of the site.

Grid coordinates (m): N 9118.3, E 514.4

Date: unknown

Elevation: 782.3 m (2,566.7 feet) AMSL

Depth: 0.13 m

Dimensions: 0.38 by 0.35 m

Excavation Methods

Feature 59 was first defined during hand stripping in the northwestern area of the site. The feature was first bisected along its east–west axis. The northern half of the feature was excavated in a single unit, with all of the feature fill

screened through ¼-inch-mesh hardware cloth. A pollen sample was taken from the base of the feature in the northern half. Following the excavation of the southern half of the feature, a profile was drawn of the remaining fill (Figure 46). All of the fill in the northern half of the feature was collected as a flotation sample.

Feature Fill

The fill consisted of medium to fine sands with some gravel. A few small flecks of charcoal were observed near the base of the pit. Postabandonment disturbance was limited to a few small rootlets.

Construction Details

The feature was oval in plan and basin-shaped in cross section. A layer of fine-grained adobe approximately 3–5 cm thick was applied to the entire inner surface of the pit. With the exception of the few flecks of charcoal observed in the fill, there was no evidence of burning.

Associated Artifacts

The artifact collection from Feature 59 included a single basalt hammer stone and several plain ware sherds that were not analyzed.

Botanical Remains

A pollen sample was recovered but not analyzed.

Faunal Remains

No faunal remains were identified.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

Feature 56, an adobe-lined pit, was located approximately 0.58 m to the east.

Features 110 and 111

Location: Features 110 and 111 were located in the cluster of burials, about 15 m north of the Feature 1 compound.

Grid coordinates (m): N 9111.7, E 518.3

Date: Miami/Roosevelt phase, based on ceramics and stratigraphic position

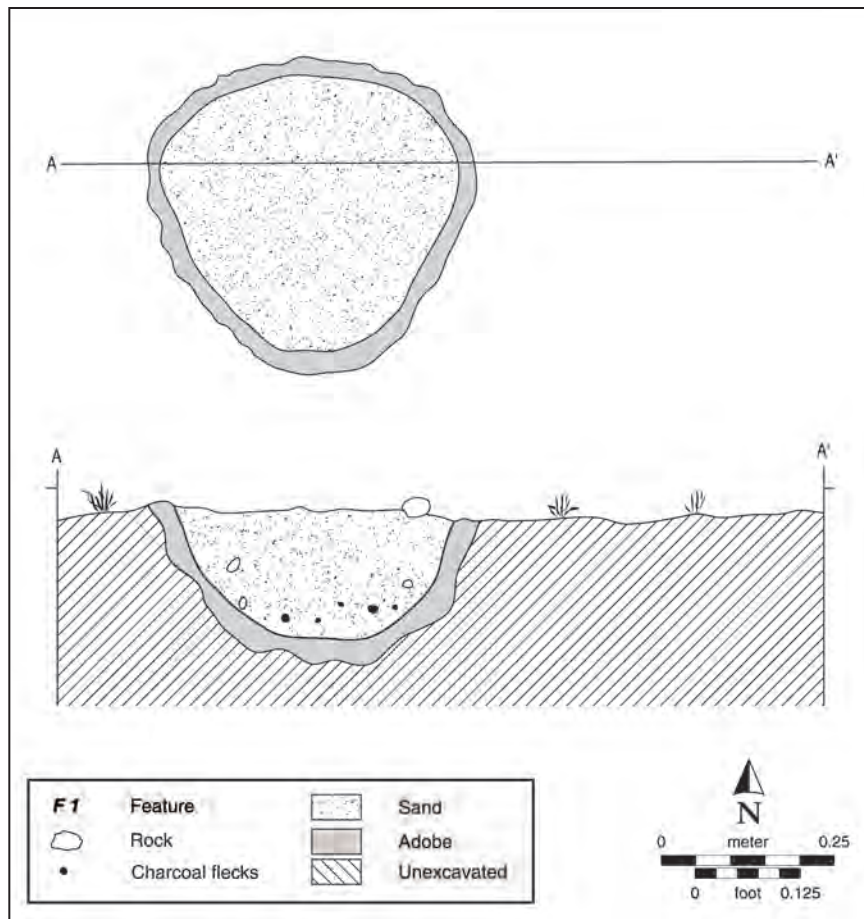


Figure 46. Adobe-lined pit Feature 59 at the Vegas Ruin (405/2012).

Elevation: 782.1 m (2,566.1 feet) AMSL
 Depth: 0.31 m (Feature 110)
 Dimensions: 1.20 by 0.91 m (Feature 110); 1.5 by 1.0 m (Feature 111)

Excavation Methods

Features 110 and 111 were two superimposed adobe-lined pits exposed during mechanical stripping north of the Feature 1 compound (Figure 47). Both Features 110 and 111 cut through a small, rock-filled hearth (Feature 112). The latest of the three features, Feature 110, was bisected along its east–west axis, and the fill from the northern half of the feature was collected as a flotation sample. Feature 111 was not sampled.

Feature Fill

The fill within Feature 110 was a moderately to hard packed silty sand with numerous small stones and gravels. A small

number of sherds were observed during the excavation of the feature and were included in the flotation sample. Post-abandonment disturbances were limited to a few small rootlets.

Construction Details

Features 110 and 111 were the largest adobe-lined pits. Feature 110 was oval in plan and basin-shaped in cross section. The fine-grained adobe completely covering the interior surface of the pit was approximately 5–8 cm thick. The adobe lining of the slightly larger Feature 111 was also 5–8 cm thick. No evidence of burning was observed in either feature.

Associated Artifacts

A single Showlow Black-on-red sherd was recovered from the fill in Feature 110. The small number of plain ware sherds from this collection were not analyzed.

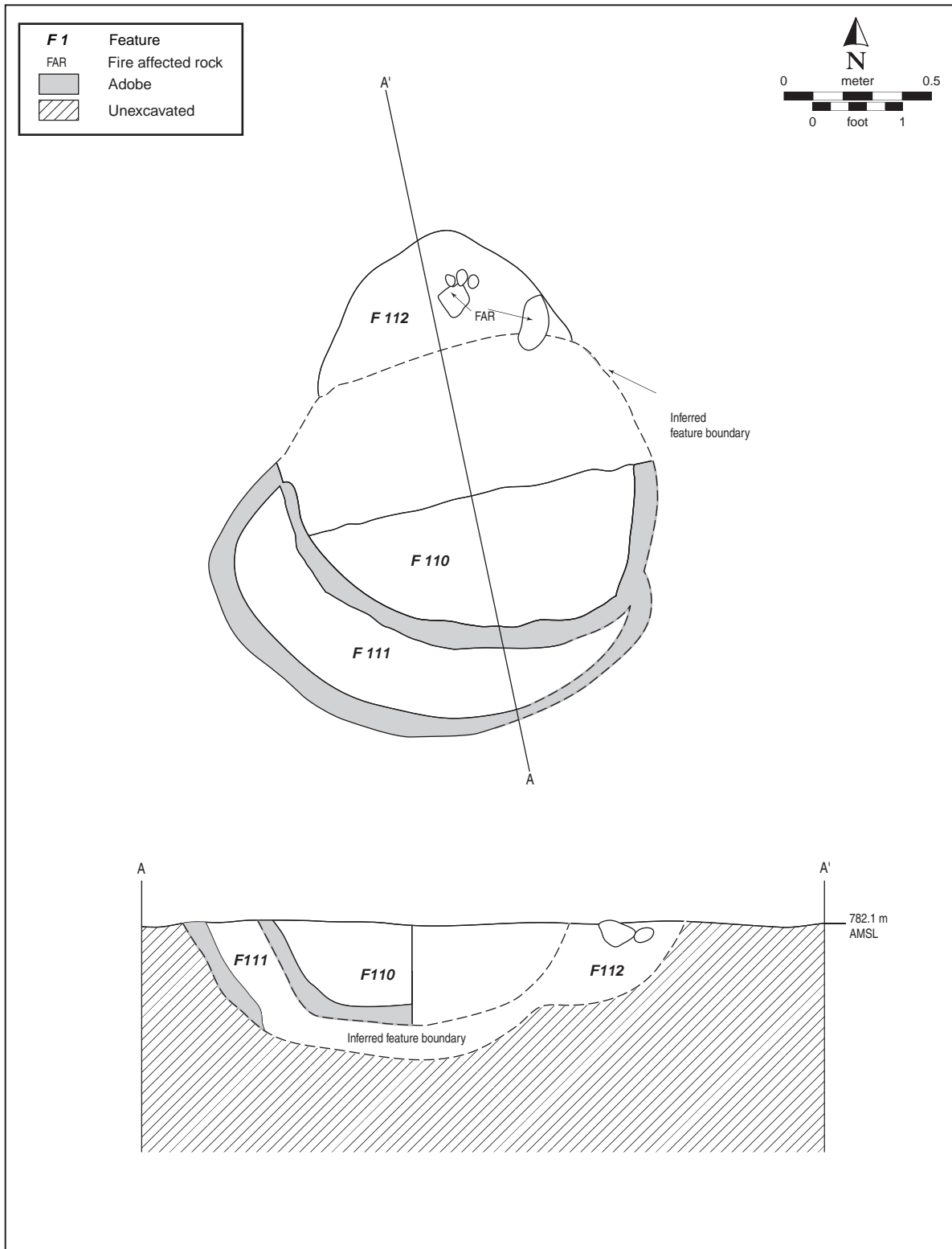


Figure 47. Adobe-lined pit Features 110 and 111 and roasting pit Feature 112 at the Vegas Ruin (405/2012).

Botanical Remains

The flotation sample was not analyzed.

Faunal Remains

No faunal remains were identified.

Chronology

The single decorated ceramic is consistent with the chronological placement of this feature.

Associated Features

Features 110 and 111 both cut into an earlier rock-filled hearth, Feature 112. All three of these pits overlay the Feature 141 burial.

Feature 170

Location: Feature 170 was located in the northeast corner of the compound, beneath the floor of Feature 11 (see Figure 42).

Grid coordinates (m): N 9092.7, E 511.1

Date: Miami/Roosevelt phase, based on stratigraphic position

Elevation: 782.1 m (2,565.9 feet) AMSL

Depth: 0.25 m

Dimensions: 0.50 by 0.45 m

Excavation Methods

This feature was encountered and excavated during the removal of the subfloor of the cobble-adobe-foundation room Feature 11. Its contents were screened through ¼-inch-mesh hardware cloth.

Feature Fill

The fill was sandy silt with a high frequency of ash and pieces of charcoal.

Construction Details

This was a small, shallow pit lined with adobe.

Associated Artifacts

No artifacts were recovered.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

No faunal remains were identified.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

Feature 170 was located in the southwestern part of Feature 11, over 30 cm beneath the floor. Feature 171, another adobe-lined pit, was located less than 2 m to the north and also beneath the floor of Feature 11. The function of this feature is unclear. Given its size, depth and adobe lining, it may have been a puddling pit associated with Feature 11 or nearby segments of the compound wall.

Feature 171

Location: Feature 171 was located in the northeast corner of the compound, beneath the floor of Feature 11 (see Figure 42).

Grid coordinates (m): N 9094.6, E 511.1

Date: Miami/Roosevelt phase, based on stratigraphic position

Elevation: 782.3 m (2,566.6 feet) AMSL

Depth: 0.37 m

Dimensions: 0.33 by 0.27 m

Excavation Methods

This pit was excavated in its entirety in a single level, and the fill was screened through ¼-inch-mesh hardware cloth. A pollen sample was taken from beneath the trough metate that capped the pit.

Feature Fill

The fill was a silty sand with higher gravel content lower in the pit.

Construction Details

This was a small, oval pit as deep as it was wide. Its sides were heavily coated in calcium carbonate. The pit was capped with a trough metate placed with its grinding surface down over the top of the pit.

Associated Artifacts

The pit was capped by a large, 0.45 by 0.39 by 0.10 m sandstone trough metate in an inverted position. No other artifacts were recovered.

Botanical Remains

The pollen sample was not analyzed.

Faunal Remains

No faunal remains were identified.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

Feature 171 was located in the north-central part of Feature 11, about 10 cm beneath the floor. Feature 170, another adobe-lined pit, was located less than 2 m to the south and also beneath the floor of Feature 11. The function of this feature is unclear. It does not appear to have been a puddling pit, given its depth to width ratio and the presence of only a carbonate coating. Its association with the metate would also indicate a different function.

Feature 189

Location: Feature 189 was located at the outside north edge of the Feature 1 compound and was intrusive to the entryway of pit structure Feature 179.

Grid coordinates (m): N 9096.0, E 499.6

Date: Miami/Roosevelt phase, based on stratigraphic position relative to Feature 179

Elevation: 783.2 m (2,569.5 feet) AMSL

Depth: 0.33 m

Dimensions: 0.54 by 0.54 m

Excavation Methods

This feature was excavated by hand, and artifacts were collected as they were encountered. The fill was not screened.

Feature Fill

This feature was located in Stratum II and was filled with a brown sandy loam that was moderately sorted and contained pea-sized gravel. There appeared to be two discrete lenses of pea-sized gravels, suggesting that the pit was filled in quickly, in at least two episodes. The fill contained many charcoal flecks, with some pieces up to 2 cm in size.

Construction Details

This was a moderate-sized pit with slightly incurving sides and an uneven base, which is the floor of the entryway of

Feature 179. The diameter tapers from 54 cm at the top to 44 cm at the base. The sides were coated with calcium carbonates, with thicker deposits of carbonates at the base of the pit.

Associated Artifacts

Twelve sherds, including 1 obliterated corrugated and 1 Snowflake Black-on-white. Only the latter was analyzed. One basalt flake was also recovered.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

Eight faunal specimens were collected, including six squirrel- to rabbit-sized and two cottontail specimens.

Chronology

Based on ceramics and stratigraphic position, this feature dates to the Miami/Roosevelt phase.

Associated Features

This feature was intrusive into the fill, southern wall, and floor of Feature 179. The feature seals one of the postholes comprising the south wall of the entryway and is also partially beneath the compound wall.

Borrow Pits

Four large, irregular disturbed areas were identified at the site. These features cut into the sterile substrate and were filled with cultural debris. It is likely that these features served as borrow pits for construction materials. These pits all measured at least 2 m in diameter and up to 1 m in depth. Feature 22 was investigated through controlled hand excavation, whereas the other borrow pits (Features 69, 97, and 195) were sampled. Feature 195 was intrusive into pit structure Feature 179, whereas Feature 97 was intrusive to pit structure Feature 19. Descriptions for these two borrow pits are provided under their respective structure descriptions (see Figures 26 and 35; see also Table 4).

Feature 22

Location: Feature 22 was located along the western edge of the ROW, north of the Feature 1 compound and pit structure Feature 34.

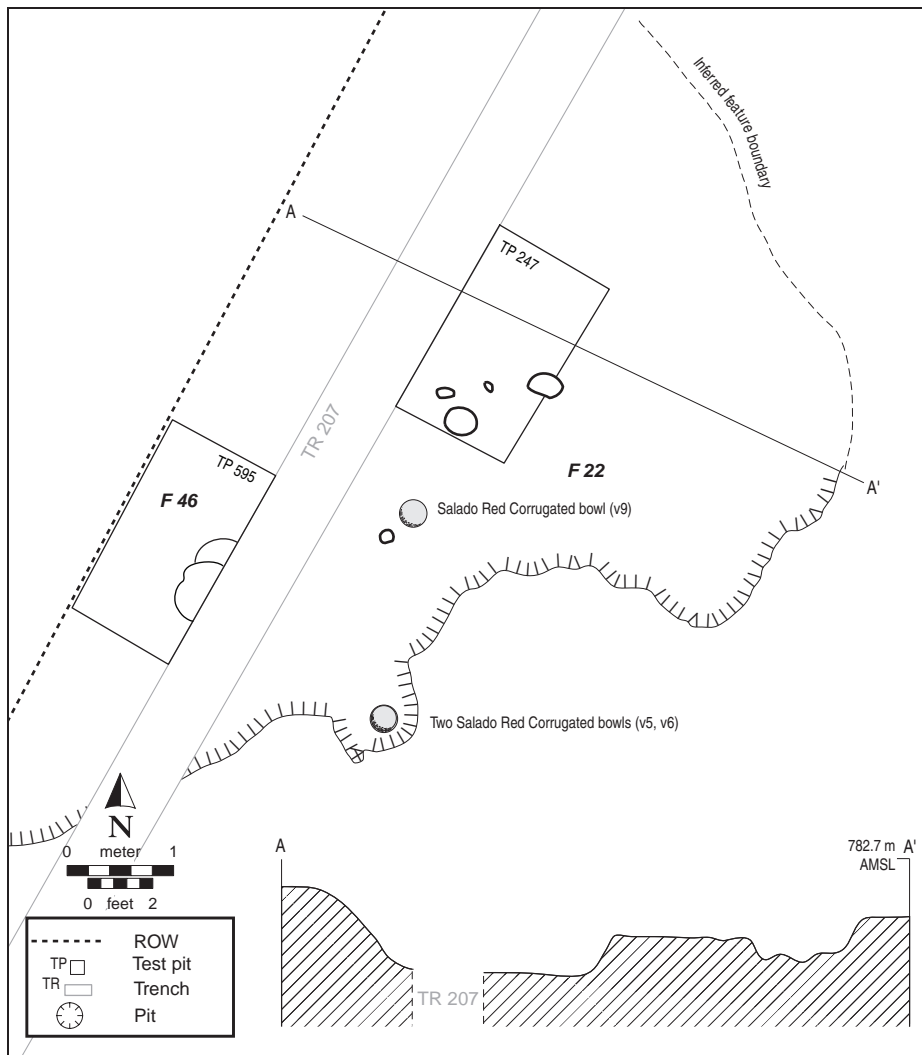


Figure 48. Borrow pit Feature 22 at the Vegas Ruin (405/2012).

Grid coordinates (m): N 9110.2, E 508.5
 Date: Miami/Roosevelt phase, based on ceramics
 Elevation: 782.9 m (2,568.4 feet) AMSL
 Depth: 1.03 m
 Dimensions: approximately 10 by 6+ m

Excavation Methods

Feature 22 was first identified in both walls of TR 207 (Figure 48). It was first believed that the feature represented a pit house. Feature 22 was sampled through the excavation of two 1-by-2-m test pits: TP 247 was manually excavated in a series of arbitrary 10-cm levels and TP 595 was manually excavated in two 20-cm levels. All excavated fill from both units was screened through ¼-inch-mesh hardware cloth.

Feature Fill

This borrow pit was originally excavated from the lower part of Stratum II to varying depths within Stratum III. The fill within Feature 22 consisted largely of a brown, moderately sorted sandy loam that was firm in consistency, with scattered small to medium-sized gravels and small cobbles. Pockets of soft, calcic soils were observed throughout the test pit but were more common in the lower levels of the unit. Artifacts, especially sherds, were numerous in all levels of TP 247, although the small size of most of the sherds (approximately 10–20 mm in diameter) suggests a gradual, natural infilling of the feature rather than its use as a midden. By contrast, very few artifacts were found in TP 595.

Construction Details

This was a large, irregularly shaped pit with curved sides. An unknown portion of the borrow pit extended beyond the western ROW. The investigated portion of the feature inside the ROW measured approximately 10 by 6 m.

Associated Artifacts

Although a relatively large number of sherds recovered from controlled contexts in Feature 22, few temporally diagnostic decorated sherds were recovered. Most of the decorated sherds could only be classified as indeterminate Cibola or Little Colorado White Ware; single examples of Snowflake Black-on-white and Showlow Black-on-white sherds were also recovered, along with large quantities of Salado Red and Brown corrugated. Three complete Salado Red Corrugated bowls were found in the southern part of the borrow pit. Vs 5 and 6 were straight-rimmed bowls that were nested and unbroken. V 9 was a bowl with an everted rim that was broken into many small pieces. The small lithic collection included a basalt hammer stone, granite mano, an argillite pendant, and several unmodified chert and quartz flakes. A drilled and burnt *Artiodactyla* shaft was also recovered.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

A small number of fragments of deer-sized mammal bones were recovered.

Chronology

Decorated and corrugated ceramics suggest a Miami/Roosevelt phase occupation.

Associated Features

Feature 46 was located at the base of the borrow pit in the southern half of Feature 22. The borrow pit was located less than 1 m west of Feature 17, and an equal distance northwest of the pit structure Feature 34.

Feature 69

Location: Feature 69 was located immediately south of the Feature 1 compound and in the eastern part of the Feature 10 midden.

Grid coordinates (m): N 9070.1, E 503.0

Date: Miami/Roosevelt phase, based on ceramics

Elevation: 783.3 m (2,569.8 feet) AMSL

Depth: variable; approximately 20–67 cm

Dimensions: 2.60 by 1.40 m

Excavation Methods

Feature 69 was first identified during mechanical stripping south of the Feature 1 compound (Figure 49). Initially thought to be an inhumation burial, the feature was hand excavated in a single unit; a judgmental sample of associated artifacts was collected. Much of the upper fill of Features 67 and 90, two small probable hearths, was removed during the excavation of Feature 69.

Feature Fill

Fill within Feature 69 was a gray-brown, ashy sandy silt with scattered gravels and small stones. The fill contained numerous ceramic and lithic artifacts, suggesting that the borrow pit was intentionally filled with trash soon after it was excavated. The fill experienced heavy postabandonment disturbance in the form of roots and animal burrows.

Construction Details

This was a large, roughly rectangular pit with two deeper depressions. At the western end is a conical depression 0.60 m wide by 0.50 m deep. At the eastern end is a wider, shallow depression about 1.5 m wide and 0.15 m deep.

Associated Artifacts

The collection of diagnostic ceramics included six sherds identified as Salado Red Corrugated and some indeterminate Cibola White Ware, including one sherd identified as Snowflake Black-on-white. A whole *Olivella* shell bead and a *Laevicardium elatum* fragment were also collected. Some lithics were noted in the fill but not analyzed.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

Several unburnt bone fragments of black-tailed jackrabbits were recovered from the fill of Feature 69.

Chronology

Ceramics and stratigraphic associations suggest a Miami/Roosevelt phase occupation.

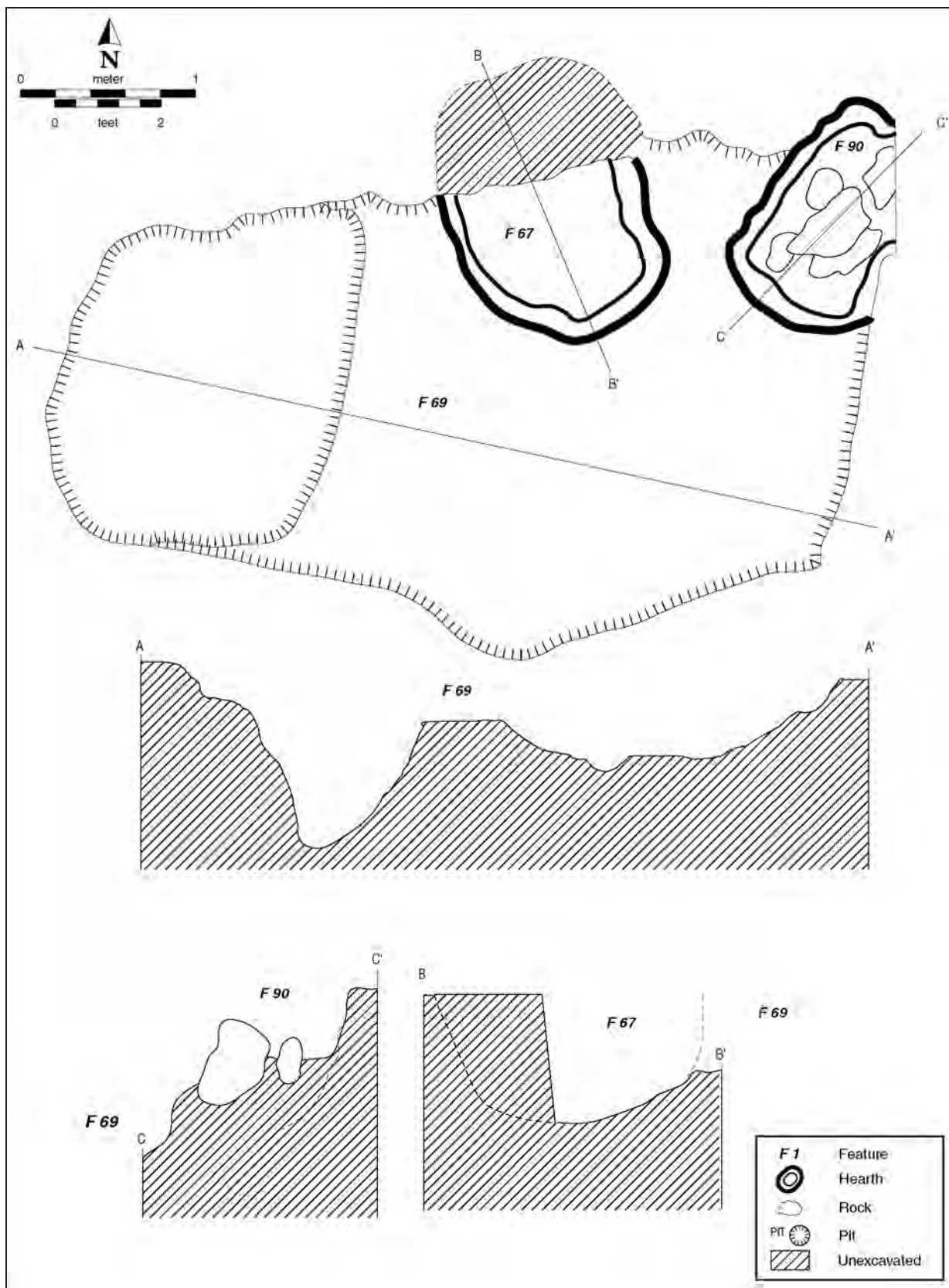


Figure 49. Borrow pit Feature 69 and extramural hearths, Features 67 and 90, at the Vegas Ruin (405/2012).

Associated Features

Feature 69 was covered by the eastern edge of the Feature 10 midden and was intruded by the Feature 67 hearth. Feature 67 was an ovate to subrectangular, basin-shaped pit that measured about 0.84 by 0.62 by 0.51 m. It intruded the north-central edge of Feature 69 (see Figure 49; see also Table 4). We excavated only the portion of Feature 67 that intruded Feature 69. Feature 69 in turn, intruded upon the Feature 90 hearth. Feature 90 was a small (0.69 by 0.45 m), deep, basin-shaped pit in the northeast corner of Feature 69. Only the upper fill was excavated, down to a dark grayish brown ashy layer with large rocks. The rectangular pit located southwest of Feature 69 appears to be the product of rodent disturbance.

Caches

Three caches were discovered during mechanical stripping. Two of the caches contained ceramic vessels, and one of the caches contained ground stone. One of the caches (Feature 57) was in the northern part of the site, in a cluster of extramural pits. The other two caches (Features 127 and 130) were located in the northeast section of the Feature 1 compound. All of the caches were deposited in small pits, each less than 0.55 m in maximum diameter.

Feature 57

Location: This cache is located at the northern end of the site.

Grid coordinates (m): N 9115.2, E 520.7

Date: Miami/Roosevelt phase, based on stratigraphic position

Elevation: 782.3 m (2,566.5 feet) AMSL

Depth: 0.38 m

Dimensions: 0.55 by 0.52 m

Excavation Methods

This pit was discovered during mechanical stripping. The backhoe truncated the top of the vessel contained within the pit (Figure 50). The pit was then excavated in a single level, with the fill first being removed from within the vessel. A photograph was taken of the exposed vessel and then the vessel was removed. A pollen sample was taken from under the vessel. The remainder of the pit was excavated. All of the fill was collected for flotation.

Feature Details

The vessel and its contents filled most of the pit. Only about 3 cm of fill surrounded the vessel. The fill was gray-brown

silt, with small, round cobbles and gravel, and it rested on sterile gravel and compacted argillic-like soil. There was moderate root disturbance.

Associated Artifacts

Approximately 30 percent of a brown plain jar filled the pit. The jar was approximately 33 cm in diameter and over 38 cm high. A small rock was found in the jar.

Botanical Remains

The botanical sample was not analyzed.

Faunal Remains

No faunal remains were identified.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

This feature was located adjacent to a cluster of extramural pits on the northern end of the site.

Feature 127

Location: Feature 127 was located in the northeastern corner of the Feature 1 compound.

Grid coordinates (m): N 9093.2, E 515.6

Date: Miami/Roosevelt phase, based on ceramics

Elevation: 782.3 m (2,566.4 feet) AMSL

Depth: 0.08 m

Dimensions: 0.19 by 0.17 m

Excavation Methods

Feature 127 was first encountered during mechanical stripping within the Feature 1 compound (Figure 51). Once identified, the feature was manually excavated with trowels. Although not screened, an effort was made to collect all associated artifacts from the soil around the feature.

Feature Details

Feature 127 consisted of a red plain jar set into a small pit lined with five schist slabs. A large sherd was placed beneath the jar. It appears that the jar was capped by a sixth slab of schist that was dislodged from its original position by the backhoe. The fill associated with Feature 127 con-

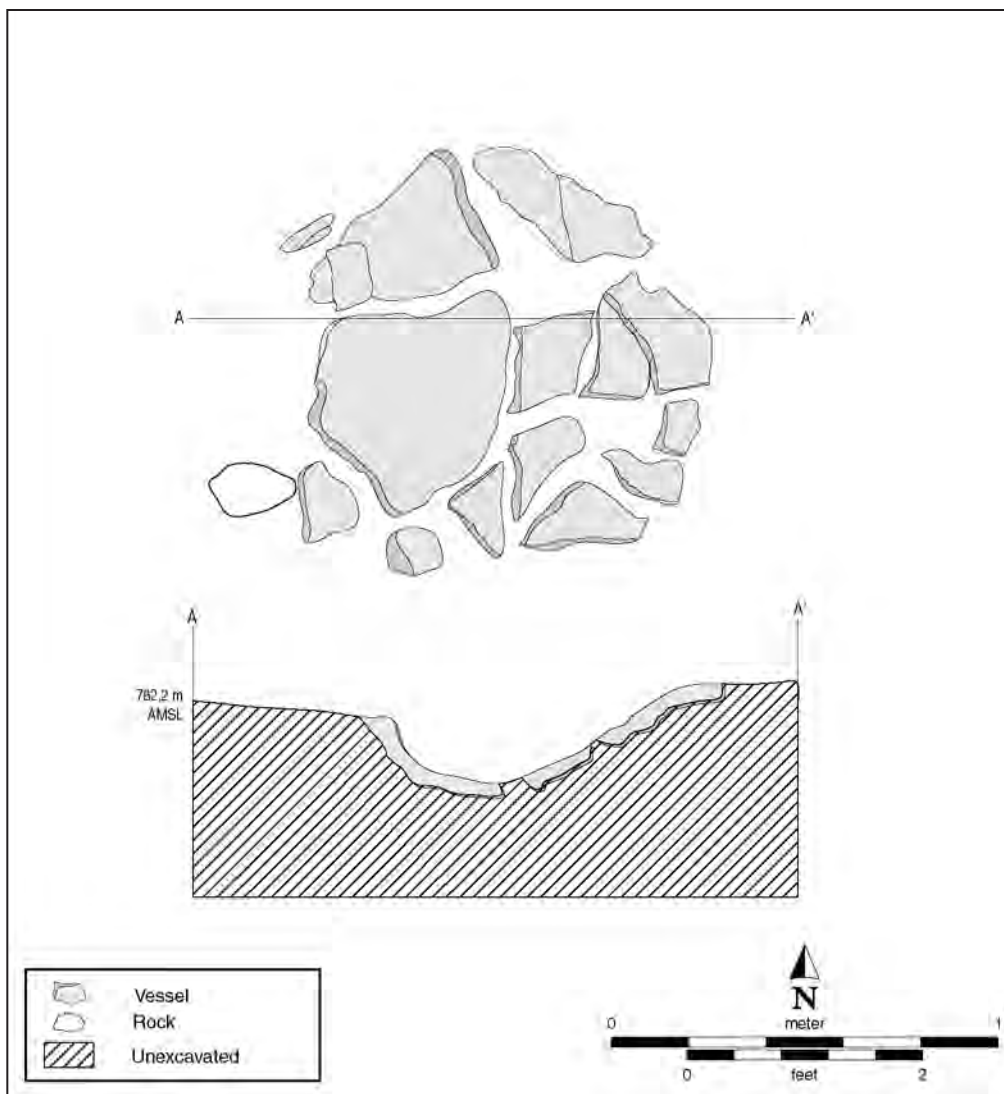


Figure 50. Cache Feature 57 at the Vegas Ruin (405/2012).

sisted of a heavily compacted light gray-brown sandy silt. Postabandonment disturbances were limited to a few small rootlets.

Associated Artifacts

With the exception of the red plain jar, no associated artifacts were recovered.

Botanical Remains

Two pollen samples were taken from beneath the jar, but these samples were not analyzed.

Faunal Remains

No faunal remains were identified.

Chronology

The red plain jar indicates a Classic period date. No additional chronological indicators were recovered.

Associated Features

Feature 127 is 12 cm southwest of Feature 129. Feature 129 is a possible burial pit measuring 0.82 m long by 0.46 m wide and has a slight alcove along the south and east walls.

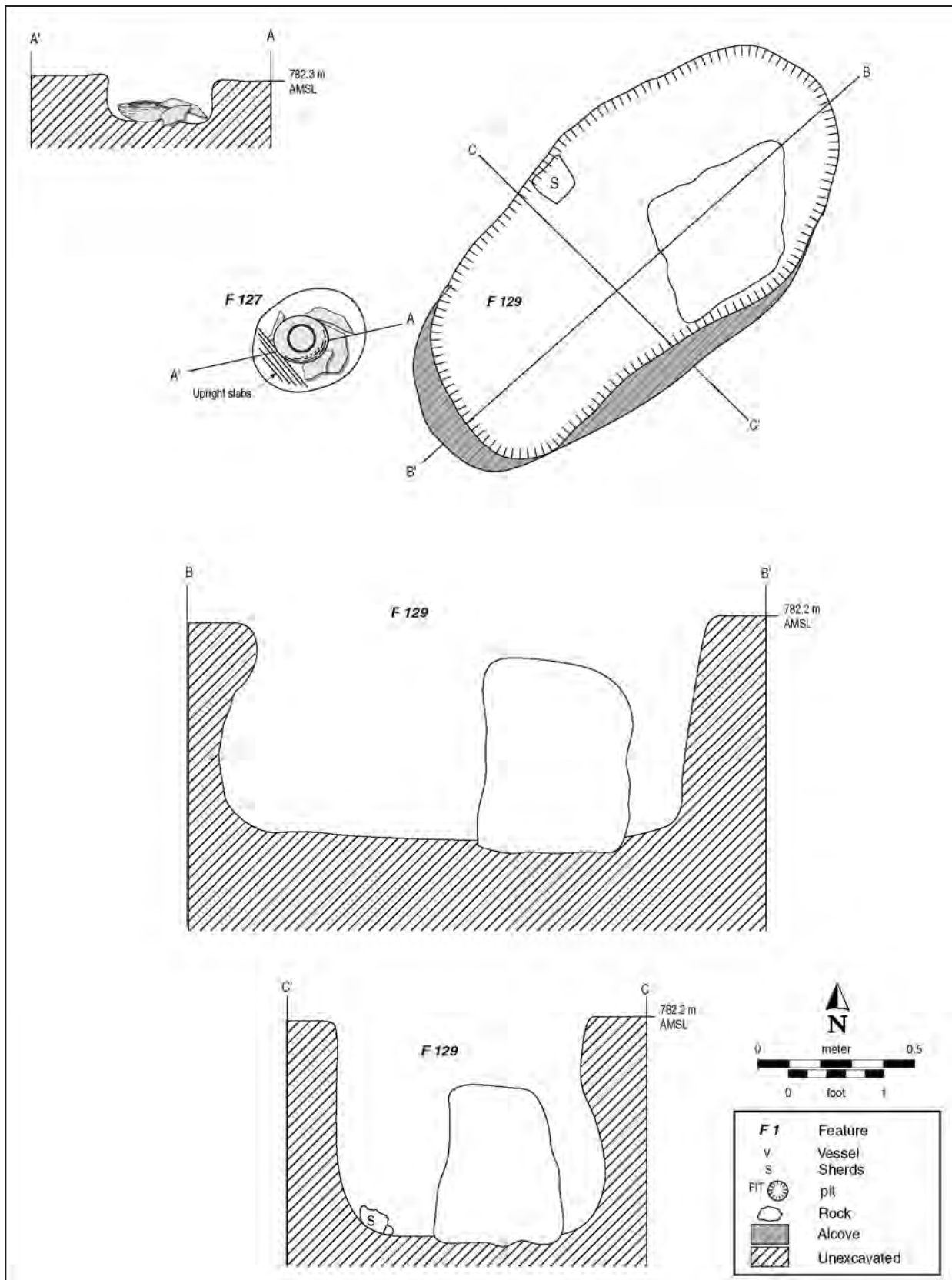


Figure 51. Cache Feature 127 and pit Feature 129 at the Vegas Ruin (405/2012).

Feature 130

Location: This small ground stone cache was in the northeast corner of the compound, about 3 m east of the southeast corner of cobble-adobe-foundation room Feature 11.

Grid coordinates (m): N 9090.8, E 516.8

Date: Miami/Roosevelt phase, based on stratigraphic position and associated features

Elevation: 781.4 m (2,563.5 feet) AMSL

Depth: 0.27 m

Dimensions: 0.25 by 0.25 m

Excavation Methods

A small remnant of a pit was discovered during mechanical stripping. The pit was entirely excavated in a single unit and level. The entire contents of the pit were recovered.

Feature Details

This small shallow pit was entirely filled with ground stone artifacts.

Associated Artifacts

A granite trough metate, a loaf-shaped rhyolite mano, and a circular quartzite mano were recovered.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

No faunal remains were identified.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

This feature is in a large concentration of extramural features and burials located in the northeast corner of the compound, near room Feature 11.

Midden

Two large, formal middens were identified in the investigated portion of the Vegas Ruin. Formal middens were distinguished from areas of sheet trash principally by their greater

depth of deposits, which is presumed to reflect more long-term use of an area for trash disposal.

Feature 10

Location: Feature 10 was located at the extreme southwestern end of the excavated portion of the Vegas Ruin. The feature appears to have extended under the southwestern corner of the Feature 1 compound (see Figure 22).

Grid coordinates (m): N 9076.2, E 489.7

Date: Miami/Roosevelt phase, based on ceramics

Elevation: 784.2 m (2,572.9 feet) AMSL

Depth: unknown

Dimensions: defined midden within the ROW was at least 20 by 12 m and extended outside the ROW approximately 5 m farther to the west and 10 m farther to the south

Excavation Methods

Feature 10 was explored through the manual excavation of one 2-by-2-m and two 1-by-2-m test pits. These pits were excavated in a series of arbitrary 10-cm levels, with all of the fill screened through ¼-inch-mesh hardware cloth.

Feature Fill

The fill within Feature 10 was quite heterogeneous, reflecting its relatively long depositional history. In general, the fill consisted of a gray-brown fine sandy loam containing numerous ceramic and lithic artifacts. Postabandonment disturbances included numerous roots and animal burrows.

Associated Artifacts

As would be expected, a diverse collection of ceramic and lithic artifacts were obtained from controlled excavation in Feature 10, all likely representing site-level activities. Temporally diagnostic painted ceramics from controlled contexts included examples of Walnut Black-on-white, Salado White-on-red, and Tularosa Black-on-white. The lithic collection reflects tool manufacturing and maintenance activities and included several cores, hammer stones, and unmodified flakes of chert, basalt, quartzite, and rhyolite. A *Glycymeris gigantean* bracelet was also recovered.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

The small faunal collection obtained from the test pits included bone fragments of rabbit-sized mammals and a single fragment of unworked *Anodonta californiensis*.

Chronology

The decorated ceramics recovered from Feature 10 reflect the main post–A.D. 1150 occupation of the site.

Associated Features

Feature 10 is stratified below the southwestern corner of the Feature 1 compound.

Feature 44

Location: This midden was located northeast of the compound, adjacent to the west side of SR 188.

Grid coordinates (m): N 9103.5, E 525.0

Date: Sedentary period/Roosevelt phase, based on ceramics

Elevation: 782.0 m (2,565.6 feet) AMSL

Depth: 0.20 m

Dimensions: 10+ m east–west by 9 m north–south

Excavation Methods

This feature was identified during the excavation of backhoe TR 213. The midden was not excavated, although artifacts were collected from the trench wall.

Feature Fill

This was a dark gray ashy deposit with scattered fire-cracked rock, located in Stratum II.

Associated Artifacts

The ceramic collection included indeterminate Cibola White Ware and Walnut Black-on-white sherds.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

No faunal remains were identified.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

This feature overlay and postdated the Feature 187 burial and possibly postdated the Feature 12 burial.

Pits/Hearths

This class of features differed from simple pits largely by the presence of oxidation in the surrounding sediments. A total of 16 features at the Vegas Ruin were given this designation. Most were located within the confines of the Feature 1 compound, although it is unlikely that all are contemporary with the occupation of the compound. Of the 16 features, 2 were excavated, 4 were sampled, and the rest were measured and mapped. Twelve of the features were between 0.40 and 0.70 m in size. One feature was slightly larger (0.84 m), and the minimum diameter of the smallest pit was 0.21 m. The depths of the features varied between 0.08 and 0.51 m, although most were about 0.20 m. The features generally contained ash, charcoal, or fire-affected rock and sometimes contained artifacts. The features sometimes contained a cobble at the base of the pit, such as Features 155 and 157, which were both located west of the Feature 11 structure. One pit/hearth, Feature 67, is described above in the Feature 69 description.

Feature 157

Location: Feature 157 was located midway between the Feature 99 pit structure and the Feature 11 room.

Grid coordinates (m): N 9091.0, E 506.2

Date: Miami/Roosevelt phase, based on association with Feature 11

Elevation: 782.7 m (2,567.8 feet) AMSL

Depth: 0.22 m

Dimensions: 0.60 by 0.50 m

Excavation Methods

Feature 157 was first identified during mechanical stripping within the Feature 1 compound (Figure 52). The feature was excavated in a single unit, with all of the fill being collected as a flotation sample.

Feature Fill

The fill within Feature 157 consisted of loose to moderately sorted sand with small flecks of charcoal dispersed throughout. Numerous subrectangular to well-rounded pebbles greater than 5 cm in diameter were also observed. Postabandonment disturbance was limited to numerous fine roots.

Feature Details

Feature 157 was an adobe-lined hearth with a flat, oval cobble measuring 35 by 30 cm resting in its base. The feature was oval in plan, with slightly flaring sides terminating at a flat base. The adobe lining was approximately 5 cm thick and exhibited slight oxidation.

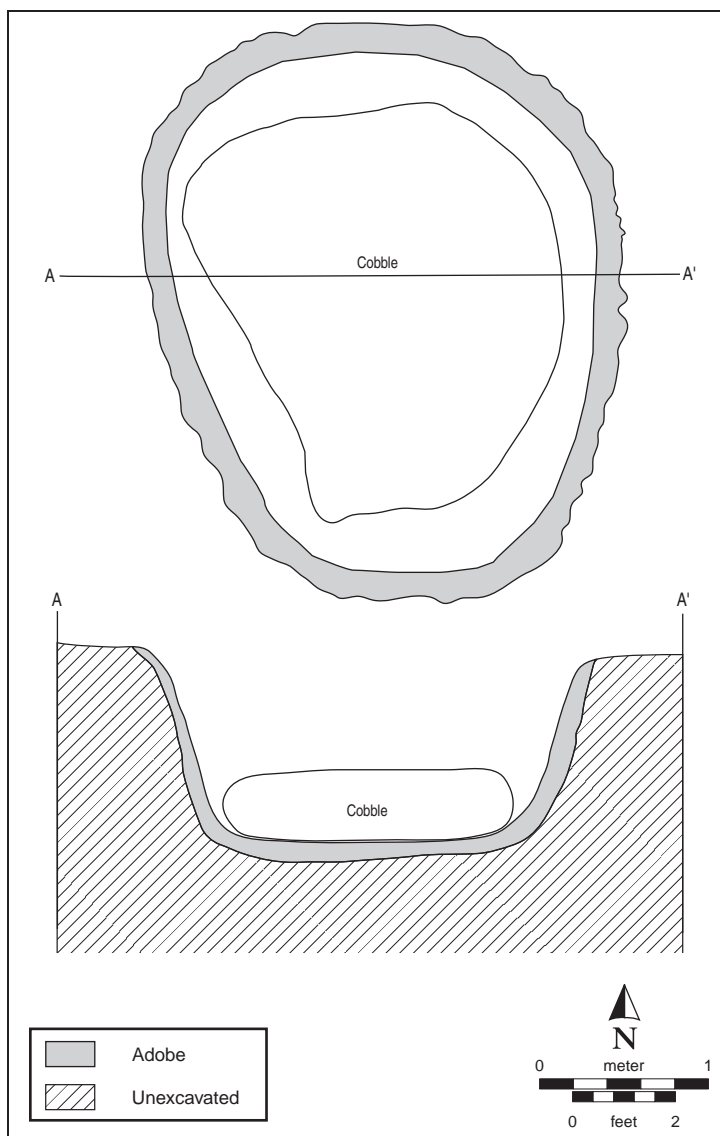


Figure 52. Pit/hearth Feature 157 at the Vegas Ruin (405/2012).

Associated Artifacts

Several large plain ware sherds were noted in the feature fill but were not analyzed.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

No faunal remains were identified.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

Feature 157 is located in the north-central part of the compound, west of the cobble-adobe-foundation enclosure. Approximately 3 m to the north was Feature 155, a similar pit hearth that also contained a large, fairly flat cobble at its base (see Table 4).

Postholes

Three postholes (Feature 213, 214, and 215) were discovered during mechanical stripping of the Feature 1 compound (see Figure 22). These features were located in the north-central part of the compound, about 2 m east of Feature 157, a pit/hearth, and just outside the northwest corner of the partially enclosed activity area, Feature 54. It is unclear whether the postholes were directly associated with the nearby cobble-adobe foundations; the top of the postholes was at least 20 cm below the presumed floor of Feature 54. The postholes were first visible as circular stains, aligned in a row oriented north-south, and spaced 50–55 cm apart. Each of the postholes was 20–28 cm in diameter. They were excavated to a depth of 20–25 cm before reaching gravelly, sterile deposits. All three of the postholes were excavated in their entirety, and no artifacts were identified. Wood fragments from the southernmost posthole, Feature 214, were collected but not analyzed.

Pot Breaks

Two pot breaks were discovered during mechanical stripping. Feature 50 was found approximately 5 cm west of Feature 37, a short wall segment perpendicular to the eastern end of the north wall of the compound (see Figure 22). The pot break consisted of approximately one-third of a brown plain vessel (V 203) of indeterminate form. Pieces of the vessel were scattered over an area approximately 30 by 20 cm. Feature 151 was also discovered during stripping operations of the Feature 1 compound (see Figure 22). The feature was a cluster of sherds, including brown plain and Salado Red Corrugated, scattered over an area approximately 20 by 20 cm.

Roasting Pits

Roasting pits are defined as thermal features where heated rocks are used for cooking food. By contrast, hearths are used for a variety of heating purposes, generally by means of fire, coals, or ash. The key attributes of roasting features include oxidation evident on the surfaces of the feature and the presence of fire-cracked rock, ash, and charcoal in the feature fill. Roasting pits are differentiated from hearths primarily by their larger size and the presence of significant quantities of fire-cracked rock. There were 14 roasting pits identified in the Formative period component at the site, of which 8 were excavated and 4 were sampled. The pits varied in diameter from 0.35 to 1.10 m, and the depths varied from 0.09 to 0.73 m. Six of the 8 excavated features are

described in detail below; the remaining features are described in Table 4.

Feature 15

Location: Feature 15 was located near the southwestern limit of the excavation, approximately 2 m west of the southwestern corner of the Feature 1 compound.
Grid coordinates (m): N 9077.7, E 493.5
Date: Miami/Roosevelt phase, based on stratigraphic position
Elevation: 783.8 m (2,571.6 feet) AMSL
Depth: 0.73 m
Dimensions: 1.10 by 0.76 m

Excavation Methods

Feature 15 was first identified during the excavation of TR 202 (Figure 53). Excavation of the backhoe trench ceased when the stones around the rim of the feature were encountered, although it is clear that several were dislodged in the process. The fill from the feature was removed as a single unit, with most being collected as a flotation sample. Several ceramic and flaked stone artifacts were collected from the remaining fill, which was not screened.

Feature Fill

The fill within Feature 15 consisted of a dark gray, ashy sandy loam with numerous fragments of fire-cracked rock, ceramic sherds, and flaked stone debris. Postabandonment disturbances were limited to numerous small roots throughout the fill.

Feature Details

Feature 15 was a stone-rimmed roasting pit containing a large quantity of ash, charcoal, and fire-cracked rock. The walls of the pit sloped down acutely to a rounded base. The interior surfaces of the pit were uniformly oxidized.

Associated Artifacts

The small artifact collection from Feature 15 consisted of 10 unmodified flakes of andesite, basalt, chert, and rhyolite. The sample also included undecorated sherds that were not analyzed.

Botanical Remains

A flotation sample collected from the fill of Feature 15 contained charred cotton seeds and charcoal from both mesquite and creosote.

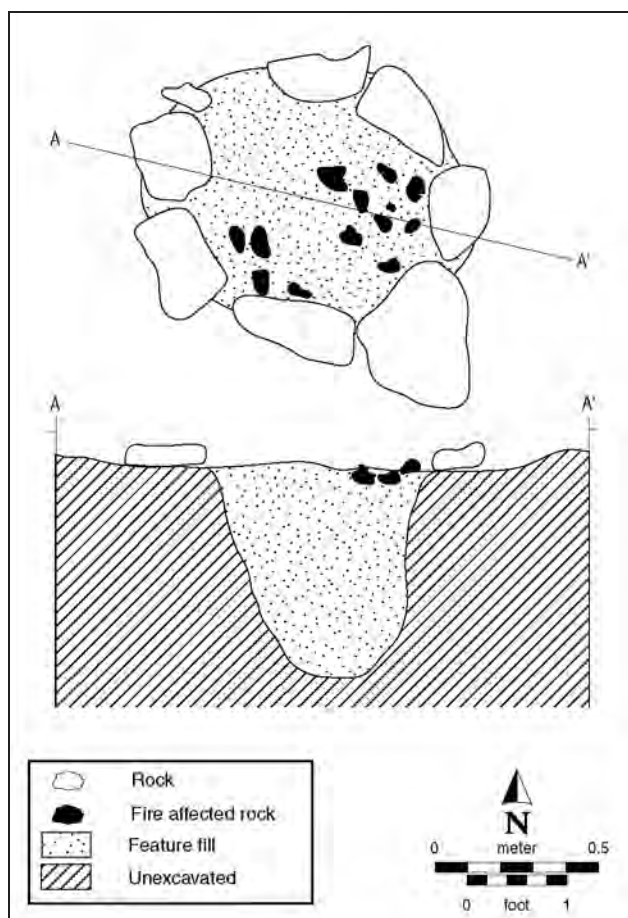


Figure 53. Roasting pit Feature 15 at the Vegas Ruin (405/2012).

Faunal Remains

The small faunal collection from Feature 15 consisted of one calcined fragment of a squirrel- to rabbit-sized mammal, several unburnt fragments from squirrel-sized and smaller mammals, and two pieces of unworked shell.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

Feature 15 was identified within the large midden area at the southern end of the site.

Feature 16

Location: Feature 16 was located along the western edge of the excavation area, immediately west of the Feature 34 pit structure.

Grid coordinates (m): N 9101.7, E 502.6

Date: Miami/Roosevelt phase, based on ceramics

Elevation: 782.9 m (2,568.5 feet) AMSL

Depth: 0.57 m

Dimensions: approximately 1.10 m diameter.

Excavation Methods

Feature 16 was first observed in the western wall of TR 207, which destroyed an unknown percentage of the feature (Figure 54). Feature depth was calculated at 0.48 m. After it was drawn in profile, the intact portion of the feature was excavated in two levels. The first level was screened through ¼-inch-mesh hardware cloth. Flotation and pollen samples were also taken. After this level was removed, the area was mechanically stripped. A second level was encountered in the vicinity. This level was not screened, but observed artifacts were collected.

Feature Fill

The fill consisted of a dark gray, ashy sandy loam with small gravels distributed throughout. Numerous small charcoal fragments were also observed. Postabandonment disturbance included moderate rodent activity and numerous small roots.

Feature Details

Feature 16 was a broad, shallow pit that, based on an examination of its base, was oval in plan. The basin-shaped base of the pit was oxidized.

Associated Artifacts

Artifacts collected included 90 ceramic sherds, including 1 sherd of Salado White-on-red; 8 unmodified flakes of andesite, basalt, and chert; and 1 splinter awl.

Botanical Remains

A flotation sample contained juniper and mesquite charcoal, a charred *Echinocereus* sp. seed, and charred monocotyledon tissue.

Faunal Remains

A single calcined fragment of a long bone from a deer-sized mammal was recovered from the fill.

Chronology

The Salado White-on-red sherd suggests a post-A.D. 1200 date for the infilling of the feature.

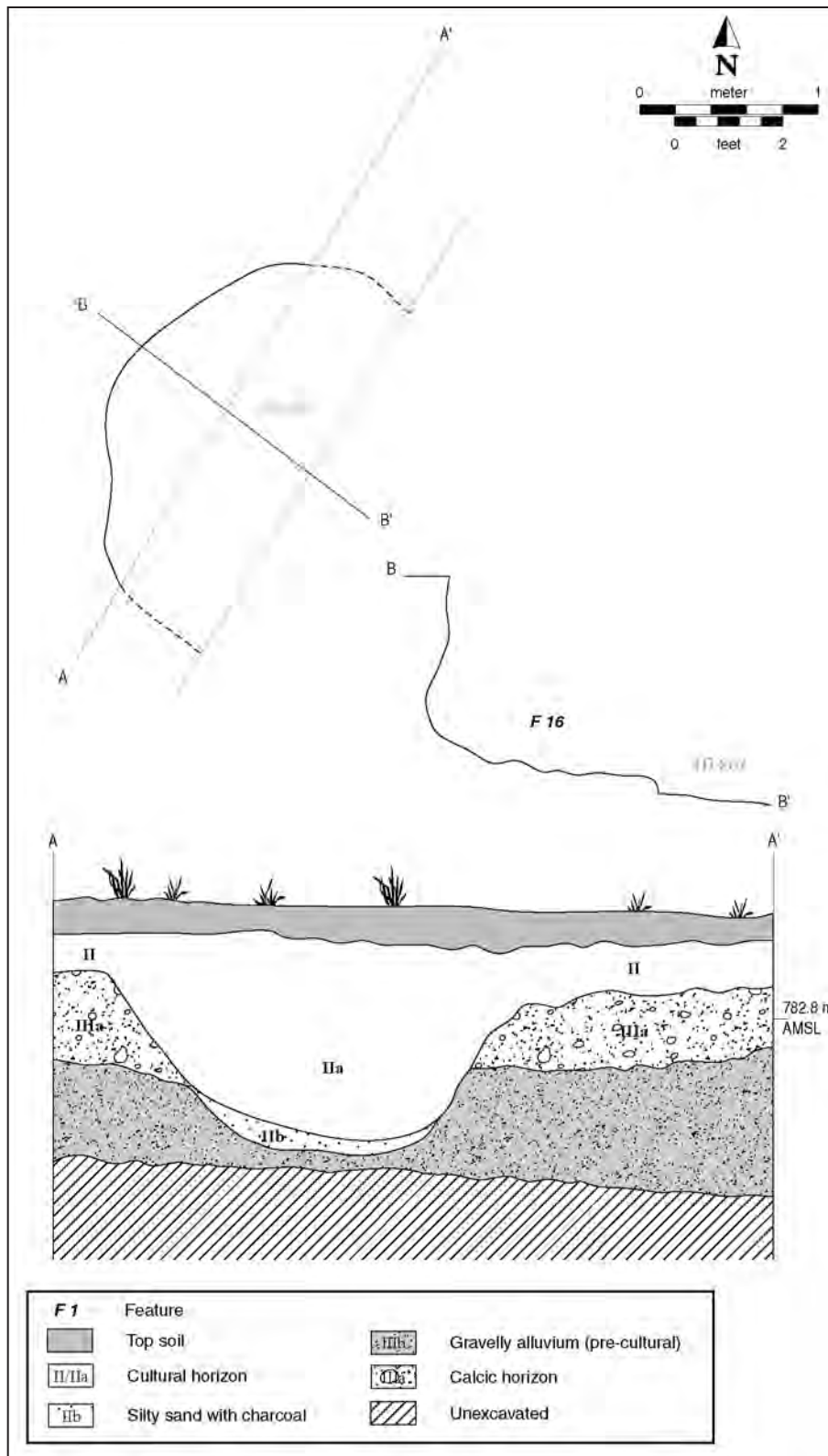


Figure 54. Roasting pit Feature 16 at the Vegas Ruin (405/2012).

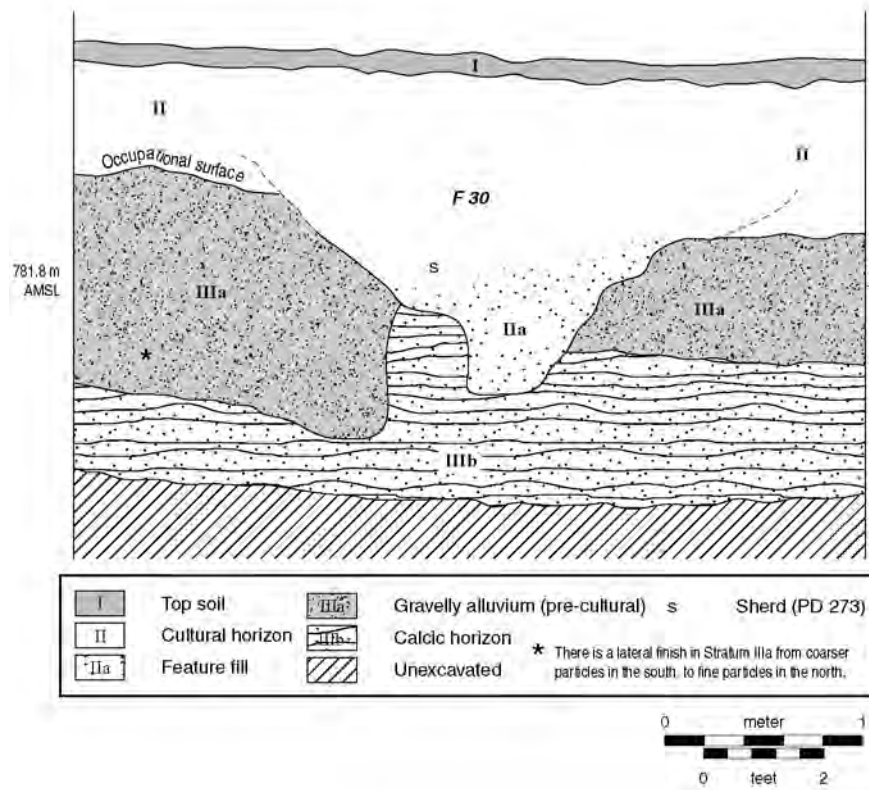


Figure 55. Profile of Feature 30, a roasting pit, in the west wall of TR 213 at the Vegas Ruin (405/2012).

Associated Features

Feature 16 was located between pit structure Features 34 and 179, approximately 5 m north of the Feature 1 compound.

Feature 30

Location: This pit was located north of the Feature 1 compound.

Grid coordinates (m): N 9107.7, E 524.9

Date: Miami/Roosevelt phase, based on ceramics

Elevation: 781.8 m (2,565.0 feet) AMSL

Depth: 0.41 m

Dimensions: 0.80 by 0.40 m

Excavation Methods

Feature 30 was identified in the western wall of TR 213 (Figure 55). A profile was drawn of the feature, and a sample of artifacts was collected from the trench wall.

Feature Fill

Fill consisted of a poorly sorted sandy silt with abundant subrounded to angular gravels. Numerous fragments of

fire-cracked rock greater than 5 cm in diameter were also observed. Postabandonment disturbance was limited to a few small roots.

Feature Details

Observations of Feature 30 were limited to the trench profile. The feature was conical in cross section, ending in a flat base approximately 25 cm across. There is no evidence that the interior surface of the pit was prepared in any way.

Associated Artifacts

The artifact collection from Feature 30 consisted of two ceramic sherds, one identified as Snowflake Black-on-white.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

No faunal remains were identified.

Chronology

The Snowflake Black-on-white sherd suggests a post-A.D. 1050 date for the infilling of the feature.

Associated Features

Feature 177, another pit, was located approximately 5 m northeast of Feature 30.

Feature 132

Location: Feature 132 was located in the northeastern corner of the compound, between TR 217 and SR 188
Grid coordinates (m): N 9087.4, E 517.7
Date: Miami/Roosevelt phase, based on stratigraphic position
Elevation: 782.2 m (2,566.3 feet) AMSL
Depth: 0.30 m
Dimensions: 0.55 by 0.53 m

Excavation Methods

This was identified by mechanical stripping, and the entire feature was collected as a flotation sample.

Feature Fill

The feature was filled with fist-sized cobbles coated with gray ash; some of the cobbles were spalled and angular, indicating that they were fire-cracked. The upper 10 cm was an ashy sandy loam with faunal bone and charcoal, and the lower 20 cm was a dark brown to gray, ashy loam.

Feature Details

This was a small, shallow, basin-shaped pit filled with large quantities of fire-affected rock (approximately 100 pieces), large chunks of ash and charcoal, and faunal bone. Oxidized soil was found along the edges and the base of the pit, and a large rock rested at the bottom.

Associated Artifacts

The feature contained chert and chalcedony flakes and shatter, as well as a limestone bead.

Botanical Remains

A small number of cheno-am, *Echinocereus*, and *Opuntia* seeds, as well as large quantities of *Prosopis* charcoal, were recovered from the flotation sample.

Faunal Remains

This roasting pit was the richest context, in terms of quantity, of faunal bone that was analyzed at the Vegas Ruin. It contained over 1,900 specimens, including lagomorphs, rodents, and artiodactyls, as well as a single fresh water fish (Cypriniformes). Most of the specimens were severely fragmented, and only 80 could be assigned to a specific taxon. Also included in the faunal collection were 10 specimens of *Succinea* and *Hawaiia minuscula*, both small terrestrial gastropods.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

This was an isolated feature located near a cluster of burials and extramural features in the northeastern part of the compound, adjacent to SR 188.

Feature 154

Location: Feature 154 was located in the northwest corner of the compound, just southeast of the entryway of the Feature 179 pit structure
Grid coordinates (m): N 9094.9, E 501.0
Date: Miami/Roosevelt phase, based on radiocarbon date
Elevation: 783.1 m (2,569.2 feet) AMSL
Depth: 0.20 m
Dimensions: 0.60 by 0.60 m

Excavation Methods

This feature was discovered during mechanical stripping of the northwest corner of the compound. All of the fill was removed as a flotation sample.

Feature Fill

This was a stone-lined pit filled with fire-affected rocks and ashy soil. The rocks were all coated with ash. There was a large, round, river cobble at the base of the pit.

Feature Details

This was a small, shallow roasting pit. An unknown portion of the upper fill was probably removed during mechanical stripping.

Associated Artifacts

A number of flakes made from cryptocrystalline and volcanic rocks were recovered. No ceramics were collected.

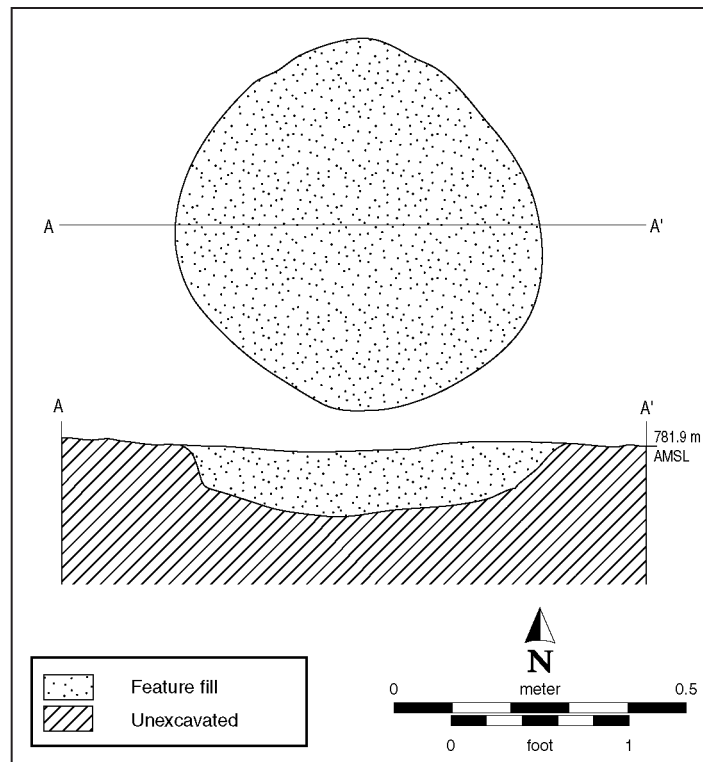


Figure 56. Roasting pit Feature 167 at the Vegas Ruin (405/2012).

Botanical Remains

The sample contained a variety of economic species, including cheno-am, *Echinocereus*, and *Gossypium* seeds; a *Zea mays* cupule; Monocotyledon tissue; and *Prosopis* charcoal.

Faunal Remains

Fifty-six faunal specimens were recovered from the feature, including primarily small squirrel- to rabbit-sized specimens. Also present were 5 rabbit- to coyote-sized specimens and 1 deer-sized specimen. One mouse-sized bone was the only specimen that exhibited evidence of alteration by fire. One single terrestrial snail shell was also recovered.

Chronology

A radiocarbon date obtained from a cotton seed returned a date of 770 ± 40 B.P. (cal A.D. 1180–1290; calibrated at 2σ with program OxCal 3.10) (see Appendix A).

Associated Features

This was an isolated feature in the northwest corner of the compound.

Feature 167

Location: Feature 167 was located within the area defined by the Feature 1 compound, 4 m east of the Feature 19 pit structure.

Grid coordinates (m): N 9082.6, E 510.1

Date: Miami/Roosevelt phase, based on association with Feature 19

Elevation: 781.9 m (2,565.1 feet) AMSL

Depth: 0.10+ m

Dimensions: 0.60 m diameter

Excavation Methods

Feature 167 was first identified during mechanical stripping within the Feature 1 compound (Figure 56). The feature was then excavated in a single unit, with all of the fill collected as a flotation sample.

Feature Fill

The fill within Feature 167 consisted of loose to moderately sorted colluvial sands laden with charcoal and ash. Numerous subrounded gravels smaller than 5 cm in diameter and several fire-cracked cobbles 15–20 cm in diameter were also observed. Postabandonment disturbances were limited to a few small roots.

Feature Details

Feature 167 was round in plan with steep, unprepared walls terminating at a slightly basin-shaped base. Because the feature was identified during mechanical stripping, feature depth should be treated as a minimum. Although no oxidation was observed on the margins of the pit, the relatively high volume of charcoal, ash, and fire-cracked rock observed in the fill supports the feature's designation as a probable hearth.

Associated Artifacts

No artifacts were collected.

Botanical Remains

The flotation sample was not analyzed.

Faunal Remains

No faunal remains were identified.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

Feature 167 is located in a cluster of small pits/hearths north and east of pit structure Feature 19.

Archaic Period Roasting Features

In addition to the late pre-Classic and early Classic period remains that constituted the bulk of the Vegas Ruin, a cluster of three features was identified immediately north of the Feature 1 compound that likely date to the Archaic period (Features 159, 180, and 183). In addition, a fourth feature of likely Archaic age (Feature 162) was located in the middle of the Feature 1 compound. Lacking any association with temporally diagnostic artifacts, this age assessment is based largely on these features' positions vis-à-vis the observed stratigraphic sequence for the site. As discussed above, the bulk of the prehistoric deposits at the Vegas Ruin were identified above Stratum III, which consisted of a gravelly sandy clay loam with weak carbonate development. This stratum corresponded with the surface sediments contemporary with construction of the architectural components at the site. Below this was a calcic horizon consisting of a fine silty clay loam with Stage I carbonate development that was designated Stratum IV. The features

discussed here tentatively dated to the Archaic period were all found below or within the Stratum IV calcic horizon. Because myriad factors affect the rate of carbonate development in a soil, we are cognizant of its limited utility as a chronological indicator. That said, it remains likely that these features predate the Formative period component of the site.

Feature 159

Location: Feature 159 was located approximately 5 m north of the Feature 1 compound.

Grid coordinates (m): N 9101.0, E 517.6

Date: Archaic period

Elevation: 781.7 m (2,564.6 feet) AMSL

Depth: 0.10 m

Dimensions: 1.55 by 0.95 m

Excavation Methods

Feature 159 was first observed during the excavation of the Feature 137 inhumation burial as a layer of ashy soil and fire-cracked rock in the wall of the burial pit (Figure 57). Following the excavation of the burial, the area to the north and west of the burial was mechanically stripped (SU 940), revealing an oval area of dark, ashy soil. This area was bisected along its north-south axis. The western half of the feature was then hand excavated, with all of the sediments screened through 1/8-inch-mesh hardware cloth.

Stratigraphy and Feature Fill

This feature consisted of a 10-cm-thick, irregular-shaped lens of ashy sandy silt with a moderate quantity of charcoal scattered throughout. Numerous fragments of fire-cracked rock from 2 to 10 cm in diameter were also observed. This deposit of ash and fire-affected rock rested on top of the calcic horizon (Stratum IV). There appears to have been minimal postabandonment disturbance to the feature.

Feature Details

Feature 159 was comprised of an oval scatter of fire-cracked rock and ashy soil that most likely represents the cleaning out of a nearby roasting pit (see Feature 183 below).

Associated Artifacts

A total of three unmodified flakes was recovered from Feature 159. An Archaic-style projectile point was recovered from the adjacent Feature 137, but the association with the burial is unclear; it may have originated from Feature 159.

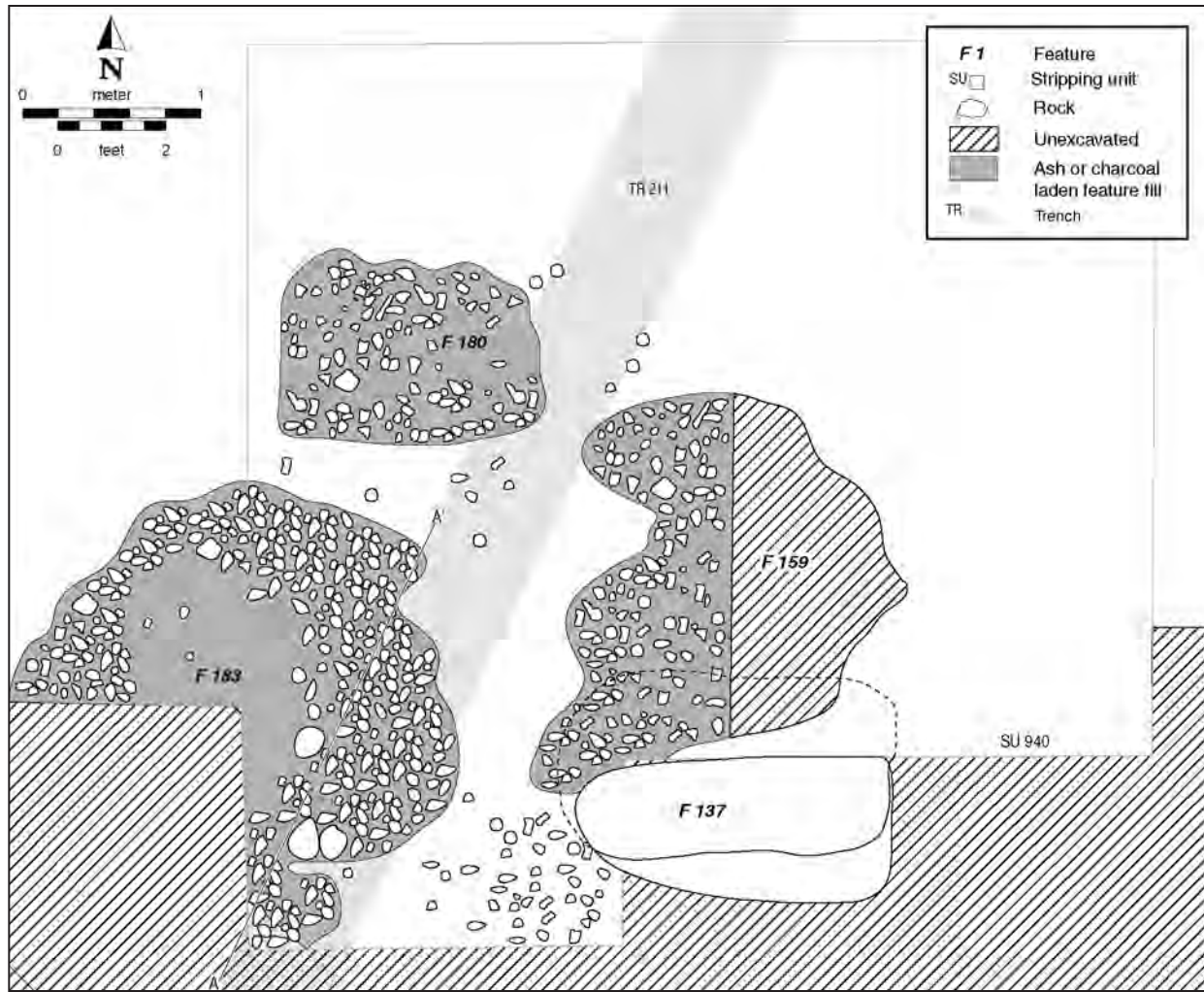


Figure 57. Archaic period roasting Features 159, 180, and 183, and intrusive burial Feature 137 at the Vegas Ruin (405/2012).

Botanical Remains

A flotation sample from the fill of the feature contained juniper and mesquite charcoal. A pollen sample contained no evidence of economic species.

Faunal Remains

Several *Succinea* sp. specimens were recovered.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

Features 159 and 180, which are located about 30 cm north-

west of Feature 159, both appear to be clean-outs associated with the roasting pit Feature 183. Feature 183 is less than 1 m west of Feature 159. The bench of burial Feature 137 cut into the southern portion of this roasting feature, exposing a large section of the ash and fire-affected rock in the burial pit. Feature 162, also located below the calcic horizon, is a roasting pit located approximately 20 m to the southwest.

Feature 162

Location: Feature 162 was located directly 1 m east of the Feature 99 pit house entryway.
 Grid coordinates (m): N 9086.4, E 507.0
 Date: Archaic period
 Elevation: 782.5 m (2,567.2 feet) AMSL
 Depth: 0.25 m
 Dimensions: 2.10 by 1.90 m

Excavation Methods

Feature 162 was first identified as a roughly circular area of dark, ashy sediments, charcoal, and fire-affected rock during mechanical stripping within the Feature 1 compound (see Figure 22). The entire feature was hand excavated as a single unit and level. The excavated fill was not screened, although a judgmental sample of artifacts was collected.

Stratigraphy and Feature Fill

This feature was covered by a light brown silty clay loam with Stage I calcium carbonate development. The fill within Feature 162 consisted of a loose, weakly indurated silty sand containing numerous fragments of fire-cracked rock and dispersed charcoal and ash. The fill also had Stage I calcium carbonate development. Postabandonment disturbance included numerous fine rootlets and several rodent burrows.

Feature Details

Feature 162 was a roughly circular pit containing ashy soil, charcoal, and numerous fire-cracked rocks. The walls of the pit were unprepared, descending sharply from the rim and terminating at a flat base. There was no evidence of oxidation in this feature.

Associated Artifacts

The small artifact collection from Feature 162 consisted of two basalt hammer stones, four unmodified flakes of chert and rhyolite, and one piece of chert shatter.

Botanical Remains

A flotation sample from Feature 162 contained juniper and mesquite charcoal.

Faunal Remains

Five unburnt fragments of bone from a squirrel- to rabbit-sized mammal were collected with the flotation sample.

Chronology

No direct chronological indicators were observed, but the cap of calcium carbonate suggests an Archaic period age.

Associated Features

Although this feature was found within the Formative period compound, it appears to be associated with the cluster of Archaic period roasting features located north of the compound.

Feature 180

Location: This feature was located 30 cm north of Feature 183 and the same distance northwest of Feature 159

Grid coordinates (m): N 9102.0, E 515.8

Date: Archaic period

Elevation: 781.7 m (2,564.6 feet) AMSL

Depth: 0.07 m

Dimensions: 1.57 by 0.96 m

Excavation Methods

This feature was found in SU 940 and was excavated as a single level and screened through 1/8-inch-mesh hardware cloth. A flotation sample was also collected.

Stratigraphy and Feature Fill

This feature consists of another lens of ashy sandy loam and fire-affected rock resting on the calcic horizon. The calcic horizon at the base of the lens showed evidence of burning.

Feature Details

This lens of ash and fire-cracked rock was 0.96 by 1.57 m and 7 cm thick. It was roughly oval to subrectangular in shape. The lens apparently rested in a shallow, burnt pit. The only disturbance noted was rootlets.

Associated Artifacts

Although no artifacts were observed during excavation, three flakes were collected from the flotation sample.

Botanical Remains

The flotation sample included three *Juniperus* specimens.

Faunal Remains

A single unidentified terrestrial or freshwater snail was recovered.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

Features 180 and 159, which were located about 30 cm southeast of Feature 180, both appear to be clean-outs

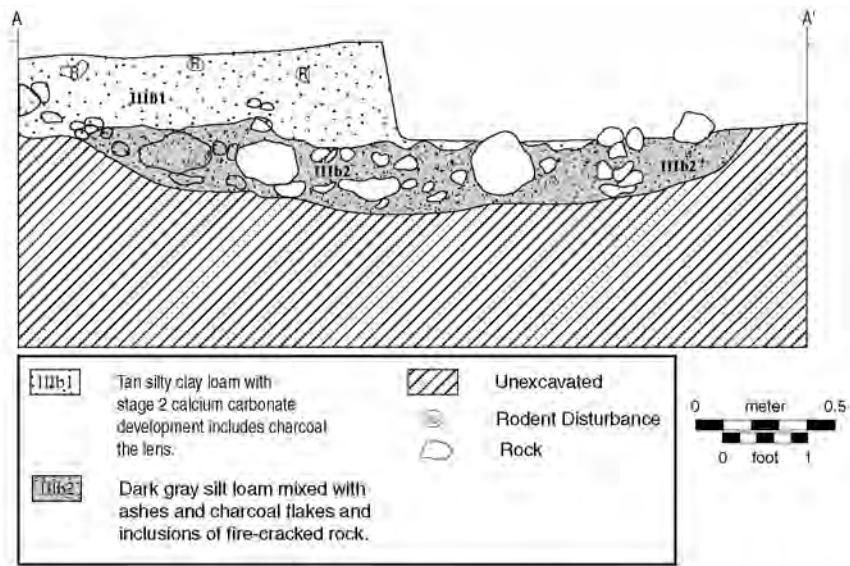


Figure 58. Profile of Feature 183, an Archaic period roasting pit, at the Vegas Ruin (405/2012).

associated with the roasting pit Feature 183. Feature 183 was 30 cm south of Feature 180. Feature 162, also located below the calcic horizon, was a roasting pit located approximately 20 m to the southwest.

Feature 183

Location: Feature 183 was located approximately 5 m north of the Feature 1 compound.
 Grid coordinates (m): N 9100.4, E 514.6
 Date: Archaic period
 Elevation: 781.7 m (2,564.7 feet) AMSL
 Depth: 0.31 m
 Dimensions: 2.40 by 2.10 m

Excavation Methods

Feature 183 was first identified as a roughly circular area of ashy soil and fire-cracked rock during the excavation of SU 940, north of the Feature 1 compound (Figure 58; see Figure 57). The eastern half of this feature, which was contained within the stripping unit, was initially excavated in a single level. The northwest quarter was also excavated in a single level, but the southwest quarter was left unexcavated. All of the excavated sediments were screened through 1/8-inch-mesh hardware cloth. Pollen and flotation samples were taken from both excavation units.

Stratigraphy and Feature Fill

This feature was a shallow pit excavated into the top of the calcic horizon (Stratum IV). It was overlain by a Stratum III

deposit of a tan silty clay loam with charcoal flecks scattered throughout. The fill of the feature itself consisted of a dark gray fine silty loam with numerous fragments of fire-cracked rock and scattered flecks of charcoal. Post-abandonment disturbance included numerous fine roots and several rodent burrows that were restricted to Stratum III.

Feature Details

Feature 183 consisted of a ring of fire-cracked rock approximately 2.1 m in diameter. This ring surrounded a shallow pit, about 1.2 m in diameter and about 0.25 m deep. The pit had gently sloping sides and a basin-shaped base and contained scattered rocks. The edges of the pit were slightly oxidized.

Associated Artifacts

Artifacts collected from Feature 183 included seven unmodified flakes of basalt, chalcedony, quartz, and rhyolite.

Botanical Remains

A flotation sample collected from Feature 183 contained juniper and mesquite charcoal. A pollen sample contained no evidence of economic species.

Faunal Remains

An unworked *Succinea* sp. fragment was recovered.

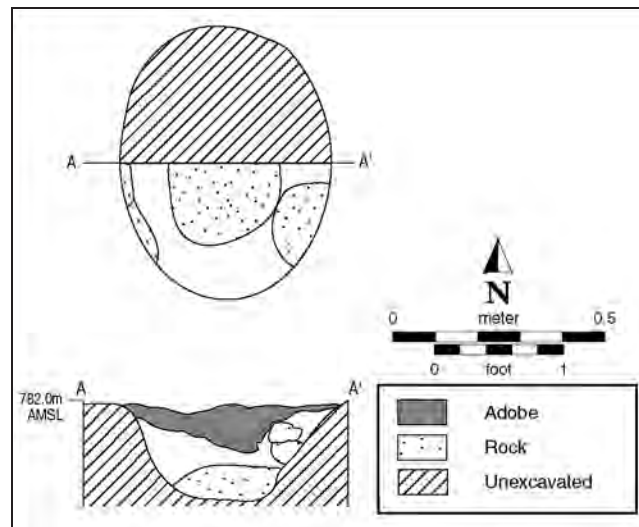


Figure 59. Slab-lined pit Feature 105 at the Vegas Ruin (405/2012). Plan drawn after excavation.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

Features 159 and 180 probably represent clean-out episodes associated with the use of Feature 183.

Slab-Lined Pits

Two small, slab-lined pits were discovered during mechanical stripping. One was located inside the Feature 1 compound, and one was located north of the compound.

Feature 105

Location: Feature 105 was located north of the Feature 1 compound and northeast of Feature 104

Grid coordinates (m): N 9101.5, E 519.7

Date: Miami/Roosevelt phase, based on stratigraphic position

Elevation: 782.0 m (2,565.7 feet) AMSL

Depth: 0.18 m

Dimensions: 0.74 by 0.54 m

Excavation Methods

This slab-lined pit was discovered during mechanical stripping. The southern half of the feature was excavated and screened through ¼-inch-mesh hardware cloth. Pollen and flotation samples were taken from the base of the feature but not analyzed.

Feature Fill

The fill was a fine sandy loam with subrounded gravels, a small amount of ash, and a few flecks of charcoal. The feature was filled with refuse, primarily sherds. There was an adobe cap.

Feature Details

This was a small, shallow pit that was excavated into a cobbly matrix (Figure 59). Some of these cobbles protruded into the pit walls. Two small tabular rocks lined the southwest side, and a large rock slab lined the base of the pit. Although charcoal and ash were noted, there was no evidence of burning.

Associated Artifacts

Ceramics were recovered from the feature, but one indeterminate Little Colorado Black-on-white sherd was the only artifact analyzed.

Botanical Remains

The botanical samples were not analyzed.

Faunal Remains

No faunal remains were identified.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

This slab-lined pit was located in a cluster of burials and extramural features just beyond the northeast corner of the Feature 1 compound.

Feature 134

Location: Feature 134 was located approximately 2 m south of the southeastern corner of the Feature 11 room.

Grid coordinates (m): N 9088.2, E 514.0

Date: Miami/Roosevelt phase, based on ceramics and association with Feature 1

Elevation: 782.3 m (2,566.7 feet) AMSL

Depth: 0.27 m

Dimensions: 0.58 by 0.56 m

Excavation Methods

The feature was first encountered during mechanical stripping within the Feature 1 compound (Figure 60). The feature was then hand excavated in a single level with all sediments screened through ¼-inch-mesh hardware cloth. Flotation and pollen samples were also collected.

Feature Fill

Feature fill consisted of a brown, sandy, gravelly loam with scattered flecks of charcoal and several small fragments of fire-cracked rock. Postabandonment disturbances were limited to some small to medium-sized roots.

Feature Details

Feature 134 was roughly circular in plan with slightly sloping sides terminating at a flat base. The walls of the pit were lined with a number of flat stones, including a mano and several pieces of slate. A large rounded cobble was placed at the center of the base of the pit.

Associated Artifacts

The artifact collection from Feature 134 consisted of one indeterminate Cibola White Ware sherd, one red plain sherd, two manos (one of quartzite and one of a volcanic tuff), and one quartzite hammer stone.

Botanical Remains

The botanical samples were not analyzed.

Faunal Remains

No faunal remains were identified.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

There were no associated features.

Other Extramural Pits

A total of 57 extramural pits of unknown function were recorded at the Vegas Ruin. This category of features was used for those that were generally circular in plan and exhibited little additional surface preparation or evidence of in situ burning. Often the function of these features remains ambiguous. The pits varied in size. There were 15 small pits that were no larger than 0.5 m in maximum diameter; the minimum diameter was 0.11 m. Fourteen were large pits that were between 1.0 and 2.6 m in maximum diameter. The remaining half were between 0.5 and 1.0 m. The depths of the features, when this could be established, ranged from 0.02 to 0.90 m. This represents a greater range of variability than the other pit types, although these pits tended to be larger than adobe-lined pits and pits/hearths. Slightly more than half of the pits were located outside of the Feature 1 compound, most of which were to the north. Of the 57 pits, 11 were excavated; pollen, flotation, and artifact samples were extracted from 11 others that were exposed in trench walls. Very few of the pits produced any formal artifacts other than ceramics. The exceptions included a Classic period side-notched projectile point from Feature 158 and a metapodial awl from Feature 84. Details of the excavation of 4 of the pits are presented here. Descriptive information on the remaining excavated and unexcavated pits is presented in Table 4.

Feature 70

Location: Feature 70 was located northwest of the southwestern corner of the Feature 1 compound.

Grid coordinates (m): N 9081.5, E 492.7

Date: Miami/Roosevelt phase, based on ceramics

Elevation: 783.6 m (2,570.8 feet) AMSL

Depth: 0.36 m

Dimensions: 1.35 by 1.03 m

Excavation Methods

Feature 70 was first identified during mechanical stripping between the western wall of the Feature 1 compound and the western limits of the excavation (Figure 61). The pit was

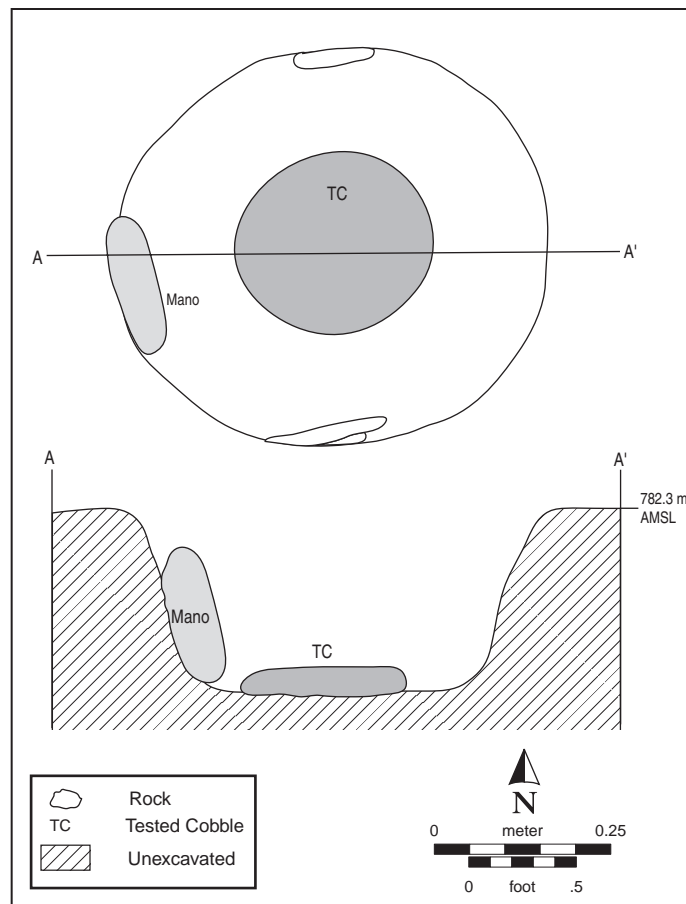


Figure 60. Slab-lined pit Feature 134 at the Vegas Ruin (405/2012).

bisected along its east–west axis, and each half was excavated separately in a single level. The fill from the southern half of the feature was screened through ¼-inch-mesh hardware cloth; artifacts were collected from the northern half without screening. Flotation and pollen samples were collected.

Feature Fill

The fill within Feature 70 consisted of a poorly sorted fine sandy loam with numerous subrounded gravels, charcoal flecks, and fragments of fire-affected rock. Several nodules of oxidized sediment were observed in the fill.

Feature Details

Feature 70 was a shallow, oval pit with sloping sides and a basin-shaped base. With the exception of the oxidized material and fire-affected rock observed in the fill, there was no evidence of burning of the feature itself.

Associated Artifacts

The artifact collection from Feature 70 contained nine ceramic sherds, including examples of Snowflake Black-on-white, Salado White-on-red, McDonald Painted Corrugated, and Holbrook or Walnut Black-on-white. A single granite metate fragment was also collected. Numerous flakes were recovered but not analyzed.

Botanical Remains

The botanical samples were not analyzed.

Faunal Remains

A single rabbit- to coyote-sized mammal bone fragment was collected from the fill of Feature 70.

Chronology

The presence of the Salado White-on-red sherd suggests a post–A.D. 1200 date for the infilling of the feature.

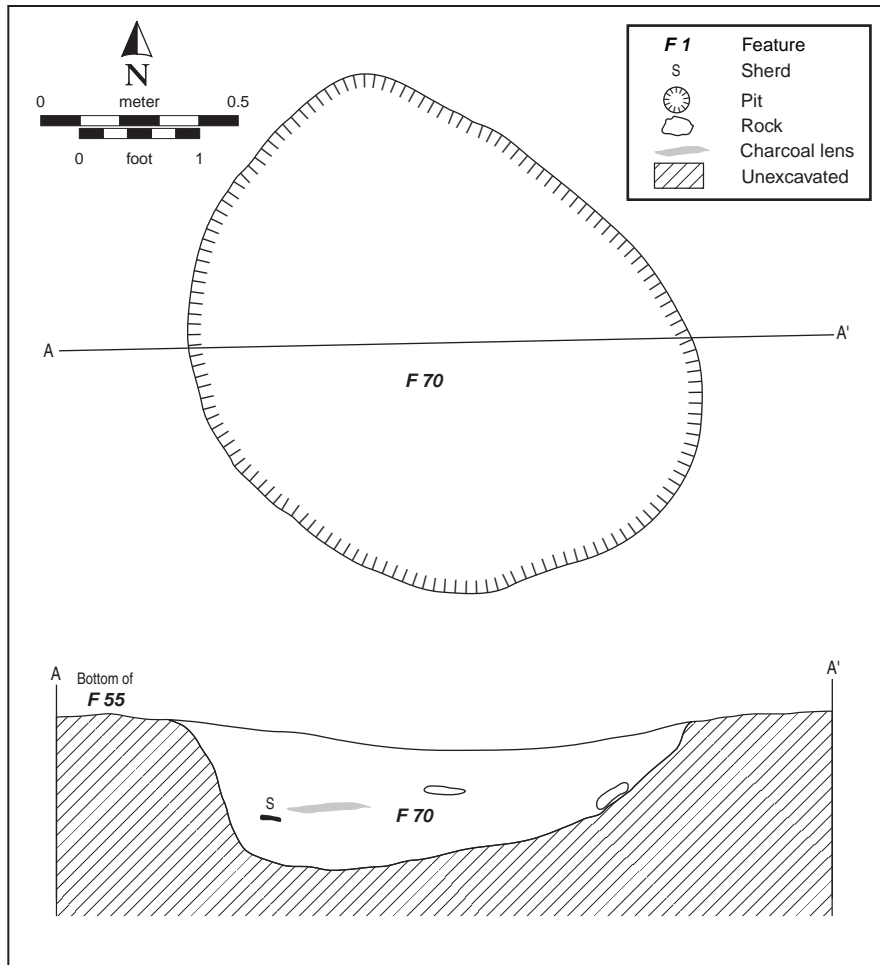


Figure 61. Pit Feature 70 at the Vegas Ruin (405/2012).

Associated Features

Feature 70 was located approximately 3 m north of the Feature 15 roasting pit, which may have been the source of the burnt material observed in the fill. Feature 70 was also within the boundaries of the Feature 10 midden.

Feature 87

Location: Feature 87 was located in a cluster of extramural features at the northern end of the site.
 Grid coordinates (m): N 9118.7, E 522.1
 Date: Miami/Roosevelt phase, based on ceramics
 Elevation: 782.1 m (2,566.0 feet) AMSL
 Depth: 0.34 m
 Dimensions: 1.40 by 1.25 m

Excavation Methods

Feature 87 was first identified during mechanical stripping. The feature was bisected along its east–west axis, and the southern half was selected for excavation (Figure 62). It was excavated in a single unit, with all of the fill screened through ¼-inch-mesh hardware cloth. A pollen sample was taken from the base of the feature but not analyzed.

Feature Fill

The fill within Feature 87 consisted of a fine- to medium-grained sandy silt with small gravels scattered throughout. The fill was distinguished from the surrounding sterile substrate by the presence of charcoal and ash and a relatively large number of ceramic and flaked stone artifacts.

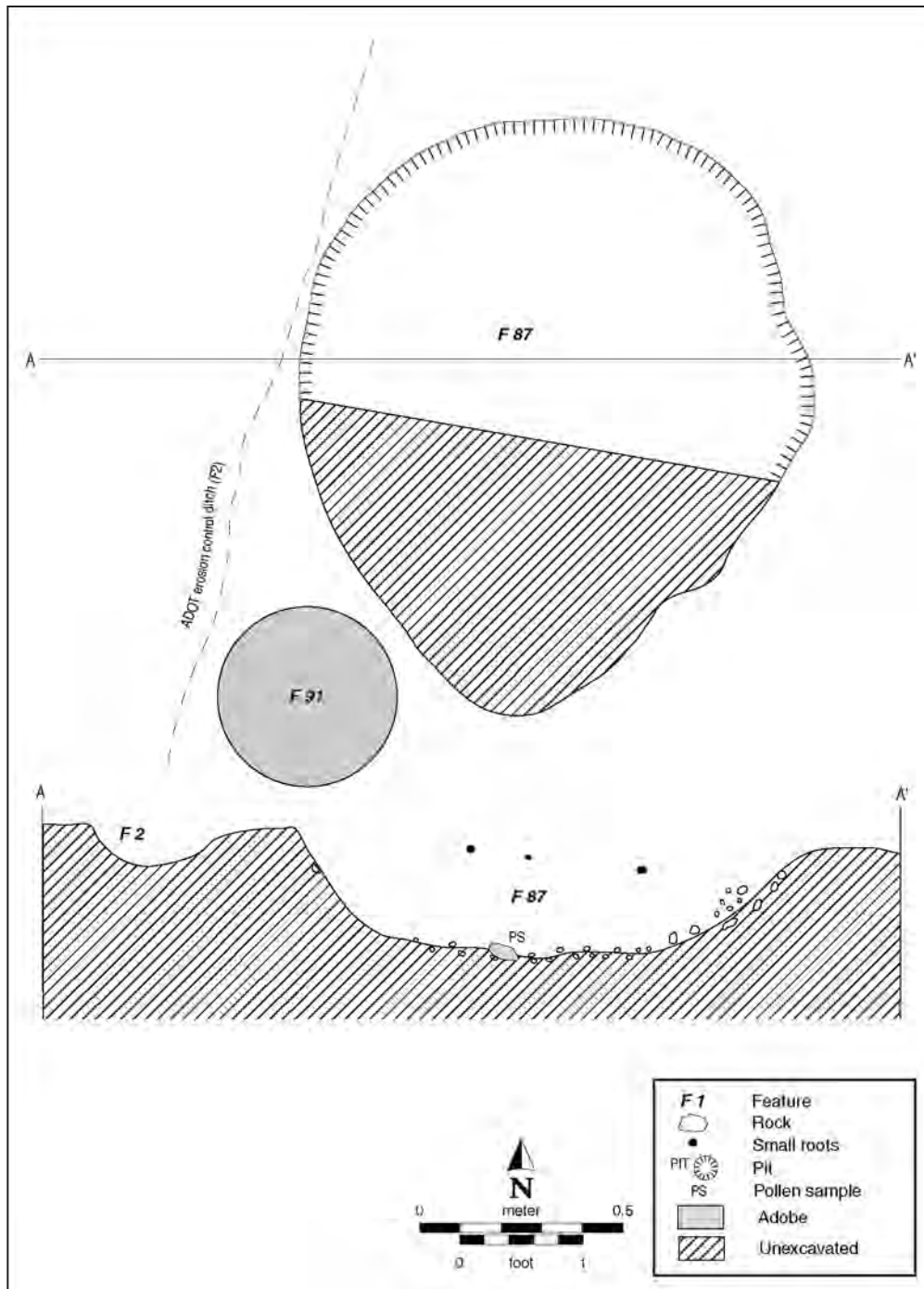


Figure 62. Pit Feature 87 and adobe-lined pit Feature 91 at the Vegas Ruin (405/2012).

Feature Details

Feature 87 was an irregular oval in plan with gradually sloping walls and a flat base. No evidence of a prepared surface was observed. The feature was dug into a deposit of gravelly sands. There was some evidence of oxidation along the northern margin of the feature.

Associated Artifacts

The artifact collection included 1 Holbrook Black-on-white sherd, 1 Roosevelt Black-on-white sherd, and 2 indeterminate Cibola White Ware sherds. Approximately 200 other sherds and 25 flakes were collected but not analyzed.

Botanical Remains

The pollen sample was not analyzed.

Faunal Remains

No faunal remains were identified.

Chronology

The Roosevelt Black-on-white sherd suggests a post-A.D. 1275 infilling of the feature.

Associated Features

Feature 87 was a spatially discrete pit located in an area of several small pits, approximately 25 m north of the Feature 1 compound. Feature 91, an adobe-lined pit, was next to Feature 87.

Feature 129

Location: This pit was located in the northeast corner of the compound, just outside the east wall of the cobble-adobe-foundation room Feature 11.

Grid coordinates (m): N 9093.4, E 515.8

Date: Miami/Roosevelt phase, based on location in compound

Elevation: 782.2 m (2,566.3 feet) AMSL

Depth: 0.40 m

Dimensions: 0.82 by 0.46 m

Excavation Methods

This feature was found during mechanical stripping of the northeast corner of the compound. This feature was completely excavated in and a single level and the fill was judgmentally sampled for artifacts.

Feature Fill

The fill was a fine sandy silt that transitioned into channel fill materials with gravels and pebbles lacking silt. Below this channel fill was a white, sterile, calcic layer. Sherds, flaked stone, and rabbit bone were discovered in the upper fill.

Feature Details

This was a small oval to subrectangular pit with a shallow alcove along the south and east sides. The north and west sides of the pit were vertical, and the base of the pit was flat. A large (20 by 30 by 37 cm) rock filled the northeast corner of the pit. This feature was suspected to be a burial pit of an infant, but no human remains or burial offerings were discovered.

Associated Artifacts

Flaked stone and a single plain ware sherd were collected from the base of the pit but not analyzed.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

Three conjoining rabbit vertebra were noted in the upper fill.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

This feature was in a large cluster of extramural features and burials located in the northeast corner of the compound, adjacent to room Feature 11. Feature 127, a cache with a small red plain jar resting on a large flat sherd, was 10 cm southwest of Feature 129.

Feature 136

Location: Feature 136 was located adjacent to the south side of the Feature 54 enclosure.

Grid coordinates (m): N 9087.6, E 510.3

Date: Miami/Roosevelt phase, based on ceramics

Elevation: 782.6 m (2,567.7 feet) AMSL

Depth: 0.9 m

Dimensions: 1.7 by 1.3 m

Excavation Methods

Feature 136 was first encountered during stripping south of Feature 54 (Figure 63). The entire feature was excavated in three arbitrary 10-cm levels, with the fill screened through ¼-inch-mesh hardware cloth. Flotation and pollen samples were collected but not analyzed.

Feature Fill

The fill within Feature 136 was a compact, brown sandy loam containing numerous subrounded to subangular gravels. A few flecks of charcoal were observed scattered throughout the fill. Postabandonment disturbances were limited to numerous fine rootlets and minimal damage from burrowing rodents.

Feature Details

Feature 136 can best be described as a pit within a pit. The upper portion of the feature was irregular in plan with a maximum diameter of 1.7 m. The walls of the pit sloped gently down to a second, smaller pit with a maximum diameter of 0.90 m. At this point, the walls of the pit dropped abruptly to a flat base 0.90 m below the identified top of the feature. The sides of the pit were not oxidized.

Associated Artifacts

The artifact collection from Feature 136 included Tularosa Black-on-white, Salado Red Corrugated, red plain, and nine sherds of a plain ware vessel (Provenience Designation [PD] 846). An argillite pendant blank was recovered from the fill.

Botanical Remains

The botanical samples were not analyzed.

Faunal Remains

Two unburnt fragments of a metatarsal from an antelope jackrabbit was recovered from the fill of Feature 136.

Chronology

The Tularosa Black-on-white sherd suggests a post-A.D. 1175 date for the infilling of the feature. No additional chronological indicators were recovered.

Associated Features

This feature is located immediately south of room Feature 54 and burial Feature 206.

Mortuary Features

Burials

Thirty-eight human interments were identified and, of these, 37 were excavated at the Vegas Ruin (Table 5). In the following section, we describe these interments and their archaeological characteristics and associations. The illustrations of the human remains accompanying these burial descriptions are stylized representations, rather than accurate depictions of the actual bones preserved. The preserved osteological and dental characteristics of each burial are described in detail in Chapters 8 and 9 of Volume 2. Most of these interments were situated in discrete graves almost universally oriented in an east–west direction. There were, however, 5 locations where the same space was used repeatedly, resulting in a sequential series of interments intruded upon or overlain by other burials. In this volume, we refer to these overlapping burial areas as burial plots. The continued use of these specific locations for interments suggests that there may have been some relationship among the individuals buried in these plots, although the nature of this relationship is unknown at present. Four of the 5 burial plots (Features 205, 216, 221, and 222) were located within or underneath the walls of the compound and its associated features and were aligned with one another along a northwest–southeast axis of approximately 119° E.

A working typology of burial treatments was developed to facilitate the description of the burial features. This typology is based on the morphological characteristics of the burial pit. In most cases, the human remains and associated offerings were placed within an inner “chamber” excavated at the base of the burial pit. These chambers appear to have been roofed with cribbing materials—slats of wood and bark, primarily juniper—that were placed over benches created by the chamber excavation or were embedded in the walls of the main burial pit. In some burials, a few funerary offerings were placed above the cribbing, but, for the most part, the burials and associated offerings were sealed within the inner chamber.

Four basic types of burial pits are identified. The first type is an alcove chamber where the inner chamber was created by undercutting one of the sidewalls of the burial pit. The second type is a central chamber with benches on both sides of the inner chamber. The third type is a side chamber with a single bench alongside the inner chamber. Each of these three types contained a covered, inner chamber in which the body was placed. The fourth burial type is a simple pit without a covered inner chamber.

Type 1

The alcove-chamber type of burial pit consists of a subrectangular main shaft with the burial chamber carved out of

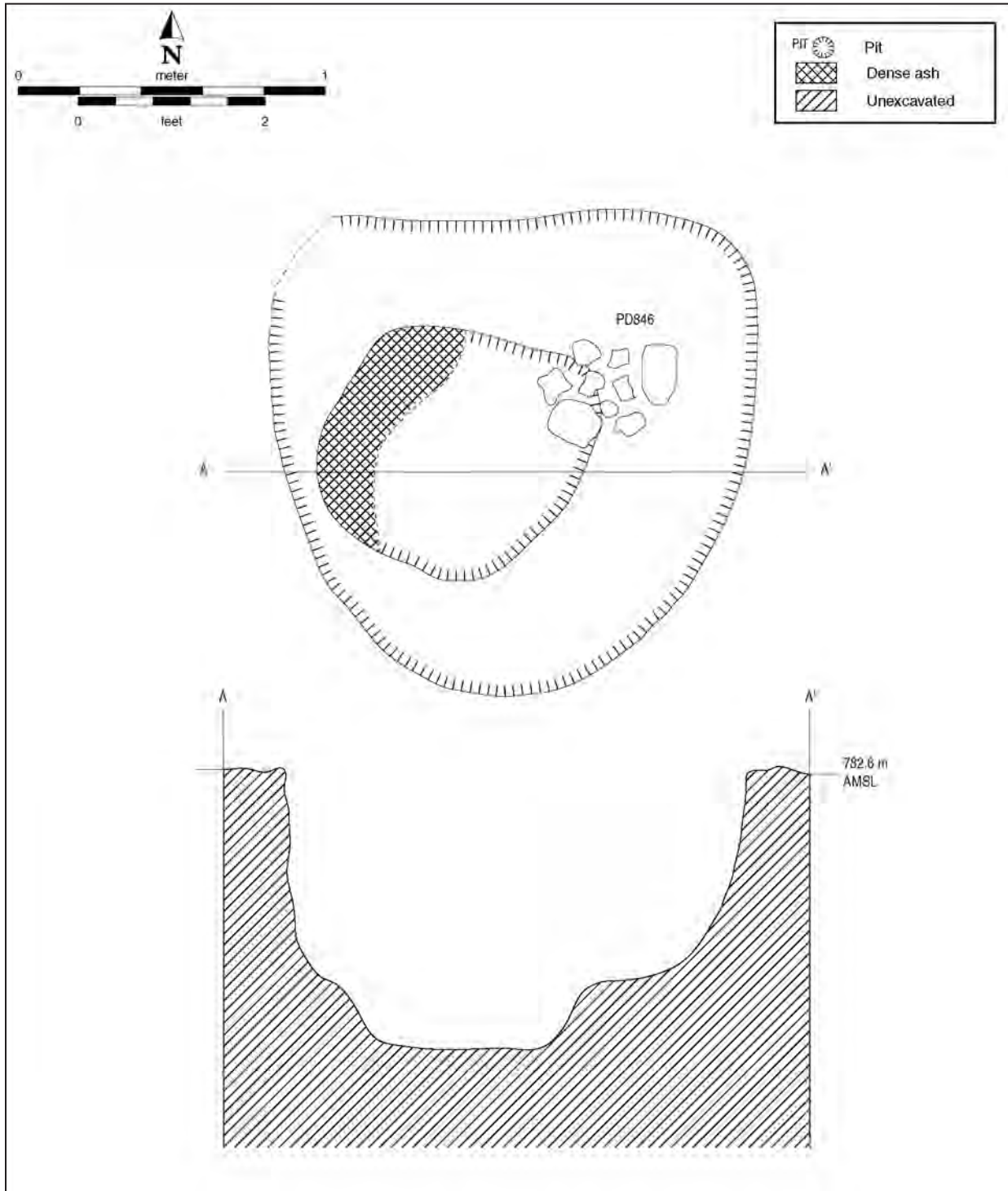


Figure 63. Pit Feature 136 at the Vegas Ruin (405/2012).

Table 5. Burial Features at Vegas Ruin (405/2012)

Feature No.	Feature Type	Comments
12	inhumation	
14	inhumation	Part of composite burial Feature 221, partially disturbed by burial Feature 101.
21	inhumation	Exposed and disturbed by backhoe trench; appears to have sectioned pit Feature 38.
33	inhumation	
49	inhumation	Intrusive to fill and floor of pit structure Feature 99.
101	inhumation	Part of composite burial Feature 221; intrusive to burial Feature 14.
102	inhumation	Part of composite burial Feature 221.
103	inhumation	Intrusive to pit structure Feature 99.
106	inhumation	
108	inhumation	
133	inhumation	Part of composite burial Feature 221.
137	inhumation	
140	inhumation	
141	inhumation	Underlaid pits Features 110 and 111, as well as hearth Feature 112.
142	inhumation	Part of composite burial Feature 223.
143	inhumation	Part of composite burial Feature 221.
144	inhumation	
145	inhumation	
146	inhumation	
164	inhumation	Part of composite burial Feature 222; overlaid Features 181 and 182.
165	inhumation	
166	inhumation	Part of composite burial Feature 223.
168	inhumation	
172	inhumation	
175	inhumation	
181	inhumation	Part of composite burial Feature 222; overlain by Feature 164; intrusive to Feature 182.
182	inhumation	Part of composite burial Feature 222; overlain by Feature 164; intruded by Feature 181.
185	inhumation	
187	inhumation	
190	inhumation	
196	inhumation	
197	inhumation	Part of composite burial Feature 205; overlaid Features 206 and 207.
199	inhumation	
204	inhumation	Beneath wall Feature 37.
205	composite burial	Composite burial including Features 197, 206, and 207.

Table 5. Burial Features at Vegas Ruin (405/2012) (continued)

Feature No.	Feature Type	Comments
206	inhumation	Secondary inhumation, disturbed by interment of Feature 207; overlain by Feature 197.
207	inhumation	Part of composite burial Feature 205; intrusive to Feature 205 and underlaid Feature 197.
216	composite burial	Composite burial including Features 219 and 220.
219	inhumation	Part of composite burial Feature 216; intrusive into floor of pit structure Feature 179 and overlain by compound wall Feature 7.
220	inhumation	Part of composite burial Feature 216; intrusive into floor of Feature 179, intruded by burial Feature 219, and overlain by wall Feature 7.
221	composite burial	Composite burial including Features 14, 101, 102, 133, and 143.
222	composite burial	Composite burial including Features 164, 181, and 182.
223	composite burial	Composite burial including Features 142 and 166.

the sidewall and undercutting one of the sides of the pit. The body and the funerary offerings were placed in these alcove chambers. Based on some of the cribbing pieces found in one burial of this type, Feature 145, we speculate that these chambers were enclosed by a lean-to type of covering, in which the cribbing elements were embedded in the pit wall above the alcove and ran diagonally to the floor of the main shaft adjacent to the alcove. We recognized two variations of the alcove type burial chamber. In the first, Type 1a, the base of the burial chamber is at the same level as the bottom of the main shaft. In the second, Type 1b, the burial chamber was dug below the floor of the main shaft creating a “bench” along one side of the burial chamber.

Type 2

Central-chamber burial pits consist of a rectangular main shaft that was excavated into the soil. A lower burial chamber was created by excavating a narrower rectangular pit at its base and centered laterally within the main shaft. This excavation created benches along both sides of the inner chamber. Again, the body and funerary offerings were placed within this chamber. Often, small alcoves were excavated into one or both ends of the inner burial chamber and some of the funerary offerings were placed above the head or at the feet of the deceased. In a few cases, these small alcoves at the ends of the chamber were offset to one side creating a small bench at the end and base of the main burial shaft. The evidence from Features 181 and 182, where the cribbing elements were extremely well preserved, indicates that cribbing elements were laid across the tops of the benches surrounding the inner chamber. The cribbing elements in Feature 181 were set into shallow grooves cut into the surface of the benches.

Type 3

The third type of burial pit is a side-chamber burial pit. As in the case of the Type 1 and 2 burial pits, these graves began with the excavation of a large rectangular main shaft. The burial chamber, however, was created by digging a narrower pit along one side of the main shaft rather than in the center. This type of excavation created a single bench along only one side of the inner burial chamber. Fragments of cribbing elements found in burial fill suggest that these inner burial chambers were also covered.

Type 4

The final type of burial pit is a simple pit without an inner chamber. These burial pits are much narrower and shallower, elliptical to subrectangular shafts excavated vertically into the soil. The bodies of the deceased were laid directly at the bottom of these shafts. Funerary offerings were rarely found in this type of inhumation. In two of these pits, the heads of the deceased had been propped on rocks.

Burial Plot Feature 205

Location: Feature 205 was a burial area containing three inhumations, Features 197, 206, and 207. It was located below Feature 54, a walled extramural area that was immediately south of the Feature 11 room in the north-central part of the Feature 1 compound.

Grid coordinates (m): N 9089.2, E 510.1

Feature type: burial plot

Date: Miami/Roosevelt phase, based on ceramics

Burial pit dimensions: 2.56 by 1.86 m and 1.47 m deep

Orientation: all three burials were oriented in a general east–west direction with their heads to the east

Excavation Methods

This feature was discovered during backhoe explorations of a large pit beneath an extramural activity area, Feature 54 (see Figure 44). The composite outline of a large irregular pit, which we subsequently discovered contained three burials, was clearly visible at the surface of the calcic horizon (Stratum IV). We suspected that one or more burials might be present, but we did not know the orientation or location of the burial shafts. We began excavating the fill of the pit in 0.10–0.20-m levels using a combination of hand probes and mechanical excavation. These excavations were neither screened nor judgmentally sampled. This procedure was followed until the remains of Feature 197 were discovered on the northern edge of the pit. All of the fill from immediately above and around the body was sifted through ¼-inch-mesh hardware cloth. After Feature 197 was removed, it was still not clear where additional burial shafts might be located or even whether another burial was present in this large pit. Therefore, backhoe excavation resumed as before until the disturbed remains of a second burial (Feature 206) were located. The remaining fill around Feature 206 and the fill around Feature 207, located beneath Feature 206, was excavated by hand and screened. Details of the excavation methods can be found in the discussion of Features 206 and 207 below.

Pit Characteristics

Feature 205 was not created as a single large pit for multiple interments but rather resulted from repeated use of the same location for burial. The configuration of this pit was the result of three discrete interments. The shape was consequently irregular, and individual burial pits could not be distinguished when the larger pit was first exposed. In overall dimensions the pit was 2.56 m long, 1.86 m wide, and 1.47 m deep. The earliest burial pit was a large, rectangular pit with a narrower Type 2 burial chamber centered laterally within it. The original interment was Feature 206, which was subsequently exhumed, modified, and reused for the interment of burial Feature 207. This was followed by the Feature 197 interment, which was a simple shallow pit at the northern edge of burial plot Feature 205 that also overlapped the north edge of Features 206 and 207.

Stratigraphy

The fill of this burial plot was a heterogeneous mixture of the soil horizons into which the graves had been dug. The burial pits all originated at a level below the surface of Feature 54, near or just above the contact of the upper

culture-bearing horizon (Stratum II) and the gravelly loam soil horizon (Stratum III). All interments had been dug through the gravelly loam and the calcic horizon (Stratum IV). The original graves penetrated the calcic horizon and ended in the upper part of the unconsolidated channel deposits below (Stratum V).

Associated Features

Feature 206 represents the original interment, which was of an adult woman. Sometime after her flesh and ligature had decomposed, most of her body and associated funerary items were removed when the pit was exhumed for the interment of an older male (Feature 207). The grave was modified slightly for the new interment with a slight shift to the east and a widening of the main shaft of the grave. The inner chamber also may have been shifted slightly to the north, and the woman's remains and funerary associations were reinterred above the cribbing of the man who was now interred in the modified chamber.

Two important clues indicate the reuse and modification of the woman's grave. First, a second, articulated left hand was found slightly south and west of the man's left hand near the southern edge of the lower chamber. We infer that this hand belonged to the woman from the original interment (Feature 206) whose disarticulated remains and associated artifacts were subsequently redeposited above the rebuilt chamber's cribbing. The body of the older man that was found in the lower chamber was shifted slightly to the northwest, leaving the southwestern part of the burial chamber empty, except for the woman's left hand. Second, a bulge was evident at the west end of Feature 205. This bulge was probably the western end of the original burial pit (Feature 206), which was apparently narrower than the later pit. The wider, rectangular pit to the east was probably the outline of the later grave, Feature 207. This evidence is consistent with the other evidence that the later burial was shifted to the east of the original burial. The eastern end of the main shaft of the earlier grave probably was removed during the exhumation of the earlier grave, and the lower burial pit probably was extended to the east as well.

The most recent grave, Feature 197, was dug along the northern edge of the modified grave. This was a shallow, simple pit that intruded only slightly into the upper fill of the older burials.

Feature 205 may predate the compound. Sometime after the last interment, the surface above this burial plot was reclaimed as an outdoor workspace associated with the Feature 11 room. One of the foundation walls that bounds this space (Feature 53) and a granary (Feature 51) were constructed over the fill of this burial plot.

There are strong similarities between Features 205 and 222, located a short distance to the southeast. Both burial plots consist of three sequential interments. The initial inter-

ment in both was of an adult woman with few offerings. These interments were then followed by interments of adult males associated with a larger number of offerings. The final interments in both features were shallow excavations into the fill of the last burials. Neither of these later graves had any nonperishable offerings, and the heads of the deceased were placed on stones. Another similarity is the shape of the burial pits. The first two graves in both sequences were large, subrectangular pits with central burial chambers. The last graves in each plot were simple vertical pits. There were differences between the respective burials in terms of the quantities and types of offerings and in the ages of the individuals at the time of death. Also, the remains of the adult woman in the initial interment in Feature 222 were left in place, whereas those in Feature 205 were disinterred and redeposited.

Feature 197

Grid coordinates (m): N 9089.9, E 510.1
Burial type: Type 4 (plain) inhumation
Date: Miami/Roosevelt phase, based on association with burial Features 206 and 207
Burial pit dimensions: 1.92 by 0.46 m and 0.88 m deep
Burial pit orientation: 91° E
Burial orientation: 89° E
Sex: male
Age: 25–30 years

Excavation Methods

Feature 197 was discovered during backhoe stripping operations to identify graves immediately below the surface of Feature 54, a walled activity space associated with the room, Feature 11 (Figure 64). The outline of the pit was most clear at the surface of the calcic horizon (Stratum IV) where the excavation of the burial pit began. From the surface of the calcic horizon, the upper burial fill was removed in 0.10–0.20-m levels by a backhoe in combination with hand explorations to locate the human remains. The shape and configuration of the burial pit were noted and monitored for changes as each level was removed. The fill down to the level of the top of the cranium was carefully removed in 0.10–0.20-m levels using a combination of hand probes and backhoe excavations. Once the cranium was encountered, all the fill around the burial was excavated as a single level and screened through 1/8-inch-mesh hardware cloth.

Burial Pit

The grave was a vertical pit without benches or alcoves. The pit was roughly subrectangular and measured 1.92 m long, 0.46 m wide, and 0.88 m deep. The sides of the pit were essentially vertical. The pit was just wide enough to

accommodate the body. At the west end of the pit near the bottom, the south wall sloped inward abruptly, decreasing the width of the pit. No evidence of cribbing was identified.

Burial Fill

The fill of Feature 197 was a light brown, gravelly sandy loam with dispersed charcoal varying in size from small flecks to lumps up to 2–3 cm across. This fill was noticeably darker than the fill of Feature 207 into which it had intruded. The darker color appeared to be the result of a greater contribution of dark brown culture-bearing sediments mixed with the otherwise tan-colored calcic soil. The burial pit most likely originated from a level near the contact of the upper culture-bearing horizon (Stratum II) and gravelly loam (Stratum III) immediately below the surface associated with Feature 54. The pit ended within the calcic horizon.

Burial Treatment

The body of this young man was laid out on his back along an east–west axis with his head resting toward the east (89° E). The head was propped against a flat stone so that he faced to the west. His legs were extended to the west. The left leg was crossed over the right at the ankles. His arms were laid alongside his body with the hands turned palms down. No other funerary items were found in the grave.

Feature 206

Grid coordinates (m): N 9089.2, E 510.4
Burial type: Type 2 (central chamber) inhumation
Date: Miami/Roosevelt phase, based on ceramics
Burial pit dimensions: 2.56 (maximum) by 1.20 m and 1.47 m deep
Burial pit orientation: generally east–west
Burial orientation: probably with head oriented to the east
Sex: female
Age: 31–40 years

Excavation Methods

Feature 206 (Figure 65) was discovered while excavating burial plot Feature 205. It was the first interment within this plot, preceding both Features 197 and 207. The bones and funerary objects were removed and redeposited during the Feature 207 interment. After Feature 197 was excavated and removed, excavation of Feature 205 resumed. This fill was carefully removed in 0.10–0.20-m levels by a combination of hand probes and backhoe scraping to locate additional burial pits. Backhoe excavations ceased when the cranium of Feature 206 was encountered on a bench above the pit. The remaining fill from this level to the top of the cribbing

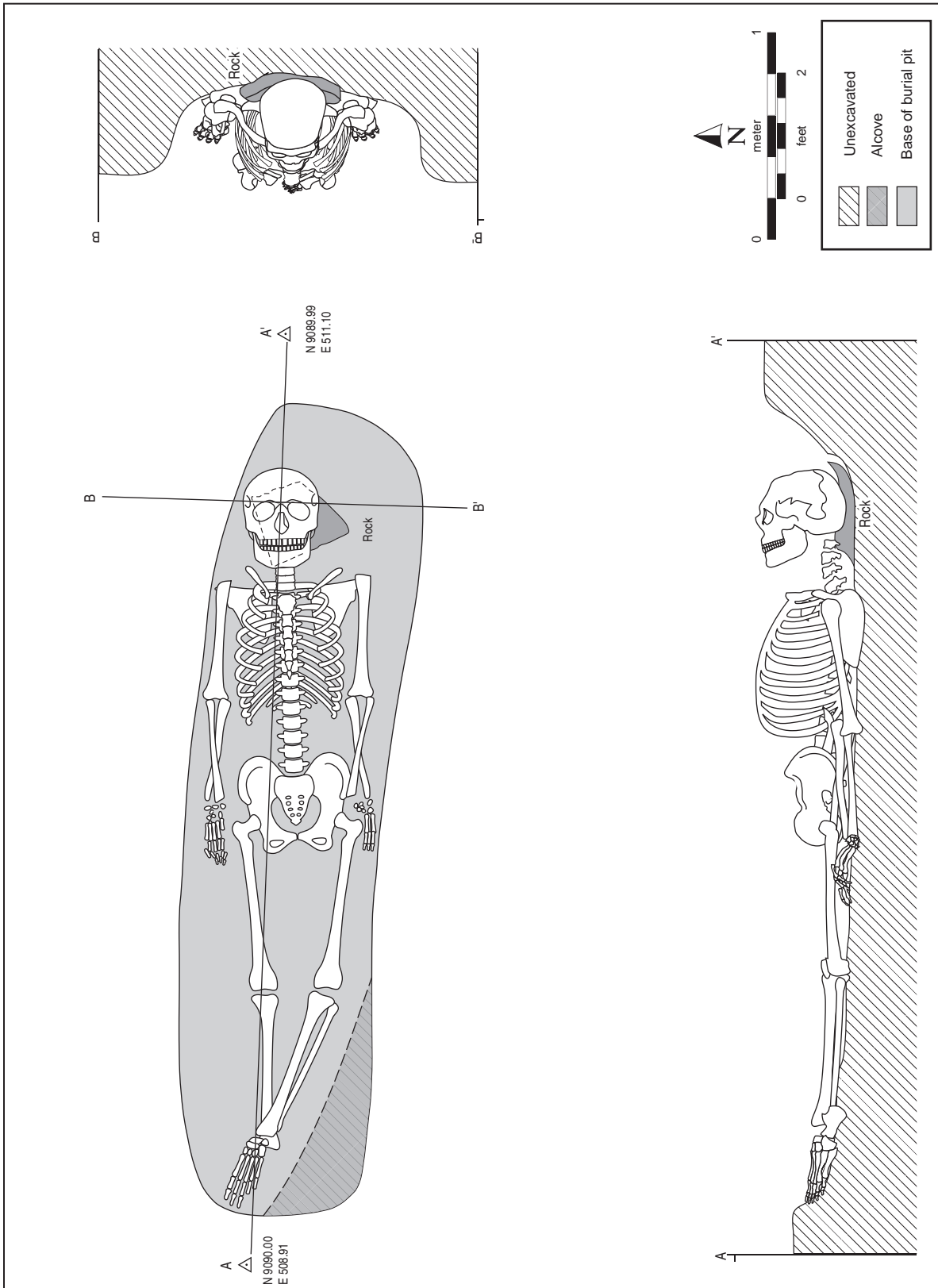


Figure 64. Burial Feature 197 at the Vegas Ruin (405/2012).

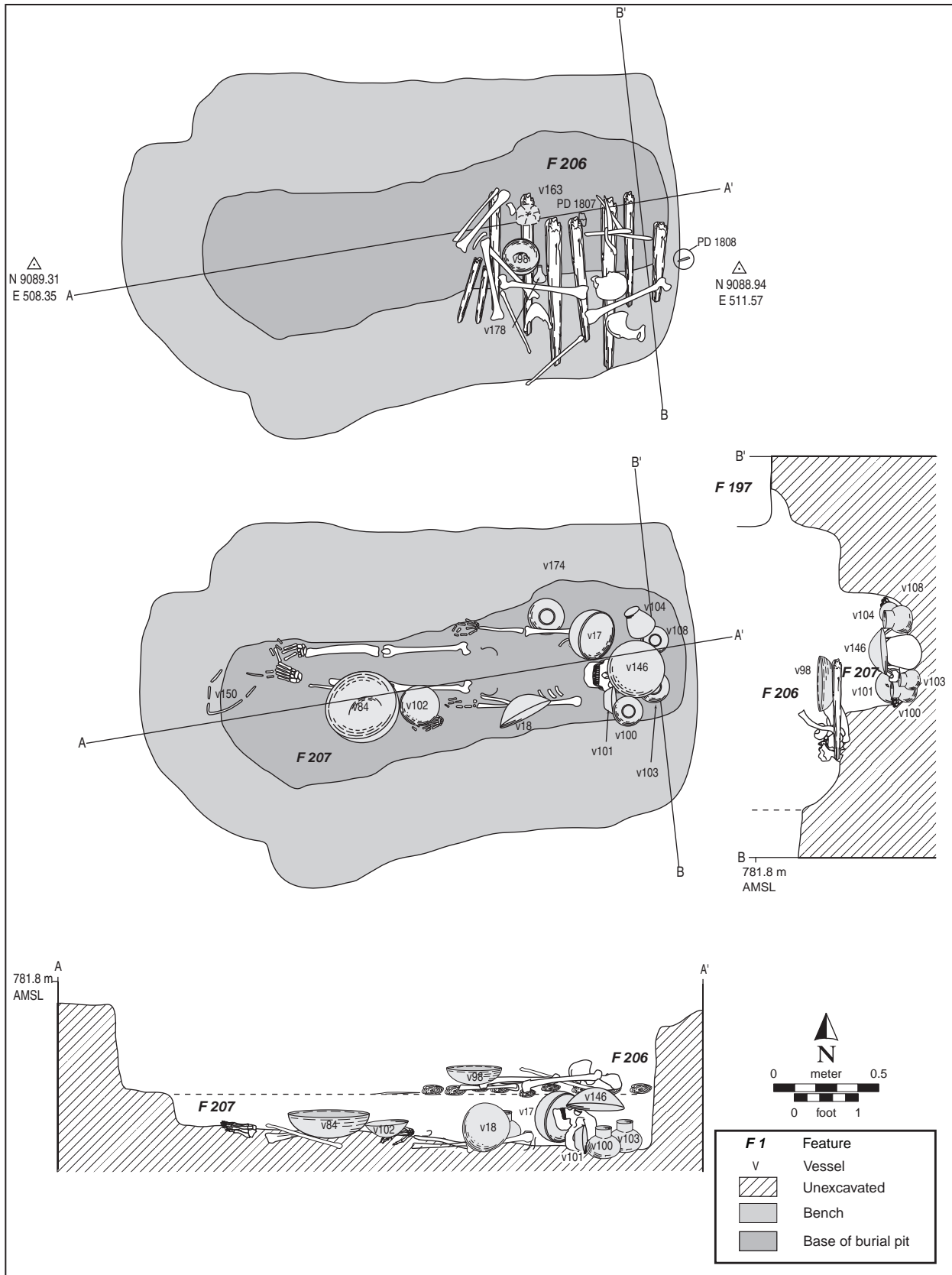


Figure 65. Burial Features 206 and 207 at the Vegas Ruin (405/2012).

of Feature 207 was hand excavated. Only the fill from immediately around the remains identified as Feature 206 was screened through 1/8-inch-mesh hardware cloth. All associated funerary items were mapped and photographed as found before removal.

Burial Pit

It was clearly evident that the later interment (Feature 207) reused the grave of Feature 206 with slight modifications (see above). It appears that the grave associated with Feature 206 originally consisted of a large, subrectangular pit with a narrower burial chamber centered laterally at the bottom, creating benches along either side of the chamber. Although it is possible to characterize the shape of the Feature 206 burial pit, there is greater uncertainty with regard to its exact dimensions and orientation. The length of the main shaft was probably less than 2.56 m, and the width was probably about 1.2 m. The depth of the main shaft to the surface of the benches was 1.19 m. The burial chamber in which the body was placed measured 0.56 m wide and an additional 0.28 m deep. Again the length of this chamber was not known exactly because of the later modification, but it must have been less than 2.14 m. Any evidence of cribbing was destroyed by the construction of the later grave.

Burial Fill

See Feature 207.

Burial Treatment

The remains of this woman and the funerary items associated with her body were removed during the Feature 207 interment and were redeposited in a disarticulated heap on top of the cribbing of the later burial. The original orientation and position of the burial could be estimated based on the location of the disarticulated hand next to burial Feature 207. Associated funerary items included a Walnut Black-on-white bowl (V 98), an unusual miniature trilobed red plain jar (V 178), a red plain bowl (V 163), and a cluster of a brown plain sherds (PD 1807) (Table 6). A bone awl (PD 1808) was also recovered from the western end of the burial. Red ochre was found on the ribs, the right side of the pelvis, the back of the left knee, and on both ankles.

Feature 207

Grid coordinates (m): N 9089.2, E 510.4
 Burial type: Type 2 (central chamber) inhumation
 Date: Miami/Roosevelt phase, based on ceramics
 Burial pit dimensions: 2.15 by 1.43 m and 1.47 m deep
 Burial pit orientation: 92° E

Burial orientation: 99° E

Sex: male

Age: 55+ years

Excavation Methods

After the removal of Feature 206, the cribbing of Feature 207 was visible (see Figure 65). The burial fill from this level to the bottom of the grave was hand excavated and was screened through 1/8-inch-mesh hardware cloth. All associated funerary items were mapped and photographed before removal.

Burial Pit

The burial pit consisted of a large, subrectangular main shaft with a laterally centered, narrower burial chamber. It was evident that the Feature 206 grave was modified and reused as the Feature 207 burial pit (see above). The latter grave was shifted approximately 0.41 m to the east of the original pit. Feature 207 consisted of a large, subrectangular main shaft that measured 1.10 m wide and 1.19 m deep. It is estimated that the main shaft was about 2.15 m long, based on the interpretation of the bulge at the western end of the pit as part of the original Feature 206 burial pit. The lower burial chamber into which the body and funerary objects were placed measured 2.10 m long, 0.56 m wide, and 0.28 m deep.

Burial Fill

The fill of this burial pit was a tan clayey silt mixed with a light brown sandy loam derived from fill of the previous burial and the soils into which the grave had been dug. The pit originated at a level just beneath the surface of Feature 54 near the contact of the upper culture-bearing horizon (Stratum II) with the gravelly loam (Stratum III). The main shaft and chamber were carved into the former southern embankment of a natural channel associated with the gravelly loam horizon. The north side of the grave was dug into the unconsolidated sand and gravel fill of this channel. The southern side of the grave was carved into the calcic horizon (Stratum IV). The burial chamber ended in the upper part of the unconsolidated channel deposits (Stratum V) that underlay the calcic horizon.

Burial Treatment

The body of this elderly man and the associated funerary items were placed in the lower burial chamber along an east-west axis. He was laid out on his back in an extended position with the head to the east (99° E). His arms were extended alongside the body with his hands turned palms upward. Twelve ceramic vessels were found with this individual (see

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Table 6. Mortuary Artifacts from Vegas Ruin (405/2012)

Feature No.	ID ^a	Artifact
Burial Plot Feature 205		
206	V 98	Walnut Black-on-white bowl
	V 163	red plain bowl
	V 178	red plain trilobed jar
	PD 1807	cluster of brown plain sherds
	PD 1808	bone awl
207	V 17	red plain bowl
	V 18	Pinto Black-on-red bowl
	V 84	red plain bowl
	V 100	red plain jar
	V 101	red plain bowl
	V 102	red plain bowl
	V 103	red plain jar
	V 104	Reserve Black-on-white jar
	V 108	red plain jar
	V 146	red plain bowl
	V 150	Salado Red Corrugated bowl
	V 174	red plain jar
	Burial Plot Feature 216	
219	V 26	red plain bowl
	V 109	Salado Red Corrugated bowl
220	V 105	red plain neckless jar
	PD 1961	turquoise pendant
	PD 1962	bone splinter awl
	PD 1964	<i>Conus</i> shell bead
	PD 1965	<i>Glycymeris</i> shell bracelet
	PD 1966	turquoise "earring"
	PD 1968	<i>Oliva spicata</i> shell bead/pendant
Burial Plot Feature 221		
14	V 28	Salado Red Corrugated bowl
	V 48	Salado Red Corrugated bowl
	V 49	Salado Red Corrugated bowl
	V 170	red plain bowl
	V 185	Brown corrugated scoop
101	V 23	red plain bowl
	V 50	Salado Red Corrugated bowl
	V 60	Salado Red Corrugated bowl

Table 6. Mortuary Artifacts from Vegas Ruin (405/2012) (*continued*)

Feature No.	ID ^a	Artifact
	V 62	red plain bowl
	V 172	red plain jar
102	V 45	Salado Red Corrugated bowl
	V 115	red plain jar
	V 149	red plain bowl ^b
	V 159	Salado Red Corrugated bowl ^b
133	V 1	red plain bowl
	V 37	red plain jar
	V 38	red plain jar
	V 43	red plain bowl
	V 61	brown plain jar
	V 97	red plain jar
	V 106	Salado Red Corrugated bowl
143	V 8	Salado Red Corrugated bowl
	V 63	red plain bowl
	V 77	red plain bowl
	V 78	Salado Red Corrugated jar
Burial Plot Feature 222		
181	V 3	red plain bowl
	V 88	red plain jar
	V 89	Salado Red Corrugated jar
	V 90	red plain bowl
	V 113	Salado Red Corrugated bowl
	V 114	Salado Red Corrugated bowl
	V 145	red plain bowl
	V 151	red plain bowl
	V 161	Salado Red Corrugated bowl
	V 165	red plain bowl
	V 181	red plain bowl
	V 182	red plain bowl
	PD 1405	ochre-stained soil
	PD 1470	bone awl/hairpin
	PD 1471	bone awl/hairpin
	PD 1479	bone awl
	PD 1494	3 turquoise “earrings”
182	V 141	red plain bowl
	V 147	red plain jar

THE SEDENTARY TO CLASSIC PERIOD TRANSITION IN TONTO BASIN

Table 6. Mortuary Artifacts from Vegas Ruin (405/2012) (continued)

Feature No.	ID^a	Artifact
	V 148	red plain jar
	V 153	red plain bowl
	V 154	red plain bowl
	V 175	red plain bowl ^b
	V 188	red plain bowl
Burial Plot Feature 223		
142	V 7	Salado Red Corrugated bowl
	V 24	red plain bowl
	V 55	red plain bowl
	V 70	Salado Red Corrugated bowl
	V 73	red plain bowl
	V 76	red plain bowl
	V 79	red plain jar
166	V 52	Salado Red Corrugated bowl
	V 91	Salado Red Corrugated jar
	V 162	Salado Red Corrugated bowl
	V 167	Salado Red Corrugated bowl
	PD 1167	shell bead bracelet
	PD 1168	shell bead bracelet
	PD 1169	shell bead bracelet
Individual Burials		
12	V 29	Roosevelt Black-on-white jar
	V 34	red plain bowl
	PD 576	projectile point cache
	PD 577	3 gray fox caudal vertebrae
	PD 580	painted wooden staff
33	V 25	red plain jar
	V 30	Roosevelt Black-on-white jar
	V 32	red plain bowl
	V 33	Brown corrugated jar
	V 35	Walnut (Style A) Black-on-white bowl
	V 36	Walnut (Style A) Black-on-white bowl
	V 40	Salado Red Corrugated bowl
	V 44	red plain bowl
	V 54	red plain bowl
	PD 1088	projectile point cluster
	PD 1096	projectile point cluster

Table 6. Mortuary Artifacts from Vegas Ruin (405/2012) (continued)

Feature No.	ID ^a	Artifact
	PD 1097	<i>Olivella</i> shell necklace
	PD 1098	projectile point cluster
49	V 41	Salado Red Corrugated jar
	V 68	Walnut (Style A) Black-on-white bowl
	V 107	Reserve Black-on-white jar ^c
	V 179	Salado Red Corrugated bowl
103	V 4	red plain bowl
	V 10	Salado Red Corrugated bowl
	V 31	Salado Red Corrugated bowl
	V 51	Salado Red Corrugated bowl
	V 58	Salado Red Corrugated bowl
	V 94	red plain jar
	V 95	red plain bowl
	V 96	Salado White-on-red jar
	V 112	Brown corrugated, indeterminate form
	V 155	Salado Red Corrugated bowl
	V 156	red plain bowl
	V 157	Salado Red Corrugated bowl
	V 158	Salado Red Corrugated bowl
	V 169	Salado Red Corrugated effigy vessel
106	V 39	red plain jar
	V 59	red plain jar
	V 69	red plain bowl
	V 74	red plain jar
	V 143	red plain bowl
	V 166	red plain scoop
	V 180	red plain bowl
	V 216	Roosevelt Black-on-white bowl
108	V 14	Salado Red Corrugated bowl
	V 15	Salado Red Corrugated bowl
	V 42	Salado Red Corrugated bowl
	V 71	red plain jar
	V 72	Snowflake Black-on-white jar
137	V 19	Leupp Black-on-white bowl
	V 75	Salado Red Corrugated bowl
	V 81	red plain jar
	V 139	Salado Red Corrugated bowl

THE SEDENTARY TO CLASSIC PERIOD TRANSITION IN TONTO BASIN

Table 6. Mortuary Artifacts from Vegas Ruin (405/2012) (continued)

Feature No.	ID ^a	Artifact
	V 144	Salado Red Corrugated jar
	PD 900	flaked stone cluster
	PD 919	faunal bone
	PD 926	projectile point cluster
	PD 927	crystal
	PD 946	bone awl
	PD 947	bone awl
	PD 948	perforated bone awl
	PD 950	resin balls
	PD 969	spatulate bone awl
	PD 978	turtle carapace "rattle"
140	V 66	red plain bowl
	V 140	red plain ladle
	V 189	red plain jar
	V 221	red plain bowl
141	V 65	Salado Red Corrugated bowl
	V 67	red plain jar
	V 80	Salado Red Corrugated bowl
	V 176	red plain bowl
144	V 20	Snowflake Black-on-white bowl
	V 21	red plain bowl
	V 64	Salado Red Corrugated bowl
	V 92	Salado Red Corrugated jar
	V 93	Salado Red Corrugated jar
	V 168	red plain bowl
145	V 16	red plain bowl
	V 82	red plain bowl
	V 86	red plain jar
	V 177	red plain bowl
	PD 957	painted basket
	PD 998	6 <i>Conus</i> shell "tinklers"
	PD 1085	large plain ware sherd
146	V 12	Walnut (Style B) Black-on-white bowl
	V 53	red plain bowl
	V 83	red plain bowl
	V 99	Snowflake Black-on-white jar
	V 160	red plain bowl

Table 6. Mortuary Artifacts from Vegas Ruin (405/2012) (*continued*)

Feature No.	ID ^a	Artifact
	V 186	red plain bowl
	V 187	red plain bowl
	V 218	Walnut (Style B) Black-on-white bowl
	PD 1158	tubular argillite bead
165	V 111	red plain bowl
	PD 1140	<i>Turritella</i> shell pendants
168	V 13	red plain bowl
	V 85	red plain jar
	V 87	red plain bowl
172	V 110	red plain bowl
	V 171	red plain jar
	V 190	Salado Red Corrugated bowl
175	V 27	red plain jar
	V 173	red plain bowl
185	V 46	Salado Red Corrugated bowl
190	V 164	Snowflake Black-on-white jar
	V 183	red plain bowl ^d
	V 184	red plain jar ^d
196	V 2	red plain jar
	V 192	red plain bowl
	PD 1699	turquoise bead
204	V 152	red plain bowl
	V 191	Salado Red Corrugated bowl ^d

Key: PD = provenience designation; V = vessel number.

^a Photographs of the vessels are located in Volume 2, Appendix A.3.

^b Reconstructible vessel not mapped.

^c Vessel came from fill above primary interment.

^d Reconstructible vessel recovered from backdirt.

Table 6). Three red plain jars (Vs 100, 103, and 108), 1 Reserve Black-on-white jar (V 104), and 2 red plain bowls (Vs 17 and 101) had been set around the head, and a large, shallow red plain bowl (V 146) was overturned over the top of the head. One Pinto Black-on-red bowl (V 18) was lying on its side over his left elbow. Another red plain jar (V 174) had been set upright next to his right elbow, and 2 other red plain bowls (Vs 84 and 102) were set upright over his left leg. Finally, 1 Salado Red Corrugated bowl (V 150) had been propped against the side of the grave near his left foot. There was an exceptionally heavy layer of red ochre over the lower abdomen and pelvis.

Burial Plot Feature 216

Location: Feature 216 represents a burial plot containing two burials, Features 219 and 220, that intruded on the southeastern corner of the Feature 179 pit structure and underlay the northwestern corner of the compound.

Grid coordinates (m): N 9095.6, E 498.2

Feature type: burial plot

Date: Miami/Roosevelt phase, based on ceramics

Burial pit dimensions: 2.01 by 1.51 m and 1.44 m deep

Orientation: generally east–west, one burial with head oriented east and the other oriented to the west

Excavation Methods

The presence of this feature was first suspected while excavating the lower roof fall of pit structure Feature 179; however, the outline was only clearly visible where it intruded the floor of the pit structure (Figure 66). The outline suggested two separate, overlapping interments. The fill was ultimately removed in three horizontal units and four levels. Even though the fill of the possible later interment was darker than the fill of the earlier interment, the upper 0.46 m of fill was removed in two levels as a single horizontal unit across both burial pits. The first level ended at the surface of the bench of Feature 219. This level was judgmentally sampled. The second level ended at a level coincident with the cranium and funerary vessels in the Feature 219 grave. This second level was partially screened; the rest was judgmentally sampled. Both these levels contained a mixture of the fill of both graves. At this point the two burials were excavated separately, and a description of the excavation techniques can be found under their respective feature headings.

Pit Characteristics

This feature, like the others, was not created as a single pit for multiple interments but rather resulted from repeated use of the same location. The shape was determined by the large, rectangular Feature 220 grave, and the smaller, overlapping Feature 219 grave. In overall dimensions, the pit was 2.01 m long, 1.51 m wide, and 1.44 m deep.

Stratigraphy

The upper fill of this burial plot was a heterogeneous mixture of dark brown culture-bearing deposits, structural debris from pit structure Feature 179, and the underlying soil horizons into which the burial pits intruded. The burial pits originated at a level just below the footer of the western and northern compound walls. The graves intruded through the fill deposits and floor of Feature 179, the calcic horizon (Stratum IV), and ended in the upper part of the unconsolidated channel deposits (Stratum V).

Associated Features

The initial feature constructed in this area was the pit structure, Feature 179. After abandonment, the superstructure of Feature 179 collapsed into the house pit, covering the floor to a depth of about 0.40 m. It appears that the burials were interred soon after. The burial plot was located within the southeast corner of the structure. The eastern ends of the burial pits undercut the southeastern corner, preserving the house's postholes in place. Subsequently, the northwestern corner of the compound was constructed over the fill

of Feature 179 and the two burials. The darker fill of Feature 219 (see below) suggested that the midden accumulation began before this interment occurred and before construction of the compound; however, most of the accumulation was restricted to the exterior of the compound, suggesting it was deposited after the compound was in use. Once constructed, the western and northern walls of the compound confined the accumulation of midden material to the outside.

The relative order of the two burials within Feature 216 was straightforward. Feature 220 was the initial burial event. The main shaft of Feature 219 intruded the northern edge of the previous grave, and the burial chamber was carved into the upper fill of the earlier grave.

Feature 219

Grid coordinates (m): N 9095.9, E 498.6
Burial type: Type 1b (alcove chamber) inhumation
Date: Miami/Roosevelt phase, based on ceramics
Burial pit dimensions: 1.39 by 0.43 m and 0.93 m deep
Burial pit orientation: 87° E
Burial orientation: 87° E
Sex: indeterminate
Age: 5–6 years

Excavation Methods

The upper 0.40 m of fill from this burial (Figure 67) was removed in two levels during the excavation of burial plot Feature 216. All the fill of the main shaft and the upper fill of the burial chamber were removed and judgmentally sampled. The size, shape, and outline of the burial pit was monitored during these excavations by relying on differences in the color and texture of the fill sediments. At about 0.40 m below the floor of Feature 179, the top of the cranium and ceramic vessels were encountered. The remaining fill of the burial chamber from this level to the bottom of the grave was hand excavated as a single level and was screened through 1/8-inch-mesh hardware cloth. All associated funerary items were mapped and photographed before removal.

Burial Pit

The grave consisted of a vertical, subrectangular shaft with an alcove burial chamber on the south side. The vertical shaft measured 1.39 m long, 0.43 m wide, and 0.61 m deep. The burial chamber extended to the south and below the main shaft. This chamber measured 1.37 m long, 0.49 m wide, and 0.32 m high. The floor of the alcove was 0.32 m deeper than the main shaft. No evidence of cribbing elements was observed.

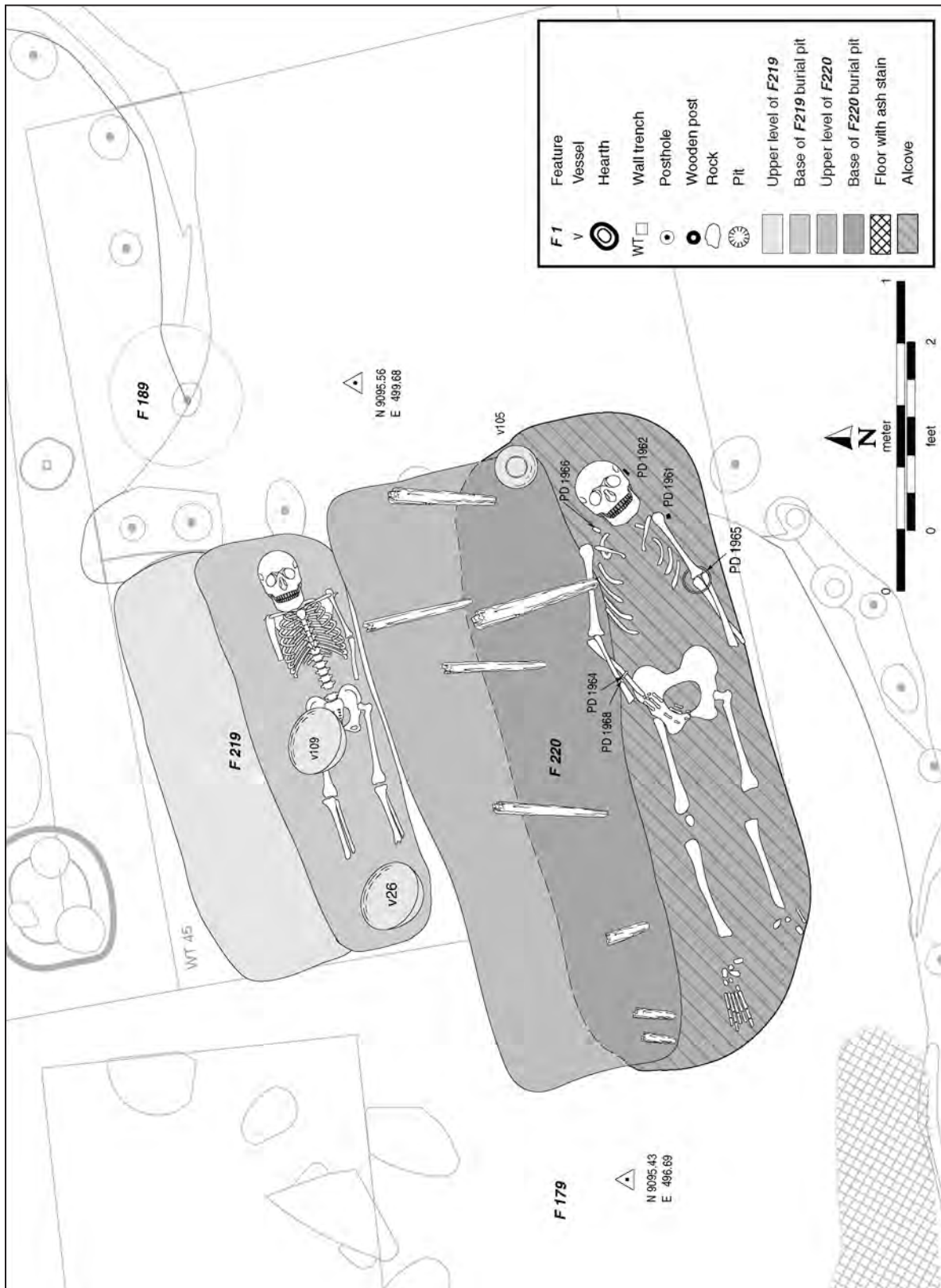


Figure 66. Burial plot Feature 216, which includes burial Features 219 and 220, at the Vegas Ruin (405/2012).

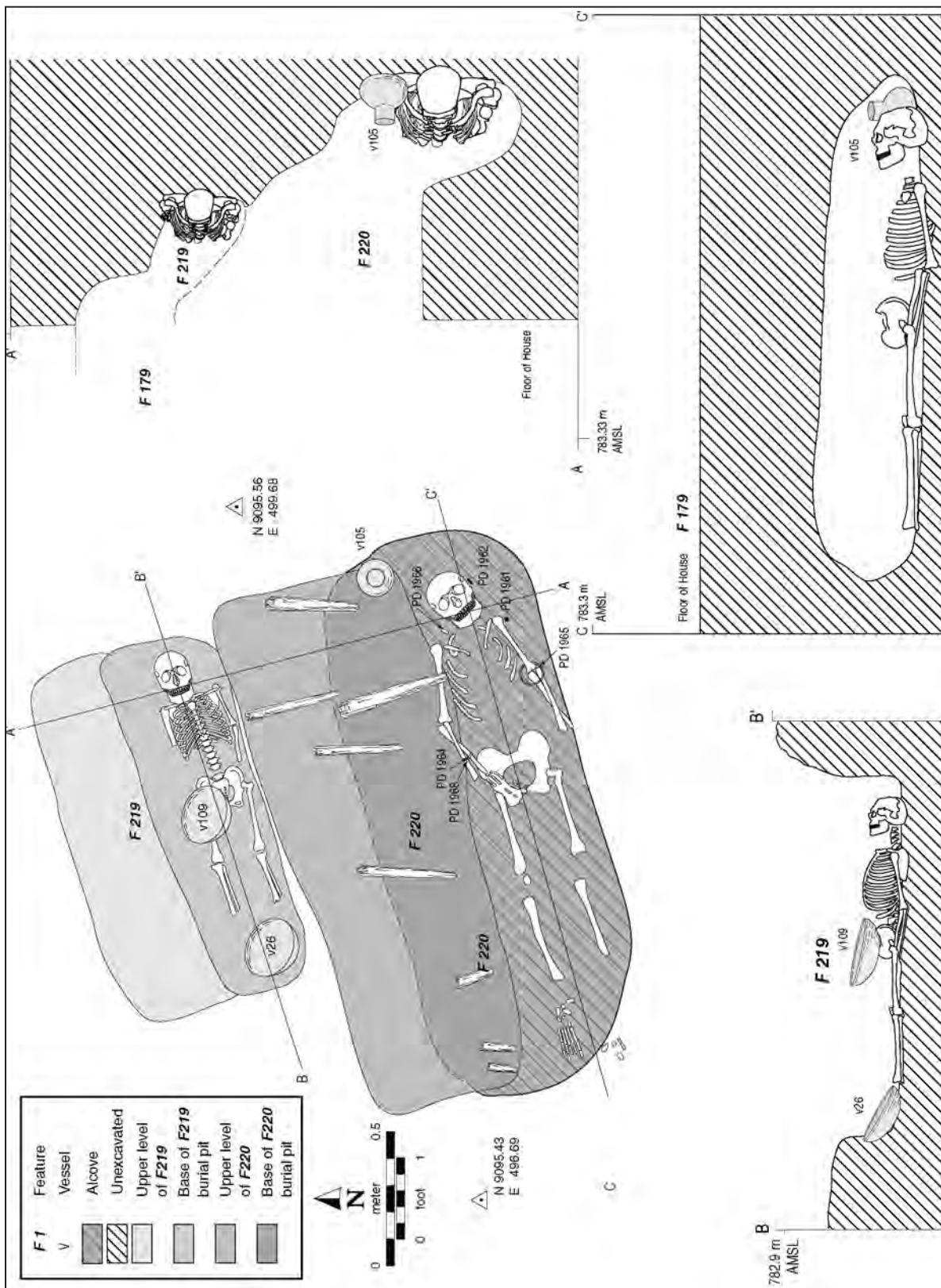


Figure 67. Burial Features 219 and 220 at the Vegas Ruin (405/2012).

Burial Fill

The burial fill was a dark grayish brown sandy clay loam with gravels and lumps of calcic soil. This fill contained a relatively high density of sherds and flaked stone artifacts. The fill was an obviously darker color than that of Feature 220. The color and quantity of artifacts indicate a significant contribution of cultural midden to these fill deposits. This fill probably derived from the sediments and soils into which the grave had been excavated. The dark color of the fill and the artifacts indicate that Feature 219 probably originated within the midden deposits comprising the upper fill of the pit structure Feature 179. It had also intruded through the layer of structural debris and floor of this pit structure. A portion of the burial pit was dug into the calcic horizon (Stratum IV) and another portion was dug into the fill of burial Feature 220.

Burial Treatment

The body of this young child had been laid on its back along an east–west axis with the head oriented to the east (87° E). The legs were extended to the west, and the arms were laid alongside the body. The head had been tilted so that it was facing westward. A Salado Red Corrugated bowl (V 109) was placed upright across the pelvis and upper right leg, and a red plain bowl (V 26) was set upright at the feet (see Table 6). Most of the body below the head was covered by a thick coating of red ochre.

Feature 220

Grid coordinates (m): N 9094.8, E 498.4
 Burial type: Type 1b (alcove chamber) inhumation
 Date: Miami/Roosevelt phase, based on ceramics
 Burial pit dimensions: 2.01 by 0.75 m and 1.44 m deep
 Burial pit orientation: 289° E
 Burial orientation: 289° E
 Sex: male
 Age: 45–50 years

Excavation Methods

The upper 0.40 m of fill from this burial (see Figure 67) was removed in two levels during the excavation of burial plot Feature 216. After the later burial (Feature 219) had been excavated and removed, a small test shaft was excavated by hand at the east end of the burial pit to locate the level of the body. Once this level was established, the backhoe was used to remove the fill to the base of the main shaft. The upper fill was judgmentally sampled. The fill of the burial chamber below this level to the bottom of the grave was hand excavated as a single level and was screened through 1/8-inch-mesh hardware cloth. All associated funer-

ary items were mapped and photographed before removal.

Burial Pit

The grave consisted of a roughly subrectangular main shaft measuring 2.01 m long, 0.75 m wide, and 1.09 m deep. The burial chamber undercut the south wall of the main shaft by about 0.44 m. The burial chamber was generally elliptical in plan view with sloping walls. The chamber measured 2.11 m long, 0.82 m wide, and 0.45 m deep at its lowest point. The floor of the burial chamber was about 0.35 m below the floor of the main shaft.

Burial Fill

The fill was a brown sandy clay loam with fine to coarse gravel inclusions. Charcoal flecks and artifacts were common. The sediments immediately around the body were sandier than the overlying fill. The burial fill was most likely derived from the cultural deposits and soils into which the grave was dug. The burial pit originated at a level above the collapsed remains of pit structure Feature 179 and penetrated the fill deposits and floor of this structure. The charcoal flecks and artifacts were probably derived from these pit structure deposits. The alcove burial chamber was carved into the lower portion of the calcic horizon (Stratum IV) and ended in the upper part of the unconsolidated channel deposits (Stratum V).

Burial Treatment

The body of this adult male was laid on his back in the alcove along an east–west axis with the head at the east end (289° E). The legs were extended to the west. The left arm was laid alongside the body; the right arm was laid alongside the body but was bent at the elbow with the hand resting on the pelvis. A single ceramic vessel, a red plain neckless jar (V 105), was placed in this grave to the right of the head (see Table 6). He wore a shell bracelet (PD 1965) on the left upper arm. Two whole shell beads (PDs 1964 and 1968) were found just above the right wrist. A small turquoise pendant (PD 1961) was found near the left shoulder, and a turquoise “earring” (PD 1966) was found on the left side of his head. A splinter awl (PD 1962) was found along the left side of the head. The location of these painted fragments and the limited extent of the pigment staining suggests that the object may have been a wooden hair ornament.

Burial Plot Feature 221

Location: Feature 221 was a large cluster of burials located in the northwestern corner of the Feature 1 compound.

Five inhumations, Features 14, 101, 102, 133, and 143, were contained in this plot.

Grid coordinates (m): N 9092.4, E 501.1

Feature type: burial plot

Date: Miami/Roosevelt phase, based on ceramics

Burial pit dimensions: 5.10 by 3.00 m and 1.16 m deep

Orientation: generally east–west; heads of burials all oriented to the east

Excavation Methods

This feature was originally discovered in TR 203 where it was visible in both sidewalls and the bottom (the depth of the feature exceeded the depth of the trench) (Figure 68). At this time it was designated Feature 14. Based on the length and depth of the feature, it was originally interpreted as a pit structure. Feature 14 was reinterpreted as a burial pit after two 1-by-2-m test pits (TPs 369 and 380), excavated on either side of the trench, revealed a narrow, subrectangular pit. Excavation of this pit revealed three burials, Features 14, 101, and 102. Continued excavation of these burials and hand stripping of the surface around the graves revealed the other two burials, Features 133 and 143. The upper fill of the entire combined pit was removed in three horizontal units. The eastern unit contained the mixed fill of Features 14 and 101, the western unit contained the mixed fill of Features 102 and 133, and the southern unit contained the fill of Feature 143. The upper fill of all five burials was eventually removed as a single level in these horizontal units to a level coincident with the human remains and funerary items. The lower burial fill from around each individual interment was excavated as discrete features.

Pit Characteristics

This feature was not created as a single large pit for multiple interments but rather resulted from repeated use of the same location for burial. The shape was consequently irregular. Each burial event was unique and represent three different styles of burial pits (see individual descriptions). In overall dimensions, the pit was 5.10 m long, 3.00 m wide, and 1.16 m deep.

Stratigraphy

The fill of this burial plot is a loose, heterogeneous mixture of the soil horizons into which the graves had been dug. The burial pits all originated at a level near or just above the contact of the upper culture-bearing horizon (Stratum II) and the gravelly loam soil horizon (Stratum III). All interments had been dug through the gravelly loam, the calcic horizon (Stratum IV), and terminated in the upper part of the unconsolidated channel deposits (Stratum V).

Associated Features

Based on the condition of the remains and the stratigraphic associations of the grave pits, the following reconstruction of the burial sequence was deduced. Features 102 and 143 were probably the earliest interments, although the relative sequence between the two could not be determined. This was probably followed by Feature 14. One of the few funerary vessels associated with Feature 14 that remained intact extended into the fill of the main shaft of Feature 143, along with the left foot and a small part of the lower left leg. Feature 14 was disturbed, in turn, by the interment of the Feature 101 burial, which removed the head and much of the right side of the individual in Feature 14. Feature 101 appears to have removed the eastern end of Feature 102 as well, but this is less certain. Feature 101 was one of the last, if not the last interment. Feature 133 was interred after Feature 102. The remains of the young woman in Feature 133 were laid at a level slightly lower level than the older woman in Feature 102, perhaps so as not to disturb the earlier burial. Furthermore, the ceramic jar on the left side of the young woman's head covered a portion of the right arm of the older woman in Feature 102. A trash pit, Feature 107, subsequently intruded the western end of Feature 133. The relative sequence of Feature 133 with respect to Features 14, 101, and 143 could not be determined, although it may have been relatively late in the sequence.

Of the five features identified as burial plots, Feature 221 appears the most distinctive. The other burial plots appear to reflect more purposeful reuse of graves than does Feature 221. Graves were placed side by side or directly on top of older graves, with a least the earlier graves being of similar type. The similarities between Features 205 and 222 are striking and have already been discussed. By contrast, Feature 221 appears to reflect a less patterned juxtaposition of graves. This appearance is, in large part, owing to the larger number of graves and the relationship of Features 14 and 101 to the other three burials. Features 102, 133, and 143 were all placed side by side as were the burials in the other plots. Features 14 and 101, which were interred later than Features 102 and 143, were placed to the east of the earlier graves. Furthermore, a greater variety of burial pit types—alcove, central chamber, and side chamber—are represented in Feature 221, although no Type 4 burial pits were found.

Feature 14

Grid coordinates (m): N 9092.0, E 502.2

Burial type: Type 1 (alcove chamber) inhumation

Date: Miami/Roosevelt phase, based on ceramics

Burial pit dimensions: length and width unknown; 1.23 m deep

Burial pit orientation: 91° E

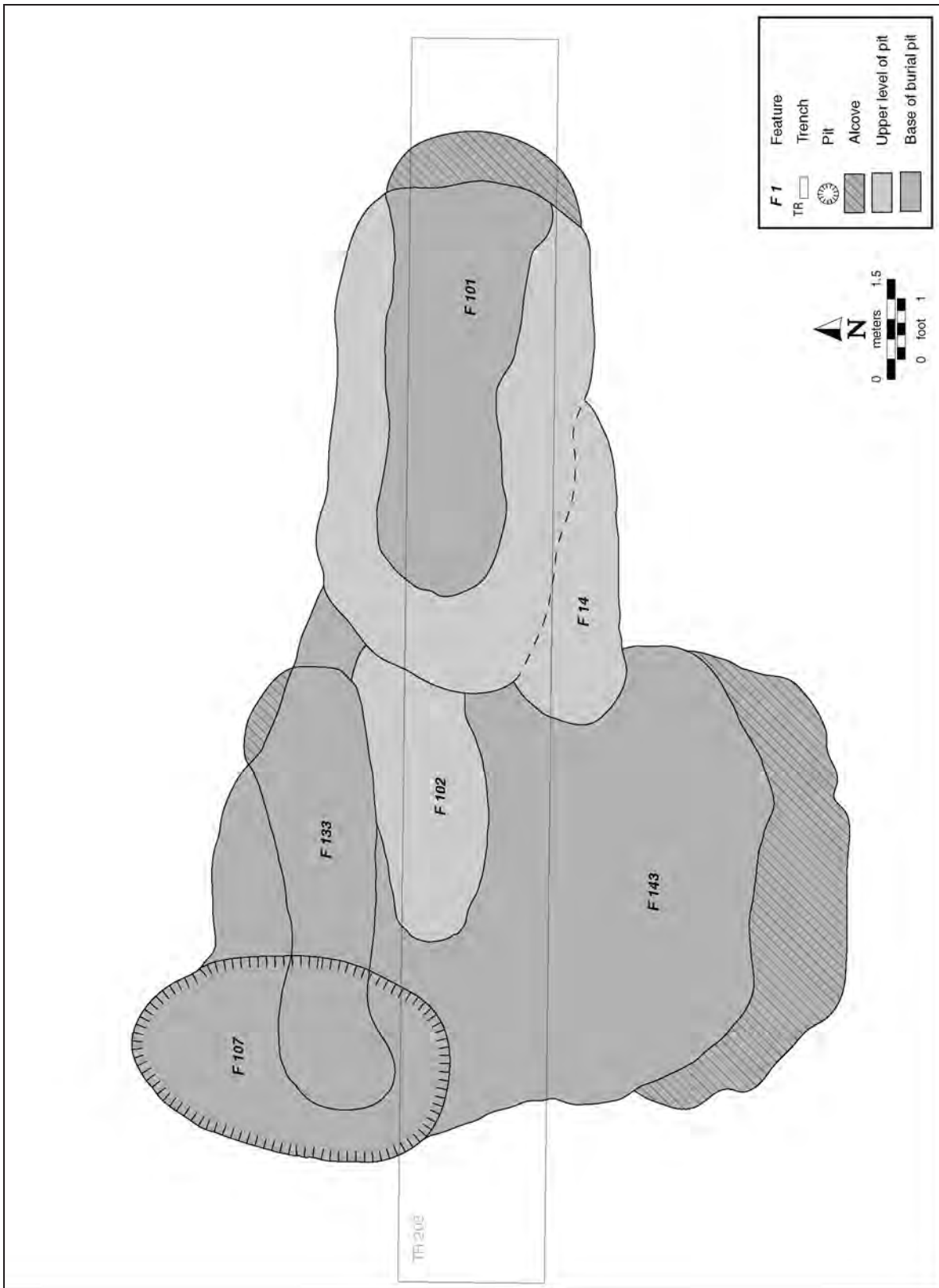


Figure 68. Burial plot Feature 221 at the Vegas Ruin (405/2012).

Burial orientation: 82° E

Sex: male

Age: 40+ years

Excavation Methods

Feature 14 was one of five interments in burial plot Feature 221 (Figure 69). In general, the upper fill of Feature 221 was removed as a single level to a point where the individual interments were visible. The only burial fill that could be clearly associated with Feature 14 was that remaining in the portion of the chamber that was preserved. This fill was excavated as a single level and was screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

Most of the original pit had been destroyed during the later Feature 101 burial event; however, the remaining portions indicate that this was an alcove-chamber burial. The main shaft of the burial pit was probably to the north of the chamber and was later entirely removed. The floor of this main shaft is estimated to have been about 1.23 m below the top of the calcic horizon. The burial chamber had been carved out of the lower portion of the calcic soil horizon and the upper portion of the underlying gravelly channel deposits. Approximately two-thirds of the chamber remained intact. This portion is approximately 0.4 m wide and 0.8 m high. Because the entire main shaft had been removed by the Feature 101 interment, which was deeper than the Feature 14 burial pit, we cannot be sure if the burial pit had a bench.

Burial Fill

The fill in the burial chamber was a heterogeneous mixture of the gravelly loams, coarse sands, gravels, and calcic clayey silts that in all likelihood were the materials removed during the pit excavation. The burial pit was dug from a level near the contact of the upper culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III) and ended in the upper portion of the loose, unconsolidated channel sands (Stratum V). The burial chamber had been dug out of the calcic horizon (Stratum IV); this dense, calcic soil formed the roof of the burial chamber. This chamber also cut into the fill of previous burial pits of Features 102 and 143. The body was laid in a shallow pit excavated into the channel sands (Stratum V).

Burial Treatment

The body of this adult male had been sectioned along a diagonal line from about the right knee to the left elbow by

a later interment (Feature 101). Only the left leg and the lower right leg remained in place. The dislocated skeletal elements and some ceramics, which were probably portions of funerary vessels originally associated with Feature 14, were replaced in a heap just above the left leg. The undisturbed portions of the body indicate that this individual had been placed on his back along an east–west axis (81.97° E) with his head to the east. His legs were fully extended to the west. His right arm was extended along his side and rotated so that the palm was down. Two upright Salado Red Corrugated bowls (Vs 48 and 49) were found intact over the lower legs (see Table 6). Three additional reconstructible vessels were recovered that were apparently associated with this burial. V 28 was a Salado Red Corrugated bowl recovered from the pelvic area. Sherds from a red plain bowl (V 170) and a Brown corrugated scoop (V 185) were found above the right leg.

Feature 101

Grid coordinates (m): N 9092.4, E 503.1

Burial type: Type 2 (central chamber) inhumation

Date: Miami/Roosevelt phase, based on ceramics

Burial pit dimensions: 2.40 by 1.10 m and 1.45 m deep

Burial pit orientation: 98° E

Burial orientation: 103° E

Sex: male

Age: 31–35 years

Excavation Methods

Feature 101 was one of five interments associated with burial plot Feature 221 (see Figure 69). The upper fill of this plot was removed as a single level to the top of the benches, and screened through 1/8-inch mesh. The fill below the surface of the benches was excavated as a single level and was screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The grave appears to have been a vertical shaft with benches to either side and at the foot of the grave. The main shaft was a large, subrectangular pit that measured 2.25 by 1.3 m and about 1.19 m deep to the top of the benches. The overall pit length is estimated because the west end was dug into the fill of Feature 102, and the boundary of Feature 101 could not be detected. The northern side of the main shaft was undercut 0.2 m. The southern side of the main shaft appears to have been essentially vertical, based on the limits of the disturbance to the earlier interment (Feature 14). The eastern end was undercut 0.25 m to accommodate the remains of the deceased.

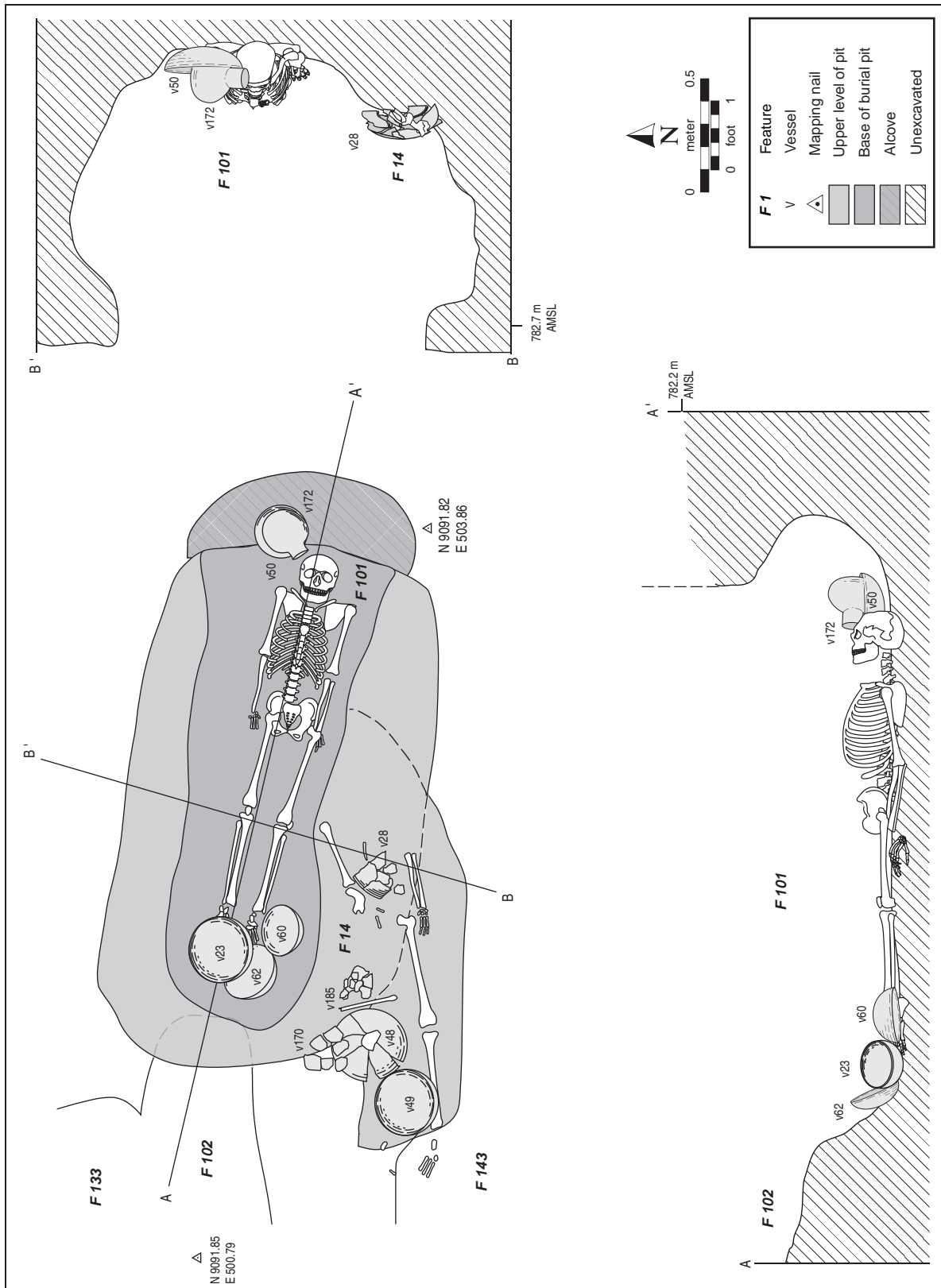


Figure 69. Burial Features 14 and 101 at the Vegas Ruin (405/2012).

The benches at the bottom of the main shaft were created by digging a narrower, roughly elliptical pit centered laterally within the main shaft. The body and funerary offerings were placed within this lower pit. The lower pit was shifted to the east by undercutting the wall of the main shaft. This offset allowed space for the bench at the foot end of the burial. The lower pit measured 2.25 by 0.6 m and was about 0.19 m deeper than the main shaft. The benches around the body were poorly preserved. Whereas the sidewalls of the main shaft were defined by the calcic soil, the boundaries of the lower burial pit were defined by the presence of bedding lines in the undisturbed channel deposits surrounding the lower pit. The benches had been carved out of these channel sands.

Burial Fill

The fill was a mixture of sands and dark brown, gravelly loam. During backhoe trenching, charcoal and ash lenses were observed in the fill approximately 0.8 m above the bottom of the burial pit. Noticeably missing from the fill were chunks of calcic soil. This may be explained by the fact that the fill of Feature 101 was the original fill of Feature 14. The reworking of the Feature 14 fill deposits may have further homogenized the sediments. This was one factor that suggests that Feature 101 was a later interment than Feature 102. The chunks of calcic soil in the fill of Feature 102 were clearly distinct from the fill of Feature 101. During the original trenching operation, approximately one to two dozen river cobbles were removed from the upper fill of this burial. These cobbles were deposited as a layer just below the contact of Strata II and III in the center of the trench. No large cobbles remained in the trench walls, and no others were removed during subsequent excavations.

Burial Treatment

This young man had been placed on his back along a generally east–west axis in the lower pit. His body was laid out with his head at the east end (98° E) and facing upward. His legs were extended to the west, and his arms were laid alongside the body with his hands turned palms upward. Five ceramic vessels had been interred with him (see Table 6). A red plain jar (V 172) was set on its side inside a Salado Red Corrugated bowl (V 50) just to the right of his head within the alcove that had been created by undercutting the eastern end of the main shaft. The other three vessels were placed around his feet and included two red plain bowls (Vs 23 and 62) and a Salado Red Corrugated bowl (V 60). Two of these bowls, Vs 60 and 62, were tilted against the pit wall, the other was set upright between the feet.

Feature 102

Grid coordinates (m): N 9092.8, E 501.1
Burial type: Type 1 (alcove chamber) inhumation
Date: Miami/Roosevelt phase, based on ceramics
Burial pit dimensions: 1.88 by 1.00 m and 1.21 m deep
Burial pit orientation: 86° E
Burial orientation: 88° E
Sex: female
Age: 50+ years

Excavation Methods

Feature 102 (see Figure 68) was one of five interments associated with burial plot Feature 221. It was discovered while excavating burial Feature 101. The upper fill above Feature 102 was removed as a single level to the top of the associated funerary items, about 0.15 m above the body. The upper fill was judgmentally sampled. At this point, Feature 133 was discovered above and to the north of Feature 102. The fill from this level to the base of the pit was excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The grave was apparently an alcove-chamber type. Most of the main shaft and the upper part of the subterranean chamber had been destroyed during the Feature 133 interment and by our backhoe trenching. Only the lower portions of the main shaft and burial chamber below the base of the backhoe trench remained. The lower burial chamber ended in unconsolidated channel deposits (Stratum V). We were not sure whether or not a bench was present. Wood fragments discovered during the excavation of Feature 133 may represent cribbing from Feature 102.

Burial Fill

The location of Feature 133 relative to Feature 102 indicates that the upper fill of Feature 102 and the roof of the subterranean burial chamber had probably been reworked during the later Feature 133 interment. The upper fill was a mixture of sands, gravels, cobbles, and chunks of calcic soil. The lower fill around the body was a brown gravelly sand with some small cobbles. Feature 102 probably originated at or near the contact of the upper culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III). The grave extended through the calcic horizon (Stratum IV) and ended in the upper portion of the unconsolidated channel deposits (Stratum V).

Burial Treatment

This individual had been placed on her back along a generally east–west axis in the lower pit with the head to the east (88° E), facing upward. The legs were extended to the west, and the arms were extended along the sides with the palms upward. Two ceramic vessels, a Salado Red Corrugated bowl (V 45) and a red plain jar (V 115) (see Table 6), were placed just to the left of the head. Fragments of two vessels, a red plain bowl (V 149) and a Salado Red Corrugated bowl (V 159), were recovered while screening the fill and not mapped.

Feature 133

Grid coordinates (m): N 9093.2, E 500.7

Burial type: Type 3 (side chamber) inhumation

Date: Miami/Roosevelt phase, based on ceramics

Burial pit dimensions: 2.21 by 0.45 m and 1.35 m deep

Burial pit orientation: 86° E

Burial orientation: 93° E

Sex: female

Age: 21–23 years

Excavation Methods

Feature 133 (Figure 70) was one of five interments associated with burial plot Feature 221. Feature 133 was discovered while excavating burial Feature 102. The upper fill of Feature 133 was removed during excavation of Features 102 and 107. The lower fill was excavated in two levels, and both were screened through 1/8-inch-mesh hardware cloth. The first level was about 0.15 m above the body; very few artifacts were noticed in this level. The second level extended down to the base of the pit. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The main shaft of the pit intruded the fill and chamber roof of Feature 102. The main shaft may have been subrectangular. The available evidence, derived from the remaining portion of the pit below the bottom of TR 203, indicates that this grave consisted of a subrectangular main shaft with the burial chamber created by digging a narrower pit along the north side and at the base of the main shaft. This created a bench along the south side. West of Feature 102, this bench was carved out of the native soils. Where Feature 133 intruded the fill of Feature 102, the bench was probably carved out of the previous burial fill and was not detected. Pieces of unburnt wood, which were probably the remains of cribbing, were found scattered throughout the upper burial fill and in the western end of the burial pit in the

lower fill. The dispersion of these cribbing fragments suggest that they were from the Feature 102 grave. The lower pit in which the remains had been placed was roughly subrectangular and measured 2.20 m long and 0.46 m wide. A small alcove had been cut into the north wall of the burial near the head. Three ceramic jars were placed in this alcove.

Burial Fill

The fill of the grave was a mixture of loose sand, chunks of calcic soil, and cobbles. This fill was probably the materials removed during the original digging of the burial pit. The burial intruded into the fill of the previous burial Feature 102. The burial pit originated at the contact of the culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III) and ended in the upper portion of the gravelly sands (Stratum V).

Burial Treatment

The body of this young woman was laid in the pit along a roughly east–west axis with the head to the east end (93° E), facing upward. Her legs were extended to the west and the arms were extended alongside the body. Her right arm was laid along her side with her hand turned palm upward, whereas her left arm had been laid out with the hand turned palm downward. Red ochre covered her left arm, pelvis, and upper left leg. This ochre first appeared in the lower fill about 3 cm above the remains.

Seven ceramic vessels were interred with this woman (see Table 6). A single red plain jar (V 97) had been placed just to the left side of her head. Two red plain jars (Vs 37 and 38) and a miniature brown plain jar (V 61) were placed along the right side of her body from the head to the middle of the upper arm. An unusual, cylindrically shaped red plain bowl (V 43) was placed over her right hand and the right side of her pelvis. A Salado Red Corrugated bowl (V 106) and a red plain bowl (V 1) were placed in the burial pit near her feet. All vessels in the grave were upright, except for the cylindrical bowl that was found on its side.

Feature 143

Grid coordinates (m): N 9091.0, E 500.5

Burial type: Type 1b (alcove chamber) inhumation

Date: Miami/Roosevelt phase, based on ceramics

Burial pit dimensions: 2.16 by 1.08 m and 1.33 m deep

Burial pit orientation: 91° E

Burial orientation: 93° E

Sex: male

Age: 50+ years

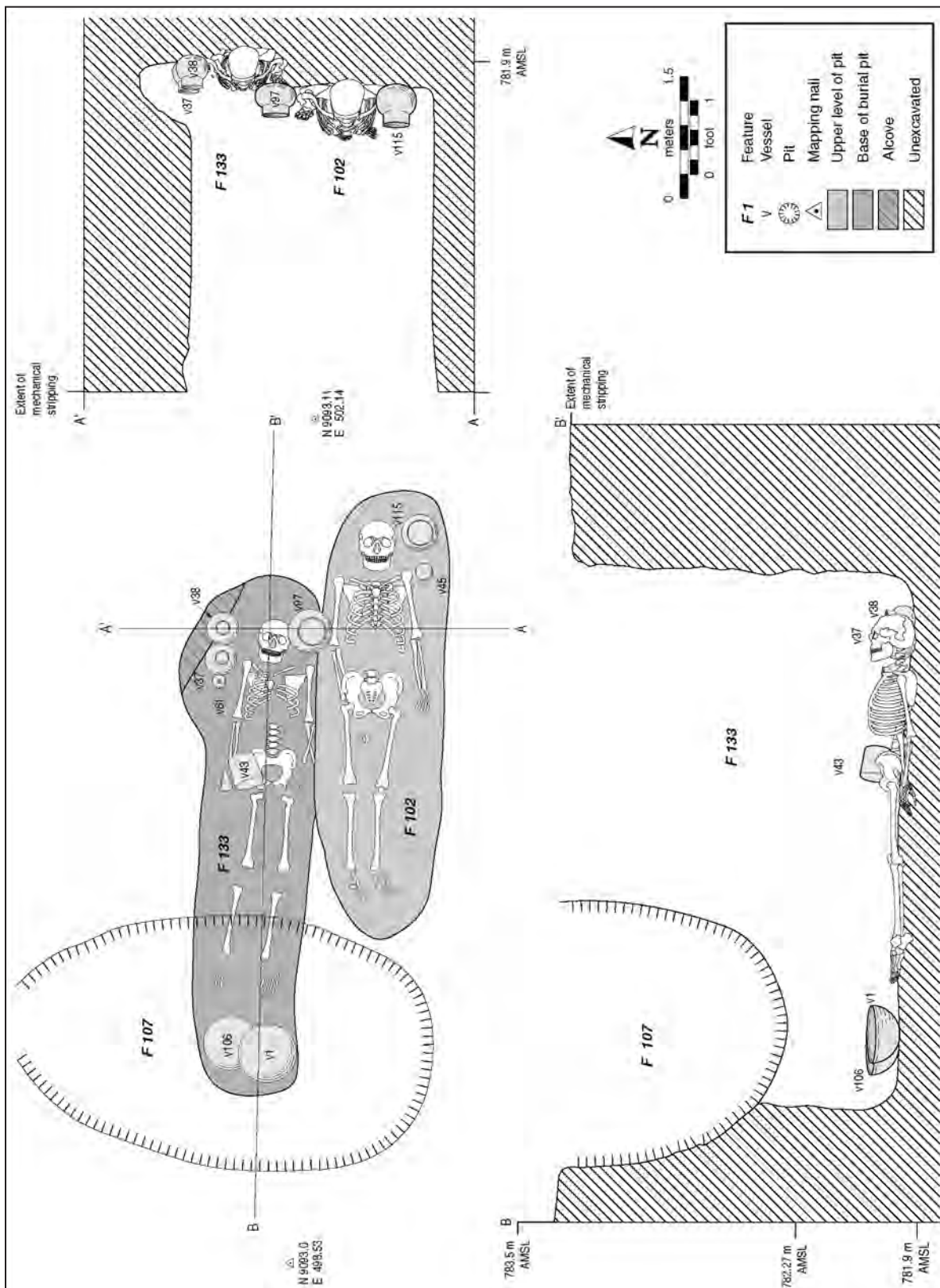


Figure 70. Burial Features 102 and 133 at the Vegas Ruin (405/2012).

Excavation Methods

Feature 143 was one of five interments associated with burial plot Feature 221 (Figure 71). The pit outline was observed just to the south of Feature 102 during hand stripping in this area. The upper fill to within 5 cm of the interment was removed as a single level and judgmentally sampled. The fill from this level to the base of the pit was hand excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The burial was of the alcove-chamber type with a bench along the north side (Type 1b). The north wall of the main burial shaft was removed during backhoe trenching. The main shaft was a large, roughly elliptical pit measuring 2.16 m long, at least 1.08 m wide, and 1.15 m deep. The width represents the distance from the edge of the backhoe trench to the south edge of the main shaft, and is therefore a minimum estimate. The curvature of the south wall of the main shaft may have been caused by sloughing of a portion of the chamber roof. The remaining sidewalls of the main pit were vertical to the top of the burial chamber. The burial chamber was carved out of the calcic soil horizon (Stratum IV), undercutting the south and west ends of the main shaft. This chamber measured approximately 2.1 m long., 0.45 m wide, and 0.58 m deep at its lowest point. The floor of the alcove was 0.18 m deeper than the main shaft, resulting in a bench alongside the burial chamber. No evidence of cribbing elements was observed.

Burial Fill

The upper fill was predominantly loose sands with occasional gravels and small cobbles. The lower fill was similar to the upper fill, except that the fill of the subterranean chamber had a larger quantity of calcic soil. Some of this calcic soil may have been portions of the pit walls that sloughed during the interment or shortly after. The grave originated at or slightly above the contact of the upper culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III). It extended through the calcic horizon (Stratum IV) and terminated in the upper part of the channel deposits (Stratum V).

Burial Treatment

The body of the deceased had been laid on his back along an east–west axis with the legs extended to the west and the head to the east (93°), facing upward. The right arm was placed parallel with the body with the hand turned palm downward. The left arm was placed with the hand resting

on the left hip. Four ceramic vessels were interred with the remains (see Table 6). A small Salado Red Corrugated jar (V 78) was placed on its side between the right shoulder and the head. Three vessels were set upright along the left side from the hip to the knee, including two red plain bowls (Vs 63 and V 77) and a Salado Red Corrugated bowl (V 8).

Burial Plot Feature 222

Location: Feature 222 was a cluster of burials located within the Feature 1 compound, approximately 8 m east of the Feature 99 pit structure. This feature includes burial Features 164, 181, and 182.

Grid coordinates (m): N 9086.9, E 513.6

Feature type: burial plot

Date: Miami/Roosevelt phase, based on ceramics

Burial pit dimensions: 3.37 by 2.49 m and 1.50+ m deep

Orientation: generally east–west; heads of burials all oriented to the east

Excavation Methods

Although this feature was partially sectioned in TR 217, it was only identified as a feature after mechanical stripping of the upper occupational surface (Figure 72). This feature was excavated in three units. The fill of each of the burial pits was sufficiently distinct that it was possible to excavate each as a discrete unit. Excavation of each burial pit is discussed under the heading for the appropriate feature.

Pit Characteristics

This feature, like the others, was not created as a single large pit for multiple interments but rather resulted from repeated use of the same location. The shape was determined by the large, rectangular burial pits for Features 181 and 182. In overall dimensions the pit was 3.37 m long, 2.49 m wide, and at least 1.5 m deep.

Stratigraphy

The fill of this burial plot was derived from the soil horizons into which the burial pits had been dug. The fill was dominated by a tan, calcic silt, with lesser quantities of sand and gravels. The burial pits originated at a level near or just above the contact of the upper culture-bearing horizon (Stratum II) and the gravelly loam soil horizon (Stratum III). Each of the interments associated with this burial plot had been dug through the gravelly loam. Feature 164 ended in the upper fill of Feature 181. The graves of Features 181 and 182 were dug into the calcic horizon (Stratum IV).

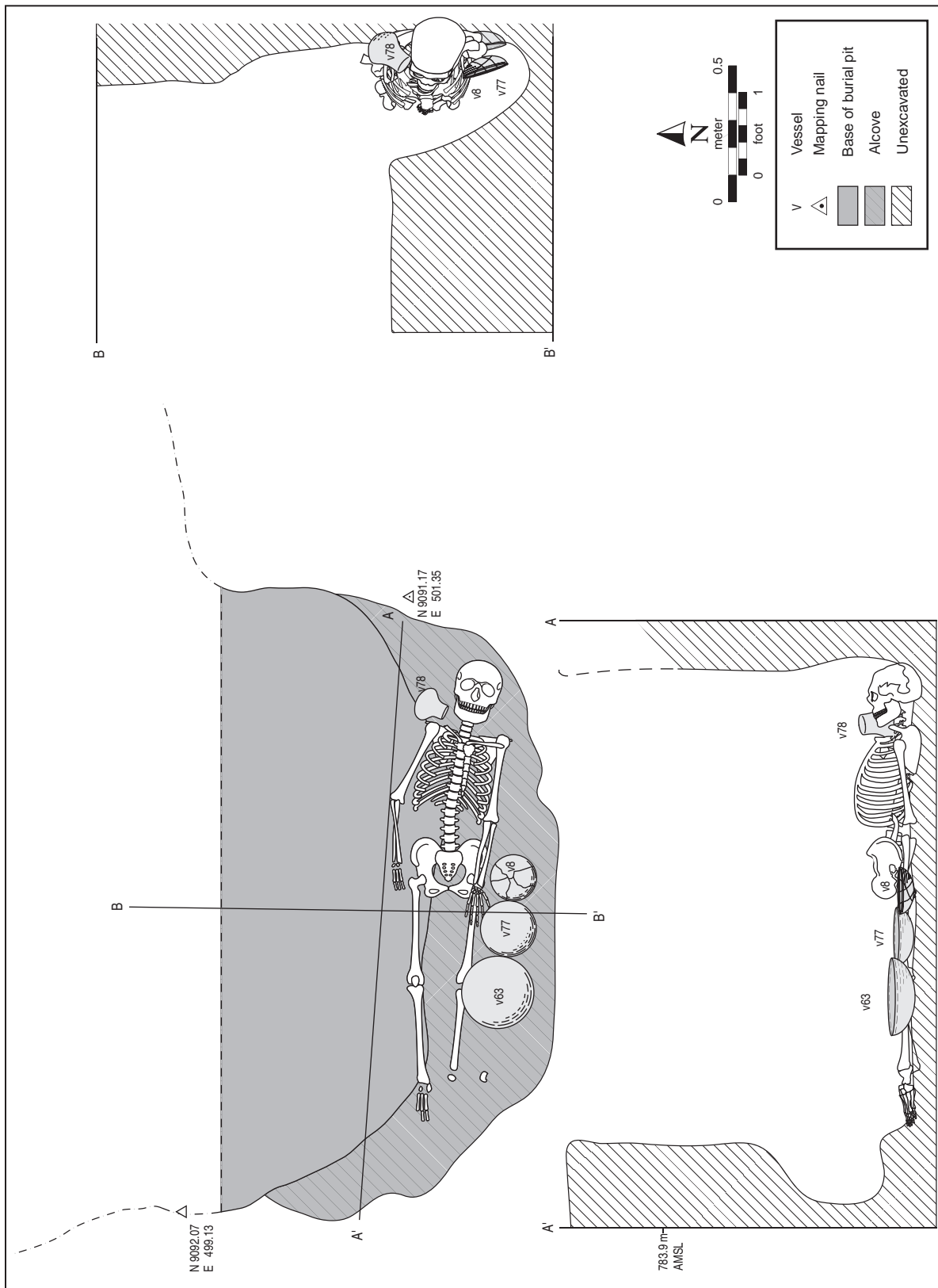


Figure 71. Burial Feature 143 at the Vegas Ruin (405/2012).

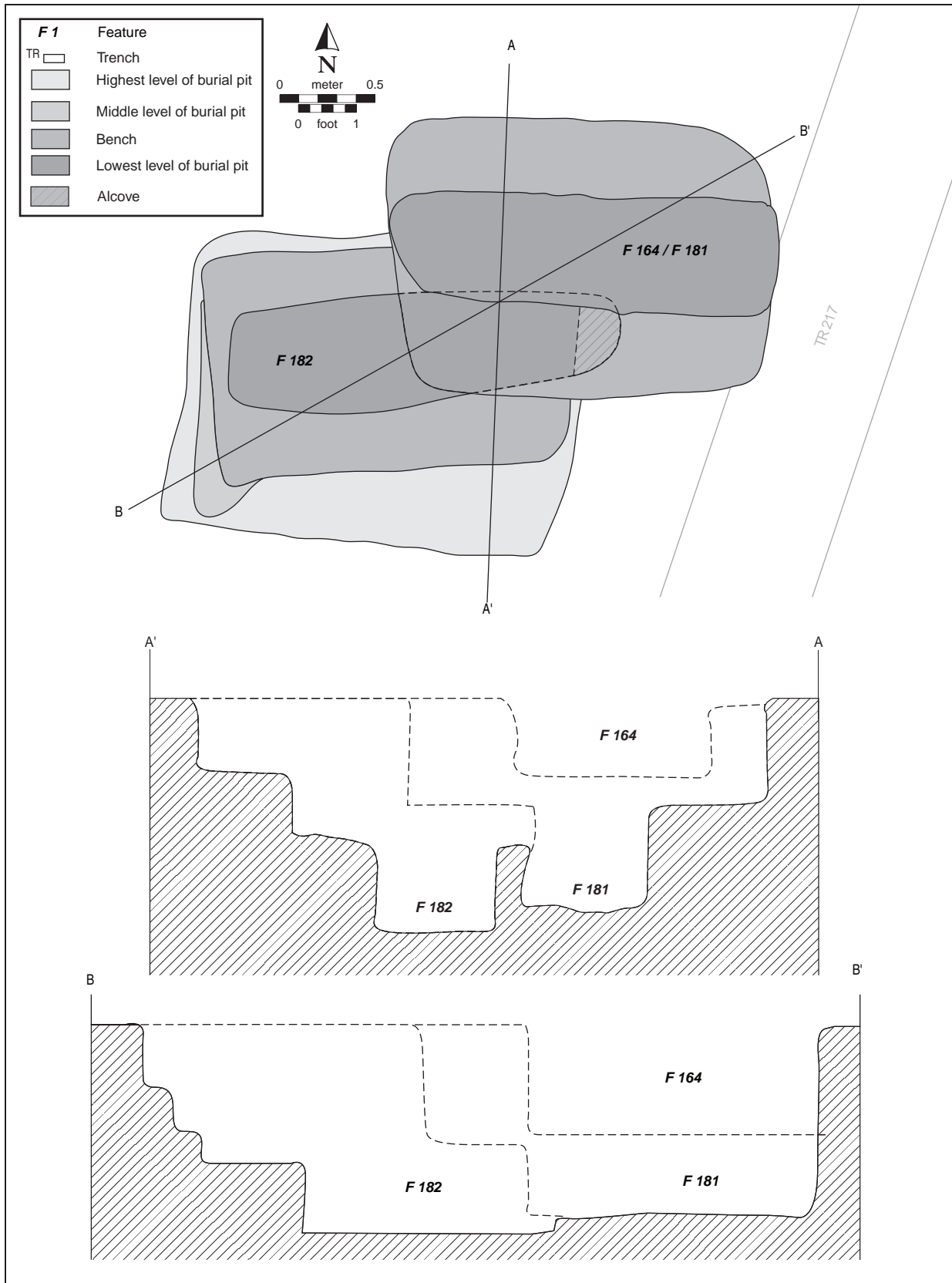


Figure 72. Burial plot Feature 222 at the Vegas Ruin (405/2012).

The benches and alcoves associated with these graves were carved into the lower portion of this stratum. Both of these graves penetrated through the calcic horizon and ended in the upper part of the unconsolidated channel deposits below (Stratum V).

Associated Features

This feature was located in the east-central part of the compound near the edge of the roadway. There are strong similarities between Features 205 and 222, located a short distance to the northwest. The relative sequence of interments was straightforward. Feature 182 was first. The grave for Feature 181, a Type 2 burial pit with a central chamber, intruded the northeastern corner of Feature 182. Although, the main shaft of Feature 181 ended at a level approximately 0.3 m above the benches associated with Feature 182 (another Type 2 burial pit), its lower burial chamber cut into the eastern end of the northern bench of Feature 182 and disturbed portions of ceramic vessels and cribbing elements originally placed on top of this bench. Portions of these vessels were recovered from the fill of Feature 181. Several cribbing elements of Feature 181 overlay some of the sherds and cribbing elements of Feature 182. In addition, the burial chamber of Feature 181 intruded a corner of the lower burial pit of Feature 182, exposing the side of the jar placed to the right of the head of the individual buried in Feature 182. The sidewall of the lower burial chamber of Feature 181 was undercut where the two chambers overlapped in an apparent attempt to avoid any further desecration of the earlier burial. Feature 164 was the last interment. The grave, a simple, shallow, Type 4 burial pit, had been dug into the upper fill of Feature 181. The body was laid at the level of the bench of Feature 181, on a thick layer of fill that had accumulated after the cribbing of Feature 181 had collapsed into the lower burial chamber. The body associated with Feature 164 was placed directly over the burial chamber of Feature 181. An extramural pit, Feature 135, was defined in the upper fill of Feature 182 during backhoe stripping. This pit was mapped and recorded but not excavated.

Feature 164

Grid coordinates (m): N 9087.2, E 514.4
Burial type: Type 4 (plain) inhumation
Date: Miami/Roosevelt phase, based on association with other Feature 222 burials
Burial pit dimensions: 1.88 by 0.85 m and 0.28+ m deep
Burial pit orientation: 88° E
Burial orientation: 87° E
Sex: male
Age: 45–50 years

Excavation Methods

The overburden above this burial was stripped away with a backhoe until the pit outline was clearly visible (Figure 73). Approximately 0.1 m of fill was then removed by hand to until the top of the skull was exposed; this fill was judgmentally sampled for artifacts. The lower 0.18 m of fill was excavated as a single level and screened through 1/8-inch-mesh hardware cloth.

Burial Pit

The burial pit appears to have been a vertical, subrectangular shaft cut into the upper fill of the earlier burial Feature 181. There were no indications of cribbing or benches.

Burial Fill

The fill was a light brown sandy silt derived in all likelihood from the materials removed during the original digging of the grave. The burial pit most likely originated from a level near the contact of the upper culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III).

Burial Treatment

The body of this man was laid on his back along an east–west axis with the head toward the east (87° E). The head was propped on a rock so that it faced to the west. The bottom of the grave, beneath the body, was stained with red ochre. No other nonperishable items were placed with this person.

Feature 181

Grid coordinates (m): N 9087.0, E 514.3
Burial type: Type 2 (central chamber) inhumation
Date: Miami/Roosevelt phase, based on ceramics
Burial pit dimensions: 2.10 by 1.52 m and 1.14+ m deep
Burial pit orientation: 97° E
Burial orientation: 93° E
Sex: male
Age: 21–25 years

Excavation Methods

We excavated a 5–10 cm level below Feature 164, and this level was judgmentally sampled for artifacts. At this depth, the excavator encountered horizontal cribbing, indicating the presence of a second, deeper burial. (Figure 74). Excavation continued by hand, and all of the fill was screened through 1/8-inch-mesh hardware cloth. Associated funerary

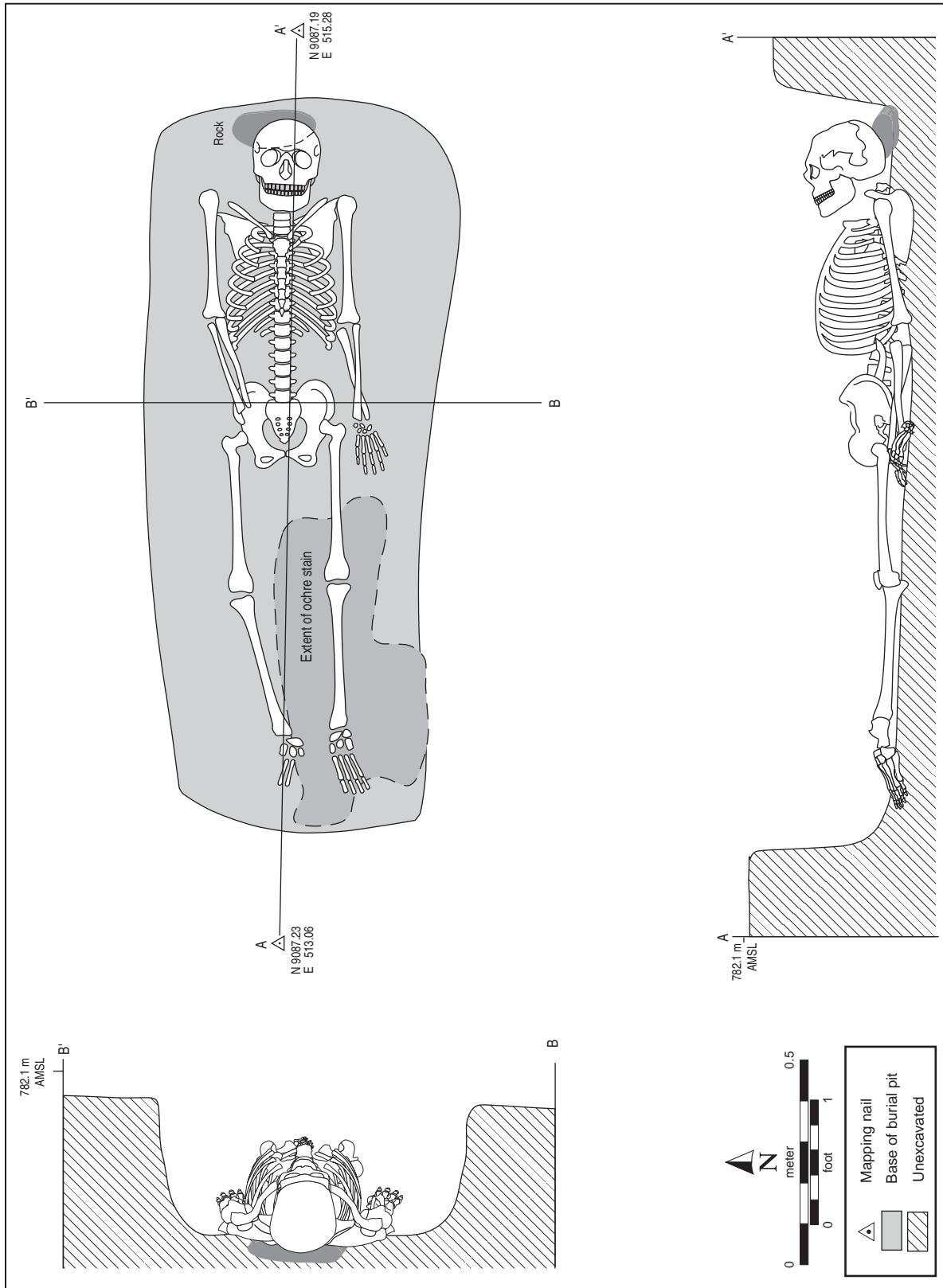


Figure 73. Burial Feature 164 at the Vegas Ruin (405/2012).

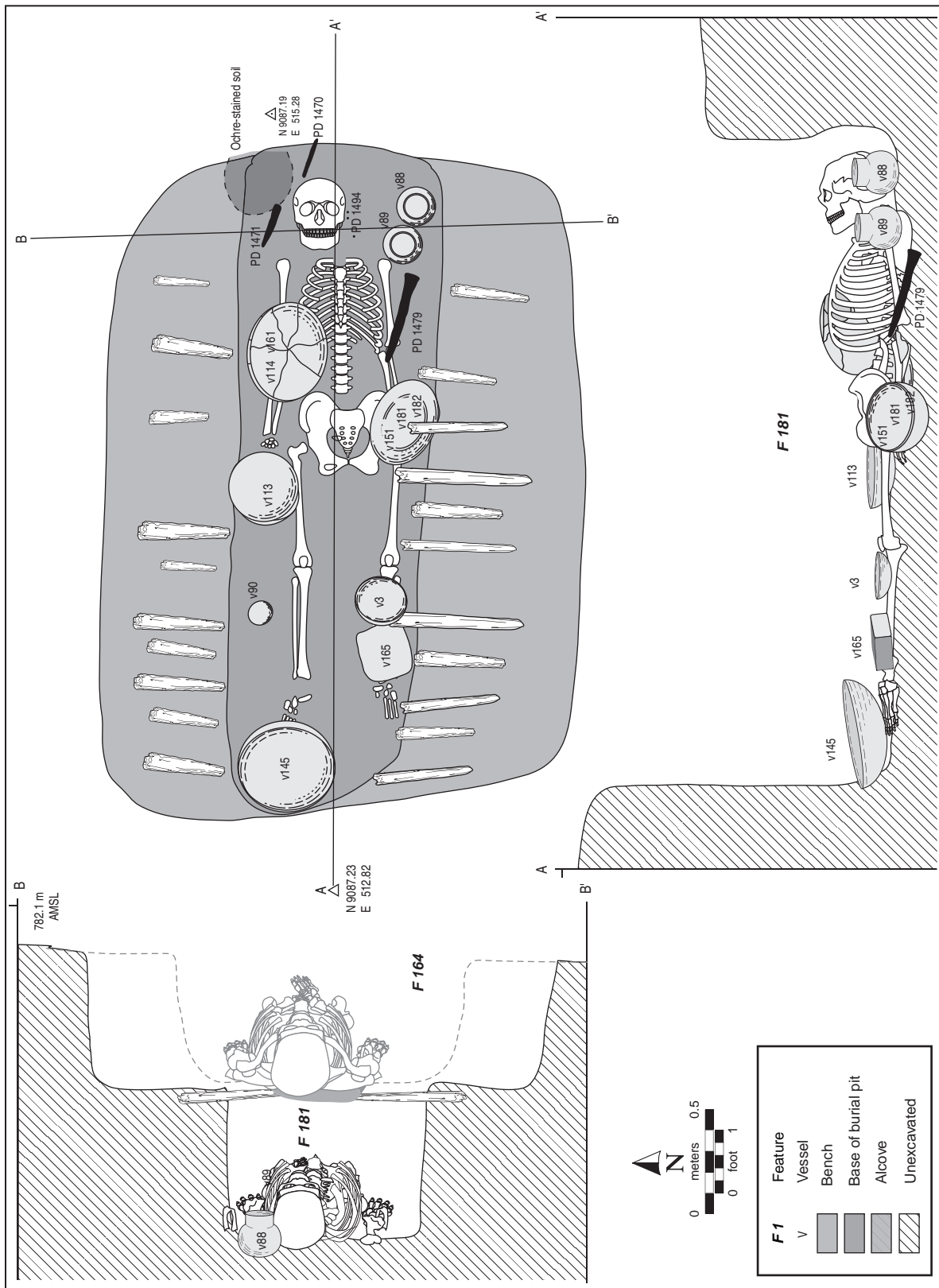


Figure 74. Burial Feature 181 at the Vegas Ruin (405/2012).

items and cribbing elements were mapped and photographed in place before removal.

Burial Pit

The burial pit consisted of a large, subrectangular main shaft with a lower, narrower burial chamber centered laterally within the main shaft. Benches lined both sides of the inner chamber. The walls of the main shaft were nearly vertical to the top of the benches. The main shaft was 2.10 m long, 1.52 m wide, and over 0.66 m deep. The lower burial chamber, in which the body and funerary items were placed, was generally parallel sided and squared off at the east end and rounded at the west end. This lower pit measured 2.14 m long, 0.61 m wide, and 0.48 m deep. A shallow alcove was carved into the base of the pit wall at the east end, accounting for the increase in length of the lower chamber. The walls of this lower chamber were nearly vertical, except in the portion of the chamber alongside the left leg. In this section, the wall of the lower chamber was undercut where the burial pit of an earlier grave, Feature 182, had been encountered. The lower chamber of Feature 181 had been roofed. Portions of 11 cribbing elements lay perpendicular to the long axis of the grave. The ends of these elements rested in shallow grooves cut into the top of the benches. The portions spanning the lower chamber had collapsed across the body and funerary items.

Burial Fill

The burial fill was a brown sandy loam resulting from a mixture of the calcic soil and sands into which the grave had been dug. The burial originated near the contact of the culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III), and terminated in the upper part of the channel deposits (Stratum V). The main shaft and the benches had been carved out of the calcic horizon (Stratum IV).

Burial Treatment

The body of this young man had been laid on his back along an east–west axis with the head toward the east (93° E). The head was turned slightly to the right. The legs were extended to the west, and the arms were laid alongside the body with the palms of the hands resting upward. Twelve ceramic vessels, including an unusual rectangular bowl (V 165), had been placed with the body (see Table 6). All vessels were set in the grave upright. A red plain jar (V 88) and a Salado Red Corrugated jar (V 89) were placed just to the left of the head. A large red plain bowl (V 145) was placed near the feet. Two nested Salado Red Corrugated bowls (Vs 114 and 161) were placed above the right elbow. A Salado Red Corrugated bowl (V 113) was placed next to the right hip. A small red plain bowl (V 90) was found next to the lower

right leg. Three nested red plain bowls (Vs 151, 181, and 182) were placed over the left elbow. Finally, two red plain bowls (Vs 3 and 165) were placed over the lower portion of the left leg.

Several nonceramic artifacts were also interred with the individual. These included three bone artifacts: a hairpin (PD 1470) found just behind the head, a small spatula awl (PD 1471) just to the right of the head, and a large spatula awl (PD 1479) alongside the upper left arm. Three small turquoise pendants (PD 1494), which may have been earrings, were found just to the left of the head. Two similar turquoise specimens, along with several teeth from the right side of the mouth, were found in the pelvic region. The latter two specimens may have been part of a similar ornament worn on the right ear. It is possible that these ornaments were transported from the right side of the skull by rodents, along with the teeth, although no definite evidence of a rodent burrow was found in this location. There was a lens of red-ochre-stained sands just to the right of the head overlying the small spatula awl. These ochre-stained sands curved alongside the lower pit walls, giving the impression that these were the remains of a red-painted object of perishable material. Red ochre was also found on the right collarbone, lumbar vertebrae, the right ribs, and left side of the pelvis.

Feature 182

Grid coordinates (m): N 9086.6, E 513.5

Burial type: Type 2 (central chamber) inhumation

Date: Miami/Roosevelt phase, based on ceramics

Burial pit dimensions: 2.15 by 1.21 m and 1.16+ m deep

Burial pit orientation: 100° E

Burial orientation: 86° E

Sex: female

Age: 45+ years

Excavation Methods

The overburden above this burial was stripped away with a backhoe until the outline was clearly visible (Figure 75). A large proportion of the upper burial fill was removed during the excavation of Feature 181, which had intruded part of the upper fill of Feature 182. The remaining fill from the level of discovery to the top of the cribbing was removed as a single level and judgmentally sampled. The fill of the lower burial pit beneath the cribbing was excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items and cribbing elements were mapped and photographed in place before removal.

Burial Pit

The burial pit for Feature 182 had characteristics that suggested that it may have resulted from digging of two grave

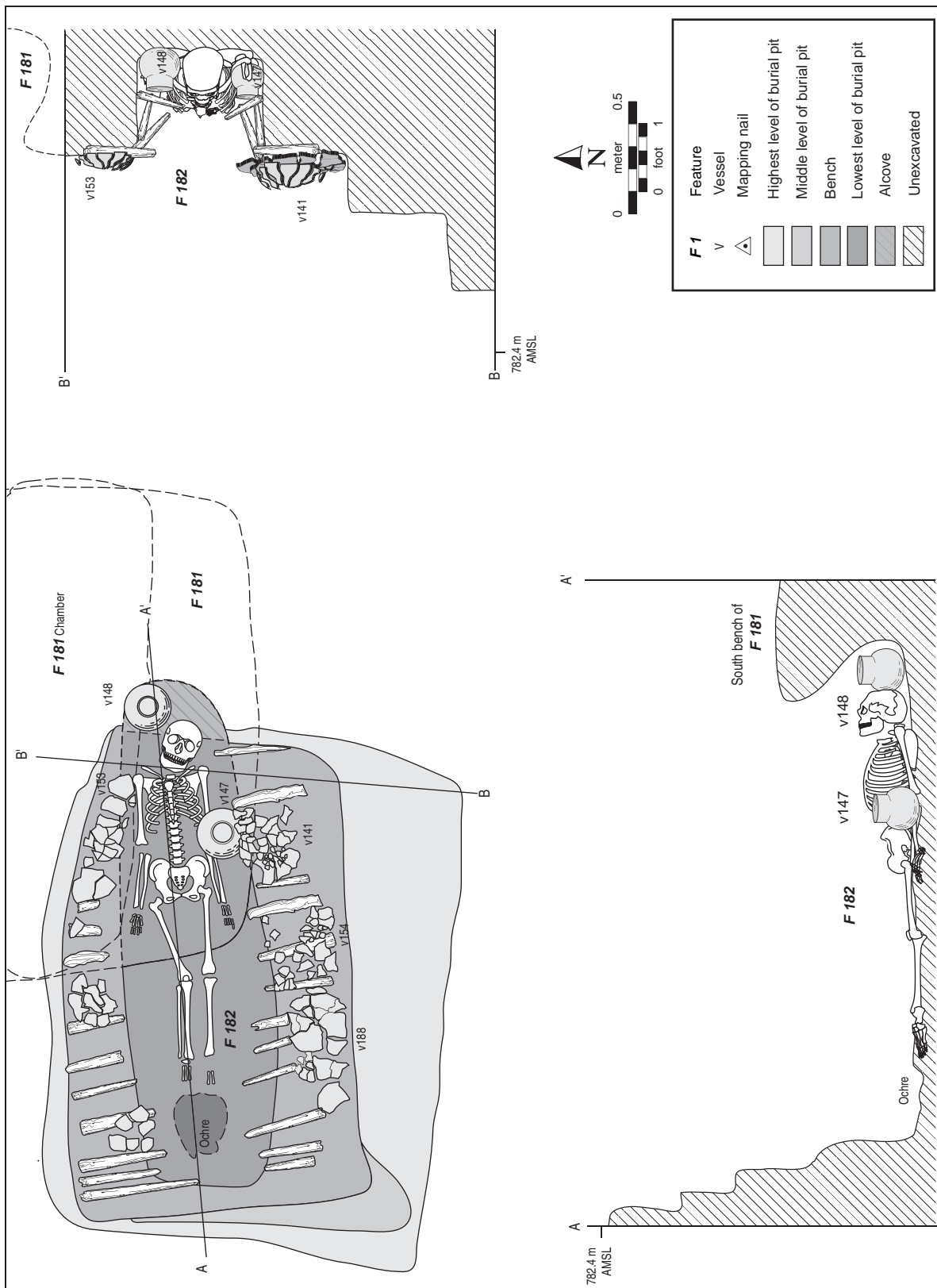


Figure 75. Burial Feature 182 at the Vegas Ruin (405/2012).

pits. There was main shaft that measured 2.13 m in length, 1.63 m in width, and greater than 0.37 m in depth, with an orientation of approximately 11° E of the lower pit. The pit in which the body was buried was dug within this larger pit but with a slightly different orientation and about 0.26 m deeper. The latter pit consisted of a large, subrectangular main shaft with a narrower, lower burial chamber centered laterally within the main shaft. This resulted in a burial pit with a bench on both sides. The main shaft of this pit had nearly vertical sidewalls and was 2.15 m long, 1.21 m wide, and more than 0.74 m deep, with an orientation of approximately 100° E. The lower burial chamber measured 2.04 m long, 0.60 m wide, and 0.42 m deep. It had been offset longitudinally from the main shaft resulting in a 0.25-m-deep alcove at the east end. The lower burial pit had apparently been roofed. Remnants of 14 cribbing elements, all lying perpendicular to the longitudinal axis of the burial, were recovered. The butt sections of these elements rested on the surface of the benches that had been carved out of the calcic soil horizon. The sections that spanned the lower burial pit had collapsed into the pit and overlay the remains and associated funerary items.

Burial Fill

The fill was a tan silty loam mixed with medium gravels derived from the soils into which the grave had been dug. The burial pit originated near the contact of the upper culture-bearing horizon (Stratum II) with the gravelly loam (Stratum III). The benches were carved out of the calcic soil (Stratum IV), and the lower burial pit ended in the upper part of the channel deposits (Stratum V).

Burial Treatment

The body of this adult woman was laid out on her back along an east–west alignment with the head toward the east and face up. The legs were extended to the west and the arms were placed alongside the body. The body was laid so that the head was placed within the alcove at the east end of the burial pit. Red ochre covered the body from the shoulders to just above the knees. Two red plain jars were placed alongside the body—one to the right of the head in the alcove (V 148) and the other by the left arm (V 147) (see Table 6). Both were set in the grave upright. A large circular stain of red ochre was observed just to the west of the feet. The shape of this stain suggests that it may be the remains of a perishable object that had been coated with red ochre. Six piles of sherds were found resting atop of the cribbing, along the sides of the burial pit. Of these, four reconstructible vessels were identified. Three red plain bowls (Vs 141, 154, and 188) were recovered from the southern bench. A fourth red plain bowl (V 153) was recovered from the northern bench near the individual’s head. One additional reconstructible

red plain bowl (V 175) was found within the burial but was not mapped. The placement of so many vessels on top of the bench and their condition are unusual. Unlike the vessels found in the lower burial chamber of Feature 182 and those found in other graves, these vessels appeared to have been purposefully broken before they were placed into the grave. The stacked sherds don’t have the appearance of vessels crushed in place by the weight of the overlying fill. Rather, this situation is somewhat reminiscent of how the vessels associated with Feature 14 had been treated when they were disturbed during the later Feature 101 burial event. No other individual, however, intruded the fill of Feature 182 as in the case of Feature 14. Instead, Feature 181 was interred at the eastern end of the main shaft of Feature 182 and did not impact the area where the broken vessels were found. Alternatively, it is possible that the larger burial pit surrounding Feature 182 represents an attempt to bury another individual in the same area, after the woman in Feature 182 was buried. The prehistoric excavators of this pit may have aborted this excavation when they encountered and broke the vessels placed on the bench of Feature 182. They may have replaced these vessels and then shifted their excavation to the northeast to avoid further disturbing the existing grave. Here they may have excavated Feature 181, which resembles the larger pit around Feature 182 in dimensions and proportions. In summary, three possibilities exist for the unusual configuration of Feature 182: (1) the larger pit was an earlier burial that had been disturbed during the Feature 182 interment, and its original contents were completely removed; (2) it was an aborted grave excavation that was subsequently modified as the Feature 182 burial pit; or (3) it was the initial excavation for the Feature 181 grave that was abandoned when the earlier burial was discovered. Because the fill deposits of the larger pit and the Feature 182 grave were indistinguishable, we could not decide which of these alternatives is most plausible.

Burial Plot Feature 223

Location: Feature 223 represents a burial plot containing two inhumations, Features 142 and 166, in the northern part of the site.

Grid coordinates (m): N 9112.9, E 517.1

Feature type: burial plot

Date: Miami/Roosevelt phase, based on ceramics

Burial pit dimensions: 3.8 by 2.5 m

Orientation: generally east–west; Feature 142 head oriented to the east and Feature 166 head oriented to the west

Excavation Methods

We found some cultural materials intermixed with natural channel deposits in the northern part of the site, and the

area was investigated by hand to assess the possibility of buried remains. After digging 70–80 cm, the excavator uncovered two reconstructible vessels and human ribs protruding from underneath a calcic layer of soil. About 3 m farther north, another two vessels were recovered. Recognizing this as a possible burial plot, the surface was scraped to expose pit outlines. During excavation of the first level, we could not distinguish two separate burial shafts; therefore, all artifacts recovered from this upper level were assigned the same provenience. In the next level, we were able to distinguish between the two burial pits, Feature 142 and 166 (Figures 76 and 77). We excavated the two burials separately, and the fill was screened through 1/8-inch-mesh hardware cloth.

Pit Characteristics

This feature was probably not designed as a single large pit for multiple interments but rather resulted from use of the same location for two different burials. The shape was oblong, measuring approximately 3.8 m long by 2.5 m wide. Both burials were aligned east–west, and the bodies were placed in alcoves—one with the head oriented to the east and the other with the head oriented to the west.

Stratigraphy

Both burials intruded the channel deposit of loose, unconsolidated sands and gravels. The burials were partially carved into the calcic soil underlying gravelly loam. There were few artifacts in the upper fill of Feature 166, which suggests that the burial was dug before the Stratum II cultural deposit had accumulated. The manner in which the burial pit of Feature 142 narrowed at the west end suggests that its shape was modified so as not to disturb Feature 166. If this is correct, then Feature 142 postdated Feature 166.

Associated Features

Features 142 and 166 were located near a concentration of extramural pits at the northern edge of the site. Feature 142 was overlain by an extramural hearth, Feature 118.

Feature 142

Grid coordinates (m): N 9113.4, E 517.9
Burial type: Type 1a (alcove chamber) inhumation
Date: Miami/Roosevelt phase, based on ceramics
Burial pit dimensions: 2.10 by 0.67 m and 1.21 m deep
Burial pit orientation: 102° E
Burial orientation: 95° E
Sex: female
Age: 30+ years

Excavation Methods

This burial was identified during hand explorations of a small, natural channel wash in the northern part of the site (see Figure 76). The outline of the burial plot was obvious at the top of the calcic horizon, after scraping the topsoil with a backhoe. A test shaft was hand excavated into the grave to locate the interment. Hand excavation confirmed that this was an alcove burial pit. Because the body was placed deep inside the alcove, the overburden and roof of the alcove were removed by a backhoe; the fill was screened through 1/8-inch mesh. Measurements were taken to document the roof of the alcove before it was removed. The fill below this level was excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The grave consisted of a vertical main shaft with an alcove burial chamber on the north side. The main shaft was a subrectangular pit measuring 2.10 m long, 0.67 m wide, and 1.21 m deep. The burial chamber was an alcove carved into the base of the north and east walls of the main shaft. This alcove measured 2.20 m long, extended up to 0.43 m beyond the rim of the main shaft, and was 0.34 m high at the opening. The floors of the main shaft and the burial chamber were at about the same level. No remains of cribbing elements were observed.

Burial Fill

The fill was a mixed brown sandy loam and tan, calcic soil with gravels, cobbles, and few artifacts. These materials were derived from the deposits and soils into which the grave was dug. The presence of artifacts in the fill suggests that the burial pit may have originated in the upper cultural horizon (Stratum II) above the contact with the gravelly loam (Stratum III). The grave intruded a channel fill associated with the erosional episode at the base of the gravelly loam. Part of the grave was carved into the calcic soil (Stratum IV) underlying the gravelly loam. The grave ended in the upper part of the loose, unconsolidated channel deposits (Stratum V) beneath the calcic soil.

Burial Treatment

The body of this woman was laid in the alcove on her back along an east–west axis with the legs extended to the west and the head to the east (95° E), facing upward. The arms were laid alongside the body with the right hand resting with the palm upward and the left hand resting with the palm downward. Seven ceramic vessels had been placed

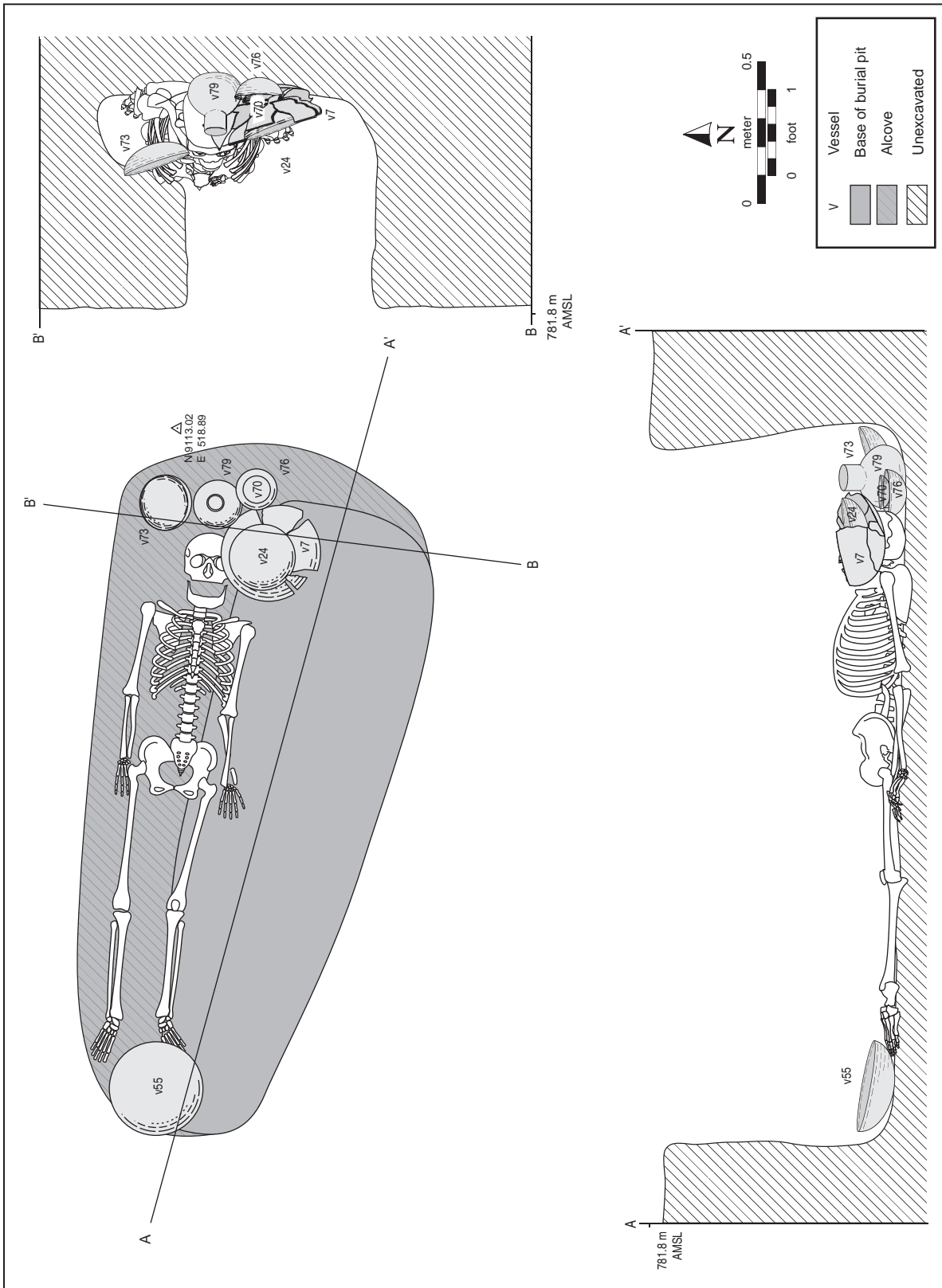


Figure 76. Burial Feature 142 at the Vegas Ruin (405/2012).

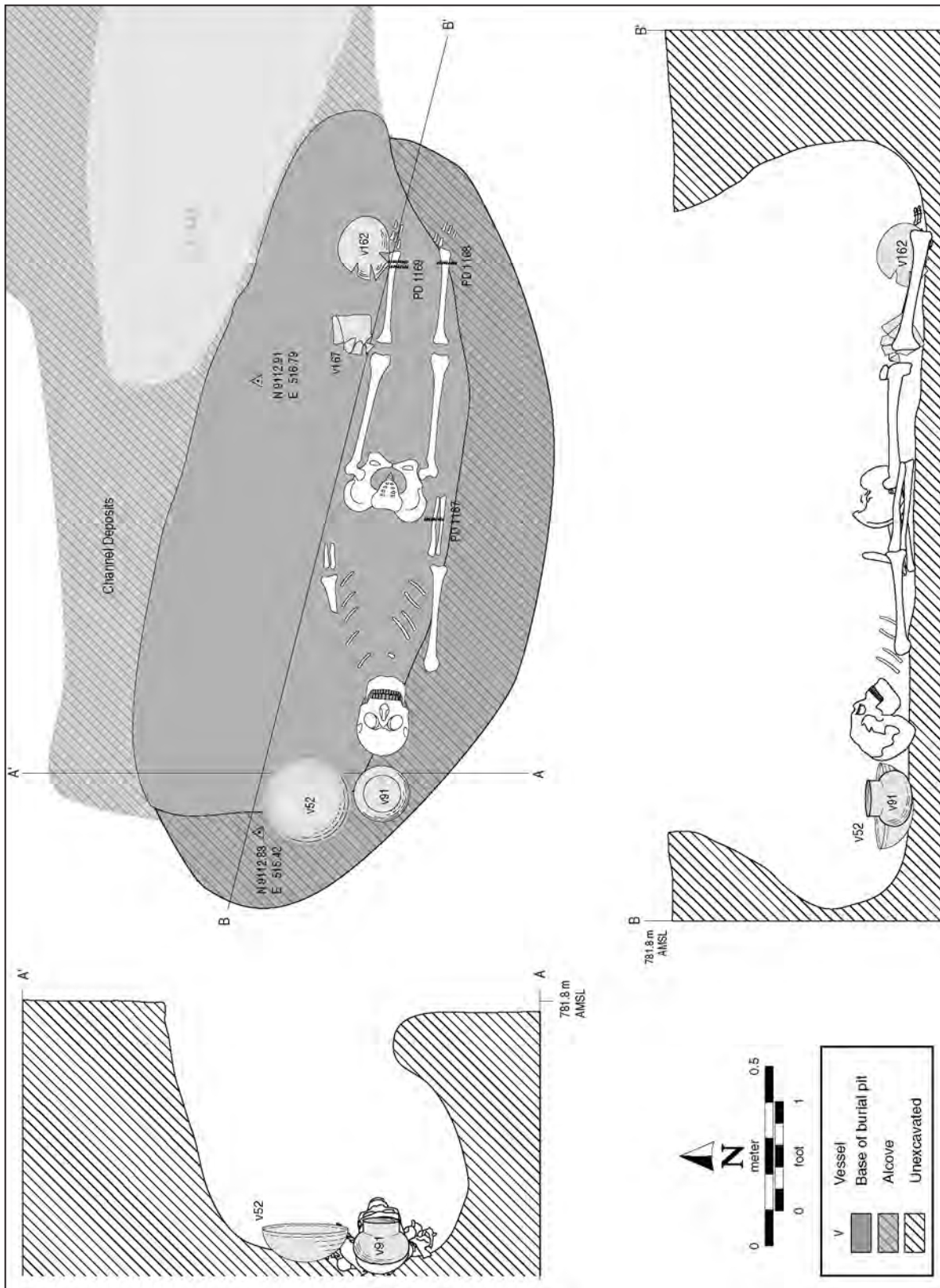


Figure 77. Burial Feature 166 at the Vegas Ruin (405/2012).

in the grave with the body (see Table 6). Six of these were placed around the head, including a red plain bowl (V 24) nested within a Salado Red Corrugated bowl (V 7) that was placed immediately to the left of the head. The rims of these bowls covered a portion of the face. Another pair of nested vessels, a Salado Red Corrugated bowl (V 70) placed inside a red plain bowl (V 76), rested above and to the left of the head. A red plain jar (V 79) was placed immediately above the head, and a red plain bowl (V 73) was placed above and to the right of the head. The last vessel was a red plain bowl (V 55) at the foot of the chamber. All of these vessels had been set upright in the grave. Red ochre was observed on the left side of the chest and underneath the torso.

Associated Features

Features 142 and 166 were near a concentration of extramural pits at the northern edge of the site. Feature 142 was overlain by an extramural hearth, Feature 118.

Feature 166

Grid coordinates (m): N 9112.6, E 516.4

Burial type: Type 1a (alcove chamber) inhumation

Date: Miami/Roosevelt phase, based on ceramics

Burial pit dimensions: 1.97 by 0.76 m and 0.68 m deep

Burial pit orientation: 285° E

Burial orientation: 270° E

Sex: female

Age: 35–40 years

Excavation Methods

This burial was discovered during hand excavation of a natural wash in the northern part of the site (see Figure 77). The outline of the grave became apparent in the top few centimeters of the calcic horizon after scraping the topsoil with a backhoe. The remaining fill was removed in two levels. The upper level was a mixture of the fill of this grave and Feature 142 and was judgmentally sampled. At the base of this level, the individual outlines of these two burial pits became distinct. The fill from this level to the base of the pit was excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The grave consisted of an irregular ellipsoidal main pit with an alcove burial chamber along the south side. The main shaft was an irregular ellipsoidal pit that measured 1.97 m

long, 0.76 m wide, and 0.68 m deep. The burial chamber was carved into the base of the south and west walls of the main shaft. This chamber was also generally elliptical and measured 2.15 m long, 0.57 m high, and extended up to 0.23 m beyond the upper rim of the grave. The floor of the burial chamber was at the same level as the main shaft. No evidence of cribbing was observed.

Burial Fill

The fill was a mixed sandy silty loam with gravels and small cobbles derived from the deposits and soils into which the grave was dug. Few artifacts were recovered from the fill. The lack of artifacts suggests that the burial may have originated at the surface of the gravelly loam (Stratum III) before any significant cultural deposit (Stratum II) had accumulated. This burial, like the nearby Feature 142, intruded into a channel deposit consisting of loose, unconsolidated sands and gravels at the base of the gravelly loam stratum. The burial chamber was carved into the calcic soil horizon (Stratum III) beneath the channel deposits. The burial pit ended in the upper part of the unconsolidated channel deposits (Stratum V) beneath the calcic horizon.

Burial Treatment

The body of this woman was placed in the burial chamber along an east–west axis with her legs extended to the east and the head to the west (270° E). The head was turned slightly to the right. The arms were laid alongside the body. Strands of shell beads were worn by the individual on the lower right arm (PD 1167) and on both ankles (PDs 1168 and 1169) at the time of burial. Four ceramic vessels were placed in the grave with the body (see Table 6): a large Salado Red Corrugated bowl (V 52) and a small Salado Red Corrugated jar (V 91) were placed in the alcove above the head, a Salado Red Corrugated bowl (V 167) was placed by the left knee, and a Salado Red Corrugated bowl (V 162) was placed by the left foot. All of the vessels were set upright in the grave.

Associated Features

The upper parts of Feature 166 and 142 overlapped, and their fill was indistinguishable. The shape of Feature 142 suggests that its southwestern edge was altered to avoid Feature 166, which in turn suggests that Feature 166 was the earlier burial. Furthermore, the fill of Feature 166 contained very few artifacts as compared to the fill of Feature 142, suggesting that Feature 166 burial was interred at a time when there was very little cultural debris in the area.

Individual Burials

Feature 12

Grid coordinates (m): N 9109.9, E 520.2
 Burial type: Type 1a (alcove chamber) inhumation
 Date: Miami/Roosevelt phase, based on ceramics
 Burial pit dimensions: 1.85 by 0.67 m and 1.23 m deep
 Burial pit orientation: 282° E
 Burial orientation: 289° E
 Sex: male
 Age: subadult, 10–12 years

Excavation Methods

This burial pit (Figure 78) was originally discovered in the western edge of TP 85, Level 4, in the area north of the compound wall. Based on this limited exposure, it was initially interpreted as a possible corner of a pit structure. It became clear, however, that the feature was a burial pit when the narrow, subrectangular outline of the pit was exposed in the floor of TR 211. The fill of the main shaft was hand excavated in two levels. The first level began at the original point of discovery at the surface of the gravelly loam horizon. This level was judgmentally sampled. The second level began at the level where several remnants of cribbing were found about 0.9 m below the rim of the pit. This level ended at the bottom of the main shaft. All of the fill from this level was screened through ¼-inch-mesh hardware cloth. The fill of the possible niche in the south wall of the burial pit was excavated as a separate unit, and all fill from this niche was collected. To facilitate exposure and removal of the body, a 1-by-2-m excavation unit was placed along the south side of the main burial pit to remove the roof of the subterranean burial chamber. The fill of the burial chamber was excavated as a single level and was screened through ¼-inch-mesh hardware cloth. All associated funerary objects were mapped and photographed in place before removal.

Burial Pit

The burial pit consisted of a main shaft with an alcove chamber on the south side. The main shaft of the burial pit was subrectangular, measuring 1.85 m long, 0.67 m wide, and 1.23 m deep. The sidewalls of the main shaft sloped inward for the first 0.5 m then were nearly vertical to within 0.27–0.35 m of the bottom. At this point, the sidewalls at the ends of the pit were undercut slightly from 0.03 to 0.11 m. The floor of the main shaft was generally flat with a slight incline from east to west.

The burial chamber was also subrectangular and measured 1.78 m long, extended 0.46 m to the south of the main shaft, and was 0.34 m high. The body of the deceased was placed

in this chamber. The floor of the subterranean chamber was at the same level as the floor of the main shaft but did not slope to the west. There were no benches in this burial, but the remains of cribbing were identified 0.9 m below the rim of the burial pit. The burial was probably affected by rodent disturbance, because some of the hand bones were displaced.

Burial Fill

The burial fill was a heterogeneous mixture of coarse sands and gravels with interspersed lumps of carbonate-rich silty soil, cobbles, occasional artifacts, and some charcoal flecks. This material probably derived from the deposits and soils into which the grave was dug. The burial fill originated at the surface the gravelly loam (Stratum III) and was capped by the upper culture-bearing horizon (Stratum II). The main shaft was dug through the gravelly loam (Stratum III), the calcic horizon (Stratum IV), and ended in the upper portion of the gravelly sand channel deposits (Stratum V). The subterranean burial chamber was carved out of the lower portion of the calcic soil. This more-compact silty soil formed the roof of the burial chamber. The body was laid in a shallow excavation into the surface of the gravelly sands.

Burial Treatment

The body of this boy was laid out on his back along an east–west axis with the head to the west (289° E) and legs extended to the east. The head faced upward, and the arms were extended along the sides with the palms of the hands facing upward. A red plain bowl (V 34) and a small Roosevelt Black-on-white jar (V 29) were set upright on the floor of the grave next to the head (see Table 6). Four projectile points (PD 576) were found in a small cache near the base of the white ware jar, and two more were found in the screened material. A fragment of a painted wooden shaft (PD 580) was found near the left upper arm. The narrow diameter of the shaft and its proximity to the stone points led to the speculation that it may have been an arrow fore-shaft. The shaft was painted with a turquoise colored paint; no design was visible. Three caudal vertebrae of a gray fox (*Urocyon cf. cinereoargenteus*) (PD 577) were found near the right hand.

Associated Features

This burial was located north of the compound among a group of burials located southeast of a concentration of extramural pits in the northwest corner of the excavated area. It did not intrude any other features and no other features intruded Feature 12. Feature 141, another burial, was located less than 1 m to the northwest, and Feature 145, a third burial, was located a little over 1 m to the south.

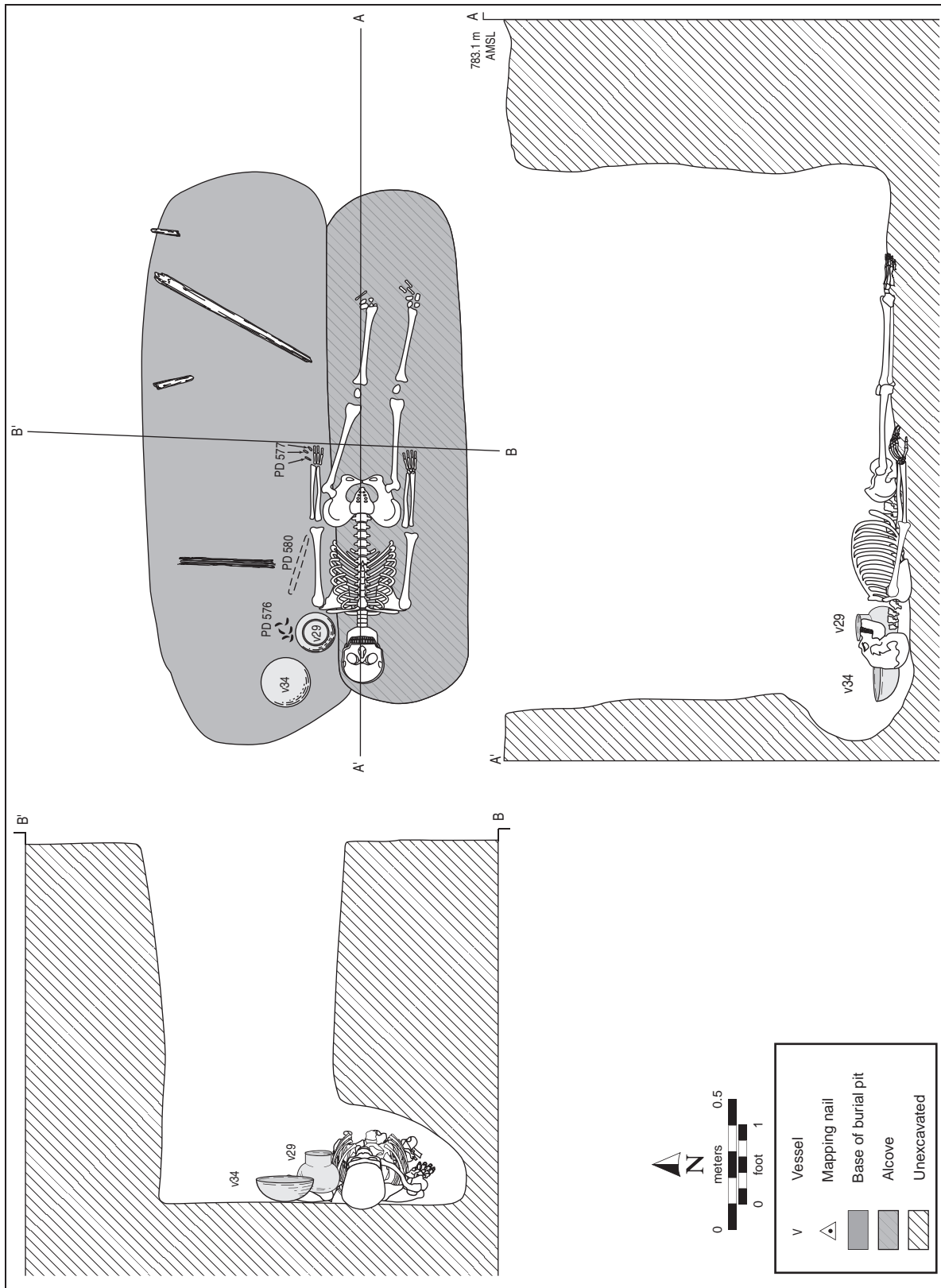


Figure 78. Burial Feature 12 at the Vegas Ruin (405/2012).

Feature 21

Grid coordinates (m): N 9093.6, E 518.3
 Burial type: Type 4 (plain) inhumation
 Date: Miami/Roosevelt phase, based on ceramics
 Burial pit dimensions: 0.47 by 0.32 m and 0.35 m deep
 Burial pit orientation: unknown
 Burial orientation: unknown
 Sex: indeterminate
 Age: 5–6 years

Excavation Methods

Feature 21 was discovered during Phase 1 explorations in TR 217. Before the feature was identified, the backhoe removed the eastern portion of the burial. Human bones, including skull fragments and a ceramic vessel, which was probably associated with the burial, were recovered from the trench backdirt by screening. After the cross section of the burial in the western wall of the trench had been drawn, a 1-by-2-m test pit was placed over the feature to remove the overburden. Once the feature outline was clearly defined, the remaining burial fill was excavated as a single level and screened through 1/8-inch-mesh hardware cloth. The burial was highly fragmented and only portions of the leg bones were found in situ (Figure 79).

Burial Pit

Based on the remaining portion, the grave was a simple oval pit with nearly vertical walls. The length was unknown, but it did not extend across the backhoe trench and therefore must have been greater than 0.35 m but less than 1.14 m. The pit was 0.47 m wide and 0.35 m deep.

Burial Fill

The fill was a light brown sandy clay loam, probably derived from the calcic soil (Stratum IV) into which the burial pit was originally excavated.

Burial Treatment

The remains found in place and recovered from the trench backdirt indicate that the body of this child had been placed in the grave on its back with the head to the east. The legs, which were in situ, were flexed. A corrugated bowl and a *Spondylus* shell bead were recovered from the trench backdirt, along with the dislocated remains. Although the association of these items to the burial has a measure of uncertainty, it seemed likely that they were items placed with the child at the time of the burial.

Associated Features

Feature 21 was located near the northeastern part of the compound near the existing roadway. It was found in a cluster of burials (Features 165, 190, 196 and 204) in this area. No other features intruded Feature 21, although the burial pit intruded a small extramural pit, Feature 39.

Feature 33

Grid coordinates (m): N 9116.4, E 517.1
 Burial type: Type 1b (alcove) inhumation
 Date: Miami/Roosevelt phase, based on ceramics
 Burial pit dimensions: 2.24 by 0.80 m and 1.40 m deep
 Burial pit orientation: 246° E
 Burial orientation: 241° E
 Sex: male
 Age: 18–22 years

Excavation Methods

Feature 33 (Figure 80) was first observed in the sidewalls of TR 210 near the northern limit of excavation. Initially, the outline of the pit could not be clearly defined because of root disturbance from a mesquite tree. The upper edge of the burial pit was observed in the bottom of an extramural pit, Feature 58, which overlay the grave. A backhoe was used to mechanically strip away the overburden until the burial outline was clearly visible where it intruded the calcic horizon. A test shaft was hand excavated into the fill to identify the level at which the interment was located. Once established, the backhoe was used to remove the fill to within about 15 cm of the burial; this upper fill was judgmentally sampled. The fill of the inner chamber was hand excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The burial pit consisted of a main shaft with an alcove burial chamber. The main shaft was roughly subrectangular and measured 2.24 m long, 0.80 m wide, and 1.20 m deep. The sidewalls of the pit were nearly vertical. The burial chamber was created by carving an alcove into the lower walls of the main pit. This alcove measured 2.61 m long, 0.61 m wide, and 0.52 m high. The floor of the alcove was 0.20 m deeper than the floor of the main shaft, creating a bench along the edge of the burial chamber. The alcove extended from 0.30 to 0.37 m beyond the rim of the main shaft to the west, north, and east. No cribbing elements were observed.

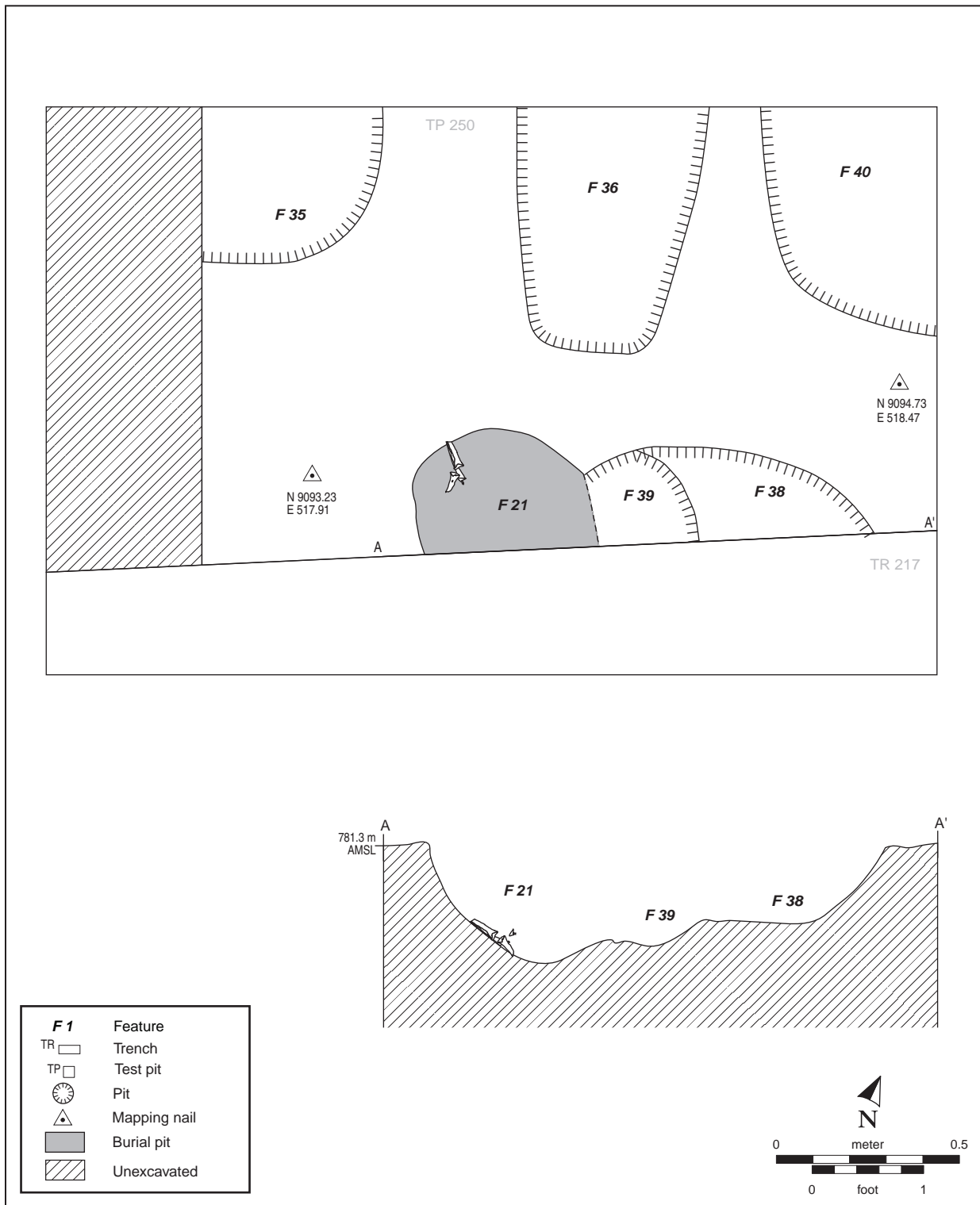


Figure 79. Burial Feature 21 and nearby pit Features 35, 36, and 38–40 at the Vegas Ruin (405/2012).

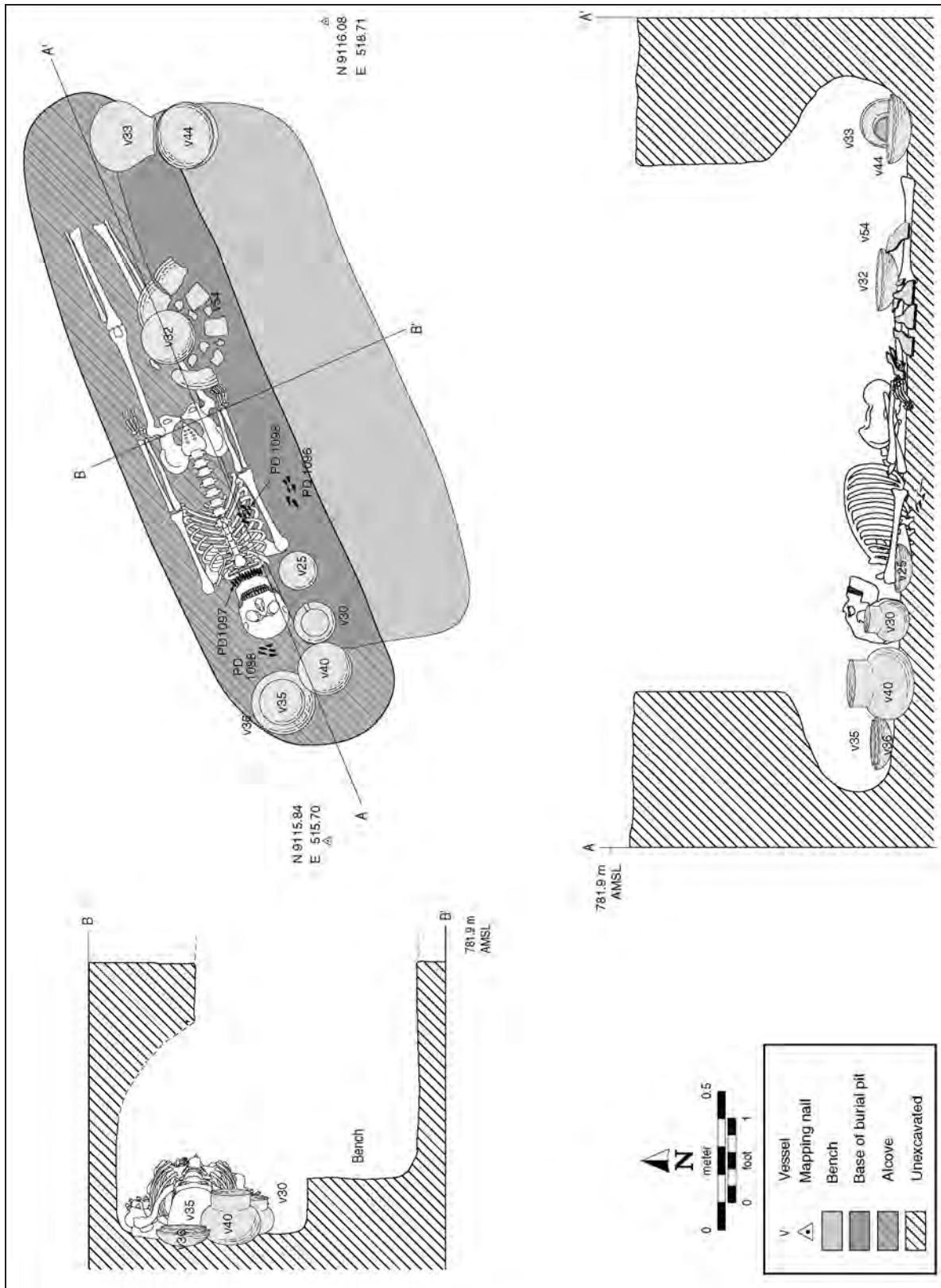


Figure 80. Burial Feature 33 at the Vegas Ruin (405/2012).

Burial Fill

The fill was a heterogeneous mixture of sands, gravels, and silty soils derived from the native soils into which the grave was dug. The grave originated at a level near the contact of the culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III). The main shaft penetrated through the underlying calcic horizon (Stratum IV) and ended in the upper part of the unconsolidated channel deposits (Stratum V).

Burial Treatment

The body of this individual was laid on his back in the alcove along an east–west axis with the legs extended to the east and the head to the west (241° E), facing upward. The arms were laid alongside the body. The individual was wearing a strand of sixty *Olivella* shell beads (PD 1097) around his neck (see Table 6). Many of these beads were colored with red ochre. Nine ceramic vessels were placed in the grave. Four vessels were placed in the alcove surrounding the head. These included two nested Walnut (Style A) Black-on-white bowls (Vs 35 and 36) and a Salado Red Corrugated bowl (V 40) above the head and a Roosevelt Black-on-white jar (V 30) immediately to the right of the head. A red plain jar (V 25) was placed at the right shoulder, and two nested red plain bowls (Vs 32 and 54) were set above the right knee. A red plain bowl (V 44) and a Brown corrugated jar (V 33) were placed near the right foot. All of the vessels were set upright, except V 33, which was found lying on its side. In addition, 16 projectile points were found in three discrete clusters within the burial. A group of 5 was found immediately above the head (PD 1088); a group of 6 was found on the right side of the chest (PD 1098); and another group of 5 was found near the right upper arm (PD 1096). Red ochre was found around the head, neck, left arm, right lower leg, and feet.

Associated Features

Feature 33 was the northernmost grave found in the settlement. It was located within the southeastern end of a group of extramural features found outside of the compound at the northern edge of the site. Features 142 and 166 were the closest other burials, located about 2 m to the south. An extramural pit, Feature 58, intruded the upper fill of Feature 33 at its extreme western end.

Feature 49

Grid coordinates (m): N 9088.9, E 502.5
 Burial type: Type 2 (central chamber) inhumation
 Date: Miami/Roosevelt phase, based on ceramics
 Burial pit dimensions: 2.20 by 1.50 m and 0.97 m deep

Burial pit orientation: 71° E

Burial orientation: 72° E

Sex: male

Age: 41–50 years

Excavation Methods

This burial was first discovered during hand stripping of the interior surface of the compound (Figure 81). The first evidence encountered for the presence of this feature was a white ware jar. After this jar was mapped and removed, a test shaft was hand excavated into the fill below the jar. Because of the irregular shape of the pit, we were unclear whether this was a burial pit; therefore, we judgmentally sampled the fill. At 0.65 m below this jar, the top of another vessel was exposed, and 0.02 m below this vessel the top of the cranium was discovered. The lower fill from the top of the second vessel to the base of the pit was excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The shape of this burial pit was unusual. The grave consisted of a large, irregular oval-shaped main shaft with a narrower burial chamber dug into the bottom of the shaft. The main shaft was 0.86 m deep and had been dug into unconsolidated channel sands and gravels. The irregular shape of the pit may have been the result of sloughing of the sidewalls during or after the grave had been dug. The lower burial chamber was roughly elliptical and measured 2.10 m long, 0.60 m wide, and 0.12 m deeper than the main shaft, creating benches on either side of the burial pit. A shallow alcove, 0.10 m deep, was carved into the eastern wall. Small fragments of cribbing were found in the lower fill.

Burial Fill

The fill was a heterogeneous mixture of sands and clayey silts derived from the cultural deposits and native soils into which the burial had been dug. The burial originated near the surface of the compound at a level coincident or slightly above the rim of the collapsed pit structure, Feature 99. The grave intruded through the structural debris and floor of the structure and ended in a deep channel deposit associated with the gravelly loam horizon (Stratum III).

Burial Treatment

The body of this man was laid in the lower chamber on his back with the legs extended to the west and the head to the east (72° E), facing upward. The arms were laid alongside the body with hands turned palms downward. A Reserve

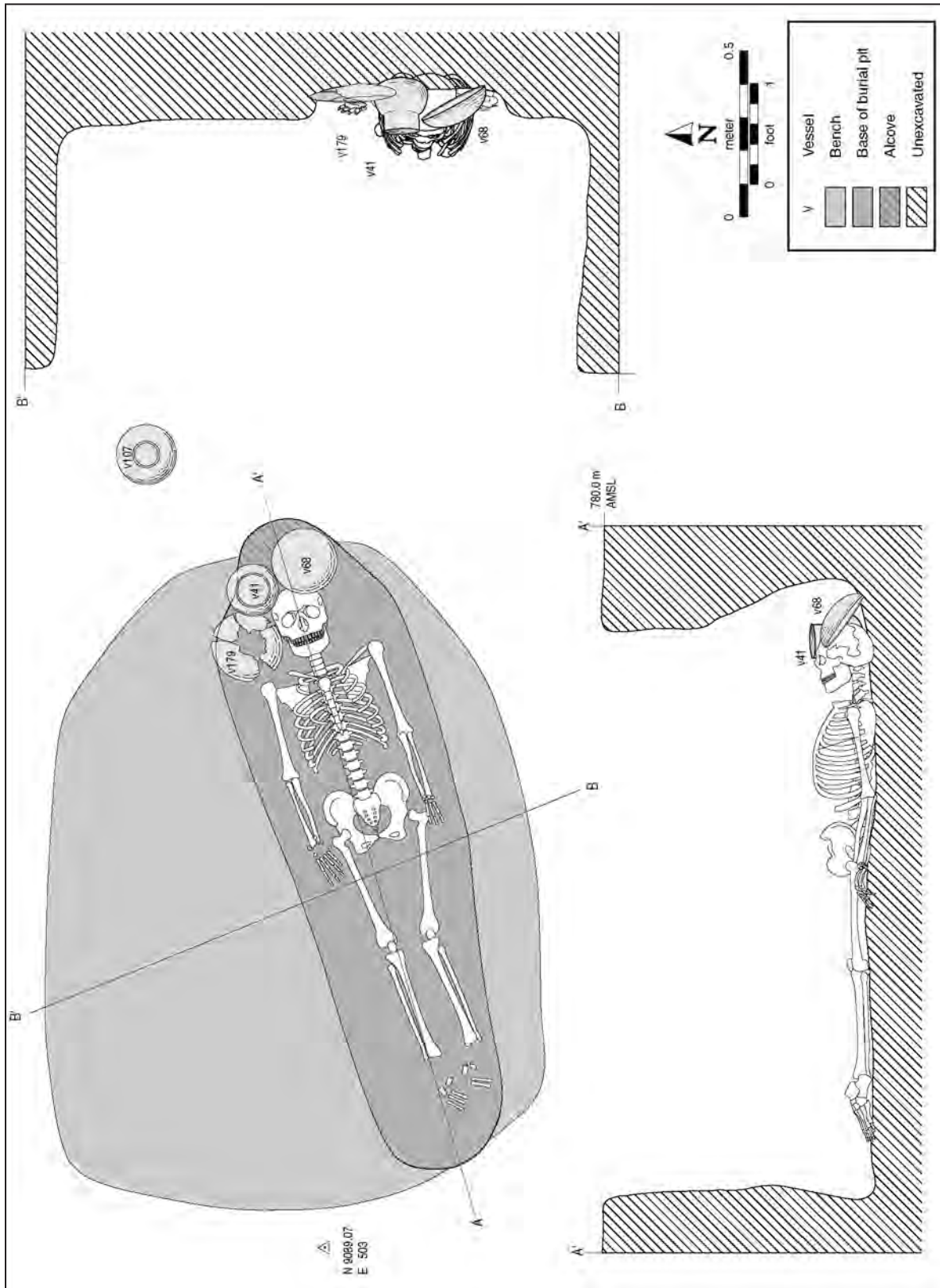


Figure 81. Burial Feature 49 at the Vegas Ruin (405/2012).

Black-on-white jar (V 107) was found just below the compound surface at the upper rim of the burial pit (see Table 6). Three other ceramic vessels were set upright in the burial chamber around the head. A Salado Red Corrugated bowl (V 179) and a Salado Red Corrugated jar (V 41) were placed on the right side, and a Walnut (Style A) Black-on-white bowl (V 68) was placed on the left side in the shallow alcove at the east end of the chamber.

Associated Features

Feature 49 was a single burial located in the northwestern corner of the compound. Burial plot Feature 221, which included Features 14, 101, 102, 133, and 143, was located less than 2 m to the northwest, and another individual burial, Feature 103, was located about 1 m to the southwest. Feature 49 intruded the northeast corner of a pit structure, Feature 99.

Feature 103

Grid coordinates (m): N 9087.1, E 500.3
 Burial type: Type 1b (alcove chamber) inhumation
 Date: Miami/Roosevelt phase, based on ceramics
 Burial pit dimensions: 2.29 by 1.18 m and 1.44 m deep
 Burial pit orientation: 87° E
 Burial orientation: 93° E
 Sex: male
 Age: 31–40 years

Excavation Methods

The fill of this burial pit (Figure 82) was observed while excavating a pit structure, Feature 99. The mixed sandy and gravelly fill of the burial pit contrasted with the adobe structural debris of Feature 99. Although we detected a difference in the deposits, the outline of the burial pit was only clearly observable where it penetrated the floor of the pit structure. The burial fill above the pit structure floor was removed as part of the structure fill; excavation of the burial pit began at the floor level of Feature 99. The upper fill, from the floor to the top of the bench, was removed as a single level and was judgmentally sampled. The fill of the inner chamber, from the top of the bench to the base of the pit, was excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The grave was dug into unconsolidated sands and gravels below the floor of the pit structure. The burial pit consisted of a main shaft with an alcove burial chamber. The main

shaft was an elliptical pit that measured 2.29 m long, 1.18 m wide, and 1.24 m deep. Collapse of part of the alcove roof and sloughing of the sediments during the original excavation of the burial shaft may have contributed to the irregular shape of the pit. The burial chamber was shifted to the south and east of the main shaft by carving an alcove into the southern and eastern walls of the main pit. At its maximum extent, the alcove extended 0.55 m to the south and 0.22 m to the east beyond the rim of the main shaft. The burial chamber was subrectangular and measured 2.20 m long, 0.62 m wide, and 0.61 m high, resulting in a bench along the side of the burial chamber. The floor of the burial chamber was 0.20 m deeper than the floor of the main shaft. Remains of cribbing elements were found in the lower burial chamber.

Burial Fill

The burial fill was a gravelly sandy loam with cobble inclusions. This fill was derived from the cultural deposits and native soils into which the grave had been dug. The grave originated at a level coincident with the rim of the collapsed pit structure, which was the interior surface level of the compound. The grave intruded through the gravelly adobe structural debris and the floor of Feature 99 and into unconsolidated channel deposits below the floor of the house. These channel deposits were associated with the gravelly loam horizon (Stratum III).

Burial Treatment

The body of this individual was laid in the alcove on its back along an east–west axis with the head to the east (93° E), facing upward. The arms were laid alongside the body with the hands turned palms downward. Fourteen ceramic vessels were placed with the body (see Table 6). Seven vessels were placed in the alcove above the head, including 2 Salado Red Corrugated bowls (Vs 10 and 31), 1 red plain bowl (V 95), 1 red plain jar (V 94), 1 Salado White-on-red jar (V 96), and 1 Salado Red Corrugated effigy vessel (V 169). V 95 was nested within Vs 31. Vs 94 and 96 were under a red plain bowl (V 4). The effigy vessel (V 169) was under an inverted Salado Red bowl (V 10). Six bowls were placed along the right side of the body, all set against the side of the burial chamber and tilted slightly. They included 1 large Salado Red Corrugated bowl (V 51) just to the right of the head, 1 large Salado Red Corrugated bowl (V 58) over the left upper arm, and 4 nested bowls at the right hip. These, beginning with the bottommost of the four, included 1 Salado Red Corrugated bowl (V 155), 1 red plain bowl (V 156), and 2 more Salado Red Corrugated bowls (Vs 157 and 158). One partial Brown corrugated vessel of indeterminate form (V 112) was placed over the right foot. Two projectile points were recovered from the lower fill.

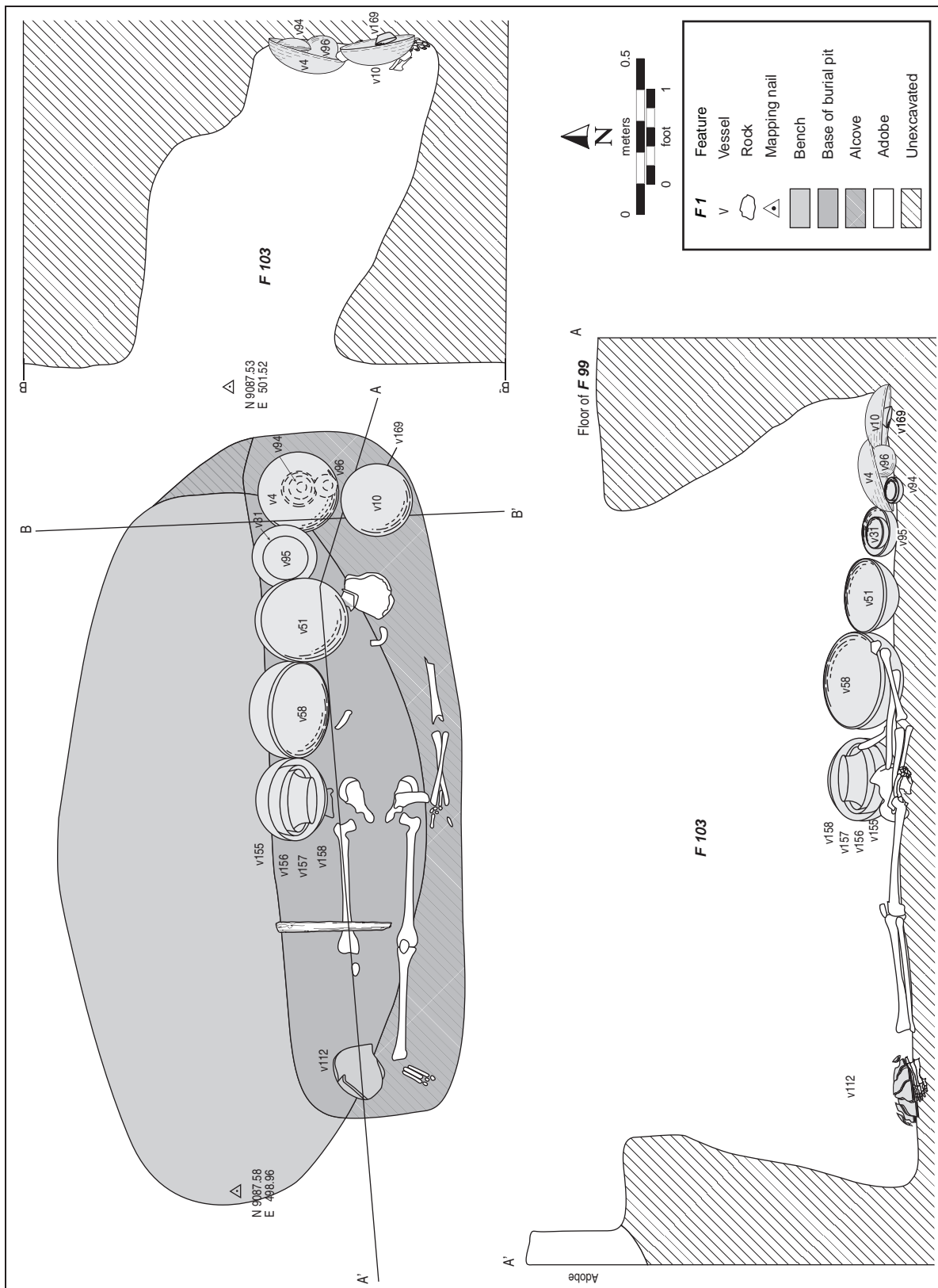


Figure 82. Burial Feature 103 at the Vegas Ruin (405/2012).

Associated Features

Feature 103 was one of several graves found in the northwestern corner of the compound. Burial plot Feature 221 was located about 4 m to the northwest, and another individual burial, Feature 49, was located about 1 m to the northeast. Feature 103 intruded the western wall, fill, and floor of the pit structure, Feature 99.

Feature 106

Grid coordinates (m): N 9099.5, E 507.2
 Burial type: Type 1b (alcove chamber) inhumation
 Date: Miami/Roosevelt phase, based on ceramics
 Burial pit dimensions: 2.46 by 1.15 m and 0.77 m deep
 Burial pit orientation: 94° E
 Burial orientation: 93° E
 Sex: male
 Age: 45–55 years

Excavation Methods

Feature 106 (Figure 83) was exposed and discovered at the floor level of a pit structure, Feature 34, located north of the compound. The upper burial fill was removed as part of the house fill. The remaining fill below the floor level was hand excavated in two levels. The upper level was from the pit structure floor to the surface of the bench; this level was judgmentally sampled. The fill of the inner chamber, from the bench to the bottom of the burial chamber, was excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The grave consisted of a vertical main shaft with an alcove burial chamber. The main shaft was roughly subrectangular, the eastern end was irregular and rounded. This main pit measured 2.47 m long, 1.3 m wide, and 0.75 m deep. The burial chamber was carved into the floor and lower wall of the main pit, undercutting the pit rim 0.15–0.20 m. The alcove extended to the south and east of the main pit and measured 2.38 m long, 0.70 m wide, and 0.30 m high. The roof of the alcove began at the bottom of the main shaft. The floor of the alcove was 0.30 m deeper than the bottom of the main shaft, resulting in a bench along the north side of the burial chamber. Cribbing elements were fairly well preserved and visible at the level of the bench.

Burial Fill

The fill was a heterogeneous mixture of tan to light brown silty soil and sandy loam derived from the deposits and

native soils into which the pit was dug. Although the burial pit was not visible until the floor of pit structure Feature 34 was cleared, the burial probably originated at a level commensurate with the rim of the house pit. The grave intruded through the structural debris and floor of this pit structure and into the calcic horizon (Stratum IV) beneath the house. The grave ended in the upper part of the loose, unconsolidated channel deposits (Stratum V).

Burial Treatment

The body of this elderly man was laid in the burial chamber on his back along an east–west axis with the head to the east (93° E), facing upward. The legs were extended to the west and the arms were laid alongside the body with the hands turned palms downward. Eight ceramic vessels were placed in the grave, all along the right side of the body (see Table 6). A large red plain jar (V 39) was placed in the alcove above and to the right of the head, and another red plain jar (V 59) was placed to the right of the head. A Roosevelt Black-on-white bowl (V 216) was placed next to the right shoulder. Alongside the right upper arm, a red plain jar (V 74) was set inside a red plain bowl (V 143). A red plain scoop (V 166) and a red plain bowl (V 180) were placed over the lower right arm. The final vessel was a red plain bowl (V 69) that was set beside the right knee. All vessels were propped against the side of the burial pit.

Associated Features

Feature 106 appears to have been an isolated burial. It appears to have been equidistant between the two burial plots, Features 216 and 221, in the northwest corner of the compound and the scattered burials along the edge of the existing road. Feature 106 clearly intruded through the floor of pit structure Feature 34. It was not intruded by any other features.

Feature 108

Grid coordinates (m): N 9097.2, E 519.7
 Burial type: Type 1 (alcove chamber) inhumation
 Date: Miami/Roosevelt phase, based on ceramics
 Burial pit dimensions: 1.70+ by 0.90 m and 0.84 m deep
 Burial pit orientation: 84° E
 Burial orientation: 96° E
 Sex: male
 Age: 15–17 years

Excavation Methods

This burial (Figure 84) was first observed in the western wall of TR 213, along the edge of the existing road, northeast of the compound. The upper part of the main shaft and

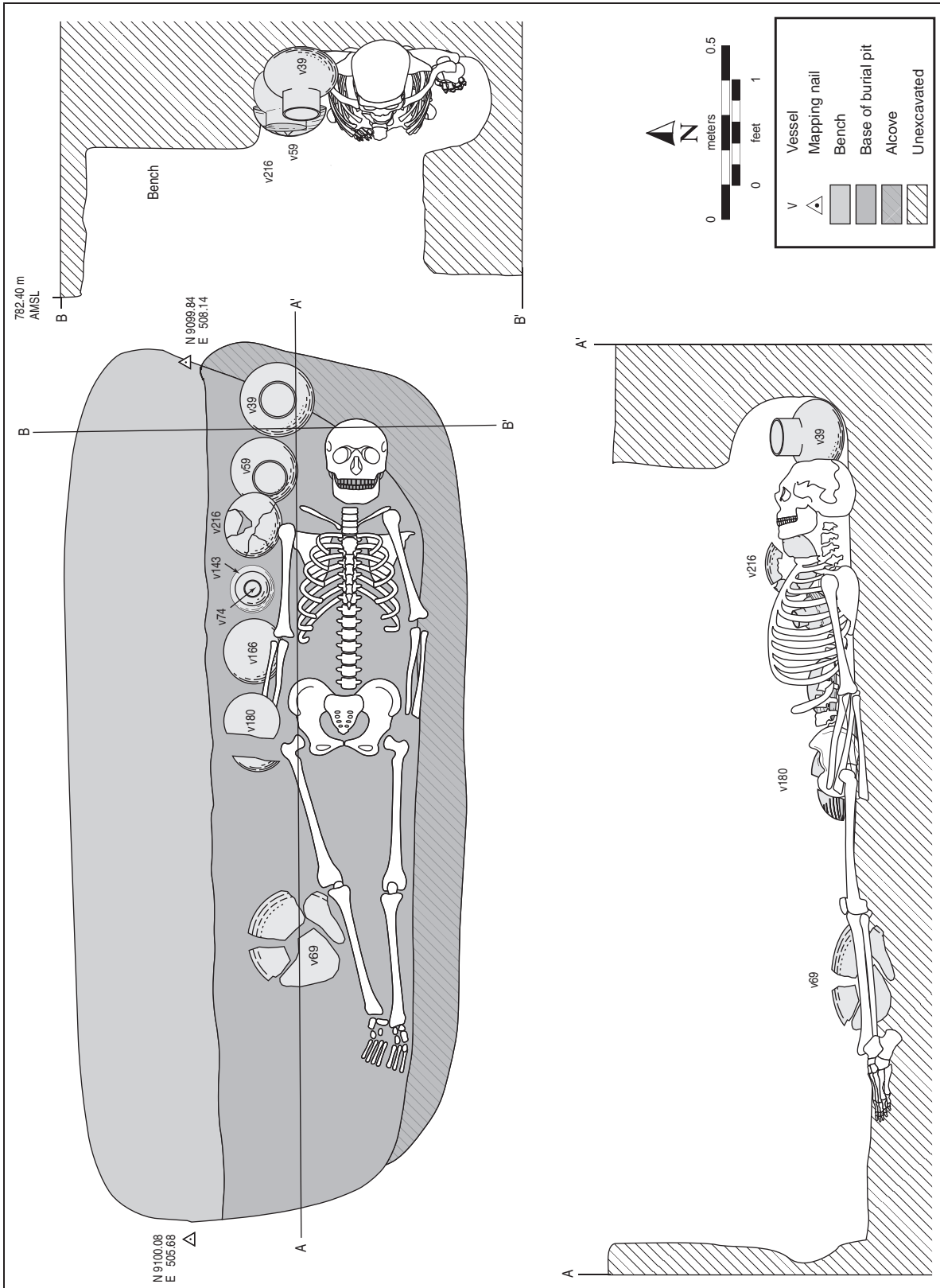


Figure 83. Burial Feature 106 at the Vegas Ruin (405/2012).

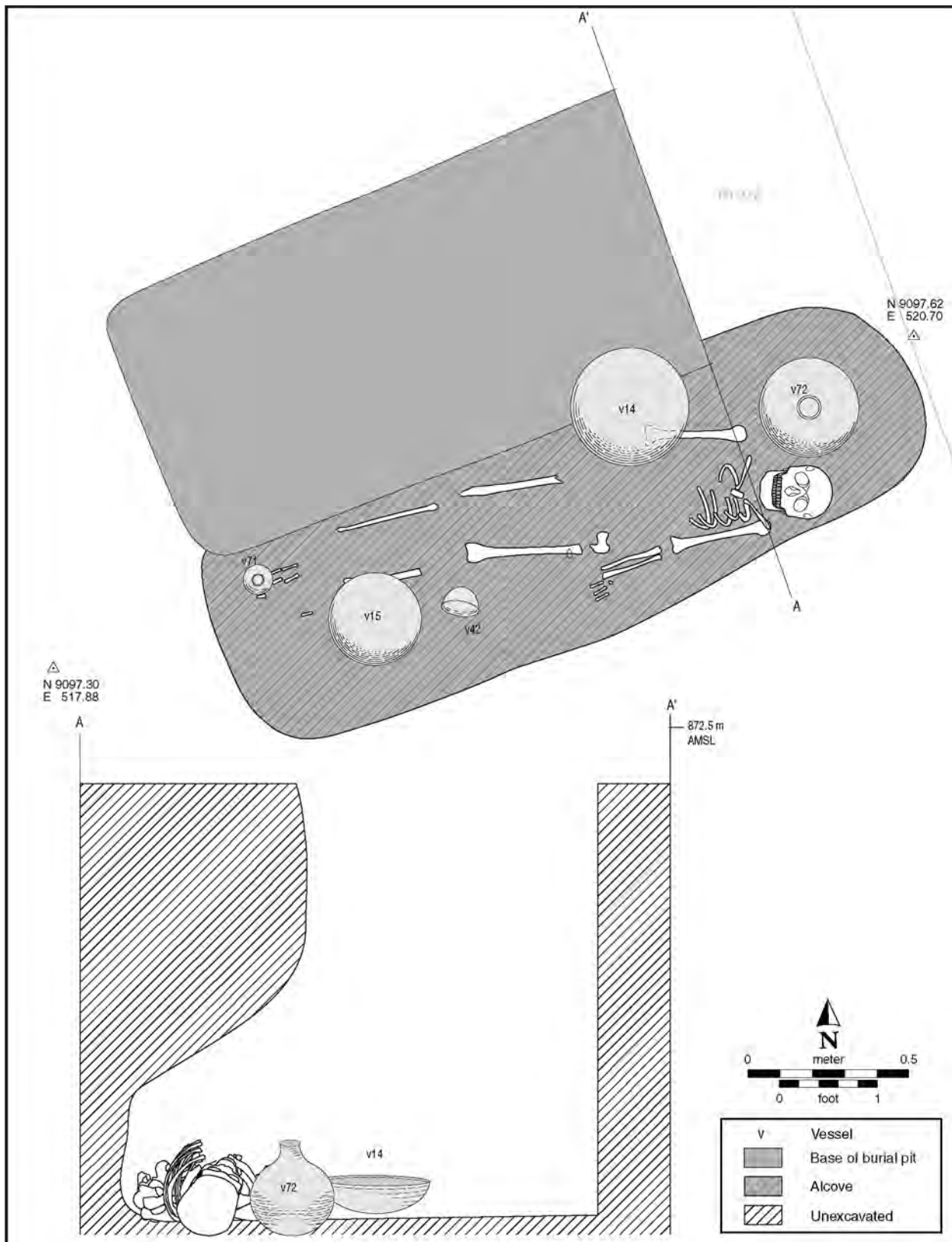


Figure 84. Burial Feature 108 at the Vegas Ruin (405/2012).

alcove were visible in the profile of the trench. The outline of the main shaft was clearly defined at the surface of the calcic horizon during backhoe stripping. The outline of the pit was recorded and mapped at this level. A small test shaft was excavated by hand from the bottom of TR 213 to identify the level at which the body rested. Once this level was confirmed, the upper fill was removed with a backhoe to within a few centimeters of the burial. The fill from this level to the base of the pit was excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The pit consisted of a vertical main shaft with an alcove burial chamber. The end of the main shaft was removed by the backhoe trench, but the length could not have exceeded 2.34 m. The width was 0.90 m and the depth was 0.84 m. The alcove was carved into the calcic soil on the south side and at the base of the main shaft. Because the main shaft had been dug into loose, unconsolidated sands and gravels, the presence of a bench could not be determined. No fragments of cribbing elements were observed. Four to six small boulders had been placed in the upper fill of the burial pit at the extreme western end. These rocks would have protruded above the contact of the cultural and gravelly loam horizons and may have been visible from the level of the prehistoric surface from which the burial originated.

Burial Fill

The burial fill was a gravelly sand derived from the unconsolidated channel deposits into which the burial had been dug. The burial pit originated at a level near the contact of the cultural horizon (Stratum II) and the gravelly loam (Stratum III). The unconsolidated channel deposit in which the burial was interred was associated with the erosional episode that scoured the surface of the calcic horizon and started the depositional cycle that formed the gravelly loam deposit. The channel penetrated the calcic horizon (Stratum IV), which formed the southern side of the burial.

Burial Treatment

The body of this individual was laid on his back in the burial chamber along an east west axis with the head to the east (96° E), facing upward. The legs were extended to the west and the arms were laid alongside the body with the palms turned upward. Five ceramic vessels were placed in the grave (see Table 6). A large Snowflake Black-on-white jar (V 72) was set just to the right of the head, and a large Salado Red Corrugated bowl (V 14) was placed upright over the right elbow. A small Salado Red Corrugated bowl (V 42)

was placed near the left knee, and a Salado Red Corrugated bowl (V 15) rested on the lower right leg. The final vessel was a small red plain jar (V 71) placed on the right foot. All vessels were set upright in the grave, except V 42, which was on its side.

Associated Features

Feature 108 was found in a group of burials and extramural features located within the northeastern part of the compound adjacent to the existing roadway. Feature 108 was located outside of the compound, about 2 m north of Features 190 and 204. Feature 108 did not intrude any other features, and none intruded into it. Feature 93, an adobe-lined pit, was located immediately south of and 1 m above the originating elevation of the burial shaft.

Feature 137

Grid coordinates (m): N 9100.0, E 517.8
Burial type: Type 1b (alcove chamber) inhumation
Date: Miami/Roosevelt phase, based on ceramics
Burial pit dimensions: 1.71 by 0.77 m and 1.32 m deep
Burial pit orientation: 95° E
Burial orientation: 81° E
Sex: male
Age: 45–55 years

Excavation Methods

This burial (Figure 85) was exposed during mechanical stripping of Stratum II to locate and identify features associated with the upper cultural horizon in the area northeast of the compound. The feature was first observed as an area of mixed calcic soil and grayish brown gravelly loam. The feature outline, however, was not clearly identifiable until the gravelly loam was mechanically removed to the level of the calcic horizon. The upper portion of the burial fill was removed at this time, and artifacts were judgmentally sampled. The lower fill was removed in two levels. The first level was excavated to the top of the associated funerary items, and the fill was screened through 1/8-inch-mesh hardware cloth. The second level extended down to the base of the main shaft and into the alcove chamber; this level was also screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The burial pit consisted of a vertical main shaft with an alcove burial chamber along the north side. The main shaft was irregularly shaped and measured 1.71 m long, 0.77 m wide, and 1.16 m deep. The burial chamber had been carved

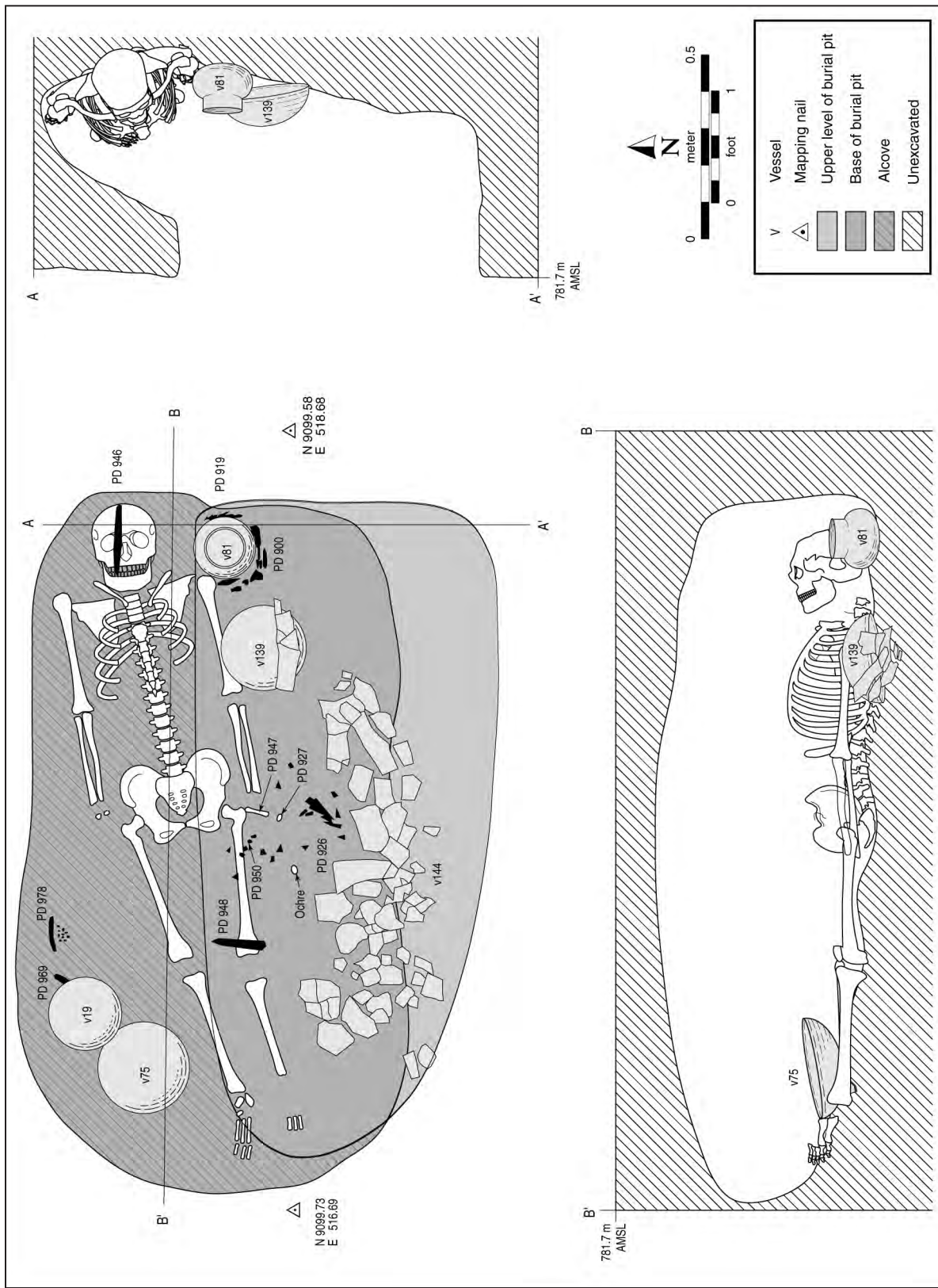


Figure 85. Burial Feature 137 at the Vegas Ruin (405/2012).

into the calcic soil at the base of the north wall. This chamber measured 1.76 m long, 0.86 m wide, and 0.50 m high. The floor of the burial chamber was 0.16 m deeper than the floor of the main shaft, resulting in a low bench along the south side of the burial chamber. No remains of cribbing elements were observed.

Burial Fill

The fill derived from the deposits and soils in which the grave was interred. It consisted of a heterogeneous mixture of brown sandy loam and light brown clayey silt, calcic soil with gravel and cobble inclusions. Several fragments of fire-cracked rocks were also observed in the fill; these derived from Archaic period Feature 159, which was partly disturbed by the grave pit. The burial pit originated near the contact of the cultural horizon (Stratum II) and the gravelly loam (Stratum III). The pit penetrated the underlying calcic horizon (Stratum IV) and ended in the upper part of the unconsolidated sands and gravels (Stratum V).

Burial Treatment

This adult male was laid in the burial chamber on his back along an east–west axis with the legs extended to the west and the head to the east (81° E), facing upward. The arms were laid alongside the body with the hands probably turned palms upward. Three clusters of burial artifacts were recovered (see Table 6). The first cluster, placed around the head of the individual, included a red plain jar (V 81) set upright above the left shoulder, a bone awl or hairpin (PD 946) lying across the face, and a fragment of bone from a deer-sized mammal found against the red plain jar (PD 919). Several lithic flakes (PD 900) were also recovered from around the jar.

The second group of items was placed along the left side of the body. A Salado Red Corrugated bowl (V 139) was placed south of the left arm. A large Salado Red Corrugated jar (V 144) was broken and scattered to the left of the body. Between the scattered sherds of this vessel and the left hip was a cluster of artifacts that included 21 projectile points (PD 926), 1 quartz crystal (PD 927), 1 bone awl (PD 947), 1 small lump of ochre and 4 resin balls (PD 950). A total of 24 projectile points were found in this burial. All but 1 of the arrow points were triangular, side-notched points typical for the time period; the exception was 1 large San Pedro dart point. Most intriguing were 4 small spherical nodules found above the upper left leg. These nodules had a powdery white exterior coating surrounding an amber colored semi-translucent substance, which we speculated at the time of discovery may have been plant resin. One large bone awl with a perforation (PD 948) was found above the left knee.

The third cluster was found north of the right lower leg and included a Salado Red Corrugated bowl (V 75), a Leupp Black-on-white bowl (V 19), a spatulate bone awl (PD 969), and portions of a turtle carapace (PD 978). Both of the bowls were set upright. The bone awl had a broad, blunted point and was resting partly under the white ware bowl. Particularly interesting was the turtle carapace. A cluster of small, pinkish quartz pebbles were found in direct association with the carapace and were unlike any of the rocks found in the vicinity of this site. The carapace and pebbles were most likely used as a rattle.

Associated Features

Feature 137 was part of a group of scattered burials located in the northeastern corner of the compound and extending to the north outside of the compound. Feature 137 was located over 3 m north of the compound about 1 m northwest of Feature 108, another burial. Feature 137 intruded through part of Feature 159, a pile of fire-cracked rock associated with an Archaic period hearth embedded in the calcic soil horizon. The fire-cracked rock in the fill of this burial probably derived from this Archaic feature. Additional angular rocks and ash and charcoal-stained soil were visible in the back wall and roof of the burial chamber.

Feature 140

Grid coordinates (m): N 9105.8, E 520.4
Burial type: Type 2 (central chamber) inhumation
Date: Miami/Roosevelt phase, based on ceramics
Burial pit dimensions: 2.00 by 0.90 m and 1.14 m deep
Burial pit orientation: 79° E
Burial orientation: 76° E
Sex: female
Age: 40+ years

Excavation Methods

This grave (Figure 86) was first observed during mechanical stripping to locate and define features associated with the upper cultural horizon in the northern part of the site. The presence of the grave was indicated by the calcic soil present in the upper burial fill. The outline of the pit, however, was not distinct until the gravelly loam was removed during the mechanical stripping to locate and identify graves. The burial fill below this level was excavated by hand in two levels. The upper level, which was judgmentally sampled, ended at a level coincident with the top of the funerary vessels. The fill from this level to the base of the pit was excavated as the second level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

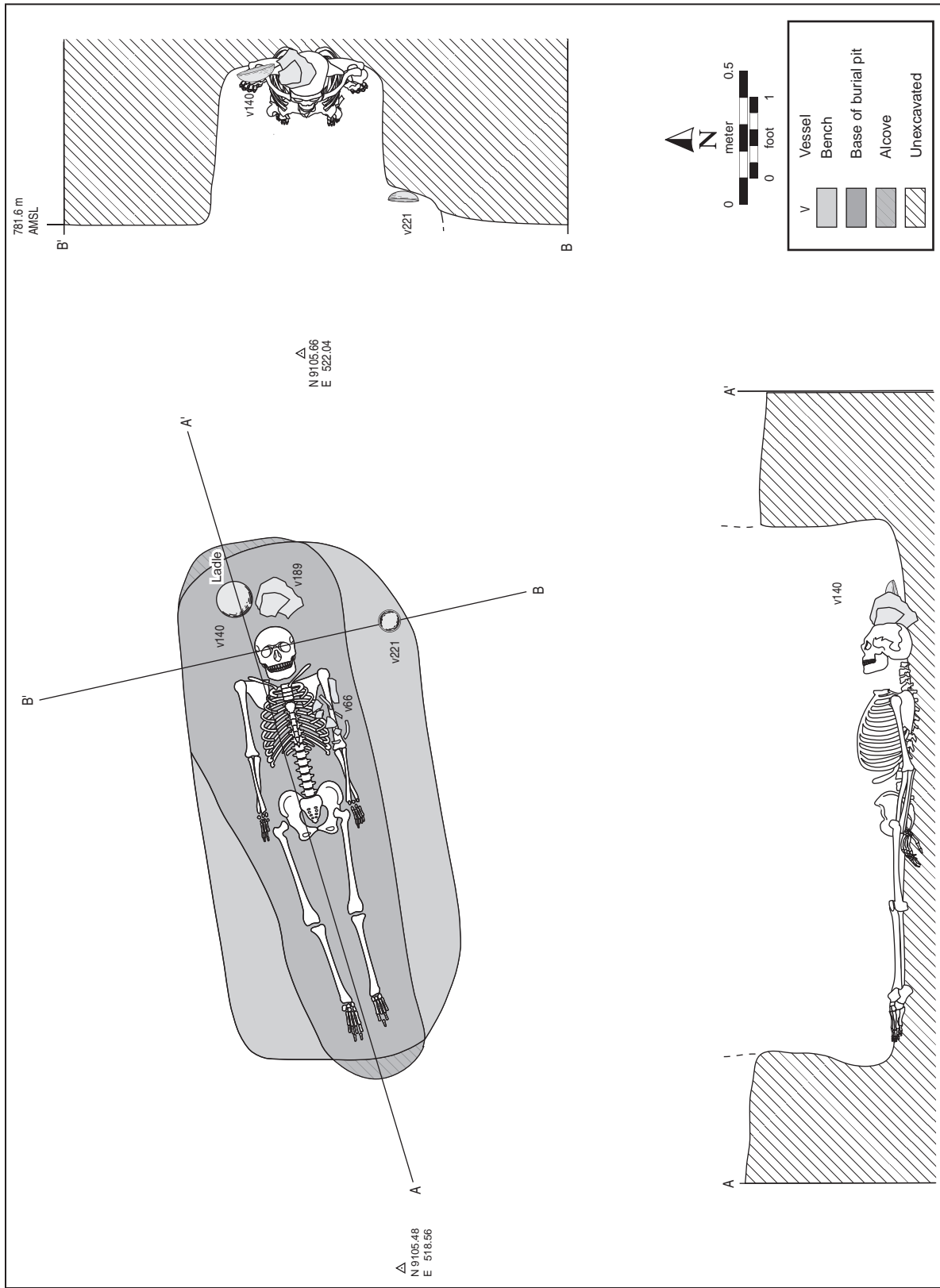


Figure 86. Burial Feature 140 at the Vegas Ruin (405/2012).

Burial Pit

The grave consisted of a straight-sided pit with rounded ends with a narrower burial chamber centered laterally within the larger pit. The main shaft measured 2.00 m long, 0.90 m wide, and 0.66 m deep. The lower burial pit was an elongated pit measuring 2.07 m long, 0.66 m across at the widest point, and 0.48 m deep. There was a bench along the entire left side of the grave and along approximately two-thirds of the right side. Shallow alcoves were carved into the east, west, and north sides of the grave. The eastern, northern, and western walls of the burial chamber were slightly undercut 0.02 m, 0.03 m, and 0.07 m, respectively. No remains of cribbing elements were observed.

Burial Fill

The fill was a brown, gravelly sandy loam with considerable admixture of tan calcic soil. This fill was probably derived from the deposits and soils into which the grave was dug. The burial pit originated at a level near the contact of the upper cultural horizon (Stratum II) and the gravelly loam (Stratum III) and ended in the calcic horizon (Stratum IV).

Burial Treatment

The body of this woman was laid in the burial chamber on her back along an east–west axis with the legs extended to the west and the head toward the east (76° E). The head was tilted forward so that it faced to the west. The arms were placed alongside the body with the hands turned with the palms downward. Four ceramic vessels had been placed in the grave as offerings (see Table 6). A small red plain bowl (V 221) was placed upright on the southern bench to the left of the head. A red plain ladle (V 140) was placed above and to the right of the head. Part of an obliterated-corrugated red plain jar (V 189) was placed immediately above the head. Finally, a fragmented red plain bowl (V 66) was placed over the left upper arm.

Associated Features

Feature 140 was among the scatter of burials in the northern part of the site. This scatter was divided into a northern and southern group. Feature 140 was the southernmost burial in this group. Features 145 and 175 are less than 1 m to the north, whereas the Archaic period hearth area, Feature 159, and another group of burials were located about 4 m to the south.

Feature 141

Grid coordinates (m): N 9111.8, E 519.4
Burial type: Type 1b (alcove chamber) inhumation

Date: Miami/Roosevelt phase

Burial pit dimensions: 2.02 by 1.14 m and 1.09 m deep

Burial pit orientation: 293° E

Burial orientation: 280° E

Sex: female

Age: 41–50 years

Excavation Methods

This burial was found while stripping in the area at the northern edge of the site. Once the burial pit outline was defined, a backhoe was used to excavate the first level, and the upper fill was judgmentally sampled for artifacts. Upon reaching a reconstructible vessel, we started with hand excavation. Two levels were excavated by hand, and both were screened through 1/8-inch-mesh hardware cloth (Figure 87). Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The grave consisted of a generally vertical main shaft with an alcove burial chamber along the north side. The outline of the main burial pit was somewhat irregular. It appears that the north wall of the pit and the roof of the burial chamber sloughed soon after the interment. The main shaft measured 2.02 m long and 0.74 m deep. The width was estimated at about 0.85 m. The floor of the burial chamber was deeper than the main shaft, resulting in an elevated bench along the south side. The burial chamber measured 1.97 m long, 0.86 m wide, and 0.62 m high. The floor of the alcove was 0.35 m deeper than the main shaft, resulting in a bench along the side of the burial chamber. At the widest extent, the alcove undercut the rim of the pit by about 0.35 m. No evidence of cribbing elements was observed.

Burial Fill

The burial fill was a mixed brown sandy loam and tan calcic soil containing numerous gravels and medium-sized cobbles. This material was derived from the deposits and soils into which the grave was dug. The burial originated at a level near the contact of the culture-bearing horizon (Stratum II) and the gravelly loam horizon (Stratum III). Much of the sands and gravels in the fill derived from a channel deposit associated with Stratum III. The bench and burial chamber were carved into the calcic soil horizon (Stratum IV) underlying the gravelly loam.

Burial Treatment

The body of this woman was laid in the alcove on her back along an east–west axis with the legs extended to the east and the head toward the west (280° E). The head faced

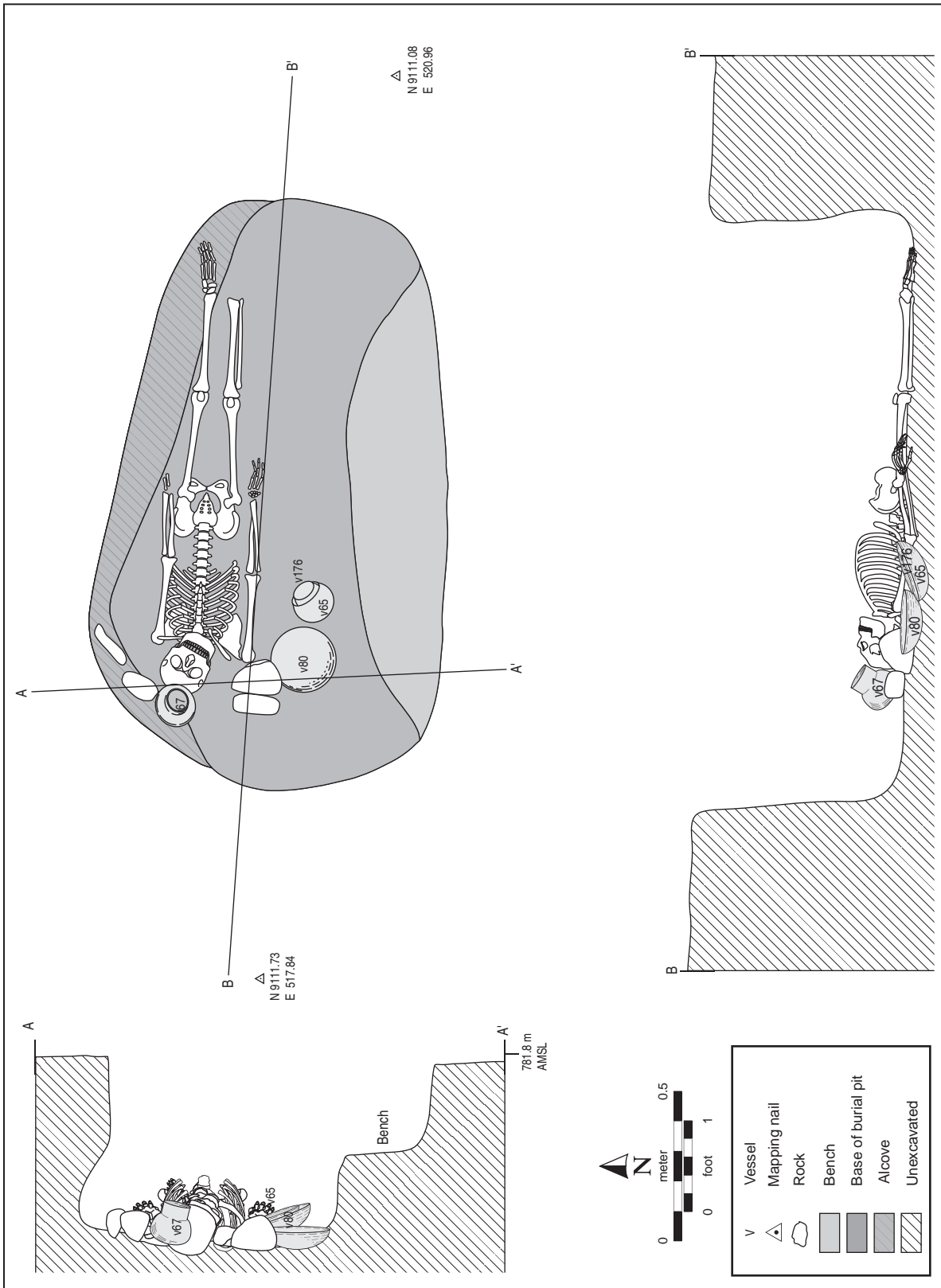


Figure 87. Burial Feature 141 at the Vegas Ruin (405/2012).

upward but was tilted slightly to the left. The arms were laid alongside the body with the hands laying with the palms upward. Four ceramic vessels were placed in the grave (see Table 6). A red plain bowl (V 176) nested inside a Salado Red Corrugated bowl (V 65) were placed on their side near the upper right arm. Another Salado Red Corrugated bowl (V 80) was placed upright near the right shoulder. A small red plain jar (V 67) was placed in the alcove above the head. A shell pendant that was probably associated with the burial was recovered from the lower fill, but its precise location was not recorded. Two cobbles were placed on each side of the cranium (see Figure 87).

Associated Features

Feature 141 was at the center of a scatter of burials on the northern edge of the settlement southeast of a concentration of extramural features. Features 12 and 142, two other burials, were located within less than 1 m. In addition, three small extramural pit features, Features 110, 111, and 112, overlay this burial.

Feature 144

Grid coordinates (m): N 9101.9, E 524.0
Burial type: Type 1a (alcove chamber) inhumation
Date: Miami/Roosevelt phase, based on ceramics
Burial pit dimensions: 1.76 by 0.72 m and 0.65 m deep
Burial pit orientation: 274° E
Burial orientation: 264° E
Sex: female
Age: 55+ years

Excavation Methods

The grave (Figure 88) was discovered during mechanical stripping operations to locate and identify graves at the northern edge of the site. The grave was not recognized until cribbing elements and vessels were exposed by backhoe stripping. The upper fill was removed during mechanical stripping. The fill from this level to the base of the pit was hand excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The grave consisted of a roughly subrectangular main shaft with an alcove burial chamber along the north side. The main shaft measured 1.76 m long, 0.72 m wide, and 0.65 m deep. The alcove was carved into the base of the north and west walls. The alcove measured 1.80 m long, 0.66 m high, and extended 0.37 m beyond the rim of the main shaft. The floor of the alcove was at the same level as the bottom of

the main shaft. Cribbing elements were observed at a level approximately 0.68 m above the floor of the grave.

Burial Fill

The fill was a brown sandy loam with gravels and small cobbles. These materials were derived from the deposits and soils into which the grave was dug. The burial pit probably originated at a level near the contact of the culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III). The burial pit intruded through the gravelly loam and into the calcic horizon (Stratum IV) and ended in the upper part of the unconsolidated channel deposits (Stratum V).

Burial Treatment

The body of this woman was laid on her back along an east–west axis with the legs extended to the east and the head to the west (264° E), facing upward. The left leg was slightly flexed with the knee turned outward. The right arm was laid alongside the body with the hand resting, palm downward, on the right hip. The left arm was also laid alongside the body but was bent at the elbow so that the hand would have rested on the lower abdomen. The body was placed almost entirely within the alcove. Six ceramic vessels were associated with the body (see Table 6). Two red plain bowls (Vs 21 and 168) and one Salado Red Corrugated bowl (V 64) were recovered from the fill of the main shaft at a level just below the cribbing elements. Vs 21 and 168 were inverted and V 64 was resting on its side. Two Salado Red Corrugated jars (Vs 92 and 93) and one Snowflake Black-on-white bowl (V 20) were set upright in the alcove surrounding the head. The jars were placed on either side of the head, and the bowl was placed near the left shoulder.

Associated Features

Feature 144 was part of the scatter of burials near the northeastern corner of the compound. Feature 144 was at the northern edge of this group about 5 m north of the compound and adjacent to the existing roadway. Feature 166, another burial, was located a few centimeters to the southwest and Feature 187 is less than 1 m to the northeast. It did not intrude any other features and no other features intruded Feature 144.

Feature 145

Grid coordinates (m): N 9108.1, E 520.6
Burial type: Type 1b (alcove chamber) inhumation
Date: Miami/Roosevelt phase, based on ceramics
Burial pit dimensions: 2.04 by 1.00 m and 1.30 m deep

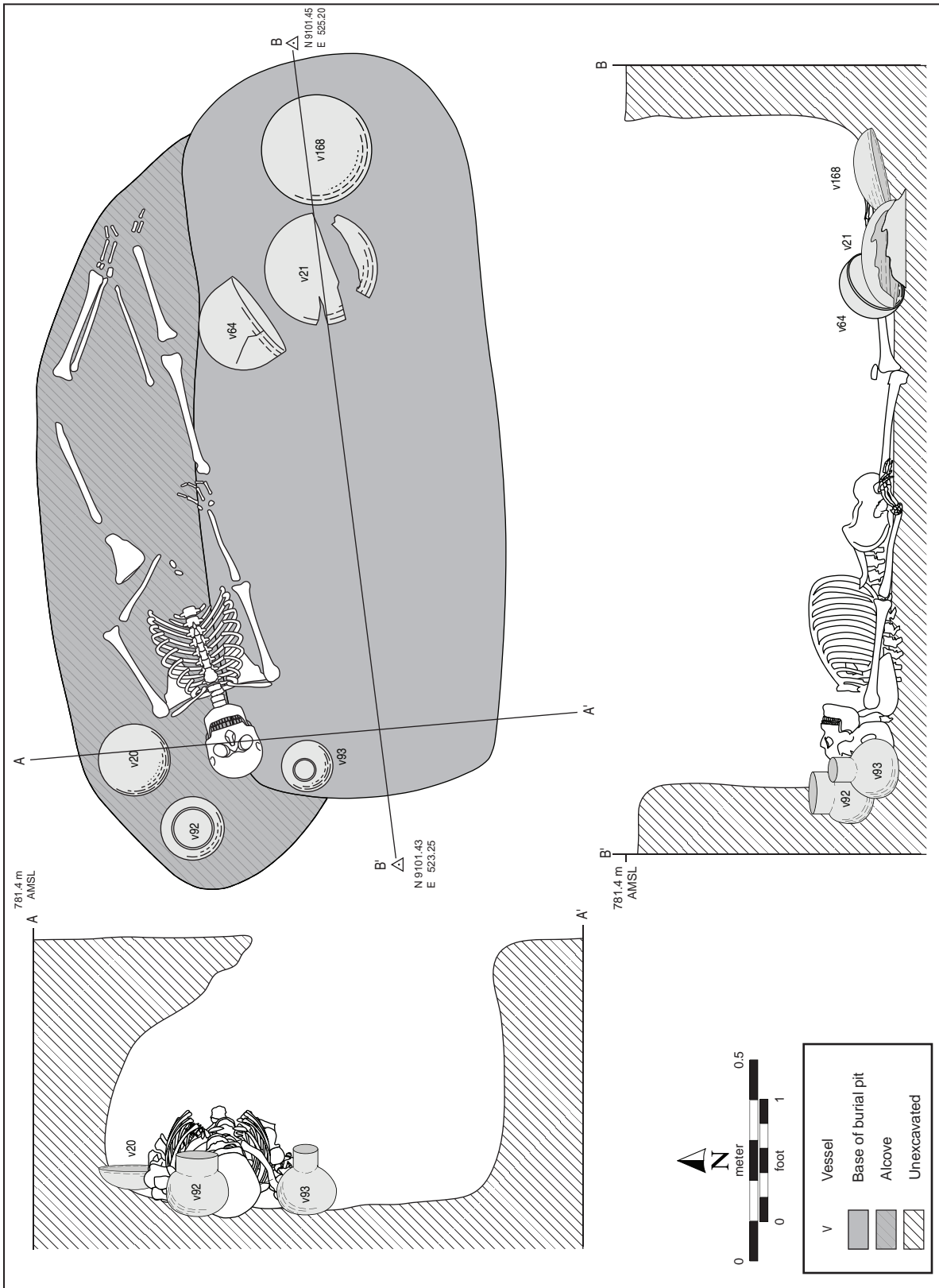


Figure 88. Burial Feature 144 at the Vegas Ruin (405/2012).

Burial pit orientation: 85° E

Burial orientation: 97° E

Sex: male

Age: 41–50 years

Excavation Methods

This grave (Figure 89) was first observed at the level of the upper occupational surface as a large irregular area of calcic soil during backhoe stripping. The outline was clear at the contact of the gravelly loam and the calcic horizon. The upper part of the shaft was excavated and judgmentally sampled. The remaining fill was removed by hand and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The grave consisted of a generally vertical, subrectangular main shaft with an alcove burial chamber on the north side. The main shaft measured 2.04 m long, 1.00 m wide, and 1.05 m deep. The burial chamber was a parallel-sided alcove carved into the base of the northern, eastern, and western walls of the main shaft. This chamber measured 2.22 m long, 0.85 m wide, and was 0.34 m high. The floor of the alcove was 0.25 m below the bottom of the main shaft, resulting in a bench along the south side of the burial chamber. Three large cribbing elements were observed in the burial fill from the level of mechanical stripping to the level of the bench. Particularly interesting was one large continuous element that began beneath what appeared to be a painted basket (see below) approximately 0.70 m above the base of the burial chamber and ended just below the surface of the bench. The angle and placement suggested that the burial chamber may have been covered by a “lean-to” type of roof supported by the north wall and the bench.

Burial Fill

The fill was a mixture of brown sandy loam and tan calcic soil derived from the deposits and soils into which the grave was dug. The pit originated at a level near the contact of the culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III). The burial chamber had been carved into the base of the calcic horizon (Stratum IV) and ended in the upper part of the unconsolidated sands and gravels (Stratum V).

Burial Treatment

The body of this man was laid in the burial chamber along an east–west axis with his legs extended to the west and the head to the east (97° E), facing upward. His arms were laid

alongside the body with the right hand turned with the palms downward and the left hand resting on the left hip. This person was wearing a strand of six *Conus* shells on the lower right arm (PD 998). Four ceramic vessels were placed in the grave (see Table 6). At the level of discovery in the fill of the main shaft, a circular area of thick red ochre paint was found. It was clear that this was a painted container, perhaps a basket or a wooden vessel (PD 957). None of the structural materials remained, but a basket-weave pattern was observed on the back of some of the paint chips. The interior and exterior of this container was coated with a thick red-ochre pigment. The interior was further decorated with blue (turquoise or azurite) and green (malachite) paints. No characteristics, other than colors, of the design were detectable. Additional layers of red pigment were observed beneath the painted container that may have been additional items, or simply fragments of the container that collapsed into the grave after it had decomposed and the cribbing roof collapsed. The ceramic vessels were placed in the burial chamber around the body. A small red plain jar (V 86) was set upright in the alcove just above the head. Two red plain bowls (Vs 82 and 177) and a large sherd (PD 1085) were found in the fill above the lower left leg and foot. One of the bowls was in an upright position and the other was tilted on its side. Another red plain bowl (V 16) was found slightly tilted on its side near the bottom of the grave near the left foot. Red ochre was found in the abdominal area and over and around the lower right arm.

Associated Features

Feature 145 was part of the scatter of burials in the northernmost part of the settlement. Feature 145 was located in the southern part of this group between Features 12 and 140. Feature 175, representing a much smaller burial pit, was located a few centimeters to the southeast. Feature 145 did not intrude upon any other features, and it was not, in turn, intruded by any other features.

Feature 146

Grid coordinates (m): N 9109.8, E 516.0

Burial type: Type 1a (alcove chamber) inhumation

Date: Miami/Roosevelt phase, based on ceramics

Burial pit dimensions: 1.72 by 0.81 m and 0.97 m deep

Burial pit orientation: 105° E

Burial orientation: 97° E

Sex: male

Age: 25–30 years

Excavation Methods

This burial (Figure 90) was discovered during backhoe stripping operations to locate and identify graves. The outline

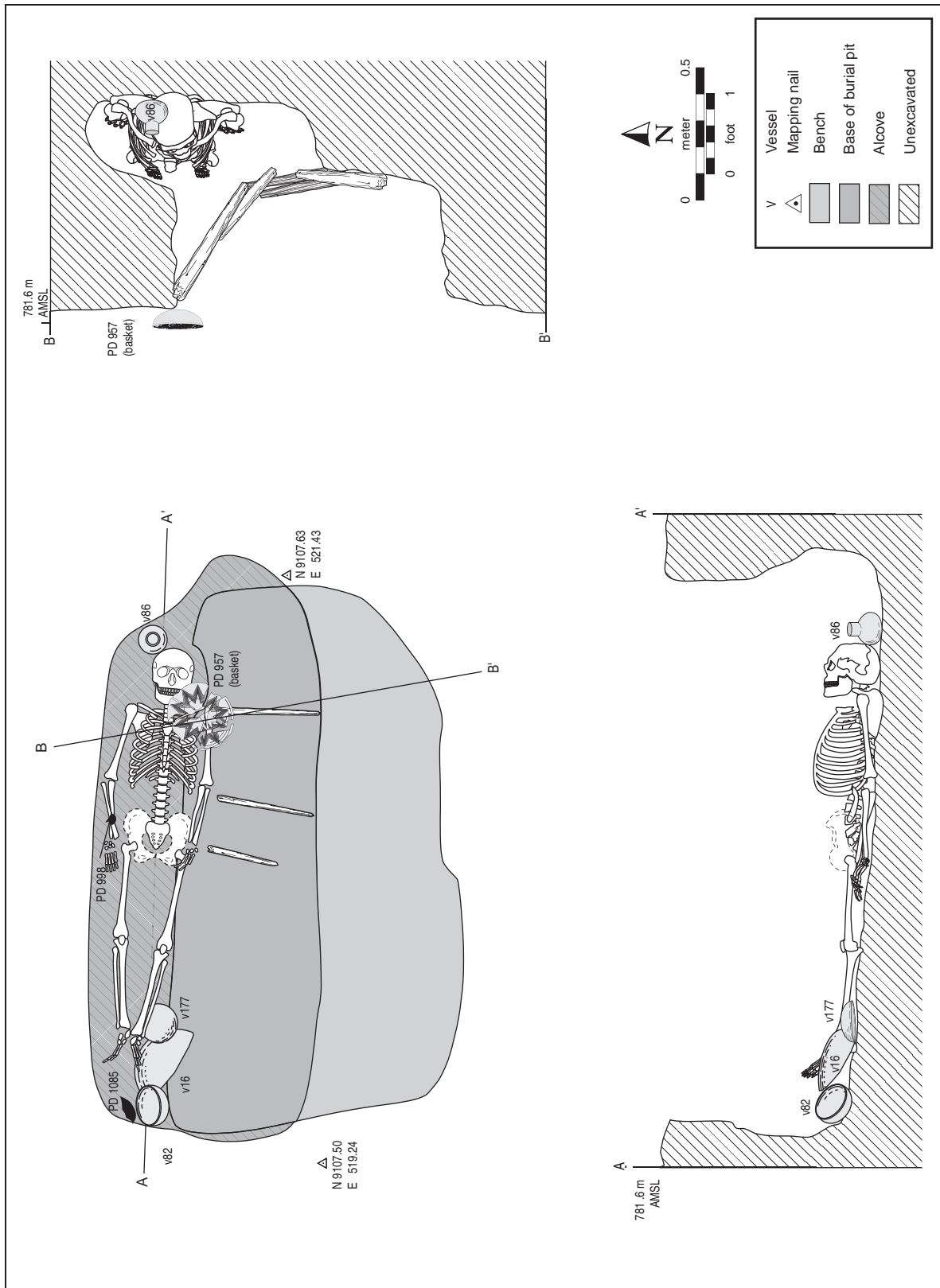


Figure 89. Burial Feature 145 at the Vegas Ruin (405/2012).

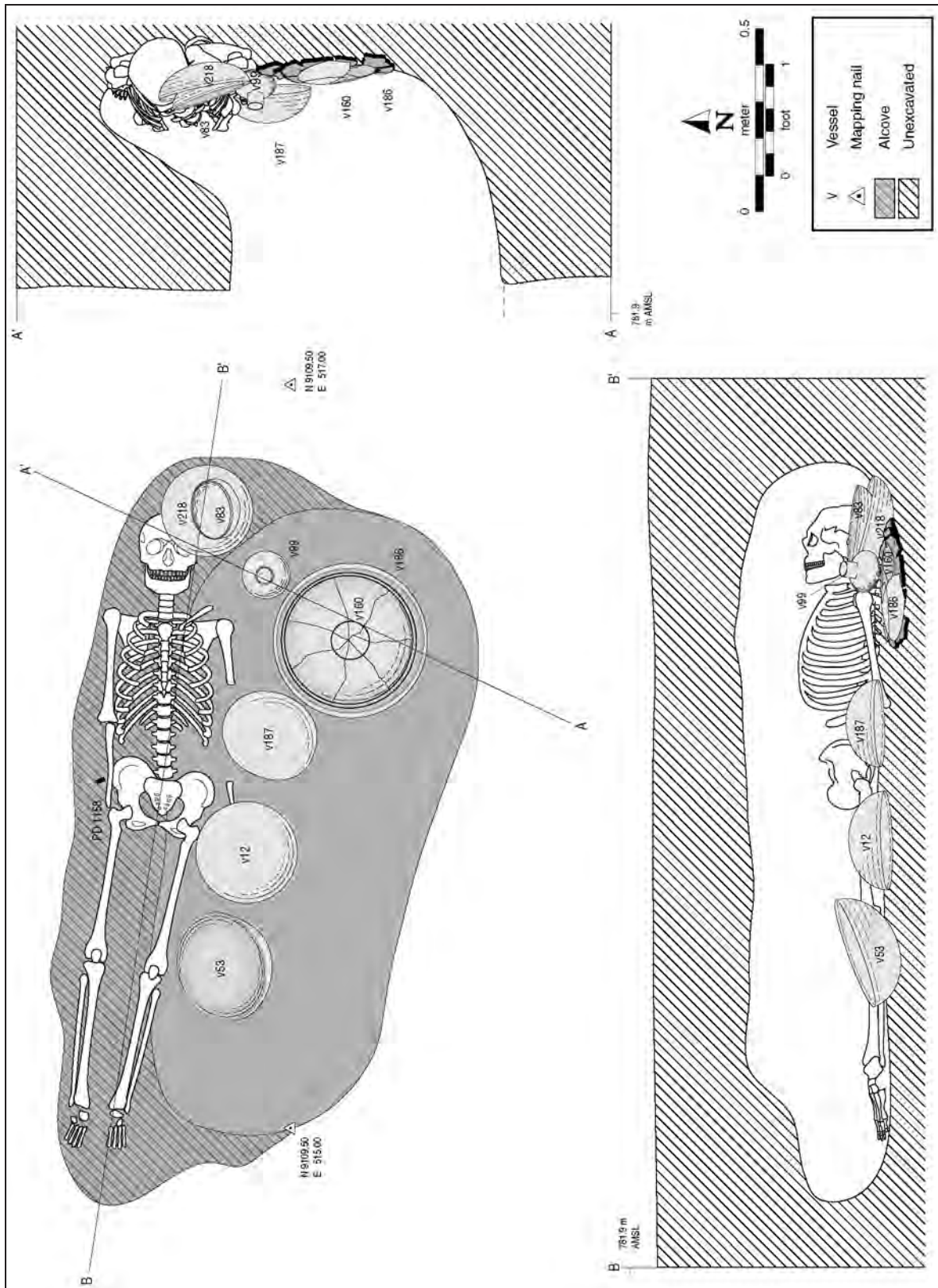


Figure 90. Burial Feature 146 at the Vegas Ruin (405/2012).

was evident in the top few centimeters of the calcic horizon. Approximately 0.40 m of the upper burial fill was removed during these excavations. The fill from the stripping level to the top of the funerary offerings was hand excavated and judgmentally sampled. The fill from this level to the base of the pit was excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The grave consisted of an elongated, ovoid main pit and an alcove burial chamber to the north. The main shaft measured 1.72 m long, 0.81 m at its widest point, and 0.97 m deep. The burial chamber was created by carving an alcove into the base of the northern wall. This alcove was 2.05 m long, 0.39 m high, and extended up to 0.31 m beyond the rim of the main shaft. The floor of the burial chamber was at the same level as the main shaft. Cribbing elements were recovered in the fill between 0.09 m and 0.53 m above the floor of the pit.

Burial Fill

The fill was a brown, silty, sandy loam with gravels and some charcoal flecks. These materials derived from the deposits and soils into which the grave was dug. The burial originated from a level near the contact of the culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III). The burial pit had intruded into a channel deposit associated with the erosional event that started the accumulation of the gravelly loam. The lower portion of the burial was carved through the calcic horizon (Stratum IV) and ended in the upper part of the unconsolidated channel deposits (Stratum V).

Burial Treatment

The body of this man was laid on his back in the alcove along an east–west axis with the legs extended to the west and the head to the east (97° E), facing upward. The arms were laid alongside the body; the right hand was turned palm downward beneath the right hip, and the left hand was turned palm upward. An argillite tubular bead (PD 1158) was found near the right wrist, which suggests that this may have been part of a bracelet worn by the man (see Table 6). Eight ceramic vessels were placed in the grave with the body. A Walnut (Style B) Black-on-white bowl (V 218) containing a smaller red plain bowl (V 83) was placed in the alcove with the body over the left side of the head. The six other vessels were placed along the left side of the body: one small Snowflake Black-on-white jar (V 99) was placed near the shoulder to the side of the head; two nested red

plain bowls (Vs 186 and 160) were placed by the upper arm; one red plain bowl (V 187) was placed near the elbow; one Walnut (Style B) Black-on-white bowl (V 12) was placed by the hip over the hand; and one red plain bowl (V 53) was placed near the knee. All of the vessels were set upright except for Vs 12 and 187 which were inverted. Heavy deposits of red ochre were observed on the arms, pelvis, and upper legs.

Associated Features

Feature 146 was part of the scatter of burials on the northern edge of the settlement near a concentration of extramural pits. Feature 146 was somewhat isolated from the other burials in this group of burials and was several meters from Features 12, 141, 142, 145, and 166. Feature 146 did not intrude upon any other features, and none intruded into it.

Feature 165

Grid coordinates (m): N 9091.2, E 518.8

Burial type: Type 2 (central chamber) inhumation

Date: Miami/Roosevelt phase, based on ceramics

Burial pit dimensions: 1.13 by 0.80 m and 0.44+ m deep

Burial pit orientation: 103° E

Burial orientation: 89° E

Sex: indeterminate

Age: 6–9 months

Excavation Methods

This burial pit (Figure 91) was observed during backhoe stripping operations to locate and identify graves. Once the outline was defined, the burial fill was removed in two levels. The upper level began at the point of discovery to a level coincident with the top of the cranium. This level was judgmentally sampled. The lower level encompassed fill around the body and was excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The burial pit consisted of a larger, oval pit with a narrower subrectangular laterally centered burial chamber. The main pit measured 1.13 m long, 0.81 m wide, and over 0.4 m deep. The burial chamber measured 0.82 m long, 0.31 m wide, and 0.08 m deep. The burial chamber was placed at the extreme eastern end of the larger pit, creating a low bench around the sides and foot of the grave. The sidewalls of the main pit sloped slightly inward. No evidence of cribbing was observed.

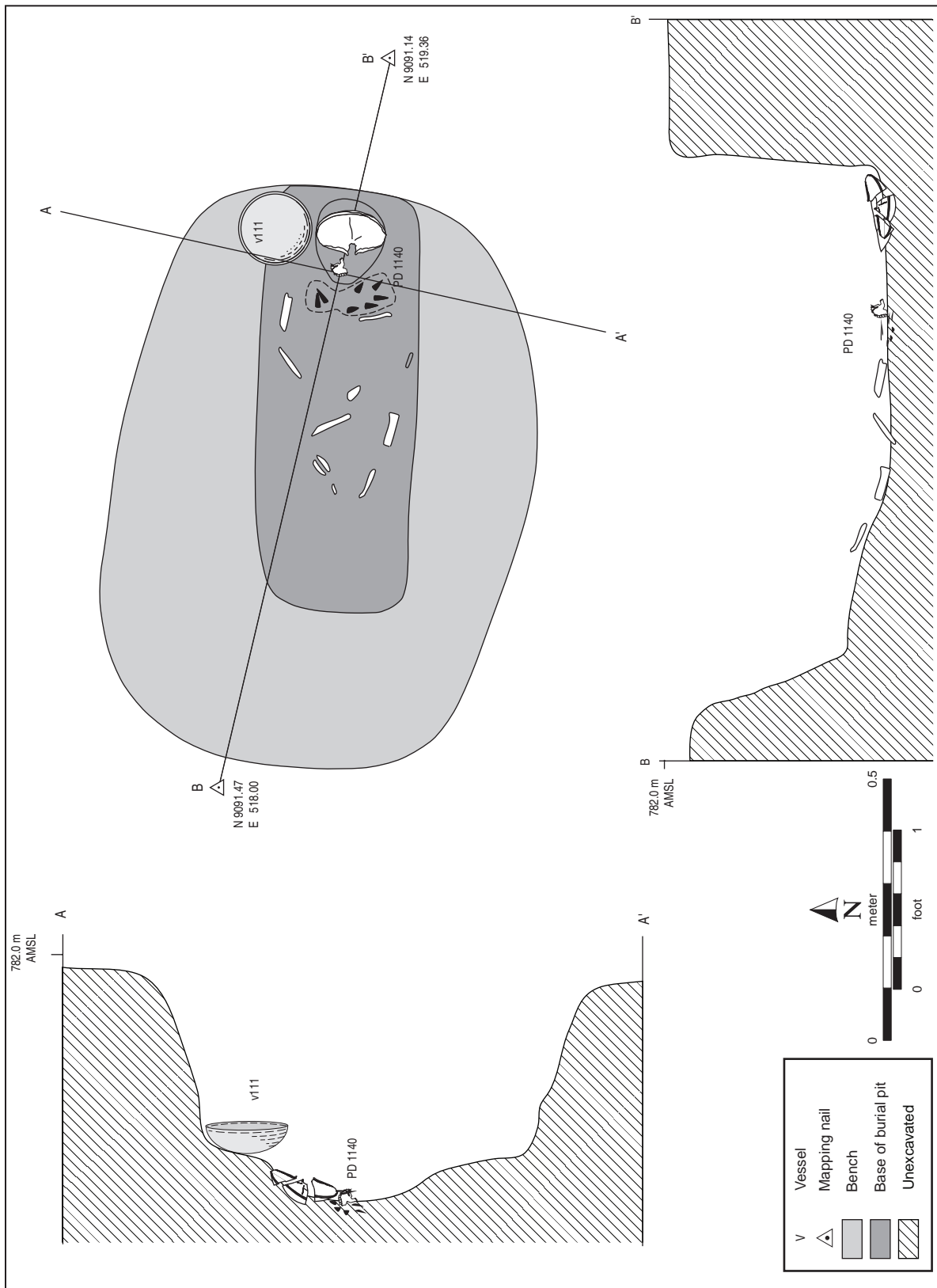


Figure 91. Burial Feature 165 at the Vegas Ruin (405/2012).

Burial Fill

The fill was a firm brown sandy loam with fine to medium gravel inclusions and some charcoal flecks. These materials were a heterogeneous mixture of the cultural deposits and soils into which the grave was dug. The pit probably originated at a level near the contact of the upper cultural horizon (Stratum II) and the gravelly loam (Stratum III). The lower part of the burial pit was carved out of the calcic horizon (Stratum IV).

Burial Treatment

Although the remains of this infant were decomposed and fragmentary, it was evident that the body of the child had been laid on its back with the legs extended to the west. It appears that the right arm was laid alongside the body and was bent at the elbow so that the hand rested on the body. The left arm may have been extended along the side. The body was aligned along an east–west axis with the head at the east end (89° E). The infant was wearing a strand of seven *Turritella* shell pendants (PD 1140) around the neck when buried (see Table 6). A red plain bowl (V 111) was set upright in the grave just to the right of the head. A light stain of red ochre was observed on the right upper arm.

Associated Features

Feature 165 was located in the northeastern portion of the compound. It appeared to be part of a scatter of burials that extended from the interior of the compound to the north along the edge of the existing roadway. Features 190 and 204 were the closest burials, located about 2 m to the northeast. Although Feature 165 was located among a concentration of extramural pit features in this part of the compound, it did not intrude upon any other feature and was not intruded upon.

Feature 168

Grid coordinates (m): N 9100.6, E 522.9

Burial type: Type 3 (side chamber) inhumation

Date: Miami/Roosevelt phase, based on ceramics

Burial pit dimensions: 1.91 by 0.94 m and 0.32+ m deep

Burial pit orientation: 264° E

Burial orientation: 266° E

Sex: female

Age: 50+ years

Excavation Methods

This burial (Figure 92) was discovered along the edge of the existing roadway northeast of the compound during mechanical stripping operations to locate and identify graves. One of the associated funerary vessels was exposed during

these backhoe excavations. An unknown amount of the upper fill of the grave had been removed during the mechanical stripping. The outline of the grave became apparent in the top few centimeters of the calcic horizon. The remaining fill was excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The burial pit consisted of a large, ovoid pit with a narrower burial pit along the south side. The grave measured 1.90 m long and 0.94 m wide. The lower burial pit was an elongated, elliptical pit measuring 1.90 m long, 0.57 m wide, and 0.13 m deep. The north side of the grave was stepped inward to the lower burial pit, giving the appearance of a step in the northwest corner of the grave and then a long bench along the north side of the lower burial pit. No evidence of cribbing was observed.

Burial Fill

The burial fill was a mixed unconsolidated sand and a calcic clayey silt derived from the deposits and soils into which the grave was dug. The fill was hard and compact possibly resulting from activities associated with the construction of SR 188. The burial probably originated at a level at or above the contact of the culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III). The lower part of the burial pit was carved partly into a channel deposit associated with the gravelly loam horizon on the south side and the calcic horizon (Stratum IV) on the north side.

Burial Treatment

The body of this woman was laid in the lower burial chamber along an east–west axis with her legs extended toward the east and the head to the west (266° E). The body was turned slightly onto its right side so the head faced to the right. The arms were laid alongside the body. There was some dark, reddish brown discoloration of the skeletal elements, but it was unclear if this was owing to a layer of red ochre over the body or simply iron staining from the soil. Three ceramic vessels were placed in this grave with the body (see Table 6): a red plain jar (V 85) was set near the left hip over the hand; a red plain bowl (V 87) was placed on the surface of the bench near the left shoulder; and a large red plain bowl (V 13) was inverted over the feet. The jar and the bowl by the shoulder were tilted on their sides.

Associated Features

Feature 168 was part of the scatter of burials along the edge of the roadway at the northeastern corner of the compound.

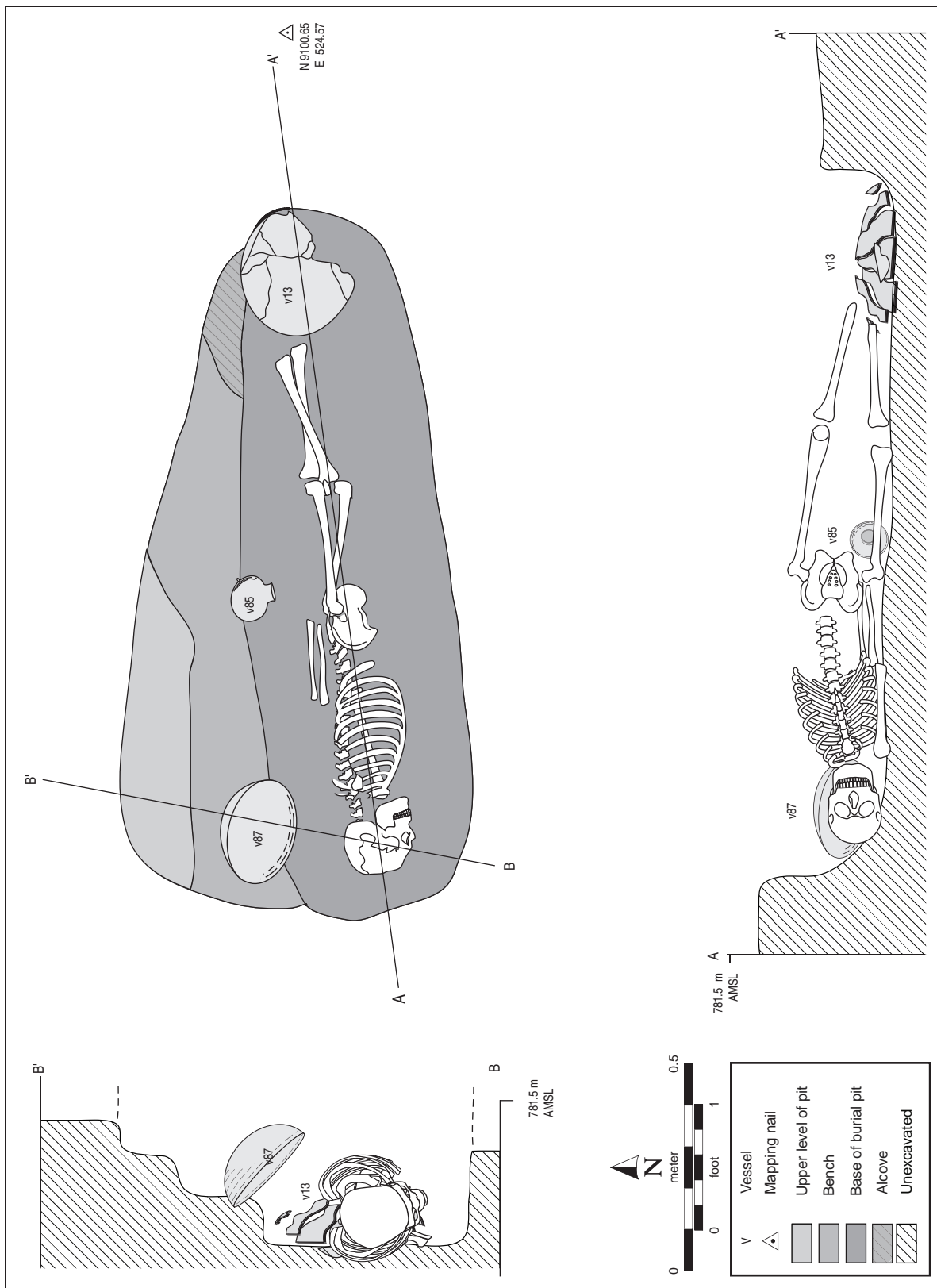


Figure 92. Burial Feature 168 at the Vegas Ruin (405/2012).

Feature 168 was near the northern edge of this group about 5 m north of the compound. Feature 144, another burial, lay immediately to the northeast. Feature 144 did not intrude any other feature and was not intruded upon by any feature.

Feature 172

Grid coordinates (m): N 9077.5, E 506.8
 Burial type: Type 1a (alcove chamber) inhumation
 Date: Miami/Roosevelt phase, based on ceramics
 Burial pit dimensions: 1.01 by 0.53 m and 0.25+ m deep
 Burial pit orientation: 89° E
 Burial orientation: 89° E
 Sex: indeterminate
 Age: birth–3 months

Excavation Methods

This burial (Figure 93) was discovered during mechanical stripping operations to locate and identify graves in the southern part of the compound. An unknown amount of the upper portion of the grave was removed during this operation. The outline of the grave became apparent in the top few centimeters of the calcic horizon. The remaining fill was excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The grave consisted of an oval pit with an alcove burial chamber along the south side. The main pit measured 1.01 m long, 0.53 m wide, and greater than 0.25 m deep. The alcove measured 0.85 m long, 0.12 m high, and extended up to 0.10 m beyond the rim of the main pit. The floor of the main pit and the alcove chamber were at the same level. No evidence of cribbing was observed.

Burial Fill

The burial fill was a mixture of loose, poorly sorted sands, gravels, and clayey silts derived from the deposits and soils into which the grave was dug. The grave probably originated at a level near the contact of the culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III). This level approximated the interior surface of the compound. The lower portion of the grave, including the alcove, was carved into the calcic horizon (Stratum IV).

Burial Treatment

The body of this infant was laid in the bottom of the grave on its back along an east–west axis. Only the left shoulder

and arm were within the alcove. The head was to the east (89° E) and the legs were extended to the west. The arms were laid alongside the body. A red plain bowl (V 110), a red plain jar (V 171), and a Salado Red Corrugated bowl (V 190) were placed in the east end of the grave to the right of the head and upper body (see Table 6). Vs 110 and 171 were set upright on the bottom of the grave; V 190 was set on its side against the side of the grave above the plain ware bowl. Five large sherds from a plain ware jar were laid over the lower portion of the body. A rattlesnake vertebra and several sherds were placed on top of the infant's thorax (see Figure 93).

Associated Features

Feature 172 was an isolated burial located in the southern part of the compound. The only other burial in this area was Feature 185, which was another infant, located about 4 m to the northeast. Feature 172 did not intrude any other features, and none intruded upon it.

Feature 175

Grid coordinates (m): N 9107.0, E 521.5
 Burial type: Type 1a (alcove chamber) inhumation
 Date: Miami/Roosevelt phase, based on ceramics
 Burial pit dimensions: 0.70 by 0.34 m and 0.29+ m deep
 Burial pit orientation: 67° E
 Burial orientation: 73° E
 Sex: indeterminate
 Age: birth–3 months

Excavation Methods

This burial was discovered in the northern part of the site during mechanical stripping operations to locate and identify graves (Figure 94). The outline of the grave was apparent in the top few centimeters of the calcic horizon but because of its small size was not originally considered as a possible burial pit. An unknown portion of the upper fill of the grave was removed during the mechanical stripping operation. Once we identified this feature as a burial, we screened the backdirt through 1/8-inch-mesh hardware cloth. The east end of the grave was disturbed while investigating another possible grave with the backhoe. The remaining fill was hand excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The burial pit consisted of a small, elongated, oval-shaped pit with a shallow alcove along the north side. The burial pit measured about 0.72 m in length, 0.35 m in width, and

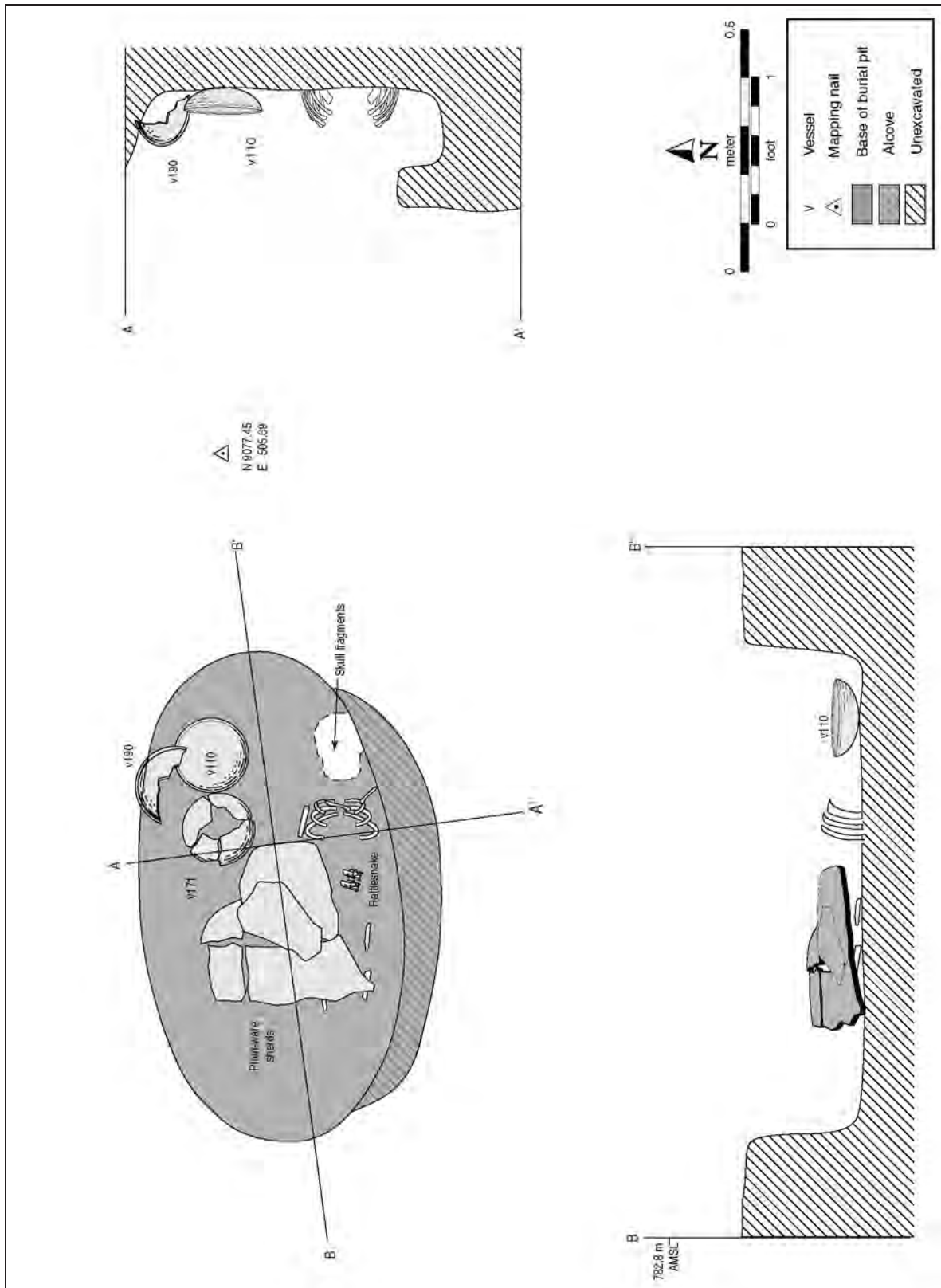


Figure 93. Burial Feature 172 at the Vegas Ruin (405/2012).

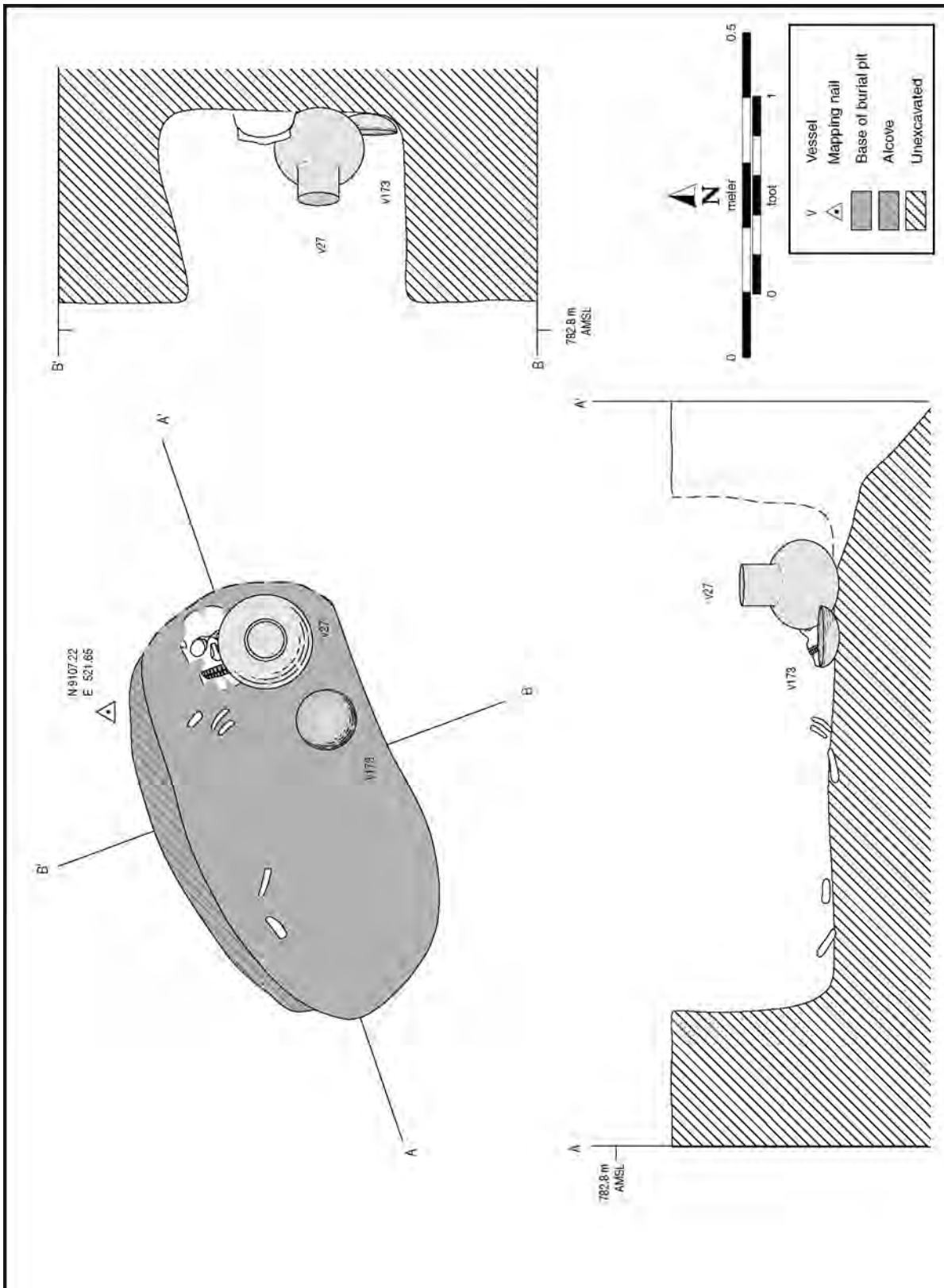


Figure 94. Burial Feature 175 at the Vegas Ruin (405/2012).

over 0.30 m deep. The length could only be estimated because of the disturbance to the east end. The alcove was approximately 0.60 m long, 0.23 m high, and extended only 0.05 m beyond the lip of the grave. No evidence of cribbing was observed.

Burial Fill

The burial fill was a dark brown clayey loam with gravels. It was slightly darker than the typical burial fill, possibly owing to the greater proportion of culture-bearing sediments. The burial probably originated at a level near the contact of the culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III). The burial pit ended within the calcic horizon (Stratum IV).

Burial Treatment

The body of this infant was laid on its back along an east–west axis with the head to the east (73° E). The legs were extended to the west. It appears that the arms may have been laid alongside the body. Two ceramic vessels were placed in the grave (see Table 6). A red plain jar (V 27) was set upright near the left side of the head. A small red plain bowl (V 173) was placed upright near the left arm.

Associated Features

Feature 175 was part of the scatter of burials at the northern edge of the settlement. This burial was near the southern end of this group almost adjacent to Feature 145, an adult burial. No other features intruded this burial or were intruded by it.

Feature 185

Grid coordinates (m): N 9079.5, E 510.7
Burial type: Type 1a (alcove chamber) inhumation
Date: Miami/Roosevelt phase, based on ceramics
Burial pit dimensions: 0.75 by 0.43 m; depth unknown
Burial pit orientation: 93° E
Burial orientation: 86° E
Sex: indeterminate
Age: 6–12 months

Excavation Methods

This burial (Figure 95) was discovered in the southeastern part of the compound during mechanical stripping operations to locate and identify graves. The outline of the grave became apparent in the top few centimeters of the calcic horizon. An unknown amount of the upper portion of the fill of the grave was removed during the stripping operation. The remaining fill was excavated as a single level and screened

through ¼-inch-mesh hardware cloth. Associated funerary items were mapped and photographed in place before removal.

Burial Pit

The grave consisted of an elongated, ellipsoidal pit with an alcove burial chamber along the south side. The main pit was 0.75 m long and 0.43 m wide. The alcove measured 0.72 m long, 0.25 m high, and extended up to 0.14 m under the main pit. The combined depth of the main pit and burial chamber was greater than 0.3 m. The floor of the main pit sloped downward gradually to the south into the alcove chamber. No evidence of cribbing was observed.

Burial Fill

The burial fill was a mixture of loose, poorly sorted sands, gravels, and clayey silts derived from the deposits and soils into which the grave was dug. The grave probably originated at a level near the contact of the culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III). This level approximates the interior surface of the compound. The lower portion of the grave, including the alcove, was carved into the calcic horizon (Stratum IV).

Burial Treatment

The body of this child was laid in the alcove on its back along an east–west axis. Most of the body was placed in the alcove. Much of the bones had been disturbed by rodent activity or had decomposed. It was clear that the head was to the east (86° E). The legs may have been extended to the west and the arms laid alongside the body. A single Salado Red Corrugated bowl (V 46) was placed along the right side of the head (see Table 6).

Associated Features

This was an isolated burial in the southeastern portion of the compound. Feature 172, another infant burial, was the only other burial in the vicinity. Feature 185 overlapped a small pit, Feature 169; it is unclear which feature intruded the other.

Feature 187

Grid coordinates (m): N 9102.4, E 526.2
Burial type: Type 1a (alcove chamber) inhumation
Date: Miami/Roosevelt phase, based on ceramics
Burial pit dimensions: unknown length, 0.88 m wide, and 1.12 m deep
Burial pit orientation: unknown
Burial orientation: 91° E

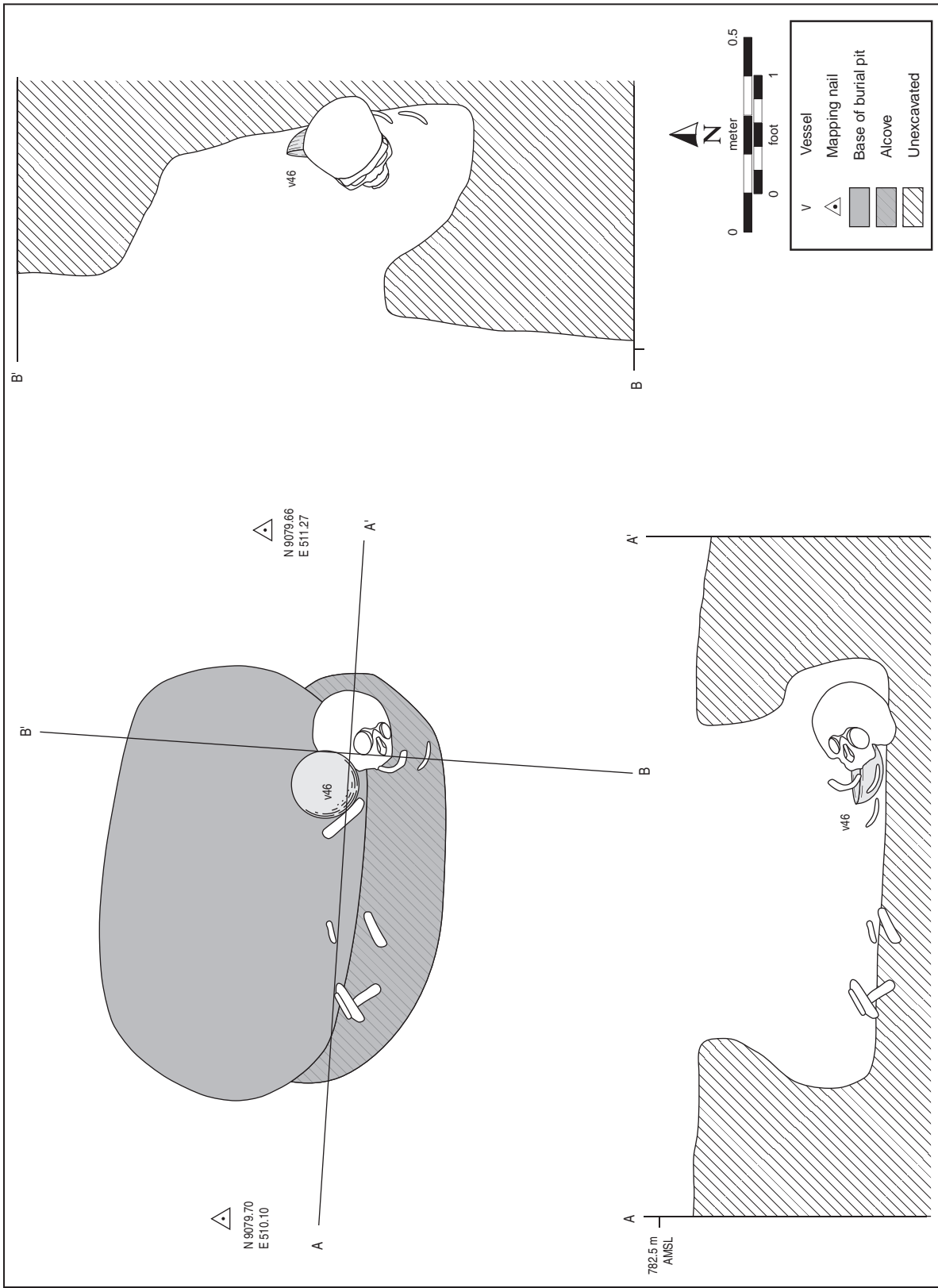


Figure 95. Burial Feature 185 at the Vegas Ruin (405/2012).

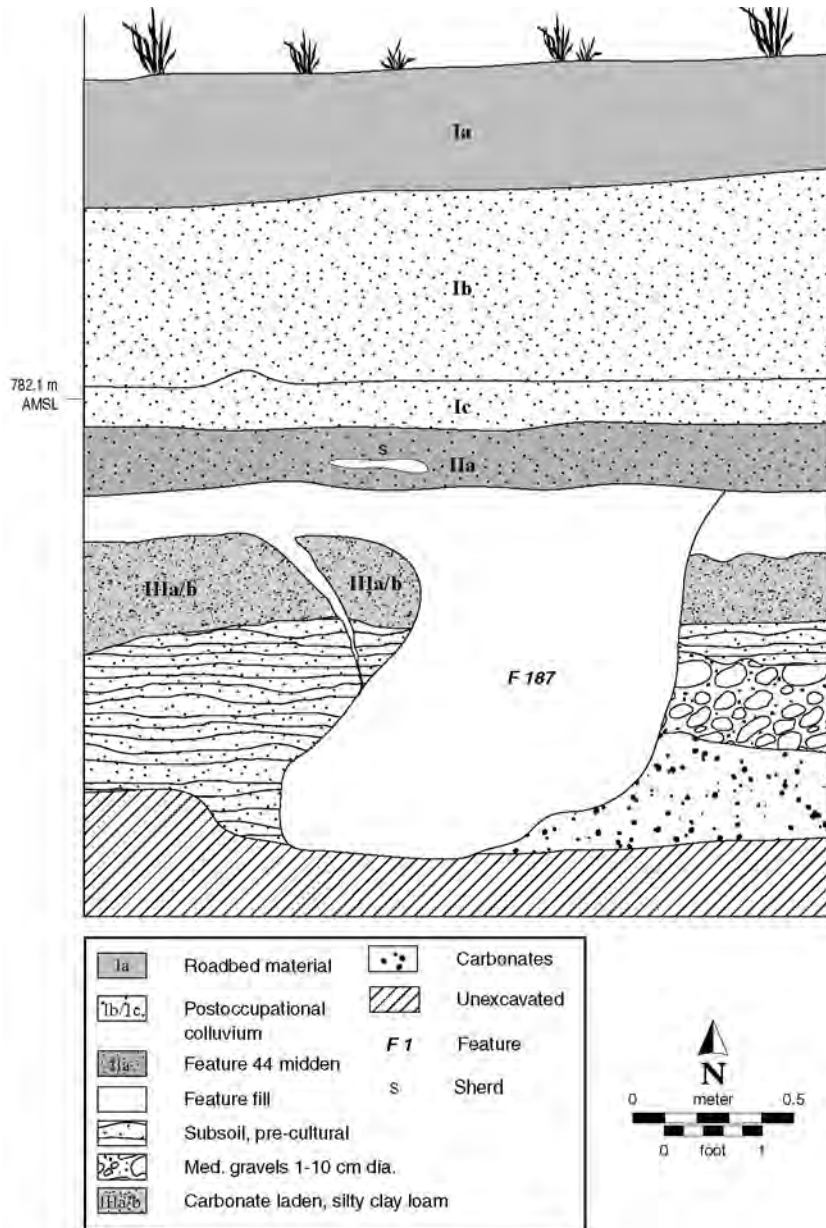


Figure 96. Profile of unexcavated burial pit Feature 187 under SR 188 roadbed.

Sex: indeterminate
Age: adult

Excavation Methods

This burial was discovered at the edge of the existing roadway along the eastern margin of the excavation area during backhoe excavations to locate and define graves (Figure 96). The backhoe exposed the legs of this individual, whose remains extend under the roadway. The roadway of SR 188 was raised above the natural grade by

0.96 m of fill so that the body now rests beneath 2.4 m of deposits. Based on the depth of the interment and the fact that most of the grave lies to the east of the excavation area toward SR 188, it was not possible to excavate this burial. The cross section of the exposed burial pit and the portions of the skeleton exposed by the backhoe were drawn and photographed. Following consultation with the TNF archaeologist, the remains were then covered by a thin layer of screened dirt, a layer of brown paper, another layer of earth, a layer of black plastic, and were then reburied to the natural grade.

Burial Pit

The cross section of the grave revealed a vertical main shaft approximately 0.88 m wide and 1.0 m deep with an alcove burial chamber along the north side. This chamber was carved into a stratum of coarse sands and fine gravels underlying the calcic horizon. The overhang had broken free of the supporting soil mass sometime after the burial had been filled and had sloughed slightly into the burial pit. The alcove chamber was about 0.68 m tall, undercut the side of the main shaft by 0.45 m, and had a sloping back wall. The floor of the burial chamber was about 0.14 m below the floor of the main shaft, creating a shallow bench along the south side of the burial.

Burial Fill

The fill was a mottled brown sandy loam with lumps of calcic soil, gravels, and charcoal flecks. The burial pit originated about 0.22 m above the contact of the upper culture-bearing horizon (Stratum II) and the gravelly loam horizon (Stratum III). The burial pit was capped by a thin midden deposit, Feature 44, that covered a large area north of the compound. The grave penetrated the calcic horizon (Stratum IV), which was only 0.30 m thick, and ended well into the unconsolidated channel deposits (Stratum V).

Burial Treatment

Based solely on the portions of the skeletal elements exposed, which consisted of the right femur, right and left tibia, and some distal phalanges, it appears that the body was laid out extended on its back with the head to the east (91° E). No associated funerary items were observed in the small portion of the grave exposed, nor was there any indication of red ochre.

Associated Features

Feature 187 was located northeast of the compound among a scatter of burials. Feature 187 was at the northern edge of this scatter less than 0.5 m from Feature 144, another burial. Another group of burials was found about 5 m to the northwest. Most of Feature 187 is buried in deep fill under the existing roadway. Only a small portion of the burial and pit were exposed, thus it is impossible to determine how it may have been associated with other features.

Feature 190

Grid coordinates (m): N 9092.4, E 519.7
 Burial type: Type 4? (plain) inhumation
 Date: Miami/Roosevelt phase, based on ceramics
 Burial pit dimensions: 0.56 by 0.26 m and 0.22+ m deep

Burial pit orientation: 69° E

Burial orientation: 71° E

Sex: indeterminate

Age: newborn

Excavation Methods

This burial (Figure 97) was exposed by the backhoe during stripping activities in the northeastern corner of the compound. The burial pit was not visible until the associated ceramic vessels were unearthed by the backhoe. The backdirt was screened through 1/8-inch-mesh to recover fragments of the vessels and any human remains that may also have been dislodged. The remaining portion of the burial pit was hand excavated. The remaining burial fill was excavated as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items remaining in place were mapped and photographed before removal.

Burial Pit

An unknown portion of the burial fill and pit were removed by stripping operations. Only a little of 0.2 m of pit fill remained after the pit was discovered. The remaining portion of the pit was roughly elliptical and measured 0.56 m long and 0.26 m wide. The pit was probably a simple, shallow inhumation without any alcoves, benches, or chambers, although this cannot be determined with any degree of certitude.

Burial Fill

The fill was a fine brown sandy silt probably derived from the soils in which the burial had been interred. The pit probably originated at a level near the contact of the culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III).

Burial Treatment

The remains of this infant were decomposed. The few identifiable elements remaining indicate that the body had been placed in this pit with the head to the east. We could not determine the position of the body. Three ceramic vessels were placed with this infant (see Table 6). A small Snowflake Black-on-white jar (V 164) had been placed at the east end of the pit near the head. Two other vessels, a red plain bowl (V 183) and a red plain jar (V 184), were recovered from the backdirt.

Associated Features

Feature 190 was located in the northeastern portion of the compound among a group of burials and extramural pits

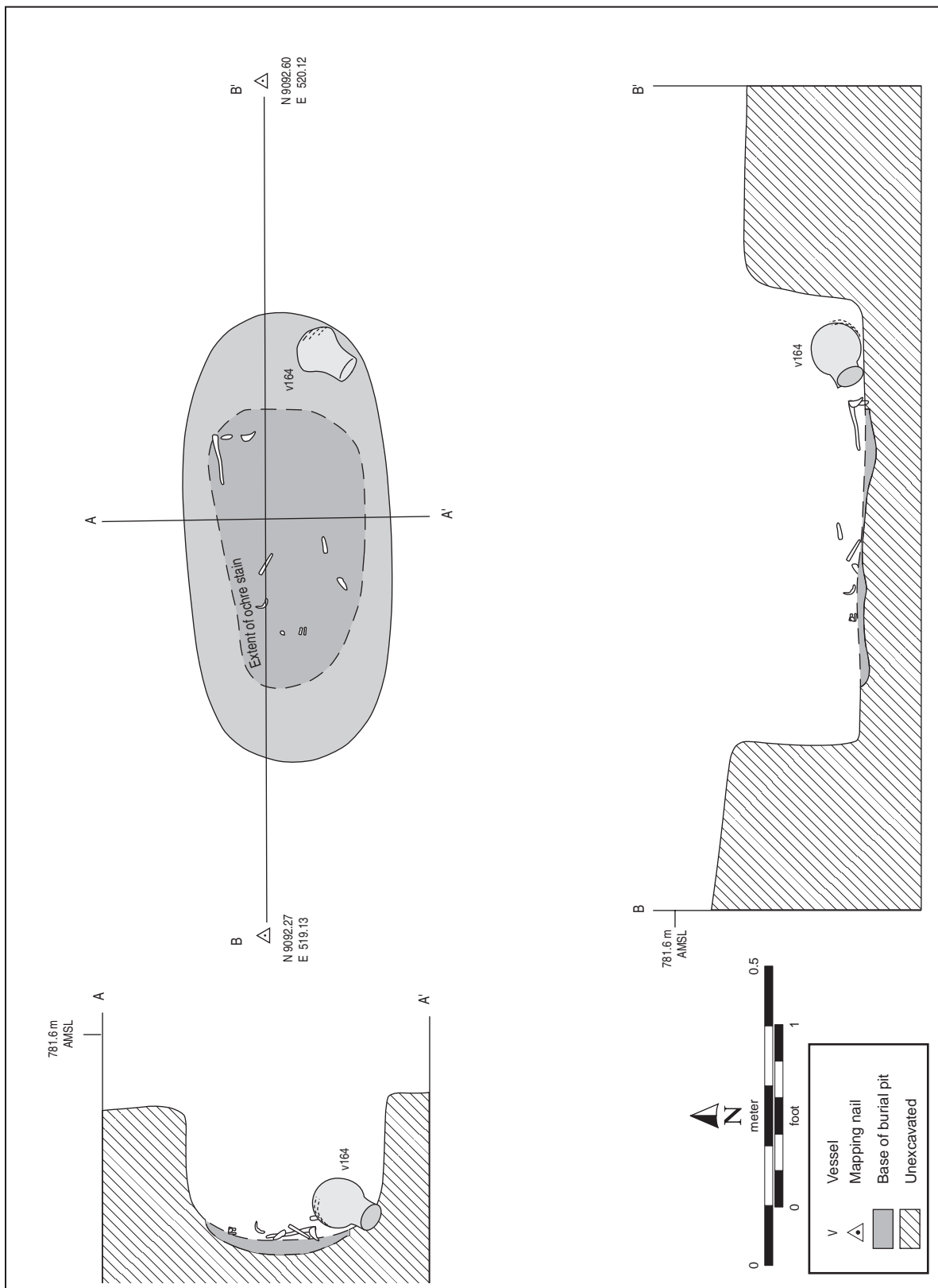


Figure 97. Burial Feature 190 at the Vegas Ruin (405/2012).

located along the edge of the existing roadway. Feature 165, another burial was located about 1 m to the southwest and Feature 204, a third inhumation, was about 1 m to the northeast. No features intruded upon Feature 190 and none was intruded by this inhumation.

Feature 196

Grid coordinates (m): N 9094.6, E 520.1
 Burial type: Type 4 (plain) inhumation
 Date: Miami/Roosevelt phase, based on ceramics
 Burial pit dimensions: 2.05 by 0.80 m and 0.75 m deep
 Burial pit orientation: 85° E
 Burial orientation: 93° E
 Sex: female
 Age: adult

Excavation Methods

This burial was discovered in the northeastern corner of the compound during backhoe stripping operations to locate and identify graves (Figure 98). An estimated 0.50 m of the upper pit was removed by the backhoe during these excavations, because it was indistinguishable from the site matrix. The grave was located beneath a cobble-adobe-foundation wall segment, Feature 37, that extended south of the northern compound wall and into the compound east of the room, Feature 11. After the relationship of the burial pit and the wall had been documented, the wall was removed to expose the remainder of the pit outline. The lower 0.25 m of fill was removed as a single level and screened through 1/8-inch-mesh hardware cloth. Associated funerary items remaining in place were mapped and photographed before removal.

Burial Pit

The grave was a shallow oval pit that measured 2.05 m long, 0.80 m wide, and 0.75 deep. The pit walls were nearly vertical.

Burial Fill

The fill was a tan to light brown clayey silt with fine to coarse gravel inclusions. This material was clearly derived from the calcic soil (Stratum IV) into which the grave had been dug. The pit originated at the contact of the upper cultural bearing horizon (Stratum II) and the gravelly loam (Stratum III).

Burial Treatment

The body of this woman had been laid on her back along an east–west axis. The head was placed toward the east (93° E), facing upward. Two ceramic vessels were placed with

the body (see Table 6). A red plain bowl (V 192) was placed at the right shoulder, and a red plain jar (V 2) was placed just to left of the head. Both vessels were set upright on the floor of the grave. A turquoise bead (PD 1699) was found just above the left hip, and two projectile points were recovered from screening fill around the body.

Associated Features

Feature 196 was located in the northeastern portion of the compound adjacent to the edge of the existing roadway. It appears to be part of a group of burials that extended from the northeastern interior of the compound to the open area north of the compound. Feature 196 was near the center of this group. Feature 196 was overlain by a short cobble-adobe-foundation wall segment, Feature 37, which abutted the northern compound wall and was lined up along the inside of the compound wall. Feature 108, another burial, was located outside the wall over 2 m to the north. Two small burial pits, Features 190 and 204, were found within the compound about 2 m to the south. A series of small pit features were found in the upper fill in the vicinity of Feature 196. The relationship of these features to the burial is unclear as they were recorded and removed to expose the burial.

Feature 199

Grid coordinates (m): N 9082.9, E 494.7
 Burial type: Type 4? (plain) inhumation
 Date: Miami/Roosevelt phase, based on association with Feature 10
 Burial pit dimensions: unknown
 Burial pit orientation: unknown
 Burial orientation: unknown
 Sex: male
 Age: 31–40 years

Excavation Methods

This burial (Figure 99) was discovered in the general midden area west of the compound during mechanical stripping operations. Because the grave was dug into unconsolidated sands, the outline of the grave was never apparent. The skeletal remains were dislodged by the backhoe; only a few fragments of the cranium, upper left arm, clavicle, and ribs were found in place. The dislodged skeletal remains were recovered by screening the spoil dirt from the scraping operations through 1/8-inch-mesh hardware cloth. The remaining skeletal elements were mapped in place before removal.

Burial Pit

Although the precise size and configuration of the pit is unknown, it is likely a simple, shallow inhumation without a chamber, benches, or alcove.

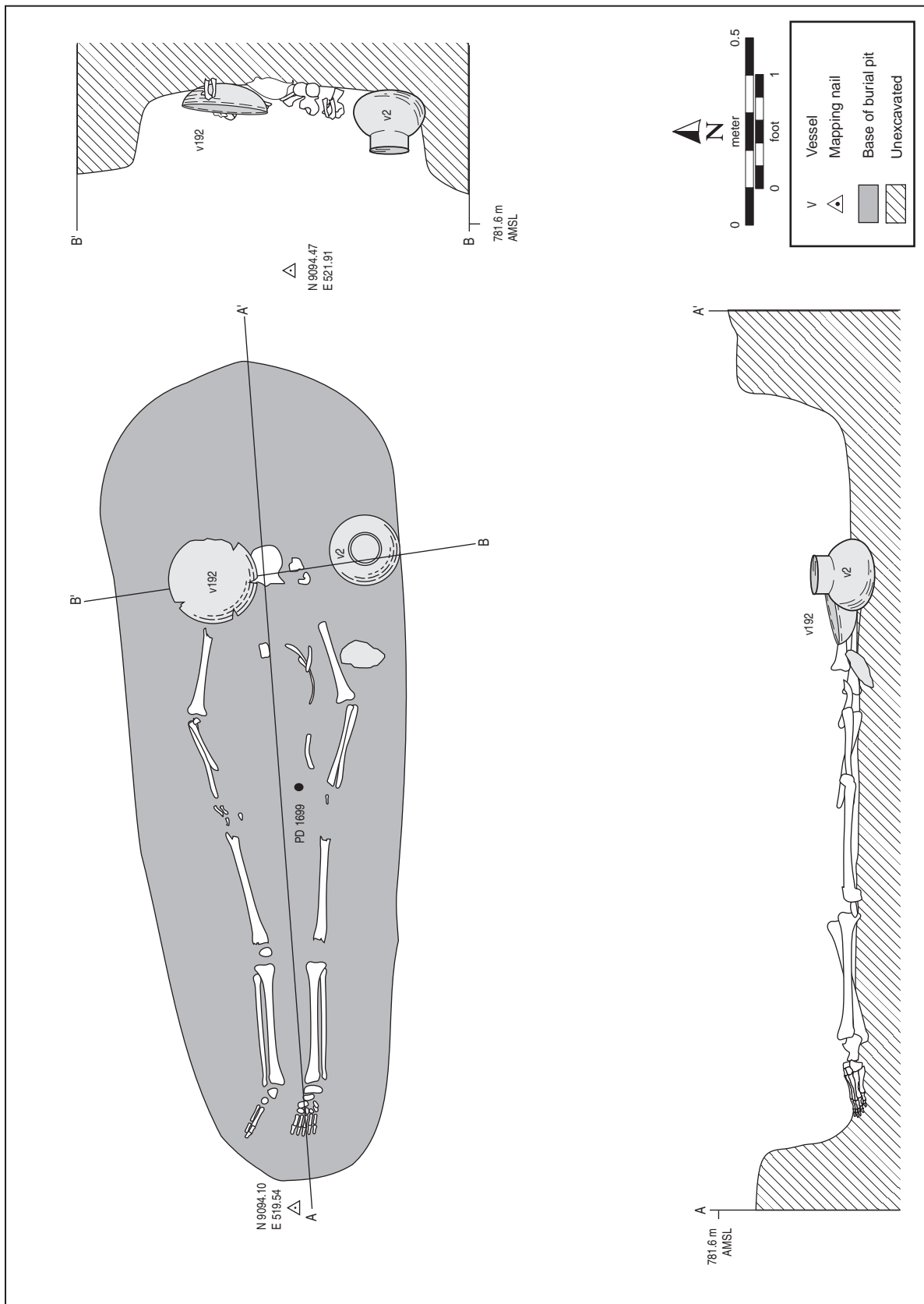


Figure 98. Burial Feature 196 at the Vegas Ruin (405/2012).

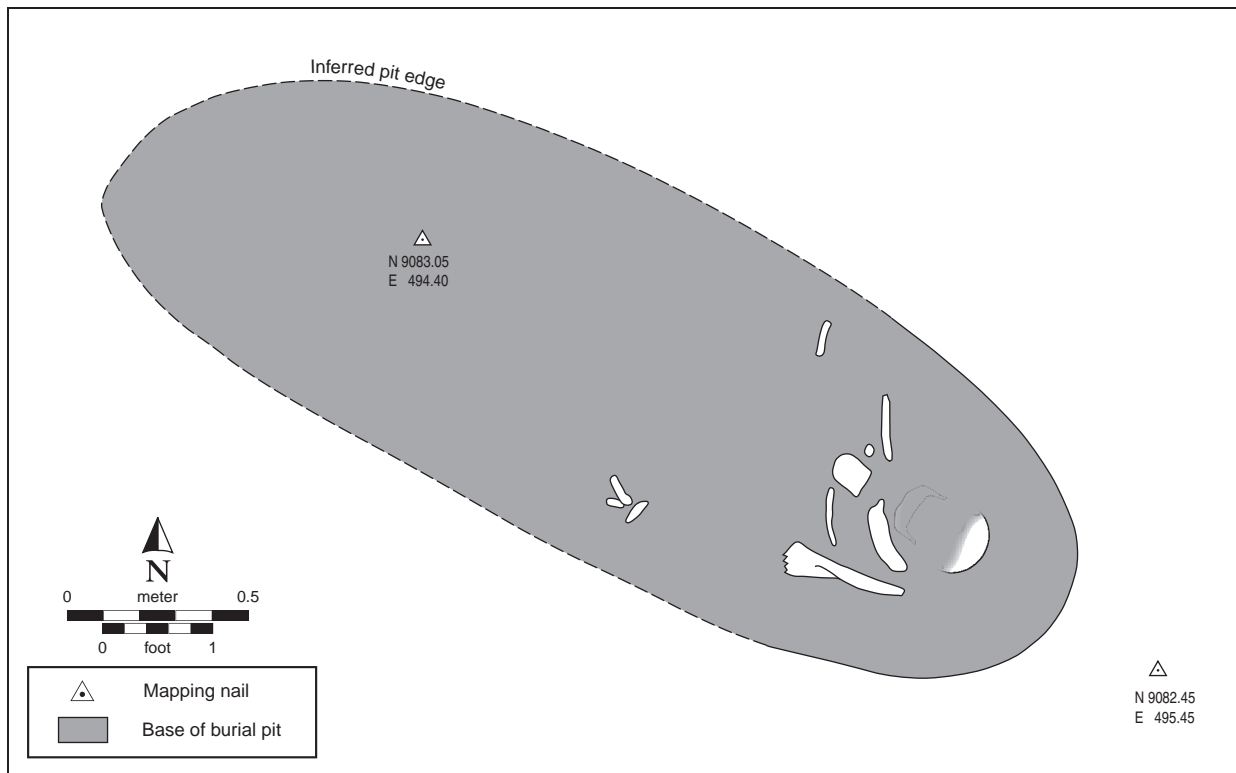


Figure 99. Burial Feature 199 at the Vegas Ruin (405/2012).

Burial Fill

The fill of the burial pit was a gravelly sand derived from the soils into which the grave was dug. The burial probably originated at a level near the contact of the culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III). The burial was interred in a channel deposit associated with the gravelly loam horizon.

Burial Treatment

Because so little of the burial remained in place, details of the interment were incomplete. It was clear that the body of this individual was laid in the pit on his back with the head to the east. No funerary vessels were recovered from the large volume of earth sifted to recover the skeletal elements. It would appear that there were no offerings placed with this individual.

Associated Features

Feature 199 was an isolated burial located outside the west wall of the compound within a broad shallow midden deposit, Feature 10. The closest burial, Feature 103, was located over 6 m away inside the compound. There were no other features impinging upon Feature 199.

Feature 204

Grid coordinates (m): N 9092.5, E 521.1
 Burial type: Type 4 (plain) inhumation
 Date: Miami/Roosevelt phase, based on ceramics
 Burial pit dimensions: 0.70 by 0.28 m and 0.35 m deep
 Burial pit orientation: 61° E
 Burial orientation: 66° E
 Sex: indeterminate
 Age: 3–6 months

Excavation Methods

This burial (Figure 100) was discovered while the backhoe was removing the Feature 37 cobble-adobe-foundation wall segment to expose the eastern portion of burial Feature 196. The upper portion of the burial pit was removed by the backhoe. The two associated ceramic vessels were broken by the backhoe, but the human remains were undisturbed. A portion of one of the vessels remained in place. The backdirt was screened through 1/8-inch-mesh hardware cloth, resulting in the recovery of fragments of the two associated vessels.

Burial Pit

The remaining portion of the grave was a simple oval pit that measured 0.70 m long, 0.28 m wide, and 0.35 m deep.

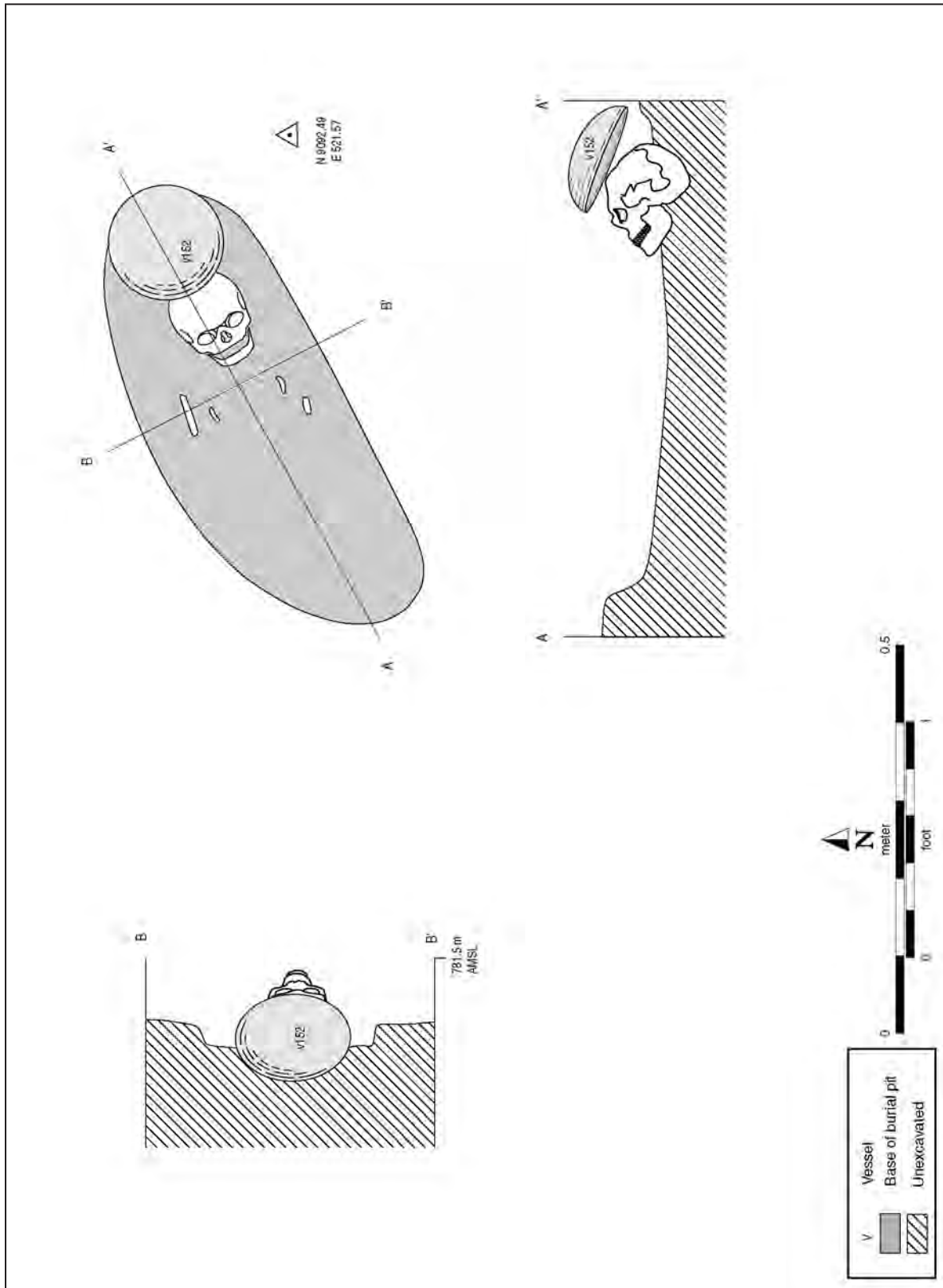


Figure 100. Burial Feature 204 at the Vegas Ruin (405/2012).

Burial Fill

The fill was a fine, reddish brown sandy loam, probably derived from the soils into which the grave was dug. The burial originated below the base of the Feature 37 wall segment, near the contact of the culture-bearing horizon (Stratum II) and the gravelly loam (Stratum III). The grave ended in the upper part of the calcic horizon (Stratum IV).

Burial Treatment

The remains of this infant were decomposed and fragmentary. The identifiable elements indicate that the body had been laid on its back along an east–west axis with the head to the east (66° E), facing upward. The arms were laid alongside the body. Two ceramic vessels had been placed with the body (see Table 6). A red plain bowl (V 152) had been placed above the head. A Salado Red Corrugated bowl (V 191) was recovered from backdirt. Charcoal and red ochre were observed in the chest and abdomen area.

Associated Features

Feature 204 was located in the northeastern portion of the compound and at the edge of the existing roadway. It was part of a group of burials that extended from the compound interior to the north. Feature 204 was overlain by a cobble-adobe-foundation wall segment, Feature 37, which abutted the northern compound wall and was about 1 m east of burial Feature 190 and about 2 m southeast of burial Feature 196.

Site Summary

The main component of the Vegas Ruin represents a small habitation settlement occupied for several generations from the transition from the Sedentary to the Classic period and into the early Classic period. A small but significant portion of the settlement lies under the existing roadway and is currently inaccessible to investigation. Within the ROW, however, we uncovered evidence of a small residential compound, Feature 1, with at least one room, associated middens, and several clusters of extramural pits. This compound apparently extended east under the existing roadbed but was truncated during the construction of SR 188. Another cobble-adobe-foundation wall lies outside of the ROW and parallels the western wall of the compound. This wall is not attached to Feature 1 and may represent the eastern edge of a second compound that extends to the west. Underlying the compound within the ROW lay the remains of an earlier occupation consisting of five pit structures oriented in a

rough north–south alignment. Slight differences in architectural styles suggest that these pit structures represent a sequence of occupations encompassing two or more generations. At least one or more of these houses may also have been occupied contemporaneously with the compound. A large number of burials found within the compound, intruding several of the houses, and in the extramural area north of the compound may be associated with either the pit structures or later occupations in neighboring sites. The burials, however, appear to predate the compound, based on stratigraphic placement and burial associations.

In terms of both number and diversity of features, the Vegas Ruin provided the most-extensive sample of the CCP sites. In spite of the limits of the ROW, a significant portion of the habitation area of the site was investigated. This included most of 1 cobble-adobe-foundation compound with at least 1 habitation structure and 1 associated granary and bounded extramural area, 5 pit structures of which 4 were likely habitations and 1 a shallow, specialized structure, 38 burials, and dozens of extramural features. Based on surface indications, a second, unexcavated compound was situated to the west of the ROW. It is possible that the earlier pit structure component extended beyond the western limits of the ROW as well.

Located at the northern end of the lower Tonto Basin and the upper edge of the terrace overlooking the Tonto Creek floodplain, the settlement seems to have been well situated for alluvial farming and to take advantage of both riparian and upland resources. The botanical data indicated that the Vegas Ruin housed a small farming group that focused on maize cultivation. The apparent labor investment in the construction of the habitation structures indicates a permanent, year-round occupation. Evidence of cotton use, either as food or fiber, was also recovered. Conspicuous by its near absence was evidence for agave exploitation—both the charred remains of the plant and stone tools traditionally associated with agave processing. Such evidence is common at many other Classic period sites in Tonto Basin and the adjoining upland areas.

With the exception of a small, ephemeral Archaic period component, represented by a cluster of three thermal features north of the compound and a single roasting feature within the compound, the main occupation of the site occurred at some time between A.D. 1150 and 1250, corresponding to the transition between the pre-Classic period and the Classic period and most of the early Classic period. These Archaic period features produced evidence of flaked stone, limited faunal remains, and juniper and mesquite charcoal. Additionally, we recovered Archaic period projectile points from late Formative period features.

It is probable that the duration of the late Formative period occupation was far shorter than even the relatively narrow time frame from the late Sedentary to the early Classic period. This creates a number of obstacles for the

interpretation of the site. The first concerns our ability to discern the temporal relationship between the features and the occupational history of the settlement. Do the archaeological remains reflect a single, unbroken period of occupation, witnessing the adoption of new architectural technology? Or do these data represent two, temporally discrete occupational episodes? Stratigraphic superpositioning indicates that at least one of the pit structures, Feature 179, predates the construction of the compound. We cannot rule out the possibility that at least some of the remaining structures were occupied concurrent with the compound. Further temporal uncertainty concerns the relationship between the burials and the habitation component, exemplified by the Feature 216 burial plot. Here, the burials intrude into the Feature 179 pit structure and are in turn stratigraphically below the Feature 1 compound. It is unlikely, however, that all of the burials represent a temporally discrete component at the site.

What we can tentatively identify as the earliest habitation component (post-Archaic period) at the Vegas Ruin consists of five pit structures (Table 7). Initial habitation may have been established as early as the late Sedentary period with the earliest house in the sequence of house floors in Feature 34 and a possibly associated small surface structure, Feature 17. Little can be said about Feature 34A, as only a fragment of the wall was preserved. From this, however, it appears to have been a pit structure with post-reinforced (brush) walls. The second structure, Feature 34B, appears to be of similar brush-walled construction and was probably also constructed in the late Sedentary period. Both were typical Hohokam Sacaton-style houses with posts set into wall grooves around the periphery of the house floor. Feature 34B was a large, oval habitation structure over 29 m² in size with a large unlined firepit and another interior pit. No entryway could be identified; however, the presumed location of the entryway (as indicated by the position of the hearth) was disturbed by subsequent prehistoric activities and a backhoe trench. Feature 17 was located a short distance to the northeast of Feature 34 and appeared to be oriented at a right angle to Feature 34, suggesting Features 17 and 34 were part of a small courtyard group. Feature 17 was a very small (less than 6 m²) structure of irregular shape and was built in a very shallow pit. No evidence of wall construction was identified. Although it contained a clay-lined hearth, its very small size, informal construction, and presence of two interior pit features suggest it was an ancillary structure associated with the occupation of Features 34A and 34B.

Features 34C and 34D were similar in shape and layout to the older Feature 34B but were built with post-reinforced, adobe-lined-wall (jacal) construction more typical of the Sedentary/Classic period transition (Miami phase); that is, they incorporated much more adobe in the wall construction than earlier pit structures, and the posts were imbedded in

the pit wall and not in grooves around the floor periphery. Clark (2001:57–62) (see also Ciolek-Torrello and Wegener 2009) suggested that this type of architecture represents the second stage in the four-stage construction sequence in the development of Classic-period, coursed-masonry rooms from Sacaton-style brush-walled houses-in-pits. Feature 34C was a slightly smaller (26 m²) in size, whereas the last house, Feature 34D, was much smaller (20 m²). No entry vestibule was apparent in either house, but both were oriented in a similar fashion to Feature 34B, and the presumed location of the entryway was disturbed. A centered clay-lined hearth was found in Feature 34D and may have been used by the occupants of the earlier Feature 34C. A cobble-lined granary pedestal was also found in Feature 34C and adds further credence to the notion that this was a transitional or early Classic period house. Features 34C and 34D appear to have functioned as habitations (cf. Ciolek-Torrello and Greenwald 1988; Ciolek-Torrello et al. 2000).

Features 99 and 179 were probably also built during the Sedentary/Classic period transition (Miami phase) but may have replaced Feature 34D. Features 99 and 179 were almost identical habitation structures of moderate size (about 19 m², they were similar in this respect to Feature 34D) but were distinguished from the Sacaton-style houses by their subrectangular shape, large, subrectangular, east-facing entry vestibules, and (like the last houses built in the Feature 34 pit) they were constructed with jacal walls. Their size, formal construction, and centered clay-lined hearths indicate that both served as habitations. It is likely that they were occupied contemporaneously; however, they do not appear to represent a courtyard group, as their entryways were parallel and Feature 179 was setback to the north and behind Feature 99. Both houses were intruded by later burials (as were the Feature 34 houses); the southeast corner of Feature 179 was overlaid by the northwest corner of the compound, whereas the northeast corner of the house was intruded by a series of trash-filled borrow pits. Feature 99 was centered in the western part of the compound but was stratigraphically lower. This evidence suggests that both houses preceded the construction of the compound and much of the burial activity at the site.

Feature 19, the fifth and last constructed pit structure at the Vegas Ruin, was built within the southwestern part of the compound and was superimposed upon the southeastern corner of the Feature 99 pit structure. Like the two jacal pit structures, Feature 99 was a moderate-sized (19 m²) habitation structure with a central clay-lined pit and was oriented towards the east. It differed from the two jacal pit structures in several respects, however. It incorporated a number of elongated cobbles set on end into the base of the wall in a pattern common among Roosevelt phase surface jacal structures in the Tonto Basin (Clark 2001:57–62; Shelley and Ciolek-Torrello 1994:248). This type of wall construction in a pit structure represents the third stage in the

Table 7. Architectural Summary for the Vegas Ruin (405/2012)

Feature No.	Construction Sequence	Structure Type	Interior Area (m ²)	Interior Features	Entryway	Stratigraphic Relationships	Absolute Dates ^a	Tentative Phase or Period
1	7	cobble-adobe-foundation compound	> 460		southwest corner	superimposed house Feature 179		Roosevelt phase
11	7	cobble-adobe-foundation room	9.0	2 hearths, 1 remodeled	possible entrance in south wall	superimposed adobe pits Features 170 and 171; intruded by Feature 176	A.D. 1210–1390, 1030–1220 (both radiocarbon); A.D. 935–1115, 1135–1315 (archaeomagnetic)	Roosevelt phase
17	1–3	pit structure	5.8	remodeled hearth, 2 pits	unknown	none		late Sedentary period
19	6	cobble- and post-reinforced adobe pit structure	19.0	remodeled hearth, pit	presumed east-facing ramp	superimposed house Feature 99	A.D. 935–1140, 1160–1315 (archaeomagnetic); A.D. 1010–1115, 1160–1215 (archaeomagnetic)	Miami/Roosevelt phase
34A	1	unknown	unknown	unknown	unknown	superimposed by Feature 34B; intruded by burial Feature 106		late Sedentary period
34B	2	post-reinforced pit structure	29.15	fire pit, pit	presumed east-facing ramp	superimposed by Feature 34C; intruded by burial Feature 106	A.D. 935–1690 (archaeomagnetic)	late Sedentary period
34C	3	post-reinforced pit structure	26.05	hearth?, pit	presumed east-facing ramp	superimposed by Feature 34D; intruded by burial Feature 106		late Sedentary period/Miami phase
34D	4	post-reinforced pit structure	19.93	hearth, granary pedestal	presumed east-facing ramp	superimposed Feature 34A–34C; intruded by burial Feature 106	A.D. 935–1690 (archaeomagnetic)	Miami phase
54	7	partially enclosed cobble-adobe foundation area	approx. 4	granary pedestal	west	superimposed burial Features 197, 206, and 207		Roosevelt phase

Table 7. Architectural Summary for the Vegas Ruin (405/2012) (*continued*)

Feature No.	Construction Sequence	Structure Type	Interior Area (m ²)	Interior Features	Entryway	Stratigraphic Relationships	Absolute Dates ^a	Tentative Phase or Period
99	5	post-reinforced adobe pit structure	19.0	remodeled hearth, 4 pits	eastern vestibule	intruded by house Feature 19; intruded by burial Features 49 and 103	A.D. 1010–1190 (archaeomagnetic); 1010–1290 (archaeomagnetic)	Miami phase
179	5	post-reinforced adobe pit structure	19.2	remodeled hearth, 2 pits	eastern vestibule	overlap by compound Feature 1; intruded by pit Features 195, 189, and 89; intruded by burial Features 219 and 220	A.D. 935–1315 (archaeomagnetic); 1030–1240 (radiocarbon)	Miami phase

^aArchaeomagnetic dates are all based on SWCV595 (LaBelle and Eighthy 1997). Radiocarbon dates are all 2- σ calibrated dates based on OxCal 3.10, IntCal04 dataset. Note that these dates differ from the original Beta Analytic calibrated dates that were calculated using the older IntCal98 dataset.

development of Classic period architecture in Tonto Basin (Clark 2001:57–62). In addition to its unusual wall foundation, Feature 99 reverted to the more oval shape of the earlier Sedentary period structure and lacked the entry vestibule of the other two jacal pit structures at the Vegas Ruin. An east-facing entryway, however, was indicated by a gap in the east wall and what appeared to be an entry pad marked by a few postholes. Feature 99 was intruded by a large, trash-filled borrow pit that may have been used in the construction of the compound or its associated features. Otherwise there is no evidence to preclude the contemporaneity between this, the last pit structure at the Vegas Ruin, and the compound.

The compound was a large structure about 20 m north-south by at least 23 m east-west (greater than 460 m² in area). The southeastern part of the compound, including the entire eastern side, was removed by earlier road construction. The compound was built with cobbles set in adobe, two to three courses high. Many of the cobbles were set vertically on end, especially along the western wall. An opening in the west end of the south wall may have served as the entryway. A wall alignment ran into the compound perpendicular to the west end of the south wall, forming a corridor between this and the southern end of the western wall. The southwest end of the Feature 19 pit structure lay less than 1 m to the northeast, suggesting that the compound may have been constructed while this house was still occupied. Feature 11 was a small, rectangular structure (9 m²) with a cobble-adobe foundation that was abutted to the center of the northern wall of the compound. This room was the only house definitely associated with the compound. It appears to have served as a habitation room, as indicated by the presence of multiple clay-lined hearths, although its small size is much less than typical habitations. No entryway was evident; however, a small L-shaped cobble-adobe-foundation structure (4 m²) was abutted to the south wall of Feature 11 and opened to the west. A cobble-based granary pedestal stood at the southwestern edge of this opening. It is unknown if this small structure was roofed. It is likely that other cobble-adobe foundation rooms lay along the eastern side of the compound, where SR 188 runs today. Compounds in Tonto Basin with interior areas between 200 and 500 m² contained between two and six rooms, whereas compounds with only a single room were less than 200 m² in area (Ciolek-Torrello 1994:Table 14.5; Clark and Vint 2000b).

Many extramural pits and other features associated with these houses were found within the compound and the area to the north. The greatest concentration occurred in the northeast part of the compound between the masonry room, Feature 11, and the roadway. There were 11 pit features in this location, consisting of 3 small firepits, 1 roasting pit, 1 slab-lined pit, 3 adobe-lined pits, and 3 artifact caches, including 1 pot break. It is not clear if these were used in

association with the occupation of the compound or the earlier pit structures. The adobe-lined pits, however, probably represent puddling pits used to construct the compound. The clustering of these features east of Feature 11 and away from the pit structures suggest that the other pits in this area were also associated with the occupation of the compound. A number of other pit features were scattered in the western and southern parts of the compound and intruded Feature 99. These included 3 firepits, 5 roasting pits, 1 additional pot break, 2 borrow pits, and a midden area that extended over Feature 179 and outside of the northwestern part of the compound.

The majority of Formative period extramural features were located in the large area to the north of the compound near Features 34 and 17 and the many burials in this area. These features comprised 19 adobe-lined pits, 5 firepits, 7 roasting pits, 1 slab-lined pit, 1 artifact cache, 1 large borrow area, 1 midden area and numerous small pits without evidence of oxidation, adobe-lining, or any other indication of function. Most of these features clustered in the northwestern portion of the excavated area, and this activity area may have extended outside of the ROW. Here alone were 1 firepit, 1 roasting pit, 9 adobe-lined pits, 1 cache, and 19 other pits. The large borrow pit and numerous adobe-lined pits located north of the compound suggest that much of this area was used to gather and prepare materials for the construction of houses and the compound. The numerous small and shallow adobe-lined pits found at the Vegas Ruin are usually interpreted as adobe puddling pits used in the construction of houses in the Classic period, when adobe was increasingly incorporated into house construction. The concentration of adobe-lined pits in the northwestern excavation area and away from the Classic period houses, however, does not support this functional interpretation and suggests that many of these pits were used in a different, as yet unknown manner. Several firepits and artifact caches were found on top of or near grave shafts, suggesting the possibility that they may have been used as part of some kind of mortuary ritual.

Far fewer features were identified southwest of the compound (the southeastern part was destroyed by earlier highway construction). Most of this area was covered by an extensive midden that appears to be the main area of refuse disposal for the occupants of the Vegas Ruin. Three firepits, 2 adobe-lined pits, and 1 small borrow pit were found within this midden area. Overall, there does not appear to be strong patterning in the distribution of extramural features at the Vegas Ruin. Although discrete clusters of extramural features could be identified, they do not appear to represent discrete activities such as construction, food processing, or refuse disposal. Rather, features representing these different activities were found in many different areas. This lack of patterning, however, may be a function of the limited excavation sample. Investigation of features that are likely

present under the roadway or west of the ROW might elucidate activity patterning much better.

We identified five distinct burial plots and numerous isolated burials. Several burials were excavated in the northwestern part of the compound, including the Feature 216 and 221 burial plots and individual burial Features 49 and 103. Features 49, 103, and 216 intruded two of the pit houses, whereas Feature 216 was overlain by the northwestern corner of the compound wall and an extensive but shallow midden deposit. Feature 221, which consisted of five discrete burial events, was confined within the northwest corner of the compound near pit structure Feature 99. This group of burials does not appear to reflect a single period during the occupation of the settlement.

In the southern part of the compound, we found a second group of burials, comprised of two isolated infant burials, Features 172 and 185. A third group was located in the central part of the compound and consisted of two burial plots, Features 205 and 222. Feature 205 appears to predate the occupation of the compound. The three burials in this plot were overlain by wall segment Feature 53 and by granary Feature 51, both associated with the use of the single room, Feature 11, identified in the compound. Feature 222 was a short distance to the southeast. Two of the burials in this plot, Features 181 and 182, were overlain by an extramural pit, Feature 135, but were otherwise stratigraphically unrelated to any of the architectural features.

Most of the remaining burials were found in a long north-south-aligned scatter that began in the northeastern corner of the compound and extended almost to the northern edge of the site where a large cluster of extramural pits was located. This scatter was divided into two discrete spatial groups separated by a 4–5-m gap. The southern group included at least nine burials extending from the interior of the compound to a point where it impacted the cluster of Archaic period cooking features. Two of these burials, Features 196 and 204, were located beneath wall segment Feature 37 that abutted the north compound wall. Feature 129, which also was found in this area, may represent a tenth burial, although no human remains or offerings were found. Had this been a child, the bones could have completely deteriorated, and no offerings might be expected. It is suggested as a burial because it was an oval pit and was filled with essentially sterile soil. It is described, however, under extramural features. The fifth group included nine more burials that were located about 4 m north the Archaic

period features and extended to the southern edge of the extramural features at the northern edge of the site. Feature 141 was overlain by three extramural features, Features 110, 111, and 112. Feature 142 was overlain by an extramural feature, Feature 118. Features 142 and 166 were stratigraphically juxtaposed, but their relative sequence is unknown. We cannot rule out the possibility that the burials north of the compound could be contemporaneous with its use or postdate it. Nevertheless, given the similarities between these burials and those that underlay the compound, it is more likely that the compound postdates the use of the site as a burial ground.

At least four types of burial treatments are distinguished among these various burials. In most cases, the graves consisted of wide and deep shafts with a narrower and lower burial chamber that contained the body and most of the funerary offerings. Three variations are recognized: Type 1 burials had an alcove chamber excavated into the wall at the base of the main shaft; Type 2 burials had a central chamber at the base of the main shaft with a bench on either side; and Type 3 burials had the inner chamber located on one side of the main shaft, creating only one bench. We infer that most of these chambers were roofed (cribbed) with wooden slats from the common occurrence of these materials in the fill of the burial chambers and the few instances of their preservation in place. The fourth type was a simple, shallow pit without any chambers or alcoves.

Burial offerings were common and diverse. Ceramic vessels were the most common items, but shell and turquoise jewelry, projectile points, and bone awls and hairpins were also common. Rare examples of painted wooden shafts, representing staffs or arrow shafts, painted basketry, and tortoise carapaces were also present. Red ochre was also spread over portions of the bodies in a number of cases. Most of these remains were sealed in the inner chambers of the burial pits, along with the human remains. In a few instances, however, burial offerings were placed above the cribbed roofs of these burial chambers. For the most part, all these burial groupings appear to have a similar range of mortuary treatments and richness and diversity of burial offerings. The numerous ceramic vessels consisted of plain wares, red wares, and white wares that were common during the late Sedentary and early Classic periods. The only temporally diagnostic types date to the Sedentary/Classic period transition and lend support to the proposition that the burials predate the construction of the compound and associated features.

The Rock Jaw Site (AZ U:3:407/2014)

Robert Wegener and Eric Eugene Klucas

Site AZ U:3:407/2014, also known as the Rock Jaw site, is a small pre-Classic period farmstead located on the second terrace above the current channel of Tonto Creek immediately north of Cottonwood Creek (Figures 101–103). The site is comprised of two superimposed pit structures and several extramural pits and hearths. Initially described as a moderate-density surface artifact scatter with limited potential for subsurface cultural deposits (Hoffman 1991:45–47), the site covers an estimated 1,248 m² at an elevation of 780 m (2,560 feet) AMSL. The northern and southern margins of the site are defined by two small unnamed washes. The western edge of the site is defined by a mechanically excavated channel constructed to redirect water flow from the northernmost of these two washes to the main channel of Cottonwood Creek. Given the close proximity of the pit structures to this channel, it is likely that the construction of the channel destroyed an unknown portion of the site. At the beginning of fieldwork, the site was fully contained within the ADOT ROW. Subsequent changes to these plans placed most of the site, including the identified subsurface features, outside of the ROW.

Phase 1

Following brush removal, Phase 1 operations at the Rock Jaw site began with the collection of all surface artifacts from within the ROW. As a means of maintaining horizontal control, these collections were made from a series of contiguous 5-by-5-m collection units (see Figure 101). Surface artifact collection was followed by the excavation of 110 linear meters of backhoe trenches placed parallel to the ROW. These operations identified two discrete features in the westernmost trench, each interpreted as possible pit

structures. A small number of Hohokam Buff Ware sherds collected during Phase 1 suggested the presence of a pre-Classic period component at the site.

Phase 2

Phase 2 operations at the Rock Jaw site focused on the excavation of the two structures identified during Phase 1, and the identification and excavation of any extramural features associated with them. These excavations revealed that the southernmost of the two possible structures, Feature 2, contained unburnt wood and other organic matter that likely was buried during the construction of the channel forming the western margin of the site and, as such, was not prehistoric. The northernmost of the two features, Feature 1, proved to be two superimposed structures; the later, upper structure was designated Feature 3.

In addition to the excavation of the two superimposed pit structures, Phase 2 operations included the mechanical stripping of approximately 600 m² around the superimposed pit structures to explore for extramural features and any burials that may have been present. Although no burials were identified within the ROW, the stripping operation revealed 10 additional features, including 7 extramural pits and 3 small extramural hearths (Table 8; see Figure 102). Given the nature of the fill observed in these features, we decided that the extramural hearths had the greatest potential for providing data relevant to the research questions defined in the Treatment Plan, especially those relating to subsistence. Therefore, all of the extramural hearths were either completely excavated or sampled during Phase 2. Data recovery of the remaining extramural pits was limited to mapping their locations. Pit Features 5, 6, 7, and 8 were all located north of the pit structures. These features were encountered

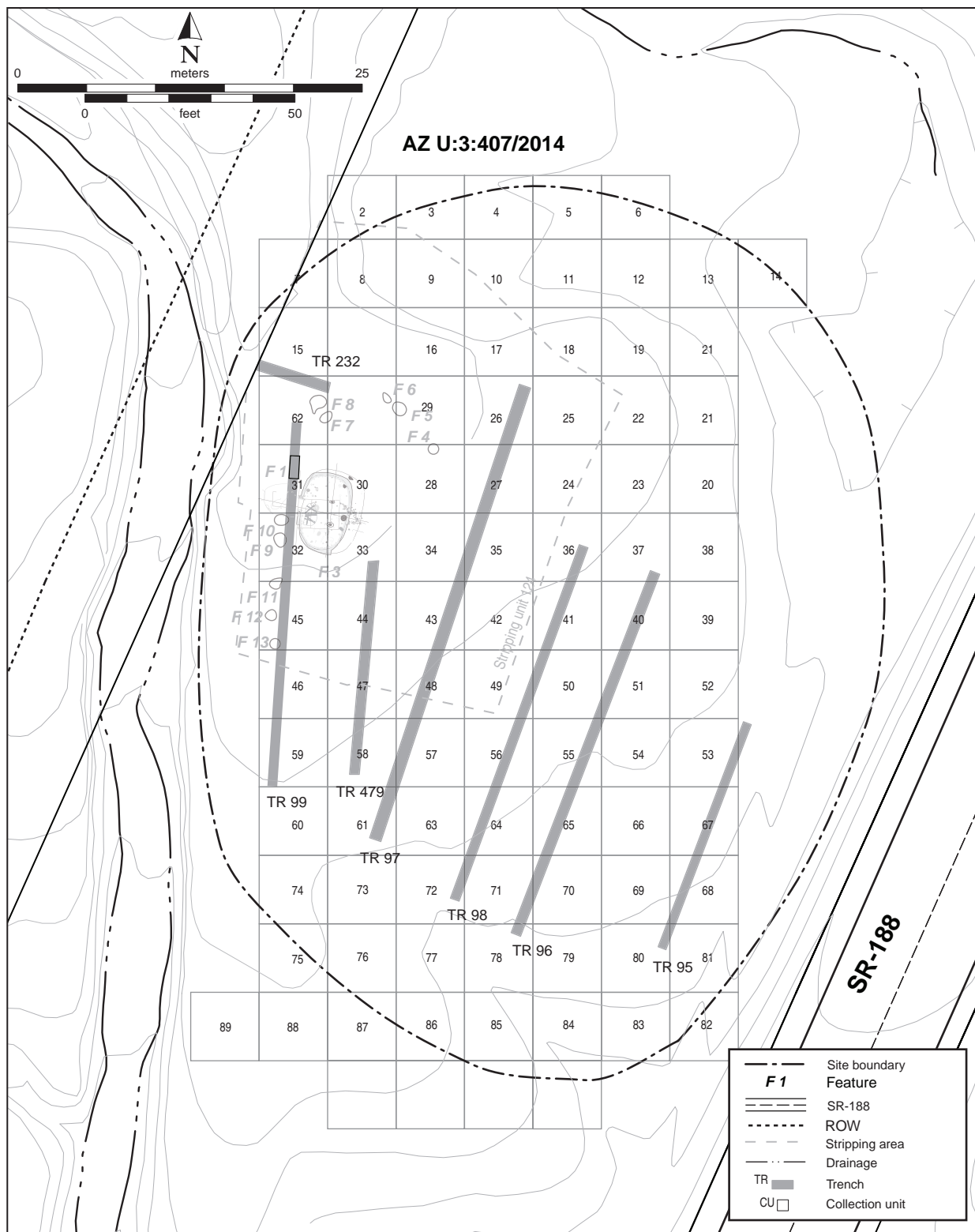


Figure 101. Site map of the Rock Jaw site (407/2014), showing collection units and trenches.

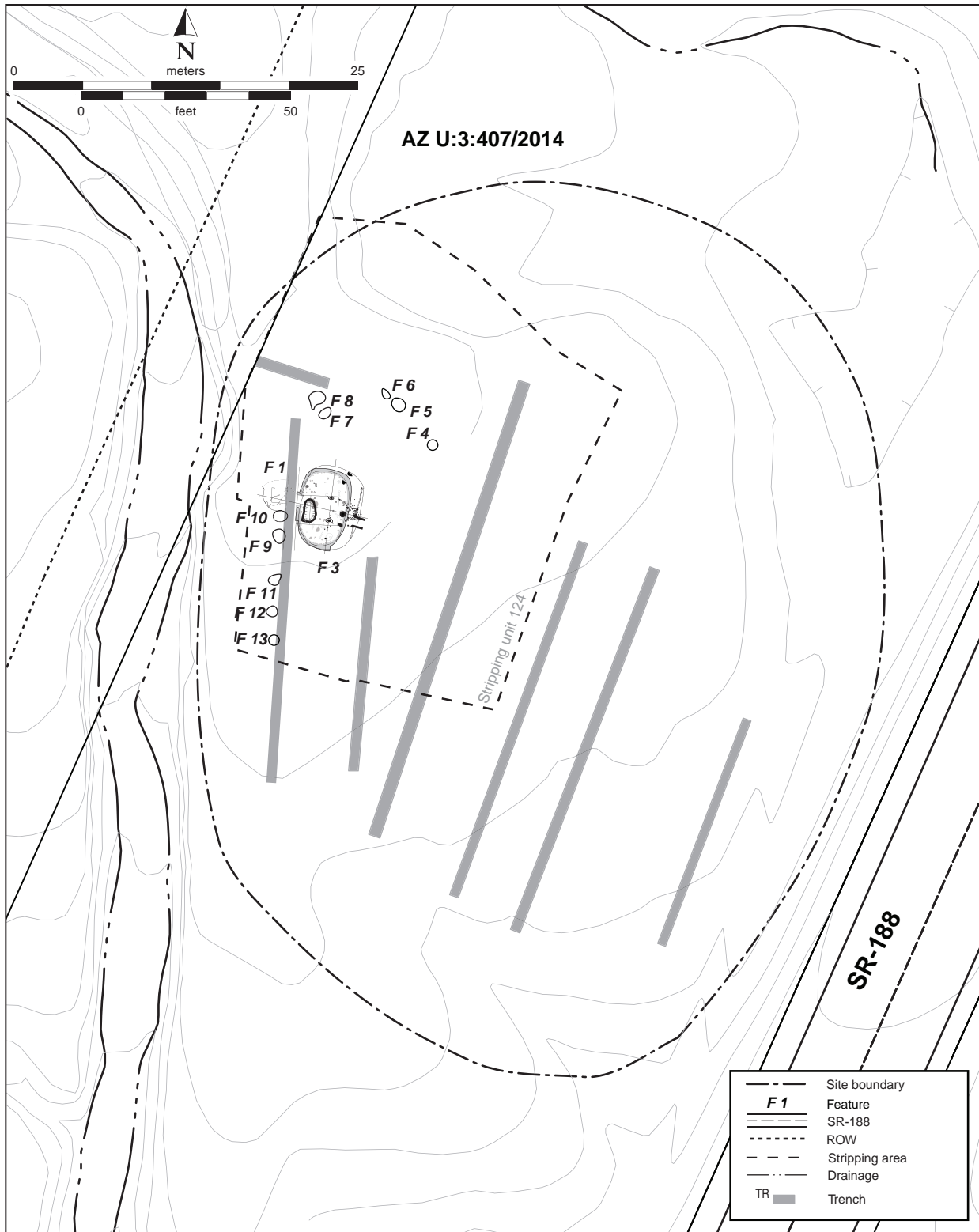


Figure 102. Site map of the Rock Jaw site (407/2014), showing features.



Figure 103. View of the central portion of the Rock Jaw site (407/2014) after excavation, view north.

during mechanical stripping at depths of 10–15 cm below the modern ground surface. Pit Features 9, 10, and 11 were all located along TR 99, to the west and southwest of the pit structures. These were also shallow pits encountered during stripping just below the modern ground surface. Feature 11 could have been rake-out material from hearth Features 12 or 13. No artifacts or samples were collected from these features.

Elevation: The originating elevation of 785.5 m (2,577.0 feet) AMSL corresponds to the floor of the overlying Feature 3 pit structure. The average floor elevation of Feature 1 was 785.1 m (2,575.7 feet) AMSL.

Abandonment processes: abandoned, burned, and remodeled

Dimensions: 5.2 by 3.3 m

Orientation: entry of structure faced west

Floor area: 15.0 m²

Shape: ovate

Feature Descriptions

Pit Structures

Feature 1

Feature type: house in a pit

Location: This house in a pit was discovered during the mechanical excavation of TR 99 (Figures 104 and 105).

It is located in the west-central portion of the site immediately east of the manmade channel leading to Cottonwood Creek. Feature 1 was superimposed by a later pit house (Feature 3). Feature 1 was oriented to the west.

Grid coordinates (m): N 8901.3, E 380.2

Date: pre-Classic, based on radiocarbon dates and ceramics

Excavation Methods

Feature 1 was discovered during the mechanical excavation of Trench 99 (see Figures 101 and 102). The house floor and a discrete charred roof-fall stratum were exposed in the west wall of the trench. Controlled excavation of Feature 1 began with the excavation of a 1-by-2-m test pit (TP 105) placed along the western edge of Trench 99. This test pit was excavated in a series of arbitrary 10-cm levels with all of the fill screened through ¼-inch-mesh hardware cloth. During the excavation of TP 105, we discovered that Feature 1 was superimposed by another structure, designated Feature 3, and that much of the fill removed during the excavation of the test pit was associated with this later structure. As a result, controlled sampling of Feature 1 began with the excavation of Level 6 in the western half of TP 105. The excavation of this level resulted in the removal of 18 cm of charred

Table 8. Features Identified at the Rock Jaw Site (407/2014)

Feature No. ^a	Feature Type	Dimensions (l × w) (m)	Preserved Depth (m)	Level of Effort
1	house in a pit	5.2 × 3.3 ^b	0.40	completely excavated
3	pit house	5.75 × 4.25 ^b	0.25	completely excavated
4	extramural hearth	0.65 × 0.57	0.18	completely excavated
5	extramural pit	approx. 1.0 × 0.8	unknown	mapped
6	extramural pit	approx. 0.75 × 0.5	unknown	mapped
7	extramural pit	approx. 1.0 × 0.6	unknown	mapped
8	extramural pit	approx. 1.3 × 1.1	unknown	mapped
9	extramural pit	approx. 1.1 × 0.5	unknown	mapped
10	extramural pit	approx. 0.8 × 0.75	unknown	mapped
11	extramural pit	0.85 (min.) × 0.75 ^c	0.02	sampled
12	extramural hearth	0.85 × 0.75	0.10	completely excavated
13	extramural hearth	0.77 × 0.45 (min.) ^c	0.12	completely excavated

^aFeature 2 was voided.

^bExcluding entryway.

^cTruncated by Trench 99.

structural debris and the exposure of the caliche-plastered floor of Feature 1. Rodent burrows observed in the northern wall of TP 105 were the only observed disturbances.

Controlled sampling of Feature 1 continued after the excavation of Feature 3. A 2-by-2-m control unit (TP 249) was placed in the west-central portion of Feature 1 underlying the east portion of TP 105 and the west half of TP 137. Three arbitrary 10-cm levels were excavated and screened. Several charred wooden post segments were exposed during the excavation of the first two levels. Three charred post segments were point located and collected for species identification and possible dendrochronological analysis (PDs 269, 273, and 276). The completion of the third and final level resulted in the exposure of several additional charred posts in contact with the floor and the remains of an in-place and charred central support post (PD 269). Flotation samples were collected from each level excavated in TP 249, and two strata—house fill and roof fall—were designated.

Continued excavation of Feature 1 entailed the excavation of two stratigraphic levels corresponding to the house fill and roof-fall strata. The house fill, consisting of loose, pale brown (10YR 6/3) sands that contained few artifacts and dispersed charcoal fragments, was removed with pick and shovel, and a judgmental sample of artifacts was collected. The house fill was deepest (40–45 cm) in the west central portion of the house, but was 30 cm thick on average. This relatively sterile stratum was massive and lacked discrete

bedding, perhaps representing the intentional leveling of the house depression prior to the construction of the overlying plastered floor of Feature 3. The roof-fall stratum consisted of very dark grayish brown (10YR 3/2), charcoal-stained sands and was 10 cm thick on average. All of the roof-fall stratum was screened through ¼-inch-mesh hardware cloth. These sands surrounded well-preserved, charred post segments and, occasionally, the charred remains of reed thatching. These charred structural materials rested immediately upon the house floor. Few artifacts were encountered during the excavation of the roof-fall stratum.

Stratigraphy

Stratum If

This stratum consisted of house fill, approximately 30 cm deep, characterized by loose sands that were encountered throughout the house and likely represent postabandonment accumulation and the intentional leveling of the house depression prior to the construction of the floor of Feature 3. The house fill stratum contained few artifacts.

Stratum Iig

This stratum consisted of roof fall, approximately 10 cm deep, characterized by a discrete layer of charred structural debris and charcoal-stained silts and sands representing the

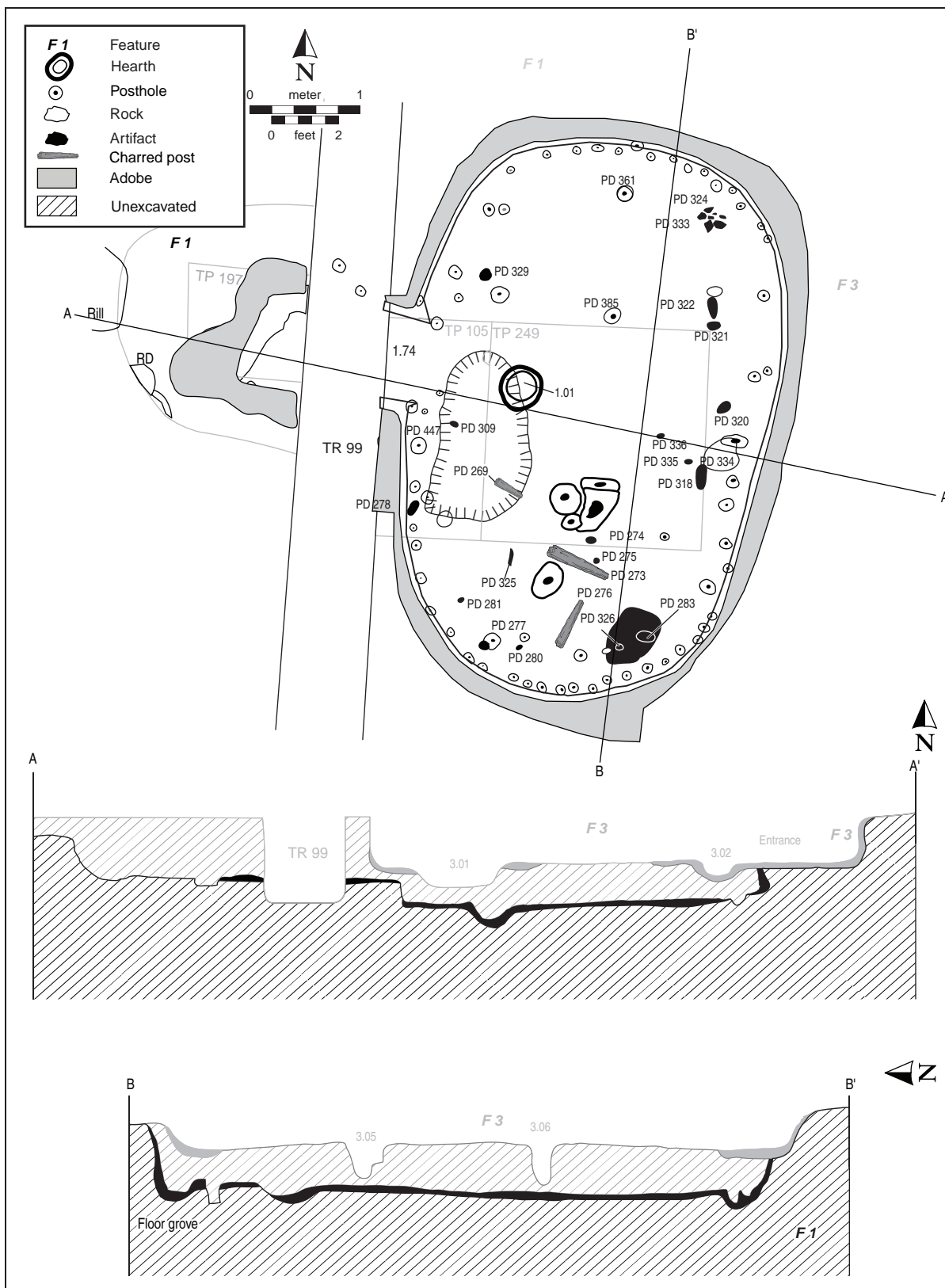


Figure 104. Plan view and profile of Feature 1 pit structure, Rock Jaw site (407/2014).



Figure 105. Photograph of Feature 1 pit structure, view south, Rock Jaw site (407/2014).

collapsed remains of the walls and roof. Few artifacts were encountered during the screening of this material, but several charred post segments were collected for species identification, radiocarbon dating, and dendrochronological analysis.

Construction Details

Walls and Roof

The house was constructed in a pit that was 0.94 m deep and excavated into a weak cambic soil (Stratum III) consisting of a carbonate-laden silty clay loam. The northeastern edge of the pit was excavated into the edge of an abandoned channel, which in turn had eroded the upper surface of the cambic soil. The floor was compacted and consisted of the native carbonate-laden silty clay loam forming Stratum III. A floor groove 5–7 cm wide and 7–10 cm deep indicated the location of the walls and encircled the pit and the sides of the entryway. Seventy-eight perimeter postholes located immediately inside the floor groove were identified and excavated. These postholes appear to represent two building episodes. Seven central-support postholes were also identified. Four of these were clustered together in the south-central portion of the house, likely representing the repeated repair or replacement of a single central support post. Another central-support posthole was identified 45 cm south of this remodeled area.

Two smaller central-support postholes were located in the northern half of the house. All 7 of the central-support postholes served as foundations for roof support posts placed along the center of the house's long axis.

Hearth

A hearth (Feature 1.01) was discovered in the west-central portion of the house, approximately 70 cm east of the entry pad (Feature 1.74). The hearth was plastered, 29 cm in diameter, and 14 cm deep, with a plastered annular collar 15 cm wide. Loose medium-grained to coarse sands filled the upper 12 cm of the hearth and covered a discrete ash lens that extended to the bottom of the feature and likely represents the last use of the feature. The fill from the hearth was collected in its entirety for flotation analysis (PD 290).

Other Floor Features

There were no other floor features.

Entry

Feature 1 possessed a stepped entryway oriented to the west, much of which was destroyed during the excavation of Trench 99. The pit containing the entry pad was 1.74 m long and 2.12 m wide. The entry pad was constructed of a carbonate-laden silt loam measuring 0.80 m wide, 1.60 m

long, and 0.12 m tall. The entry pad was constructed atop 2–3 cm of charcoal-stained sands, suggesting that it was added after the house floor was prepared. The linear floor groove that encircled the floor extended along the sides of the entry pad. Postholes were situated at each corner of the entry pad, and two were discovered along its northern side. These postholes likely supported the superstructure for a vestibule entryway. Extensive rodent disturbance was observed within the entry pit immediately west of the entry pad.

Evidence for Remodeling

A series of conjoining central-support postholes (Features 1.02, 1.46, 1.47, and 1.76) represent the repeated repair or replacement of a single, central support post. Similarly, two series of perimeter postholes were also identified. This suggests that the walls were either repaired or reinforced subsequent to the original construction of the house. Sediment situated between the entry pad and floor also indicated that the entry pad was likely constructed after the floor was prepared. After Feature 1 burned and collapsed, the depression appeared to have been leveled by adding sediment (Stratum II_f). A second pit structure (Feature 3) was then constructed immediately atop the remains of Feature 1.

Associated Artifacts

Several artifacts were recovered from the floor of Feature 1 (Table 9). These include four manos, one metate, one chert corner-notched projectile point, three basalt hammer stones, one *Glycymeris* sp. shell bracelet fragment, and several plain ware sherds. One artifact, a Sedentary Side-Notched projectile point, was found in the roof fall of Feature 1.

Botanical Remains

Flotation samples were collected from the floor fill of the pit structure and the hearth. In addition to juniper (*Juniperus* sp.) and mesquite (*Prosopis* sp.) charcoal, economic species recovered from the fill of the structure included cotton (*Gossypium* sp.), cheno-am seeds, and three bean fragments (*Phaseolus* sp.). A *Phragmites* sp. stem fragment was also recovered. The sample from the hearth contained only two identifiable species, a *Phragmites* sp. stem fragment and a grass (Poaceae [Gramineae]) stem. In addition to the flotation samples, large samples of charcoal were collected from two postholes for species identification and possible dendrochronological dating. All samples were identified as juniper. A composite pollen sample was taken from floor-contact contexts within Feature 1, which contained moderate quantities of amaranth pollen.

Faunal Remains

A small collection of mammal bones were recovered from controlled units in Feature 1. Most of these could only be assigned to a general size class, the majority being rabbit sized. A single mandible fragment was identified as deer (*Odocoileus* sp.), and one specimen was identified as a dog bone (*Canis* sp.) (PD 203).

Chronology

No temporally diagnostic artifacts were recovered from floor contexts. A small number of Holbrook Black-on-white and Sacaton Red-on-buff sherds from the fill of the structure suggest a terminus ante quem of ca. A.D. 1050–1150. Several carbonized beans (*Phaseolus* sp.) collected from the floor fill of the feature were submitted for radiocarbon dating, returning a date of 1040 ± 40 B.P. (cal A.D. 890–1120; calibrated at 2σ with program OxCal 3.10) (see Table A.1). An archaeomagnetic sample was taken from the hearth, returning a date of A.D. 1110–1140 (dated against SWCV595; LaBelle and Eighmy 1997) (see Table A.1). None of the charcoal samples submitted for dendrochronological dating returned a date.

Associated Features

Features 1 and 3 were superimposed. The Feature 1 pit structure was constructed in the Feature 3 house pit.

Feature 3

Feature type: pit house

Location: This pit house was discovered during the mechanical excavation of TR 99 and was subsequently exposed in plan view with the mechanical excavation of SU 124 (Figures 106 and 107; see Figure 102). It is located in the west-central portion of the site immediately east of the manmade channel leading to Cottonwood Creek. Feature 3 stratigraphically superimposed Feature 1.

Grid coordinates (m): N 8901.3, E 380.2

Date: pre-Classic, based on radiocarbon dates and ceramics
Elevation: The originating elevation of 785.4 m (2,576.6 feet) AMSL corresponds to the surface of the mechanical stripping unit (SU 124). The average floor elevation was 785.1 m (2,575.8 feet) AMSL.

Abandonment processes: abandoned

Dimensions: 5.75 m north–south by 4.25 m east–west

Orientation: entry of structure faced east

Floor area: 21.0 m²

Shape: oval

Excavation Methods

Feature 3 was discovered during the excavation of TP 105, which was started for controlled sampling of Feature 1.

Table 9. Floor Artifacts from the Rock Jaw Site (407/2014)

PD No., by Feature No.	Description
Feature 1	
269	charred post fragment
273	charred post fragment
274	basalt flake
275	basalt flake
276	charred post fragment
277	brown plain sherd
278	sandstone mano
280	basalt hammer stone
281	basalt flake
283	brown plain sherd
309	sandstone mano
318	metavolcanic mano
320	basalt hammer stone
321	basalt flake
322	granite mano
324	brown plain sherd cluster
325	white chert corner-notched projectile point
326	granite metate
327	basalt hammer stone
329	basalt flake
333	<i>Glycymeris</i> sp. shell bracelet fragment
334	basalt flake
335	Wingfield Plain sherd
336	brown plain sherd
Feature 3	
133	basalt metate
135	ceramic scatter and 1 lithic flake
159	brown plain sherd
160	Wingfield Plain sherd
161	brown plain sherd
163	brown plain sherds
164	quartzite mano
173	brown plain sherd
174	brown plain sherd
176	brown plain sherd

Table 9. Floor Artifacts from the Rock Jaw Site (407/2014)
(continued)

PD No., by Feature No.	Description
177	indeterminate ceramic
178	indeterminate ceramic
180	Wingfield Plain sherd
181	Wingfield Plain sherd
182	Wingfield Plain sherds
183	Wingfield Plain sherd
184	Wingfield Plain sherd
185	brown plain sherd
186	Wingfield Plain sherd
187	Wingfield Plain sherd
188	Wingfield Plain sherd
189	Wingfield Plain sherd
190	red plain sherd
191	sandstone flake
192	obsidian flake
193	indeterminate ceramic
194	rhyolite perforator
196	obsidian projectile point
206	Wingfield Plain sherds and one sandstone flake
207	brown plain sherds
208	brown plain sherd
209	Wingfield Plain sherd
210	Wingfield Plain sherd
212	brown plain sherd
214	chert flake
237	<i>Olivella biplicata</i> spire-lopped bead
241	brown plain sherd

Key: PD = provenience designation.

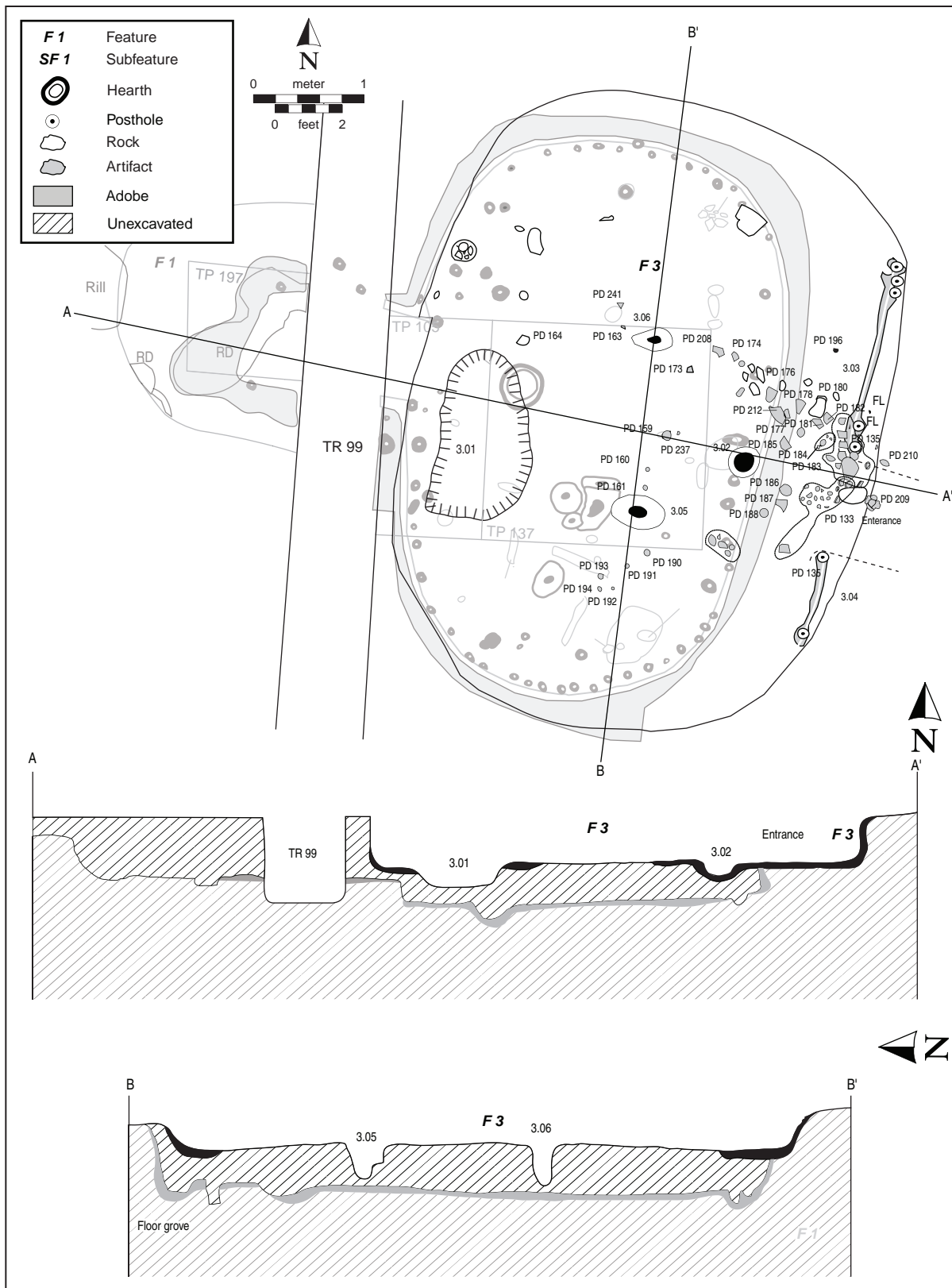


Figure 106. Plan view and profile of Feature 3 pit house, Rock Jaw site (407/2014).

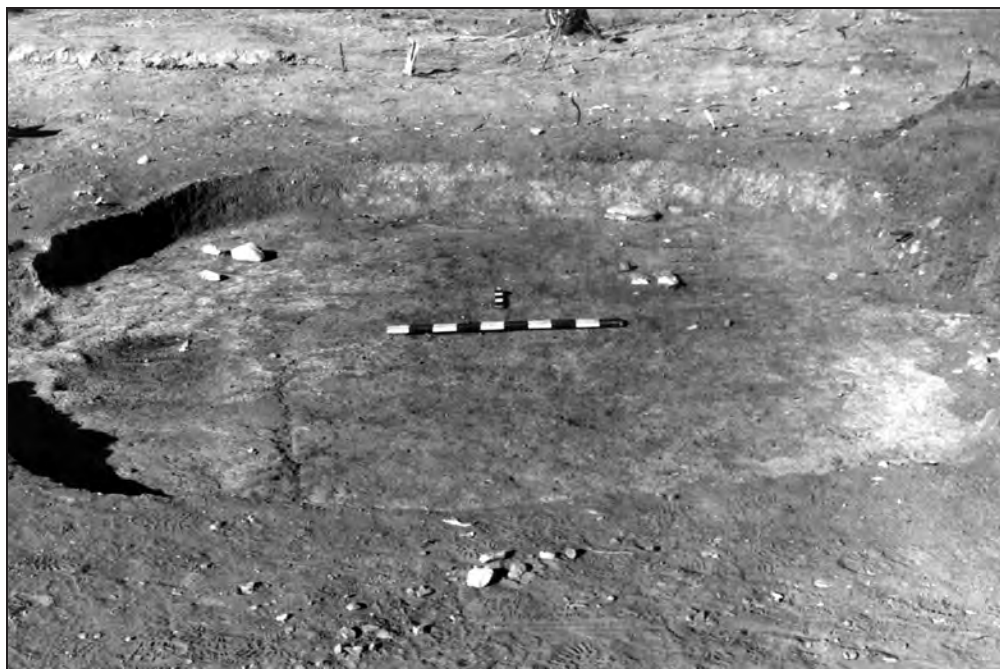


Figure 107. Photograph of Feature 3 pit house, view north, Rock Jaw site (407/2014).

When Feature 3 was found to overlay Feature 1, the levels originally assigned to Feature 1 were reassigned to Feature 3. Therefore, controlled sampling of Feature 3 began with the excavation of a 1-by-2-m test pit (TP 105) placed along the eastern edge of TR 99. TP 105 was excavated in seven screened levels, five of which contained fill exclusively associated with Feature 3. Stratum I, Level 1, represents the removal of the modern colluvium, whereas Stratum II, Level 6, extended into an underlying pit structure (Feature 1). The house floor was exposed at the completion of Stratum II, Level 5. Subsequently, 30–40 cm of overburden was removed during the mechanical stripping of SU 124, exposing the structure in plan view. Another control unit (TP 137) was then placed near the center of the house adjacent to the east side of TP 105. Three arbitrary levels were removed from this 2-by-2-m unit with all of the excavated fill screened through ¼-inch-mesh hardware cloth, resulting in the exposure of a plastered house floor and the identification of a house fill and roof-fall stratum. The southern half of the house was then excavated in order to expose a profile of the structure fill. Two levels were removed during this procedure. The first level was 17 cm thick on average and consisted of a mixture of house fill and roof-fall sediments. A judgmental sample of artifacts was collected from this level without screening. The second level was screened, measuring 8 cm in thickness on average, and consisted of charred structural debris and charcoal-stained sediment. Completion of this second level resulted in the exposure of the thinly plastered floor and walls throughout the southern

half of the house. A profile of the remaining fill was then drawn, and the northern half of the house was then excavated in the same manner as the southern half.

Stratigraphy

Stratum I

This stratum consisted of a postoccupational overburden, approximately 30 cm deep, characterized by loose surface sands and gravels that covered the remains of the structure. Very few artifacts were recovered from these sediments.

Stratum IIb

This stratum consisted of house fill, approximately 17 cm deep, characterized by loose, light brown sands and silts. This deposit appeared to be a postabandonment accumulation. It contained few artifacts, but occasional pockets of charcoal-stained sediment were present.

Stratum IIc

This stratum consisted of roof fall, approximately 8 cm deep, characterized by a charcoal-stained fine sandy loam that in places surrounded charcoal fragments 1–3 cm in diameter. Numerous rounded gravels and granules were also noted, along with many fine to medium-sized rootlets. Artifact density increased with depth in this stratum. It represented

the charred and collapsed remains of the walls and roof. This debris covered several point-located artifact clusters that rested on the house floor.

Construction Details

Walls and Roof

Interpretation of construction of the walls and roof was based on the floor grooves and presence of two central-support postholes. The floor grooves (Features 3.03 and 3.04) were located along the eastern floor margin flanking either side of the east-facing entryway. Narrow strips adjacent to both sides of the floor grooves were covered with well-preserved plaster. The floor groove located north of the entryway (Feature 3.03) was 1.8 m long, 8 cm wide, and 8–15 cm deep. Two postholes intersected its southern end, and three postholes intersected its northern end. The floor groove located south of the entryway (Feature 3.04) was 84 cm long, 8 cm wide, and 8–12 cm deep. One posthole was located at each end of this floor groove. These floor grooves were likely constructed in order to further strengthen the eastern wall, which unlike the other walls was flanked by channel gravels. Two central-support postholes (Features 3.05 and 3.06) were identified. No other perimeter postholes were defined.

Hearth

A basin shaped, plastered hearth (Feature 3.02) was located 74 cm inside of the entryway in the east-central portion of the house. The hearth measured 28 cm in diameter and was 14 cm deep. Loose medium-grained to coarse sands and several plain ware sherds filled the hearth. The hearth fill was collected in its entirety and submitted for flotation analysis.

Other Floor Features

There were no other floor features.

Entry

The entrance opened to the east, but a large saguaro prevented excavation of most of the entryway. The excavated portion of the entry was situated between the floor grooves, plastered, and did not appear ramped.

Evidence for Remodeling

There was no evidence for remodeling.

Associated Artifacts

A scatter of ceramic and flaked stone artifacts were found

on the floor (see Table 9 and Figure 106), most of which were concentrated on the floor in the eastern part of the structure. The ceramic collection consisted of brown plain and Wingfield Plain sherds. The flaked stone collection included two formal tools: a small obsidian projectile point (PD 196) and a rhyolite perforator (PD 194). The remainder of the flaked stone collection consisted of secondary flakes of sandstone, chert, and basalt. The ground stone collection included a basalt metate (PD 133) and a quartzite mano (PD 164). An *Olivella biplicata* bead was also recovered on the floor of Feature 3 (PD 237).

Botanical Remains

Flotation samples were analyzed from the near-floor fill of the structure and from the hearth. The only species that could be identified in the samples were juniper, present as charcoal in both samples, and *Phragmites australis* [*P. communis*], present as charred stem fragments in the sample from the hearth. A composite pollen sample containing moderate quantities of amaranth pollen was taken from floor-contact contexts within Feature 1.

Faunal Remains

The majority of the small faunal collection from Feature 3 consisted of fragments of rabbit- and deer-sized mammals. A single long-bone fragment recovered from the floor was identified as *Canis* sp. (PD 203).

Chronology

No temporally diagnostic artifacts were recovered from floor contexts. A sample of charred *Phragmites australis* stems collected from an intramural pit (Feature 1.01) returned a radiocarbon date of 1000 ± 40 B.P. (cal A.D. 970–1160; calibrated at 2σ with program OxCal 3.10) (see Table A.1). An archaeomagnetic sample was taken from the hearth, returning a date of A.D. 1010–1265 (dated against SWCV595; LaBelle and Eighmy 1997) (see Table A.1).

Associated Features

Features 1 and 3 were superimposed, with Feature 3 constructed within the Feature 1 house pit.

Extramural Hearths

Feature 4

Location: This small extramural hearth (Figure 108) was located approximately 10 m northeast of the Feature 1 and 3 pit structures.

Grid coordinates (m): N 8904.8, E 388.2

Date: pre-Classic period, based on ceramics

Elevation: The originating elevation of 785.4 m (2,576.8 feet) AMSL corresponds to the surface of the mechanical stripping unit (SU 124).

Depth: 0.18 m

Dimensions: 0.65 m east–west by 0.57 m north–south

Excavation Methods

This extramural hearth was discovered during the mechanical stripping of SU 124. Its upper surface rested 10–15 cm below the modern ground surface. The fill was collected in its entirety and submitted for flotation analysis.

Feature Fill

The upper 8 cm of feature fill consisted of loose silts and sands that surrounded several fire-cracked rock fragments and small ash pockets. The lower 10 cm of fill consisted primarily of charred-wood fragments and ash.

Construction Details

This ovate pit was dug into the sterile cambic soil (Stratum III) that blanketed the site (see Figure 108). It had 75°–80° walls, a slightly concave base, and was unlined. The walls and base of the pit were fire hardened and oxidized.

Associated Artifacts

A total of five ceramic artifacts, all brown plain sherds, and two lithic artifacts, an andesite and a basalt flake, were recovered from the fill of Feature 4.

Botanical Remains

The flotation sample from Feature 4 contained both mesquite (*Prosopis* sp.) and jojoba (*Simmondsia* sp.) charcoal. A single pollen sample taken from the feature contained amaranth, mallow (*Sphaeralcea* sp.), and grass pollen.

Faunal Remains

No faunal remains were identified.

Associated Features

This extramural hearth originated at the occupational surface associated with the Feature 1 and 3 pit structures and about 5 m to the northeast. Two unexcavated extramural pits (Features 5 and 6) were discovered on the same surface approximately 5–7 m to the northwest.

Feature 12

Location: Feature 12 is a rock-filled hearth approximately 30 cm west of TR 99 and approximately 80 cm north of Feature 13.

Grid coordinates (m): N 8892.4, E 376.4

Date: pre-Classic period, based on stratigraphy

Elevation: The originating elevation of 785.4 m (2,576.7 feet) AMSL corresponds to the surface of the mechanical stripping unit.

Depth: 0.10 m

Dimensions: 0.85 m north–south by 0.75 m east–west

Excavation Methods

Feature 12 was first identified in the western wall of Trench 99 (Figure 109). Following mechanical stripping, which enabled us to define the margins of the feature, the fill was removed in a single unit and submitted for flotation and pollen analysis. Large stones contained in the fill were removed in the field.

Feature Fill

The fill of Feature 12 consisted of loose, sandy silt surrounding a dense pack of angular rocks, several exhibiting evidence of heat alteration. Small flecks of charcoal were observed throughout.

Construction Details

This ovate pit was dug into the sterile Stratum III soil. The feature was bowl shaped in cross section, with a slightly concave base. The walls and base of the pit exhibited evidence of oxidation.

Associated Artifacts

The artifact collection from Feature 13 consisted of one basalt hammer stone, one chert flake, and one andesite flake.

Botanical Remains

The macrobotanical remains recovered from Feature 12 included both mesquite (*Prosopis* sp.) and creosote bush (*Larrea* sp.) charcoal, and charred seeds of hedgehog cactus (*Echinocereus* sp.), cheno-ams, and grasses (Poaceae [Gramineae]). The pollen record from Feature 12 included evidence of both maize (*Zea* sp.) and legumes, as well as amaranth and grasses.

Faunal Remains

No faunal remains were identified.

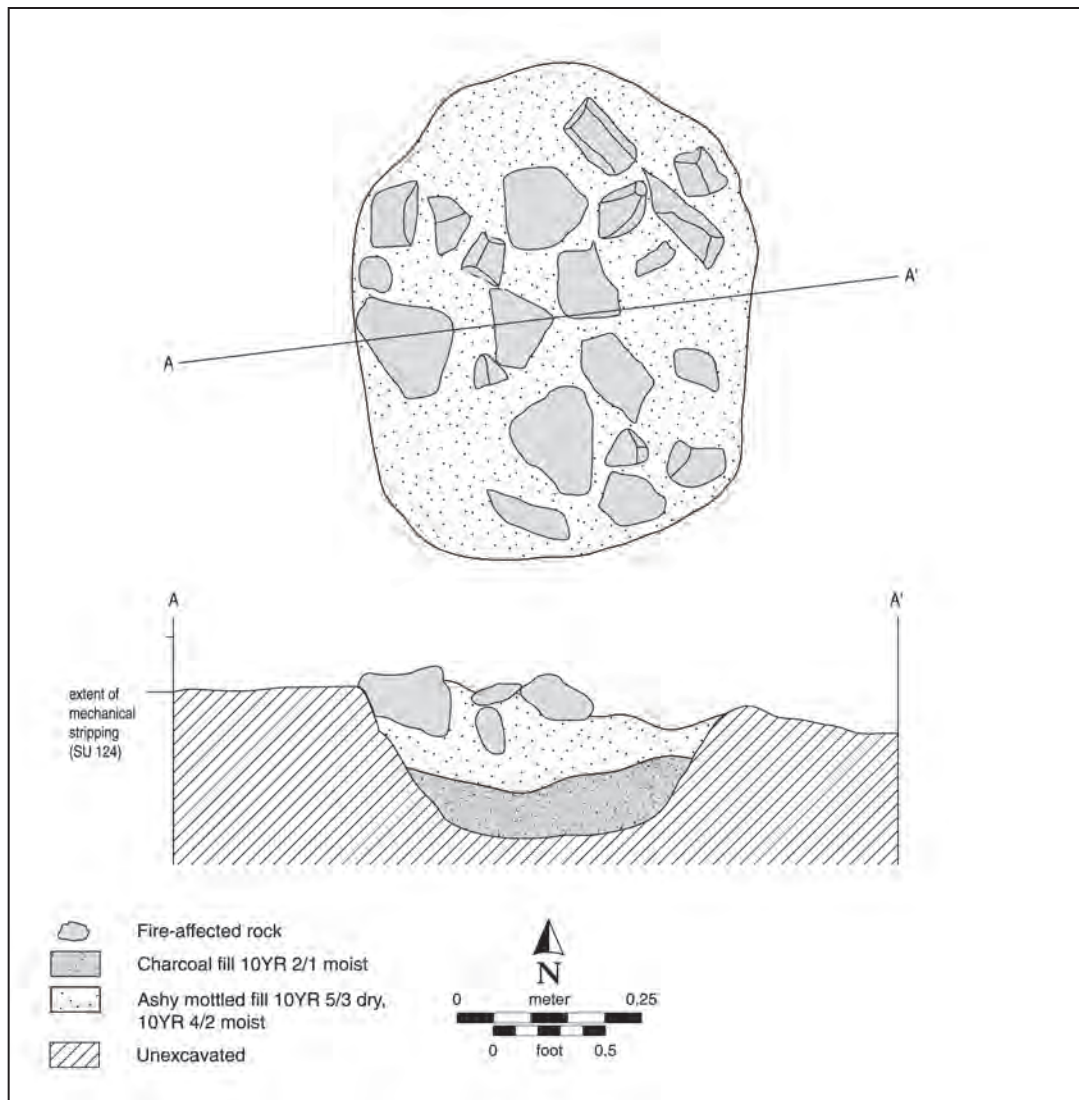


Figure 108. Profile and plan of extramural hearth Feature 4, Rock Jaw site (407/2014).

Associated Features

Feature 12 was located approximately 5 m south-southwest of the house features and 80 cm north of the similar extramural hearth, Feature 13. No other features were located nearby.

Feature 13

Location: This extramural hearth was the southernmost prehistoric feature discovered at this site.

Grid coordinates (m): N 8890.8, E 376.7

Date: pre-Classic period, based on stratigraphy

Elevation: The originating elevation of 785.4 m (2,576.8 feet)

AMSL corresponds to the surface of the mechanical stripping unit (SU 124).

Depth: 0.12 m

Dimensions: 0.77 m north-south by 0.45+ m east-west

Excavation Methods

This feature was discovered in the west wall of TR 99, which removed the eastern portion of the feature (Figure 110). Feature 13 was exposed in plan view during the mechanical stripping of SU 124. The organic fill of the feature distinguished it from the surrounding sediments. The feature fill was collected in its entirety and submitted for flotation analysis.

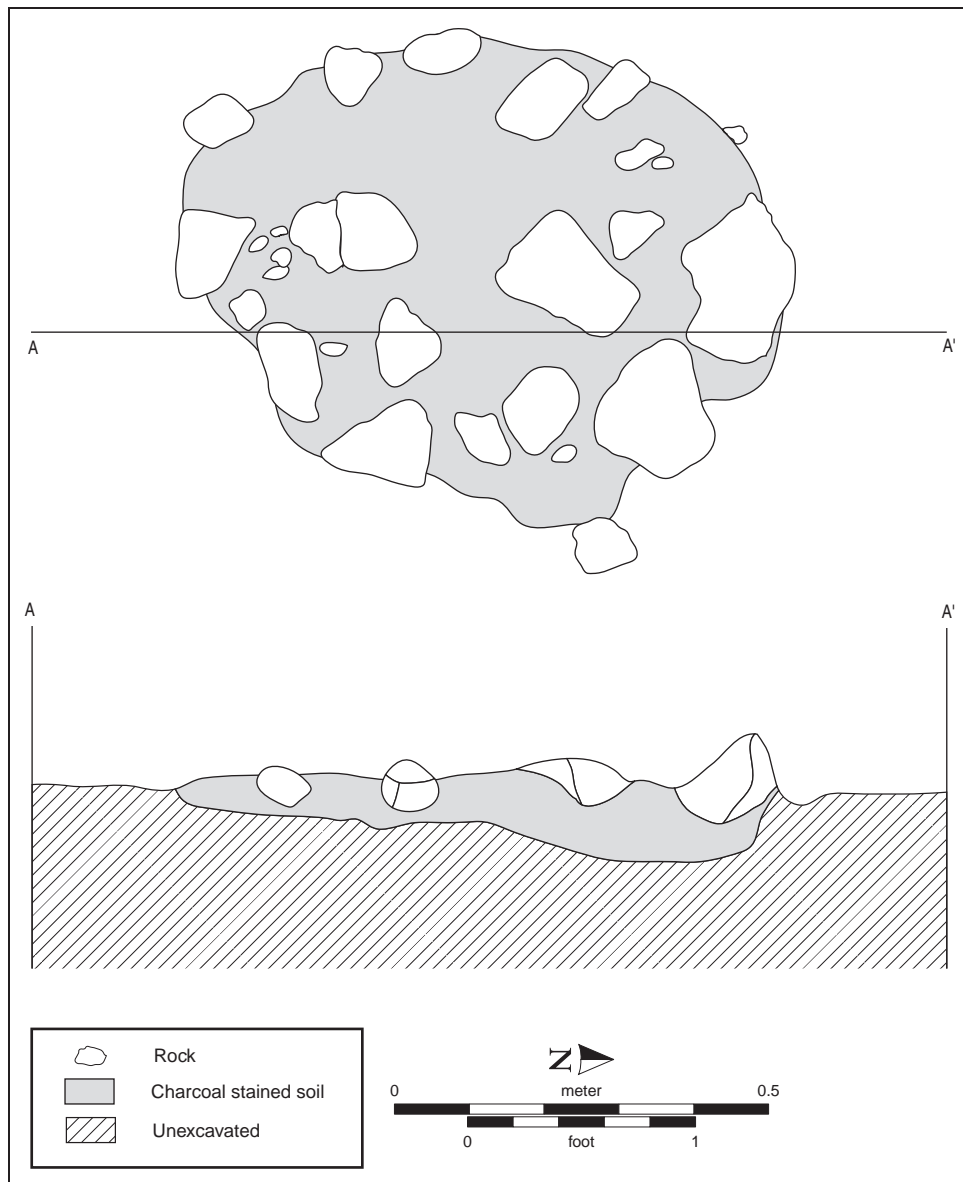


Figure 109. Profile and plan of extramural hearth Feature 12, Rock Jaw site (407/2014).

Feature Fill

The feature fill consisted of fire-cracked rocks surrounded by a light gray sandy loam. No other artifacts were observed, but charcoal flecks and fragments were numerous. Fine rootlets riddled the feature fill, and a large rodent burrow was discovered at the base of the pit.

Construction Details

Feature 13 was ovate in plan and basin shaped in cross section. The pit was excavated into a silty clay loam with no additional preparation to the surface apparent. Although no

evidence of oxidation was observed, the pit appeared to be fire hardened.

Associated Artifacts

The artifact collection from Feature 13 consisted of a single chert flake.

Botanical Remains

A flotation sample extracted from the fill of Feature 13 contained mesquite (*Prosopis* sp.) charcoal and seed frag-

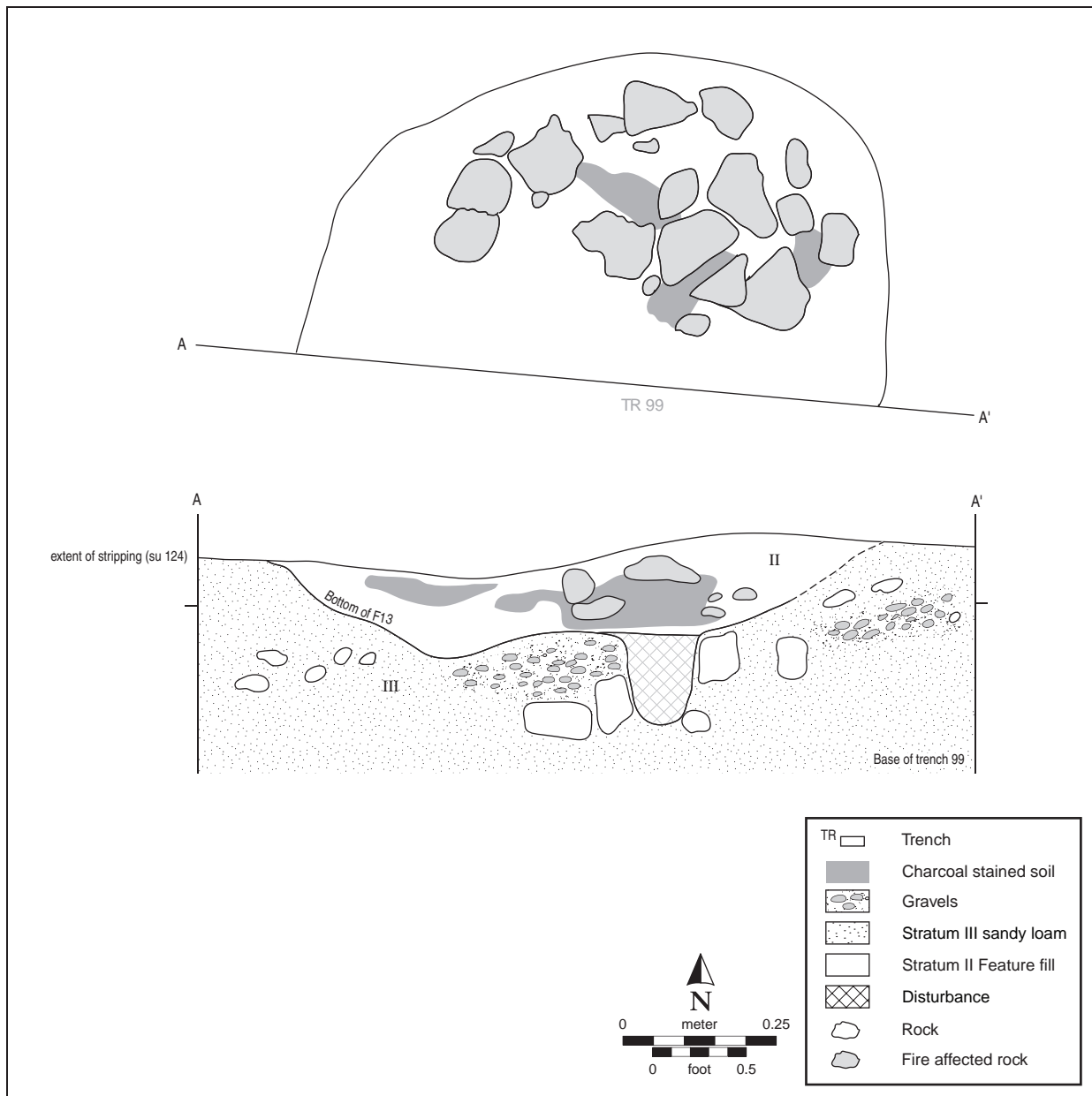


Figure 110. Profile and plan of extramural hearth Feature 13, Rock Jaw site (407/2014).

ments of grass (Poaceae [Gramineae]), cheno-ams, and hedgehog cactus (*Echinocereus* sp.). A single pollen sample taken from the feature contained evidence of maize (*Zea* sp.), as well as mallow (*Sphaeralcea* sp.) and amaranth.

Faunal Remains

No faunal remains were identified.

Associated Features

This feature originated at the occupational surface associated with the pit structures (Features 1 and 3) and was located 8 m south-southwest of these structures. It was approximately 4 m south of Feature 11, an extramural pit, and 0.80 m south of Feature 12, a similar rock-filled extramural hearth.

Site Summary

The data collected during excavations at the Rock Jaw site reflect the activities associated with a small farming settlement, perhaps occupied by a single household. The artifacts recovered both on the surface of the site and from excavated contexts reflect a range of activities consistent with year-round, permanent occupation. This is also reflected in the considerable effort put into the construction of the two habitation structures at the site. The two structures represent a sequential occupation. Feature 1 was constructed first and was a large habitation structure with an entryway oriented to the west. Two hearths and three extramural pits were located to the south-southwest of the Feature 1 entryway and probably represent an extramural activity area associated with the occupation of this house. Feature 3, a smaller habitation structure, was built within the pit associated with Feature 1 but faced to the east. A hearth and two extramural pits were located to the northeast of the entryway and were probably associated with the use of Feature 3. Two additional

extramural pits were located a short distance to the north of both houses and could have been used with either house.

In terms of the occupational history of the site, the available data are somewhat equivocal. Two radiocarbon dates, both obtained from annual species recovered from strong contexts, indicate that the two pit structures, Features 1 and 3, were occupied before ca. A.D. 1000, placing them in the latter part of the pre-Classic Sedentary period. The archaeomagnetic date obtained from Feature 3, the earlier of the two superimposed pit structures, agrees with this assessment. The archaeomagnetic date obtained from the upper house, however, suggests that the occupation of the site likely extended into the early twelfth century A.D., thus bridging the transition between the pre-Classic Sedentary period and the early Classic period. A similar range of dates were obtained from the pit structures excavated at the Vegas Ruin (see Chapter 5). These dates are also consistent with the small collection of painted pottery recovered at the site that included two Sacaton Red-on-buff sherds and a much larger number of Cibola White Ware, Little Colorado White Ware, and Tusayan White Ware, as well as a few red plain and Salado Red Corrugated sherds.

AZ U:3:408/2015

Robert Wegener and Eric Eugene Klucas

Site AZ U:3:408/2015 is a large, dispersed multi-component site encompassing several discrete loci, including a small Classic period compound, several Classic period field houses, and a pre-Classic period component of an unknown nature. The site is located on both sides of the existing SR 188 alignment immediately south of Cottonwood Creek at an approximate elevation of 780 m (2,560 feet) AMSL (Figure 111). Site 408/2015 was initially described as covering an estimated 12,183 m² (1.22 ha) and encompassing a small masonry structure, a rock ring, and an associated scatter of ceramic and lithic artifacts (Hoffman 1991:47–49). An estimated 60 percent of this area was contained within the 100-foot ADOT ROW. Following a recent survey, Woodall (1996) combined Site 408/2015 with Site AR-03-12-06-634, extending the site boundary east to Tonto Creek. The combined sites encompassed several widely scattered architectural units, including a small compound located at the edge of the deeply incised channel of Tonto Creek, several masonry field houses, and a large midden area suggesting the presence of significant subsurface deposits with broad time depth.

Site 408/2015 has been disturbed by a number of recent activities. A shallow erosion-control ditch runs parallel to SR 188 west of its current alignment. This portion of the site is also bisected by a gravel road leading west to a windmill and water tank. The site is also apparently used frequently as a campsite, reflected by the large quantities of trash over the site surface.

Phase 1

Phase 1 investigations at Site 408/2015 began with the collection of surface artifacts from a series of 126 5-by-5-m

collection units (see Figure 111). This was followed by the excavation of a series of hand trenches adjacent to the rock alignment designated as Feature 1 (see below). These trenches revealed that Feature 1 was a discrete feature with no adjoining walls. The function of this feature could not be determined with confidence. Based on the presence of a small number of corrugated ceramic sherds and a fragment of carved argillite recovered during the excavation of Feature 1, the feature is likely to be prehistoric in age.

In addition to the hand excavation, a series of 14 backhoe trenches totaling 200 linear meters was excavated on both sides of the highway as a means of assessing the extent of any subsurface cultural deposits within the ROW. No buried cultural deposits were identified in the portion of the site east of the highway. This was consistent with the observed surface artifact densities. Trenches placed in the western portion of the site encountered a total of eight features, including a suspected pit structure, a large roasting pit, and an inhumation burial (Feature 8) (Table 10). The burial was excavated in its entirety during Phase 1. The fill within the pit contained a diverse assortment of artifacts, including several fragments of baked-clay figurines and pieces of carved shell. The pit also contained moderate quantities of charcoal and ash throughout the fill, suggesting that the artifacts recovered from the pit represent a general midden deposit rather than mortuary artifacts. The diversity of artifacts also provided evidence for the presence of a habitation locus at the site.

Phase 2

Phase 2 operations at Site 408/2015 entailed the further exploration of the features identified during Phase 1. This began with excavation of a series of 1-by-2-m screened test

pits within the suspected pit structure. These test excavations revealed that the suspected pit structure was simply a moderately thick layer of ash, charcoal, and fire-cracked rock, most likely representing clean-out episodes associated with the roasting pit. Following the excavation of the features identified during Phase 1, an area west of the highway measuring approximately 1,000 m² was mechanically stripped in an effort to identify any additional features within the ROW. No additional features were identified during this operation.

Changes to the ROW after the completion of Phase 1 added 4,765 m² to the impact area at the northern end of the site. To ensure that no additional features were present in the expanded ROW, a single 25-m-long trench was excavated on the east side of the highway. In the expanded ROW on the west side of the highway, two trenches were excavated near a small masonry structure. The masonry structure itself was not excavated because it was located outside the ROW. No buried cultural deposits were identified in the expanded trenching areas. Based on these findings, no further work was deemed necessary in the expanded ROW area.

Feature Descriptions

Architectural Features

Feature 1

Feature type: rock alignment

Location: The rock alignment was discovered in the northwestern segment of the site, approximately 20 m south of Forest Road No. 167 (see Figure 111).

Grid coordinates (m): N 8619.8, E 268.3

Date: Classic period, based on ceramics

Elevation: The originating elevation of 0.23 m below datum (mbd) corresponds to the average elevation of the modern ground surface.

Depth: 0.13 m

Dimensions: 6.69 by 0.6 m

Orientation: 24° long axis

Excavation Methods

This feature was visible from the surface and was initially identified as a masonry-wall segment (Figure 112). Exposure of the feature began with the hand excavation of two wall trenches (WT). These trenches were excavated without screening, although a judgmental sample of artifacts was collected. WT 3 was 5 m long, 1.5 m wide, and encompassed the southern half of the feature. WT 4 was also 5 m long

and 1.5 m wide; it encompassed the northern half of the wall. An average of 15 cm of sediment was removed from the wall trenches. Few artifacts were encountered during the removal of this sediment. Excavation of these trenches resulted in the complete exposure of the feature. Only a single course of stone was found. No subfeatures, cross walls, or occupational surfaces were observed.

Controlled sampling of Feature 1 entailed the excavation of two 1-by-2-m test pits (TPs 6 and 15). TP 6 was oriented perpendicular to and west of the wall. Five levels were removed from this test pit, and all of the excavated fill was screened through ¼-inch hardware cloth. TP 15 was also oriented perpendicular to the rock alignment but along its eastern side. Four levels were removed from TP 15, and few artifacts were captured during the ¼-inch screening of these levels.

Stratigraphy

Two strata were exposed during the excavation of the feature—brown (10YR 5/3 moist), loose, poorly sorted surface sediments (Stratum I) and a pale brown (10YR 6/3 moist) sandy clay loam (Stratum II). The Stratum I surface sands were 5 cm deep on average and surrounded few artifacts. These sands rested atop the gradual smooth surface of the incipient Stratum II paleosol. Poorly sorted, fine to coarse gravels and occasional charcoal flecks were found throughout Stratum II. Artifacts were most numerous within the upper 10 cm of Stratum II.

Construction Details

The alignment was constructed of 16 well-rounded alluvial cobbles with an average diameter of 45 cm laid in a single course. These cobbles were set in a pinkish brown, carbonate-laden adobe mortar. The cobbles were set atop the paleoground surface with no evidence of a footing trench observed. No prepared surfaces or intramural features were found in association with the feature.

Evidence for Remodeling

There was no evidence for remodeling.

Associated Artifacts

The few temporally diagnostic artifacts that were recovered during the excavation of Feature 1, including several sherds of Salado Red Corrugated and a small number of indeterminate Cibola White Ware sherds, were obtained from mixed contexts. Because of this, their association with the feature may simply be fortuitous. The lithic collection included evidence of tool production and maintenance, including tested cobbles, cores, secondary flakes, two knives, and two

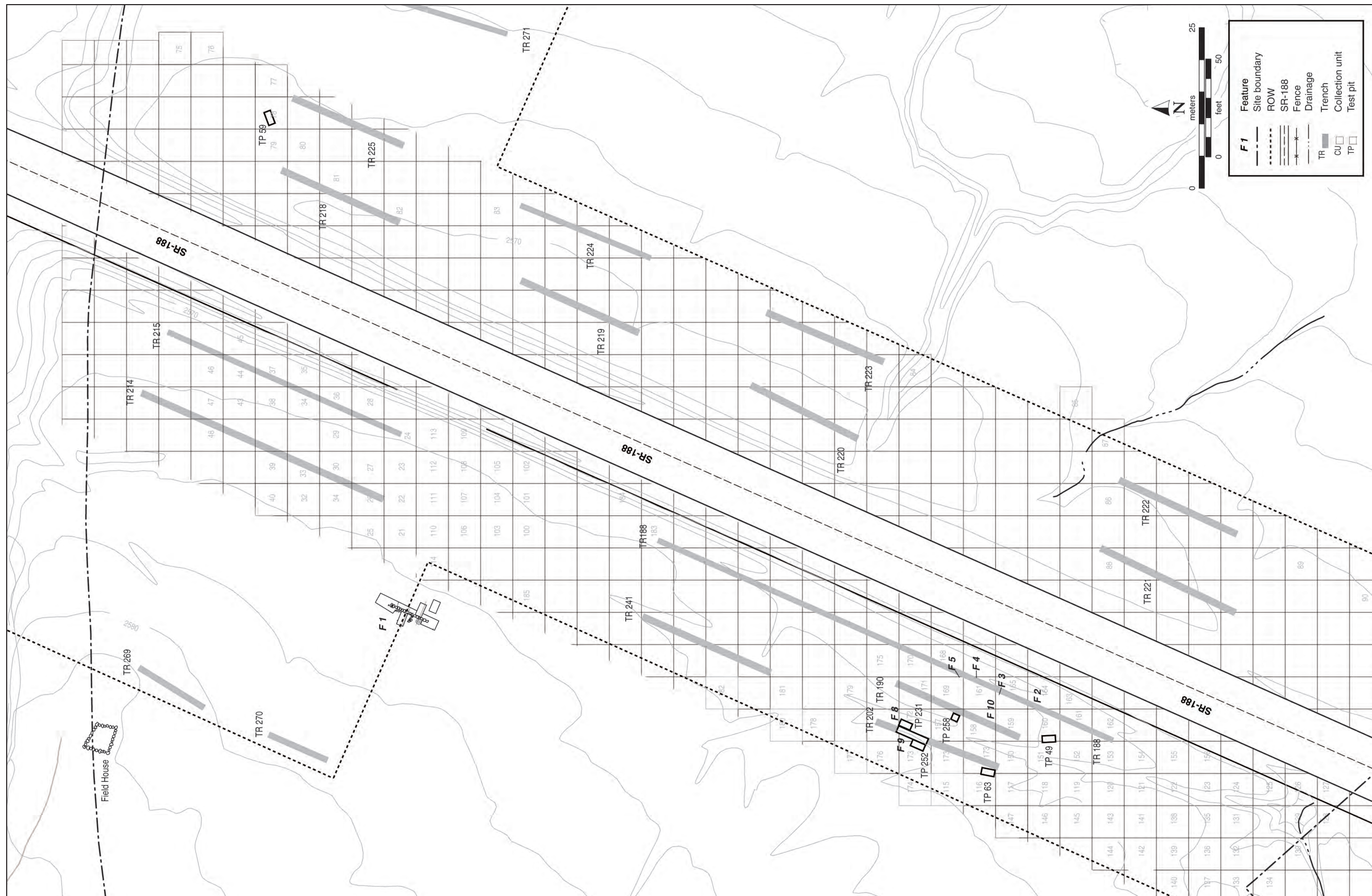


Figure 111. Site map of Site 408/2015, showing excavation areas within the ROW.

Table 10. Features Identified at Site 408/2015

Feature No. ^a	Feature Type	Diameter or Dimensions (l × w) (m)	Preserved Depth (m)	Level of Effort
1	rock alignment	6.69 × 0.6	0.13	Completely exposed with two wall trenches and two 1-by-2-m test pits.
2	pit	1.6	0.28	Flotation sample.
3	midden	? × 1.9	0.41	Flotation sample.
4	hearth	1.65 × 0.57	0.58	Mechanical trenching.
5	hearth	?	0.50	Flotation sample.
8	human burial	1.4 × 0.8 (min.)	0.35 (min.)	Completely excavated.
9	midden	5.9 (min.)	0.70	Two 1-by-2-m test pits.
10	hearth	0.35	0.18	Flotation sample.

^aFeatures 6 and 7 were voided.

hammer stones. A small argillite pendant blank was also recovered.

Depth: 0.58 m
Dimensions: 1.65 m east–west by 0.57 m north–south

Botanical Remains

No botanical samples were collected.

Excavation Methods

This extramural hearth was discovered during the mechanical trenching of TR 188 (Figure 113). Its upper surface rested 5–10 cm below the modern ground surface.

Faunal Remains

No faunal remains were identified.

Feature Fill

The feature fill consisted of up to 25 cm of very dark brown (7.5YR 5/2) gravel-laden sandy loam. The feature fill was uniformly ash enriched and exhibited Stage I carbonate development in the form of coatings beneath clasts and numerous fine filaments. Several fire-cracked and charcoal-stained rocks were exposed in profile.

Chronology

The limited ceramic collection suggests a Classic period date for the structure, although as mentioned above, no temporally diagnostic artifacts were recovered from strong contexts.

Construction Details

The feature was unlined and dug into a sterile gravelly alluvium (Stratum III). It had 35°–40° walls and a flat bottom. The base of the pit was blackened, but no evidence of oxidized sediment was encountered.

Associated Features

There were no associated features.

Associated Artifacts

No associated artifacts were recovered.

Extramural Hearths

Feature 4

Location: This small extramural hearth was discovered in TR 188.

Grid coordinates (m): N 8531.2, E 258.1

Date: Formative period, based on stratigraphy

Elevation: The originating elevation of 782.6 m (2,567.6 feet) AMSL corresponds to the modern ground surface.

Botanical Remains

A single pollen sample submitted for analysis contained Poaceae (Gramineae) and amaranth pollen, both of which

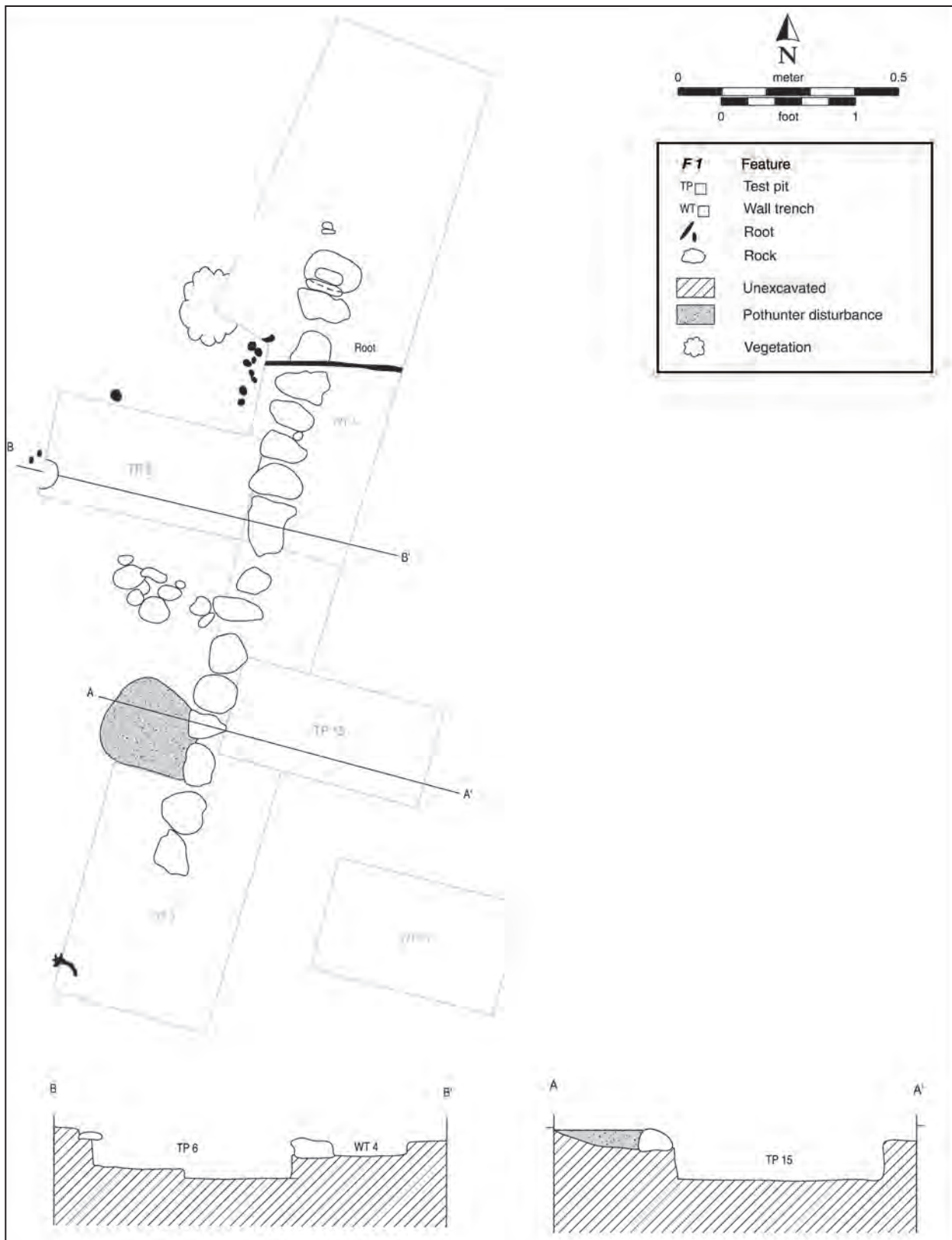


Figure 112. Plan view and cross section of Feature 1 rock alignment, Site 408/2015.

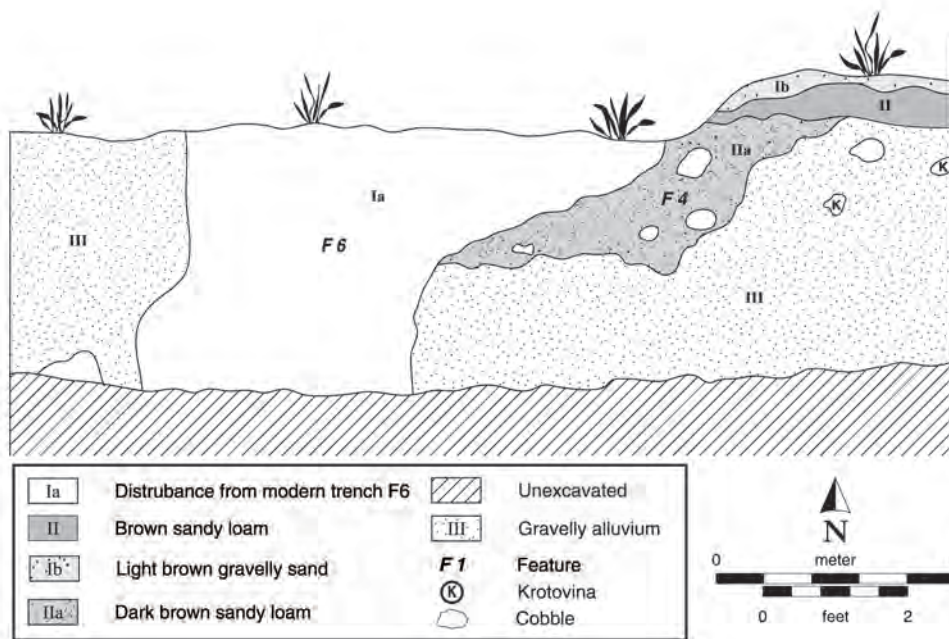


Figure 113. Profile of Feature 4 hearth, Site 408/2015.

could represent modern contaminants. No macrobotanical remains were identified.

Faunal Remains

No faunal remains were identified.

Associated Features

This extramural hearth originated at the surface of Stratum III. The southern segment of the feature was previously truncated by a modern trench associated with the construction of SR 188.

Feature 5

Location: This extramural hearth was discovered in the west wall of TR 188.

Grid coordinates (m): N 8534.3, E 259.2

Date: Formative period

Elevation: The originating elevation of 782.8 m (2,568.2 feet) AMSL corresponds to the surface of Stratum III.

Depth: 0.50 m

Dimensions: unknown

Excavation Methods

This feature was exposed in the west wall of TR 188, which removed the eastern portion of the feature (Figure 114). The

charcoal-stained fill of the feature distinguished it from the surrounding sediments. The feature was sampled through the collection of a 4-liter flotation sample taken from the feature profile. No additional feature excavation was conducted. A detailed profile was drawn and photographs were taken.

Feature Fill

The feature fill consisted of a dark brown (7.5YR 3/2), ash- and gravel-laden sandy clay loam. Stage I carbonate filaments were found throughout the feature fill and surrounding sediments. Sediments in the base of the feature appeared slightly oxidized.

Construction Details

The unlined and conical-shaped pit was excavated into a gravelly alluvium (Stratum III). Though unlined, the pit walls and base were fire hardened. The base of the pit also appeared slightly oxidized compared to the surrounding sediments.

Associated Artifacts

No associated artifacts were recovered.

Botanical Remains

No macrobotanical remains were identified in the single flotation sample. With the exception of amaranth, which

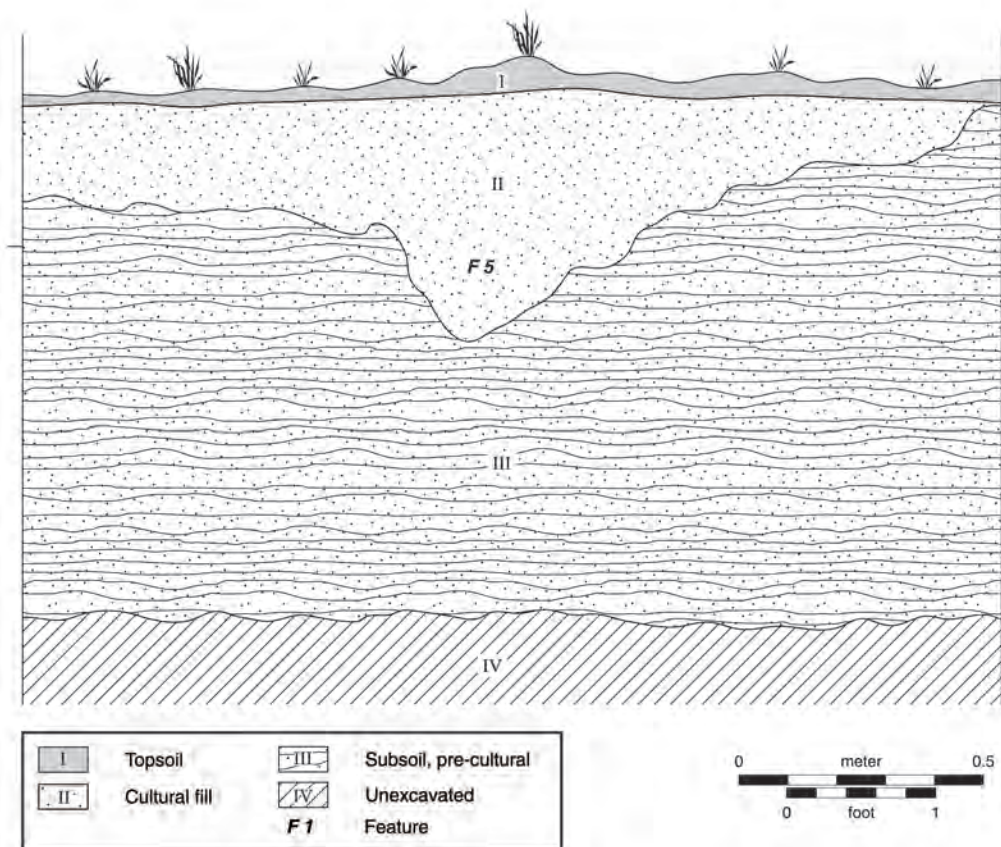


Figure 114. Profile of Feature 5 hearth, Site 408/2015.

may be a recent contaminant, the pollen sample did not produce evidence of economic species.

Faunal Remains

No faunal remains were identified.

Associated Features

There were no associated features.

Feature 10

Location: This small extramural hearth was discovered in the east wall of TR 190.

Grid coordinates (m): N 8529.8, E 252.2

Date: pre-Classic period, based on stratigraphic association with other features

Elevation: The originating elevation of 782.9 m (2,568.7 feet) AMSL corresponds to the upper surface of the feature.

Depth: 0.18 m

Dimensions: 0.35 m in diameter

Excavation Methods

This extramural hearth was exposed in the east wall of TR 190 (Figure 115). Its upper surface rested 30–35 cm below the modern ground surface. A 4-liter flotation sample of the feature fill collected from the trench profile represents the only controlled excavation of this feature.

Feature Fill

The upper 8 cm of feature fill consisted of loose silts and sands that surrounded several fire-cracked rock fragments and small ash pockets. The lower 10 cm of fill consisted primarily charcoal-stained sands and silts. These sediments surrounded numerous angular gravels. No artifacts were observed in the feature profile.

Construction Details

A discrete pit outline was not visible. The charcoal-stained sediment and fire-cracked rock concentration distinguished the feature from the surrounding sediments. The base of the

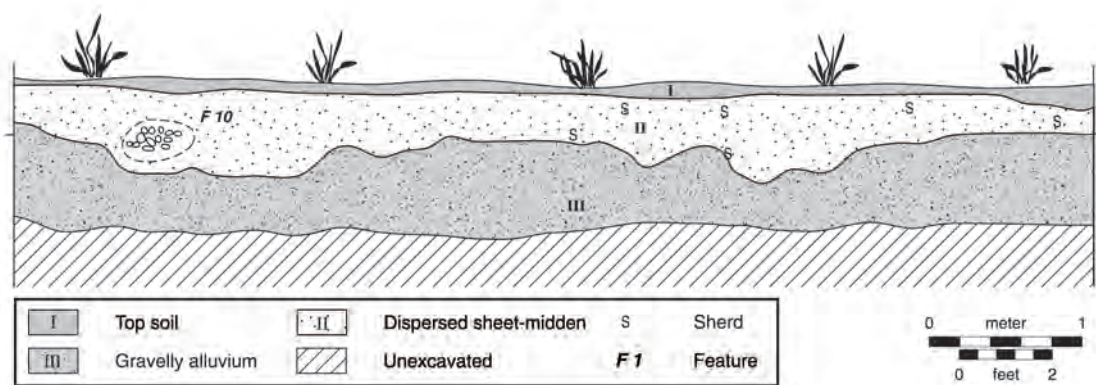


Figure 115. Profile of Feature 10 hearth and sheet midden, Site 408/2015.

feature intruded the upper surface of a sterile, cobble-laden alluvium (Stratum III). The material initially described as Feature 7, which likely represents a dispersed sheet-midden deposit, probably contained rake-out material from the Feature 10 roasting pit.

Associated Artifacts

A single basalt flake was recovered from Feature 10.

Botanical Remains

No botanical remains were identified.

Faunal Remains

No associated faunal remains were identified.

Associated Features

There were no associated features.

Extramural Pits

Feature 2

Location: This extramural pit was discovered in the west wall of TR 188.

Grid coordinates (m): N 8521.3, E 253.7

Date: pre-Classic period, based on ceramics

Elevation: The originating elevation of 782.7 m (2,567.8 feet) AMSL corresponds with the upper surface of the feature.

Depth: 0.28 m

Dimensions: 1.6 m in diameter

Excavation Methods

This extramural pit was exposed in profile during the excavation of TR 188. The pit walls were difficult to define given the weakly indurated sediments (Figure 116). The pit originated at the upper surface of a sterile, gravel-laden alluvium (Stratum III). This feature was not excavated. Artifacts were judgmentally sampled from the trench profile, and a 4-liter flotation sample was also taken from the profile. No further excavations were conducted.

Feature Fill

The pit fill consisted of grayish brown loam that, unlike the surrounding sediments, contained numerous gravels and dispersed charcoal. The gravels were subangular and 0.5–2.0 cm in diameter; the charcoal consisted of small flecks and fragments. A large, fire-blackened and rounded cobble rested near the center of the feature.

Construction Details

This pit was dug into a sterile, gravel-laden alluvium (Stratum III). The pit was unlined, shallow, and slightly concave in cross section.

Associated Artifacts

A total of 11 ceramic sherds were recovered from the fill of Feature 2, including 1 sherd identified as Santa Cruz Red-on-buff, 8 classified as brown plain, and 2 that could not be assigned to type. In addition, 1 unmodified lithic flake was recovered.

Botanical Remains

A single pollen sample submitted for analysis contained no economic species other than amaranth, which may represent

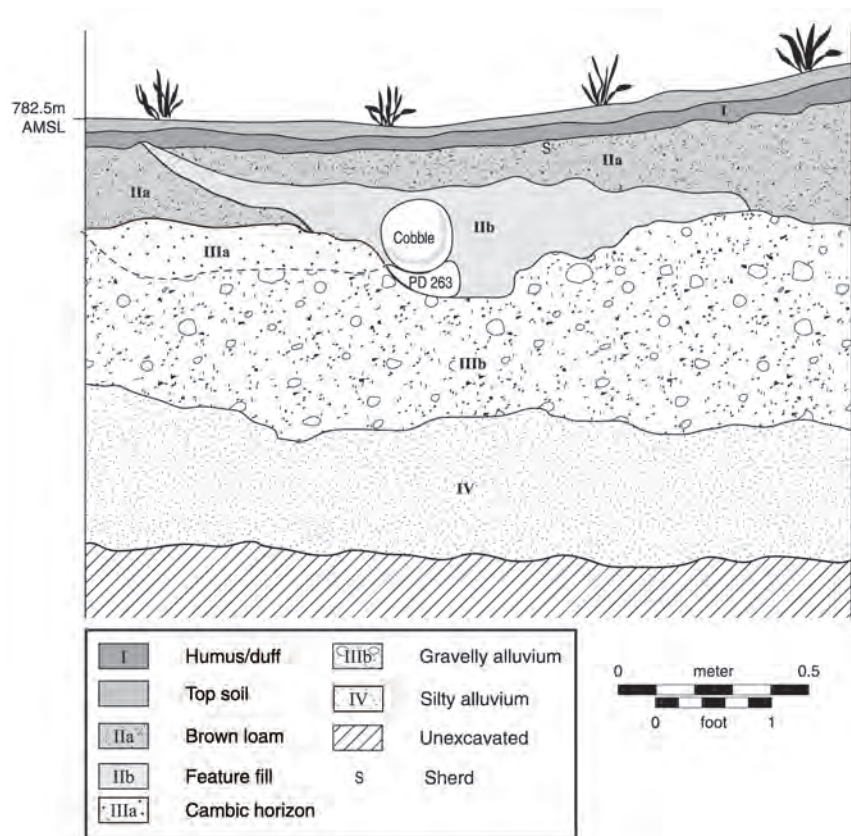


Figure 116. Profile of Feature 2 pit, Site 408/2015.

modern contamination. No macrobotanical remains were recovered.

Faunal Remains

Three fragments of bone from a coyote- to deer-sized mammal were recovered.

Associated Features

There were no associated features.

Middens

Feature 3

Location: This feature was discovered in the west wall of TR 188.

Grid coordinates (m): N 8527.6, E 256.6

Date: pre-Classic period, based on stratigraphic association with other features

Elevation: The originating elevation of 782.7 m (2,568.0 feet) AMSL corresponds to the upper surface of the Stratum III alluvium.

Depth: 0.41 m

Dimensions: 1.90 m east–west; north–south dimensions unknown.

Excavation Methods

This feature was exposed mechanically in the west wall of TR 188 (Figure 117). It was initially identified as a discrete deposit of ashy loam. A 4-liter flotation sample (PD 263) was removed from the feature after a detailed profile was drawn, and no further excavation was conducted.

Feature Fill

The sediment forming the feature consisted of an ash- and charcoal-laden loam. No artifacts were observed in the feature fill. This feature fill likely represents clean-out debris from a nearby hearth or roasting pit.

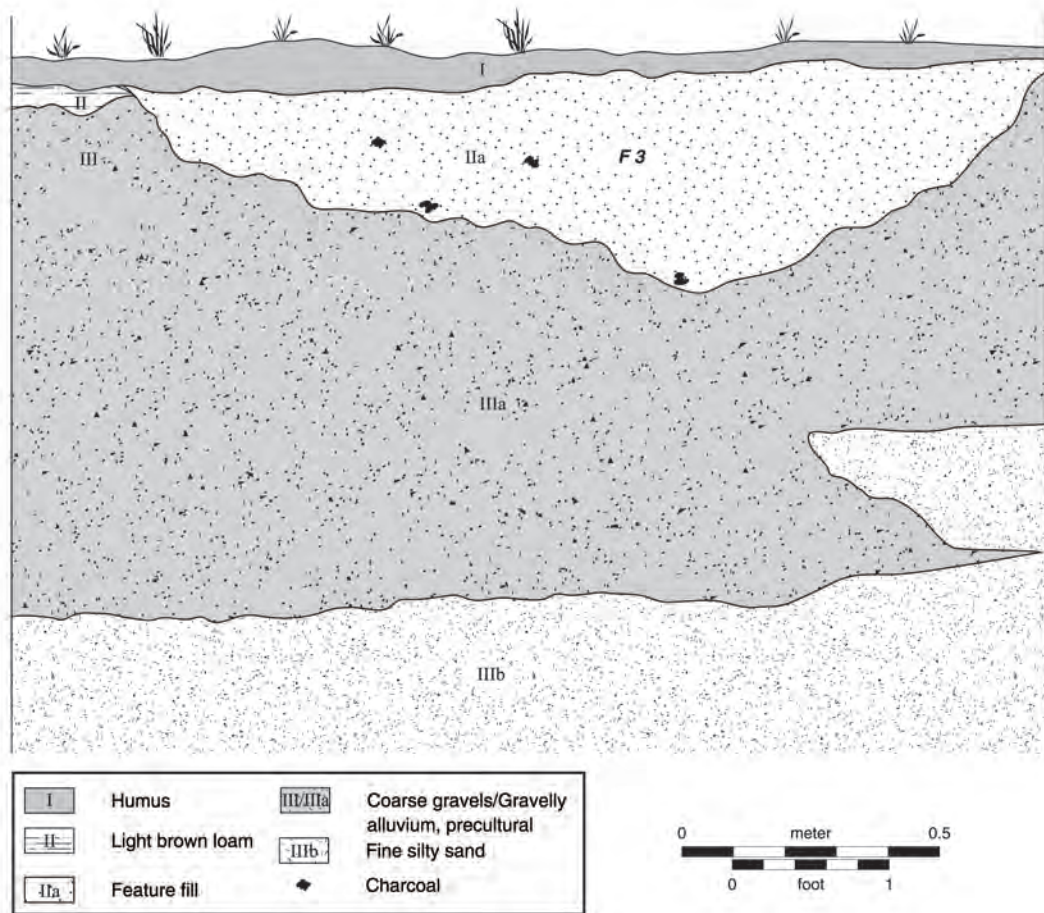


Figure 117. Profile of Feature 3 midden, Site 408/2015.

Construction Details

The feature fill rested in a natural concave depression or channel that truncated the upper surface of the Stratum III alluvium. The base of the feature was wavy and erratic.

Associated Artifacts

No artifacts were collected.

Botanical Remains

A single pollen sample submitted for analysis contained no economic species other than amaranth, which may represent modern contamination. No macrobotanical remains were recovered.

Faunal Remains

No faunal remains were identified.

Associated Features

There were no associated features.

Feature 9

Location: This feature was in the east and west walls of TR 202.

Grid coordinates (m): N 8538.1, E 249.4

Date: pre-Classic period, based on ceramics

Elevation: The originating elevation of 783.2 m (2,569.6 feet) AMSL corresponds to the upper surface of SU 287. The

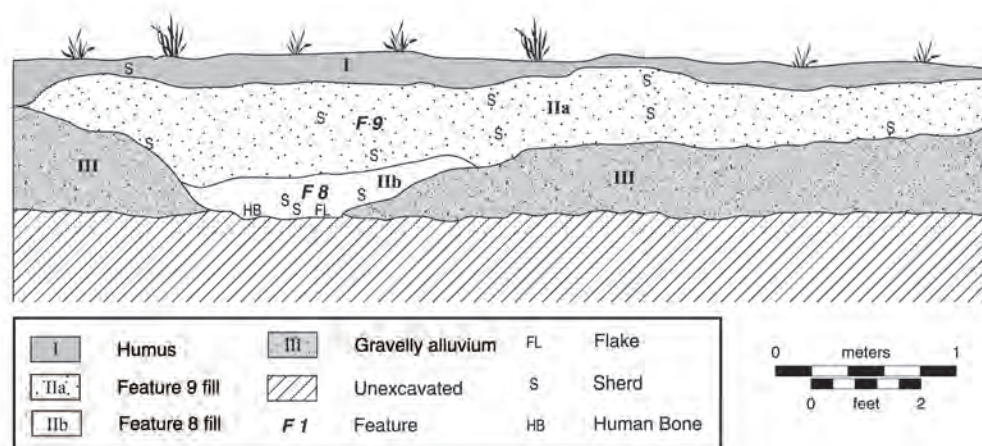


Figure 118. Profile of Feature 9 midden, Site 408/2015.

surface that the cobbles rested on was located at an elevation of 782.4 m (2,566.8 feet) AMSL.

Depth: 0.70 m

Dimensions: Total dimensions unknown. Exposed portion of the feature was 5.9 m in the east face of the trench and 2.9 m in the west face.

Excavation Methods

This feature was exposed in profile during the mechanical excavation of TR 202 (Figure 118). It was initially identified as a possible structure (see Figure 118). Controlled sampling of this feature began with the excavation of a 1-by-2-m control unit (TP 231) placed along the east side of TR 202. Another 1-by-2-m control unit (TP 252) was later excavated along the west side of TR 202. One natural and four arbitrary levels were removed from TP 231. Ceramic, lithic, and bone artifacts were numerous in each of the levels excavated. Excavation of Level 4 resulted in the average removal of 10 cm of burial fill associated with Feature 8, a human inhumation. TP 252 was then excavated in order to collect a more representative sample from the Feature 9 rake-out accumulation. Four levels were removed from TP 252. Artifact density was high in each level excavated. Sediment from each level was screened through ¼-inch-mesh hardware cloth. Excavation of TP 252 ceased with the exposure of the sterile Stratum III alluvium.

Feature Fill

The sediment filling the feature consisted of an ash-stained, sandy clay loam that contained numerous alluvial gravels

and cobbles. This sediment surrounded numerous ceramic and flaked stone artifacts. Many fine to medium-sized rootlets represented the only observed disturbances.

Construction Details

The feature fill rested atop the naturally undulating surface of the sterile Stratum III alluvium. No evidence of a discrete pit or occupational surface was observed.

Associated Artifacts

A total of 223 ceramic sherds were collected from the sampled portion of Feature 9. Of these, 178 were identified as brown plain. A single temporally diagnostic sherd, identified as Sacaton Red-on-buff, was recovered from the feature. The lithic collection included 1 mano.

Botanical Remains

No macrobotanical remains were identified. The single pollen sample submitted for analysis contained maize (*Zea sp.*) pollen in addition to a number of weed species.

Faunal Remains

Numerous fragments of mammal bone were recovered from the sampled portion of Feature 9. None of these could be identified to the level of the species. The vast majority of the collection was determined to be from deer-sized species.

Associated Features

This feature surrounded the Feature 8 human inhumation.

Burial

Feature 8

Location: This burial was discovered during the excavation of TR 202 and represented the only burial discovered at this site.

Grid coordinates (m): N 8542.2, E 250.9

Originating elevation: 782.8 m (2,568.2 feet) AMSL

Burial type: inhumation

Date: pre-Classic period, based on ceramics

Burial pit dimensions: 1.40 by 0.80 m+ and 0.35 m+ deep

Burial pit orientation: north-south

Burial orientation: north-south

Sex: indeterminate

Age: 3–4-year-old child

Excavation Methods

Feature 8 was discovered during the excavation TR 202, which removed the cranium and thorax (Figure 119). Trench backdirt identified as being associated with the burial was worked through $\frac{1}{8}$ -inch-mesh hardware cloth. Numerous severely splintered bone fragments were recovered as part of this procedure. The controlled excavation of this feature began with removal and $\frac{1}{8}$ -inch screening of a 10-cm level in TP 231. Three additional levels were also removed and screened. This resulted in the exposure of the few remaining in-place skeletal elements. A plan view, profile, and cross section were then drafted. Photographs were also taken.

Burial Pit

The ovate burial pit was difficult to define. Its sides sloped slightly (2° – 3°) inward before merging with the flat burial pit floor. The pit was unlined and evidence of burial cribbing was observed.

Burial Fill

The burial fill consisted of a gray (7.5YR 3/1 moist) ash-laden, sandy loam that contained numerous granules and gravels that were 0.5–2.0 cm in diameter. Many fine rootlets were also present. Ceramic sherds were the most numerous artifacts encountered, although flaked stone and shell specimens were also present. The burial fill was 35 cm deep on average. No rodent disturbances were noted, but numerous

fine to medium-sized rootlets were encountered throughout the burial fill.

Burial Treatment

This individual was a 3–4-year-old child interred in a flexed position, resting on its right side. The head was oriented to the south and the feet pointed to the north. Most of the remains were removed by the backhoe trench. Only a small portion of the lower legs and feet remained in place. The position of these skeletal elements indicated that the orientation and position of the individual.

Associated Artifacts

A large quantity of ceramic and lithic artifacts were recovered during the excavation of Feature 8 and the screening of the trench backdirt. None of these artifacts, however, can be said with confidence to have been directly associated with the burial. Most of the artifacts were likely from the midden into which the burial was excavated. The ceramic collection contained several temporally diagnostic sherds, including examples of Sacaton Red-on-buff, Kana'a Black-on-white, Red Mesa Black-on-white, and Deadmans Black-on-red, indicating a pre-A.D. 1150 occupation in this area of the site. It must be mentioned, however, that these dates provide only a terminus ante quem for the burial, and the burial could have been placed in the midden after it was no longer used. The lithic collection included numerous unmodified flakes and shatter, also reflecting a midden deposit. Formal lithic tools recovered during the excavation of Feature 8 include three manos, three schist “knives,” one biface, and one argillite bracelet fragment. In addition, several shell bracelet fragments, two awls, and fragments of one ceramic figurine were found.

Associated Features

This burial pit was excavated into the Feature 9 midden.

Site Summary

Spatially the largest of the project sites, Site 408/2015 encompassed several occupational loci that were temporally and spatially discrete. These included a Classic period compound and a probable pre-Classic period habitation located well east of the ROW and adjacent to the current channel of Tonto Creek. The portion of the site contained within the project ROW appears to have been located away from the main occupational components of the site. Found within the ROW were one 6.7-m-long rock alignment, two

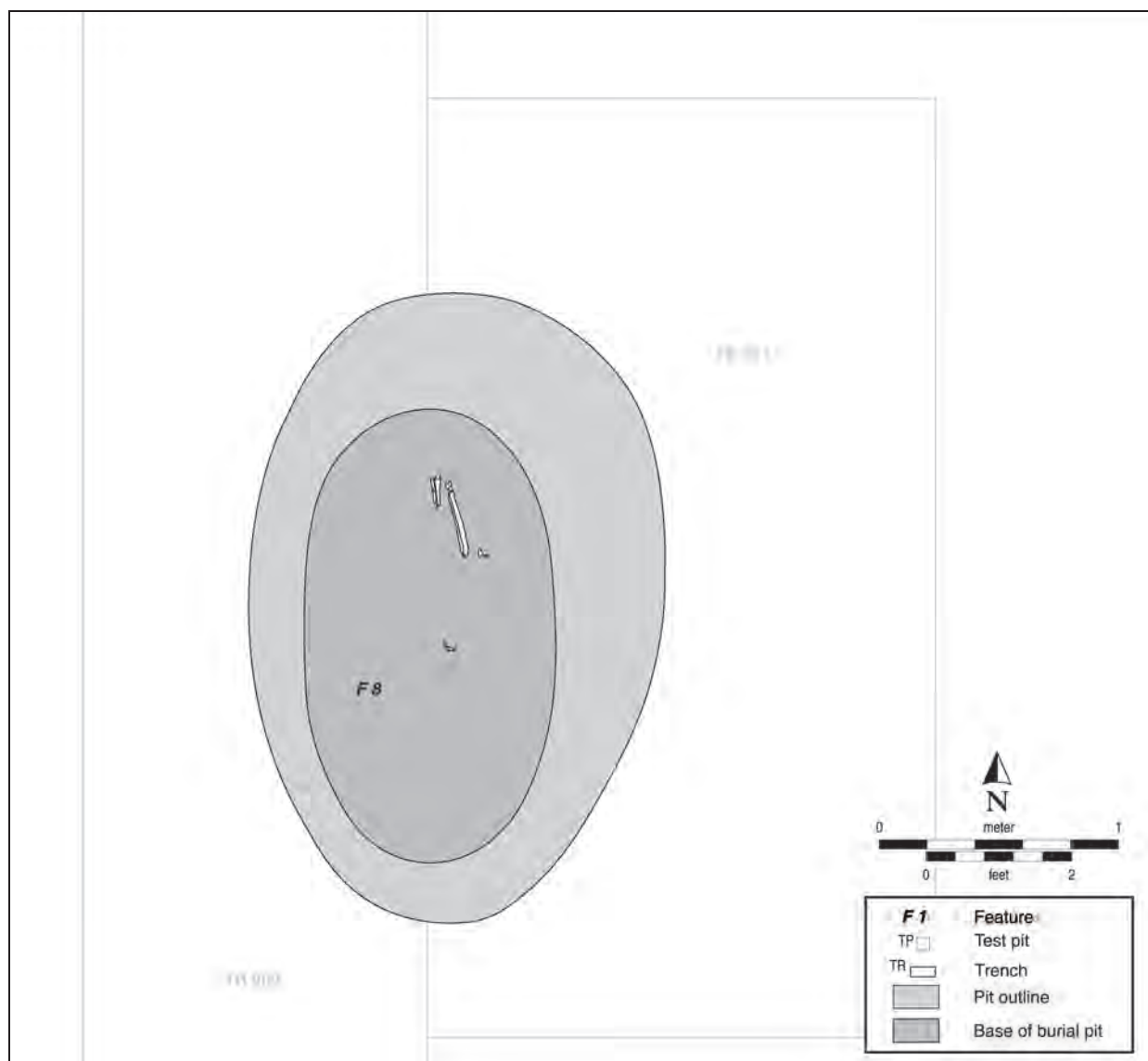


Figure 119. Plan of burial Feature 8, Site 408/2015.

midden areas, three extramural hearths, one extramural pit, and one human burial located at the base of one of the middens, Feature 9. Given the quantity and diversity of artifacts recovered from the midden areas, especially Feature 9, it is likely that a significant pre-Classic period occupation, dat-

ing sometime between the Colonial and Sedentary periods, is present nearby. A limited early Classic period occupation is also evident in the ROW, as represented by the rock alignment and associated ceramics.

The Crane Site (AZ U:3:410/2017)

Robert Wegener and Eric Eugene Klucas

Site AZ U:3:410/2017, also referred to as the Crane site, is situated at the eastern end of a ridge oriented east–west that is cut by the existing SR 188 roadbed near the southern end of the project area. The ridge is part of the first terrace above the floodplain west of Tonto Creek (Figures 120–125, Table 11; see Figure 4). The site covers an estimated 5,720 m², with approximately 50 percent contained within the proposed ROW. The site was initially described as a large prehistoric-sherd and lithic-artifact scatter with several masonry structures (Hoffman 1991:51–54). All of the suspected masonry structures were located on the portion of the site west of the highway. Artifact densities were high over the western portion of the site, with a dense concentration of artifacts and ashy soil located at the northern edge of the site. This latter area appeared to be a large midden. Artifact densities on the east side of the highway were low, with the exception of the base of the ridge, probably as the result of erosion.

Based on surface indicators, the architecture can be divided into two discrete groups, with only the easternmost located within the ROW. The structures appeared to have suffered considerable postabandonment disturbance, with a large number of rocks scattered on the surface of the site and only the basal foundation stones still intact in many places. This disturbance was exacerbated by a north–south-running erosion-control feature that cut through the length of the site west of the highway and removed large portions of several rooms.

Phase 1

Following the clearing of brush, Phase 1 operations began with the collection of a sample of the surface artifacts from within the ROW and an inspection of the artifacts outside

the ROW. During this process, we determined that the site extended at least 80 m upslope to the west, where a pair of shell artifacts were recovered from an area of dark, ashy soil. Following the collection of surface artifacts, we defined the extent of the subsurface cultural deposits at the site. Because of the difficulty of getting a backhoe onto the site, we limited these explorations during Phase 1 to hand excavations. These included the excavation of a series of screened test pits, including one placed in the suspected midden, and the excavation of a series of wall trenches as a means of identifying the number of structures present at the site. The hand excavations suggested that the cultural deposits at the site were relatively shallow and were overlying an argillic horizon in places less than 20 cm below the modern ground surface. The excavation of the wall trenches exposed three rooms fully within the ROW and a fourth extending outside of the ROW to the west. Hand excavations in the portion of the site east of the highway revealed no buried cultural deposits, indicating that no further work was needed in this area.

Phase 2

Phase 2 operations at the Crane site focused on the further excavation of the architectural features delineated during Phase 1 and the exploration for burials in the portion of the site within the ROW. This began with the excavation of a series of hand trenches to the east and south of the architectural features. Although few artifacts were identified on the southern slope of the ridge, two 1-m-wide hand trenches were also excavated in this area, as burials have been found in similar situations at other sites (Ciolek-Torrello, ed. 1987; Hohmann 1985).

The investigation of the architectural features continued during Phase 2 with the excavation of screened control units

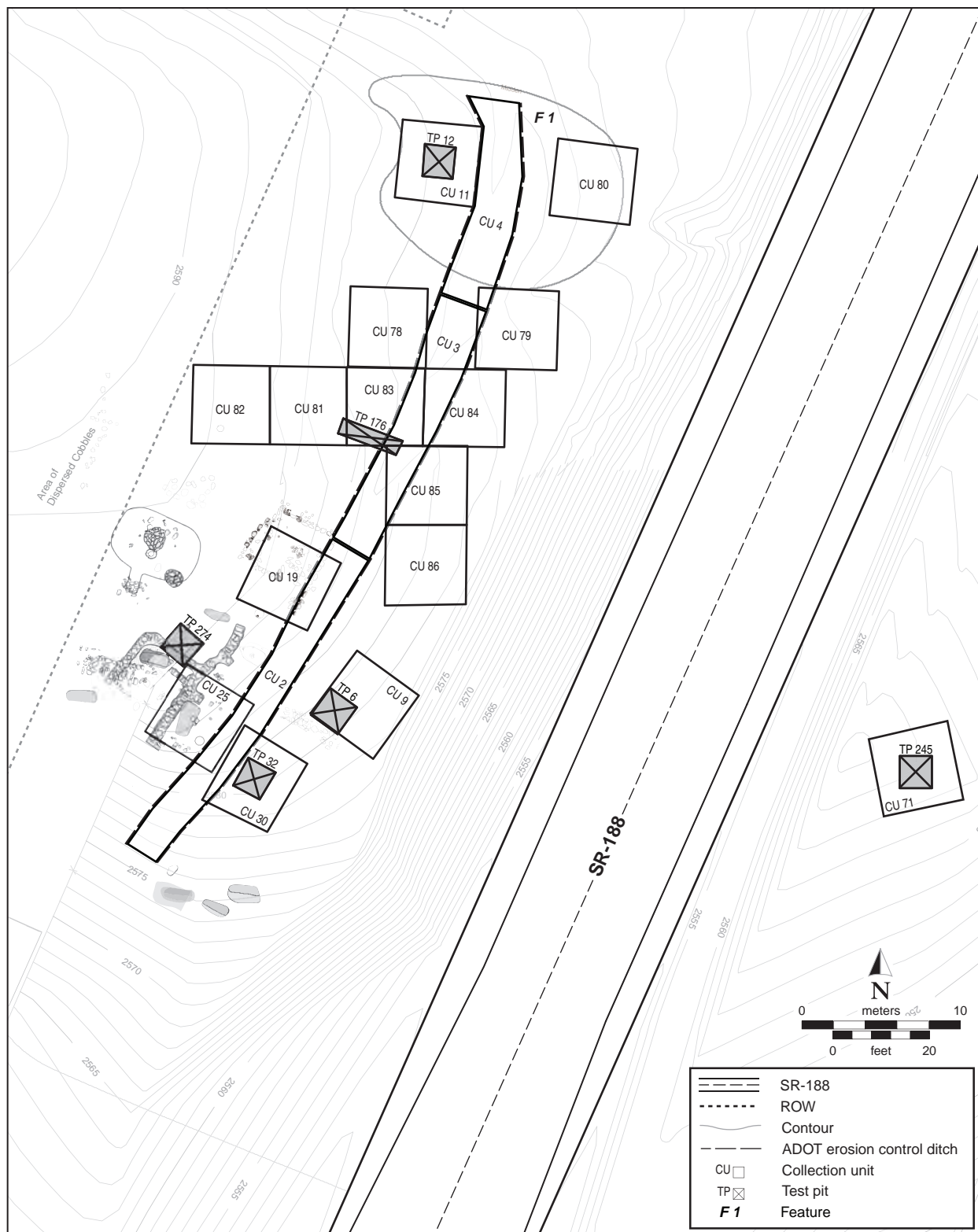


Figure 120. Phase I surface collection units and test pits at the Crane site (410/2017).



Figure 121. Backhoe trenches and mechanical stripping units at the Crane site (410/2017).

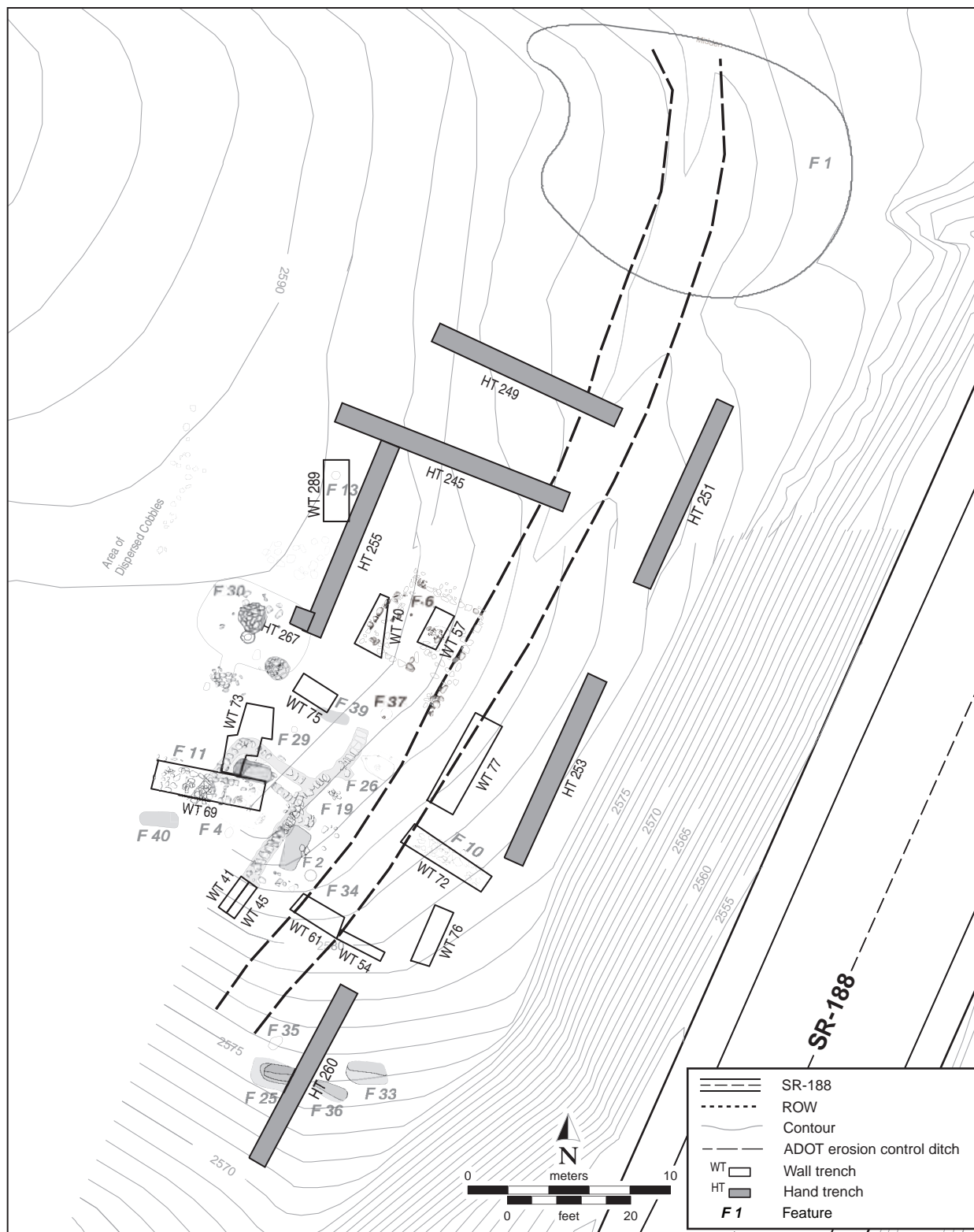


Figure 122. Hand and wall trenches at the Crane site (410/2017).

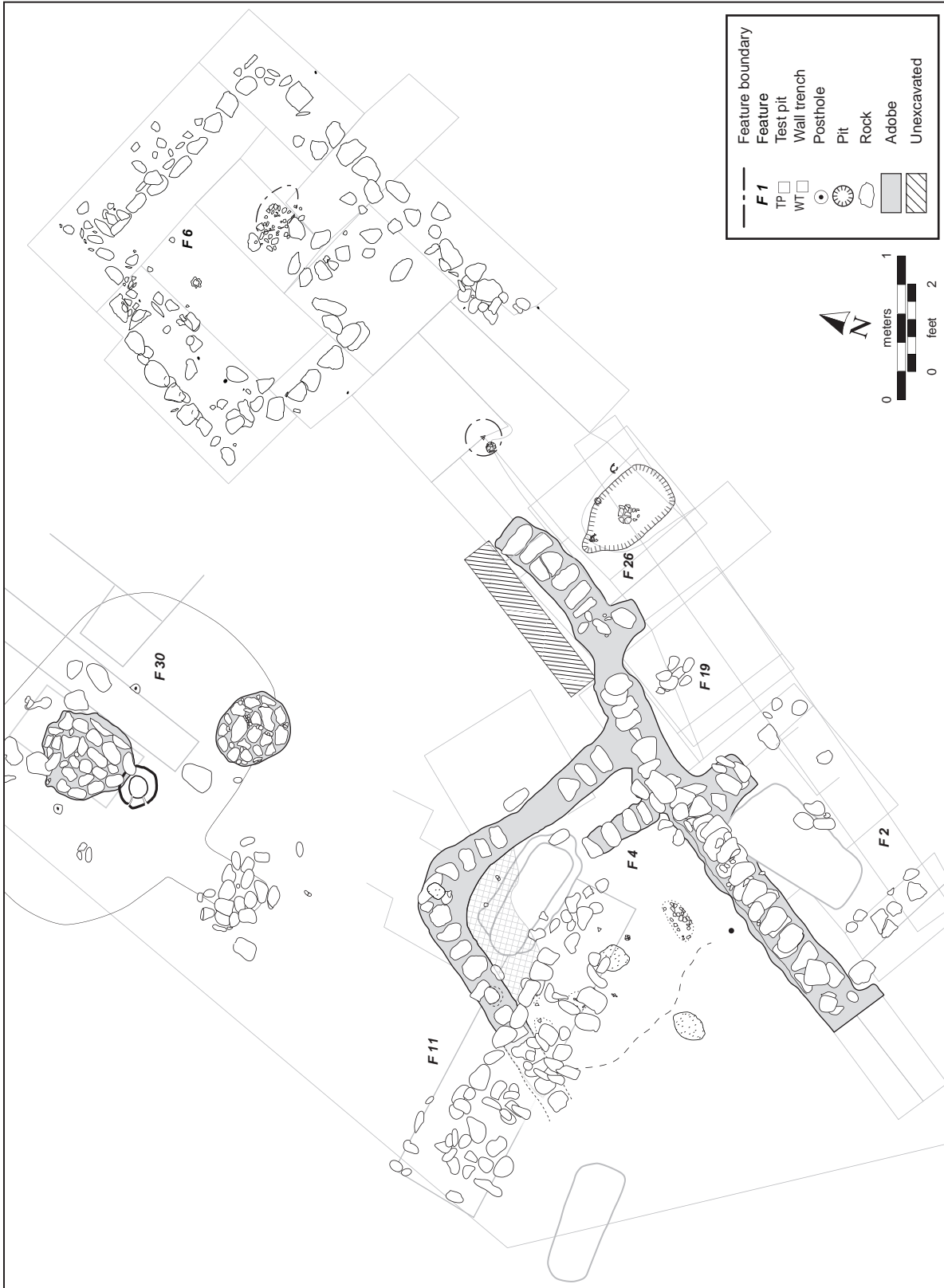


Figure 123. Architectural features at the Crane site (410/2017).



Figure 124. Photograph of the Crane site (410/2017), view northwest.



Figure 125. Photograph of the western portion of the Crane site (410/2017) after brush clearing, view north.

Table 11. Features Identified at the Crane Site (410/2017)

Feature No. ^a	Feature Type	Diameter or Dimensions (l × w) (m)	Preserved Depth (m)	Level of Effort
1	midden	14.25 × 12.76	0.42	sampled
2	cobble-adobe-foundation structure	3.77 (min.) × 2.71 (min.)	0.21	excavated
4	cobble-adobe-foundation structure	4.17 × 3.69	0.11	excavated
5	west wall of Feature 2 and Feature 19	9.20 × 0.70	0.55	exposed
6	cobble-adobe-foundation structure	3.59 × 3.87	0.19	excavated
7	north wall of Feature 6	3.8 × 0.30	0.85	exposed
8	west wall of Feature 6	4.0 × 0.40	0.67	exposed
9	east wall of Feature 6	5.80 × 0.40	1.09	exposed
10	wall segment	4.90 × 0.60	0.53	exposed
11	cobble alignment bisecting Feature 12	4.55 × 0.36	0.45	excavated
12	west wall of Feature 4	2.5 (min.) × 0.50	0.47	exposed
13	hearth	0.41 × 0.34	0.10	flotation sample
14	north wall of Feature 4	3.30 × 0.40	0.58	exposed
15	wall segment in Feature 4	1.44 × 0.42	0.63	exposed
17	cobble concentration	1.65 × 1.10	0.08	excavated
18	dividing wall between Features 2 and 19	2.20 × 0.40	0.60	exposed
19	cobble-adobe-foundation structure	3.81 (min.) × 2.67 (min.)	0.10	excavated
21	burial	2.19 × 1.00	0.21	excavated
22	south wall of Feature 6	5.0 × 0.40	0.86	exposed
24	granary	1.3 × 1.0	0.15	excavated
25	burial	1.97 × 0.79	0.73	excavated
26	possible structure	2.03 (min.) × 2.02 (min)	0.04	sampled
27	roasting pit	0.60 × 0.80	0.09	excavated
28	pit	1.60 × 1.20	0.24	excavated
29	hearth	0.30 × 0.25	0.02	flotation
30	pit house	5.37 × 3.71	0.14	excavated
31	granary	1.30 × 1.20	0.07	excavated
33	burial	1.85 × 1.06	0.31	excavated
34	hearth	0.42 × 0.25 (min.)	0.15	flotation
35	pit	0.82 × 0.51 (estimated)	0.36	excavated

Table 11. Features Identified at the Crane Site (410/2017) (continued)

Feature No. ^a	Feature Type	Diameter or Dimensions (l × w) (m)	Preserved Depth (m)	Level of Effort
36	burial	1.64 × 0.52	0.11	excavated
37	pit	0.55	0.25	excavated
38	burial	1.92 × 1.01	0.55	excavated
39	burial	1.77 × 0.60	0.10	excavated
40	burial	1.92 × 0.72	0.08	excavated

^aFeatures 3, 16, 20, 23, 32, and 41 were voided.

from within each of the walled spaces. Once the floors were identified, the remaining upper fill was removed as a single unit—an arbitrarily defined 10-cm level immediately above the floors was screened through ¼-inch-mesh hardware cloth. All floor features were completely excavated.

Following the excavation of the architectural spaces, the portion of the site west of the highway was mechanically stripped to ensure that all burials within the ROW were identified and excavated. Several burials were identified during this procedure, both on the summit of the ridge and on its southern slope.

Architectural Feature Descriptions

Feature 2

Feature type: cobble-adobe-foundation structure

Function: unknown

Grid coordinates (m): N 8326.9, E 151.6

Date: Roosevelt phase, based on ceramics and architecture

Elevation: The originating elevation of 786.8 m (2,581.5 feet)

AMSL corresponds to the modern surface. The average floor elevation was 786.6 m (2,580.8 feet) AMSL.

Abandonment processes: unknown

Dimensions: 3.77+ by 2.71+ m

Orientation: 34° long axis

Floor area: 10.0+ m²

Shape: rectangular

Excavation Methods

Feature 2 (Figures 126 and 127) was visible from the surface and was bounded by the Feature 5 wall on the west and the

Feature 18 wall on the north. Exposure of Feature 2 began with the excavation and judgmental sampling of WTs 38, 39, 43, and 53. WT 38 partially exposed the remains of the Feature 18 wall that bounded the structure on the north and joined the Feature 5 wall on the west. The western wall (Feature 5) was exposed during the excavation of WTs 39 and 43.

A 2-by-2-m control unit (TP 26) was then placed in the northwest corner of the structure. Three levels were removed from this test pit, which ultimately revealed a segment of the poorly preserved adobe-plastered floor. Level 1 represented the removal of the surface sands and gravels (Stratum I) and was 3 cm deep on average. Excavation of Level 2 resulted in the removal of an average of 9 cm of feature fill (Stratum IIa). Level 3 was 6 cm deep on average and was completed with the exposure of the poorly preserved adobe-plastered floor.

The remaining fill was removed en masse to the floor in two levels. The first level was 12 cm deep on average, was judgmentally sampled, and resulted in the collection of few artifacts. Level 2 was 10 cm deep on average, was screened, and resulted in the exposure of the poorly preserved and undulating floor throughout the structure. Seven cobbles between 25 and 35 cm in diameter were discovered in the fill and likely represented wall fall from the western wall of the structure (Feature 5).

Stratigraphy

Stratum IIa

Stratum IIa consisted of feature fill, approximately 10 cm deep, characterized by a loose, poorly sorted sandy loam that contained few ceramic sherds and flaked stone artifacts. These sediments were a mixture of colluvial material that had been washed into the structure from the west and sediment redeposited during the excavation of the ADOT erosion-control ditch. Dispersed charcoal was noted in the

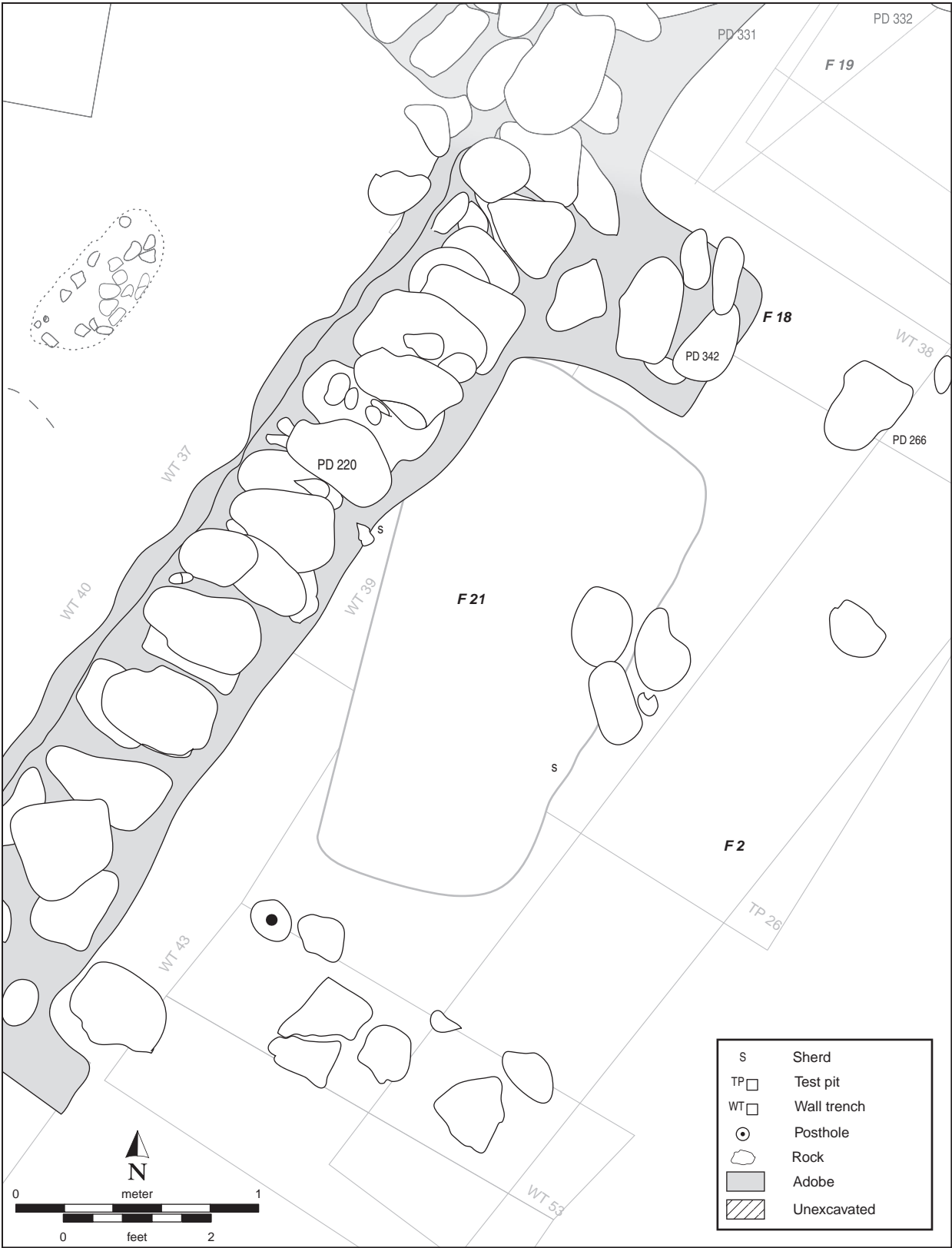


Figure 126. Cobble-adobe-foundation structure Feature 2, and burial Feature 21, at the Crane site (410/2017).



Figure 127. Photograph of the Feature 2 foundations at the Crane site (410/2017), view west.

northwest corner of the structure. One 16-liter sample of sediment that was screened through ½-inch mesh and a small triangular arrow point with a slight concave base were collected from Level 1 of TP 26.

Stratum IIb

Stratum IIb consisted of an arbitrarily defined near-floor fill, approximately 10 cm deep, characterized by a mixture of Level 1 feature fill and a poorly sorted sandy loam that at times surrounded adobe fragments. The adobe fragments likely represent collapsed wall segments and displaced portions of the floor. Few ceramic and flaked stone artifacts were present. The controlled sample of this stratum was collected from TP 26.

Construction Details

Walls and Roof

Feature 2 represented the remains of a cobble-adobe-foundation room. The remains of two cobble-adobe-foundation walls bounded the structure on the west and north. The southern wall likely washed down the southern site slope, whereas the eastern wall was likely removed during the construction of the ADOT erosion-control ditch. At least three vertical courses of river cobbles that on average were 50 cm long,

35 cm wide, and 15 cm thick and a pinkish gray adobe mortar were used to construct the western wall (Feature 5). The remains of the northern wall (Feature 18) extended 2.2 m east from the western wall. The northern wall was 40 cm wide and 20 cm tall on average. A single vertical course of rounded river cobbles that were placed in a pinkish gray adobe mortar was all that remained of the northern wall, which had been truncated by the ADOT erosion-control ditch. The pinkish gray adobe mortar consisted of a silty clay loam that contained numerous dispersed charcoal flecks. Up to 15 cm of adobe mortar covered the interior surface of the walls, which in turn were anchored in a footing trench excavated into the underlying argillic paleosol. This footing trench was between 10 and 20 cm deep. The pinkish gray color (7.5YR 4/2) of the adobe mortar contrasted sharply with the underlying yellowish red (5YR 4/6) argillic paleosol. The footing for both walls was dug into the underlying argillic paleosol to a depth of 10–20 cm. No postholes were observed during the structure excavation.

Floor

The prepared floor was constructed from the same pinkish gray adobe mortar used to construct the walls. It consisted of small, thin (<3 cm), poorly preserved patches of adobe plaster that covered approximately 25 percent of the structure space. The adobe floor plaster was applied directly atop the weathered surface of the argillic paleosol.

Hearth

There was no hearth.

Other Floor Features

There were no other floor features.

Entry

There was no defined entry.

Evidence for Remodeling

There was no evidence for remodeling.

Associated Artifacts

A number of sherds were recovered from the fill of the feature, including 55 Salado Red Corrugated sherds and 1 Holbrook Black-on-white sherd. A single sherd identified as St. Josephs Black-on-white was also recovered from the fill. The lithic collection was dominated by flaking debris, including a small number of core fragments. A single chert projectile point was recovered from the upper fill. One mano (Table 12) was recovered in situ.

Botanical Remains

A flotation sample taken from the near-floor fill of the feature contained mesquite (*Prosopis* sp.) charcoal and two charred maize (*Zea* sp.) cupules.

Faunal Remains

A small quantity of fragmented mammal bones were recovered from the fill of Feature 2, none of which could be assigned to genus or species. Most were small, most likely representing squirrel- to rabbit-sized animals.

Chronology

No archaeomagnetic or radiocarbon dates were obtained. No temporally diagnostic artifacts were recovered from strong contexts. The small number of Salado Red Corrugated and Holbrook Black-on-white sherds suggest the feature postdates A.D. 1100. The single sherd identified as St. Josephs Black-on-white suggests a pre-A.D. 1100 component at the site as well.

Associated Features

Feature 2 was part of a small compound and shared a common wall (Feature 5) with the Feature 4 structure to the east

and a common wall (Feature 18) with the Feature 19 structure to the north. The cribbing of an adult inhumation (Feature 21) was discovered immediately beneath a heavily disturbed portion of the adobe floor plaster in the northwest corner of the room. The ADOT erosion-control ditch removed the eastern portion of this room.

Feature 4

Feature type: cobble-adobe-foundation structure

Function: habitation

Grid coordinates (m): N 8329.8, E 149.0

Date: Roosevelt phase, based on ceramics and architecture

Elevation: The originating elevation of 787.3 m (2,582.8 feet) AMSL corresponds to the modern surface. The average floor elevation was 786.5 m (2,580.2 feet) AMSL.

Abandonment processes: demolished and trash filled

Dimensions: 4.17 by 3.69 m

Orientation: 132° long axis

Floor area: 15.4+ m²

Shape: rectangular

Excavation Methods

Feature 4 (Figures 128 and 129) represented the remains of another cobble-adobe-foundation room that was visible from the surface and was bounded by wall foundations on the east (Feature 5), west (Feature 12), and north (Feature 14). Exposure of Feature 4 began with the excavation and judgmental sampling of WTs 37, 40, and 44 along the eastern structure wall (Feature 5). A 1-by-2-m control unit (TP 291) was placed in the southeast corner of the structure. Two levels were removed from this unit. Level 1 was 2 cm deep on average and represented the removal and screening of the surface sands (Stratum I). Level 2 was screened, excavated to the floor, and 13 cm deep on average. The excavation of Level 2 was guided by the profile in WT 37. Excavation of TP 291 resulted in the collection of numerous ceramic and flaked stone artifacts, the identification of two strata (Strata IIa and IIb), and the partial exposure of the poorly preserved, adobe-plastered floor.

The remaining feature fill (Stratum IIa) and arbitrarily defined near-floor fill (Stratum IIb) were removed completely during the excavation of the two levels.

Stratigraphy

Stratum IIa

Stratum IIa consisted of feature fill, approximately 7 cm deep, characterized by a weakly indurated and poorly sorted

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Table 12. Artifacts Recovered In Situ from Architectural Features at the Crane Site (410/2017)

Feature No.	ID	Artifact
2	PD 270	mano
4	PD 310 ^a	<i>Laevicardium</i> -shell flying-bird pendant
	PD 312	brown plain, red plain, and Brown corrugated sherds
	PD 314	Brown corrugated sherds
	PD 315	basalt flake
	PD 316	red plain sherd
	PD 317	brown plain sherd
	PD 318	Salado Red Corrugated sherd
	PD 319	basalt flake
	PD 320	andesite core
	PD 322	red plain sherds
	PD 323	brown plain and red plain sherds
	PD 594	Salado Red Corrugated and red plain sherds
6	PD 258	mano
	PD 259	brown plain sherd
	PD 262	mano
	PD 265	mano
	PD 271	metate
	PD 367	Brown corrugated and red plain sherds
	PD 369	Brown corrugated sherd
	PD 370	brown plain sherd
	PD 375	sandstone anvil
	PD 377	mano
	PD 378	hammer stone
	PD 380	shaft straightener
	PD 381	brown plain and red plain sherds
	PD 383	metate fragment
17	PD 385	basalt axe
	PD 395	schist knife
	PD 396	basalt flake
	PD 397	hammer stone
	PD 399	schist knife
	PD 407	metate
19	PD 331	two hammer stones
	PD 332	metate
	PD 342	mano
26	V 208	Salado Red Corrugated bowl

Table 12. Artifacts Recovered In Situ from Architectural Features at the Crane Site (410/2017) (continued)

Feature No.	ID	Artifact
	V 210	Salado Red Corrugated bowl
	V 211	Salado Red Corrugated jar
	V 214	Salado Red Corrugated jar
30	PD 463	brown plain sherds
	PD 456	mano
31	PD 455	mano
	PD 457	hammer stone
	PD 458	Brown corrugated and brown plain sherds
	PD 460	mano

Note: The vessel photographs are located in Volume 2, Appendix A.3.

Key: PD = provenience designation; V = vessel number.

^aThe photograph of this pendant is in Volume 2, Figure 54.

sandy loam that contained numerous gravels. These sediments represent postoccupational colluvium that washed into the feature from the north and west. Many plain ware sherds and flaked stone artifacts were recovered, along with a bifacial mano. The controlled sample of this stratum was collected from TP 291.

Stratum IIb

Stratum IIb consisted of an arbitrarily defined near-floor fill, approximately 5 cm deep, characterized by an ash-laden silt loam that surrounded numerous artifacts. This stratum contained refuse intentionally dumped into the structure after its abandonment. The controlled sample of this stratum was collected from TP 291 and during the removal of the remaining near-floor fill.

Construction Details

Walls and Roof

The structure was bounded by the remains of three cobble-adobe-foundation walls: to the east is a segment of Feature 5, to the west is Feature 12, and to the north is Feature 14. The southern wall, like that of the adjacent Feature 2, was likely washed down the southern site slope. Feature 5 was shared by these two rooms. Up to three in-place vertical courses of river cobbles that on average were 45 cm long, 35 cm wide, and 15 cm thick, along with a pinkish gray adobe mortar, were used to construct this shared wall. Only the basal course and adobe footing of the other two walls remained. The western wall consisted of 12 subrounded river cobbles that averaged 30 cm in diameter. This wall

extended 4.3 m north–south. The northern wall consisted of a discontinuous course of seven subrounded river cobbles connected only by the adobe footing. Like the western wall, these cobbles averaged 30 cm in diameter. The cobbles used to construct all three walls were placed in shallow (10–20 cm) footing trenches and were mortared into place with a light gray, charcoal-laden adobe mortar. The adobe-filled footing trench appeared to be continuous between the western and northern walls, suggesting that these walls were bonded and built at the same time. The northern wall abutted the eastern wall. No postholes were encountered anywhere in this structure.

Floor

The adobe-plastered floor of Feature 30 was constructed from a thick adobe plaster applied to the sterile, native subsoil (Stratum III). The entire living area within the structure was probably plastered. Where preserved, the floor plaster was 3–5 cm thick.

Hearth

There was no hearth.

Other Floor Features

There were no other floor features.

Entry

A 1.14-m gap near the center of the northern wall likely represented the Feature 4 entry. The adobe-filled footing

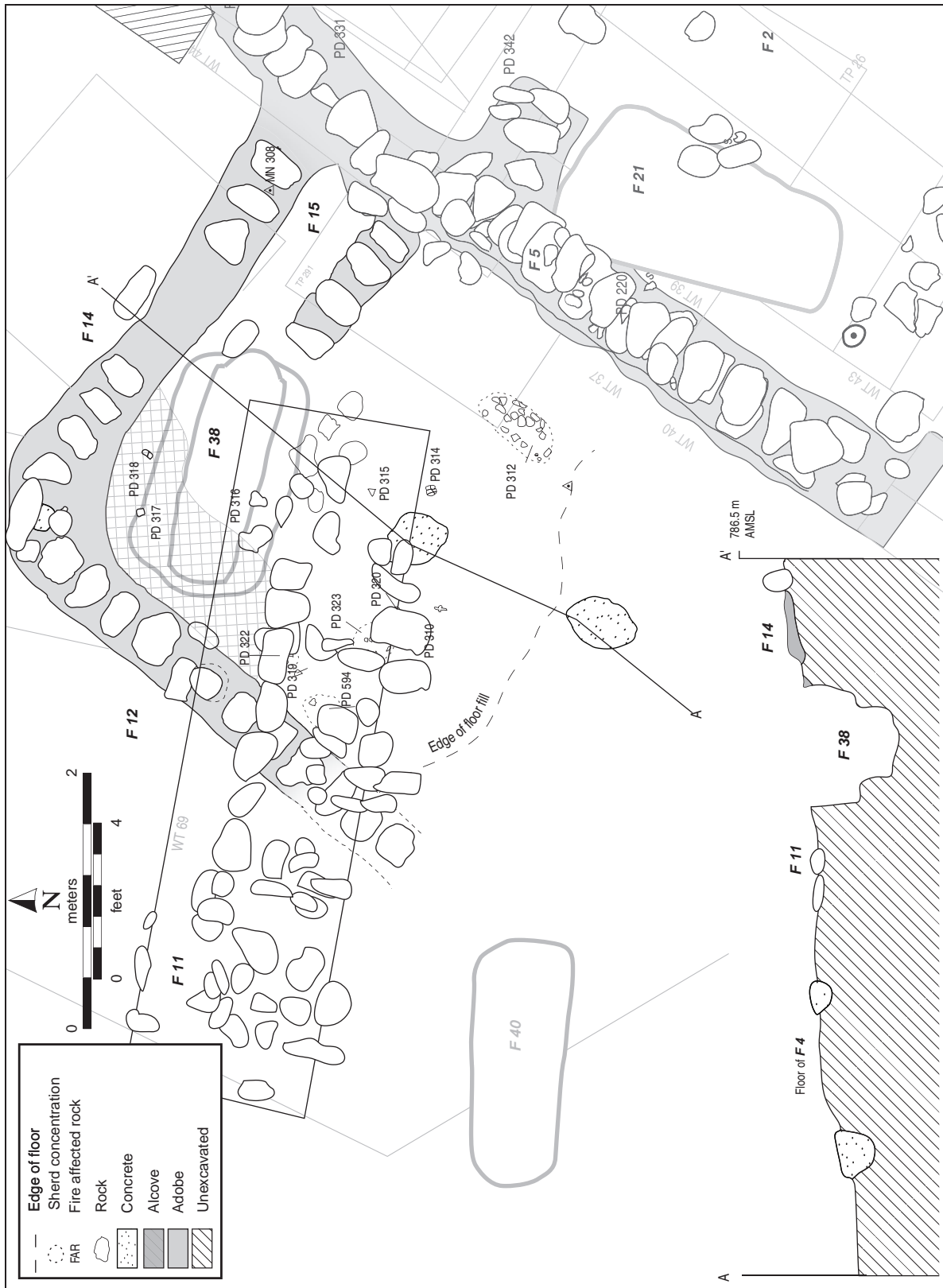


Figure 128. Feature 4, a cobble-adobe foundation structure, and adjacent features at the Crane site (410/2017).



Figure 129. Photograph of the Feature 4 foundations at the Crane site (410/2017), view east.

trench extended across this threshold. An isolated cobble outside this entryway may have represented a riser. This entryway would have opened north into the presumed courtyard area.

Evidence for Remodeling

Features 11 and 15 were cobble-adobe-foundation wall segments that bisected Feature 4. Feature 11 extended across the top of Feature 12, parallel to Feature 14. Feature 15 was built directly on the floor of Feature 4. Together, they may have represented the remains of another structure built on top of Feature 4.

Associated Artifacts

Several painted sherds were recovered from the near-floor fill of the feature, including examples of Holbrook or Walnut Black-on-white and Kana'a Black-on-white. Several brown plain, red plain, and Salado Red Corrugated sherds were recovered from the floor. Lithic artifacts recovered from the floor and the near-floor fill included an andesite core (PD 320), and unmodified basalt flakes (see Table 12). A flying-bird pendant made of *Laevicardium* (PD 310) was also found in this context. Artifacts collected from the fill of the room included a mano, a tabular schist hoe, a sandstone San Pedro dart point, a worked stone awl and a *Gly-*

cymeris sp. shell bracelet fragment (illustrated in Volume 2, Figure 54).

Botanical Remains

A flotation sample collected from the near-floor fill of the feature contained juniper and mesquite charcoal, two fragments of charred monocotyledon tissue, possibly agave, and a single charred maize cupule. A pollen sample from the same context included maize pollen.

Faunal Remains

Numerous fragmented mammal bones were recovered from the near-floor fill of the feature, most classified as rabbit sized. Specific genera and species that were able to be identified in the collection included black-tailed jackrabbit (*Lepus californicus*), cottontail rabbit (*Sylvilagus* sp.), and deer (*Odocoileus* sp.).

Chronology

No archaeomagnetic or radiocarbon dates were obtained from Feature 4. The small number of Salado Red Corrugated and Holbrook or Walnut Black-on-white sherds suggest the feature postdates A.D. 1100, whereas the Kana'a Black-on-white pottery suggests a pre-A.D. 1100 component at the site as well.

Associated Features

The entry of this structure opened onto a common extramural area. This structure shared a common wall (Feature 5) with Features 2 and 19. It appears that the north and western walls were demolished down to their basal stones when the Feature 11 rock alignment was constructed over the west wall (Feature 12). Another rock alignment (Feature 15) was built on shallow fill above the floor of Feature 4. An adult inhumation (Feature 38) intruded the northwest corner of the structure, just west of Feature 15.

Feature 6

Feature type: cobble-adobe-foundation structure

Function: unknown

Grid coordinates (m): N 8338.3, E 157.9

Date: Roosevelt phase, based on ceramics, architecture, and radiocarbon dating

Elevation: The average originating elevation of 787.4 m (2,583.2 feet) AMSL corresponds to the modern surface.

The average floor elevation was approximately 787.2 m (2,582.6 feet) AMSL.

Abandonment processes: abandoned and trash filled

Dimensions: 3.59 by 3.87 m

Orientation: 30° long axis

Floor area: 15.2+ m²

Shape: rectangular

Excavation Methods

The cobble-adobe-foundation walls bounding Feature 6 were partially visible at the surface (Figures 130 and 131). Exposure of this feature began with the manual excavation and judgmental sampling of a series of wall trenches (WTs 62, 64, and 65) along the eastern structure wall (Feature 9). Similarly, WT 66 was excavated in order to expose the northern wall, and WT 70 was excavated in order to expose the western wall.

The controlled sampling of Feature 6 began with the excavation of a 2-by-2-m unit (TP 20). Three levels were removed during the excavation of TP 20. Excavation of Level 1 resulted in the removal of the modern sheetwash sands and leaf litter (Stratum I) that covered the feature and resulted in the exposure of the feature fill (Stratum IIa) in plan view. Because we used arbitrarily defined levels in the test pits, the thickness of Level 2 was between 6 and 16 cm, creating a flat, level surface for the top of Level 3. Removal of 2–7 cm of sediment (Stratum IIb) during the excavation of Level 3 resulted in the exposure of the poorly preserved and undulating structure floor.

Sediments filling the remainder of the structure were then removed in two levels that correlated with the strata identi-

fied during the excavation of TP 20. Strata I and IIa were removed with pick and shovel and were judgmentally sampled. Stratum IIb, an arbitrarily defined stratum, was removed with trowels and screened through ¼-inch-mesh hardware cloth. The removal of Stratum IIb resulted in the exposure of the poorly preserved and undulating structure floor.

Stratigraphy

Stratum I

Stratum I consisted of poorly sorted colluvial sands that surrounded many granules and gravels. These surface sands and gravels were approximately 4 cm deep, contained redeposited artifacts, and were partially covered with leaf litter.

Stratum IIa

Stratum IIa consisted of feature fill, approximately 10 cm deep, characterized by a weakly indurated and poorly sorted sandy loam that contained few artifacts. These sediments consisted of a mixture of colluvial and cultural deposits that had been washed into the structure from the east and sediment that had been redeposited during the excavation of the ADOT erosion-control ditch. Several cobbles that were likely used to construct the cobble-adobe-foundation walls were removed from this feature fill. These cobbles likely represent wall fall. Levels 1–3 in TP 20 represented the controlled excavation of Level 1.

Stratum IIb

Stratum IIb consisted of an arbitrarily defined near-floor fill, approximately 10 cm deep, that exhibited the same characteristics as Stratum IIa. Excavation of this stratum resulted in the exposure of the poorly preserved structure floor. In places, the sediments covering the floor were ash laden and surrounded numerous artifacts. These sediments and artifacts likely represent occupational debris intentionally dumped into the structure after its abandonment.

Stratum III

Stratum III consisted of sterile argillic paleosol. The adobe plaster that formed the structure floor was applied directly atop the weathered surface of this natural stratum.

Construction Details

Walls and Roof

The remains of four cobble-adobe-foundation walls bounded the feature. The remains of the eastern wall (Feature 9) was

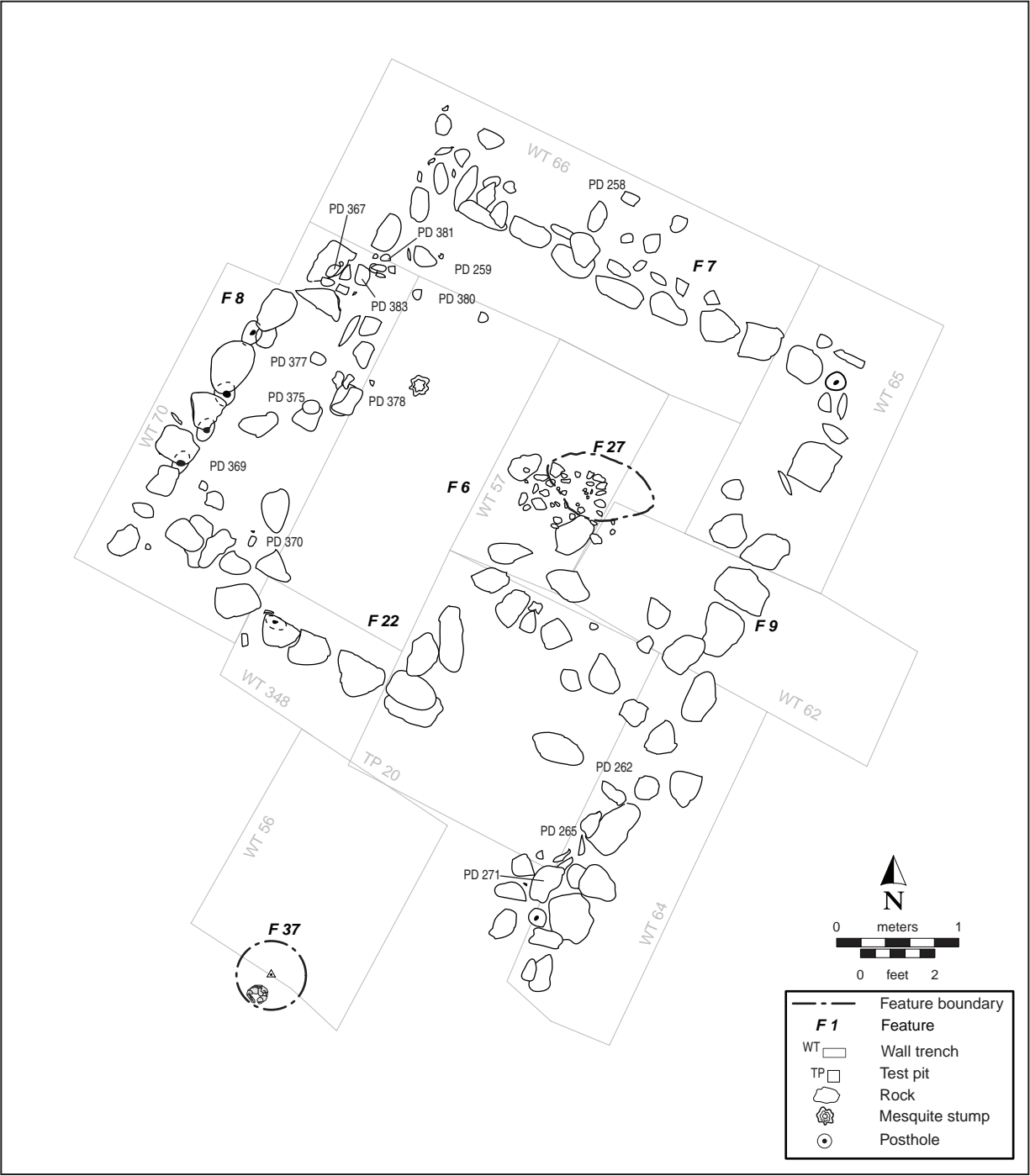


Figure 130. Feature 6, a cobble-adobe-foundation structure, at the Crane site (410/2017).



Figure 131. Photograph of the Feature 6 foundations at the Crane site (410/2017), view north.

represented by a single course of more than 20 rounded river cobbles that were 20–60 cm in diameter and arranged in roughly two parallel rows. These cobbles, like those used to construct the other walls, were embedded in an adobe mortar and set in a shallow (10–20 cm) footing trench. This wall extended 5.8 m north–south and was 40 cm thick and 30 cm tall on average. It extended beyond the southern wall (Feature 22) and formed a small wing wall in front of the structure. The eastern wall was different from the other walls, as it was built in two rows with a post embedded at each end. At the southern end of the wall, a shallow posthole was found in the center of the footing trench surrounded by several cobbles. A posthole was also found in the footing trench below the junction of this and the northern wall (Feature 7).

The northern wall (Feature 7) was 3.8 m long and consisted of one to two courses of 20–55-cm-long river cobbles arranged in a single row. Nine large cobbles formed the basal course. These nine cobbles were set in a 10–20-cm-deep footing trench and were then mortared in place. A second course of smaller cobbles overlapped portions of the wall and slumped off to the north. This cobble-adobe foundation was 30 cm wide and 25–35 cm high on average.

The western wall (Feature 8) consisted of two courses of river cobbles set in a single row in a thick adobe mortar. The lower course was anchored in a 10–20-cm-deep footing trench. This wall foundation was 4 m long and

35 cm tall on average. This foundation also supported wall posts. Four shallow postholes were set between the cobbles along the edge of the floor in the southern part of this wall.

The southern wall (Feature 22) was 5 m long and 40 cm wide on average. It consisted of nine 25–40-cm river cobbles arranged in a single row. This basal course was also set into an adobe-filled footing trench that was 10–20 cm deep. A single posthole was embedded along the floor edge between cobbles in this wall.

Floor

The structure floor was not plastered and was poorly preserved. It consisted of the weathered surface of the Stratum III argillic soil. The average elevation of the floor surface was 787.2 m AMSL, sloping slightly to the east. Several artifacts were discovered on the floor and were point located. These artifacts are interpreted as having been deposited after the structure was abandoned.

Hearth

There was no hearth.

Other Floor Features

There were no other floor features.

Entry

An 85-cm gap between the southern (Feature 22) and eastern (Feature 9) walls was identified as the poorly preserved entryway. This entryway opened to the south and faced the entryway of Feature 4. The eastern wall extended approximately 75 cm beyond the entrance. The surface of the entryway was level with the floor. No evidence of a sill was observed, and no postholes were adjacent to the opening.

Evidence for Remodeling

There was no evidence for remodeling.

Associated Artifacts

A single Roosevelt Black-on-white sherd was recovered from the upper fill of the feature. Several Salado Red Corrugated sherds were recovered from the near-floor fill. A small number of ceramic artifacts were recovered from the floor, including five Brown corrugated sherds, eight brown plain sherds, and red plain sherds (see Table 12). Lithic artifacts collected from the fill include several flakes of chert, jasper, quartzite, and schist. Lithic artifacts recovered from the floor include a sandstone anvil (PD 375), two quartzite manos (PDs 265 and 377), a basalt hammer stone (PD 378), a limestone shaft straightener (PD 380), and a rhyolite metate fragment (PD 383). An *Oliva* tinkler was recovered from the feature fill (illustrated in Volume 2, Figure 54).

Botanical Remains

A flotation sample taken from the near-floor fill contained juniper, mesquite, and creosote bush charcoal, as well as a small number of charred cotton (*Gossypium* sp.) seeds and maize cupules. The pollen sample contained no evidence of economic species.

Faunal Remains

Several bone fragments were recovered from the near-floor fill of the feature. Most could only be assigned to size class, with the majority categorized as small rodent. A single rattlesnake (*Crotalus* sp.) vertebra was also recovered. It is likely that these remains were intrusive to the feature.

Chronology

A single radiocarbon date of cal A.D. 1050–1280 (calibrated at 2 σ with program OxCal 3.10) was obtained from a charred maize cupule (see Table A.1).

Associated Features

Feature 6 was located to the north of the small room block

containing Rooms 2, 4, and 19. An intrusive roasting pit (Feature 27) was discovered near the center of the structure.

Feature 10

Feature type: isolated cobble-adobe-foundation segment

Function: habitation

Grid coordinates (m): N 8327.2, E 159.0

Date: Roosevelt phase, based on architecture

Depth: 0.53 m

Abandonment processes: unknown

Dimensions: 4.90 by 0.60 m

Orientation: 30° long axis

Floor area: no associated floor area was defined

Excavation Methods

This wall segment was exposed during the excavation of WT 72 in the eastern portion of the main habitation area (see Figure 122). A single 2-by-2-m test pit (TP 6) was excavated north of the wall segment. Sterile deposits were encountered at a depth of approximately 15 cm below ground surface. We did not excavate on the south side of the feature, because it was on the eroded edge of the slope.

Construction Details

Walls and Roof

The foundation consisted of a single course of cobbles that averaged 40 cm in diameter. Some evidence of adobe mortar was noted on the northern and southern edges of the foundation wall. Wall fall surrounded the in situ foundation, which suggested that the wall may have originally reached three courses in height.

Floor

No floor was defined.

Hearth

There was no hearth.

Other Floor Features

There were no other floor features.

Entry

There was no defined entry.

Evidence for Remodeling

There was no evidence for remodeling.

Associated Artifacts

A quartzite mano was associated with this foundation wall segment. No other artifacts were recovered.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

No faunal remains were identified.

Chronology

No chronometric data or diagnostic artifacts were obtained.

Associated Features

The foundation segment was isolated from the other wall foundations, although it was oriented perpendicular to the long axis of the compound. It was located approximately 2.5 m east of Feature 19 in the compound. It is possible that it was once connected to the compound, but the ADOT erosion-control ditch now separates Feature 10 from the compound.

Feature 11

Feature type: cobble alignment
Function: habitation
Grid coordinates (m): N 8331.0, E 147.2
Date: Roosevelt phase, based on superposition
Depth: 0.45 m
Abandonment processes: unknown
Dimensions: 4.55 by 0.36 m
Orientation: 20° long axis
Floor area: unknown

Excavation Methods

This cobble alignment was visible on the surface. It was defined in WT 69 and excavated as part of Feature 4.

Construction Details

Walls and Roof

This was a cobble rock alignment that was built perpendicular to and on top of the west wall of Feature 4. It was

a single course of cobbles resting atop brown sandy clay loam and did not appear to be set into an adobe footing like the walls of room Feature 4. Thirteen cobbles comprised the main alignment. A large amount of rubble lay downslope to the south and suggests that this alignment may have originally consisted of three vertical courses. The eastern end of this alignment extended onto the floor of Feature 4. It is not clear, however, whether the five or six rocks in the middle of Feature 4 were part of the alignment or rubble.

Floor

No floor was defined.

Hearth

There was no hearth.

Other Floor Features

There were no other floor features.

Entry

There was no defined entry.

Evidence for Remodeling

There was no evidence for remodeling.

Associated Artifacts

A mano and a basalt hammer stone were the only artifacts recovered from this feature.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

No faunal remains were identified.

Chronology

This feature superimposed Feature 4, which we interpreted as an early Classic structure.

Associated Features

This feature superimposed the west wall of Feature 4.

Feature 15

Feature type: cobble-adobe alignment
 Function: habitation
 Grid coordinates (m): N 8331.4, E 150.6
 Date: Roosevelt phase, based on superposition
 Depth: 0.63 m
 Abandonment processes: unknown
 Dimensions: 1.44 by 0.42 m
 Orientation: 30° long axis
 Floor area: unknown

Excavation Methods

This feature was found during the excavation of Feature 4.

Construction Details

Walls and Roof

This is a short, linear cobble alignment that is located south and parallel to Feature 14, the north wall of Feature 4. It consists of five cobbles averaging 30–40 cm in diameter. They were constructed on a dark ash and charcoal-laden fill, resting on the floor of Feature 4. Adobe filled the 10-cm gaps between the cobbles, but we found no evidence of an adobe-filled wall trench like the other walls of Feature 4. Feature 15 abutted Feature 5, the east wall of Feature 4.

Floor

No floor was defined.

Hearth

There was no hearth.

Other Floor Features

There were no other floor features.

Entry

There was no defined entry.

Evidence for Remodeling

There was no evidence for remodeling.

Associated Artifacts

There were no associated artifacts.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

No faunal remains were identified.

Chronology

This feature superimposed the floor of Feature 4, indicating an early Classic period date.

Associated Features

This feature was built on top of the floor of Feature 4 and abutted the east wall of Feature 4. The feature was located slightly northeast of the Feature 11 rock alignment but was not connected.

Feature 19

Feature type: cobble-adobe-foundation structure
 Function: unknown
 Grid coordinates (m): N 8331.2, E 153.6
 Date: Classic period, based on ceramics and architecture
 Elevation: The average originating elevation of 786.9 m (2,581.8 feet) AMSL corresponds to the modern surface. The average floor elevation was approximately 786.8 m (2,581.5 feet) AMSL.
 Abandonment processes: abandoned
 Dimensions: 3.81+ by 2.67+ m
 Orientation: 42° long axis
 Floor area: 9.6+ m²
 Shape: rectangular

Excavation Methods

Feature 19 was the remains of another cobble-adobe-foundation room that was only partially visible from the surface. It was separated from Feature 2 to the south by the remains of a dividing wall (Feature 18) and from Feature 4 to the west by another dividing wall (Feature 5) (Figures 132 and 133). The exposure of Feature 19 began with the excavation and judgmental sampling of WTs 44 and 46 along the remains of the structure's western wall (Feature 5) and WT 38 along the southern wall that divided Feature 19 from Feature 2. Excavation of these wall trenches resulted in the exposure of the basal course of stones used to construct the walls, although few artifacts were found.

Controlled sampling of Feature 19 started with the excavation of two levels in a 2-by-2-m unit (TP 327) placed in the center of the structure. Level 1 represented the



Figure 132. Feature 19, a cobble-adobe-foundation structure, at the Crane site (410/2017).

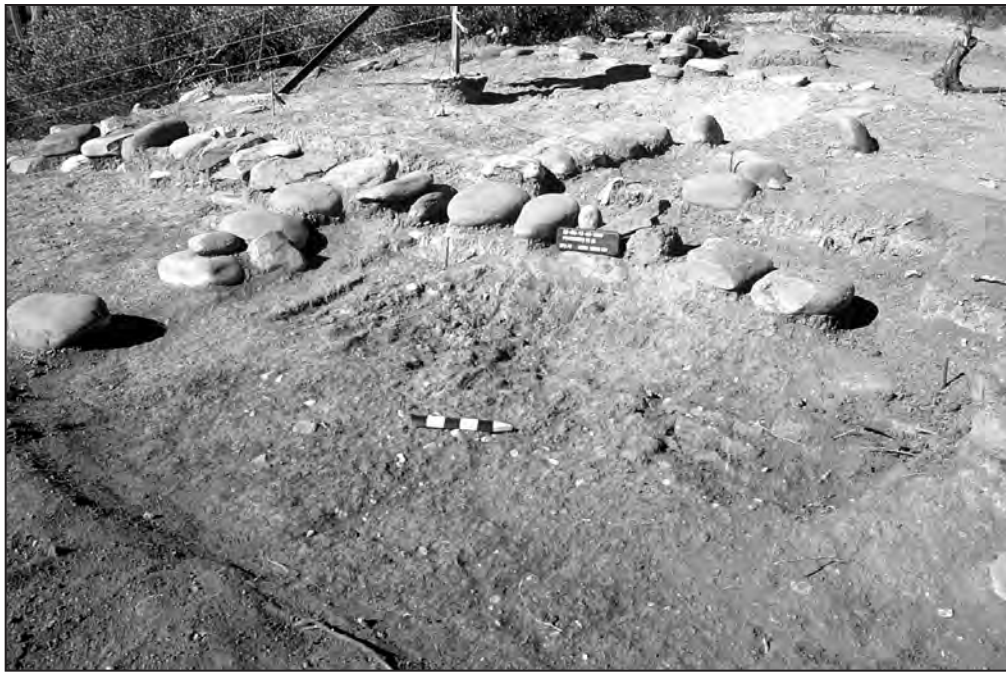


Figure 133. Photograph of the Feature 19 foundations at the Crane site (410/2017), view west.

removal and judgmental sampling of 1–6 cm of the surface sands (Stratum I). Few artifacts were encountered during the removal of this colluvial sediment. Level 2 represented the removal and screening of the remaining feature fill (Stratum IIa), which was 5 cm deep on average, and exposure of the poorly preserved, adobe-plastered floor. Excavation of TP 327 resulted in the total removal of the feature fill.

Stratigraphy

Stratum I

Stratum I consisted of poorly sorted colluvial sands that surrounded many granules and gravels. These surface sands and gravels were approximately 4 cm deep and contained a few redeposited artifacts that had been washed into the feature.

Stratum IIa

Stratum IIa consisted of feature fill, approximately 5 cm deep, characterized by a weakly indurated and poorly sorted sandy loam that contained few artifacts. These sediments represent a mixture of colluvial and cultural deposits that had washed into the structure from the east and sediment redeposited during the excavation of the ADOT erosion-

control ditch. Level 2 in TP 327 represented the controlled excavation of this stratum.

Construction Details

Walls and Roof

This feature was bounded by cobble-adobe wall foundations on the south and west. The western wall of Feature 19 consisted of the northern portion of Feature 5, which divided this feature and the Feature 2 room from the Feature 4 room to the west. The Feature 5 wall consisted of up to three courses of river cobbles and adobe mortar. On average, the segment of the Feature 5 wall that bounded this structure on the west was 45 cm tall and 30 cm wide. The southern wall (Feature 18) was poorly preserved compared to the western wall. The southern wall divided this structure from Feature 2. It was constructed from adobe mortar and at least one course of rounded river cobbles that were 35 cm long and 20 cm high on average. The eastern end of the southern dividing wall was obliterated during the construction of the ADOT erosion-control ditch. The preserved segment of this wall measured 2.2 m east–west. The cobbles used to construct it, like those used to construct the western dividing wall, were placed in a shallow footing trench and mortared into place with a light gray adobe. No postholes or roof supports were observed.

Floor

The floor was patchily preserved and consisted of the same light gray adobe used to construct the cobble reinforced walls. This plaster appeared ash laden and, in places, contained dispersed charcoal flecks.

Hearth

There was no hearth.

Other Floor Features

There were no other floor features.

Entry

There was no defined entry.

Evidence for Remodeling

There was no evidence for remodeling.

Associated Artifacts

With the exception of a small number of Salado Red Corrugated sherds recovered from the near-floor fill of the feature, no temporally diagnostic ceramic artifacts were recovered. The near-floor fill also contained a small number of chert, quartzite, basalt, and andesite flakes. The small floor assemblage includes two hammer stones (one granite and one quartzite) (PD 331), one mano (PD 342), and two granite metate fragments (PD 332) (see Table 12).

Botanical Remains

No macrobotanical remains were recovered. A pollen sample collected from beneath one of the metate fragments contained maize pollen.

Faunal Remains

A single deer-sized mammal-bone fragment was recovered from the upper fill of the feature.

Chronology

No archaeomagnetic or radiocarbon dates were obtained from Feature 19. The Salado Red Corrugated sherds recovered from the near-floor fill suggest a Classic period date for the feature.

Associated Features

Feature 19 is part of a cobble-adobe-foundation-walled room block comprising a room on the west (Feature 4), a room on the south (Feature 2), and a possible room (Feature 26) on the north. The ADOT erosion-control ditch removed the eastern portion of this room.

Feature 26

Feature type: possible cobble-adobe-foundation room

Function: unknown

Grid coordinates (m): N 8331.8, E 155.4

Date: Roosevelt phase, based on architecture and ceramics

Elevation: The average originating elevation of 786.8 m (2,581.4 feet) AMSL corresponds to the modern surface.

The average floor elevation was approximately 786.8 m (2,581.2 feet) AMSL.

Abandonment processes: abandoned and trash filled

Dimensions: 2.03+ by 2.02+ m

Orientation: 28° long axis

Floor area: 4.4+ m²

Shape: rectangular

Excavation Methods

Excavation of this feature (Figure 134) began with the exposure of its western wall (Feature 5) during the excavation and judgmental sampling of WTs 49 and 50. Excavation of these wall trenches resulted in the collection of few artifacts. WT 55 was then excavated to determine if a dividing wall existed between this feature and Feature 19 to the south. A small alignment of cobbles at the southwestern corner of the feature may have represented the remains of a cross wall.

This feature was sampled through the excavation of a 2-by-2-m unit (TP 393). The structure fill (Stratum IIa) was screened in a single level that was removed from this unit. Artifact density was high. This suggests that this structure was abandoned and trash filled. Excavation of TP 393 also resulted in the exposure of the weathered argillic paleosol (Stratum III) that in places was covered with small patches of adobe plaster, the remnants of the prepared floor. The remaining fill was judgmentally sampled.

Stratigraphy

Stratum I

Stratum I consisted of surface sands and gravels that were less than 5 cm deep. In many areas the surface sands had been removed prior to the feature excavation by pedestrian traffic and aeolian erosion.

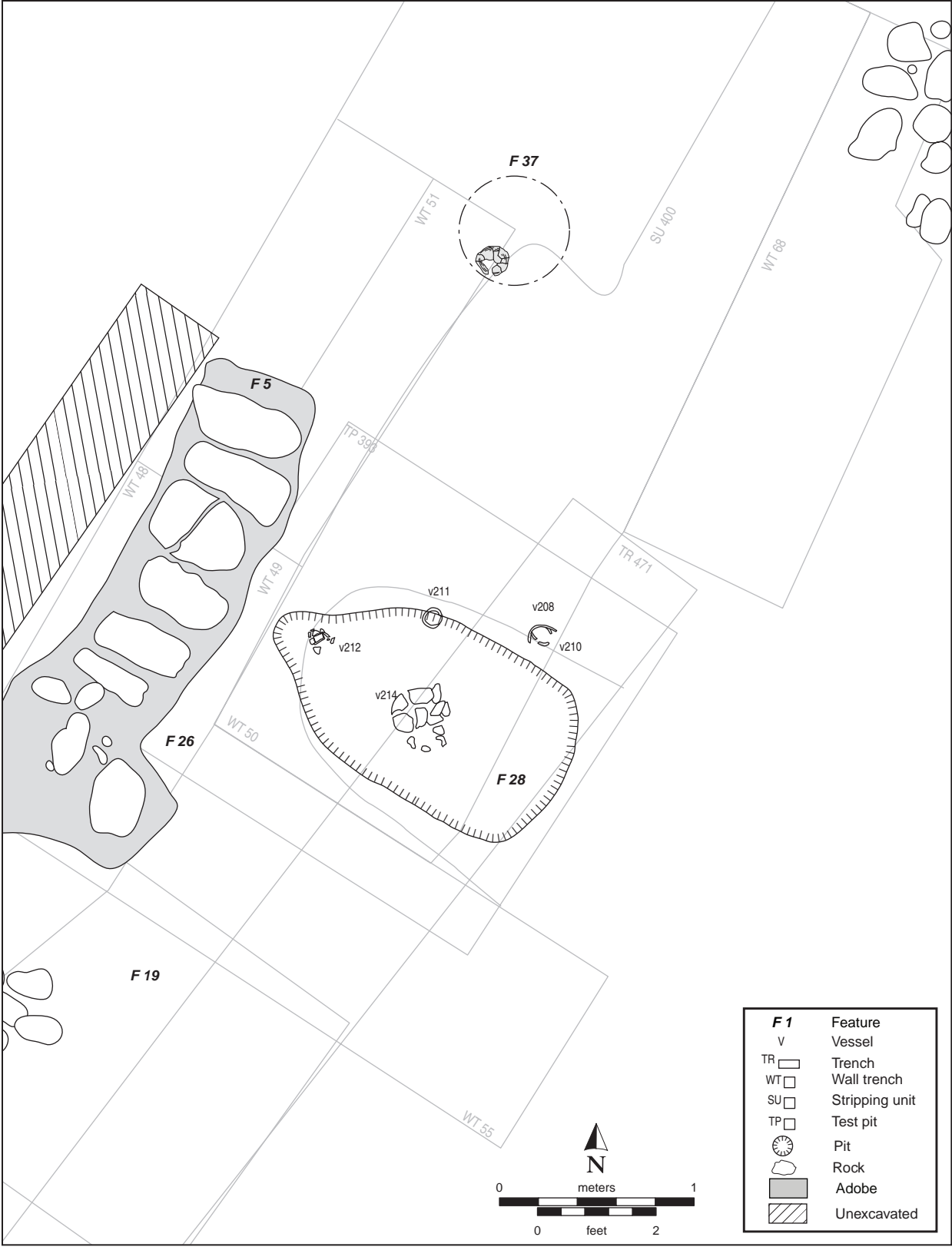


Figure 134. Plan view of a possible structure, Feature 26, and pit Feature 28 at the Crane site (410/2017).

Stratum IIa

Stratum IIa consisted of feature fill, approximately 5 cm deep, representing sediments that had washed into the feature since its abandonment, along with occupational debris intentionally dumped into the feature. Sediments forming this stratum consisted of a loose, poorly sorted sandy loam.

Stratum III

Stratum III consisted of argillic paleosol. The weathered surface of this native subsoil corresponded with the feature floor.

Construction Details

Walls and Roof

Feature 26 was a partially bounded space at the northern end of the small room block comprising Features 2, 4, and 19. It was defined by a cobble-adobe extension of Feature 5, the wall foundation forming the central spine of the room block. The wall foundation segment defining Feature 26 consisted of subrounded to well-rounded cobbles approximately 50 cm in diameter set in adobe plaster. The average width of the preserved portion of the wall was 70 cm. The cobbles were set in a shallow footer approximately 15 cm deep. A single cobble set in the wall trench at the southern end of the Feature 5 segment represented the only preserved portion of the southern wall foundation separating Feature 26 from the room Feature 19. No evidence of roof or wall supports was encountered.

Floor

The floor consisted of intermittent patches of adobe plaster applied directly atop the weathered surface of the Stratum III argillic paleosol. No attempt seems to have been made to level the structure floor.

Hearth

There was no hearth.

Other Floor Features

There were no other floor features.

Entry

There was no defined entry.

Evidence for Remodeling

There was no evidence for remodeling.

Associated Artifacts

A single Snowflake Black-on-white sherd was recovered from the upper fill of the structure. Also recovered from the upper fill were a number of unmodified basalt and chert flakes and a single basalt hammer stone. In the lower fill, four reconstructible vessels were found: fragments of two Salado Red Corrugated bowls (V 208 and V 210) and two miniature Salado Red Corrugated jars (V 211 and V 214) (see Table 12). A fragment of another red ware bowl was found inside the intrusive pit, Feature 28 (see below). These vessels probably represented refuse deposited after abandonment of the room.

Botanical Remains

No macrobotanical remains were recovered. A single pollen sample submitted for analysis revealed no economic species.

Faunal Remains

No faunal remains were identified.

Chronology

No archaeomagnetic or radiocarbon dates were obtained from Feature 26. The Snowflake Black-on-white sherd, postdating A.D. 1040, suggests a Classic period use of the feature.

Features

This possible structure was situated immediately north of another structure (Feature 19). If Feature 26 was an actual structure, it would have represented the northernmost extension of the room block. The isolated Feature 6 structure was located 6 m farther to the north. A large, trash filled pit (Feature 28) was intrusive into the structure and trash, including several broken vessels, filled much of the preserved portion of the room. The ADOT erosion-control ditch removed the eastern portion of this possible room.

Feature 30

Feature type: pit house

Function: habitation

Grid coordinates (m): N 8337.9, E 149.4

Date: Sedentary period or Miami phase, based on architecture and archaeomagnetic dates

Elevation: The average originating elevation of 787.7 m (2,584.4 feet) AMSL corresponds to the bottom of the mechanical stripping level in SU 287. The average floor

elevation was approximately 787.6 m (2,583.9 feet) AMSL.

Abandonment processes: abandoned and burned

Dimensions: 5.37 by 3.71 m

Orientation: 114° long axis

Floor area: 18.0 m²

Shape: ovate

Excavation Methods

Feature 30 (Figures 135–137) was first exposed during the excavation of Hand Trenches (HTs) 255 and 267 and described as a prepared occupational surface encountered during the excavation of Feature 24. TR 330 was later excavated to expose this feature in profile. The western trench wall of TR 330 bisected the feature and exposed a cobble concentration that was later identified as a granary pedestal intrusive to the feature (see Feature 24 description). Feature 30 was then exposed in plan view during the mechanical stripping of SU 287, which entailed the removal of about 15 cm of colluvial sands (Stratum I) and up to 5 cm of the feature fill (Stratum II). It was then identified as an oval pit structure and was designated Feature 30. The charcoal-laden sediment that filled the house contrasted sharply with the surrounding reddish brown argillic soil.

Controlled sampling of Feature 30 began with the excavation of a 1-by-2-m unit (TP 359). A single level was excavated and screened. Excavation of this level resulted in the exposure of what was ultimately interpreted as an intrusive granary pedestal (Feature 24) and the burnt and plastered house floor.

The remaining feature fill was removed en masse during the excavation of three levels. Level 1 (Stratum IIa) was 4 cm thick on average and was judgmentally sampled. This level consisted of the removal of the house fill and resulted in the discovery of another granary pedestal (Feature 31) that truncated the southeast corner of the house. Level 2 (Stratum IIb) also averaged 4 cm in thickness but was screened. Excavation of Level 2 resulted in the exposure of an adobe-plastered surface associated with the intrusive granary pedestals (Features 24 and 31). Level 3 (Stratum IIc) was 6 cm thick on average and ended with the exposure of the poorly preserved, burnt, and plastered floor.

Stratigraphy

Stratum IIa

Stratum IIa consisted of feature fill, approximately 10 cm deep. About half of this stratum was removed from the western portion of the house during the mechanical stripping of SU 287. It consisted of a weakly indurated and charcoal-stained sandy loam. Few artifacts were recovered during

the mechanical stripping and manual excavation of this stratum.

Stratum IIb

Stratum IIb consisted of an arbitrarily defined near-floor fill, approximately 4 cm deep, including the charcoal stained sediment that rested atop the adobe-plastered surface associated with the granary pedestals (Features 24 and 31). It consisted of a poorly sorted sandy loam that contained numerous granules and gravels. Stage I carbonate filaments and numerous rootlets were also present.

Stratum IIc

Stratum IIc consisted of near-floor fill, approximately 6 cm deep, including sediment situated between the adobe-plastered surface associated with the granary pedestals (Features 24 and 31) and the burnt and poorly preserved house floor. It contained few artifacts but was charcoal stained.

Construction Details

Walls and Roof

This was a true pit house, unlike the houses-in-pits found at other project sites. No wall groove or peripheral postholes were found. A thin caliche plaster was applied directly to the sterile native subsoil that formed the shallow excavated pit wall. The pit walls were slanted approximately 75°–80°, and a rounded plaster coping provided a seamless transition from wall to floor.

Two central-support postholes (Features 30.02 and 30.03) provided the only evidence of roof supports. These postholes were centered along the long axis of the structure and would have held primary roof-support posts. No exterior postholes could be identified in the argillic subsoil that surrounded the structure.

Floor

The floor was constructed of the same caliche plaster as the walls and was applied directly to the sterile substrate. The plaster continued uninterrupted up the walls, which suggests that the floor and walls may have been plastered at the same time.

Hearth

One formal hearth (Feature 30.01) was encountered within the living area of the house. This hearth had been disturbed during the construction of the Feature 24 granary, which partially covered the large collar that surrounded the hearth



Figure 135. The pit house, Feature 30, and associated Features 17, 24, and 31 at the Crane site (410/2017).

basin. This collar was 8 cm thick and 15 cm wide on average. The hearth basin was 32 cm in diameter and 34 cm deep. One remodeling episode was evident from a layer of oxidized plaster beneath the outermost surface. The fill within the hearth consisted of ash and represented the last use of the hearth. This fine, white to gray ash surrounded flecks of charcoal and was collected as a flotation sample.

Other Floor Features

There were no other floor features.

Entry

The entryway opened to the south and was partially covered by a mound of cobbles (Feature 17). It ramped slightly upward, was 1.3 m long, and was 75–80 cm wide. Plaster was not preserved in the entryway and no postholes were discernible.

Evidence for Remodeling

An adobe-plastered floor was constructed in the house depression shortly after the house burned and was abandoned.

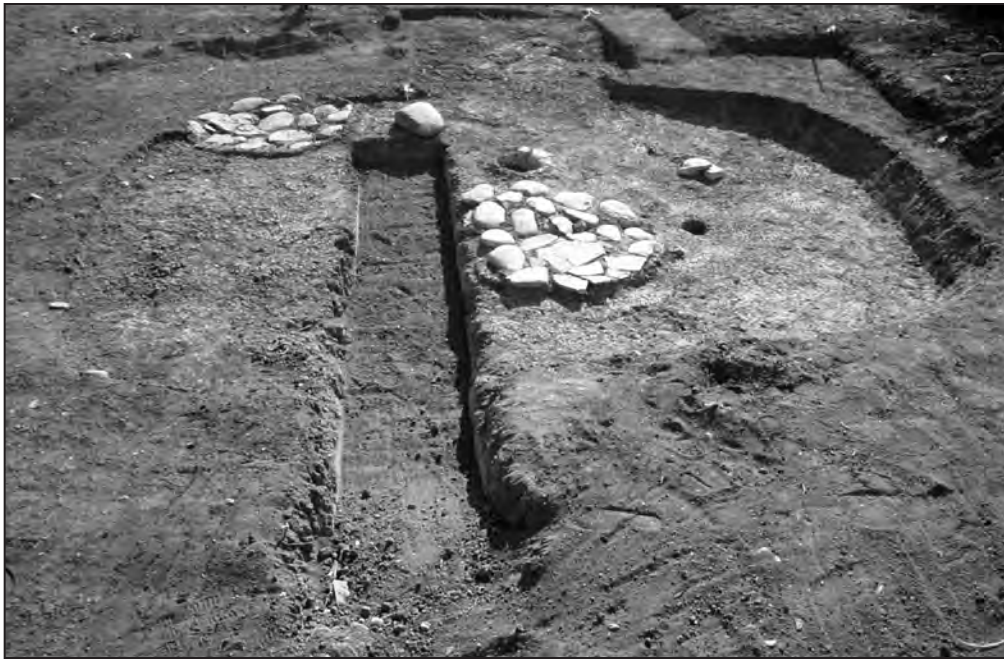


Figure 136. Overview of the Feature 30 pit house and associated granaries, Features 24 and 31, at the Crane site (410/2017), view south.



Figure 137. Photograph of the Feature 30 pit house and associated granaries, Crane site (410/2017), view west.

On average, only 6 cm of sediment rested between this adobe-plastered floor and the burnt remains of the original caliche-plastered house floor. Two granaries were then constructed. The cobble pedestal used to construct one of the granaries (Feature 31) was set in the wall of the house. Another cobble granary pedestal (Feature 24) was also constructed near the center of the house, and it overlapped the northern portion of the hearth Feature 30.

Associated Artifacts

A small floor assemblage was recovered from Feature 30, including 1 quartzite mano, 1 quartzite hammer stone, 1 basalt hammer stone, and 24 brown plain sherds (PD 463) (see Table 12). One Pinto Black-on-red sherd was recovered from the near-floor fill of the feature but is more likely associated with the later occupation of this site. One needle pendant was recovered during screening of Stratum IIB fill (illustrated in Volume 2, Figure 54). During initial exploration of the site, a rim section of 1 red plain bowl (V 215) and 1 argillite ring fragment were discovered in HT 267 and designated as Feature 3. Subsequently, we determined that this was the northeast corner of Feature 30. It is unclear whether these two artifacts were associated with the pit house or the later courtyard.

Botanical Remains

Three flotation samples from the fill and one sample from the hearth were submitted from Feature 30. The sample from the near-floor fill contained charred cotton seeds and maize cupules. The sample from the hearth contained charred cheno-am seeds and juniper charcoal. Two pollen samples taken from beneath floor-contact artifacts contained maize pollen.

Faunal Remains

Numerous faunal bones were recovered from the fill of Feature 30, most only assigned to size class. The only specimens that could be assigned to species were several fragments identified as black-tailed jackrabbit recovered from the near-floor fill.

Chronology

A charred maize cupule was submitted for radiocarbon analysis but was of insufficient mass to return a date. Archaeomagnetic samples taken from the hearth returned three alternate dates: A.D. 1010–1140, 1160–1215, and 1235–1365 (dated against SWCV595; LaBelle and Eighmy 1997) (see Table A.1). It is most likely that either of the first two alternatives is correct. The single decorated sherd corresponds in age with the youngest date.

Associated Features

Feature 30 lies in the area that subsequently served as the courtyard for the small cobble-adobe-foundation room blocks that were built to the south and east. Three features intruded the house. These included two granary pedestals that were associated with the room blocks. One pedestal (Feature 24) was constructed near the center of the house and partially covered the hearth (Feature 30.01) collar. Another granary pedestal (Feature 31) located in the southeastern portion of the house truncated the house wall. A cobble concentration (Feature 17) was discovered at the southern end of the entryway. This cobble concentration corresponded closely to the dimensions of the entryway. It perhaps represented the intentional sealing of the house entry at the time of abandonment.

Nonarchitectural Features

Feature 1

Feature type: midden

Location: Feature 1 rested in the north-central portion of the site alongside an unnamed ephemeral drainage. The ADOT erosion-control ditch bisected the eastern third of this feature north to south.

Grid coordinates (m): N 8362.8, E 170.9

Date: Sedentary–early Classic periods, possibly late Classic, based on ceramics

Depth: 0.42 m

Dimensions: 14.25 m east–west by 12.76 m north–south

Area: 161.4 m²

Excavation Methods

Feature 1 was a midden deposit visible from the surface, and it consisted of a discrete ash- and charcoal-stained area replete with artifacts (see Figure 122). Controlled sampling of this midden began with the excavation of TP 12. This 2-by-2-m control unit was placed near the center of the midden. Excavation began with the removal and screening of approximately 4 cm of leaf litter and surface sands (Stratum I). Removal of the first level resulted in the excavation and screening of up to 20 cm of midden fill (Stratum II). Numerous ceramic and flaked stone artifacts were collected. Fire-cracked rock formed a significant portion of the fill, and several black-on-white ceramic sherds were noted. Level 2 also contained numerous artifacts—particularly large plain ware ceramic sherds and cortical flakes. Excavation of the third level resulted in the exposure of the underlying sterile argillic soil and the midden's undulating base. Artifact density remained high throughout the excavation of TP 12.

Exposure of this midden continued with the mechanical excavation of TR 309, which bisected the midden east–west. This trench was excavated in order to determine if the midden extended beyond what was visible from the surface and to test for the possibility of human burials within the midden. Artifacts were judgmentally sampled during the trench excavation and no burials were encountered within or beneath the midden. The midden was ultimately stripped away mechanically during the excavation of SU 302, which was also judgmentally sampled.

Feature Fill

The midden fill consisted of a charcoal- and ash-stained sandy loam that contained numerous ceramic and lithic artifacts. Fire-cracked rock formed a significant portion (approximately 30 percent) of the midden matrix. Stage I carbonate filaments were observed throughout the feature. The upper surface of the midden had been eroded and washed downhill toward SR 188. Further, the upper 30 cm of the midden had been removed during the construction of the ADOT erosion-control ditch. Large plain ware sherds and cortical flakes were the most numerous artifacts. Faunal bone was not observed during the excavation and sampling of the midden.

Associated Artifacts

Copious quantities of ceramic and lithic artifacts were recovered from the Feature 1 midden. The ceramic collection included examples of Sacaton Red-on-buff, Holbrook or Walnut Black-on-white, Pinto or Gila Polychrome, Pinto Black-on-red, Tularosa Black-on-white, and Reserve Black-on-white. This collection indicates that the site was occupied from the Sedentary period through the early Classic period and possibly into the late Classic period. A diverse lithic collection was also recovered, including flakes and cores of a wide range of material types.

Botanical Remains

A flotation sample submitted from the midden contained charred maize cupules as well as charred cheno-am seeds and creosote bush charcoal.

Faunal Remains

A sample from the basal level of the midden contained several charred mammal bones that could be classified only as representing squirrel- to rabbit-sized animals.

Chronology

No absolute dates were obtained from this feature, but ceramics suggest it was used from the Sedentary period

through the early Classic period and, possibly, into the late Classic period.

Associated Features

This midden was situated approximately 40 m north of the architectural features, and no other features were directly associated with it.

Granaries

Feature 24

Feature type: granary pedestal

Function: food storage

Location: This feature was discovered near the center of the Feature 30 pit house.

Grid coordinates (m): N 8338.3, E 148.9

Date: Roosevelt phase, based on ceramics and architectural associations

Dimensions: 1.3 m north–south by 1.0 m east–west

Shape: ovate

Excavation Methods

This feature was discovered in the west wall profile of TR 330 (Figure 138; see also Figures 136 and 137). It appeared initially to be several flat, oval river cobbles resting on a prepared surface. Controlled sampling of this feature began with the excavation of TP 359. This 1-by-2-m control unit was placed over the feature and a single level was excavated and screened. An average of 15 cm of sediment was removed, and this resulted in the exposure of an oval granary pedestal.

Feature Fill

The sediments that covered this granary pedestal consisted of a mixture of adobe-mortar fragments and a silty clay loam. These sediments were ash laden and numerous charcoal flecks were present. Many fine to medium-sized rootlets were also encountered. Few artifacts were observed.

Construction Details

This granary pedestal was constructed from 28 cobbles that were 7–30 cm long, 10–22 cm wide, and 3–7 cm thick. These cobbles were set in an adobe mortar consisting of an ash-laden silty clay loam. The adobe extended 10–15 cm beyond the outermost stones. It was oval in plan view and measured 1.30 m north–south by 1 m east–west.

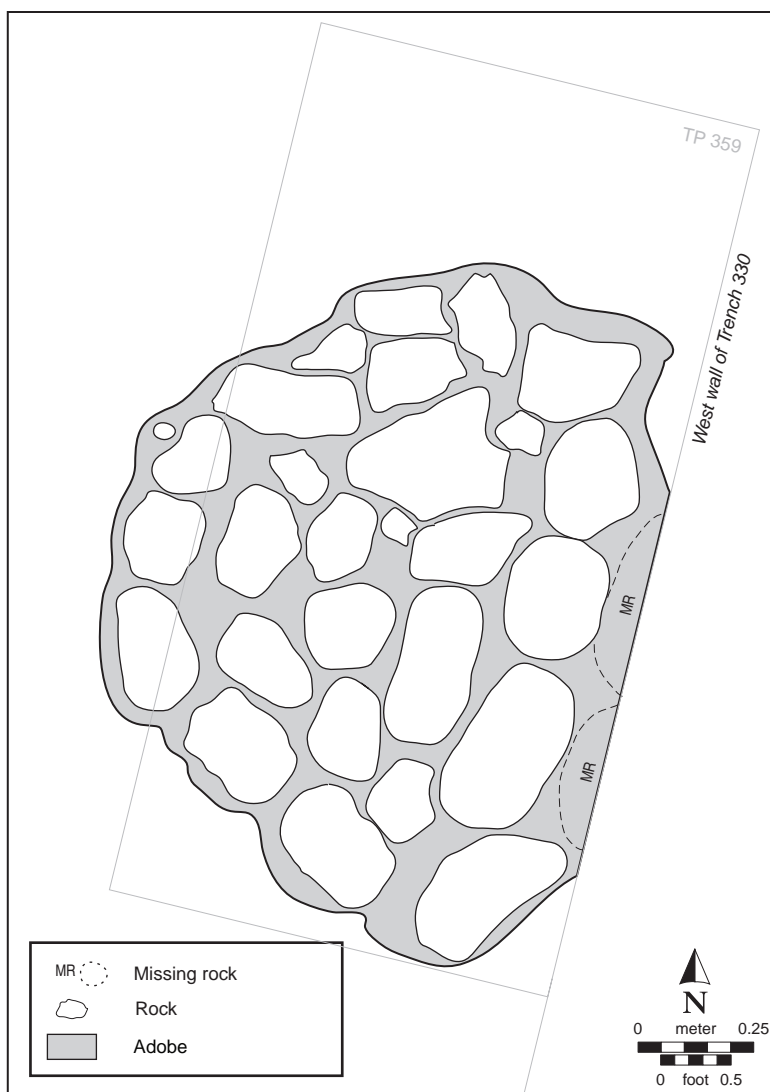


Figure 138. Plan view of granary Feature 24 at the Crane site (410/2017).

Associated Artifacts

Several small brown plain and Salado Red Corrugated sherds were recovered from the fill of Feature 24. An indeterminate Cibola White Ware sherd was also recovered. The small lithic collection included a single basalt scraper, an unmodified basalt flake, and an unmodified chert flake.

Botanical Remains

A single flotation sample taken from the fill of the feature contained juniper and creosote bush charcoal, charred chenopodium seeds, and a charred maize cupule. No pollen samples were analyzed.

Faunal Remains

A small number of bones from rabbit-sized mammals were recovered from the fill of Feature 24.

Associated Features

This feature intrudes the pit house, Feature 30. The southern edge of this feature covered the plastered collar of the hearth discovered in the underlying Feature 30. Further, a 2–3-cm-thick lens of charcoal-stained sands and silts had accumulated on the floor of the pit house prior to the construction of this granary. Therefore, this granary postdates the occupation of the Feature 30 pit house. It lies within an area that

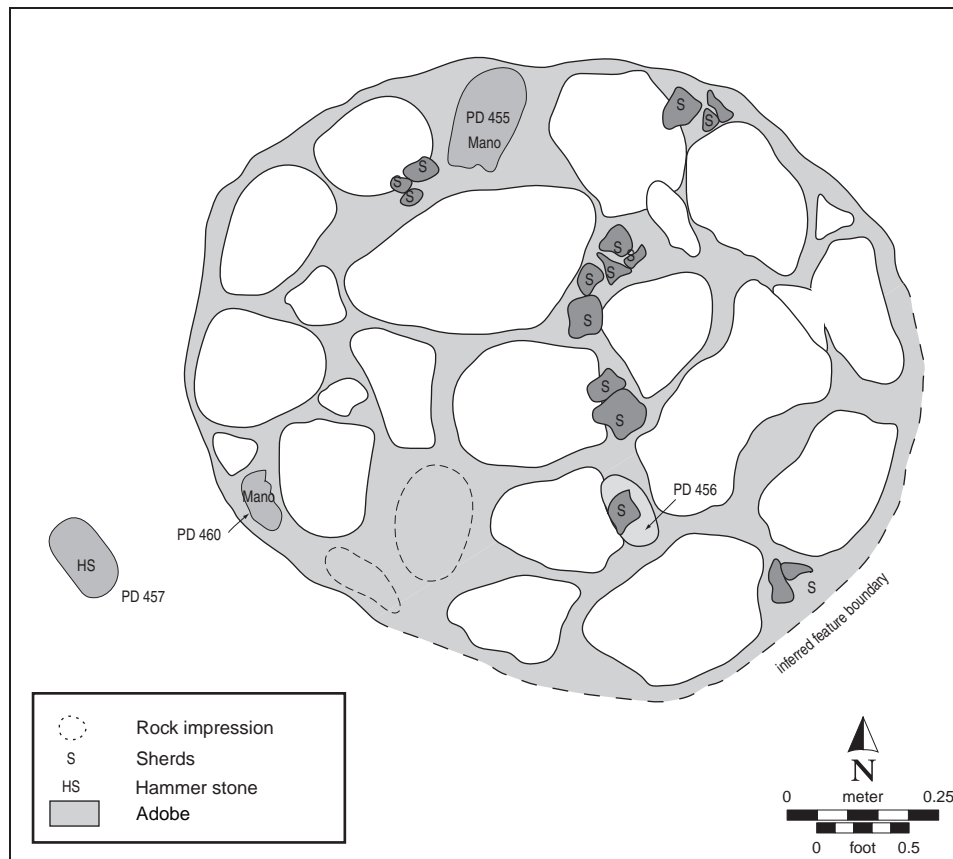


Figure 139. Plan view of granary Feature 31 at the Crane site (410/2017).

probably served as the courtyard for the cobble-adobe-walled room blocks at the site and is probably associated with these rooms.

Feature 31

Feature type: granary pedestal

Function: food storage

Location: As with the Feature 24 granary, this granary was also discovered within the Feature 30 pit house.

Grid coordinates (m): N 8335.6, E 149.5

Date: Miami/Roosevelt phases, based on ceramics and architectural associations

Dimensions: 1.30 m east–west by 1.20 m north–south

Shape: ovate

Excavation Methods

This granary pedestal was discovered during the excavation of the Feature 30 pit house (Figure 139; see also Figures 136 and 137). It occupied the southeast corner of the house, cutting into the pit wall. Up to 16 cm of fill covered the feature. The removal and screening of this sediment

resulted in the exposure of the adobe mortar and river cobbles used to construct the granary pedestal. A detailed plan view was then drawn, and pollen samples were collected from beneath several manos that were used to construct the pedestal.

Feature Fill

Sediments covering the pedestal consisted of weakly indurated sheetwash sands and gravels.

Construction Details

This granary pedestal was constructed from adobe mortar and 23 subrounded river cobbles. The adobe mortar consisted of an ash-stained silty clay loam. This mortar was 3–5 cm thick and extended 5–10 cm beyond the cobbles. Four manos were incorporated in the construction of the pedestal.

Associated Artifacts

A small number of ceramic sherds, including a single example of Pinto or Gila Polychrome, was collected from the fill.

A total of 23 brown plain sherds and 3 Brown corrugated sherds were collected from the floor surface of the feature. Three manos (PDs 455, 456, and 460), and 1 quartzite hammer stone (PD 457) were also collected (see Table 12).

Botanical Remains

No macrobotanical remains were recovered. A composite pollen sample taken from beneath the three manos contained maize pollen.

Faunal Remains

No faunal remains were identified.

Associated Features

This granary pedestal was located in the southeast corner of the Feature 30 pit house. It rested approximately 2 m southeast of the Feature 24 granary pedestal, which was located near the center of the Feature 30 pit house. Like Feature 24, this is likely intrusive into Feature 30, and both granaries lie within the partially enclosed courtyard area associated with the cobble-adobe-foundation rooms and are probably associated with this later component of the site.

Extramural Hearths

Feature 13

Location: This small extramural hearth was discovered approximately 5 m northwest of the Feature 6 cobble-adobe-foundation structure.

Grid coordinates (m): N 8346.0, E 153.5

Date: Miami/Roosevelt phases, based on ceramics

Elevation: The originating elevation of 787.6 m (2,584.0 feet) AMSL corresponds to the surface of SU 302.

Depth: 0.10 m

Dimensions: 0.41 m north–south by 0.34 m east–west

Excavation Methods

This feature was discovered during the mechanical stripping north of the main habitation area (Figures 140 and 141). It was initially identified as a possible stone-capped pit. Removal of the ovate capstone and fill revealed that this feature represented an extramural hearth. The feature fill was collected en masse for flotation analysis.

Feature Fill

A charcoal-laden sandy loam filled the pit. Several ceramic sherds and debitage fragments were recovered from this fill.

Construction Details

This feature was dug into the sterile argillic paleosol that blanketed the portion of the site located atop the hill. The pit was unlined. The capstone was flaked around all margins. It was fashioned from basalt, was ovate in plan view, and was 3–5 cm thick. The base of the pit was blackened, whereas the sides of the pit appeared slightly oxidized.

Associated Artifacts

A total of 33 ceramic sherds were recovered from the fill of Feature 13. With the exception of a single sherd identified as an indeterminate Tusayan Gray corrugated, the remaining sherds were evenly divided between brown plain, Brown corrugated, and Salado Red Corrugated.

Botanical Remains

A flotation sample collected from Feature 13 contained creosote bush charcoal, charred cheno-am seeds, and a charred maize cupule. Maize pollen was also identified in the feature.

Faunal Remains

With the exception of two specimens identified as black-tailed jackrabbit, the faunal collection could only be identified as belonging to rabbit-sized species.

Associated Features

This extramural hearth was the northernmost thermal feature discovered at this site.

Feature 29

Location: This small extramural hearth was discovered approximately 5 m west of the Feature 6 cobble-adobe-foundation structure.

Grid coordinates (m): N 8333.4, E 151.5

Date: Miami/Roosevelt phases, based on relationship with Features 4 and 30

Elevation: The originating elevation of 787.3 m (2,583.0 feet) AMSL corresponds to the surface of SU 287.

Depth: 0.05 m

Dimensions: 0.30 m east–west by 0.25 m north–south

Excavation Methods

This feature was discovered during the mechanical stripping of SU 287 (Figure 142). Only the lower 5 cm of the pit remained after the stripping. The feature was initially identified as an adobe-lined pit. Manual excavation revealed

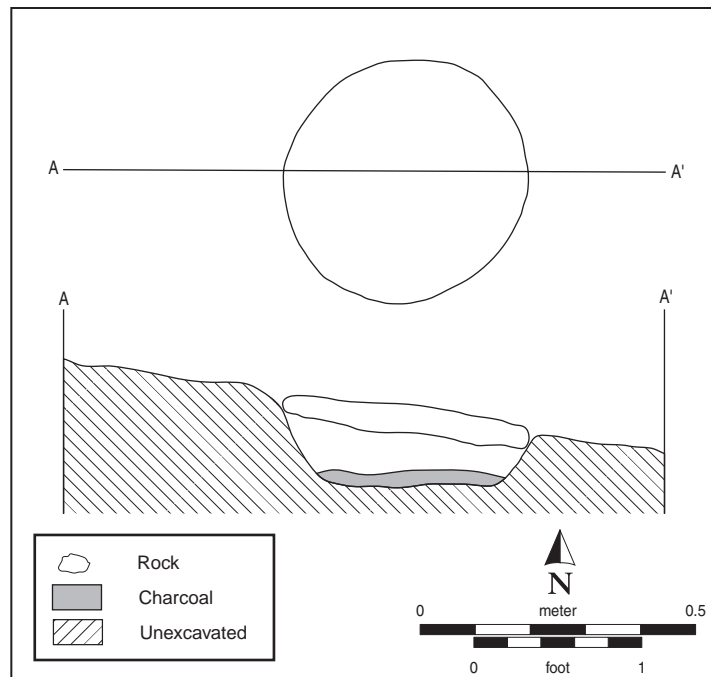


Figure 140. Plan view of hearth Feature 13 at the Crane site (410/2017).

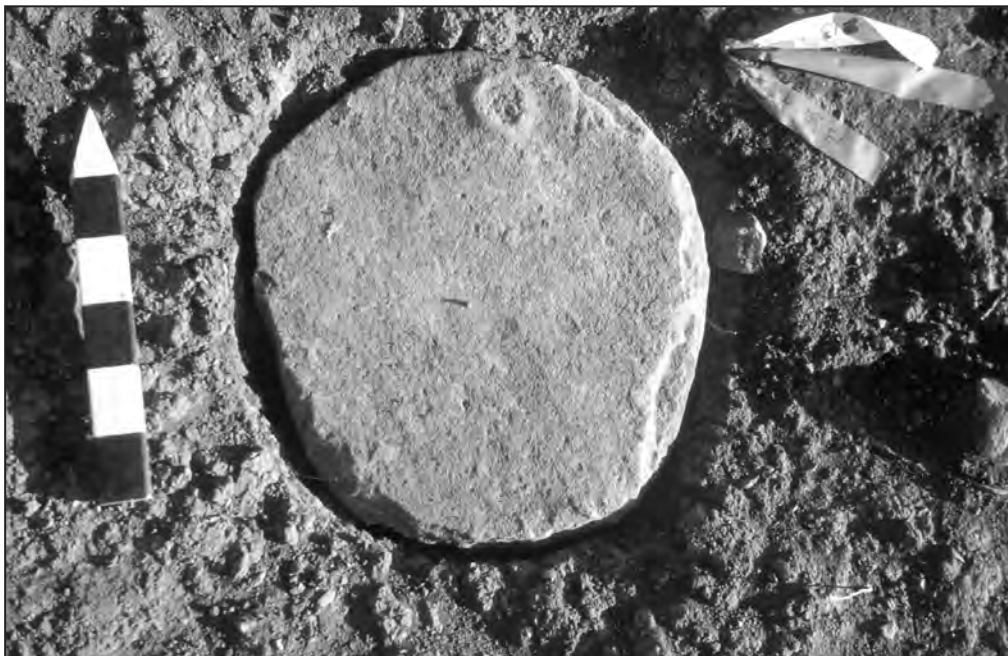


Figure 141. Photograph of the Feature 13 hearth at the Crane site (410/2017) before removing capstone.

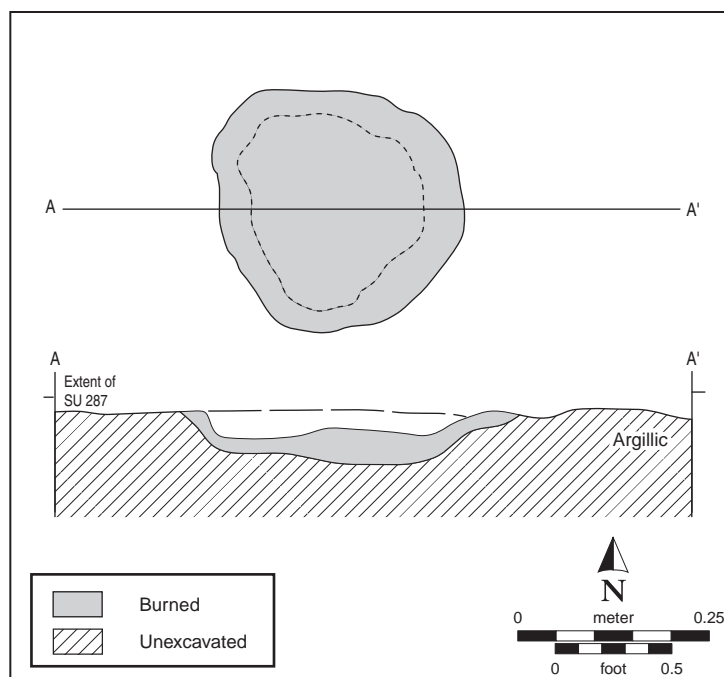


Figure 142. Cross section of hearth Feature 29 at the Crane site (410/2017).

that it was an extramural hearth. The remaining feature fill was collected en masse for flotation analysis.

Feature Fill

A charcoal-stained sandy clay loam filled this feature. No artifacts were encountered in this hearth.

Construction Details

The pit was dug into the sterile argillic paleosol that blanketed the portion of the site located atop the hill. It was adobe lined and its base was blackened. The sides of the pit appeared slightly oxidized.

Associated Artifacts

No artifacts were recovered from the feature.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

Three leporid specimens and one small squirrel- to rabbit-sized specimen were recovered from the fill of Feature 29.

Associated Features

This extramural hearth was situated between the Feature 4 structure and the Feature 30 pit house.

Feature 34

Location: This extramural hearth was situated approximately 2 m east of the Feature 2 structure.

Grid coordinates (m): N 8326.6, E 152.2

Date: possibly Archaic, based on stratigraphy

Elevation: This hearth was discovered 0.45 m below the modern ground surface.

Depth: 0.15 m

Dimensions: 0.42 m north-south by 0.25+ m east-west

Excavation Methods

This feature was discovered in the east wall of TR 471 (Figure 143). Excavation of the TR 471 removed an undetermined portion of the feature. The feature consisted of a plano-convex lens of charcoal-stained sandy clay loam. It was profiled, and the remaining feature fill was removed en masse for flotation analysis.

Feature Fill

A charcoal-stained sandy clay loam characterized the feature fill. No artifacts were encountered in this hearth.

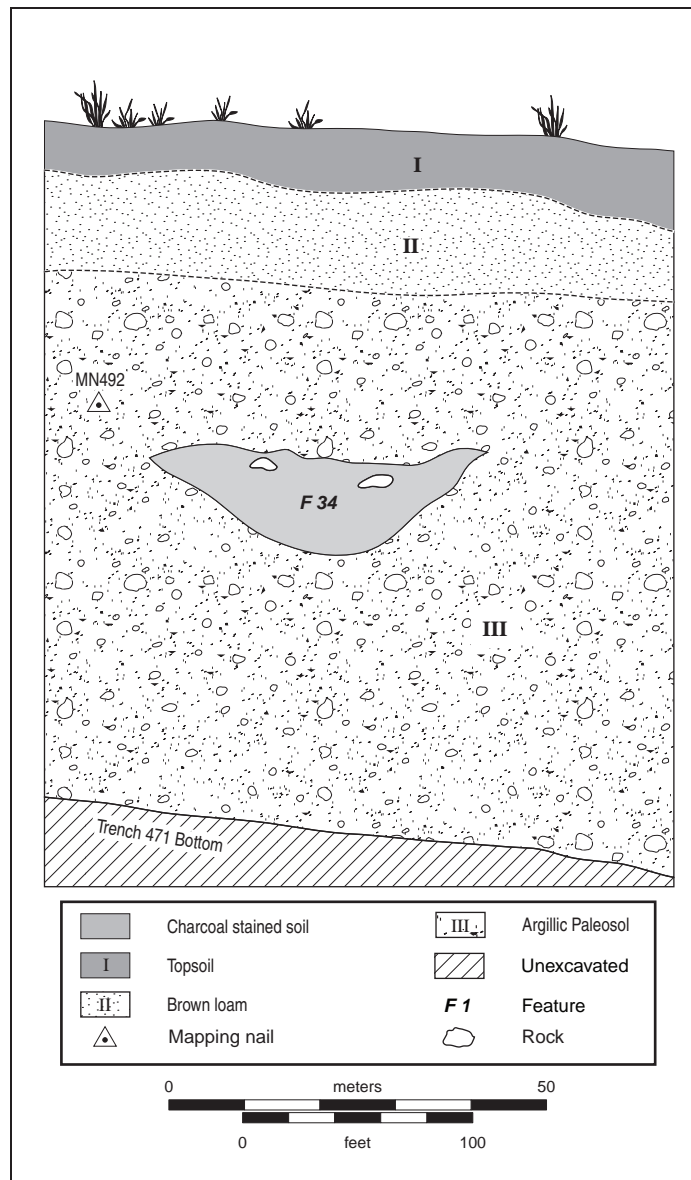


Figure 143. Hearth Feature 34 at the Crane site (410/2017).

Construction Details

The pit originated in the Stratum III argillic paleosol at a depth of 0.45 m below the modern ground surface. Its construction entailed the excavation of a small depression. No evidence of oxidation was observed, however, the hearth fill was uniformly charcoal-stained and black. Discrete charcoal fragments were not observed.

Associated Artifacts

No associated artifacts were recovered.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

No faunal remains were identified.

Associated Features

This extramural hearth was situated immediately east of the Feature 2 cobble-adobe-foundation structure. The

occupational surface associated with this feature was not identifiable in the clay-rich sediments that surrounded it. Given its location in the Stratum III paleosol, this feature is possibly Archaic period in age.

Roasting Pits

Feature 27

Location: This intrusive roasting pit was discovered near the center of the Feature 6 cobble-adobe-foundation structure.

Grid coordinates (m): N 8338.3, E 158.0

Date: Roosevelt phase, based on association with Feature 6

Elevation: The originating elevation of 787.0 m (2,581.9 feet) AMSL corresponds with the floor of the Feature 6 cobble-adobe-foundation structure.

Depth: 0.20 m

Dimensions: 0.60 m north–south by 0.80 m east–west

Excavation Methods

This feature was discovered while clearing the floor of the Feature 6 cobble-adobe-foundation structure and was initially identified as a fire-cracked rock concentration (Figure 144). The north and south halves were removed separately in single levels. The southern half was removed first and judgmentally sampled. This resulted in the exposure of a profile showing the feature fill. The northern half was then removed and screened. Removal of the feature fill resulted in the exposure of a shallow oval pit that was dug through the Feature 6 floor.

Feature Fill

Numerous fire-cracked rocks were observed in this feature, averaging 5–15 cm in diameter and surrounded by a charcoal-stained sandy loam. A few ceramic sherds and debitage specimens littered the feature fill. Numerous rootlets were present, and the fill was replete with carbonate filaments.

Construction Details

This feature was dug into the sterile argillic paleosol that blanketed the portion of the site located atop the hill. The pit was unlined and the base of the pit was blackened, whereas the sides of the pit appeared slightly oxidized. The pit was shallow and slightly concave in cross section.

Associated Artifacts

The artifact collection from Feature 27 consisted of two brown plain sherds.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

A single specimen classified as from a rabbit-sized animal was recovered.

Associated Features

This roasting feature cut through the floor of the Feature 6 structure, postdating the room's construction. It was the only feature encountered within this structure space.

Pits

Feature 28

Location: This intrusive trash-filled pit was discovered near the center of a possible cobble-adobe-foundation structure (Feature 26).

Grid coordinates (m): N 8331.8, E 155.5

Date: Roosevelt phase, based on ceramics and intrusion into Feature 6

Elevation: The originating elevation of 786.8 m (2,581.2 feet) AMSL corresponds with the floor of a possible structure, Feature 26.

Depth: 0.24 m

Dimensions: 1.60 m east–west by 1.20 m north–south

Excavation Methods

This feature was discovered in plan view during the excavation of a possible cobble-adobe-foundation structure, Feature 26 (see Figure 134). It rested near the center of this structure and appeared to intrude the floor. The pit walls were difficult to define given the clay-rich sediments. The pit originated at the upper surface of the argillic paleosol that blankets this portion of the site. The pit fill was excavated and screened in a single level. Because of the large number of partially reconstructible vessels in the area, we originally suspected that this was a burial pit. TP 393, a 2-by-2-m unit, was placed over the pit to determine if a burial was present.

Feature Fill

The pit fill was 20–27 cm deep and consisted of a reddish brown sandy clay loam that, unlike the surrounding sediments, contained numerous gravels and dispersed charcoal. The gravels were angular and 0.5–2 cm in diameter; the charcoal consisted of small flecks and fragments.

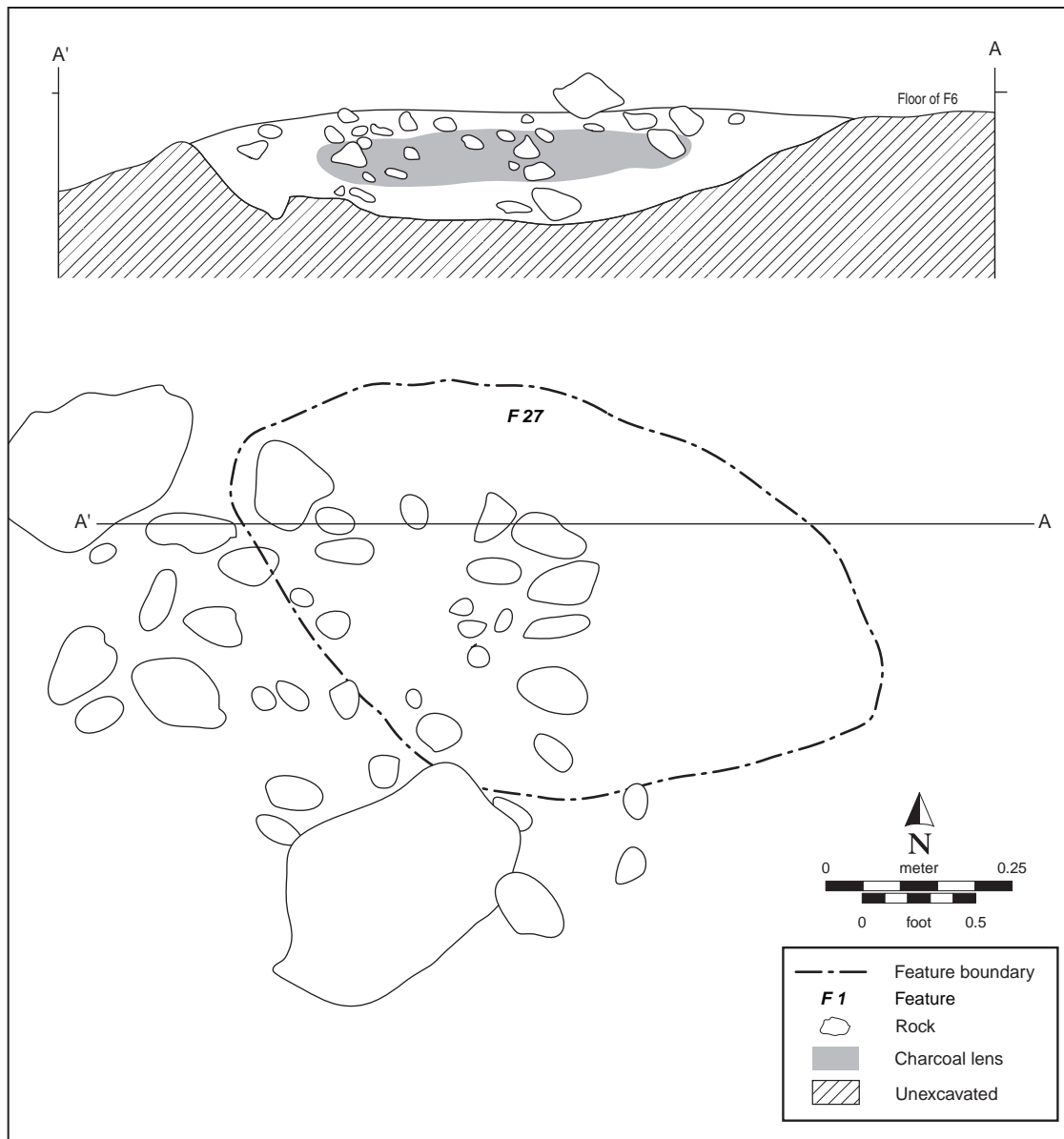


Figure 144. Roasting pit Feature 27 at the Crane site (410/2017).

Construction Details

This feature was dug below the floor of Feature 26 and into the sterile argillic paleosol that blanketed the portion of the site located atop the hill. The pit was unlined, shallow and slightly concave in cross section.

Associated Artifacts

A total of 264 ceramic sherds were recovered from the fill of Feature 28. Of these, 43 were classified as red plain and 97 as Salado Red Corrugated. The remaining sherds were

classified as either brown wares or not assigned to type. A fragment of 1 red plain bowl (V 212) was discovered near the western end of the feature and several other vessel fragments were found above and around the pit. Disk beads and 1 small *Glycymeris* pendant were also recovered (illustrated in Volume 2, Figure 54).

Botanical Remains

A flotation sample collected from Feature 28 contained juniper, mesquite, creosote bush charcoal, and a single charred cheno-am seed.

Faunal Remains

The faunal collection contained a single bone fragment identified as cottontail rabbit and two fragments classified as rabbit sized.

Associated Features

This trash-filled pit truncated the floor of a possible cobble-adobe-foundation structure (Feature 26). It was situated between the ADOT erosion-control ditch and the cobble-adobe-foundation wall that divided Features 2 and 4. It was the only feature encountered within this possible structure space.

Feature 35

Location: This possible burial pit was discovered 1 m north of the Feature 25 burial and was located on the southern site slope along TR 468.

Grid coordinates (m): N 8318.0, E 150.5

Originating elevation: 783.7 m (2,571.3 feet) AMSL

Depth: 0.36 m

Date: late Sedentary–early Classic

Dimensions: 0.82 by 0.51 m (estimated) with a maximum depth of 0.68 m

Excavation Methods

This pit was discovered in plan view during mechanical stripping of the southern site slope (Figure 145). It was initially defined as a small, roughly north–south-oriented, ovate burial pit. It had been truncated during the excavation of TR 468. The pit was not discernible in the east wall profile of TR 468 and was not discovered until the mechanical stripping of SU 487. This small pit was excavated and screened in one level. Excavation of this level resulted in the removal of 44 cm of sediment on average and the collection of ceramic sherds and a few flakes. Although it was initially believed to be a burial pit, no human remains or other evidence of an interment were observed. A small bench, however, was exposed.

Feature Fill

Sediments removed from the pit consisted of charcoal- and ash-stained sands and silts. These sediments were weakly indurated and enveloped a few artifacts. The fill contrasted sharply with the carbonate-rich, bedded silts and sands that surrounded the pit.

Construction Details

The pit was irregular and ovate in plan view. It was unlined and its long axis was aligned roughly north–south. A flat bench flanked the western side of the pit. This bench was

16 cm high and 25 cm wide, and the top of this bench sloped (2° – 5°) downward to the east. The eastern pit wall extended vertically 46 cm to the base of the pit, whereas the western pit was slightly sloped (87° – 88°) and merged with the upper surface of the bench.

This pit was originally believed to have been constructed for the burial of an infant or subadult individual. No cribbing, skeletal elements, or fragments, however, were encountered during the excavation. The fact that this small pit contained a bench suggests that it was constructed as a burial pit. It is possible that an infant had been buried in this pit but had decomposed completely. This is not surprising as the nearby adult skeletons were in very poor and incomplete condition.

Associated Artifacts

Sherds from two and possibly three different vessels representing Salado Red Corrugated and Salado Red types (PD 503) were exposed in the pit during mechanical stripping. No more than a small fragment of each vessel was represented. Four basalt flakes and a variety of ceramics were also recovered from the feature, including Brown corrugated, brown plain, indeterminate Black-on-white, red plain, and Wingfield Plain.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

No faunal remains were identified.

Associated Features

This pit was located approximately 1 m north of the Feature 25 burial. Two other burials were located nearby on the southern site slope.

Feature 37

Location: This extramural pit was discovered approximately 4 m southeast of the Feature 6 cobble-adobe-foundation structure.

Grid coordinates (m): N 8334.1, E 156.2

Date: Miami/Roosevelt phases, based on ceramics

Elevation: The originating elevation of 0.35 m below datum (mbd) corresponds with the surface of SU 508.

Depth: 0.25 m

Dimensions: 0.55 m oval

Excavation Methods

This feature was discovered in plan view during the mechanical stripping of SU 508. It consisted of a charcoal-stained

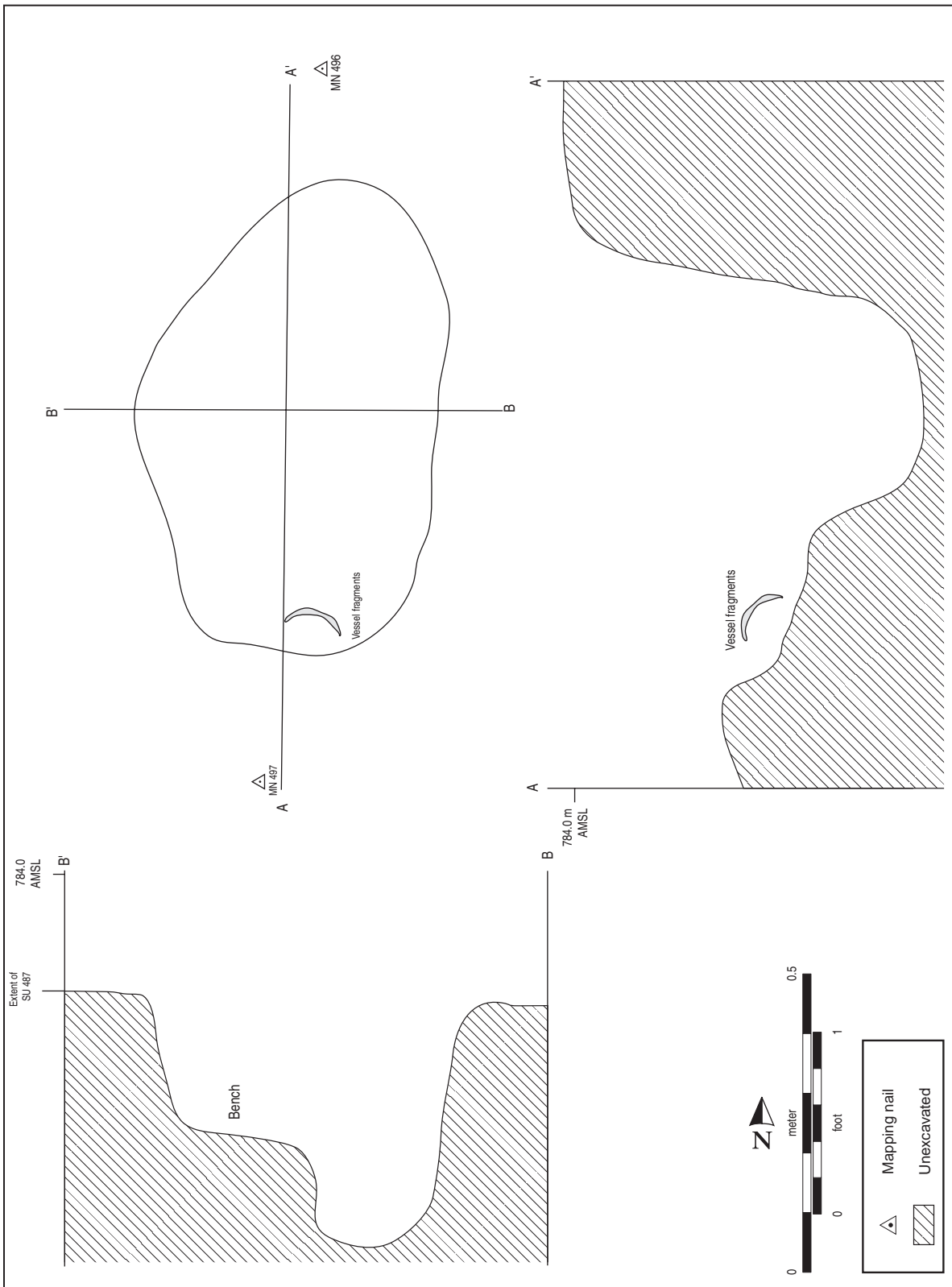


Figure 145. Pit Feature 35 at the Crane site (410/2017).

area that contained a few sherds of a Salado Red Corrugated vessel and several leporid bone fragments. This feature was excavated and judgmentally sampled in a single level. No fire-cracked rock was encountered.

Feature Fill

The feature fill consisted of a reddish brown sandy clay loam that contained numerous charcoal fragments. These charcoal fragments were 1–5 cm in diameter. Small (<2 cm) angular gravels and fine rootlets were also numerous.

Construction Details

This feature was dug into the sterile argillic paleosol that blanketed the portion of the site located atop the hill. The pit was unlined, and the base of the pit did not appear thermally altered. The pit was shallow and slightly concave in cross section.

Associated Artifacts

Two chert flakes and an obsidian flake were recovered from the fill of Feature 37.

Botanical Remains

No botanical remains were recovered.

Faunal Remains

A total of five unburnt bone fragments of a rabbit-sized animal were recovered from the feature.

Associated Features

This roasting feature cut through the floor of Feature 6. It was the only feature encountered within this structure space.

Other Features

Feature 17

Feature type: cobble feature

Function: unknown

Location: This cobble concentration was discovered at the opening of the entryway to the Feature 30 pit house.

Grid coordinates (m): N 8335.4, E 149.2

Date: Roosevelt phase, based on ceramics

Elevation: The originating elevation of 787.7 m (2,584.4 feet) AMSL corresponds to the upper surface of SU 287. The

surface that the cobbles rested upon was situated at an elevation of 787.6 m (2,584.1 feet) AMSL.

Dimensions: 1.65 m east–west by 1.10 m north–south

Excavation Methods

This feature was discovered in plan view during the mechanical stripping of SU 287 (Figure 146). It was initially identified as a cobble concentration. Controlled sampling of this feature began with the excavation of a 2-by-2-m control unit (TP 362). The feature was exposed in its entirety after the removal and screening of an average of 11 cm of sediment.

Feature Fill

The sediment surrounding the cobbles consisted of a reddish brown sandy clay loam that contained numerous gravels and artifacts. This sediment surrounded a three-quarter grooved axe, a schist knife, and several ceramic sherds and chert flakes. Three large roots represented the only observed disturbances.

Construction Details

This feature consisted of 14 river-rounded cobbles, 2 manos, and 1 basin metate fragment. These cobbles and artifacts were firmly embedded in the upper surface of the argillic paleosol. No evidence of adobe mortar was observed; however, the cobbles used to construct this feature were similar to those incorporated into the nearby granary pedestals (Features 24 and 31). This feature, like the granary pedestals, intruded the Feature 30 pit house. The embedded cobbles were inclined to the east (i.e., downhill), as if they were originally placed on end and upright but had subsequently collapsed downhill with erosion.

Associated Artifacts

A total of 41 sherds were recovered from the upper fill of the feature, which included one sherd of Pinto Polychrome. Seven lithic artifacts were recovered, including two hammer stones (PD 397), two schist knives (PDs 395 and 399), one basalt axe (PD 385), one granite metate fragment (PD 407), and one unmodified basalt flake (PD 396). One *Glycymeris* awl was also recovered from the fill (illustrated in Volume 2, Figure 54).

Botanical Remains

No botanical remains were recovered.

Faunal Remains

No faunal remains were identified.

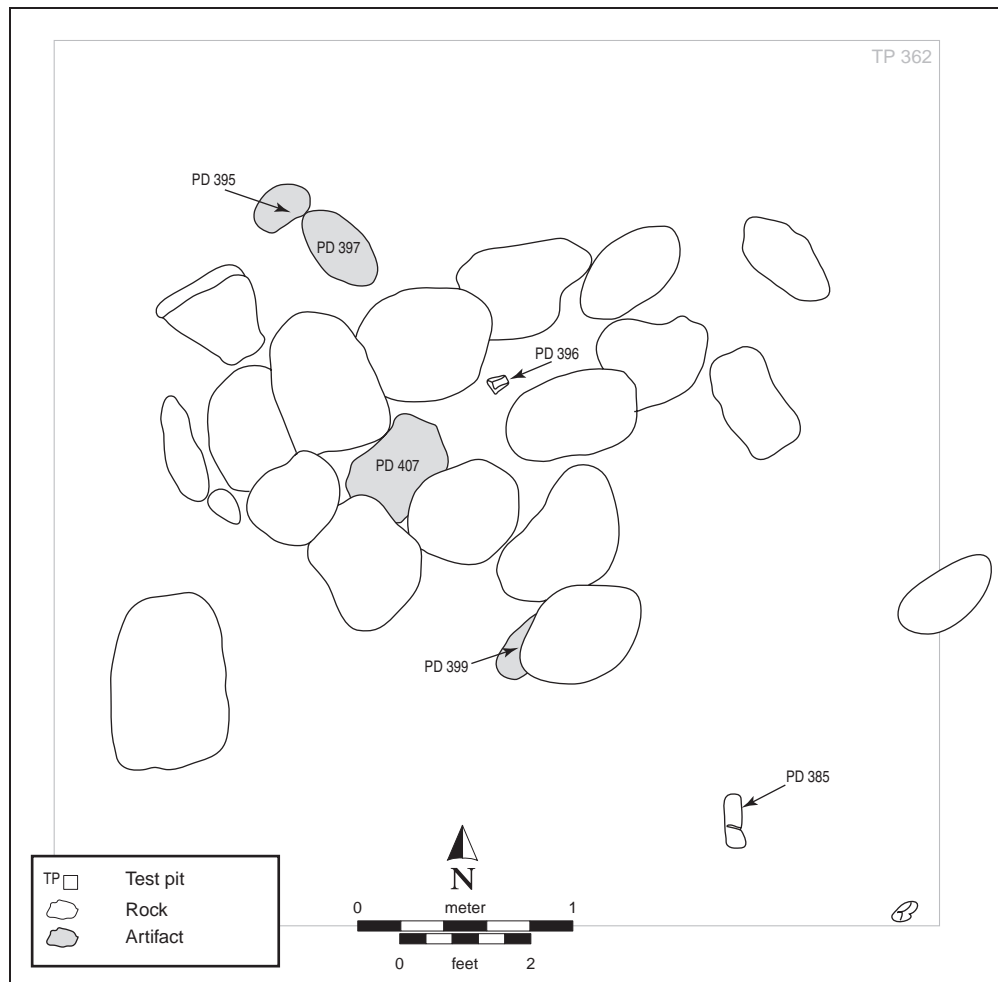


Figure 146. Cobble concentration Feature 17 at the Crane site (410/2017).

Associated Features

This feature was situated at the terminus of the Feature 30 entryway and was about 2 m south of the Feature 24 and 31 granary pedestals. It is most likely intrusive to the pit house and either associated with the use of the granaries or possibly representative of the intentional sealing of the Feature 30 pit house after abandonment.

Burials

Feature 21

Location: This burial was discovered in the western portion of the Feature 2 structure. It is one of two burials (see Feature 38) directly associated with architectural features at this site.

Grid coordinates (m): N 8327.6, E 151.2

Originating elevation: The originating elevation of 786.6 m (2,580.8 feet) AMSL corresponds with the floor of the Feature 2 structure.

Burial type: Type 4 (plain) inhumation

Date: Roosevelt phase, based on ceramics

Burial pit dimensions: 2.19 by 1.00 and 0.23 m+ deep

Burial pit orientation: 15.09°

Burial orientation: 17.82°

Sex: female

Age: 41–50 years

Excavation Methods

Feature 21 was discovered during the excavation of the Feature 2 structure (Figure 147). It was initially defined as a truncation of the structure floor located along the western structure wall (Feature 5). Exposure of Feature 2 began with the excavation and judgmental sampling of this area and resulted in the removal of 3 cm of sediment (Stratum IIa)

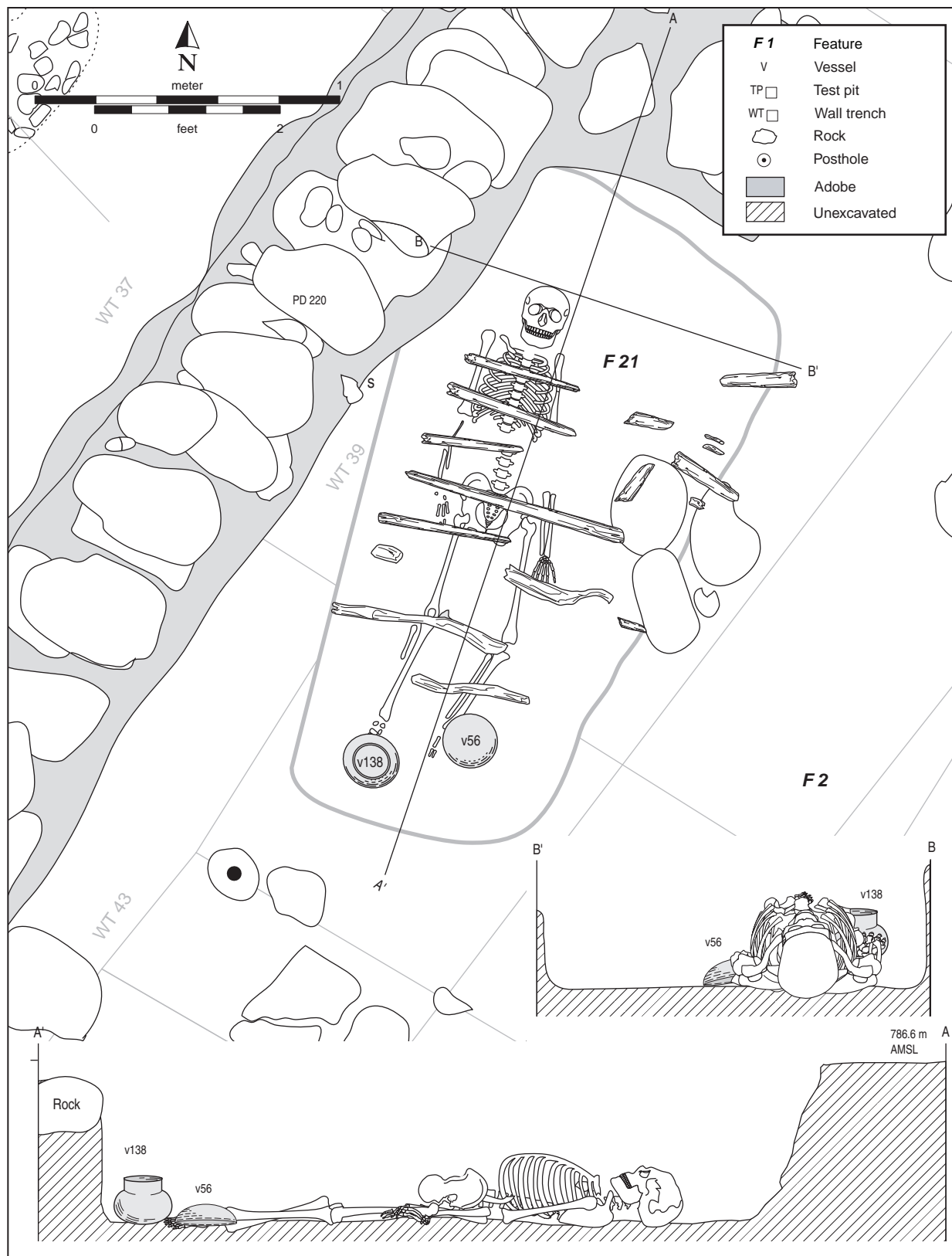


Figure 147. Burial Feature 21 at the Crane site (410/2017).

on average. These activities led to the exposure of the collapsed and poorly preserved wood burial cribbing. Photographs were then taken and a detailed plan view of the cribbing was drawn. A sample of the wood cribbing was collected for species identification. The excavation and screening of the second level resulted in the removal of 18 cm of sediment (Stratum IIa) on average, and the exposure of an adult inhumation and two mortuary vessels. The fill was screened through 1/8-inch-mesh hardware cloth.

Burial Pit

Given the clay rich sediments, the burial pit was difficult to define. It was rectangular with rounded corners. The pit expanded in width to the north and its sides sloped slightly (2°–3°) inward before merging with the flat burial pit floor. The burial cribbing was poorly preserved and consisted of a single course of wooden branches. Seventeen cribbing elements were preserved. These elements were oriented east–west and were 2–4 cm thick and 20–73 cm long. The cribbing had collapsed near the center of the burial pit, and small cribbing fragments rested immediately atop the skeleton. The in-place cribbing elements were situated 18–20 cm above the skeleton.

Burial Fill

Two strata were discovered. Stratum IIa (burial fill) was approximately 3 cm deep. This stratum was characterized by a mixture of argillic peds and adobe plaster fragments from the floor of the Feature 21 structure that rested atop the collapsed wooden-burial-cribbing elements. These sediments surrounded numerous granules and gravels that were 0.5–2 cm in diameter. Many fine rootlets were also present. Several ceramic sherds were the only artifacts encountered in this stratum. Stratum IIb was approximately 18 cm deep and consisted of those sediments situated between the remains of the wood cribbing and the burial pit floor. These sediments consisted of an argillic sandy clay loam that contained dispersed charcoal flecks and few artifacts. No rodent disturbances were noted, but numerous fine to medium-sized rootlets were encountered throughout the burial fill.

Burial Treatment

This individual was interred in an extended, supine position. The cranium was oriented to the north and faced to the left; the feet were oriented to the south. The right leg was fully extended, but the left leg was slightly flexed. A Pinto Polychrome bowl (V 56) was placed along the lateral side of the left foot, and a small red plain jar (V 138) was placed along the right foot (Table 13). An intact, triangular, white chert arrow point was collected from the screen during the excavation

of Level 2 (Stratum IIb). This arrowhead was likely placed in the burial at the time of the interment.

Associated Features

This burial is intrusive to Feature 2 and was placed alongside the western wall (Feature 5) of this structure.

Feature 25

Location: This burial was discovered on the southern site slope in the west wall of HT 260. It is one of three burials discovered in this portion of the site.

Grid coordinates (m): N 8316.6, E 151.0

Originating elevation: 783.9 m (2,571.9 feet) AMSL

Burial type: Type 2 (central chamber) inhumation

Date: Roosevelt phase, based on ceramics

Burial pit dimensions: 1.97 by 0.79 m and 0.73 m deep

Burial pit orientation: 101.04°

Burial orientation: 102.57°

Sex: female

Age: 40+ years

Excavation Methods

Feature 25 was discovered in the west wall of HT 260. The feature was later exposed in the eastern wall of backhoe-excavated TR 472. It was initially defined as a large extramural pit in the profile of the hand trench (Figure 148). Removal of a 4-liter flotation sample from this pit profile resulted in the exposure of a red plain jar. It was decided at this time that the feature was likely a burial. Excavators removed 85 cm of overburden to expose the pit clearly in plan view. The upper fill was then excavated until wood cribbing fragments were encountered resting on a bench. This was accomplished by removing and judgmentally sampling an average of 30 cm of overburden and pit fill as a single level. The wood cribbing and burial fill below it were excavated as a second level and screened through 1/8-inch hardware cloth. Removal of this second level resulted in the complete exposure of the burial pit, the remains of a human skeleton, and associated artifacts. A plan view and cross sections were then drawn. Photographs were also taken.

Burial Pit

The pit was clearly defined. It was subrectangular with rounded corners. A slightly sloping bench that was 30 cm wide and 14 cm tall surrounded the southern and western ends of the pit. This bench corresponded with a natural, carbonate-rich lens. The southern side of the pit was concave in cross section, whereas the northern side of the pit was nearly vertical. The burial cribbing was poorly preserved

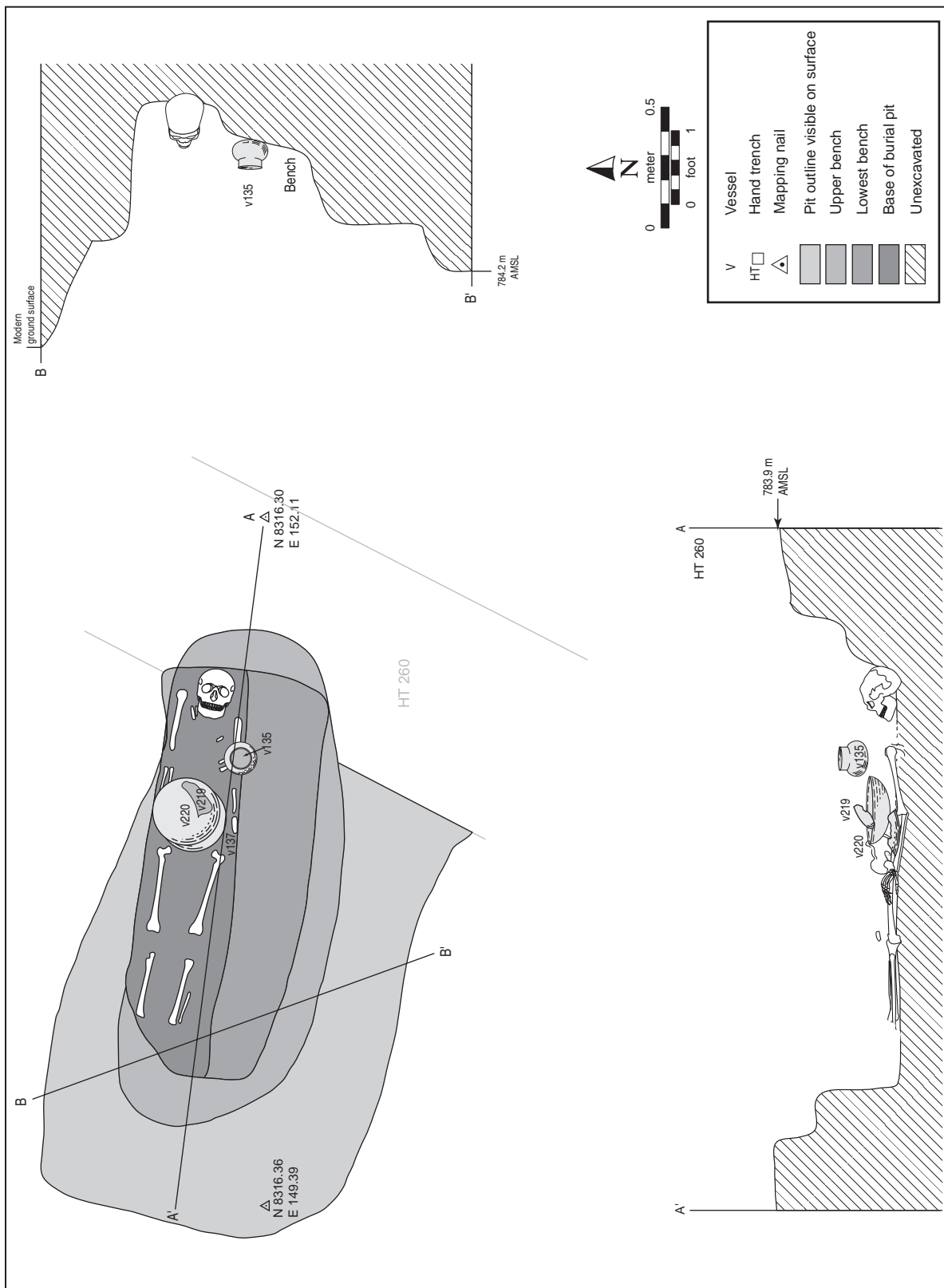


Figure 148. Burial Feature 25 at the Crane site (410/2017).

Table 13. Mortuary Artifacts from the Crane Site (410/2017)

Feature No.	ID	Artifact
21	V 56	Pinto Polychrome bowl
	V 138	red plain jar
25	V 135	red plain jar
	V 137	red plain bowl
	V 219	brown plain bowl
	V 220	red plain bowl
33	V 22	Tularosa or Pinedale Black-on-white bowl
	V 57	Salado Red Corrugated bowl
	V 136	Salado Red Corrugated bowl
	V 142	Brown corrugated jar
36	PD 504	Salado Red Corrugated sherd
38	V 11	Salado Red Corrugated bowl
	V 47	Salado Red Corrugated jar
	V 116	Salado Red Corrugated bowl
	V 117	red plain bowl
	V 118	red plain bowl
	V 119	red plain bowl
	V 120	red plain bowl
	V 121	red plain bowl
	V 122	Salado Red Corrugated bowl
	V 123	red plain bowl
	V 124	Salado Red Corrugated (indeterminate form)
	V 125	Salado Red Corrugated jar
	V 128	Salado Red Corrugated jar
	V 129	red plain bowl
	V 130	Salado Red Corrugated jar
	V 131	red plain bowl
	V 132	Salado Red Corrugated jar
	V 194	Salado Red Corrugated eccentric
	PD 561	<i>Glycymeris gigantean</i> shell bracelet
	PD 562	shaft straightener
PD 563	shaft straightener	
PD 564	<i>Glycymeris</i> sp. shell bead	
PD 565	<i>Glycymeris</i> sp. shell bead	
PD 566	painted wood staff	
PD 567	painted wood staff	
PD 568	bone awl	

Table 13. Mortuary Artifacts from the Crane Site (410/2017) (continued)

Feature No.	ID	Artifact
	PD 569	bone awl
	PD 570	bone awl tip
	PD 575	bone awl
	PD 576	bone earring/pendant
39	V 133	red plain jar
	V 134	red plain bowl
	PD 560	turquoise pendant
40	V 126	red plain bowl
	V 127	Brown corrugated vessel (indeterminate form)
	V 195	red plain bowl
	V 196	red plain vessel (indeterminate form) ^a

Note: The vessel photographs are located in Volume 2, Appendix A.3.

Key: PD = provenience designation; V = vessel number.

^a From upper fill.

and consisted of small wood fragments that were dispersed throughout the pit. In places, cribbing fragments rested directly atop the skeleton.

Burial Fill

The fill consisted of a single stratum (Stratum II) divided into two units. The upper fill, Stratum IIa, contained numerous artifacts and was ash laden and charcoal stained. It contrasted sharply with the surrounding carbonate lenses and sterile colluvium. Few fine rootlets were observed, but extensive rodent disturbance was noted. Small skeletal fragments were mixed throughout the lower fill (Stratum IIb), as were several of the phalanges. Rodent burrows were also observed in the western end of the burial pit.

Burial Treatment

This individual was interred in an extended supine position. The cranium, oriented to the east, was propped upright against the edge of the burial pit and faced the feet to the west. Both arms and legs were fully extended and parallel. Four funerary vessels were recovered (see Table 13). Three nested bowls rested atop the pelvis. These included a brown plain bowl (V 219) within a red plain bowl (V 220), both nested within a red plain bowl (V 137). A red plain jar (V 135) was discovered atop the bench and the left humerus.

Associated Features

This burial was situated approximately 1 m directly west of another adult inhumation, Feature 36, and 0.7 m south of Feature 35.

Feature 33

Location: This burial was discovered on the southern site slope in TR 470. It is one of three burials discovered in this portion of the site.

Grid coordinates (m): N 8316.8, E 155.1

Originating elevation: 783.6 m (2,570.9 feet) AMSL

Burial type: Type 3 (side chamber) inhumation

Date: Roosevelt phase, based on ceramics

Burial pit dimensions: 1.85 by 1.06 m and 1.91 m deep

Burial pit orientation: 93.63°

Burial orientation: 96.89°

Sex: female

Age: 40+ years

Excavation Methods

Feature 33 was discovered within TR 470 (Figure 149). It was initially defined in profile and subsequently exposed mechanically in plan view during mechanical stripping. The first level removed from this feature was mechanically excavated. Excavation of this level resulted in the removal of 70 cm of colluvial overburden that covered the burial pit

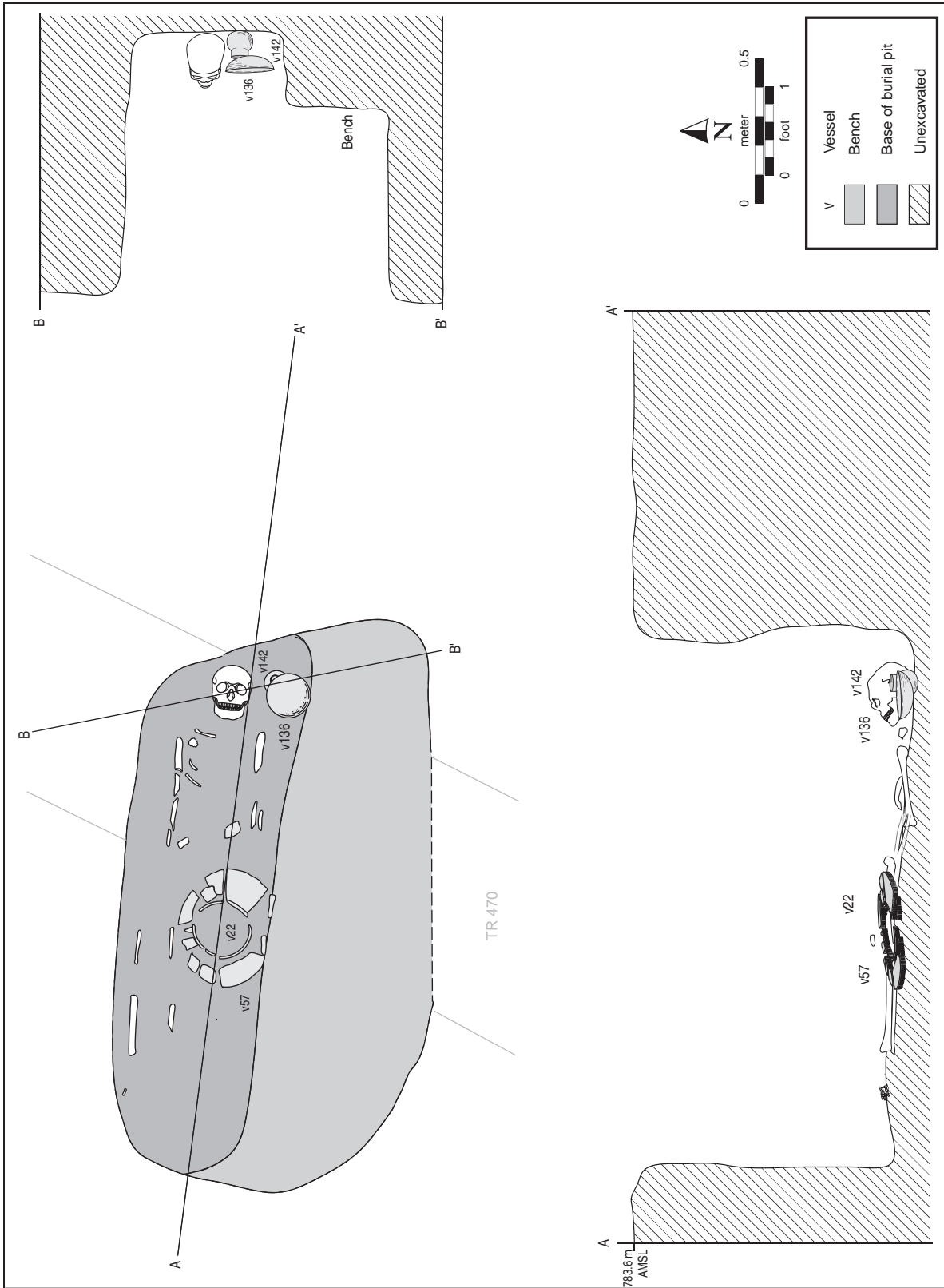


Figure 149. Burial Feature 33 at the Crane site (410/2017).

and 80 cm of fill. A polychrome sherd and several plain ware sherds and debitage specimens were judgmentally sampled from the fill during the mechanical stripping. Mechanical excavation was terminated about 20 cm above the bench. The remaining burial fill (approximately 40 cm deep), Level 2, was removed by hand and screened through 1/8-inch hardware cloth. Completion of Level 2 resulted in the exposure of the poorly preserved skeleton and funerary items. A detailed plan view was then drawn and cross sections were drafted. Photographs were also taken. Pollen samples were collected from beneath the mortuary vessels, and the sediment filling these vessels was collected for flotation analysis.

Burial Pit

The burial pit was clearly defined in plan view. It was rectangular with rounded corners in plan view and its long axis was oriented roughly east–west. Small wood cribbing fragments were found throughout the lower burial fill, Level 2, and resting atop the skeleton. This burial pit possessed vertical walls and a bench. The bench was located along the southern side of the pit and was 24 cm high and 46 cm wide. The skeleton and funerary items were located below the bench in a chamber located along the northern portion of the pit. This burial chamber was 52 cm wide and 1.84 m long.

Burial Fill

Sediments filling the burial pit consisted of an ash- and charcoal-laden sandy loam. The burial fill was weakly indurated and contrasted sharply with the surrounding carbonate-rich sediments. Ceramic sherds, ground stone fragments, and debitage were relatively abundant in the upper burial fill, but these artifacts were not interpreted as forming a part of the burial treatment. The lower fill was similar but also contained numerous cribbing fragments and a few human bone fragments. Many rodent burrows were also found in the lower fill and may have contributed to the mixing of cribbing and bone fragments.

Burial Treatment

This individual was interred in an extended, supine position. The cranium faced upward and was oriented to the east; the legs pointed to the west. The skeleton was poorly preserved. Both arms and legs were fully extended and parallel. Four funerary vessels were recovered (see Table 13). A Salado Red Corrugated bowl (V 136) rested along the left side of the cranium. Under this was placed a small Brown corrugated jar (V 142). A large Salado Red Corrugated bowl (V 57) rested atop the pelvis, and a Tularosa or Pinedale Black-on-white bowl (V 22) rested inside of it. Ochre covered a portion of the right tibia.

Associated Features

This burial was the easternmost of three burials discovered on the southern site slope. It was situated approximately 1.5 m northeast of the Feature 36 burial.

Feature 36

Location: This burial was discovered on the southern site slope during mechanical stripping.

Grid coordinates (m): N 8315.6, E 153.3

Originating elevation: 783.4 m (2,570.3 feet) AMSL

Burial type: Type 3 (side chamber) inhumation

Date: Roosevelt phase, based on ceramics

Burial pit dimensions: 1.64 by 0.52 m and approximately 0.80 m deep

Burial pit orientation: 106.42°

Burial orientation: 104.65°

Sex: indeterminate

Age: adult dwarf (discussed in Volume 2, Chapter 8)

Excavation Methods

Feature 36 was discovered in plan view after the mechanical stripping of SU 487 (Figure 150). The pit was difficult to define, and it was necessary to strip approximately 70 cm of the upper pit fill mechanically to define the pit. The remaining 10 cm of fill was removed by hand in a single level and screened through 1/8-inch hardware cloth. This resulted in the exposure of a poorly preserved adult skeleton and a large plain ware sherd.

Burial Pit

The upper 70 cm of the burial pit were difficult to define, whereas the lowermost 10 cm of the pit were distinct. The pit was rectangular with rounded corners, and a flat bench possibly existed along its southern wall. This bench was perhaps 30 cm wide and between 10 and 15 cm tall. This bench corresponded with a natural carbonate-rich lens of silts and sands. Evidence of cribbing was not observed.

Burial Fill

The fill surrounding the burial consisted of a weakly indurated, brown sandy loam. These sediments surrounded many colluvial gravels and a few fragments of dispersed charcoal. Seven small plain ware sherds were gathered during the screening of this sediment. A few fine rootlets were observed, but extensive rodent disturbance was noted—particularly in the eastern end of the pit. Several small skeletal fragments were mixed throughout the lower burial fill.

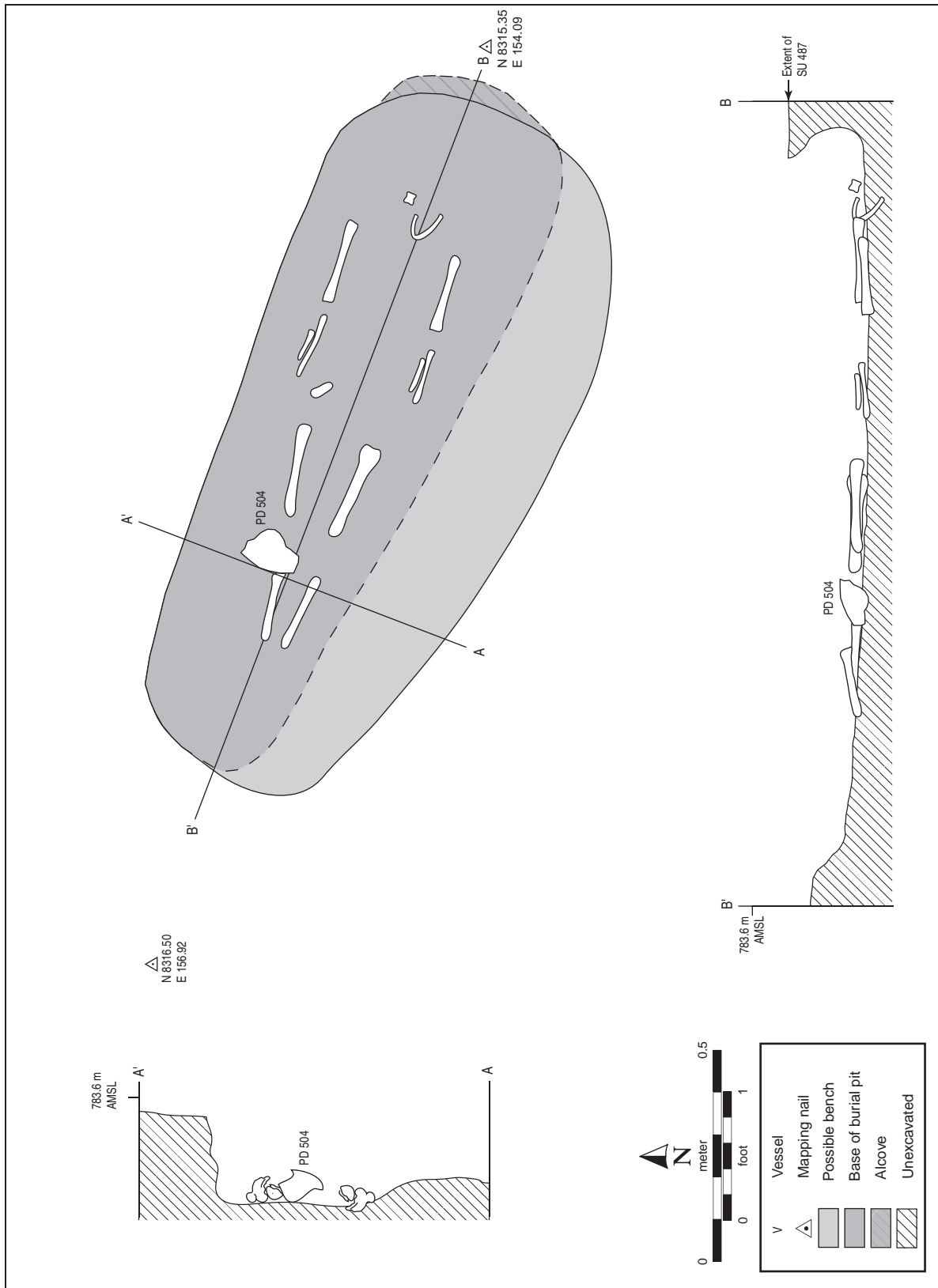


Figure 150. Burial Feature 36 at the Crane site (410/2017).

Burial Treatment

This individual was interred in an extended, supine position. The individual was oriented with the head to the east and the feet to the west. Several small fragments were all that remained of the cranium. The poorly preserved arms and legs were fully extended and parallel. No foot or hand bones were recovered. Similarly, the only axial elements observed included several small rib fragments. The estimated stature of this individual was 4 feet 4 inches–4 feet 7 inches, the stature of a 9–13 year old child, but the dentition and robust muscle attachments suggested an adult. A Salado Red Corrugated sherd (PD 504) rested atop the right knee. This sherd represented the only recovered funerary object.

Associated Features

This burial was situated approximately 80 cm southwest of the Feature 36 burial. It is one of three burials discovered on the southern site slope.

Feature 38

Location: This burial was discovered atop the hill amid the cobble-adobe-foundation architecture. It was situated in the Feature 4 structure.

Grid coordinates (m): N 8331.4, E 149.6

Originating elevation: The originating elevation of 786.5 m (2,580.2 feet) AMSL corresponds to the floor of the Feature 4 structure.

Burial type: Type 2 (central chamber) inhumation

Date: Roosevelt phase, based on ceramics

Burial pit dimensions: 1.92 by 1.01 m and approximately 0.80 m deep

Burial pit orientation: 104.54°

Burial orientation: 105.07°

Sex: male

Age: 25–30 years

Excavation Methods

Feature 38 (Figure 151) was discovered in plan view after mechanical stripping. It appeared as a rectangular carbonate stain within the argillic soil that surrounds the feature and blankets the hilltop. Mechanical stripping of this feature continued until a piece of wooden burial cribbing was exposed. The upper fill (Level 1) was excavated with a backhoe down to the top of the cribbing; this fill was judgmentally sampled. At this point the burial pit was easily defined and the cribbing was completely exposed and mapped. The cribbing was remarkably well preserved, but the central portion had collapsed into the inner chamber. Several samples of the cribbing were also collected for species identification. The lower fill (Level 2) extended from

the cribbing down to the actual burial and was manually excavated and screened through ¼-inch hardware cloth. The cribbing was then removed and the funerary items and skeleton were exposed. All of the remaining fill (Level 3) was also excavated by hand and screened through ¼-inch hardware cloth.

Burial Pit

The burial pit was clearly defined. It was rectangular with rounded corners and a central burial chamber. The upper 1.30 m of the pit walls were vertical and met a flat bench that extended all the way around the pit. This bench was 15–18 cm wide and 48 cm tall on average. The bench served as the support for the north–south-oriented cribbing planks. Originally, these cribbing planks spanned the inner burial chamber, although many cribbing planks had collapsed into the chamber even though they were not decayed appreciably. The individual cribbing planks were 85–95 cm long and 3–5 cm in diameter. Ten east–west-oriented cribbing planks represented the remains of a second course that were perpendicular to and rested atop the better-preserved and lower north–south-oriented cribbing planks.

Burial Fill

The lower fill of the pit consisted of a mixture of sandy clay loam and carbonate-laden sandy loam peds. These sediments surrounded many colluvial gravels but few fragments of dispersed charcoal. The lowermost 3–5 cm of the burial fill consisted of moderately sorted and weakly indurated sands. These sands were not present in the pit-wall profiles and perhaps represented sediments deposited around the interment prior to the placement of the funerary items and cribbing. The cribbing rested at an average of 55 cm above the skeleton. A side-notched arrow point was recovered during the screening of the burial fill. Few fine rootlets were observed and no evidence of rodent disturbance was noted.

Burial Treatment

This individual was interred in an extended, supine position. The individual was oriented with his head to the east facing upward and his feet to the west. The skeleton was poorly preserved. His legs and right arm were full extended, but the left hand rested atop the pelvis. The only axial elements observed included small rib fragments. This burial contained the greatest quantity and diversity of funerary items encountered at this site. Eighteen funerary vessels, many of which were crushed when the cribbing collapsed, were recovered (see Table 13). Two Salado Red Corrugated jars (V 128 and V 132) rested above the cranium. The remaining vessels rested directly atop the skeleton. A red plain bowl (V 123)

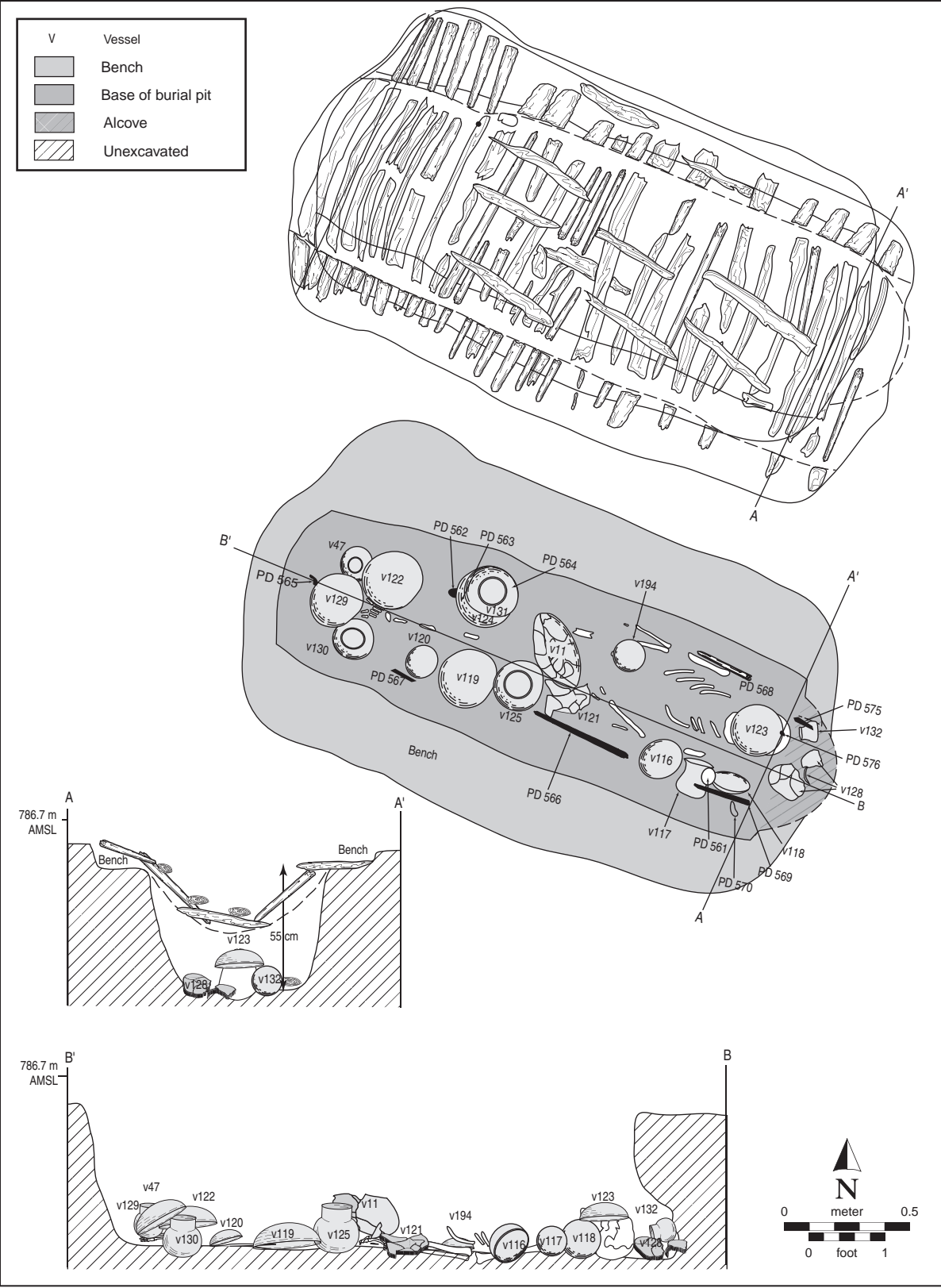


Figure 151. Burial Feature 38 at the Crane site (410/2017).

was placed over the individual's chest and face. Two red plain bowls (V 117 and V 118) and a Salado Red Corrugated bowl (V 116) rested atop the left arm. A Salado Red effigy vessel resembling a turtle (V 194) was discovered near the individual's lower right arm. The pelvis was covered by a red plain bowl (V 121), a Salado Red Corrugated bowl (V 11), and a Salado Red Corrugated jar (V 125). Two shell beads (PD 544) were discovered under a red plain bowl (V131). The individual's legs were almost entirely covered by ceramic vessels. Two red plain bowls (V 119 and V 120) had been placed above the left leg, and two red ware vessels were placed immediately north of the right leg (V 124 and V 131).

Two stone shaft straighteners (PDs 562 and 563) and a shell bead (PD 564) were discovered beneath V 124. A cluster of four vessels were placed around the feet, including two Salado Red Corrugated jars (V 130 and V 47), a Salado Red Corrugated bowl (V 122), and a red plain bowl (V 129). A shell bead (PD 565) was also recovered near V 129.

Two painted wood fragments that perhaps represented a single arrow shaft or staff were also discovered. One rested along the lateral side of the left arm and innominate bone (PD 566). It was 38 cm long and 2–3 cm in diameter. The second painted wood artifact (PD 567) was found along the lateral side of the left tibia and was approximately 10 cm long and 2–3 cm in diameter. A large and fragmented metapodial bone awl (PD 569) and bone awl tip (PD 570) rested along the left humerus. Another large and fragmented metapodial bone awl was situated along the right humerus (PD 568). A worked bone fragment (PD 575) was discovered atop the right shoulder next to the cranium. A *Glycymeris gigantean* shell bracelet (PD 561) was discovered along the remains of the left humerus. A small bone pendant (PD 576) was found on the man's forehead.

Associated Features

This burial was intrusive to the northwest corner of the Feature 4 structure. It is one of two burials that were discovered within architectural features (see also Feature 21) and four burials located on top of the hill.

Feature 39

Location: This burial was discovered on the hilltop and in the inferred courtyard area. It was situated between the Feature 4 and Feature 6 structures.

Grid coordinates (m): N 8334.1, E 153.4

Originating elevation: 786.4 m (2,580.2 feet) AMSL

Burial type: Type 4 (plain) inhumation

Date: Roosevelt phase, based on ceramics

Burial pit dimensions: 1.77 by 0.60 m and approximately 1.25 m deep

Burial pit orientation: 107.68°

Burial orientation: 114.20°

Sex: female

Age: 45–60 years

Excavation Methods

This burial was discovered during the mechanical stripping below the architecture on the summit of the ridge (Figure 152). The burial pit was difficult to define, and it was discovered when two funerary vessels were exposed during mechanical stripping. The upper 1.0–1.25 m of the burial pit had been removed during the mechanical stripping; the spoil dirt was judgmentally sampled for artifacts. The remaining burial fill was hand excavated in a single level and screened through 1/8-inch hardware cloth. This resulted in the exposure of the skeleton and two funerary vessels. A detailed plan view map and a lateral and longitudinal cross section were then drawn.

Burial Pit

It was not possible to define this pit until much of the fill had been removed. It was rectangular with rounded corners and expanded slightly to the east. No benches or niches were discovered, and the pit was a simple shaft with a flat bottom and nearly vertical walls. The pit was originally excavated into the sterile argillic paleosol that blankets the hilltop.

Burial Fill

Most of the burial fill consisted of a mixture of a sterile sandy clay loam and carbonate-laden silts that were difficult to distinguish from the surrounding matrix until the argillic paleosol was encountered. The soil filling the bottom of the pit was charcoal and ash stained in places.

Burial Treatment

This woman was interred in the extended supine position. The skeleton was poorly preserved. The head was oriented to the east. Ochre covered the pelvis, vertebrae, and upper thighs. Yellow pigment, perhaps limonite, was also observed on the upper thighs. A red plain jar (V 133) was located atop the right shoulder and a red plain bowl (V 134) was located atop the left shoulder (see Table 13). A turquoise pendant (PD 560) was discovered lying on the left forearm.

Associated Features

This burial was located between the Feature 4 and the Feature 6 structures. It occupied the inferred courtyard area associated with these rooms.

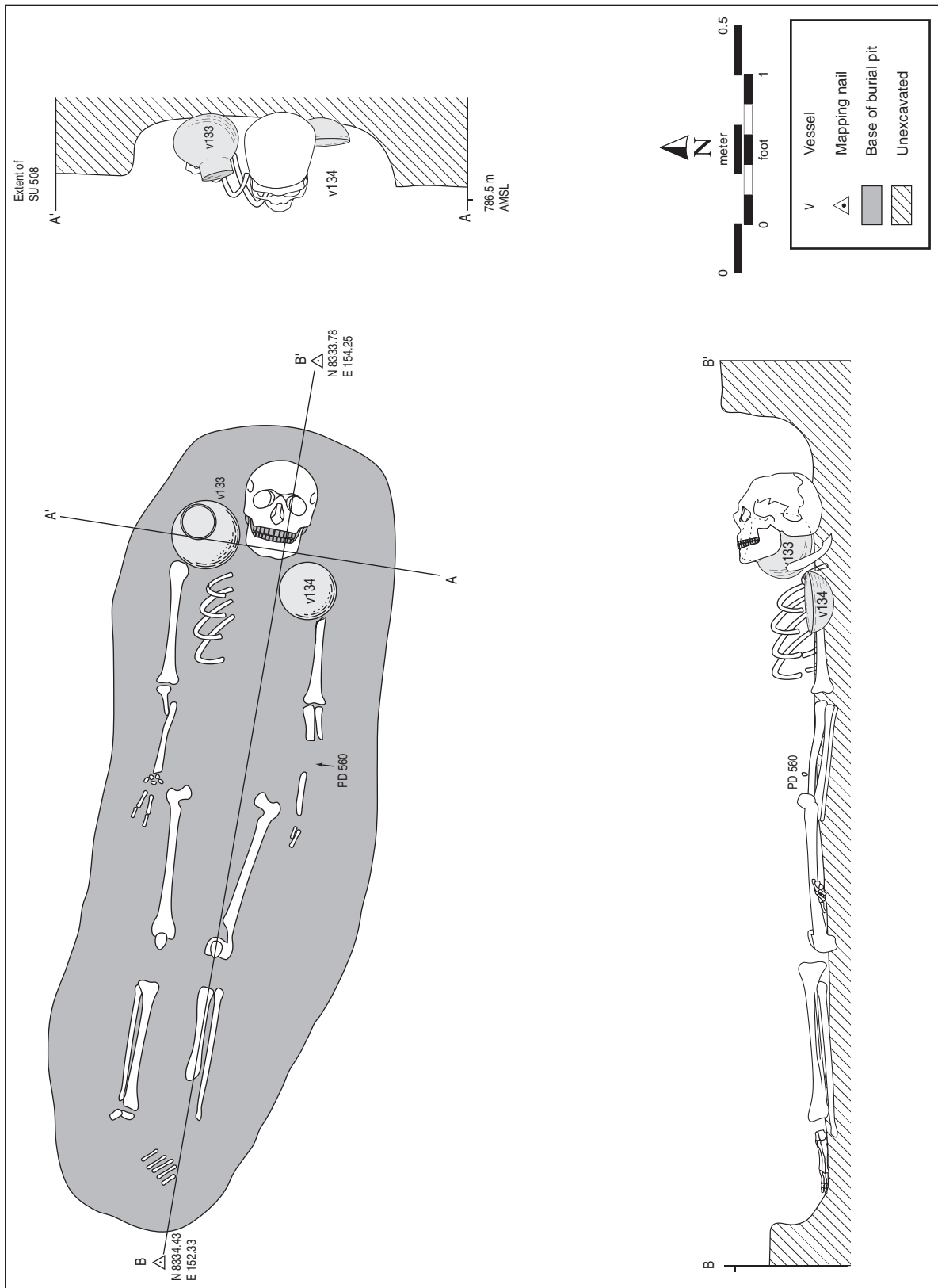


Figure 152. Burial Feature 39 at the Crane site (410/2017).

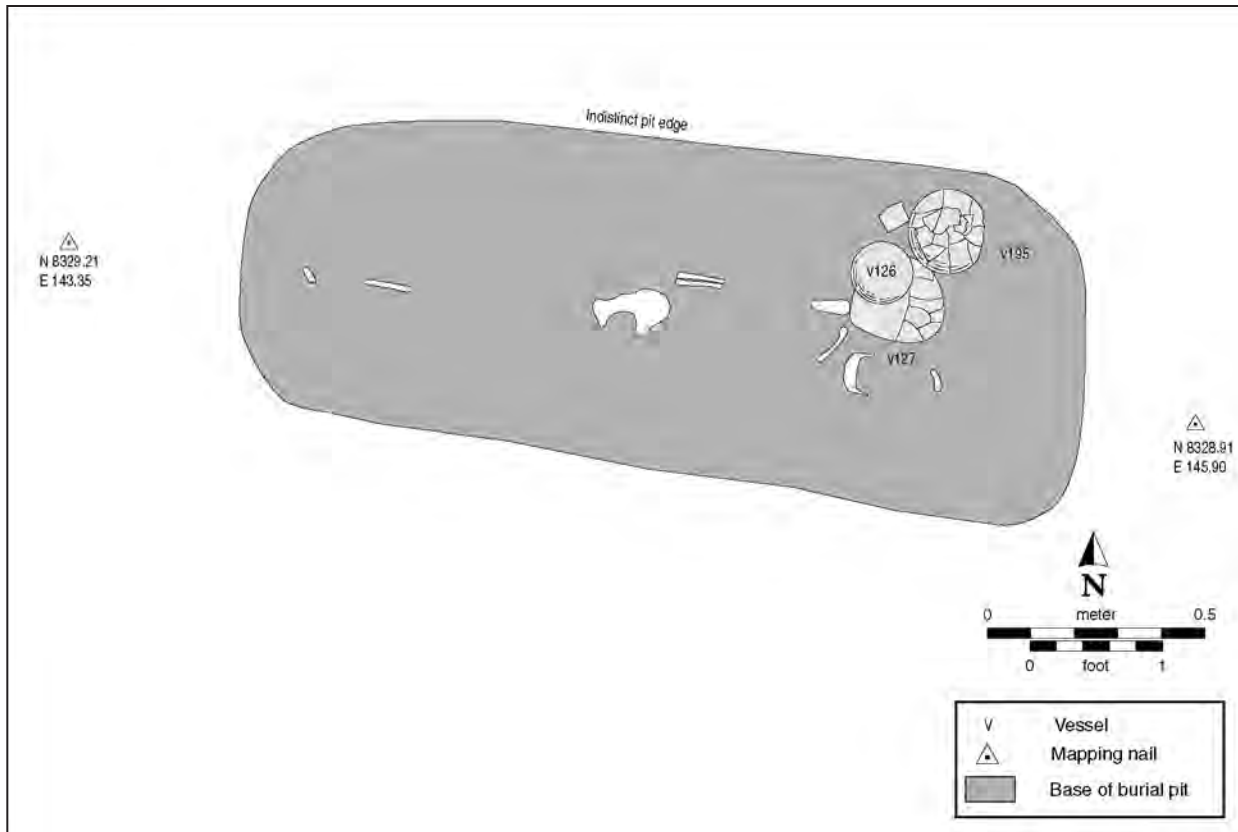


Figure 153. Burial Feature 40 at the Crane site (410/2017).

Feature 40

Location: This burial was located near the western edge of the ROW immediately southwest of Feature 4.

Grid coordinates (m): N 8329.0, E 144.7

Originating elevation: 786.4 m (2,580.1 feet) AMSL

Burial type: Type 4 (plain) inhumation

Date: Roosevelt phase, based on ceramics

Burial pit dimensions: 1.92 by 0.72 m and approximately 0.80 m deep

Burial pit orientation: 91.92°

Burial orientation: 94.83°

Sex: female

Age: 35–40 years

Excavation Methods

This burial was discovered during the mechanical stripping of SU 508 (Figure 153). It was located immediately south of the Feature 4 structure at the edge of the hill. The burial was not visible until the funerary vessels and portions of the poorly preserved skeleton were mechanically exposed. Mechanical excavation around this feature was then halted. Excavation of this feature continued with the hand excavation and screening of a single level. Removal of this level

resulted in the exposure of a poorly preserved skeleton and three funerary vessels. Only 8 cm of burial fill remained and little of the burial pit remained. A detailed plan map was then drawn of the remainder of the pit.

Burial Pit

The burial pit was poorly preserved. Most of the burial pit was removed mechanically before the pit could be defined. The base of the burial pit was rectangular with rounded corners. No evidence of a bench, cribbing, or niche was observed.

Burial Fill

A fine sandy clay loam characterized the burial fill. This sediment surrounded numerous subrounded gravels ranging between 1 and 4 cm in diameter. This fill was difficult to distinguish from the matrix that surrounded the pit.

Burial Treatment

The individual was buried in an extended, supine position. The head was oriented to the east and the feet to the west. The inverted base fragment of a Brown obliterated corru-

gated vessel of indeterminate form (V 127) rested along the left side of the cranium (see Table 13). A red plain bowl (V 126) rested atop the corrugated vessel base. Another red plain bowl (V 195) was situated immediately to the north and was adjacent to both these vessels. Fragments of a fourth vessel, a red plain of indeterminate form (V 196), was recovered from the upper fill and not mapped.

Associated Features

This burial was situated 1 m southwest of the Feature 4 structure. It was one of four burials located atop the hill and associated with the architectural features.

Site Summary

The Crane site contained the remains of a badly disturbed hamlet occupied primarily in the early Classic period. The investigated portion of the site contained one small compound with at least four rooms, a fifth isolated room, a courtyard containing two granary pedestals, and a large midden area. An ADOT erosion-control ditch destroyed most of the eastern part of the compound, leaving only an isolated wall segment, and erosion on the slope of the hill destroyed the southern part. What appeared to be the remains of a second compound were observed to the west of the ROW. An earlier late pre-Classic or Miami occupational phase, represented by a single pit house and refuse in the midden, was also observed. It is likely that a significant portion of the site was removed during the construction of the existing SR 188. It is also probable that buried features, including habitation structures, continued beyond the western limit of the excavation as defined by the ROW. This, coupled with the extensive erosion and postabandonment disturbances to the compound, affects its interpretive potential, especially in addressing questions of demography. Because of this disturbance, it was impossible to determine room size and function. Feature 6 was the only complete room; it was of average size, about 15 m², but did not contain a hearth. None of the fragmentary rooms contained hearths, either. That said, the investigated sample of the Crane site provides important information on the transition from the pre-Classic–Classic period in Tonto Basin.

Two distinct kinds of architectural features were identified at the Crane site: a subrectangular pit house and aboveground rectilinear structures with cobble-adobe foundations. Given

the available chronometric data, the temporal relationship between these architectural styles is somewhat equivocal. The ceramic collections recovered from the two classes of architectural features expresses considerable similarity, especially in terms of temporally sensitive types. A single radiocarbon date from the Feature 30 pit house provided little information for addressing this problem, indicating that an early Classic period abandonment for the structure was possible. This, taken in concert with the absence of stratigraphic superpositioning between the two structure types, indicates that a degree of occupational overlap may have existed. Granary pedestals that were undoubtedly associated with the later occupation, however, intruded the pit house. A cobble pile placed over the entrance to the pit house may have been used to seal the structure prior to its demolition. Thus, it is more likely that the pit house predated the compound.

The macrobotanical and pollen evidence attest to the importance of maize in the economy of the inhabitants of the Crane site. Evidence of cotton use, whether as a fiber or food, was also recovered from several contexts. But what is perhaps of greater interest is the relative paucity of evidence of wild-plant exploitation, including the use of agave. Although this may simply be an artifact of our sample, the relative absence of nonbotanical indicators of agave use, such as tabular schist tools, suggests that agave played a less significant role in the economy, especially when compared with contemporary sites in the central and southern portions of Tonto Basin.

Seven human burials were recovered, in addition to a possible infant burial pit (Feature 35). Four of these burials were on top of the hill, two of which were intrusive to rooms, and three of these burials and the possible pit were along the southern slope of the main habitation area. The temporal relationship between the burial features and the excavated architectural features is somewhat equivocal. Do the burials represent the resident population, or did the site serve as a burial area independent of its use as a habitation? Based on the accompanying mortuary ceramics, all of the excavated burials date to post A.D. 1150, with one, Feature 21, postdating A.D. 1275. This assessment is based on the recovery of a Pinto Polychrome bowl from Feature 21. These data suggest that the burials are contemporary with the occupation of the cobble-adobe-foundation structures, and perhaps the pit house as well. Two of the burials, Features 21 and 38, appear to have used existing walls in defining the burial pit, suggesting they postdate the occupation of these structures. The burials located along the southern slope of the ridge provide little data on their temporal association with the habitation area.

The Globe-Payson Highway (AZ U:3:246/1381)

Matt C. Bischoff, Matthew Sterner, and Holly Warner

The historic Globe-Payson Highway, designated as AZ U:3:246/1381, is also referred to as Forest Highway (FH) 9. Portions of the historic road are located within the current ADOT ROW. In order to document this road, SRI archaeologists conducted further field investigations and archival research in 1999. In this chapter, we outline our methods and the previous research conducted on the Globe-Payson Highway. We develop a historic context of the area, highlighting four interrelated themes: exploration, settlement, transportation, and communication. Next, we discuss the results of our archival research, including the four alignments of FH 9 and the modern highways that replaced it. Lastly, we present the results of our field investigations of the road.

The project area is located at a strategic physiographic point in the region that separates upper and lower Tonto Basin. The separation is just below Jakes Corner by a large schist outcrop that projects east into the basin from the Mazatzal Mountains, almost touching the western flanks of the Sierra Ancha (Wilson 1959). This outcrop pinches off the Tonto Creek floodplain, forcing the river through a narrow gorge and constraining transportation and communication between upper and lower Tonto Basin.

Methods

Investigative methods included field investigations of the segments of FH 9 in the project area and archival research that was conducted to develop a historic context for the road. Preliminary archival research on the Globe-Payson Highway was started by SRI historian Matt C. Bischoff in October 1999. Cultural resource management reports were collected from the Supervisor's Office of the TNF in Phoenix, Arizona, as well as from the SRI library in Tucson. These secondary

sources provided a contextual history for the TNF as a whole, as well as leads for additional research on historical-period roads in the forest. Mr. Michael Sullivan (TNF), in particular, provided a great deal of important information on FH 9 and transportation systems in general. Other secondary sources (e.g., community histories) were collected from a variety of locations, such as the University of Arizona Main Library in Tucson, the main and special collections libraries at Arizona State University, the Rim Country Museum in Payson, Arizona, and the Payson Public Library. A number of primary materials were collected at the Arizona State Museum Library, especially copies of several maps of the TNF region from the early twentieth century. The Rim Country Museum provided a variety of primary and secondary documents, including maps, reports, and newspaper articles, and the Payson Public Library provided additional secondary sources.

Additional research was conducted at the Supervisor's Office of the TNF. Records consulted there consisted of maps, forest management plans, contract reports, and manuscripts. Timber sale atlases were particularly helpful, providing a variety of information. Manuscript collections from the Arizona Highway Department and ADOT were reviewed at the Arizona Department of Library, Archives, and Public Records (LADPR). Published reports were also examined in the State Documents section of the LADPR. These reports primarily consisted of state highway department documents produced between 1927 and 1974. ROW maps, plans, and as-built plans were reviewed and copied at the Engineering and Plans section of ADOT in Phoenix. The Program and Project Management Office of ADOT was also consulted for relevant information.

Finally, Mr. Bischoff visited the project area for a reconnaissance, and drove portions of FH 9 in October 1999. Intensive field investigation of Globe-Payson Highway was conducted on November 9 and 10, 1999. Old road segments were examined, recorded, and compared to other road

segments of similar age in the area. This field investigation helped to illuminate the various phases of road construction, as well as to determine extant road segments. Although the entire project ROW was surveyed for remnants of the historic road, the only areas of potential concern are between stations 215+00 and 330+00. No historical-period artifacts were identified or collected during the survey, and no subsurface testing was conducted.

Previous Work

Portions of FH 9 have been recorded during other cultural resource management projects in the general area. The most-extensive work involved a total of 35 extant segments of FH 9 that were recorded between Rye and Payson by Archaeological Research Services, Inc. (Bilsbarrow et al. 1999). At that time, the road was found to be potentially eligible for listing in the NRHP under Criteria a and d. FH 9 served as an important transportation link in western Gila County, particularly for the town of Payson, as well as for other smaller communities, such as Rye. Because of modern development and highway construction, FH 9 exists only as a discontinuous resource today.

A History of the Globe-Payson Highway (AZ U:3:246/1381)

In this section, we develop a historic context for FH 9, placing the road within the history of the local area, as well as the wider, central Arizona region. The historic context is broken into four sections: (1) a discussion of early exploration and settlement in the project area, (2) the history of transportation and communication in the project area, (3) the various alignments of FH 9, and (4) the overshadowing of FH 9 by modern roads and highways. The historical development of FH 9 can be traced in Figures 154–165.

Early Exploration and Settlement

Owing to the rugged nature of the surrounding topography, Euroamerican exploration and settlement of Tonto Basin began relatively late in the historical period. Spanish explorers in the sixteenth and seventeenth centuries bypassed the region entirely; they followed other major drainages such as the Verde and Gila Rivers. American fur trappers also

tended to bypass the area, following rivers in search of beaver (Croxen 1926:1; James 1991:36–37). For these reasons, little was written or known about the area prior to the mid-nineteenth century.

Prior to the 1860s, Tonto Basin had been a place of refuge for several Native American groups, as the inaccessibility of the area provided them with a place to escape. However, mining strikes in the Bradshaw Mountains in the 1860s, as well as in the mountains surrounding Globe, heightened interest in Tonto Basin. King S. Woolsey launched an expedition up Tonto Creek in 1864. Although he was unsuccessful in subduing the local tribes, his expedition reached as far north as the future site of the town of Strawberry (James 1991:37).

Following the Civil War, the U.S. Army in Arizona began to pursue the Apache and Yavapai bands in earnest. Fort McDowell was established along the lower Verde River as a permanent post in 1865, under the command of Lieutenant-Colonel Bennett (McClintock 1916:153). A road was built over the Mazatzal Mountains into Tonto Basin, connecting Fort McDowell with its satellite, Camp Reno, which was founded in 1867 (LeCount 1976:3–4; Jensen 1999). The military hoped that Camp Reno would provide them with a base in the heart of enemy territory. However, it was abandoned in 1870 because of the poor condition of the roads and its vulnerability to attack (Schreier 1992).

The Department of Arizona was created in 1870, and the military district fell under the command of General George Stoneman (McClintock 1916:148). Despite some successful infrastructure projects in the region, such as the construction of Reno Road, contemporaries criticized General Stoneman for his ineffective management of the local tribes (Farish 1918). For this reason, he was replaced in the following year by General George Crook (McClintock 1916:218). From his headquarters at Camp Verde, General Crook launched many attacks against the Tonto Apache. General Crook also commissioned the construction of a trail, later known as the Crook Trail (Bowman 1978; Ciolek-Torrello 1981; Jacobs 1980), along the Mogollon Rim to facilitate the movement of his troops between Forts Verde and Apache. By 1870, the last major Apache threat was Del Shay, a Tonto Apache chief living in the Sierra Ancha area (Ciolek-Torrello 1999:71). He rejected the Army's offers of a peace treaty and continued to resist White encroachment. Although the exact date and cause of death remain controversial, it seems that Del Shay was killed sometime in 1874 (McClintock 1916:227; Peace 1981:8). The attack upon Skeleton Cave, a rockshelter located on the north escarpment of the Salt River Canyon at the foot of the Mazatzal Mountains, was the bloodiest and most decisive action of Crook's campaigns (Bourke 1971; Ferg and Tessman 1998). There, on December 28, 1872, almost 100 Yavapai and Apache men, women,

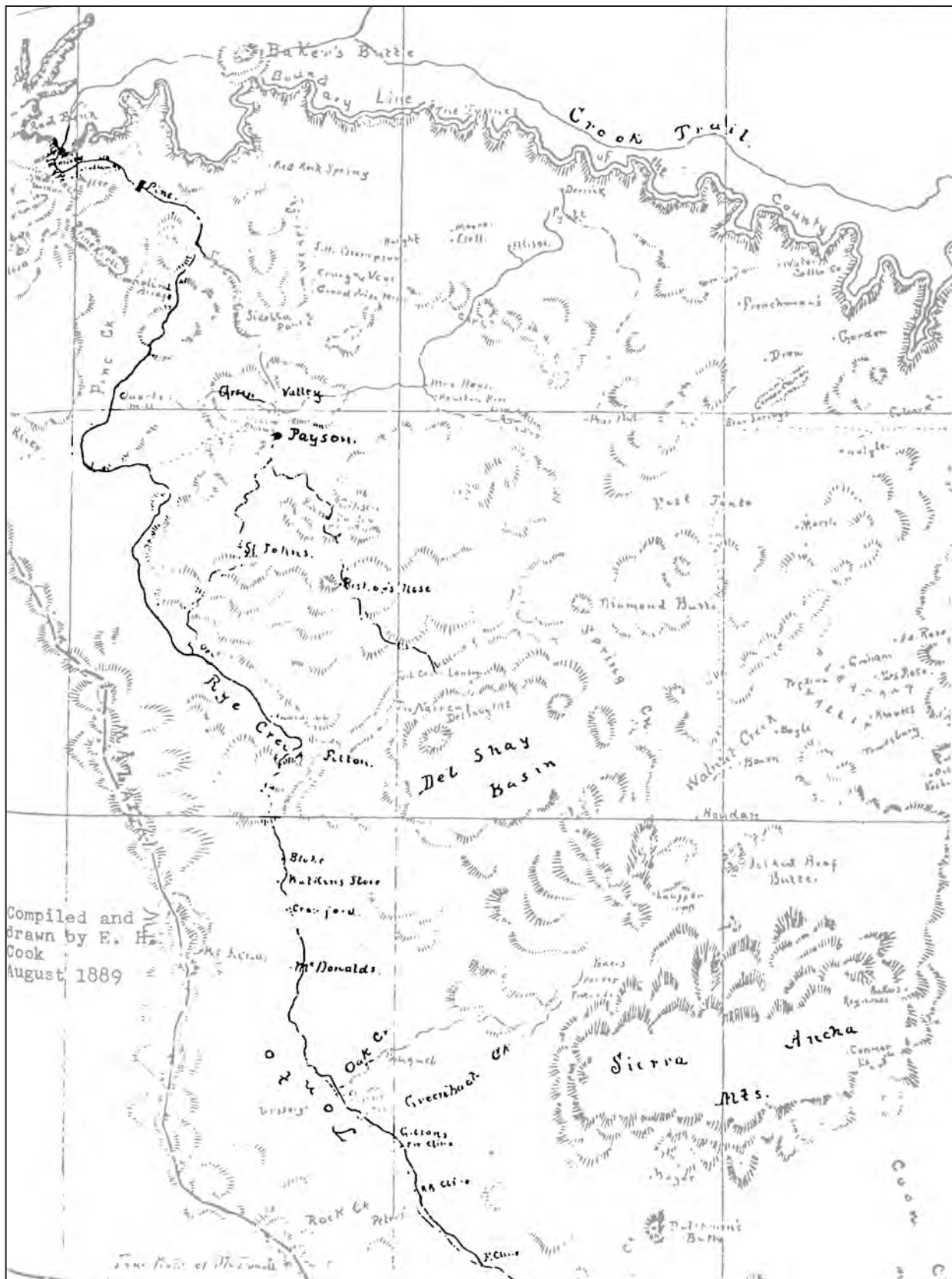


Figure 154. Map of Tonto Basin and surrounding areas, 1889. Compiled and drawn by E. H. Cook. Note road south of Payson, along Rye Creek, and through Tonto Basin (Murphy 1991).

and children were attacked and killed by elements of three companies of the Fifth U.S. Cavalry under the command of Major Brown, as well as an unknown number of mule packers and civilians and over 100 Native American scouts. Bourke (1971:209) writes that it was this action and another at Turret Butte (near Cordes Junction) that “broke the spirit of the Apache nation.”

During the 1870s, most of the remaining Apache and Yavapai were placed on reservations and within a short time all of central Arizona was opened to White settlement (James 1991:37–38). Civilian traders, packers, and drivers who had accompanied the earlier military expeditions now returned to mine, ranch, and settle in the area. Several prospecting expeditions were launched during this period. One of the first mineral claims in Tonto Basin was filed in 1879 by Al Sieber, who served as a scout in the Army (LeCount 1976:6). Sieber continued to prospect and filed additional claims in the area in 1895, 1896, and 1899. He worked these claims until 1907, when he was killed while working with Apache laborers during the construction of a road for the Roosevelt Dam. Fred Pranty took over these claims in later years (LeCount 1976:6). Prospecting activity continued during the early 1900s and claims were scattered throughout Tonto Basin. Copper mining was particularly popular along Gun and Hardt Creeks, and by 1906, nearly 200 claims had been filed in the area (LeCount 1976:7). This area became known as the Tonto-Pittsburg Mine, after it was purchased by the Tonto River Copper Company (Ciolek-Torrello 1999:73).

Although mining played an important role in the early history of the region, it was the livestock industry that became the most prominent. Roads, originally constructed for military purposes, now provided access to new ranges and pasturage. Soon after the pacification of the Apache, ranchers began bringing small herds into the region (Croxen 1989:243). The first ranchers were from California and Oregon; later they came from Texas and New Mexico. David Harer was perhaps the first of the stockmen to come to Tonto Basin (LeCount 1976:12; Northern Gila County Historical Society 1984:130). Lured by reports of the rich and unspoiled pastures of the region, Harer ventured into Greenback Valley, on the western slopes of the Sierra Ancha, in 1872 and lived peacefully with the Apache for several months (Zachariae 1991:16). He went back to California in 1873 but returned the next year with his family and brother-in-law, Florence C. Packard, to settle Greenback Valley (LeCount 1976:75). In 1876, Christian Cline drove 1,600 cattle from California into Tonto, thereby establishing the first large-scale ranch in Tonto Basin (LeCount 1976:43). In the late 1870s, William Burch and William McDonald drove 50 head of cattle from the Walapai Mountains to Tonto Basin and then to the Green Valley area. Many of these early ranchers homesteaded small

plots of land along Tonto Creek. Markets for their cattle included mining settlements in the surrounding areas, as well as military posts throughout the region.

Payson Area

The area around Payson was once known as Green Valley, Big Valley, and Long Valley, although the first name was the most popular (Northern Gila County Historical Society 1984:30). Established in 1876, the town of Payson provided supplies and food to the smaller mining communities in the area, such as Marysville and the Golden Waif Mine (Murphy 1991:16). Union Park, as Payson was originally known, had a population of only 40 when it was first surveyed in 1882.

Mormon settlement in the Payson region soon followed, including a small, short-lived town at the confluence of City Creek and the East Verde River, called Mazatzal City. Also in the late 1870s, a small group of Mormons settled for a short time on the East Verde River, approximately 16 km (10 miles) west of present-day Payson. The community was called the East Verde Settlement and was abandoned in 1882 when the inhabitants moved to Pine (Shoger 1975:16). Other Mormon communities were established in the 1880s at Milk Point Ranch (James 1991:38) and Gisela along upper Tonto Creek. Burch and McDonald brought the first sawmill to the region, hauling it from Maricopa to Payson in 1880 (Croxen 1926:4).

Gisela

Gisela is located 16 km (10 miles) south of Payson. It was settled by Mormons in 1880, and most of the early settlers were cattle ranchers (Peace 1981:15). The Mormons were responsible for many improvements to the area, including the construction of Felton Ditch and the Gisela schoolhouse (Ciolek-Torrello 1999:83). Despite the departure of the Mormons in 1890, Gisela continued to attract new settlers and ranchers, including the Booth, Neal, Hardt, Holder, and Conway families (Peace 1981). John Holder was responsible for bringing goats to Gisela and greatly expanding goat ranching along Tonto Creek (Northern Gila County Historical Society 1984:134; Peace 1981). Many of the families that were based in Gisela owned homesteads and ranches farther south, near Jakes Corner and the CCP area.

Rye Creek

The settlement of Rye was located at a ford crossing Rye Creek. During the Pleasant Valley War, Rye was considered neutral territory by both sides of the feud (Stebbins 1987:55). A post office was set up there in 1884, but it was discontinued in 1907 (Granger 1960:114). Sam Haught, Jr., was perhaps Rye's most prominent citizen in its early days. Sam

Haight, Jr., originally settled on Weber Creek near Payson, moving with his family to Rye Creek in 1890. During his tenure at Rye, he became a cattle baron with an estimated 10,000 head of cattle, 1,000 horses, and a range that extended from Rye to Sunflower on the west slopes of the Mazatzal Mountains. In 1905, he was elected to the Territorial Legislature as the lone representative of Gila County. He was also the postmaster, owner of the general store, rancher, and miner (Northern Gila County Historical Society 1984:118; Peace 1981:61). In 1909, he divorced his wife and sold his ranch on Rye Creek.

Jakes Corner Area

Among the earliest settlers near the project area was the Felton family. Oliver C. Felton and his family arrived in the late 1870s. They spent one winter in the Verde Valley before moving on to Tonto Basin, where they established a ranch at the mouth of Rye Creek (Croxen 1989:245). By 1881, Oliver Felton was successfully ranching along Rye Creek and his children attended Rye School (Peace 1981:26, 50–51). Oliver’s son, George A. Felton, subsequently moved to the Hardt Creek valley, where he established a ranch (Peace 1981). Originally known as Felton Station, George Felton’s ranch was located on the west side of what is now Jakes Corner. George Felton owned two other ranches in Tonto, which used the Cross 7 and VIV brands. The Cross Seven Ranch is shown on historical maps (TNF 1919, Gila County 1924, TNF 1927, TNF 1941b). Felton’s VIV ranch is also visible on historical maps and is the location of a major Salado ruin (Mills and Mills 1975; see Figure 164). It was recorded in a local family history that “George had a standing one-thousand-dollar bet that he could ride any horse. Before he got on the horse, he would place a half-dollar in each stirrup. Then he would bet any amount of money that the half-dollars would be there when the horse stopped—and they always were” (Peace 1981:51).

Opposite Felton Station, the present site of Jakes Corner, was the Hardt family homestead. Henrich Frederick Christian Hardt married Annie Eliza Harer, the daughter of David Harer, in 1875 (Peace 1981:59). They homesteaded at Jakes Corner during the 1890s, and their children attended Rye School (LeCount 1976:65; Peace 1981:26). After the death of her husband in 1898, Annie Hardt moved north with her three sons, two daughters, and stepmother to Gisela, and the children were enrolled in Gisela school (Peace 1981:59). Despite being a widow and mother of five, Annie was still involved with cattle ranching (1900 U.S. Census, National Archives and Records Administration [NARA]). By 1920, she held U.S. land patents for 160 acres around Jakes Corner, although the family owned a home in Gisela (Documents 01856 and 038352, Bureau of Land Management [BLM] General Land Office). Her son, Henry Hardt, was subsequently granted an adjoining 105 acres of land at Jakes

Corner (Documents 017811 and 051647, BLM General Land Office). Annie Hardt’s eldest daughter, Susan Jane “Susie,” married Al Despain with whom she had two sons. They lived along Rye Creek, near Jakes Corner (see Figure 156).

Although Jakes Corner is the only known settlement within the ROW, there were several neighboring homesteads and ranches in the early twentieth century. William Brodie owned a homestead southwest of Jakes Corner (Document 0186, BLM General Land Office). Several families homesteaded north of Jakes Corner, including Frank Holder, James “Jim” Jones, James Wright, and Sarah Brady (Documents 017860, 021675, 014831, 013202, and 09043, BLM General Land Office). The Brunson and Howell families owned homesteads in the southern part of the project area, near Cottonwood Creek (Documents 838, 766, 831, and 820, BLM General Land Office).

In 1924, George Felton opened the first store at Jakes Corner, on the west side of the road. Because the trip from Payson to Globe took 2 days, Felton Station was often a stopover place. George Felton ran the store at what came to be known as Jakes Corner, until his death in 1936 (Peace 1981:51). Subsequently, it was taken over by Polly Hicks Brown, who also bought the former Hardt ranch, the Rye Store, and several other local ranches (Peace 1981:42–43). Polly ran the store for 6 years until Nina and Jake Stevenson purchased it, at which time the location received the name “Jakes Corner.” The Stevensons were responsible for the most-extensive improvements to the property. Jakes Corner contained a general store, service station, and bar, which together served as the social center for the settlers in the area. The Stevensons ran the store for 25 years. When SR 87 was completed, the corner was bypassed, leading to a marked decrease in business. In the early 1970s, the property was purchased by Pete and Lila Connolly, who greatly expanded the store. After them, the establishment was owned by Elaine and Bud Decker, who further developed the property. Today, Jakes Corner still thrives as a gas station and store, serving the recreational traffic heading between Phoenix and Theodore Roosevelt Lake. Jakes Corner also hosts a trailer park and detached, single-family homes.

Transportation and Communication

Until relatively recently, Tonto Basin was isolated from the rest of Arizona, largely owing to the rugged nature of the basin and its lack of abundant precious minerals. Additionally, Native American groups were able to keep Euroamericans out of the area until the 1870s. For these reasons, Euroamerican transportation through the region was largely nonexistent until the U.S. military established a few poorly maintained roads. In the 1870s and 1880s, wagon roads

finally blazed through the area. Before the territory or state became involved in the construction of roads, toll roads and bonds generally paid for their construction. Counties were also on their own in constructing roads. Later, taxes were levied for road construction and maintenance (ADOT 1977:1). More often than not, however, local settlers were left to construct and maintain their own roads. This was certainly the case prior to the widespread use of the automobile and was likely true of Tonto Basin in the late nineteenth century.

Prior to 1880, transportation and communication to and from settlements such as Payson was sporadic. Generally, mail headed for Payson or Tonto Basin would be sent to Globe or Flagstaff and then be carried into the area by freighters or army couriers. In 1880, the Reno Post Office was established, which provided sporadic mail delivery until 1894 (LeCount 1976:28). By that time, other post offices had opened in nearby communities. The Tonto Post Office opened in 1884 near the mouth of Slate Creek just south of the project area, and Andrew Howell served as postmaster between 1891 and 1902 (LeCount 1976:28). In 1884, a post office was also opened in the small town of Union Park, which was then renamed Payson in honor of U.S. Congressman Louis Edward Payson, who was chairman of the Post Office and Post Roads committee at that time (James 1991:39).

The settlers in Tonto Basin needed improved transportation links with outside markets. The closest community was the mining town of Globe to the south. The road to Globe followed a military route, which was very difficult and slow. The transportation of goods during this period was accomplished largely by the use of burro pack trains. Although the trains could carry a significant amount of goods (each burro carried roughly 200 pounds), progress was slow. The animals had to be unpacked every night in order to allow them to graze. The next day they would be repacked and progress would resume. Travel was also slow because of the nature of “roads” through the area. Few of these “roads” could actually be labeled as proper roads and were instead little more than trails (Northern Gila County Historical Society 1984:19–23).

The road that became known as FH 9 originally extended from Roosevelt Dam to Camp Verde, Arizona. Segments of this road were in place many years prior to it being designated as FH 9. Apparently, the earliest alignment of the road was used by wagons between the early 1880s and 1892. This was replaced by a second alignment that was used until 1915. The second alignment was then replaced by a third alignment constructed sometime between 1915 and 1919. Finally, a fourth alignment was built between 1924 and 1933. The road was officially designated FH 9 only after the Forest Highway system was officially created in 1921. These different alignments used the old segments of the road where they could, changing the road’s course only where it was necessary. Later, more-substantial roads over-

shadowed FH 9, particularly the Bush Highway and later the Beeline Highway, which eventually became SR 87. The alignment of FH 9 was upgraded intermittently throughout the twentieth century until it became a part of the state highway system and received the designation State Route 188. SR 188, however, followed only portions of the old FH 9, bypassing it in many locations.

Alignments of FH 9

First Alignment (Early 1880s–1892)

As described above, roads through the area were few and poor in nature at the end of the nineteenth century. The U.S. Army had established many trails in order to move troops and supplies from one fort to another, generally by horse, burro, or wagon. It is likely that the first alignment of what later became known as FH 9 was constructed by the U.S. Army in order to connect other trails. The road from Fort McDowell (on the Verde River) to Camp Reno was extended north past the Oxbow Mine near Payson sometime in the 1880s, forming what would become the first alignment of FH 9 (see Figure 154). It is not clear from the 1889 map (see Figure 154) where this road passed in relationship to the project area.

The few settlers who traversed these roads during this period had a difficult time. Wagon teams were challenged by the harsh landscape as well as steep ascents and descents across rugged terrain. In 1886, a small family of Mormons made a journey through Tonto Basin with their team and wagon. One of the members of the family, Lewis Barney, kept a journal of the trip. On Sunday, August 25, Barney described their journey south of Payson to Tonto Creek as follows:

We continued on our way I as usual going on ahead of the team on foot coming to Tonto creek it being very sandy I crossed the creek and lay down in the shade of a sycamore tree to rest and wait the arrival of the teams, in about an hour they came up having to leave one wagon and put both teams on one wagon to pull the one through the sand, after getting the wagons through the sand we went on for a half a mile and stopped in the shade of a couple of Sycamore trees for noon then proceeded on for three miles to a country store. Where we bought a little thin bacon the children called it rine it was thicker than good sole leather, the purchase being affected, we drove on to a ranch belonging to a man by the name of Blake one half mile from the store at this place we stopped and set two wagon tires [Barney 1886:133].

The next day, Barney described the portion of the trip near Jakes Corner:

Monday 26, Moved across the Tonto Creek pulling through heavy sands causing us to double teams again leaving one wagon on the bottom taking the other on to the foot of the mountain, which was very steep and rocky and three quarters of a mile to the top of the mountain requiring a half of a day to reach the top, where the road makes a square turn to the right and down the mountain in to a deep canyon where we stopped for noon there being a little warm water three quarters of a mile up the wash, Martha feeling very much cast down, afternoon we proceeded on up a side canyon over hills and sliding rock to Harts ranch making four miles that day, at this place there are two springs of water not very good [Barney 1886:133].

With the increased demand for goods across central Arizona in the 1880s and 1890s, roads into and throughout Tonto Basin were improved. Eventually, freight wagons replaced pack burros as the primary mode of moving goods through the area. The wagons were able to carry a larger cargo as well as passengers. During this period, most commerce from the Payson area went to Globe to the south (passing through Tonto Basin) and Flagstaff to the north. Phoenix was too difficult to reach because of the crossing of the Salt River (Northern Gila County Historical Society 1984:19–23). During the summer, when snow was not an issue and feed was available, goods were carried north to Flagstaff. The trip took at least 7 days. During winter months, goods were transported into and out of Globe, a trip which took at least 9 days. Portions of this early freight route were eventually incorporated into FH 9. In 1898, a railroad was extended to Globe, allowing for the more economical transport of ore. This led to increases in production and the town's activity. The railroad also provided a great incentive for commerce to come through the town, including goods and people from Tonto Basin (Northern Gila County Historical Society 1984:19–23; Shoger 1975:24).

With the demand for agricultural products rising in Globe, ranching became a more viable way of life in Tonto Basin. An increasing number of people moved into the basin to ranch during the latter part of the twentieth century. The success of ranching, however, had its downside. By 1890, the range was fully stocked, and the number of cattle reached a peak by 1900. According to some estimates, there were 20 times as many cattle in 1900 as there were in 1970. The great number of cattle in the region produced a surplus of cattle products, as well as tremendous overgrazing. Range conditions, which were almost ideal when settlers first arrived in the 1870s, deteriorated considerably. Native grasses that had once grown several feet high were replaced by brush that choked many of the hillsides (Croxon 1926:3). Between 1904 and 1905, an 18-month drought struck the area, crippling many ranches. Worse, a flood followed the

drought and depleted what was left of the productive topsoil. To combat these problems, the Tonto National Forest was formed in 1905 to protect the Salt River watershed. One of the first measures of the new forest reserve was to eliminate sheep in Tonto Basin, which had previously wintered there. Range conditions, however, continued to deteriorate into the 1920s. By World War I, there were an estimated 82,000 cattle in the reserve. Another drought in 1921 greatly reduced this number (Murphy 1991:18).

Although mining activity declined in the 1880s, prospecting was renewed in the 1890s when relatively large amounts of copper, gold, and silver were found in the Hardt and Gun Creeks area. These discoveries led to over 150 claims being filed over the following 10 years. The claims were then consolidated into the Tonto River Copper Company. This large company continued mining up until 1910 (LeCount 1976:7). Other mines were longer lived, including the Ord Mine in Slate Creek, which mined asbestos (Stebbins 1987). A small community known as Goswick Camp emerged around this mine. Tungsten and fluorspar were also prospected for and mined to a small degree in Tonto Basin. As with earlier mining discoveries, however, these later ones led to relatively little additional settlement in the project area.

The first of what could be called an “alignment” of FH 9 emerged in the early 1880s as a military trail and wagon road (see Figure 154). With the arrival of increasing numbers of ranchers and miners in Tonto Basin, the road was used by a larger number of travelers. The road was still little more than a trail at this time. Portions of this road can still be seen.

Second Alignment (1892–1915)

In an attempt to create a territorial-wide road system, the Arizona Territorial Engineer was appointed in 1909. The appointment was part of a territorial road law. The engineer reported on roads in the territory, and provided recommendations for improvements as well as new construction. Prior to this time, all expenditures for road improvements were made under the direction of the County Board of Supervisors (Arizona State Engineer 1918:41). In 1912, Arizona became a state and the Territorial Engineer became the State Engineer. This position was a precursor to the Arizona Highway Department.

Between 1892 and 1915, a second alignment was constructed of what would become known as FH 9, north of the current project area. The new alignment, which was constructed by horse-drawn equipment, passed to the west of Oxbow Hill and east of the Oxbow Mine, then headed northeast until it joined the old segment at Gibson Creek. From there, the route continued on to Payson. It appears now that there were two trails into Payson from Tonto Basin during this period, bifurcating at Rye Creek (USGS 1910).

That portion of the road through Tonto Basin (and the current project area) is not visible on this map.

By 1900, the trip between Globe and Payson took 5 days (an improvement over the 9 days of the 1890s) (Mogollon Advisor 1984). Roads during this period were not looked upon with much confidence, as attested to by early Payson merchant E. J. Bonacker in 1900: "There are no graded roads to Flagstaff or Globe and five days are needed to come from Globe to Payson" (as quoted in Murphy 1991:23). The road north of Payson over the Mogollon Rim was even worse, as described by Revilo Fuller around the turn of the century: "Strawberry is so steep that brakes won't hold the wagon unless a shoe is placed under the wheel and a chain wound around the axle to keep the wagon from running over the horses" (Murphy 1991:23). This portion of the road, however, was hardly typical of the overall route, although there were other steep climbs at Oxbow Hill and Gun Creek in the project area.

Perhaps the most dramatic event for the region during this period was the construction of Roosevelt Dam. The first major federal reclamation project, Roosevelt Dam entailed a great deal of construction activity between 1903, when surveys were begun, and 1911, when the dam was completed. New roads were established, camps and towns sprang up, and men came from all over to work. The Mesa-Roosevelt Road, later known as the Apache Trail, was constructed at this time. The Tonto National Forest was established in 1905, in part to protect the watershed for the new reservoir (James 1991:40). As water levels rose and Tonto Creek flooded, portions of FH 9 were relocated by the Reclamation Service (later known as the Bureau of Reclamation).

As a part of the construction, roads between the dam and the Phoenix area were established. For the first time, freighting between Phoenix and the Payson area was possible. Roads were still poor, and the trip between Globe and Payson still took 5 days. The road through Tonto Basin remained rather primitive. The road, which was originally designed to carry freight by burro, was widened for horse-drawn wagons during the early 1900s. It appears that unlike now, the road at that time generally followed the east bank of Tonto Creek, although it crossed it in several locations (see Figure 155). At Slate Creek, it extended along the east bank to a point midway between Cottonwood Creek and Reed Gulch, where it crossed into the project area on the western side of Tonto Creek. From this point, it continued a short distance north to Gold Creek, which it apparently followed northwestwards in the direction of Jakes Corner.

A new resort named Anglers Inn was established at the northern end of the newly formed Roosevelt Lake. This establishment led to an increased tourist use of the region and its exposure to a broader segment of the population. The region was previously unknown to many visitors to the inn in these early years. An early traveler provides us with a glimpse of road conditions in the Payson area during this

period. Ms. Lillias Goodfellow joined many other people who began to explore the backcountry of central Arizona following the construction of Roosevelt Dam. Ms. Goodfellow journeyed along the Apache Trail from Mesa to Roosevelt Dam, through Tonto Basin to Payson, and eventually visited the Tonto Natural Bridge in 1912. The route north from the dam followed the wagon road along what would become known as FH 9. Ms. Goodfellow described the country through which she passed:

By the southern route the traveler takes the stage or a camp wagon at Mesa Arizona from which he must travel over the famous Roosevelt road. This scenic thoroughfare winds first through thousands of acres of untilled land, then through the canyon of the Salt River where it appears ever before you like a huge snake coiling along the steep sides of the canyon walls, grim precipices of sand stone on the right and sheer abyss on the left. After a journey of 60 miles you come upon the Roosevelt Dam. Crossing this gigantic structure the road winds along the shores of Roosevelt Lake for fifteen miles, then follows up the valley of the Tonto River, through a land dotted with cattle. The stage ride ends up at Payson 120 miles from Mesa. From there on, a distance of seventeen miles, the journey is made on horseback or private vehicle [Goodfellow 1912].

With larger numbers of settlers, along with a growing number of tourists, a demand for better roads developed in Arizona in the 1910s. As a result, one of the first pieces of road legislation in Arizona was passed in 1912. This so-called State Road Law proposed a statewide road system, including a network of approximately 1,500 miles that would connect all county seats and nearly all principal towns (ADOT 1977:1). This early legislation, however, bypassed Tonto Basin completely. Attention was focused on other areas, including roads leading into and out of the state, as well as those connecting major communities together (e.g., Tucson and Phoenix).

The second alignment of what would become FH 9, therefore, was little changed from the first. Although the road was expanded to handle wagons, its route remained basically the same through Tonto Basin. Significant road improvements in the region came with the arrival and more widespread use of the automobile, beginning in the 1910s.

Third Alignment (1915–1924)

By the 1910s, most of the roads in the Tonto Basin and Payson regions were simple, two-track roads serving local homesteads and settlements (Oliver and Hathaway 1997:11). Daily postal service did not arrive until 1921. A telephone line was built to Payson in 1908, although phone service was not widespread until 1957. It would take until 1959 for Payson to be served by a paved road (James 1991:40).

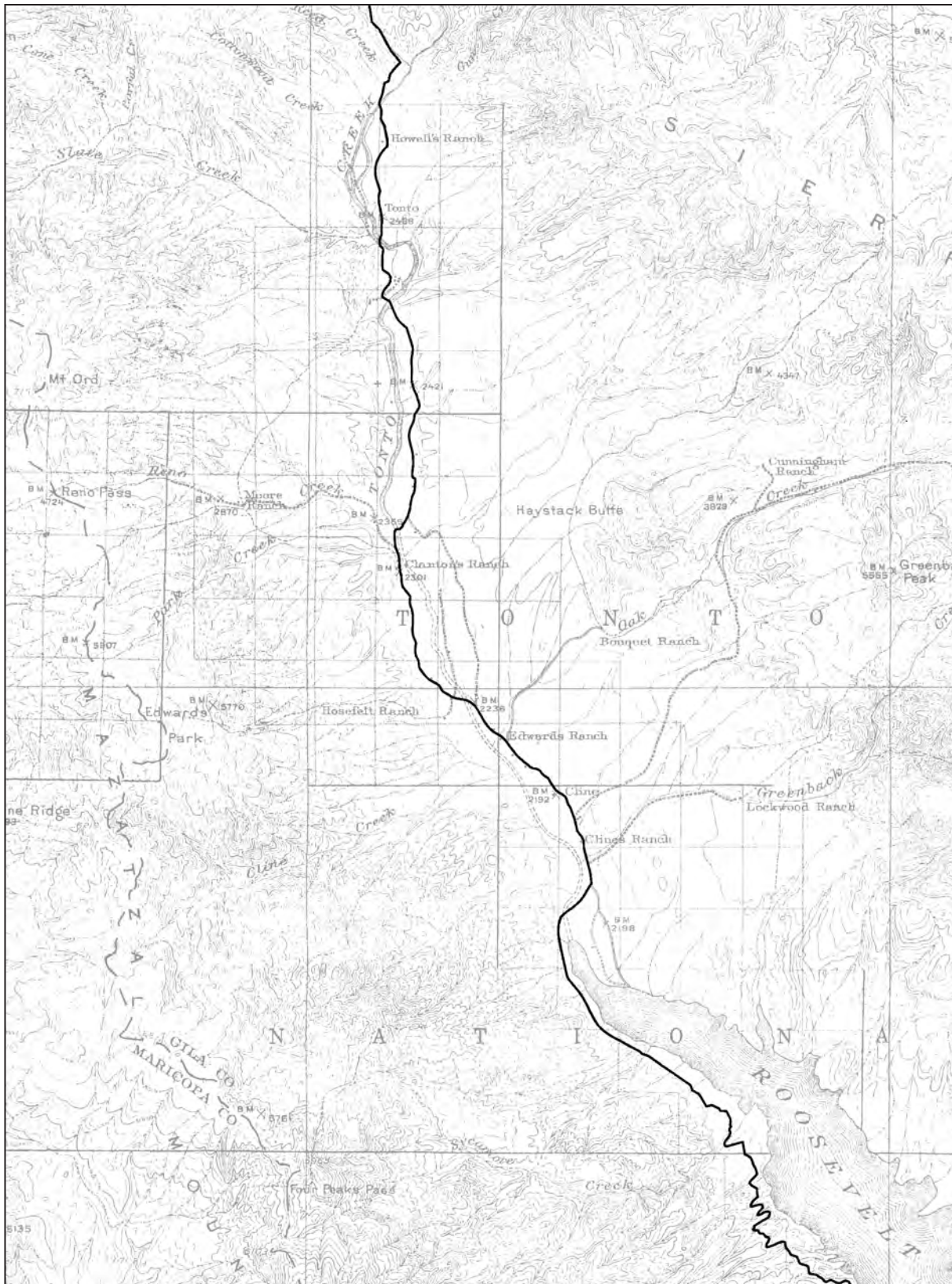


Figure 155. Roosevelt Lake to Reed Gulch. 1907 Roosevelt, Arizona, USGS quadrangle, scale 1:125,000; surveyed in 1905–1907 (USGS 1907). Note road through Tonto Basin, much of it lying on the east side of the Tonto Creek. This was the old wagon road.

Without a market by which to sell their goods, farmers and ranchers found it difficult to make a living. The population of Payson was only 150 in 1916, a slight increase from previous decades. Other communities were also small at this time, including Pine (population: 175) and Strawberry (population: 75) (Forbes 1916:1).

In 1916, the Federal Aid Road Act was passed. The act appropriated monies for individual states to spend on their roads, under the direction of the Bureau of Public Roads (BPR). The BPR at this time was under the jurisdiction of the Department of Agriculture (later it would fall under the Department of Commerce). The monies were designed to be used on rural routes, particularly roads used by U.S. Post Office mail carriers. The federal dollars had to be matched by the states or counties to which they were appropriated (Arizona State Engineer 1920:21). The act was designed to create a system of primary highways extending across a given state and secondary highways extending across the counties (ADOT 1977:13). The act was a landmark in federal road legislation, as it provided substantial resources to states to improve their transportation networks. Many states took great advantage of the act, constructing miles upon miles of new highways.

In light of these legislative developments, the third alignment of what would become known as FH 9 was constructed between 1915 and 1919. It is likely that this new alignment was constructed to allow for automobile traffic. The old road, which was designed for wagon travel, was abandoned in portions, resulting in the overall straightening of the route. The old wagon road, which traveled along the east side of the Creek, was also extremely steep in places, whereas the new road was far gentler. The new route was blazed along the west side of Tonto Creek (see Figure 156). By 1915 in the southern part of the project area, the road appears to have run along the older, eastern route, again crossing to the west in the vicinity of Reed Gulch and then continuing in a northwesterly direction along Gold and Hardt Creeks to Rye Creek (see Figure 156). From there, it passed to the east of Oxbow Hill, again bypassing the Oxbow Mine (which had shut down in 1908). Continuing north, the road reached the old road alignment, which it followed into Payson. By 1919, FH 9 appears to have crossed the river below Slate Creek and continued on the western bank as far north as Reed Gulch and then turned eastwards to go around the large schist outcrop (Tonto Hill) dividing upper and lower Tonto Basin (TNF 1919). From this point, it headed northwest to Gold and Hardt Creeks. It is not currently known who constructed this new alignment, although the Arizona State Engineer was likely involved. By 1916, the new alignment allowed travelers to make the trip from Globe to Payson in 1 day (Oliver and Hathaway 1997:11).

The newer alignment, as well as the more widespread use of automobiles, brought changes to the Tonto Basin region, including increased tourism and commerce. The route was

designated a county road in 1916 and connected the road between Phoenix and Roosevelt Dam (Apache Trail) with the Payson area (Arizona State Engineer 1916). In 1920, the road was referred to as the Roosevelt Payson Road (1920 U.S. Census, State of Arizona, Gila County, District 53, page 4).

Automobiles had become more common and widely used in Arizona by this time. The Globe-Payson Stage began running in 1921, connecting Tonto Basin with Globe. The stage, run by Grady Harrison, used a touring truck to haul freight and passengers from Payson to Globe and other points. Eventually, the stage provided service to Strawberry and into the Verde Valley to Jerome.

Fourth Alignment and Designation of FH 9 (1924–1933)

The Federal Aid Road Act, passed in 1916 (described above), led to the construction of roads in areas where states could afford the match. Many states, however, lacked concerted highway plans. As a result, the Federal Highway Act (FHA) was passed in 1921, which required that each state designate a road system upon which the federal appropriations could be spent. Because the law allowed for federal aid to a total of 7 percent of a state's highways, the system became known as the "seven percent system." Arizona's road mileage at that point was 21,400, making 1,498 miles eligible for federal aid. Arizona, because it contained so much uninhabited and public land, was required to match federal dollars in a 75.29 (federal) to 24.1 (state) ratio, which was less than that required for more urban states (Hatcher 1931:7). The routes included in most state's highway plans were generally those connecting larger communities, as well as interstate routes. Because it was located in an isolated portion of the state, the road that later became known as FH 9 was not part of the proposed Arizona highway system. It remained a county road until after 1921.

The FHA also established, among many other things, the forest highway system (Michael Sullivan, personal communication 2000). As a result, FH 9 was designated as such in 1921. The forest highway system consisted of roads that were "of primary importance to the states, counties, or communities within, adjoining, or adjacent to the national forests" (BPR 1960:9). The forest highways did not, however, include those roads and trails that were designed primarily for the protection, administration, or use of the national forest itself. Funds were provided for the construction and maintenance of forest highways through the Secretary of Agriculture in the 1920s, the Works Progress Administrator in the 1930s, and the Secretary of Commerce beginning in the 1950s. The forest highways themselves were constructed with federal monies, often in conjunction with the state or counties through which they passed. Maintenance of the

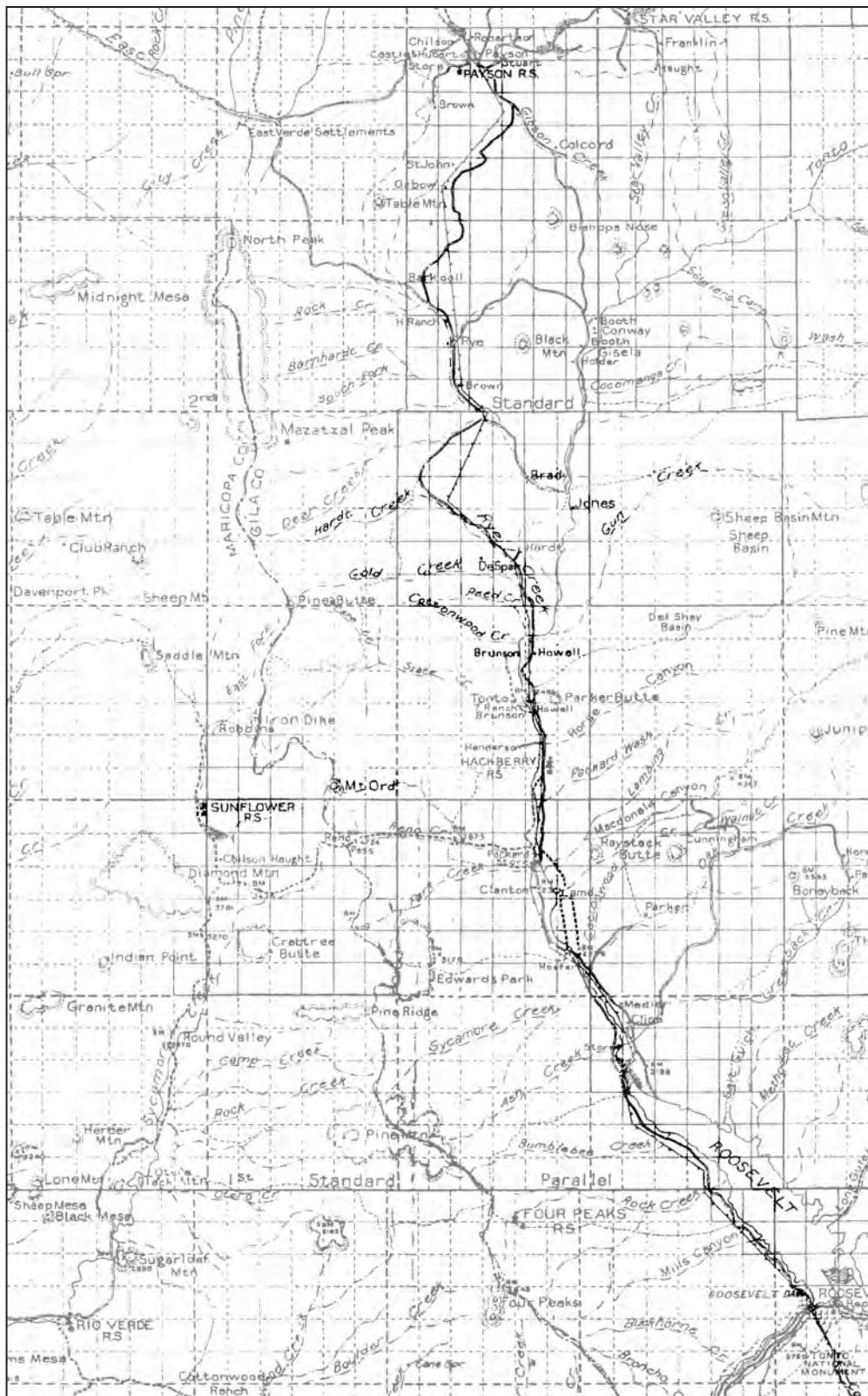


Figure 156. Map of Tonto National Forest, 1915. Temporary Base Map, Gila and Salt River Meridian. Note road from Roosevelt Dam to Payson, through Tonto Basin, and its location on east side of Tonto Creek through much of the project area. This indicates that the wagon road was still in use (TNF 1915).

forest highways was generally paid for by the states or counties (BPR 1960:13). The designation of FH 9 provided a larger source of money for the road. It is no coincidence that the highway began to see major improvements following its designation in 1921.

Arizona's population exploded from roughly 40,000 in the 1880s to 400,000 by 1927. Roadways to serve these people expanded from 2,000 to 22,000 miles during the same time period (ADOT 1977:1). The Arizona Highway Department and the Arizona State Highway Commission were created in 1927, leading to the establishment of a concerted state highway system (ADOT 1977:1). The highway department was the largest branch of the state government in the 1920s, indicating Arizona's commitment to improved transportation. The state highway system proposed in 1912 and 1916 was officially adopted at this time (Arizona State Engineer 1924:9). In 1928, the Secretary of Agriculture ruled that those roads within federal reservations (including forests) did not count against the 7 percent federal aid roads within the states (ADOT 1977:18). This latter act provided additional federal funding for roads such as FH 9.

In light of these nationwide and statewide developments, a new alignment of the northern portion of FH 9 was constructed between 1924 and 1933 (Gila County 1924, see Figure 157). The new alignment headed north from Rye Creek then passed west of Oxbow Hill. From there, it went northeast to Wilbanks, then north to Round Valley, and finally northwest toward Payson. This route completely bypassed much of the old route in the area. The new route followed the contours of the land to a much greater degree than the previous routes and was designed to handle increased automobile traffic. The road was labeled as an "improved motor road" by 1928 and was the main route of travel to Payson from the south. The alignment of the road through Tonto Basin and the project area, however, again remained largely unchanged during this period. This segment of the road did, however, receive improvements during the late 1920s. It was during this time that the road became graded, covered in gravel, and was at least 10 feet wide.

By the late 1920s, automobiles were carrying passengers, mail, and freight into and out of Payson, although it was still a full day trip from there to Globe (Mogollon Advisor 1984). It was also at this time that a road from Mesa was blazed north to Sunflower, following portions of what would become the Beeline Highway (TNF 1928). It is clear, however, that this was a secondary route, and most transportation into the area followed FH 9.

In 1926, FH 9 was graded and covered in gravel between Roosevelt Lake and the Fossil Creek Grade, a distance of 74 miles (TNF 1927). By that year, Arizona contained 862 miles of forest highways, the majority of which were unimproved dirt roads (Arizona State Engineer 1926:33). Many road projects were undertaken across the state during the late 1920s, as automobiles became more widespread. Con-

struction of secondary roads, however, remained relatively limited during this period. Nevertheless, many highway officials realized the importance of secondary roads, not least of whom was the Chief of the BPR, Thomas MacDonald. MacDonald expressed this feeling in 1930:

It is time to extend to the secondary or local roads some more effective improvement, and I am sure the time has arrived when the more effective improvement will be extended. It not only will be done; it is being done, and the process is already well advanced. There are very definite reasons why progress in the improvement of the secondary roads under the supervision of the local authorities has been slow in the past [MacDonald 1930:14].

The reasons for lack of improvements alluded to by Mr. MacDonald included disorder on the part of local authorities, crude equipment, and limited revenues. In the case of FH 9, highway officials and locals realized the importance of the highway for county as well as state travel, in addition to providing access to important recreational places. It was clear that improvements to the road were warranted.

During the 1920s, the priority of the TNF was the protection of the Salt River watershed, as well as range management. Owing to limited budgets, little else could be pursued. With the Great Depression in the 1930s, forest reserves received substantial support in the form of federal dollars. Programs such as the CCC, in particular, completed many projects on Forest Service lands. These projects included range management and improvement measures, as well as road construction (Works Progress Administration 1989:451). The CCC was clearly active in the area and maintained several work camps in the CCP vicinity at various times in the 1930s (Ciolek-Torrello, ed. 1987; Stebbins 1987). Little is known, however, about specific improvement projects undertaken on FH 9 during this period. Based on the road's improved nature through the 1930s, it is clear that projects were completed.

By 1933, Arizona contained 23,270 miles of roads. The state highway system covered only 2,866 miles of these roads. Within this state system, only 141 miles were concrete, 1,076 were oil-covered, and the remainder were gravel or dirt. The first paved road in Arizona appeared in 1920, and only a few roads were covered in oil even into the 1930s. New road construction in Arizona during this period consisted of graded dirt roads, generally covered in gravel. Most road-improvement projects consisted of oiling or resurfacing existing roadways (Arizona Highway Department 1952). Approximately \$5,211,000 was made available to the state by the federal government's public works program at this time. State revenues for road building beyond government aid consisted of gas taxes, vehicle registration fees, common carrier taxes, certificate of title fees, and chauffeur's license fees. Despite these revenue sources, the state relied heavily

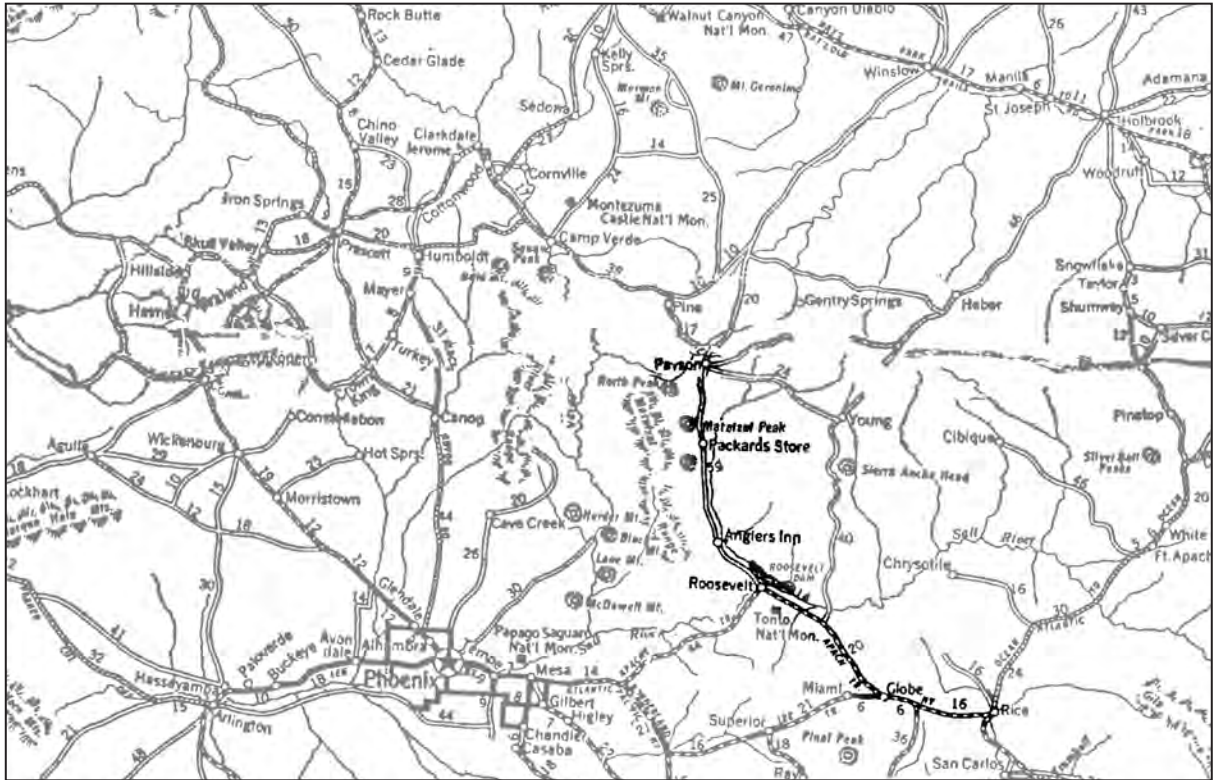


Figure 157. Map of roads in central Arizona, 1925. Note FH 9 between Roosevelt Lake and Payson, as well as Packard's Store (C. M. Company 1925).

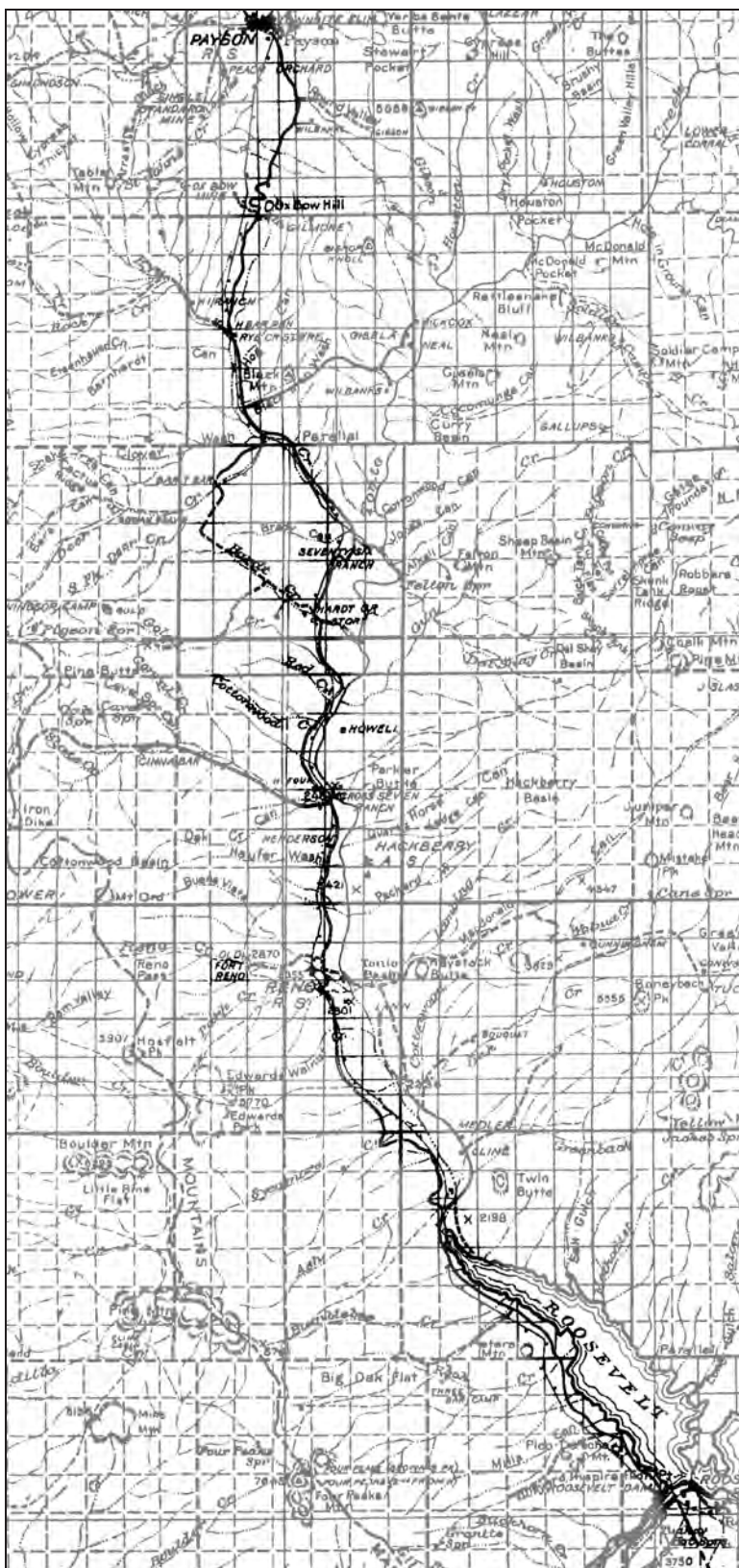


Figure 158. Map of the Tonto National Forest, 1934. Note FH 9 between Roosevelt Lake and Payson (TNF 1934).

upon federal funding (Dowell 1933:4). FH 9 continued to be excluded from the state highway system throughout the 1930s, however.

Despite its exclusion from the state system, FH 9 had been improved to the point that it was referred to as a “high service road” by TNF’s transportation plan of 1941 (TNF 1941b). According to this plan, FH 9 was not considered a “highway” (like the Beeline, see below) but was a more substantial road than others in the area, which included “medium, low service” or “low service rut” roads (TNF 1941a). Like many other Arizona roads at this time, FH 9 was primarily covered in gravel (Arizona Highway Department 1946). The first 10 miles of the road leading north from Theodore Roosevelt Dam was oiled; the rest was gravel. The highway provided access to an increasingly popular recreational area of the TNF. The road was also vital for the timber and cattle resources in the Tonto Basin area, as well as those on the Mogollon Rim. The importance of the road to Gila County was stressed in a report generated in 1948:

This route serves many ranches and small mines in the area north of Roosevelt Dam, and is the main route south from Flagstaff, Pine, and Payson, to the Globe-Miami District and to the Bush Highway leading to the Salt River Valley. Average daily traffic during 1947 was 35 vehicles [Arizona Highway Department 1948:4].

The journey between Globe and Payson, however, was still a long trip in the 1940s, at least according to Nina Stephenson, owner of Jakes Corner during the period:

Gawd, I thought this was the end of the world up here. . . . Our nearest neighbor was the 76 Ranch, about three miles. . . . It was a five-hour trip to get to Mesa if it didn’t rain. It was all dirt roads and creeks, and they’d start risin’ when it rained. . . . We had three or four cabins here, and once in a while we’d rent one to a trapper or an old cowpuncher, or a quail hunter or deer hunter, which made a little excitement [as quoted in *Arizona Republic* 1985 April 7].

Modern Highway Construction and Its Impacts on FH 9

Bush and Beeline Highways

During the 1930s, while the fourth alignment of FH 9 was being constructed and improved, the Bush Highway was also being constructed. The Bush Highway, an unimproved dirt road, was built by the Work Projects Administration (WPA) and the CCC, and extended from the northern end of Stewart Mountain Dam Road north to Felton. The road followed the old Camp Reno route, then left it at Sycamore

Creek south of Sunflower, climbed out of the Sunflower Valley near Mt. Ord, crossed the Mazatzal Mountains into the upper Tonto Basin at Hardt Creek, and then followed the creek a short distance to Felton’s Station (see Figure 159). Segments of the Bush Highway were documented where it crossed Gold Creek (Ciolek-Torrello, ed. 1987:127). At Felton’s, the Bush Highway intersected FH 9 from which point the traveler followed FH 9 to Payson. Later, the highway was straightened, widened, and rerouted in portions (Northern Gila County Historical Society 1984:46–47). The improved version of the Beeline Highway was completed in 1958 and shortened the trip from Phoenix to Payson to only a few hours by eliminating the need to travel along the Apache Trail; instead it offered a direct route out of Mesa from McDowell Road. The Beeline Highway also bypassed Felton Station by following a more direct route to Rye Creek. It was the first paved road to Payson, and its route would be basically followed by SR 87.

Improvements in the Late 1940s

In 1944, the FHA was passed, which in part established the Federal Aid Secondary (FAS) system. The FAS allowed states to establish a secondary set of highways, which generally were feeder roads, also known as farm-to-market roads (ADOT 1977:19). These highways received federal monies, although counties were required to match the federal expenditures in a ratio of 71.06 (federal) to 28.94 (county). The FAS system consisted of both state and county FAS roads, which were deemed to be of primary importance to state or county traffic (Arizona Highway Department 1949:5). Eventually, FH 9 would be included in this system (see below).

Road construction, which had been relatively primitive in the 1930s, became far more sophisticated by the late 1940s and into the 1950s. The durability of the newer roads was far superior to those constructed during earlier decades. This was particularly true in more-rural areas such as Tonto Basin. Roads constructed during this period took longer to build but tended to last far longer than their predecessors from the 1930s.

Despite its eventual overshadowing by the Beeline Highway, FH 9 underwent several improvements between 1946 and 1950. During that time, the road was widened, straightened in places, and berms were constructed along its length (see Figure 160). Between 1949 and 1950, the section between Rye and Hardt Creek (approximately 10.8 km [6.7 miles] north of the project area) was also graded and bridges were built. The roadbed, at least in this section, was expanded to 26 feet. Portions of the road were covered with asphalt, whereas others were covered with gravel. The entire route from Felton’s Station to Theodore Roosevelt Lake was graded, and other sections to the north of Payson were covered with gravel and asphalt (BPR 1949). The portion

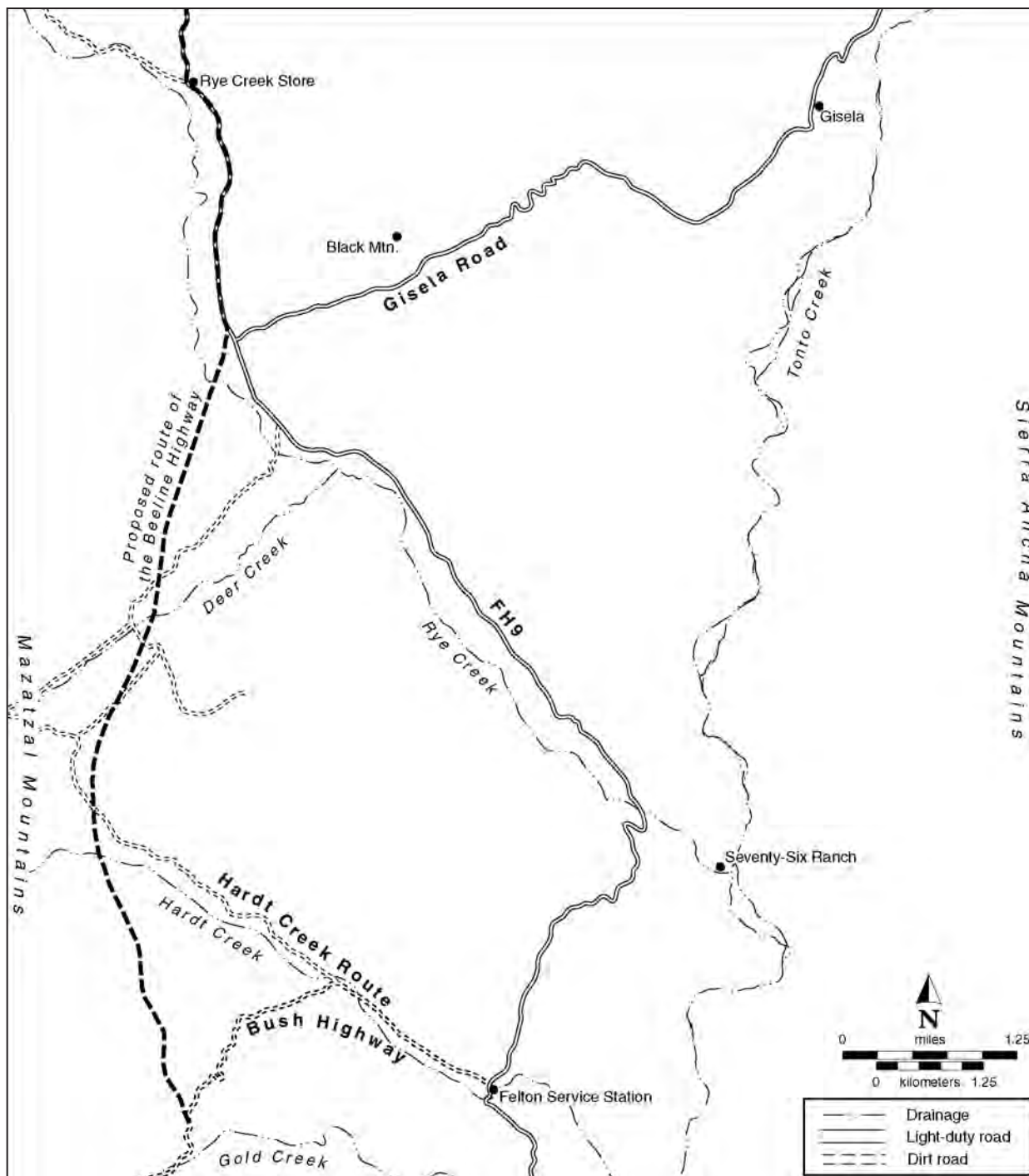


Figure 159. Upper Tonto Basin road map, based on the 1936 Payson, Arizona, 15-minute USGS quadrangle (USGS 1936). FH 9 is still shown as a county highway. Bush Highway is shown connecting with FH 9 at Felton Station, and the future Beeline Highway is shown bypassing Felton Station.

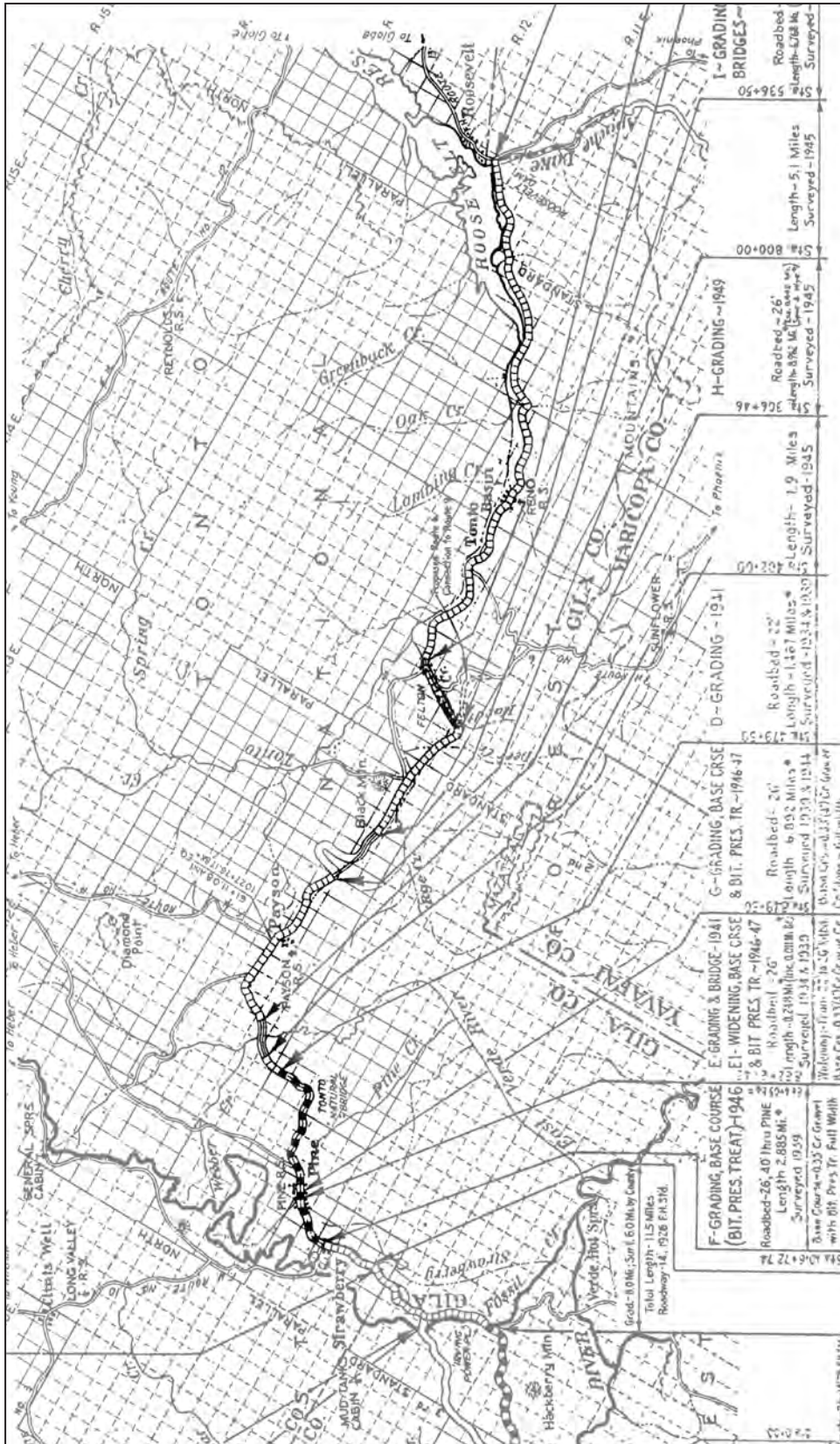


Figure 160. Plans showing proposed road improvements, including Hardt Creek Route, 1949 (BPR 1949).

of the road north of Payson was also substantially improved during the 1940s.

The Hardt Creek route, which followed the Hardt Creek segment of the old Bush Highway and another unimproved road along Hardt Creek to Deer Creek, connected FH 9 and the Beeline Highway. This new route was completed in 1950, was 26 feet wide, 3.387 miles long, and had a graded dirt surface (Arizona Highway Department 1959; BPR 1949). Previously, FH 9 connected with the Beeline along a route due north of Felton's Station (later Jakes Corner) for slightly over 2 miles to Rye Creek near its confluence with Tonto Creek. From there, it followed Rye Creek to the junction with the Gisela Road and the Beeline Highway (U.S. Geological Survey [USGS] 1936) (see Figure 159). This original segment of FH 9 along Tonto Creek continued to be used and was then renamed FH 194.

In the late 1940s, FH 9 was added to the FAS system and was known as Route 209, although it continued to be referred to as FH 9. The route was a two-lane gravel roadway, ranging in width between 12 and 30 feet. Through the current project area, the roadway width was 20 feet. The route ran from Theodore Roosevelt Dam north through Tonto Basin and into Payson, ending just south of Flagstaff. At the Ash Creek and Sycamore Creek crossings, the road contained only concrete dips, without bridges. At Jakes Corner, however, a 60-foot concrete bridge was constructed across Hardt Creek (Arizona Highway Department 1957a).

During the early 1950s, studies were made of FH 9 through Tonto Basin with an eye toward improving the highway. Recommendations to relocate the highway to the northeast side of the reservoir were made at that time. These plans were abandoned, however, in light of environmental impacts (U.S. Department of Transportation 1981:S-2).

A great deal of attention was focused on Arizona's roads in the late 1950s. Between 1958 and 1959, Arizona received only \$253,290 from the federal government for their forest highway system. The following fiscal year, however, this apportionment had risen to \$1,900,000 (Arizona Highway Department 1958:9). The portion of FH 9 through Tonto Basin was worked on during this period, following the completion of the Hardt Creek route.

State Route 87

The expansion of the Beeline Highway greatly impacted FH 9. The expansion project got underway in the early 1950s, and a paved, two-lane highway was completed between 1957 and 1960 (see Figure 161). Prior to that time, the drive from Phoenix to Payson was roughly a 4-hour trip. The townspeople of Payson lobbied for the highway's construction, in order to improve connections between their town and the outside world. Following the construction of the Beeline Highway, and particularly following its improvement and redesignation as SR 87, FH 9 was no longer the

preferred route for traffic to Payson. The lower Tonto Basin, however, remained a popular destination for fishing, boating, hunting, and other rural-based recreational users. FH 9 continued to be used by this recreational traffic headed to the lower Tonto Basin and Theodore Roosevelt Lake.

Recent Improvements to FH 9–State Route 188

In approximately 1960, FH 9 entered the state highway system, and portions of it began to be referred to as SR 188. As the highway was improved, portions of the old FH 9 were destroyed or bypassed. By 1962, SR 188 consisted of that portion from Theodore Roosevelt Dam to Ash Creek. From Ash Creek north, the road was still referred to as FH 9 (see Figure 164). At Hardt Creek, FH 9 now headed west following the creek until it intersected with SR 87. This latter route would be the eventual route of SR 188. From that point and north to Payson and beyond, the road was referred to as both FH 9 and SR 87. Some maps at this time still referred to FH 9 as FAS 209, leading to much confusion (see Figure 162). In addition, another road, which was labeled FH 194, split off north from FH 9 at Hardt Creek (Jakes Corner). This latter road, which followed the alignment of FH 9, continued north from Jakes Corner and generally followed Tonto Creek until reaching Rye Creek, where it continued on to connect with SR 87 (TNF 1962).

By 1962, the road through the current project area (along with most of road through Tonto Basin) was 20 feet wide (Arizona Highway Department 1962:45). Plans were already being made for an improved highway, which called for a 34-foot-wide roadway and a bituminous surface treatment (see Figure 163). Construction on the current alignment of SR 188 did not begin until the early 1970s (see below).

Soon after the designation of SR 188, work began on improving the roadway. The initial construction did not completely bypass FH 9 but followed it in many places. Improvements and upgrading of SR 188 were accomplished in piecemeal fashion, bypassing FH 9 in increments. In 1966, prestressed steel beam and concrete bridges were constructed over Gold Creek and Reed Gulch (near Cottonwood Creek) (ADOT 1975:194). In the late 1960s, that portion of the road between Gold and Cottonwood Creeks (project FH 9-7-1) was improved with a surface treatment of some kind. At that time, the portion of the road to the south of Cottonwood Creek was unimproved and likely was a graded gravel surface (BPR 1964). Soon thereafter, construction began on modern SR 188, although FH 9 continued to be used and improved.

By 1970, most of SR 188 was still gravel, although in the current project area the road was paved. This means that old FH 9 through the project area had been bypassed by this time (as we know that it was never paved).

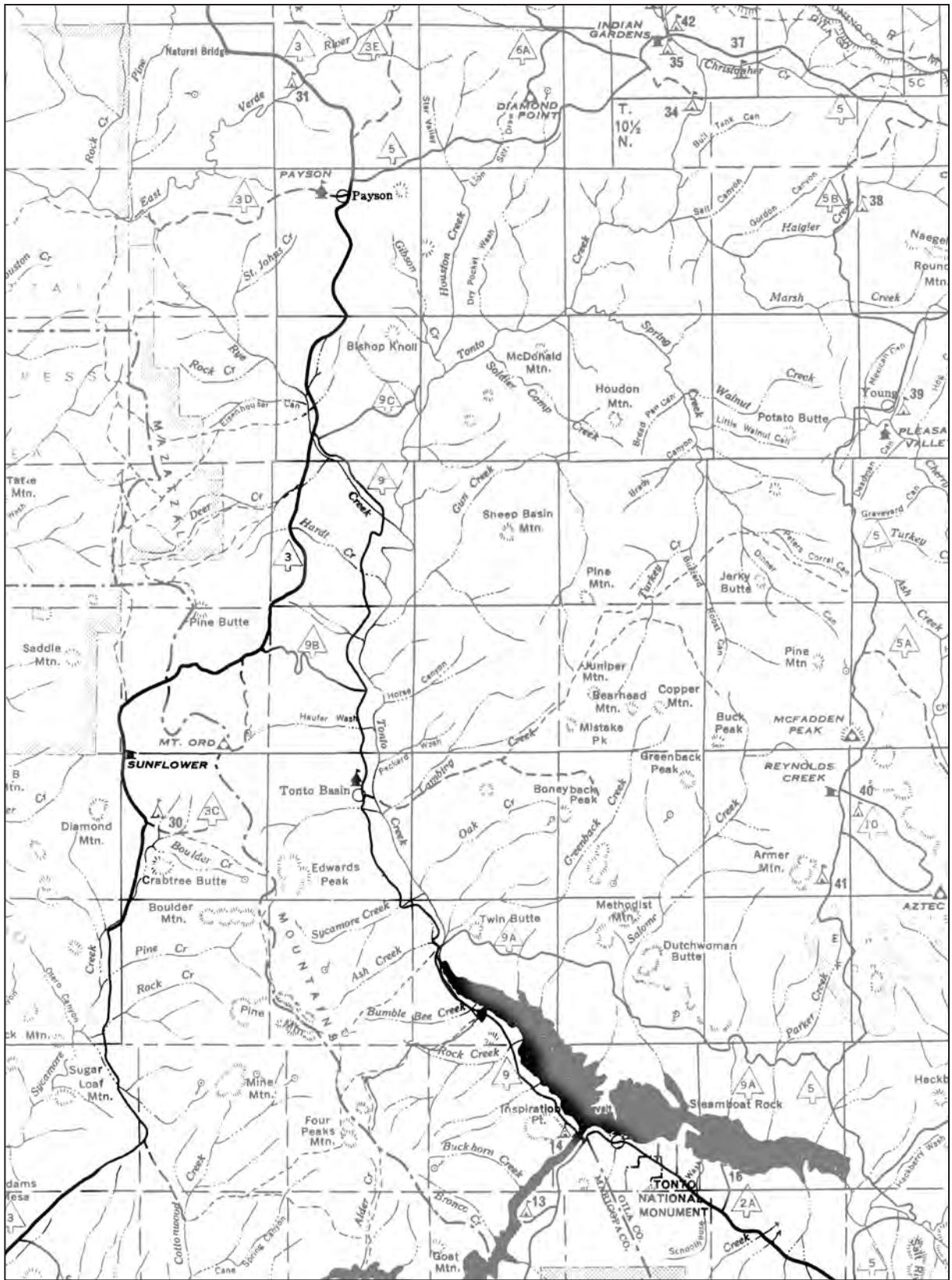


Figure 161. Map of the Tonto National Forest, showing FH 9 and the Beeline Highway, 1958 (TNF 1958).

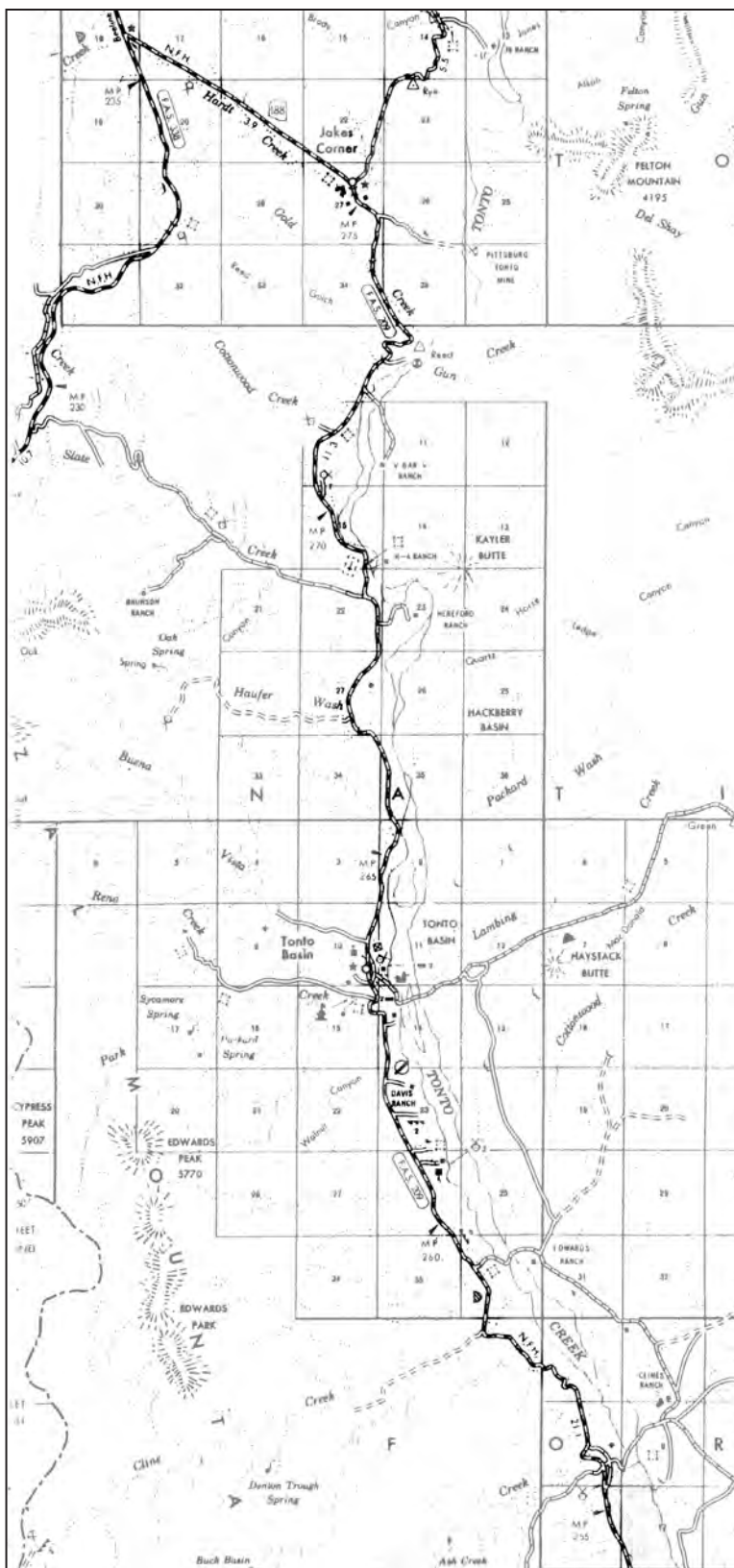


Figure 162. General Highway Map of northern Gila County, 1960, from north of Roosevelt Lake to Junction with Beeline Highway. Note alignment of FH 9. Old wagon road is shown as dirt road (Arizona Highway Department 1960).

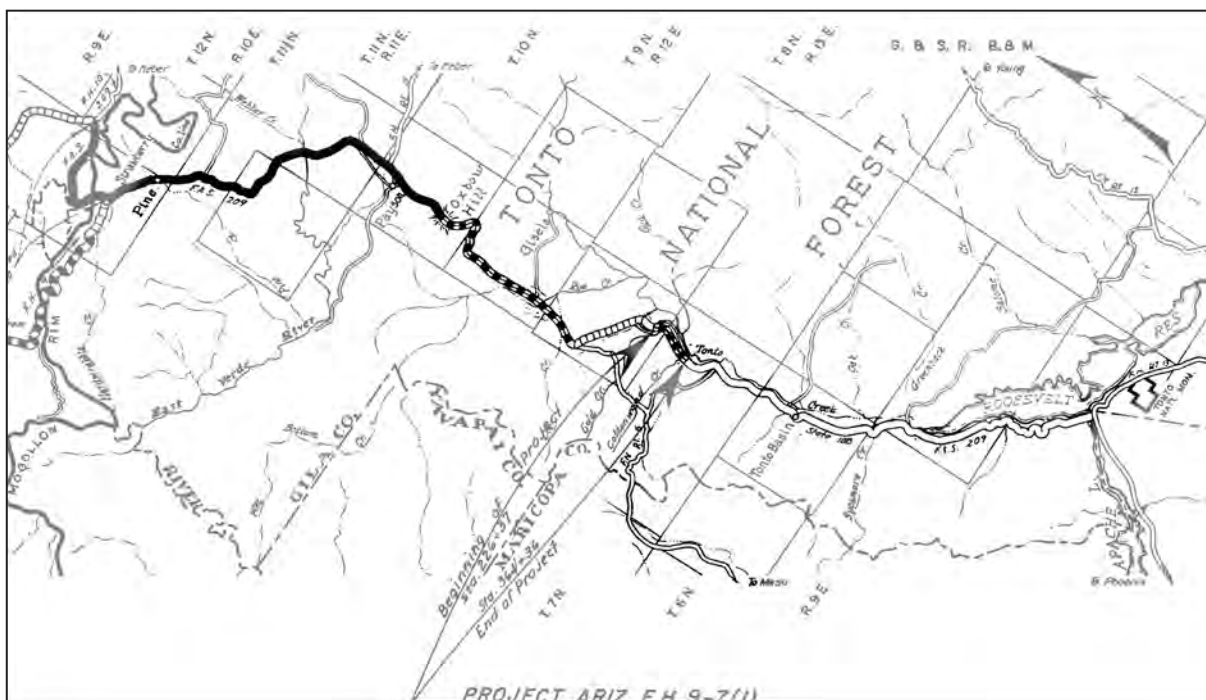


Figure 163. As Constructed Plan for Project FH 9-7 (1), 1964, from Theodore Roosevelt Lake to Pine (U.S. Department of Commerce, Bureau of Public Roads 1964).

In the early 1970s, the 4.4-mile-long segment of SR 188 along Hardt Creek and south of the connection with SR 87 was widened to a 28-foot roadway, and another 2.6-mile segment to the south was resurfaced. This lower segment used the old FH 9 alignment. At approximately the same time, the remaining 28.9 miles of SR 188 to Theodore Roosevelt Dam was constructed, also consisting of a 28-foot roadway (Arizona Highway Department 1969). This construction bypassed the old alignment of FH 9 for much of its route (see Figure 165). In 1975, SR 188 was realigned through Jakes Corner, bypassing the old bridge across Hardt Creek. Other portions of the old alignment were bypassed as well during this period, including the old bridges at Gold Creek and Reed Gulch in the project vicinity, and the Slate Creek area at the southern edge of the project area.

By the late 1970s (roughly 1976), the present roadbed of SR 188 had been constructed through the project area. The northern 21 miles (which encompass the current project area) were paved and completely bypassed FH 9 at this time. New drainage structures were constructed along this segment, making the road an “all-weather roadway” (U.S. Department of Transportation 1976:2-1). Even by 1981, however, portions of SR 188 were still gravel. The section between Ash Creek and Theodore Roosevelt Dam was unpaved and subject to frequent washouts (U.S. Department of Transportation 1981:S-1). The present roadbed in this area was paved sometime thereafter (in the early 1980s), in addition to the construction of recreational sites along that portion of the reservoir.

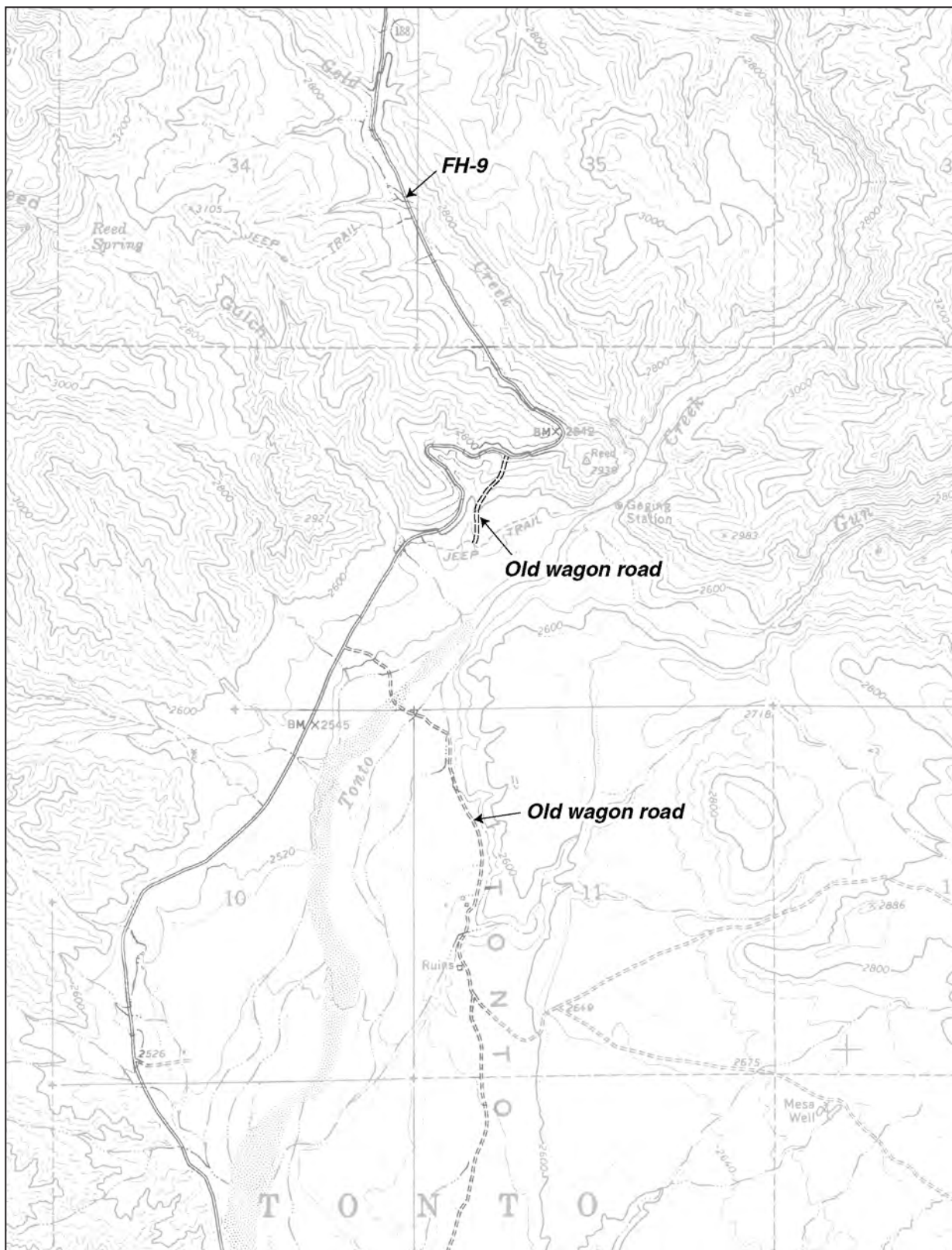


Figure 164. Map of FH 9 along Gold Creek from the 1964 Kayler Butte, Arizona, USGS quadrangle, scale 1:24,000 (USGS 1964). Modern SR 188 had not been constructed yet.

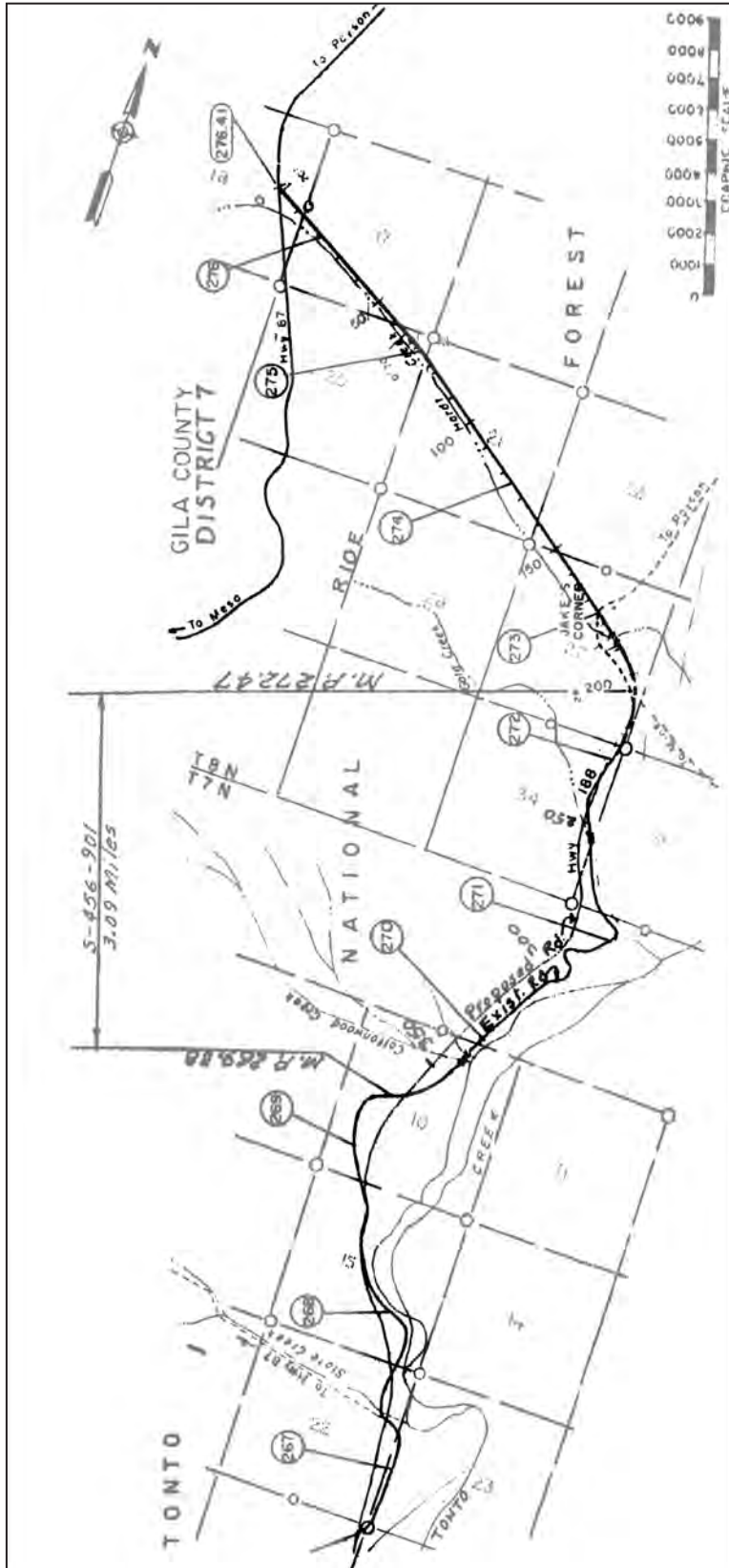


Figure 165. Plan for SR 188 through current project, 1973. Note plans for roadcut bypassing old FH 9 route around hill (Arizona Highway Department 1973). This map shows the replacement of Segments 1-4.

Field Investigations

Many portions of the old alignment of FH 9 exist in the region (Figures 166–168). Field investigations revealed that portions of the historical-period road lie approximately from Stations 215+00 to 250+00, from 290+00 to 295+00, and from 325+00 to 330+00 along the current ROW. No historical-period artifacts were identified or collected within the ROW. Several types of features are associated with the road, including the roadbed itself, cuts into the hillside, retaining walls, and bridges. The first three types were identified and recorded during the pedestrian survey. Three bridges were also identified, but these were located outside the project ROW.

The southernmost of these bridges is the Reed Gulch Bridge (Figure 169). It is a simple span, I-beam bridge reinforced with steel girders. The superstructure is a concrete deck, and admits two lanes of traffic (Figure 170). The Gold Creek Bridge is located near Roadbed Segment 1. This is also an I-beam bridge reinforced with steel girders (Figure 171). A central pier supports the span, and its abutments are hidden by decorative masonry (Figure 172). A retaining wall extends outward from this bridge, and the upper course of stone is the same type of stone used for the bridge abutments (Figure 173). The northernmost bridge is the Hardt Creek Bridge, near Jakes Corner (Figure 174). This is a simple span, I-beam bridge with steel girders. The deck is concrete and admits two lanes of traffic. Because of the structural similarities of all three bridges, it is likely that they were all built between 1957 and 1966, and all were bypassed with the construction of SR 188 in the 1970s. All three continue to be used for local traffic along segments of the old FH 9 that are still usable.

Roadbed Segment 1

Traces of Roadbed Segment 1 were identified in the ROW between Stations 215+00 and 245+00, north of Gold Creek and west of the current SR 188 alignment. This approximately 3,000-foot-long segment of FH 9 consists of an unimproved dirt road, about 20 feet wide at its greatest extent. The only features associated with this segment are four roadcuts carved into the hillsides on the west side of the old roadbed.

The approaches to the modern bridge, over which SR 188 crosses Gold Creek, are elevated on earthen embankments at least 30 feet in height. The northern approach buried the old FH 9 roadbed, separating it into Roadbed Segments 1 and 2. Roadbed Segment 1 extends north, running parallel to and lower than SR 188, from the base of the embankment for the northern approach. This route follows a small drain-

age that empties into Gold Creek near the bridge (Figure 175). The old road is approximately 20 feet wide, and can be traced for about 360 feet before reaching an area that is covered by colluvial deposition from the construction of SR 188. Approximately 280 feet of the former roadbed is obscured in this manner. Beyond this point, the FH 9 roadbed continues its north–south course along the small drainage and parallel to SR 188 for a distance of about 1,290 feet. Over this distance, the road rises in elevation about 28 m (90 feet) from 838 to 866 m (2,750 to 2,840 feet) AMSL. At this point, the roadbed leaves the drainage and climbs about 35 feet over a hillslope overlooking SR 188 (Figure 176). It continues along this hillslope for a distance of about 1,310 feet before it drops down 35 feet into another drainage and intersects the modern highway. At this point, the old roadbed disappears.

Several roadcuts were made into the slopes of the hills and ridges on the west side of the drainage to accommodate the old roadbed. Roadcut 1 begins about 250 feet north of the southern end of the segment, extends for about 75 feet, and varies in height between 6 and 8 feet. Roadcut 2, cut about 250 farther north, measures 20–30 feet high and about 140 feet in length (Figure 177). The road continues north 30 feet, following a slightly steeper grade to Roadcut 3, which is on the same hillslope as Roadcut 2 (Figure 178). Roadcut 3 was the largest cut in the project area, measuring about 25 feet high and over 560 feet in length (Figure 179). Roadcut 4 begins about 670 feet farther north on another hillslope where the roadbed climbs out of the drainage and above SR 188. Along the western edge of the road, a small cut was made into the hillside. Roadcut 4 is about 8 feet high and 330 feet long (Figures 180 and 181).

Roadbed Segment 2

Roadbed Segment 2 is separated from Segment 1 by the northern approach to the modern SR 188 Gold Creek Bridge. This segment extends in a southeasterly direction along the toe slope at the base of a large hill on the east bank of Gold Creek and SR 188. Roadbed Segment 2 is located within the ROW between Stations 245+00 and 250+00 and between the toe slope and the creek. The old Gold Creek Bridge, associated with FH 9 and built in 1966, lies along this segment but just outside the project ROW. The length of road contained within the ROW is less than 100 feet. Segment 2 was constructed on a slightly raised bench above the creek and cut into the toe slope of the hill. The road increases about 3 m (10 feet) in elevation from the modern embankment to the edge of the ROW (Figure 182). The road is an unimproved dirt road about 15 or 20 feet wide that hugs the base of the hillside until it reaches the old Gold Creek Bridge (Figure 183).



Figure 166. Roadbed Segment 1, west of SR 188.

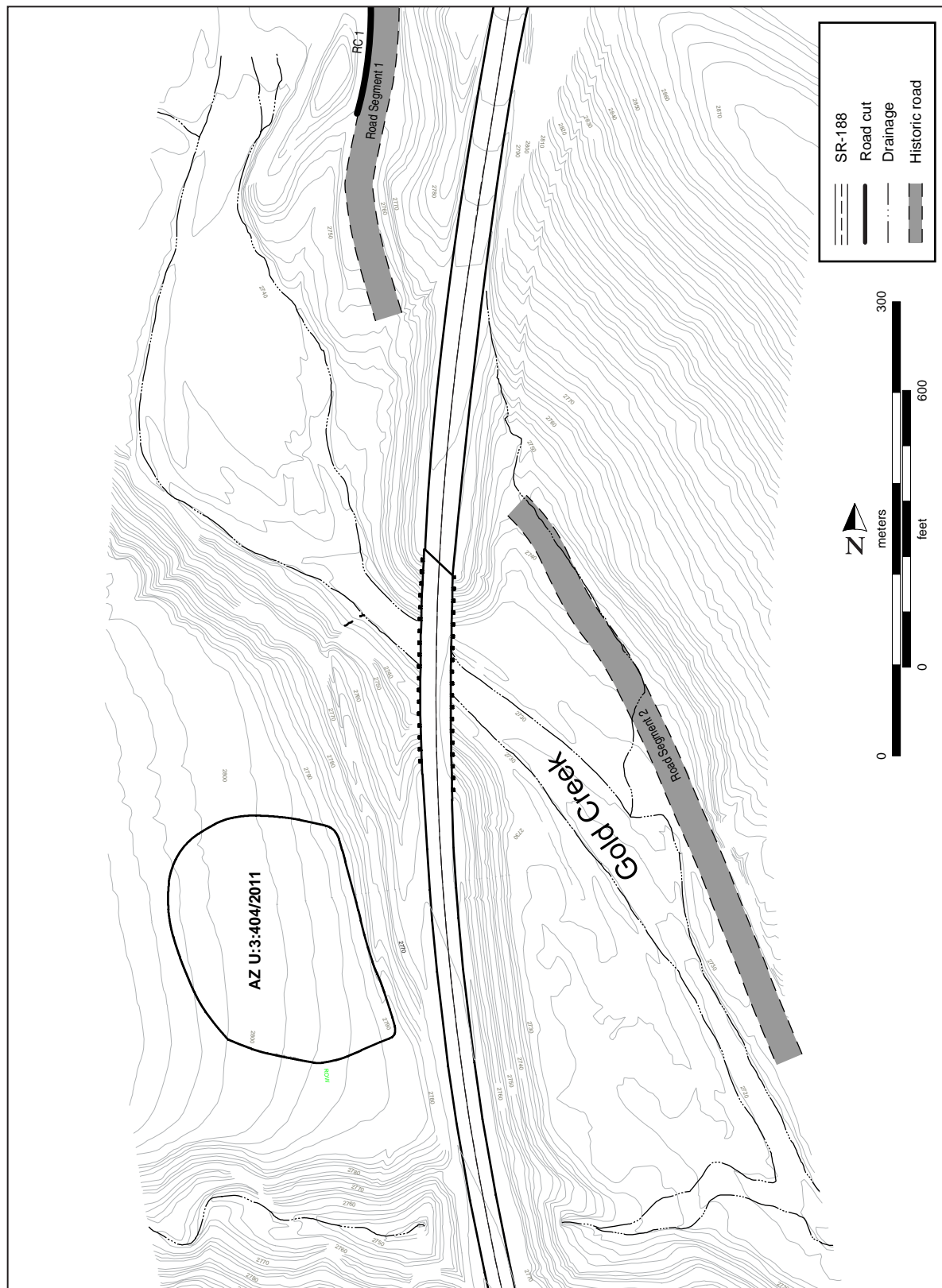


Figure 167. Roadbed Segment 2, near the modern SR 188 Gold Creek bridge.

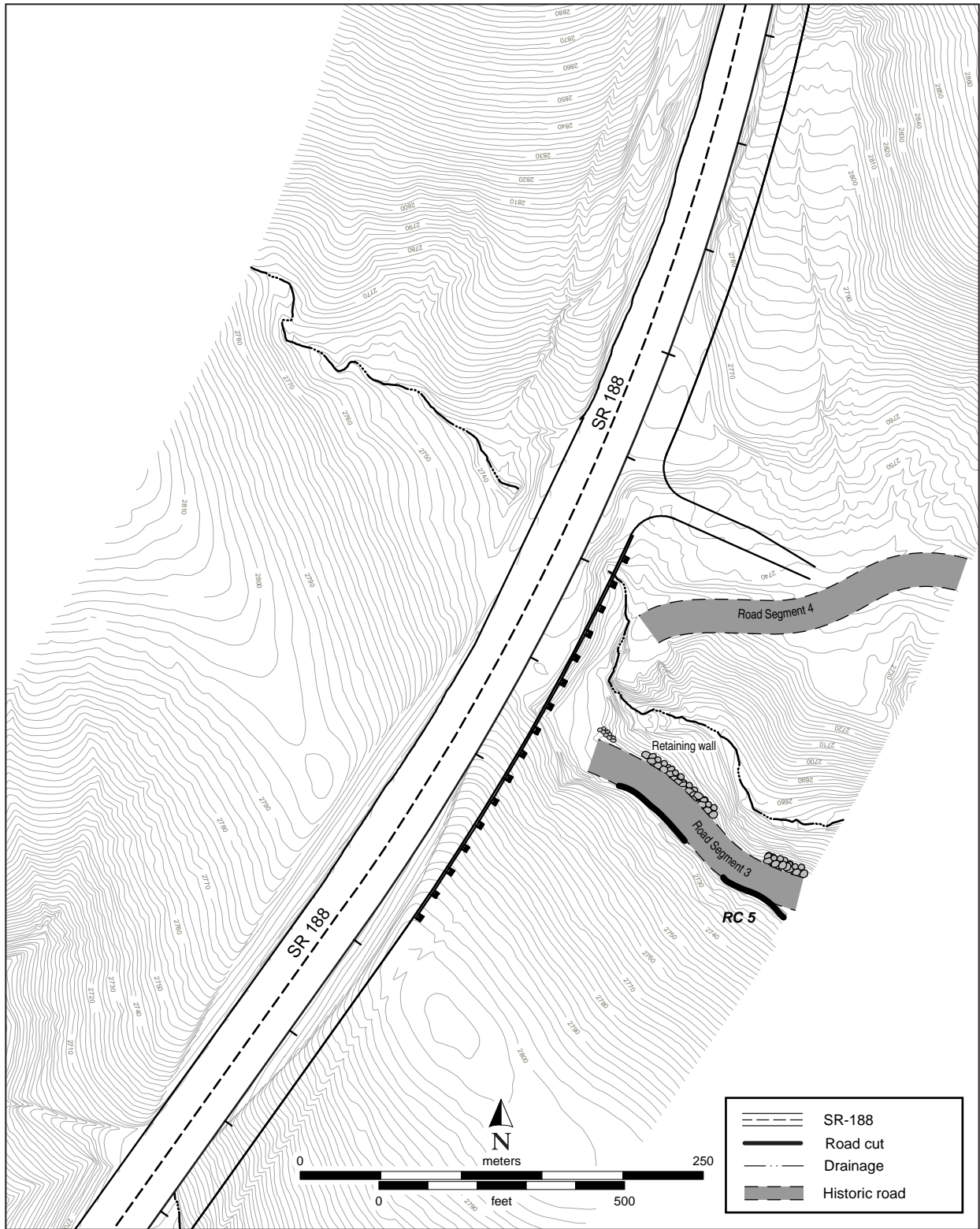


Figure 168. Roadbed Segments 3 and 4, east of SR 188.



Figure 169. FH 9 bridge spanning Reed Gulch, east of the project area.



Figure 170. FH 9 roadbed over Reed Gulch Bridge, view north.



Figure 171. FH 9 bridge spanning Gold Creek.



Figure 172. Detail photograph of stone and concrete abutments of the old Gold Creek Bridge.



Figure 173. Masonry retaining wall along the old FH 9 roadbed near the Gold Creek Bridge.



Figure 174. Hardt Creek Bridge near Jakes Corner.



Figure 175. Roadbed Segment 1, north of Gold Creek.



Figure 176. Roadbed Segment 1 along Roadcut 3, view north.



Figure 177. Roadcut 2 along Roadbed Segment 1, view west.



Figure 178. Roadcut 3 along Roadbed Segment 1, view west.



Figure 179. Roadcut 3 along Roadbed Segment 1, view west.



Figure 180. Roadbed Segment 1 along Roadcut 4.



Figure 181. Roadcut 4 along Roadbed Segment 1, view west.



Figure 182. Roadbed Segment 2 (foreground), near embankment associated with modern SR 188 Gold Creek Bridge (background).



Figure 183. Roadbed Segment 2, view southeast from SR 188.



Figure 184. Roadbed Segment 3, viewed south from across the ravine.



Figure 185. Retaining wall along Roadbed Segment 3.



Figure 186. Detail photograph of dry-laid stone retaining wall, Roadbed Segment 3.



Figure 187. Roadbed Segment 4, viewed southeast from across the ravine.

Roadbed Segments 3 and 4

These segments of FH 9 are located in the current ROW between Stations 290+00 and 295+00. Originally, these two segments were connected, forming a continuous switchback climbing a steep ravine that drops down into the Tonto Creek floodplain and around the large schist outcrop, Tonto Hill (TNF 1919)

Roadbed Segment 3 forms the southern part of the switchback. Here, the roadbed is an unimproved dirt road over 15 feet wide. The length of Roadbed Segment 3 contained in the ROW is about 150 feet, oriented perpendicular to SR 188, which crosses the head of the ravine on an embankment rising over 40 feet above the old roadbed and covering the bend that connected Roadbed Segments 3 and 4. Several features are associated with Roadbed Segment 3. A large roadcut, Roadcut 5, was excavated into the slope on the south side of the ravine, which measured about 15–25 feet in height and extends for several hundred feet and beyond the ROW (Figure 184). To prevent the road from eroding down into the ravine, a stone retaining wall was built (Figure 185). This retaining wall was constructed with large river cobbles, each measuring 40–70 cm in diameter. The stones were dry-laid into courses, and the lower courses were held together with packed earth (Figure 186). The number of visible courses varies from 4 to 10. Within the ROW, there are two extant

segments of the retaining wall: one is approximately 20 feet long and the other is 70 feet long. A large section of the retaining wall that separates these two segments has slumped downslope into the ravine. Several more segments can be seen outside of the ROW to the east.

Roadbed Segment 4 comprises the northern part of the switchback running along the gradually sloping northern side of the ravine (Figure 187). Here, the road is approximately 6 m (20 feet) higher in elevation than Roadbed Segment 3. The roadbed is an unimproved dirt road about 15–20 feet wide and extends about 100 feet within the ROW. The eastern end of this segment intersects with a modern pullout from SR 188 that provides access to the eastern end of this road segment that extends east of the ROW.

Roadbed Segment 5

Roadbed Segment 5 is located at the southern end of the project area, between Stations 325+00 and 330+00. It is aligned perpendicular to SR 188 and extends eastward toward Tonto Creek. Within the ROW, the former road has been paved with concrete. Beyond the ROW, however, there remains an unimproved dirt path roughly 15 feet wide that turns northwards and continues to where it meets the old Reed Gulch Bridge.

Conclusion

FH 9 provided a vital lifeline to the previously inaccessible Tonto Basin and surrounding region. The road was also the first route to open the Payson and Mogollon Rim areas from the south. During the late nineteenth century, the road through Tonto Basin was virtually the only thoroughfare to the rich ranching country of what is now Payson. The road also opened Tonto Basin itself to settlement, primarily ranching. FH 9 opened these areas to the increasingly important concentrations of population in central Arizona, particularly Globe and later Phoenix. As these latter areas grew and developed, communities serviced by FH 9 benefited. New markets for products, as well as a place to purchase manufactured goods, were made accessible by FH 9. The road carried passengers, freight, and mail, and was used by all means of transportation from wagons to automobiles. The road also played an important role in recreational aspects of the TNF. During its existence, FH 9 opened the Sierra Ancha, Tonto Basin, and other wild and scenic areas to visitors. The road was continuously used and updated until 1960, when it was realigned and renamed SR 188.

Five segments of FH 9 could be identified within the current ROW. Roadbed Segments 1 and 2 may have been

in use at least as early as 1907, when the road apparently followed the course of Gold Creek to Hardt Creek (see Figure 155). They may have continued in use until the modern, paved highway was constructed after 1973 (see Figure 165). Roadbed Segments 3 and 4 were probably constructed by 1919, when the road veered away from the mouth of Gold Creek and headed eastward around Tonto Hill (TNF 1919). They appear to have been abandoned by 1941, when the road reverted to the Gold Creek route. It is likely that all three bridges were built between 1957 and 1966, although these may have replaced earlier bridges. The rest of the features identified during the survey, including the roadcuts and rock retaining walls, are more difficult to date. According to an earlier study of the CCC, the CCC was responsible for construction and maintenance of many of the roads and other facilities in Tonto Basin (Ciolek-Torrello, ed.1987:276–299; Stebbins 1987). It is entirely possible that the FH 9 roadbed, cuts, and retaining walls were maintained by the CCC, however, our investigations proved inconclusive in this regard. Unlike the nearby Sunflower and Ashdale CCC camps (Stebbins 1987), we did not identify any deposits of historical-period refuse associated with the former Globe-Payson Highway.

Results and Laboratory Analyses of Archaeomagnetic and Calibrated Radiocarbon Samples

Table A.1. Archaeomagnetic and Calibrated Radiocarbon Samples from the Cottonwood Creek Project Site

Feature No., by Site	Context	Sample No.	Sample Type	Dates ^a
Site 41/583				
1	<i>horno</i>	SRI 2070	archaeomagnetic	A.D. 1010–1315
Vegas Ruin (405/2012)				
11	cotton (<i>Gossypium</i> sp.) from cobble-adobe-foundation room	Beta-154336	radiocarbon	cal A.D. 1210–1390
	cobble-adobe-foundation room, hearth (11.01)	SRI 2075	archaeomagnetic	off curve
	corn (<i>Zea mays</i>) from cobble-adobe-foundation room, hearth (11.02)	Beta-154338	radiocarbon	cal A.D. 1030–1220
	cobble-adobe-foundation room, hearth (11.02)	SRI 2082	archaeomagnetic	A.D. 935–1115, 1135–1315
19	pit structure, original hearth (19.04)	SRI 2078	archaeomagnetic	A.D. 935–1140, 1160–1315
	pit structure, later hearth (19.01)	SRI 2071	archaeomagnetic	A.D. 1010–1115, 1160–1215
34	pit structure, original hearth (34.32)	SRI 2079	archaeomagnetic	A.D. 935–1690
	pit structure, later hearth (34.01)	SRI 2072	archaeomagnetic	A.D. 935–1690
99	pit structure, pit associated with the hearths (99.24)	SRI 2080	archaeomagnetic	not measured
	pit structure, original hearth (99.25)	SRI 2081	archaeomagnetic	A.D. 1010–1290
	pit structure, later hearth (99.01)	SRI 2073	archaeomagnetic	A.D. 1010–1190
154	cotton (<i>Gossypium</i> sp.) from roasting pit	Beta-154339	radiocarbon	cal A.D. 1180–1290
179	corn (<i>Zea mays</i>) from pit structure	Beta-154332	radiocarbon	cal A.D. 1030–1220
	pit structure, latest hearth (179.60)	SRI 2074	archaeomagnetic	A.D. 935–1315
Rock Jaw site (407/2014)				
1	tepyary bean (<i>Phaseolus</i> sp.) from pit structure	Beta-154335	radiocarbon	cal A.D. 890–1120
	pit structure, hearth (1.01)	SRI 2077	archaeomagnetic	A.D. 1110–1140
3	common reed (<i>Phragmites australis</i> [<i>P. communis</i>]) from pit structure	Beta-154337	radiocarbon	cal A.D. 970–1160
	pit structure, hearth (3.02)	SRI 2076	archaeomagnetic	A.D. 1010–1265
4	hearth	SRI 2084	archaeomagnetic	too imprecise to date
Crane site (410/2017)				
6	corn (<i>Zea mays</i>) from cobble-adobe-foundation room	Beta-154334	radiocarbon	cal A.D. 1050–1280
13	hearth	SRI 2086	archaeomagnetic	too imprecise to date

Table A.1. Archaeomagnetic and Calibrated Radiocarbon Samples from the Cottonwood Creek Project Site (continued)

Feature No., by Site	Context	Sample No.	Sample Type	Dates ^a
27	roasting pit	SRI 2085	archaeomagnetic	too imprecise to date
29	hearth	SRI 2087	archaeomagnetic	too imprecise to date
30	pit structure, hearth (30.01)	SRI 2083	archaeomagnetic	A.D. 1010–1140, 1160–1215, 1235– 1365

^aArchaeomagnetic dates are all based on SWCV595 (LaBelle and Eighmy 1997). Radiocarbon dates are all 2- σ calibrated dates based on OxCal 3.10, IntCal04 dataset. Note that these dates differ from the original Beta Analytic calibrated dates that were calculated using the older IntCal98 dataset

Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2070

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ O:15:41 (ASM)

Site Location: Latitude: 34.01° N Longitude: 248.68° E Magnetic Declination: 12° E

Gila River Valley, Arizona, USA

Provenience: Horno F1

Archaeomagnetic Directional Data

Specimens Collected: 11
 Specimens Used (n): 11
 Inclination: 59.78°
 Declination: 344.72°
 Intensity: 1.89E-04 G
 α_{95} : 5.10°
 k: 82.41
 R: 10.88

Virtual Geomagnetic Polar Coordinates

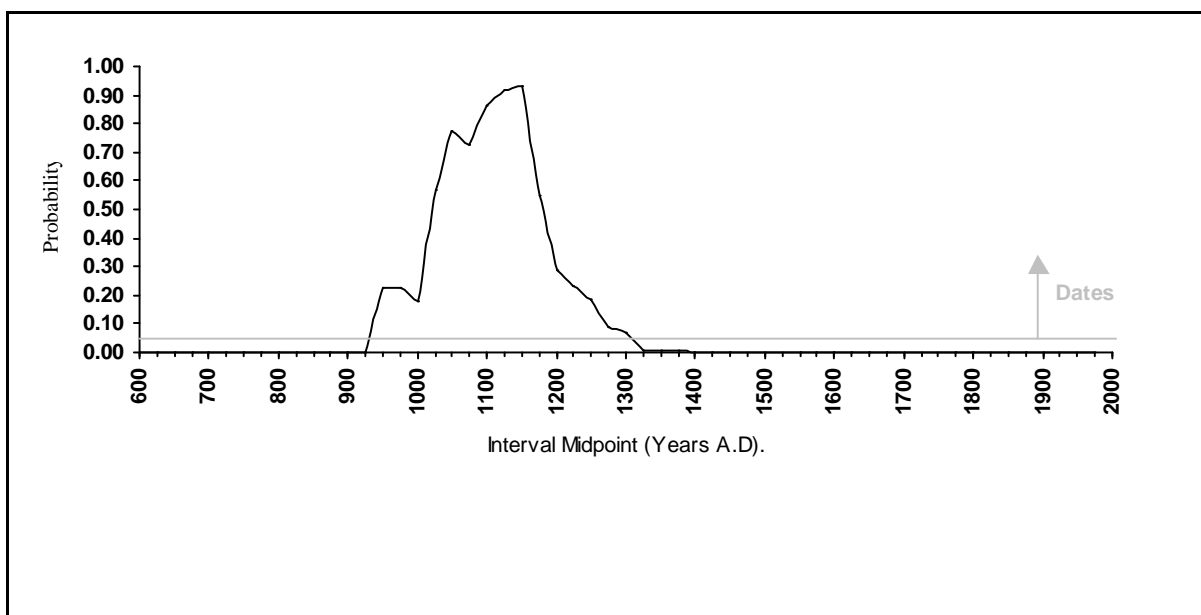
Latitude: 76.18° N
 Longitude: 191.80° E
 dm: 7.63°
 dp: 5.75°

SWCV595 Archaeomagnetic

Date Range(s):

A.D. 935–1315

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2071

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ U:3:405 (ASM), Vegas Ruin

Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E
 Gila County, Arizona, USA

Provenience: Pit Room F19, 19.01

Archaeomagnetic Directional Data

Specimens Collected: 10
 Specimens Used (n): 10
 Inclination: 57.16°
 Declination: 348.06°
 Intensity: 1.64E-03 G
 α_{95} : 1.70°
 k: 786.96
 R: 9.99

Virtual Geomagnetic Polar Coordinates

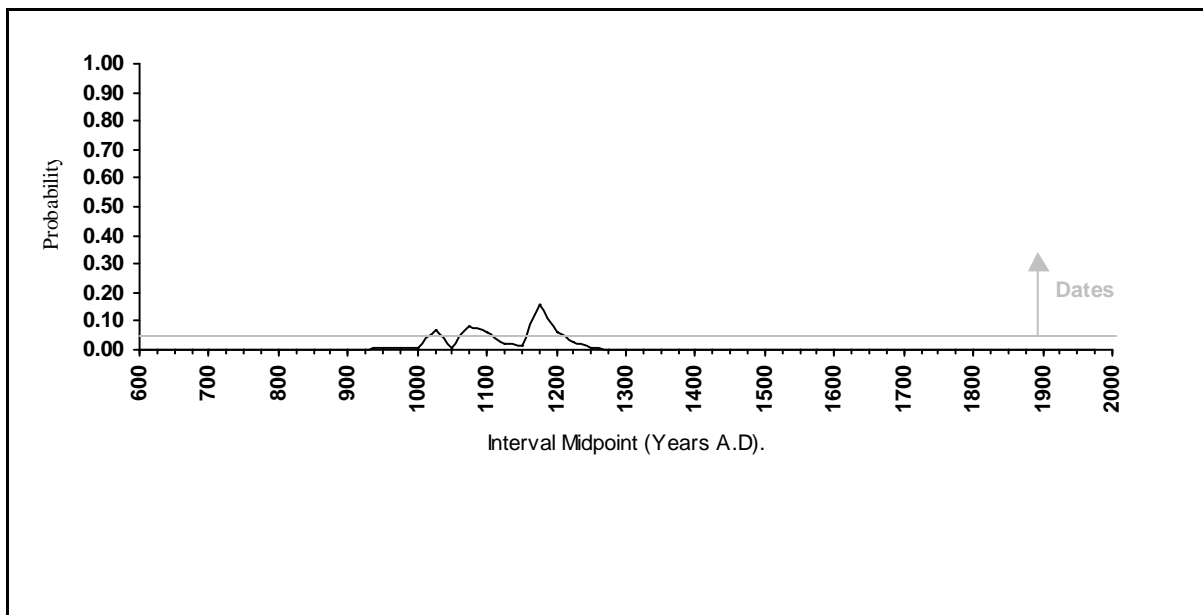
Latitude: 79.62° N
 Longitude: 183.49° E
 dm: 2.51°
 dp: 1.83°

SWCV595 Archaeomagnetic

Date Range(s):

A.D. 1010–1040
 A.D. 1060–1115
 A.D. 1160–1215

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2072

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ U:3:405 (ASM), Vegas Ruin

Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E
 Gila River Valley, Arizona, USA

Provenience: Pit Room F34, 34.01

Archaeomagnetic Directional Data

Specimens Collected: 12
 Specimens Used (n): 8
 Inclination: 60.71°
 Declination: 348.33°
 Intensity: 3.78E-03 G
 α_{95} : 4.70°
 k: 140.14
 R: 7.95

Virtual Geomagnetic Polar Coordinates

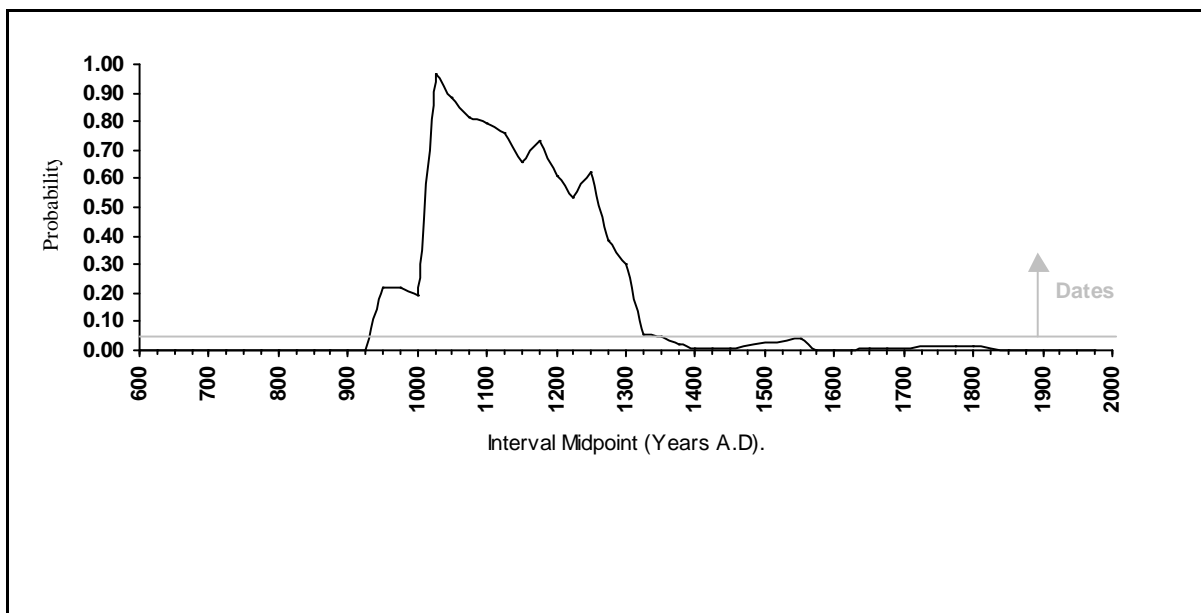
Latitude: 77.98° N
 Longitude: 202.21° E
 dm: 7.16°
 dp: 5.47°

SWCV595 Archaeomagnetic

Date Range(s):

A.D. 935–1365

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2073

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ U:3:405 (ASM), Vegas Ruin

Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E
 Gila County, Arizona, USA

Provenience: Pit Room F99, 99.01

Archaeomagnetic Directional Data

Specimens Collected: 12
 Specimens Used (n): 12
 Inclination: 61.39°
 Declination: 347.06°
 Intensity: 9.74E-04 G
 α_{95} : 1.80°
 k: 576.62
 R: 11.98

Virtual Geomagnetic Polar Coordinates

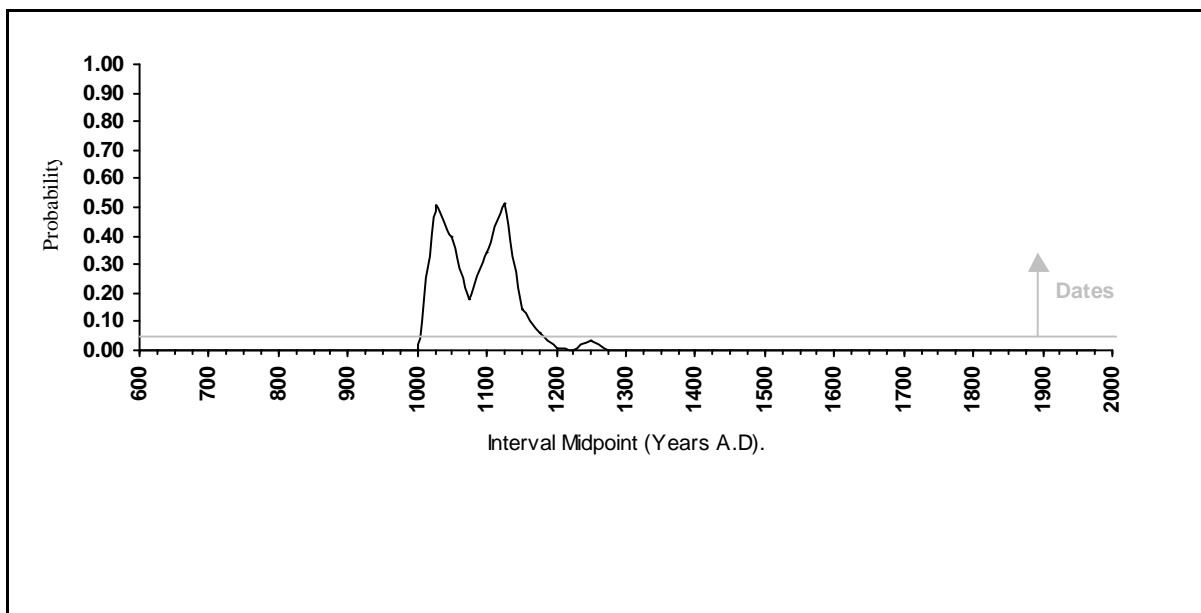
Latitude: 76.75° N
 Longitude: 202.60° E
 dm: 2.78°
 dp: 2.14°

SWCV595 Archaeomagnetic

Date Range(s):

A.D. 1010–1190

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2074

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ U:3:405 (ASM), Vegas Ruin

Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E
 Gila River Valley, Arizona, USA

Provenience: Pit Room F179, 179.60

Archaeomagnetic Directional Data

Specimens Collected: 12
 Specimens Used (n): 11
 Inclination: 60.62°
 Declination: 349.73°
 Intensity: 1.53E-03 G
 α_{95} : 3.60°
 k: 166.31
 R: 10.94

Virtual Geomagnetic Polar Coordinates

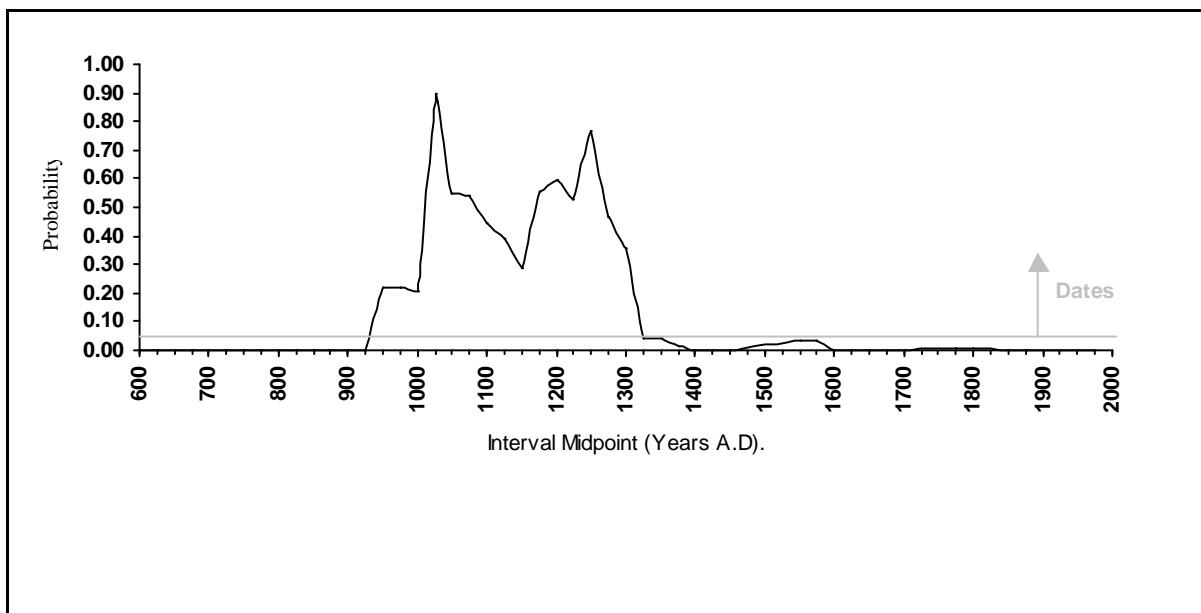
Latitude: 78.87° N
 Longitude: 205.00° E
 dm: 5.41°
 dp: 4.12°

SWCV595 Archaeomagnetic

Date Range(s):

A.D. 935–1315

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2075

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ U:3:405 (ASM), Vegas Ruin

Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E
 Gila County, Arizona, USA

Provenience: Pit Room F11, 11.1

Archaeomagnetic Directional Data

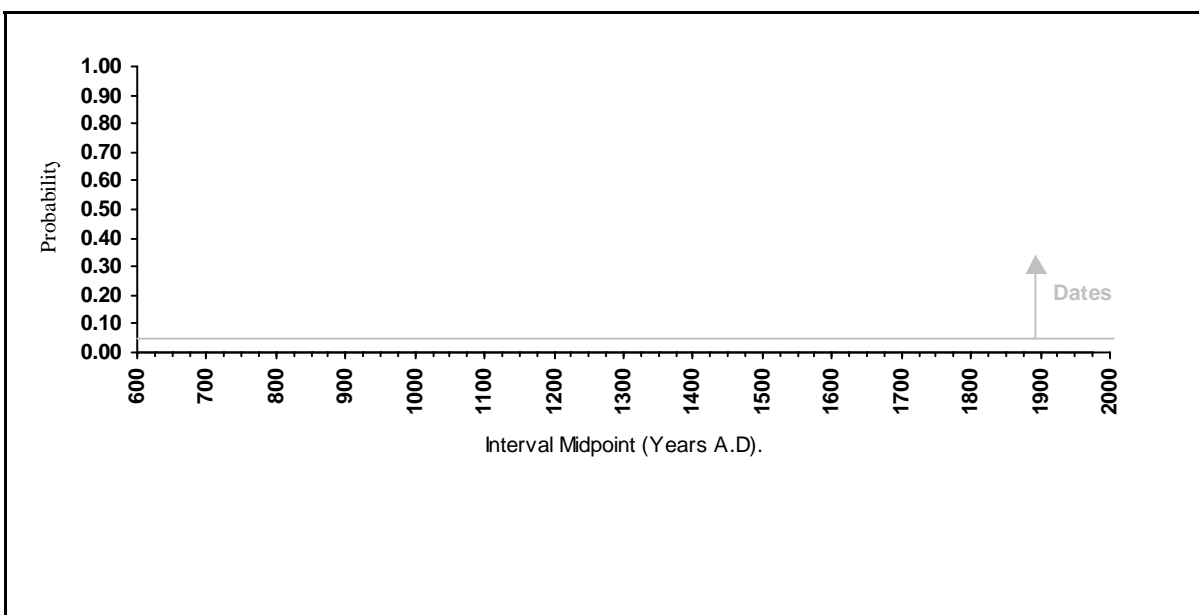
Specimens Collected: 13
 Specimens Used (n): 13
 Inclination: 57.41°
 Declination: 337.40°
 Intensity: 3.10E-03 G
 α_{95} : 2.40°
 k: 296.64
 R: 12.96

Virtual Geomagnetic Polar Coordinates

Latitude: 71.32° N
 Longitude: 177.73° E
 dm: 3.53°
 dp: 2.58°

**SWCV595 Archaeomagnetic
 Date Range(s):**

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2076

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ U:3:407 (ASM), Rock Jaw

Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E
 Gila County, Arizona, USA

Provenience: Pit Structure F3, 3.02

Archaeomagnetic Directional Data

Specimens Collected: 12
 Specimens Used (n): 10
 Inclination: 59.89°
 Declination: 347.50°
 Intensity: 4.02E-04 G
 α_{95} : 2.50°
 k: 371.38
 R: 9.98

Virtual Geomagnetic Polar Coordinates

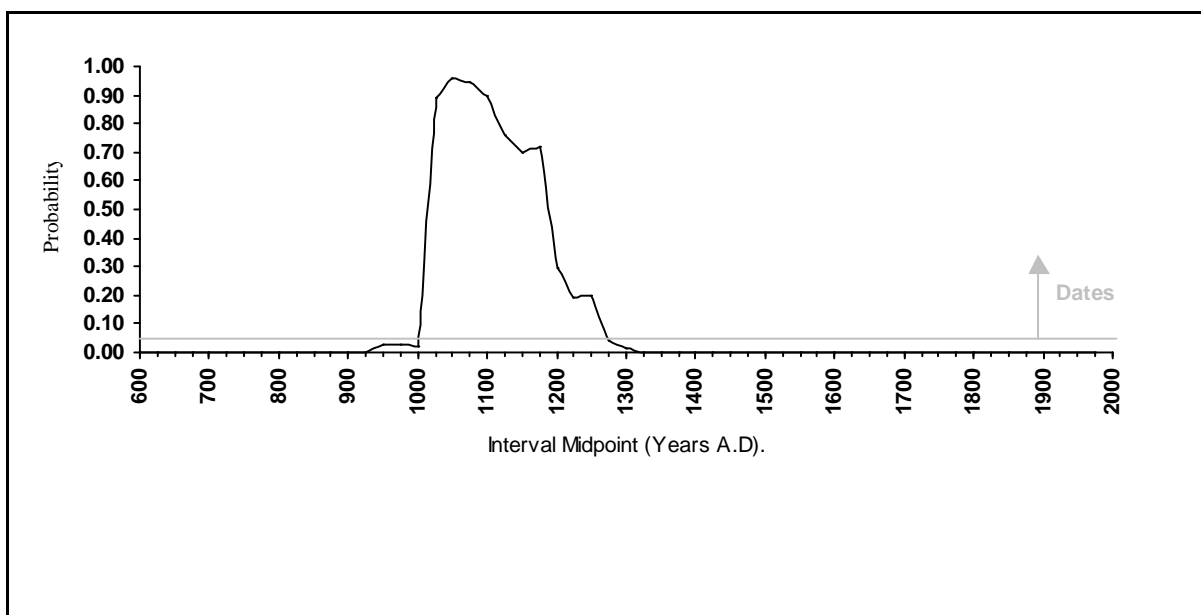
Latitude: 77.98° N
 Longitude: 196.75° E
 dm: 3.79°
 dp: 2.86°

SWCV595 Archaeomagnetic

Date Range(s):

A.D. 1010–1265

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2077

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner
 Site: AZ U:3:407 (ASM), Rock Jaw
 Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E
 Gila River Valley, Arizona, USA
 Provenience: Pit Structure F1, 1.01

Archaeomagnetic Directional Data

Specimens Collected: 12
 Specimens Used (n): 11
 Inclination: 0.00°
 Declination: 343.52°
 Intensity: 1.79E-03 G
 α_{95} : 1.50°
 k: 950.77
 R: 10.99

Virtual Geomagnetic Polar Coordinates

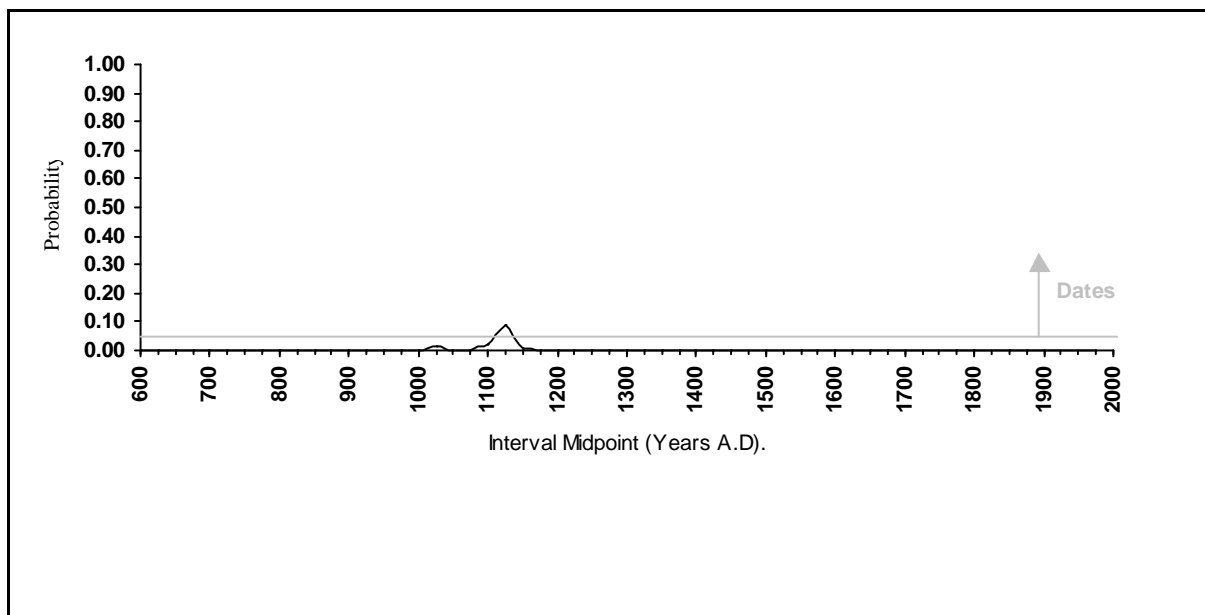
Latitude: 74.16° N
 Longitude: 199.54° E
 dm: 2.30°
 dp: 1.79°

SWCV595 Archaeomagnetic

Date Range(s):

A.D. 1110–1140

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2078

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ U:3:405 (ASM), Vegas Ruin

Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E

Gila River Valley, Arizona, USA

Provenience: Pit Room F19, 19.04

Archaeomagnetic Directional Data

Specimens Collected: 12
 Specimens Used (n): 8
 Inclination: 61.18°
 Declination: 351.26°
 Intensity: 1.38E-04 G
 α_{95} : 2.70°
 k: 422.68
 R: 7.98

Virtual Geomagnetic Polar Coordinates

Latitude: 79.24° N
 Longitude: 211.65° E
 dm: 4.14°
 dp: 3.18°

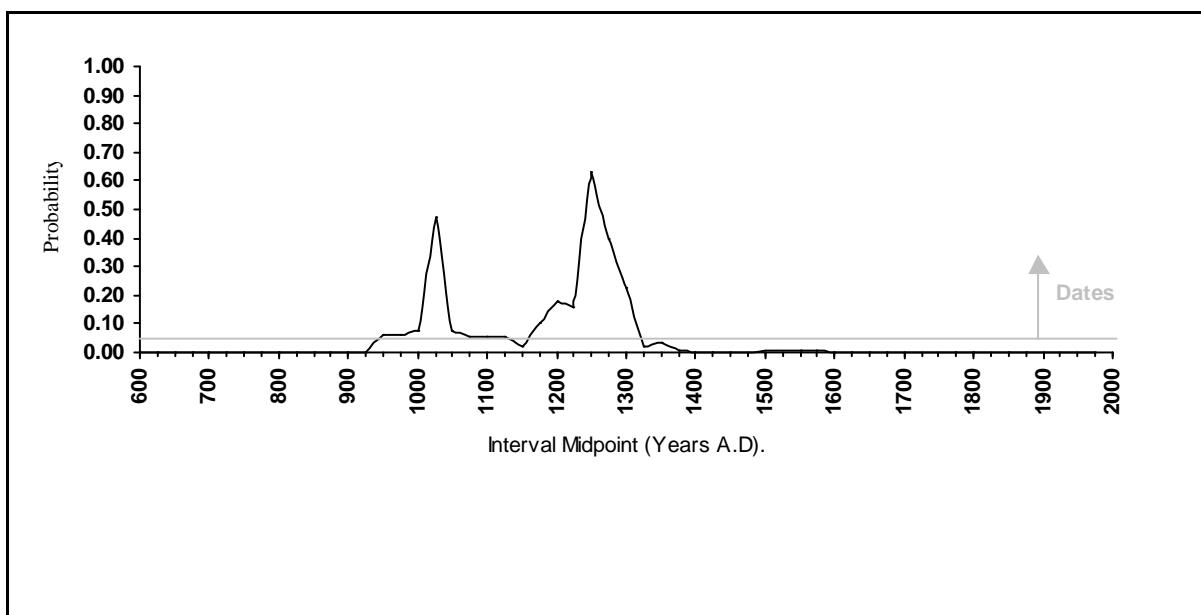
SWCV595 Archaeomagnetic

Date Range(s):

A.D. 935–1140

A.D. 1160–1315

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2079

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ U:3:405 (ASM), Vegas Ruin

Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E
 Gila River Valley, Arizona, USA

Provenience: Pit Room F34, 34.32

Archaeomagnetic Directional Data

Specimens Collected: 12
 Specimens Used (n): 12
 Inclination: 60.54°
 Declination: 353.84°
 Intensity: 1.09E-04 G
 α_{95} : 5.50°
 k: 62.42
 R: 11.82

Virtual Geomagnetic Polar Coordinates

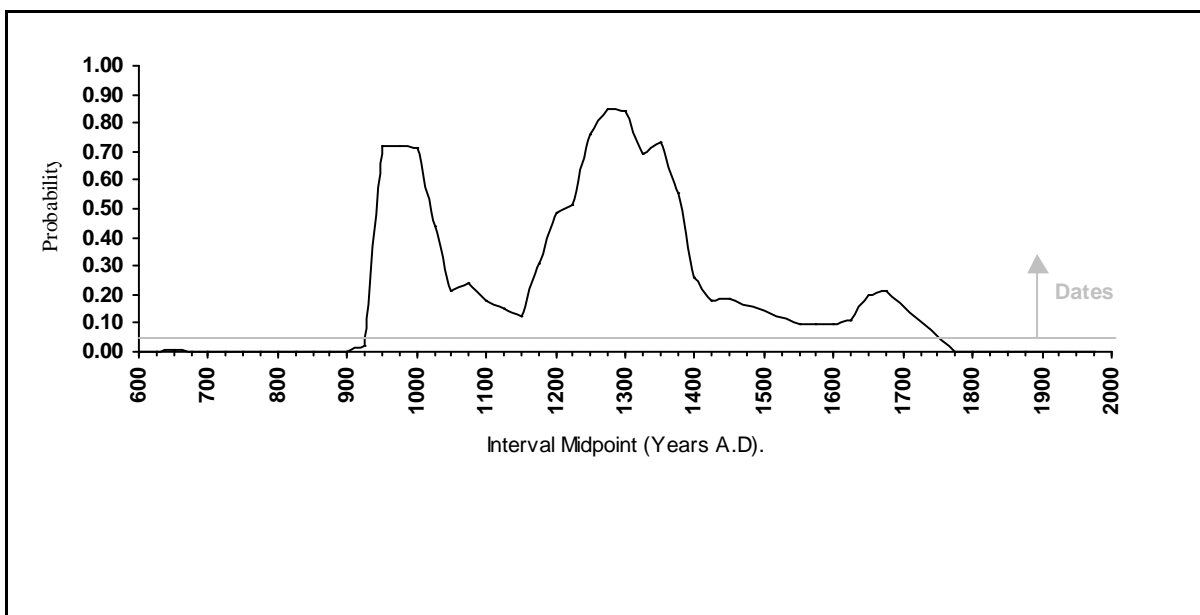
Latitude: 81.03° N
 Longitude: 217.64° E
 dm: 8.43°
 dp: 6.42°

SWCV595 Archaeomagnetic

Date Range(s):

A.D. 935–1690

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2081

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ U:3:405 (ASM), Vegas Ruin

Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E
 Gila River Valley, Arizona, USA

Provenience: Pit Room F99, 99.25

Archaeomagnetic Directional Data

Specimens Collected: 13
 Specimens Used (n): 13
 Inclination: 59.83°
 Declination: 349.06°
 Intensity: 6.82E-04 G
 α_{95} : 1.80°
 k: 560.39
 R: 12.98

Virtual Geomagnetic Polar Coordinates

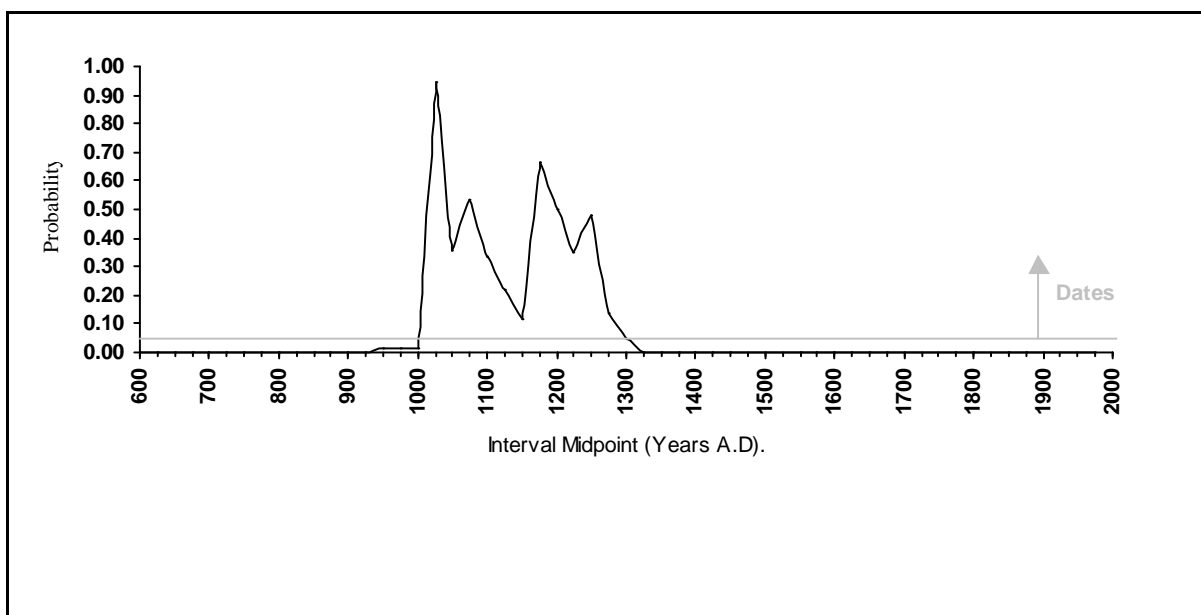
Latitude: 79.02° N
 Longitude: 199.61° E
 dm: 2.64°
 dp: 1.99°

SWCV595 Archaeomagnetic

Date Range(s):

A.D. 1010–1290

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2082

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ U:3:405 (ASM), Vegas Ruin

Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E
 Gila County, Arizona, USA

Provenience: Pit Room F11, 11.2

Archaeomagnetic Directional Data

Specimens Collected: 7
 Specimens Used (n): 7
 Inclination: 55.32°
 Declination: 350.38°
 Intensity: 7.09E-04 G
 α_{95} : 3.60°
 k: 287.95
 R: 6.98

Virtual Geomagnetic Polar Coordinates

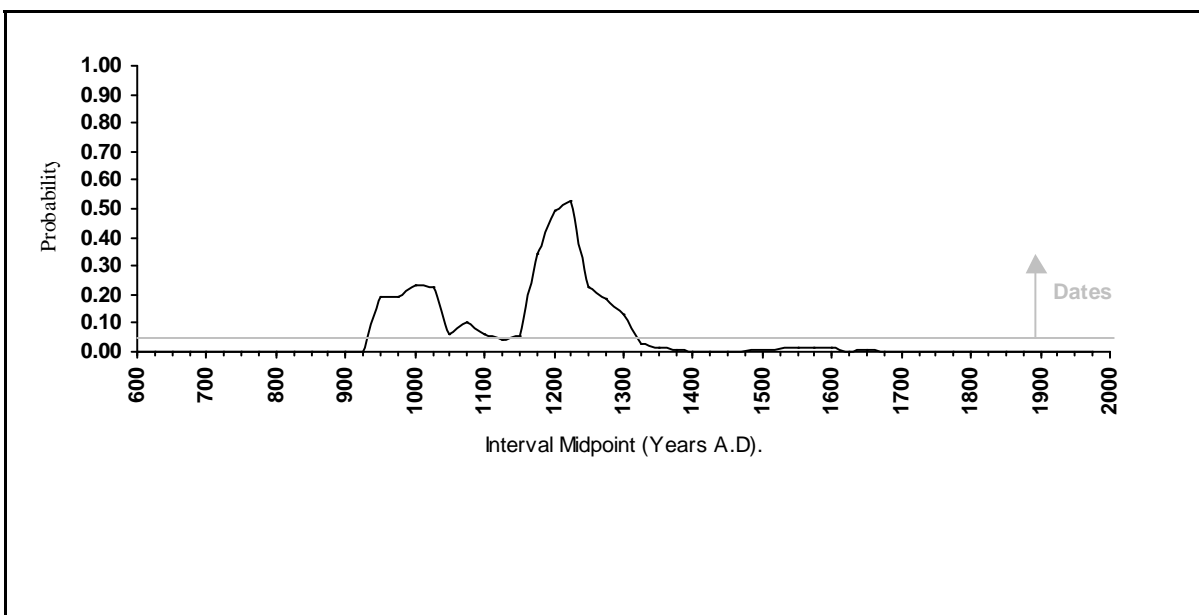
Latitude: 81.14° N
 Longitude: 186.42° E
 dm: 5.08°
 dp: 3.62°

SWCV595 Archaeomagnetic

Date Range(s):

A.D. 935–1115
 A.D. 1135–1315

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2083

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ U:3:410 (ASM), Crane

Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E
 Gila County, Arizona, USA

Provenience: Pit Structure F30, 30.1

Archaeomagnetic Directional Data

Specimens Collected: 12
 Specimens Used (n): 12
 Inclination: 64.49°
 Declination: 351.19°
 Intensity: 2.87E-03 G
 α_{95} : 4.90°
 k: 81.02
 R: 11.86

Virtual Geomagnetic Polar Coordinates

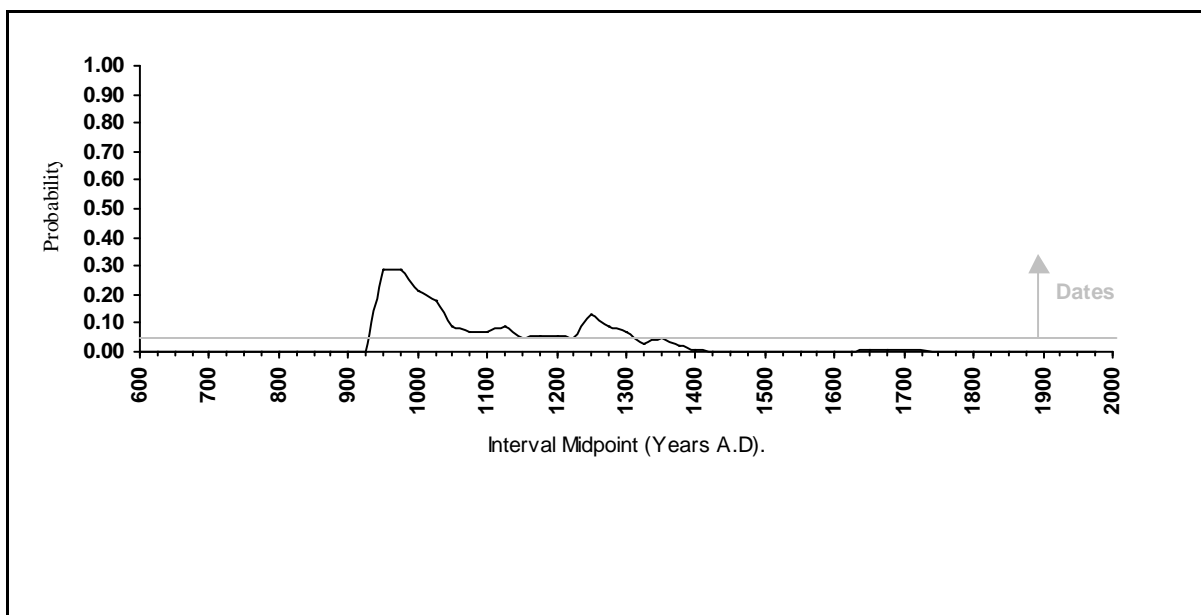
Latitude: 75.94° N
 Longitude: 222.88° E
 dm: 7.78°
 dp: 6.23°

SWCV595 Archaeomagnetic

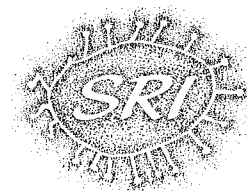
Date Range(s):

A.D. 935–1140
 A.D. 1160–1215
 A.D. 1235–1315
 A.D. 1335–1365

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2084

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ U:3:407 (ASM), Rock Jaw

Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E
 Gila County, Arizona, USA

Provenience: Firepit F4

Archaeomagnetic Directional Data

Specimens Collected: 11
 Specimens Used (n): 11
 Inclination: 60.64°
 Declination: 313.33°
 Intensity: 4.07E-05 G
 α_{95} : 47.50°
 k: 1.89
 R: 5.71

Virtual Geomagnetic Polar Coordinates

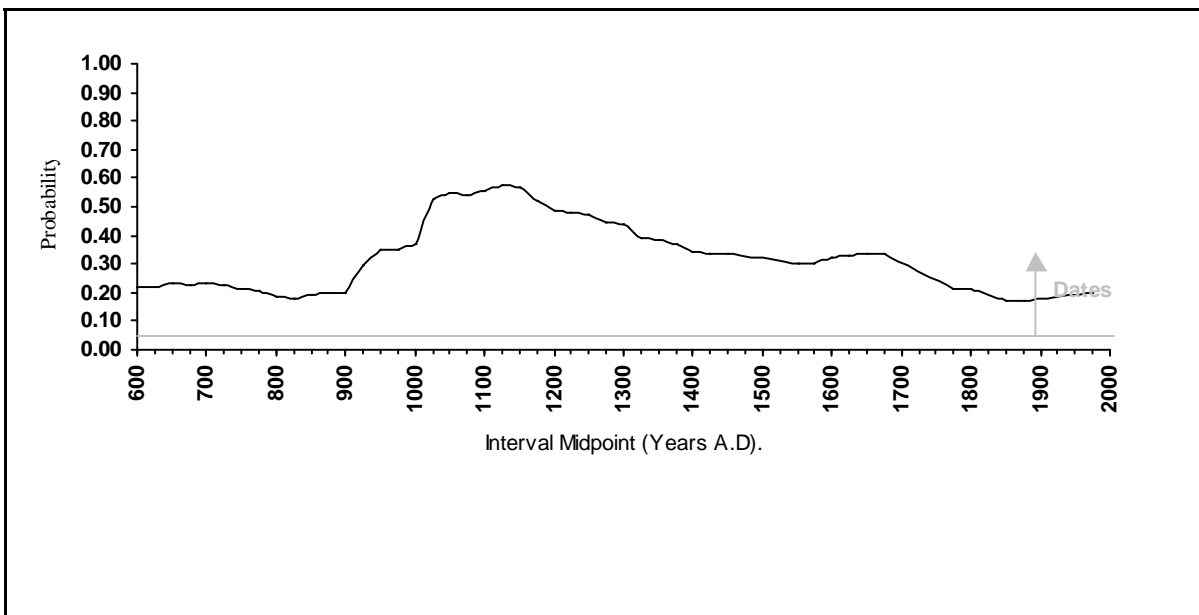
Latitude: 52.80° N
 Longitude: 184.61° E
 dm: 72.36°
 dp: 55.16°

SWCV595 Archaeomagnetic

Date Range(s):

A.D. 585–1990

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2085

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ U:3:410 (ASM), Crane

Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E
 Gila River Valley, Arizona, USA

Provenience: Roasting Pit F27

Archaeomagnetic Directional Data

Specimens Collected: 12
 Specimens Used (n): 12
 Inclination: 48.64°
 Declination: 337.51°
 Intensity: 4.98E-05 G
 α_{95} : 11.60°
 k: 15.07
 R: 11.27

Virtual Geomagnetic Polar Coordinates

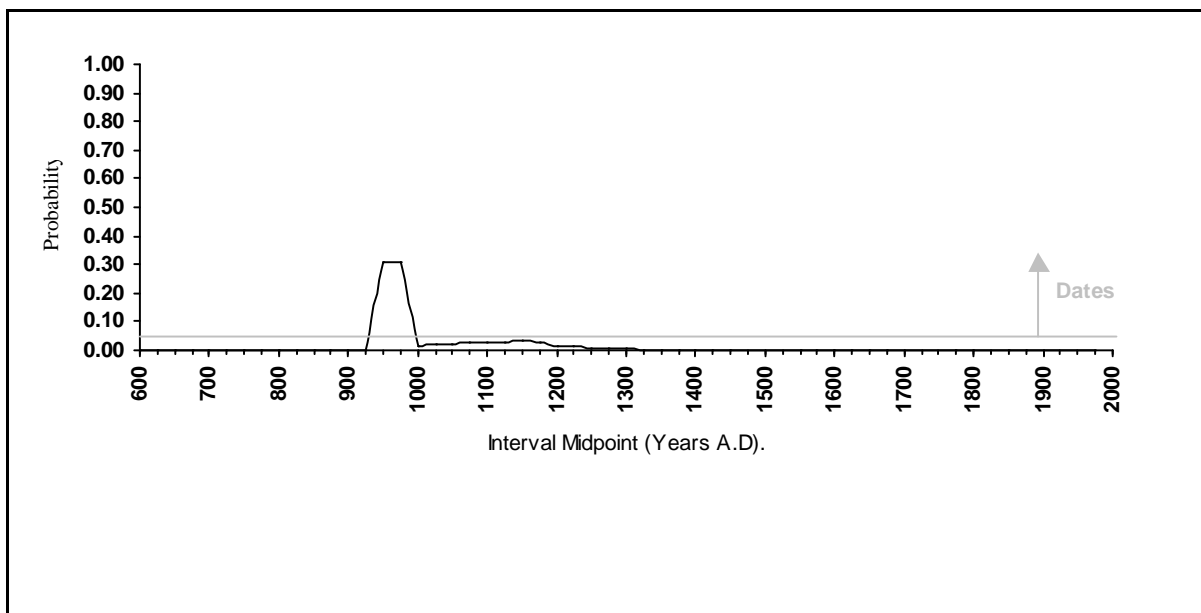
Latitude: 70.43° N
 Longitude: 151.92° E
 dm: 15.21°
 dp: 10.00°

SWCV595 Archaeomagnetic

Date Range(s):

A.D. 935–990

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2086

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ U:3:410 (ASM), Crane

Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E
 Gila County, Arizona, USA

Provenience: Firepit F13

Archaeomagnetic Directional Data

Specimens Collected: 12
 Specimens Used (n): 12
 Inclination: 36.63°
 Declination: 357.10°
 Intensity: 3.04E-05 G
 α_{95} : 18.60°
 k: 6.43
 R: 10.29

Virtual Geomagnetic Polar Coordinates

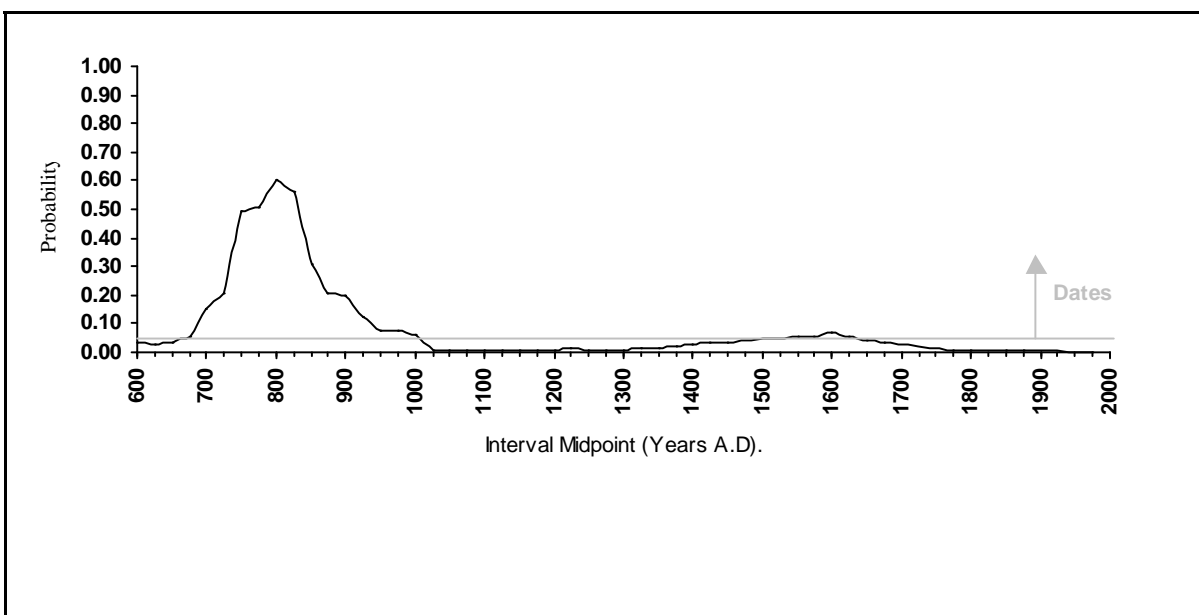
Latitude: 76.18° N
 Longitude: 80.12° E
 dm: 21.69°
 dp: 12.67°

SWCV595 Archaeomagnetic

Date Range(s):

A.D. 660–1015
 A.D. 1535–1640

Dating Probabilities



Dating Report
Archaeomagnetic Research Program
Statistical Research, Inc.
Tucson, Arizona



Laboratory Number: SRI 2087

Project: Statistical Research, Inc., Tucson Office: SR188: Jakes Corner

Site: AZ U:3:410 (ASM), Crane

Site Location: Latitude: 33.97° N Longitude: 248.68° E Magnetic Declination: 11.99° E
 Gila County, Arizona, USA

Provenience: Firepit F29

Archaeomagnetic Directional Data

Specimens Collected: 10
 Specimens Used (n): 10
 Inclination: 60.03°
 Declination: 343.29°
 Intensity: 2.18E-05 G
 α_{95} : 19.40°
 k: 7.18
 R: 8.75

Virtual Geomagnetic Polar Coordinates

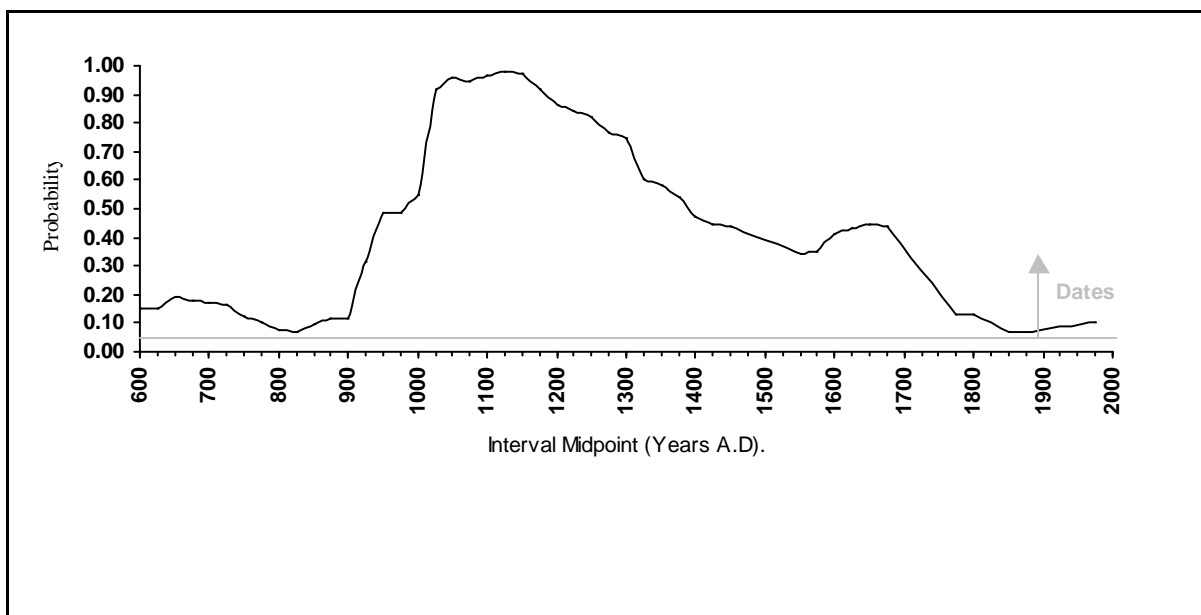
Latitude: 75.06° N
 Longitude: 191.27° E
 dm: 29.29°
 dp: 22.15°

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Date Range(s):

A.D. 585–1990

Dating Probabilities





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MR. DARDEN HOOD
Director

Mr. Ronald Hatfield
Mr. Christopher Patrick
Deputy Directors

May 7, 2001

Mr. Jeffrey Altschul
Statistical Research, Inc.
6099 E. Speedway Blvd.
P.O. Box 31865
Tucson, AZ 85751
USA

RE: Radiocarbon Dating Results For Samples 2012PD1760, 2017PD346, 2014PD263,
2012PD440, 2014PD236, 2012PD185, 2012PD1042

Dear Jeff:

Nice meeting you at SAA. Enclosed are the radiocarbon dating results for seven samples recently sent to us. They each provided plenty of carbon for accurate measurements and all the analyses went normally. The report sheet also contains the method used, material type, applied pretreatments and, where applicable, the two sigma calendar calibration range.

One of the samples (Beta-154335) was listed as "maize" on the datasheet, but did not exhibit a $^{13}\text{C}/^{12}\text{C}$ ratio typical of maize. We double checked everything and the value of -24.7 o/oo for the sample is correct. For maize, I would expect something around -10 o/oo (which would make the date about 250 years older).

As always, this report has been both mailed and sent electronically. All results (excluding some inappropriate material types) which are less than about 20,000 years BP and more than about ~250 BP include this calendar calibration page (also digitally available in Windows metafile (wmf) format upon request). The calibrations are calculated using the newest (1998) calibration database with references quoted on the bottom of each page. Multiple probability ranges may appear in some cases, due to short term variations in the atmospheric ^{14}C contents at certain time periods. Examining the calibration graphs will help you understand this phenomenon. Don't hesitate to contact us if you have questions about calibration.

We analyzed these samples on a sole priority basis. No students or intern researchers who would necessarily be distracted with other obligations and priorities were used in the analyses. We analyzed them with the combined attention of our entire professional staff.

Information pages are also enclosed with the mailed copy of this report. If you have any specific questions about the analyses, please do not hesitate to contact us.

Our invoice is enclosed. Please, forward it to the appropriate officer or send VISA change authorization. Thank you. As always, if you have any questions or would like to discuss the results, don't hesitate to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Darden Hood".


BETA ANALYTIC INC.

DR. M.A. TAMERS and MR. D.G. HOOD

 UNIVERSITY BRANCH
 4985 S.W. 74 COURT
 MIAMI, FLORIDA, USA 33155
 PH: 305/667-5167 FAX: 305/663-0964
 E-MAIL: beta@radiocarbon.com

REPORT OF RADIOCARBON DATING ANALYSES

Mr. Jeffrey Altschul

Report Date: 5/7/01

Statistical Research, Inc.

Material Received: 3/26/01

Sample Data	Measured Radiocarbon Age	¹³ C/ ¹² C Ratio	Conventional Radiocarbon Age(*)
Beta - 154332 SAMPLE : 2012PD1760 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1030 to 1240 (Cal BP 920 to 710)	660 +/- 40 BP	-11.0 o/oo	890 +/- 40 BP
Beta - 154334 SAMPLE : 2017PD346 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1160 to 1270 (Cal BP 790 to 680)	610 +/- 40 BP	-11.5 o/oo	830 +/- 40 BP
Beta - 154335 SAMPLE : 2014PD263 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (maize): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 910 to 920 (Cal BP 1040 to 1030) AND Cal AD 955 to 1035 (Cal BP 995 to 915)	1040 +/- 40 BP	-24.7 o/oo	1040 +/- 40 BP
Beta - 154336 SAMPLE : 2012PD440 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1230 to 1300 (Cal BP 720 to 650)	740 +/- 40 BP	-24.7 o/oo	740 +/- 40 BP
Beta - 154337 SAMPLE : 2014PD236 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 980 to 1060 (Cal BP 970 to 890) AND Cal AD 1080 to 1150 (Cal BP 860 to 800)	1000 +/- 40 BP	-24.7 o/oo	1000 +/- 40 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = 1950 A.D.). By International convention, the modern reference standard was 95% of the C14 content of the National Bureau of Standards' Oxalic Acid & calculated using the Libby C14 half life (5568 years). Quoted errors represent 1 standard deviation statistics (68% probability) & are based on combined measurements of the sample, background, and modern reference standards.

Measured C13/C12 ratios were calculated relative to the PDB-1 international standard and the RCYBP ages were normalized to -25 per mil. If the ratio and age are accompanied by an (*), then the C13/C12 value was estimated, based on values typical of the material type. The quoted results are NOT calibrated to calendar years. Calibration to calendar years should be calculated using the Conventional C14 age.



BETA ANALYTIC INC.

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REPORT OF RADIOCARBON DATING ANALYSES

Mr. Jeffrey Altschul

Report Date: 5/7/01

Sample Data	Measured Radiocarbon Age	¹³ C/ ¹² C Ratio	Conventional Radiocarbon Age(*)
Beta - 154338 SAMPLE : 2012PD185 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1030 to 1240 (Cal BP 920 to 710)	670 +/- 40 BP	-11.5 o/oo	890 +/- 40 BP
Beta - 154339 SAMPLE : 2012PD1042 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1200 to 1290 (Cal BP 750 to 660)	790 +/- 40 BP	-26.0 o/oo	770 +/- 40 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = 1950A.D.). By International convention, the modern reference standard was 95% of the C14 content of the National Bureau of Standards' Oxalic Acid & calculated using the Libby C14 half life (5568 years). Quoted errors represent 1 standard deviation statistics (68% probability) & are based on combined measurements of the sample, background, and modern reference standards.

Measured C13/C12 ratios were calculated relative to the PDB-1 international standard and the RCYBP ages were normalized to -25 per mil. If the ratio and age are accompanied by an (*), then the C13/C12 value was estimated, based on values typical of the material type. The quoted results are NOT calibrated to calendar years. Calibration to calendar years should be calculated using the Conventional C14 age.

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The Sedentary to Classic Period Transition in Tonto Basin presents the results of archaeological investigations on the eastern slopes of the Mazatzal Mountains at the boundary of the upper and lower Tonto Basins in central Arizona. The project involved nine small prehistoric sites and segments of the historical-period Globe-Payson Highway. The prehistoric sites include two limited-activity sites located along Hardt Creek near Jakes Corner, an early Classic period field house overlooking Gold Creek, and six late Sedentary–early Classic period sites near Cottonwood Creek. The latter include two small early Classic period compounds overlying smaller Sedentary period settlements.

The Sedentary to Classic period transition, a watershed event in the prehistory of Tonto Basin, has been the subject of considerable controversy for over a half century. Early investigators had argued that this transition was a time when Hohokam colonists abandoned Tonto Basin, leaving a cultural vacuum that was subsequently filled by groups who migrated from the Mogollon Rim and created a distinct Puebloan-related culture they called the Salado. Later investigators rejected the notion of a cultural hiatus and argued for direct continuity between the pre-Classic period Hohokam and Classic period Salado cultures. Still others have suggested that Tonto Basin was an area of cultural interaction between the three major cultures of the Southwest. The variable influences of the Hohokam, Mogollon, and Anasazi were manifested in architecture, ceramics, and mortuary practices at different times and in different places within the basin. The variety of chronologies, time periods, and phases developed for Tonto Basin reflect this debate.

The State Route 188–Cottonwood Creek Project provides important new information about chronology and cultural relations during this pivotal time period in Tonto Basin prehistory. In this, the first volume in a three-volume series, we present the results of archaeological investigations at these sites. We describe in detail architecture, mortuary, and other features, as well as their associated remains and chronometric data.