The Mescal Wash Site: A Persistent Place along Cienega Creek, Southeastern Arizona

Archaeological Investigations at the Marsh Station Traffic Interchange and Pantano Railroad Overpass, Interstate 10, Pima County, Arizona

Volume 1: Project Background and Feature Descriptions

Edited by
Rein Vanderpot

Technical Series 96
Statistical Research, Inc.
Tucson, Arizona

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Technical Series 96
Statistical Research, Inc.
Tucson, Arizona

2017

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ABSTRACT

Report Title: The Mescal Wash Site: A Persistent Place along Cienega Creek, Southeastern Arizona; Archaeological Investigations at the Marsh Station Traffic Interchange and Pantano Railroad Overpass, Interstate 10, Pima County, Arizona; Volume 1: Project Background and Feature Descriptions

Report Date: 2016

Project Sponsor: Arizona Department of Transportation and Federal Highway Administration

Contract Number: ECS Contract No. 00-64 (TRACS No. H2390 01E)

Permit Numbers: State of Arizona Blanket Antiquities Permit No. 2000-55bl; Arizona State Museum Permit No. 2000-92ps; Burial Memorandum of Agreement No. 00-21; ASM Repository Agreement No. 865; State Highway Right-of-Way Permit No. 78066; Union Pacific Railroad Contract Folder No. 01904-64.

Agencies: Arizona State Land Department, Arizona State Historic Preservation Office, Arizona State Museum, Arizona Department of Transportation, and Federal Highway Administration

Project Title: The Marsh Station Archaeological Project (MSAP)

Archaeological Consultants: Statistical Research, Inc. (SRI), 6099 E. Speedway Blvd., Tucson, AZ 85712; (520) 721-4309

Principal Investigator: Jeffrey H. Altschul, Ph.D. (2000–2005); Stephanie M. Whittlesey, Ph.D. (2006); Rein Vanderpot, M.A. (2007–2016)

Project Director: Rein Vanderpot, M.A. (2000–2006)

Field Director: William L. Deaver, M.A., and Robert Wegener, M.A. (2000–2001)

Project Description: In 2000 and 2001, SRI, completed phased archaeological data recovery at the Mescal Wash site (AZ EE:2:51 [ASM]), located at the Marsh Station Traffic Interchange and Pantano Railroad Overpass, Interstate 10, Pima County, Arizona. Phase 1 fieldwork was conducted between June 19 and July 27, 2000; Phase 2 fieldwork was conducted between January 16 and June 15, 2001. A total of 1,197 field person-days was expended during these periods. This work was conducted in support of the reconstruction of the existing interchange and overpass by the Arizona Department of Transportation. During the investigations, SRI identified 2,314 archaeological features, of which 474 features (not counting intramural subfeatures) were excavated. The excavated features included 97 structures and 377 extramural features (48 of which were burials).

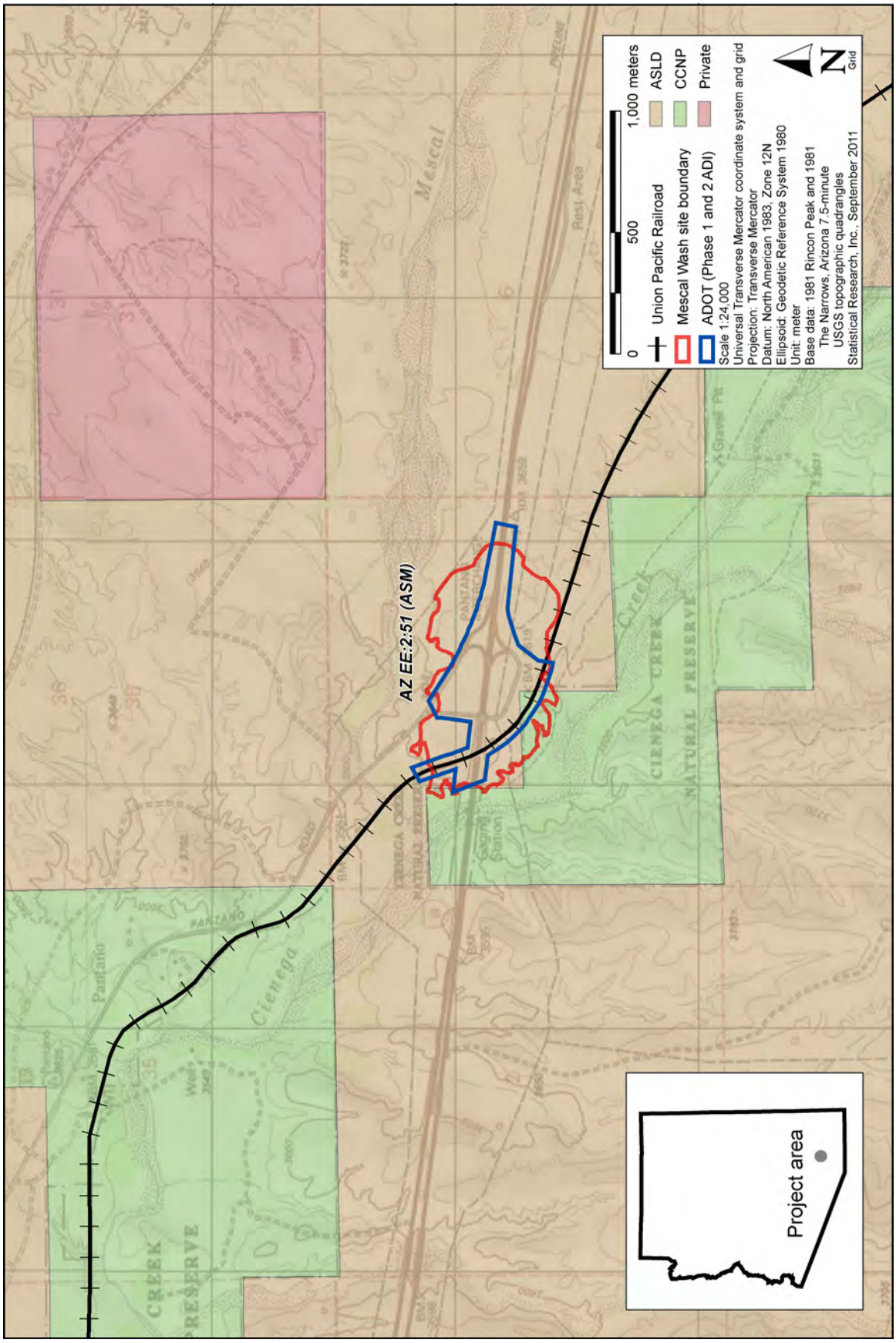
Land Status: Arizona State Land Department, Union Pacific Railroad, Arizona Department of Transportation, and private (including Cienega Creek Natural Preserve [Map 1])

Location: Township 17 South, Range 17 East, Section 1, on the 1981 The Narrows, Arizona, 7.5-minute U.S. Geological Survey topographic quadrangle (Map 1)

NRHP-Eligible Properties: Mescal Wash site (AZ EE:2:51 [ASM]), Criterion d, 1996

Recommendations: SRI recommends that the investigated portions of the Mescal Wash site have been effectively mitigated, and no further research potential exists for the portion of the site within the existing Arizona Department of Transportation right-of-way. Enough of the site remains intact in noninvestigated areas to retain its NRHP eligibility status. Any future ground-disturbing activities within site boundaries outside of the Arizona Department of Transportation right-of-way should be preceded by an appropriate plan of work in consultation with the appropriate agencies and stakeholders.

Curation Facility: Arizona State Museum, University of Arizona, Tucson



Map 1. The Mescal Wash site (AZ EE:2:51 [ASM]) and surrounding area, showing landownership (Arizona State Land Department [ASLD], Cienega Creek Natural Preserve [CCNP], and other, private ownership) and right-of-way areas (Arizona Department of Transportation [ADOT] Area of Direct Impact and Union Pacific Railroad [UPRR]).

CHAPTER 1

Introduction

Rein Vanderpot

This document is the first of three volumes presenting the results of a data recovery program conducted by Statistical Research, Inc. (SRI), at the Mescal Wash site, AZ EE:2:51 (Arizona State Museum [ASM]), in Pima County, southeastern Arizona (Figure 1). The site is located in Section 1, Township 17 South, Range 17 East (The Narrows 7.5-minute U.S. Geological Survey [USGS] quadrangle, 1981), on land managed by the Arizona Department of Transportation (ADOT), the Union Pacific Railroad (UPRR), and the Arizona State Land Department (ASLD). The archaeological site covered an area of nearly 1 km^2 at the confluence of Mescal Wash and Cienega Creek, traversed by Interstate 10 (I-10) and the UPRR line. ADOT's proposed reconstruction of the existing Pantano Railroad Overpass and the Marsh Station traffic interchange (TI) at I-10 would impact large portions of the site. To fulfill its obligations under the pertinent state and federal historic preservation laws, ADOT contracted with SRI to mitigate the adverse effects resulting from the construction efforts. SRI conducted phased data recovery in 2000 and 2001 (the Marsh Station Archaeological Project [MSAP]), sponsored by ADOT under ECS Contract No. 00-64 (TRACS No. H239102D) and under the terms and conditions of State Highway Right-of-Way (ROW) Permit No. 78066, State Land Permit No. 2000-92ps, Burial Agreement A.R.S. §41-844 (Case #00-21), ASM Repository Agreement No. 865, and UPRR Contract Folder Number 01904-64.

During Phase 1, SRI inspected the entire site surface and identified eight loci (Loci A–H) (Figure 2); all but Locus H were completely or partially within ADOT's proposed area of direct impact (ADI) (Figure 3). Phase 1 testing included all or portions of six loci (Loci A–F); Loci G and H were mapped but not subjected to testing or surface collecting. More than 1,500 m of backhoe trenches and about 1,150 m^2 of stripping units were excavated (Vanderpot and Altschul 2000). Of the 237 archaeological features found in the ADI, 26 features, including 6 burials, were tested or completely excavated. During Phase 2, the backhoe stripped overburden from large areas in Loci A–D (13,262 m^2, or 3.3 acres) (Vanderpot 2001) (see Figure 3). The revised ADI included the southern half of Locus A, most of Locus B, all of Locus C, and most of Locus D but eliminated two tested loci (Loci E and F) (see Figure 3). In this project phase, SRI exposed a total of 2,007 new features and excavated 397 features. The excavated features consisted of 96 structures and 301 extramural features, 42 of which were burials.

This introductory chapter presents summaries of the project history, previous investigations, site setting and composition, chronology, and research issues. Detailed cultural-historical overviews of much broader scope are provided in Chapters 1 and 2 of Volume 2 and in Volume 3. The research domains that guided the investigations presented in Altschul et al. (2000) are brought up to date in Chapter 1 of Volume 2 as well as in Volume 3.

Project History

The construction project was funded by the Federal Highway Administration (FHWA). Hence, it was considered an undertaking as defined by Section 106 of the National Historic Preservation Act of 1966, as amended. To comply with the law, a Memorandum of Agreement (MOA) was executed among FHWA, ADOT, ASLD, ASM, the Hopi Tribe, the Tohono O'odham Nation, the U.S. Army Corps of Engineers (USACE), the Arizona State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation (ACHP).

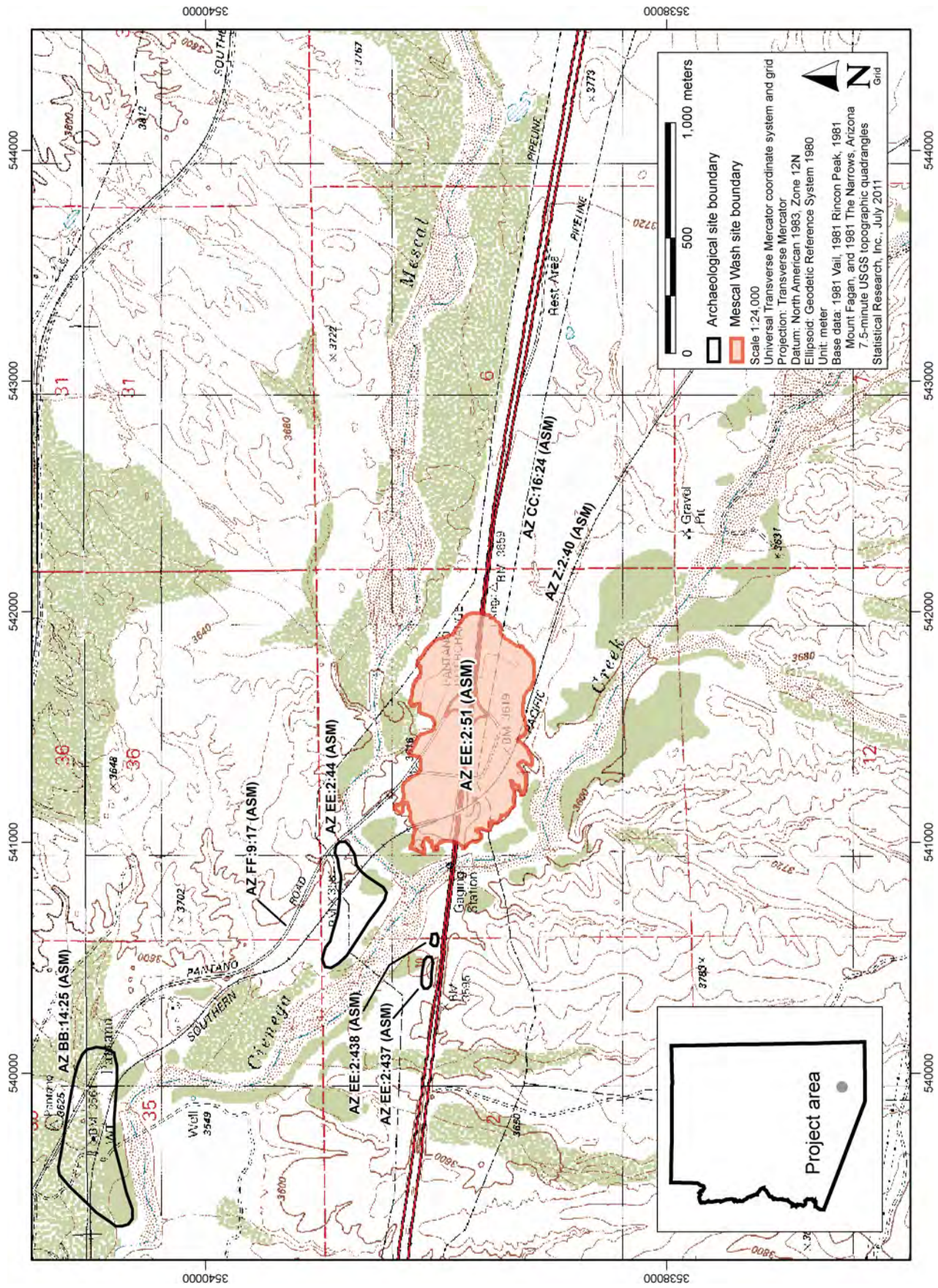


Figure 1. Location of the Mescal Wash site and adjacent sites along Cienega Creek.

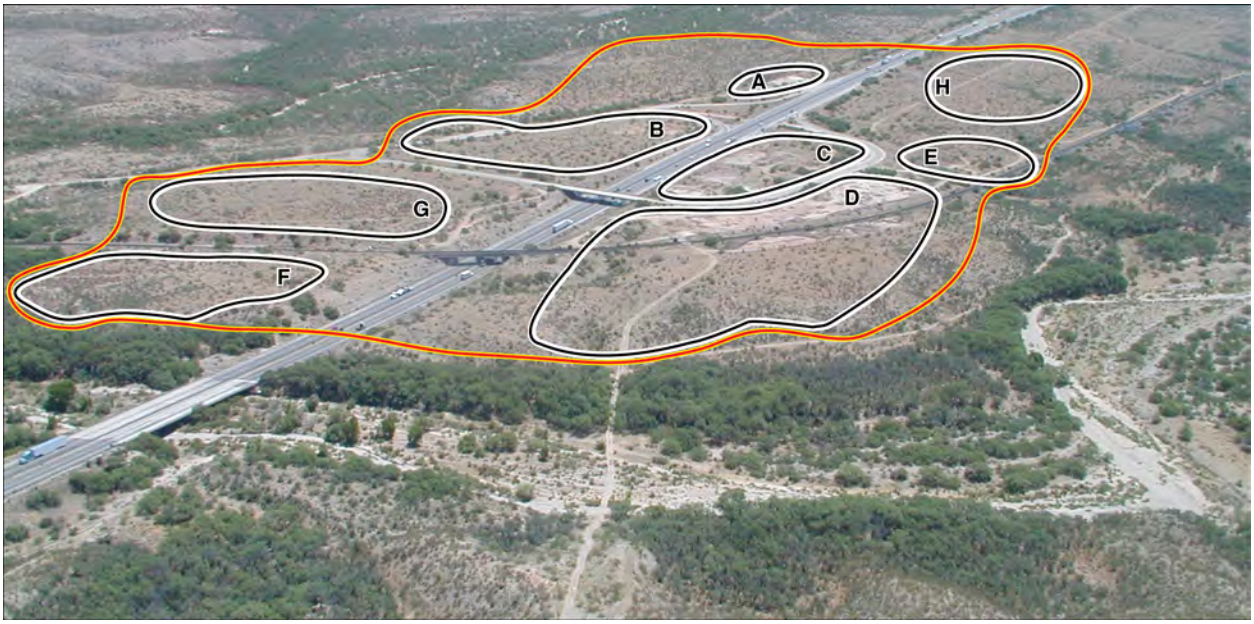


Figure 2. Aerial overview of the Mescal Wash site, showing Loci A–H.

As planned initially, the 2.1-mile-long construction project was to occur along I-10 between Mileposts 288.5 and 290.6, approximately. It was to be done in two phases, starting with the replacement of the Pantano Railroad Overpass and the raising of the existing Marsh Station Bridge. The second phase would include reconstruction of I-10 and a new traffic interchange for Marsh Station Road. The project would also include a realignment of the railroad tracks within the project area. SWCA Environmental Consultants (SWCA) surveyed the proposed construction area in 1993 (Roberts 1993) and subsequently developed an archaeological testing plan for the project (Slaughter and Roberts 1995). Although the plan was approved by SHPO, it was not implemented because ADOT and SHPO decided that there was no need to test the site to determine its eligibility for listing in the National Register of Historic Places (NRHP). It was obvious that the site had potential to provide important information from surface evidence alone. But the plan was required in order to complete the Environmental Assessment and MOA.

At the beginning of 2000, SRI was selected to conduct the archaeological data recovery for the construction project. Fieldwork for the project was completed in the periods June 19–July 27, 2000 (Phase 1), and January 16–June 15, 2001 (Phase 2). Preliminary results for the Phase 1 investigations were reported by Vanderpot and Altschul (2000), and those for Phase 2 by Vanderpot (2001). Results of on-call survey work for the project were provided by Wegener (2000). The project progressed on schedule until October 2002, when ADOT asked SRI to prepare a plan of work (Vanderpot 2002) for expected additional archaeological investigations at the site due to changes in the construction-design plan. In consultation with ADOT, it was decided to integrate the results from these proposed excavations with the results of the earlier data recovery investigations into a single set of reports. As a result, further work on the existing reports was halted. In March 2005, however, ADOT let SRI know that the additional work was put on hold indefinitely and requested that we proceed with finalizing the analyses and report.

History of Investigations at the Mescal Wash Site

The Mescal Wash site has a long (and occasionally convoluted) history of archaeological investigations (Table 1). In 1994, the site was determined potentially eligible for listing in the NRHP under Criterion d (James W. Garrison [SHPO] to Bettina Rosenberg [ADOT], letter, October 26, 1994, State Historic Preservation Office, Phoenix, Arizona; Ken Rozen [ASLD] to Bettina Rosenberg [ADOT], letter, December 7, 1994, State Historic Preservation Office, Phoenix, Arizona). Further examination of the site's potential to provide important information prompted ADOT to consult again on the NRHP eligibility, resulting in a determination of eligibility under Criterion d (Carol Heathington [SHPO] to Robert Gasser [ADOT], letter, March 5, 1996, State Historic Preservation Office, Phoenix, Arizona).

The Mescal Wash site has been recorded multiple times, and three different site numbers have been used. The site was originally recorded in 1965 by James Ayres, then

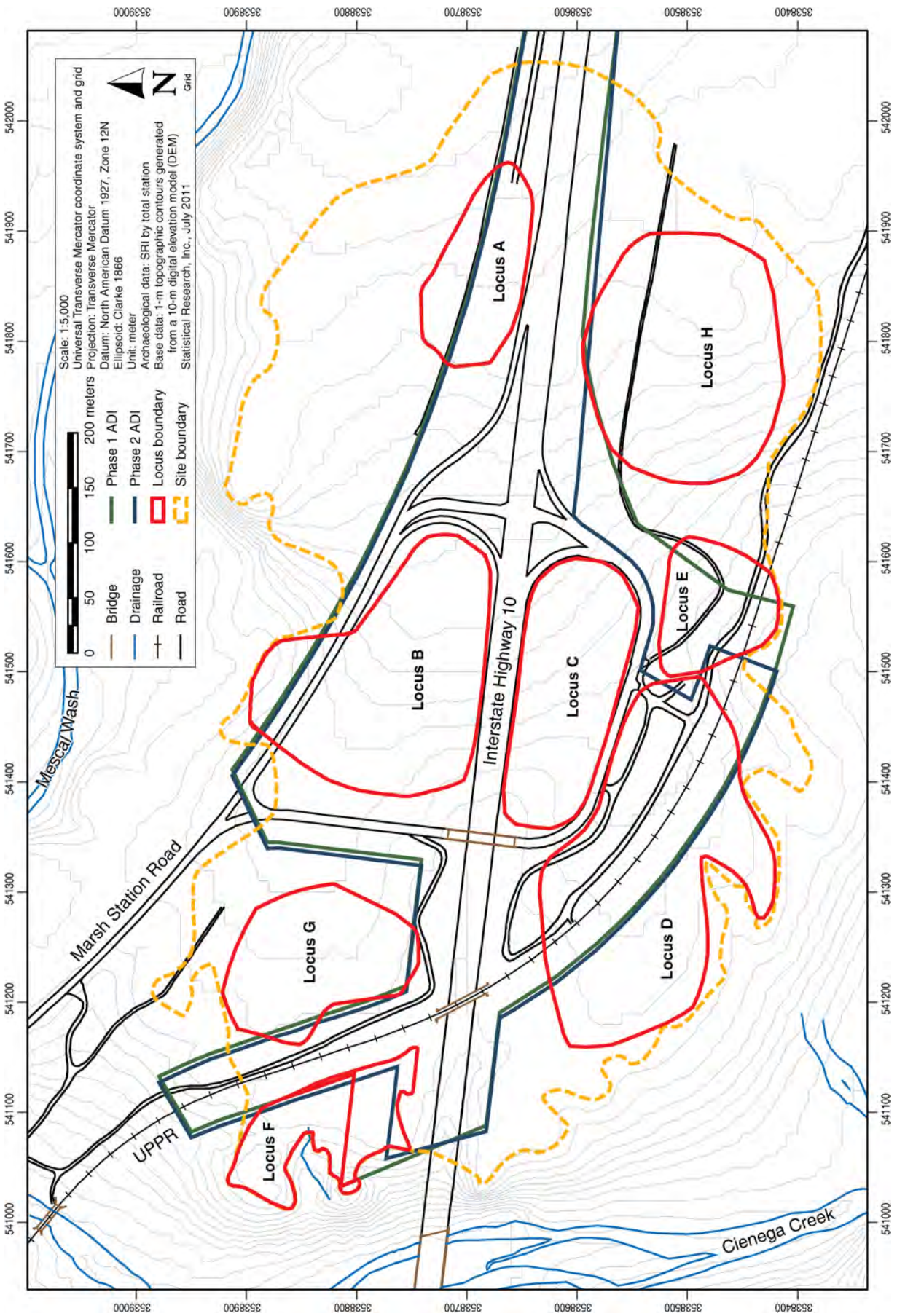


Figure 3. Map of the Mescal Wash site.

Table 1. Timeline of Archaeological Investigations at the Mescal Wash Site

Year of Investigations	ASM Accession No.	Project Name	Project Scope	Client	Investigating Company or Institution	References
1955	1955-3	Southern Pacific Pipeline Right-of-Way Survey, Southeastern Arizona	survey	SPRR	ASM	McConville and Holzkamper 1955
1965			site recording		ASM	Ayres 1965
1987	1987-222	USTelecom Fiber Optic Cable Survey and Testing Project	survey and testing	USTelecom	Dames & Moore	O'Brien et al. 1987
1991		Archaeological Test Excavations at Eight Sites in the San Pedro Valley, Cochise County, Arizona	testing	U S West Communications	SWCA	Seymour et al. 1992
1993	1993-262	Marsh Station Traffic Interchange on U.S. Interstate 10 East of Tucson, Pima County , Arizona	survey	ADOT	SWCA	Roberts 1993
1995		Marsh Station Traffic Interchange on U.S. Interstate 10 East of Tucson, Pima County, Arizona	treatment plan (no fieldwork)	ADOT	SWCA	Slaughter and Roberts 1995
1996	1996-391	Cultural Resources Survey of Interstate 10 from Marsh Station to the Cochise County Line (Mileposts 290.0 to 296.2) and the Eastbound Mescal Interchange in East-Central Pima County, Arizona	survey	ADOT	ARS	Kwiatkowski 1996
2000, 2001	2000-618	Marsh Station Archaeological Project	data recovery	ADOT	SRI	Altschul et al. 2000; Vanderpot 2001; Vanderpot and Altschul 2000; this report
2000		Marsh Station Archaeological Project	on-call survey	ADOT	SRI	Wegener 2000
2000, 2001		Arizona Portion of Link Two of the AT&T NexGen/ Core Project	survey	AT&T	WCRM	Kearns et al. 2001
2001–2003		Arizona Portion of Link Two of the AT&T NexGen/ Core Project	data recovery	AT&T	WCRM	Kearns 2010
2002	2003-807	Arizona Portion of Link Two of the AT&T NexGen/ Core Project	testing	AT&T	SRI	Vanderpot and Heckman 2002
2003, 2004	2003-1230	Relocation of the Marsh Station Traffic Interchange on Interstate10	survey	ADOT	EcoPlan	Strohmayer 2005a, 2005b; Strohmayer et al. 2005
2004	2003-1230	Feasibility Study for the Relocation of the Marsh Station Traffic Interchange on Interstate 10	feasibility study	ADOT	EcoPlan	Strohmayer et al. 2005

continued on next page

Year of Investigations	ASM Accession No.	Project Name	Project Scope	Client	Investigating Company or Institution	References
2003	2005-5	Link Two Arizona Ingress/Egress Routes: Addendum 4 to an Archaeological Survey of the Arizona Portion of Link Two of the AT&T Nexgen/ Core Project for AT&T Corporation	survey	AT&T	WCRM	Baker and Jones 2004
2003	2005-302	Link Two Arizona: Addendum 9 to an Archaeological Survey of the Arizona Portion of Link Two of the AT&T Nexgen/Core Project for AT&T Corporation	survey	AT&T	WCRM	Baker 2004
2006	2006-0001	Class III Cultural Resources Survey, SFPP, LP, El Paso to Phoenix Expansion Project, Arizona Portion	survey	KMEP	WSA	Rawson et al. 2006a, 2006b; Rieder et al. 2006
2007	2008-534	SFPP, LP, ADOT Relocation Project, Marsh Station, Arizona	monitoring	KMEP	WSA	Milliken and Rawson 2009
2007		SFPP, LP, El Paso to Phoenix Expansion Project, Arizona Portion: Cochise and Pima Counties, Arizona	data recovery	KMEP	WSA	Ravesloot et al. 2010
2008	2008-0416	Mescal Wash Sprint Fiber Optic Cable Relocation	survey, monitoring	Sprint/HDR	SRI	Blake and Graves 2008
2008		Union Pacific Pantano Realignment	data recovery	UPRR	WestLand	Deaver 2010
2009, 2010	2005-664	Marsh Station Traffic Interchange Relocation Project	survey, monitoring, testing	ADOT	EcoPlan	Neuzil 2009a, 2009b, 2010

Key: ADOT = Arizona Department of Transportation; ARS = Archaeological Research Services; ASM = Arizona State Museum; EcoPlan = EcoPlan Associates, Inc.; KMEP = Kinder Morgan Energy Partners; SPRR = Southern Pacific Railroad; SRI = Statistical Research, Inc.; SWCA = SWCA Environmental Consultants, Inc.; UPRR = Union Pacific Railroad; WCRM = Western Cultural Resource Management, Inc.; WestLand = WestLand Resources, Inc.; WSA = William Self Associates, Inc.

of ASM, after its location was reported by Mr. George Roberts, a private citizen (O'Brien et al. 1987). Ayres examined only a portion of the site and described it as a 50-by-50-m sherd area, assigning it site number AZ EE:2:51 (ASM). On the basis of a small collection of sherds, he suggested a Late Classic period age (A.D. 1350–1450) for the site. The ceramic scatter was located on the terrace above Cienega Creek, on the south side of U.S. Highway 80 (now I-10).

In 1987, during survey and testing for a USTelecom fiber-optic cable, Dames & Moore rerecorded the site as a much larger area extending as far north as Mescal Wash (O'Brien et al. 1987). The 1965 site number was retained. Dames & Moore mapped the site, conducted a systematic surface collection in the northern part, and excavated three 1-by-2-m excavation units (O'Brien et al. 1987) (see Chapter 3, this volume). As determined from the artifact collections, the site spanned the Middle and Late Archaic periods (4800 B.C.–A.D. 1), as well as the Colonial and Sedentary periods in the Hohokam sequence (A.D. 750–1150).

In 1991, this time for U S West, Inc., SWCA conducted investigations for the placement of a second fiber-optic line in the southwestern part of the site. Extensive cultural deposits between the interchange and the edge of the terrace above Cienega Creek were found (Seymour et al. 1992). As a result, the utility cable was rerouted to an existing gas-pipeline ROW. Although the investigated site portion encompassed the location originally recorded by Ayres, a new site number, AZ EE:2:164 (ASM), was inadvertently assigned. In fact, as shown on the site map created during the investigations (Seymour et al. 1992:Figure 11), the site boundaries did not extend north of Marsh Station Road. Systematic artifact collections were made in areas later designated Loci D and E by SRI (see Chapter 3, this volume). Artifacts that SWCA recovered in this area suggested a Sedentary to Classic period occupation, but, in contrast to the previous findings in the site's northern portion, there was no evidence for Archaic period use.

In 1993, SWCA returned to the site area to conduct a survey along the interstate in advance of the proposed reconstruction of the Marsh Station TI and the Cienega Creek Bridge (Roberts 1993. A records search at ASM demonstrated the previous errors regarding site area and number, which were rectified. The site was given back its initial number of AZ EE:2:51 (ASM). As rerecorded by SWCA, the site largely retained the boundaries determined by Dames & Moore, although they were extended to the northwest (Roberts 1993:Figure 1). Around this time, another site-number error occurred. The error shows up on the ASM site card rewritten during this time. The rewritten card contains a 1993 note by ASM Site Files Manager Sharon Urban that "SWCA's work showed that AZ EE:2:164 (ASM) was the same site as AZ EE:2:44 (ASM) (a site located next to AZ EE:2:51) and that the earlier designation will be retained." The mistake was carried over onto the ASM site-record maps. AZ EE:2:44 (ASM) (named the Marsh Station Road site) was recorded in 1955 during a survey of a gas-pipeline ROW along the Southern Pacific Railroad conducted by ASM (McConville and Holzkamper 1955). The site was excavated by Western Cultural Resource Management (WCRM) in 2002, in conjunction with the AT&T NexGen/Core Project (see below). It was a small Formative period habitation site located on the opposite, north bank of Mescal Wash, about 300 m north of the Mescal Wash site (see Figure 1). The two sites are spatially distinct from each other, and there is no good reason to combine them into a single site. Even so, in 1996, Archaeological Research Services (ARS) continued the error in their report of another survey along I-10 (Kwiatkowski 1996). Fortunately, SWCA used the correct number in their treatment plan for the Mescal Wash site (Slaughter and Roberts 1995), written in anticipation of ADOT's reconstruction of the interchange and bridge (and, of course, the present archaeological project). In February 2000, the Mescal Wash site was revisited by WCRM during their survey for the AT&T NexGen/Core Project, and a new ASM site card was completed (Kearns et al. 2000; Kearns et al. 2001). On the site card, the history of the confused site-number assignment was reviewed and the correct site number used.

In 2003, ADOT proposed relocating and reconfiguring the proposed design (for which SRI did the archaeological clearing in 2000 and 2001) of the Marsh Station TI and contracted with EcoPlan Associates, Inc. [EcoPlan], to conduct archaeological investigations and a feasibility study in advance of the construction. EcoPlan surveyed 186 acres adjacent to the I-10 ROW in 2003 and returned the next year to survey 64 additional acres (Strohmayer et al. 2005). EcoPlan identified two previously unrecorded sites (AZ EE:2:437 [ASM] and AZ EE:2:438 [ASM]) (see Figure 1) and located six previously recorded sites, including the Mescal Wash site, where two artifact concentrations (not mapped by SRI) were documented along the eastern site boundary, just south of I-10. EcoPlan recommended monitoring during construction and the excavation of geotechnical borings on Mescal Wash (Strohmayer 2005a, 2005b; Strohmayer et al. 2005).

WCRM was contracted to conduct a series of surveys in Arizona as part of the Link Two of the AT&T Nexgen/Core Project for the AT&T Corporation. Both the Mescal Wash and the Marsh Station Road sites were included in the study area. Fieldwork took place in summer and fall 2000 and spring 2001 (Baker and Jones 2004; Kearns et al. 2000; Kearns et al. 2001) and from fall 2001 through summer 2003 (Baker 2004). Researchers visited both the Mescal Wash and the Marsh Station Road sites and expanded the boundary of the Marsh Station Road site. The Mescal Wash site was recorded as a multicomponent Archaic and Hohokam habitation, but archaeologists noted that AT&T construction equipment had impacted the site, recording that pseudoartifacts had been created by bedrock

excavations, and therefore surveyed an informal reroute for construction traffic (Baker 2004:14). They recommended that construction equipment should be restricted to rubber-tired vehicles (Baker and Jones 2004). At the Marsh Station Road site, WCRM recorded an additional, 120-by-78-m surface scatter of lithics and sherds (primarily Hohokam with small proportions of Dragoon or Mogollon ceramics), slightly expanding the Marsh Station Road site boundary (Kearns et al. 2001). Kearns et al. (2001) suggested that the Marsh Station Road site might have been a Hohokam neighbor associated with the Mescal Wash site.

Additional testing of the Mescal Wash site was conducted by SRI in 2002 as part of the AT&T NexGen/Core Fiber Optic Telecommunication Project. The project potentially impacted two areas within the site, including two linear cable easements and a boring-pad location. WCRM subcontracted with SRI to do the work at the Mescal Wash site (Vanderpot and Heckman 2002). SRI surveyed the area, excavated 226 m of backhoe trenches, identified one feature (a lithic concentration), and made a controlled artifact collection. All other data recovery at sites along the project corridor—including AZ EE:2:44 (ASM)— was conducted by WCRM (Kearns et al. 2001).

Kinder Morgan Energy Partners (KMEP) relocated two segments of a pipeline extending from El Paso, Texas, to Phoenix, Arizona, and contracted with William Self Associates (WSA) to survey the Arizona portion (Segment C) before construction. The Arizona portion of the El Paso to Phoenix Expansion (EPX) project consisted of the replacement of approximately 98 miles of 8-inch petroleum pipeline between Apache Pass (Cochise County) and Tucson (Pima County). The pipeline passed through Locus A of the Mescal Wash site and also through the nearby Marsh Station Road site. In 2006, WSA surveyed the pipeline corridor (Rawson et al. 2006a; Rieder et al. 2006) and additional parcels to be impacted by access routes and staging areas (Rawson et al. 2006b). WSA archaeologists revisited both the Marsh Station Road site and the Mescal Wash site, noting that the latter was in fair condition, with Archaic and Hohokam occupations evident from surface artifacts. They recommended that existing routes through the Marsh Station Road site could continue to be used, but with rubber-tired vehicles only (Rawson et al. 2006a). As part of an additional monitoring task, a single backhoe trench was excavated along the northeastern boundary of Locus A of the Mescal Wash site, and artifacts (including a San Jose projectile point) were collected from the surface of the impacted area (Milliken and Rawson 2009; Ravesloot et al. 2010). In 2007, Phase 1 data recovery was conducted at six sites; Phase 2 investigations were conducted at two of these: the Mescal Wash site and the Marsh Station Road site (Ravesloot et al. 2010). At Mescal Wash, limited excavation contributed very little to our knowledge about the site. The Marsh Station Road site was an extensive, multicomponent, semipermanent habitation site covering approximately 20 acres, less than 4 percent of which was investigated during the EPX project. WSA archaeologists documented 193 features and subfeatures, including 6 pit houses/structures; excavated 134 of these; and collected more than 50,000 artifacts, most of which were flaked stone or ceramics. Largely mirroring the occupational history of the Mescal Wash site, the Marsh Station Road site was occupied from at least 1050 B.C. to A.D. 1400; the most intense occupation occurred during the late Middle Formative period. Notable hiatuses are evident during the Late Formative (Tanque Verde phase) period and perhaps during the Cienega phase of the Early Agricultural period.

In 2008, ADOT requested that Sprint's replacement of a fiber-optic conduit and cable be monitored as it passed through the Mescal Wash site. HDR, Inc., contracted with SRI to monitor the work. In addition to monitoring earthmoving activities, SRI archaeologists performed a pedestrian survey in the affected areas within site boundaries and recorded two features: a pit and a sheet midden (Blake and Graves 2008).

In 2009 and 2010, EcoPlan conducted survey, monitoring, surface collection, and excavations at the site for the same Marsh Station TI relocation project for which SRI's 2000 and 2001 work was conducted, (Neuzil 2009a, 2009b, 2010). The additional work at the site was necessary because the design plan for the relocation (including that of the railroad) had changed. Most work was done in 2009 when the northern portion of Locus B (excluded from SRI's 2000 and 2001 project area) and areas to the north of Loci A and G were investigated. In Locus B, trenching and stripping were followed by the excavation of 60 features, including a prehistoric cemetery of 33 cremations and various pit features as well as a midden, though no structures (Neuzil 2009b). The pit features and associated materials suggested Formative period resource processing. In 2010, EcoPlan went back to the site for additional surface collection and testing in and around Locus H, because the construction project area had been revised (Neuzil 2010). No cultural features were found during these investigations. EcoPlan also conducted data recovery at AZ EE:2:437 (ASM) and AZ EE:2:438 (ASM), which were located side by side west of the Mescal Wash site, directly across Cienega Creek (Neuzil 2009b). At AZ EE:2:437 (ASM), 7 structures, 2 cremations, and 67 extramural pits were excavated. Most of the pits and several structures appeared to be Archaic in age; other features dated to the Formative period. AZ EE:2:438 (ASM) yielded 4 structures, 4 inhumations, and 48 extramural pits. Again, most of the pits and 2 structures appeared to be Late Archaic in age.

Finally, WestLand Resources, Inc. (WestLand), conducted phased data recovery at the Mescal Wash site as part of the UPRR Pantano Realignment in 2008 (Deaver 2010). In all, 53 trenches were excavated, and an area of 7,833 m^2 was mechanically stripped. Excavation in the north half of Locus A and the northern edge of Locus G uncovered 3 middens, 15 pit structures, 14 activity areas,

11 human and 4 nonhuman animal burials, and 26 thermal and 65 nonthermal pits dating to the end of the Middle Formative period.

Site Setting

The Mescal Wash site is located on a broad, mesalike terrace at the east side of the V-shaped confluence of Mescal Wash and Cienega Creek (see Figures 1–3). The terrace is about 700 m wide and slopes gently to the south, its steep sides dropping 12–15 m to the drainages below. Elevation ranges from 1,094 to 1,112 m (3,590 to 3,650 feet) above mean sea level (AMSL). Mesquite (*Prosopis*), acacia (*Acacia*), creosote bush (*Larrea tridentata*), brittlebush (*Encelia*), yucca (*Yucca*), various cacti (Cactaceae), and a variety of grasses (Poaceae) cover the terrace. Located in an area of upland hills and grassland approximately halfway between the Tucson Basin and the San Pedro River, the site lies in an ecological transition zone between the Sonoran Desert and the Chihuahuan Desert grasslands. Cienega Creek flows north through the broad Empire Valley, bordered on the east by the Whetstone Mountains and the Mustang Mountains, on the south by the Canelo Hills, and on the west by the Santa Rita Mountains and the Empire Mountains (Figure 4). At present, the creek is deeply entrenched. Perennial water flows through most of the lower half of the creek, in particular above The Narrows, a bedrock constriction about 5 km south of the site. Along much of its course are large areas of slowly flowing, ponded water. These lushly vegetated riparian marshlands (or *cienegas*) have given the creek its name. Cienega Creek was not entrenched during the early historical period, and John Bartlett described the Empire Valley in 1851 as a grassland with drainages that contained swamps and pools of water flanked by head-high grasses and groves of small oaks (Martin 1963:4). Mesquite has replaced much of these grasslands, and most of the *cienegas* have dried up. A thick mesquite bosque is present along the edge of Cienega Creek immediately below the site (see Figure 2). An important feature of the valley is the presence, within a small area, of three major plant communities: riparian, grassland, and oak woodland. Furthermore, conifer forest is present a few kilometers away, higher up in the mountains, and Sonoran Desertscrub vegetation is within easy reach, to the northwest. At its confluence with Cienega Creek, Mescal Wash flows through a broad, flat channel. An ephemeral drainage holding water only during summer rainstorms, Mescal Wash, as the name implies, is flanked by populations of mescal agave (*Agave parryi*). Different suites of economically important plant species are present in each of these areas that, together, once formed a year-round reserve of sustenance for aboriginal settlers. Significantly, site location on a flat ridge at the confluence of two major drainages would have provided a number of attractive features for prehistoric populations. Principal among these would have been immediate access to arable land on the floodplains and the water resources of the drainages themselves.

Chronology

The combination of resource diversity, abundance, and accessibility probably was a major reason for the longevity of the Mescal Wash site. The investigations showed that the site had witnessed habitation spanning nearly 3,000 years; the excavated loci evidenced an episodic rhythm to the occupation. Travelers, hunters, gatherers, farmers, pioneers, and colonists—in different configurations and at different times—all made their mark on and contributed to the local landscape in distinctive ways. As determined from radiocarbon and archaeomagnetic dates, the Mescal Wash site was intermittently occupied between about 1200 B.C. and A.D. 1450, a time span corresponding to the Late Archaic and Formative periods. Middle Archaic period dart points recovered from the site suggest even earlier use, but no protohistoric artifacts or features were identified. Several undated rock-lined roasting pits in Locus D found at or just below the modern ground surface, however, might have been late prehistoric or protohistoric. Historical documents show that by the 1800s, the greater site area was known as the Ciénega de los Pimas and was used regularly as a camping and watering stop for soldiers, settlers, and Apaches alike (Albright 1921; Dobyns 1981:18; Officer 1987:15; Wagoner 1975:151). Wagon roads and the Butterfield Overland Mail line followed. No artifacts or features dating to this time were found, and the only evidence of historical-period use was limited to subsequent roads, the railroad, and a scatter of artifacts from the 1950s or later in Locus B.

For our purposes, we have divided the Formative period into Early (A.D. 1–750), Middle (A.D. 750–1150), and Late (A.D. 1150–1450) (Figure 5; Table 2). We use this unconventional designation instead of the better-known sequence used for the Hohokam and their predecessors because the latter implies a cultural affiliation. As one of our research goals is to investigate cultural affiliation, it is best not to make assumptions at the outset. On the basis of ceramic evidence, the Middle Formative period at the Mescal Wash site can be subdivided into two parts: Middle Formative A (A.D. 750–950) and Middle Formative B (A.D. 950–1150). Although we do not want to use Hohokam terms in discussing the site, it is convenient to say that these two spans of time correspond to the Colonial and Sedentary periods in the Hohokam cultural sequence and also mirror similar

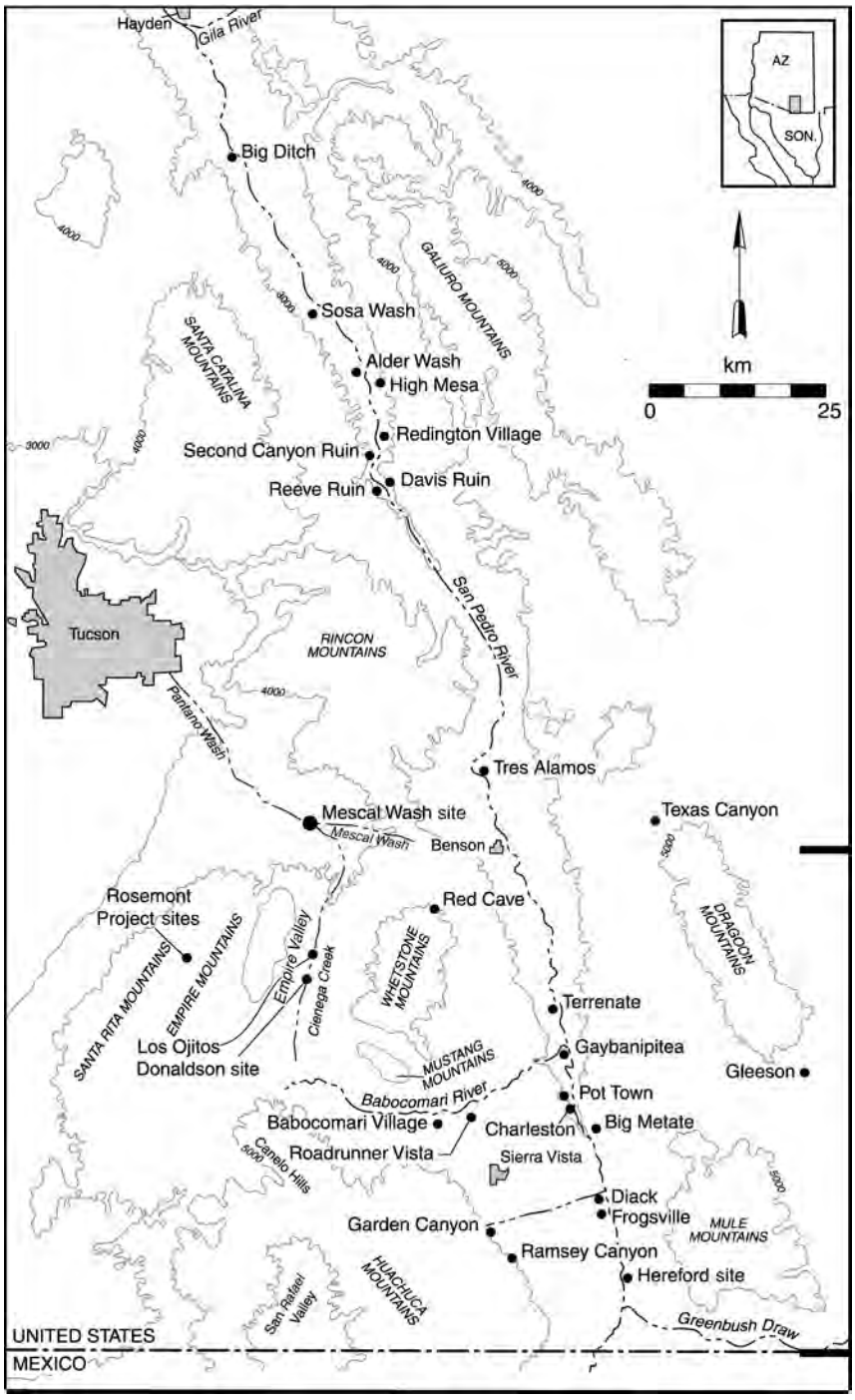


Figure 4. Map of the greater San Pedro Valley, showing Mescal Wash and other major sites in the region.

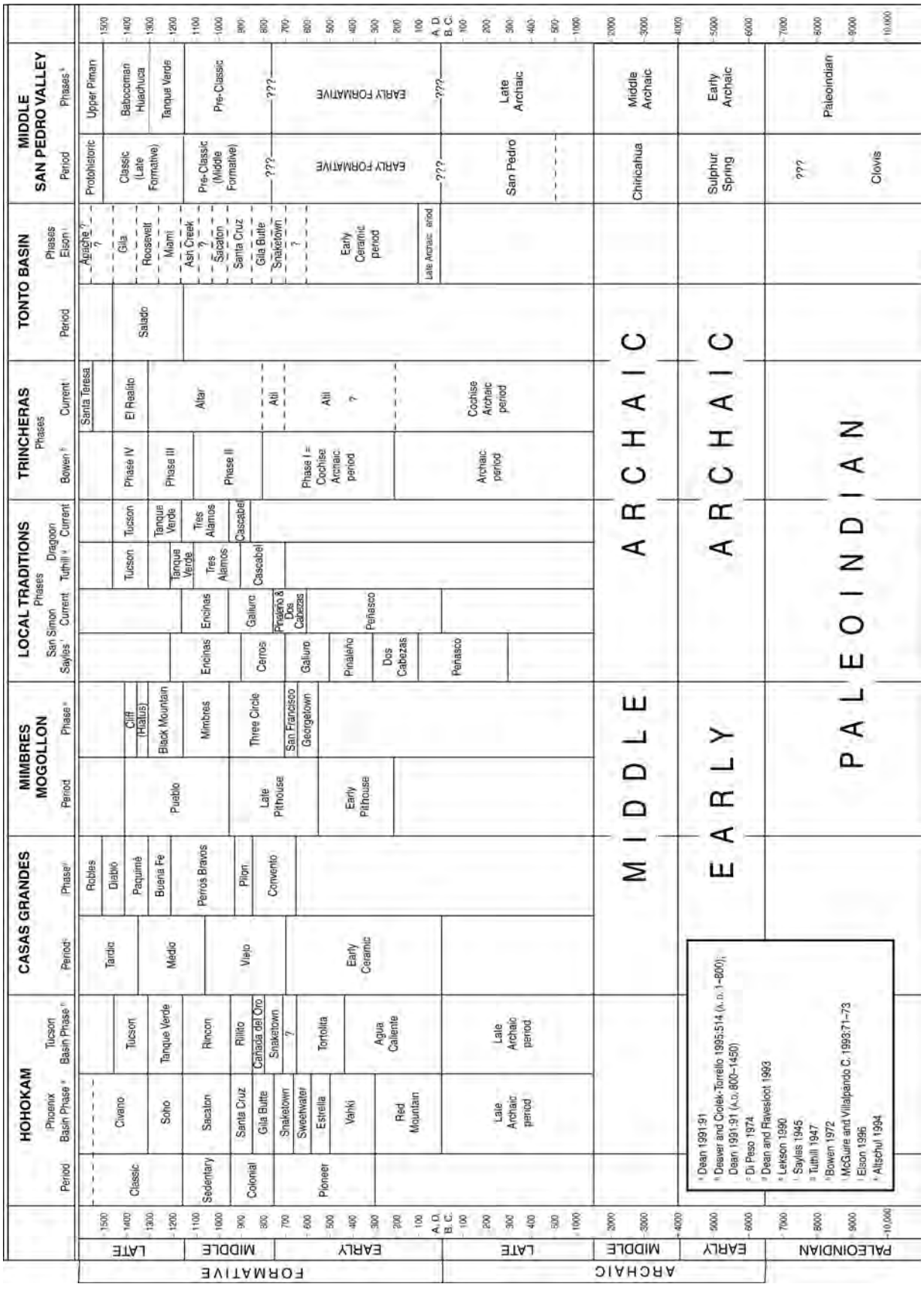


Figure 5. Chronological chart for southeastern Arizona.

Table 2. Chronology for the Mescal Wash Site

Period	Date Range
Paleoindian period[a]	11,500–8500 B.C.
Archaic period	8500 B.C.–A.D. 1
Early Archaic period[a]	8500–4800 B.C.
Middle Archaic period	4800–1500 B.C.
Late Archaic period	1500 B.C.–A.D. 1
Formative period	A.D. 1–1450
Early Formative period	A.D. 1–750
Middle Formative period	A.D. 750–1150
Middle Formative A period	A.D. 750–950
Middle Formative B period	A.D. 950–1150
Late Formative period	A.D. 1150–1450
Late Formative A period[a]	A.D. 1150–1300
Late Formative B period	A.D. 1300–1450

[a] There was no direct evidence for these periods at the Mescal Wash site.

periods in the Mogollon and San Simon sequences (see Figure 5). Similarly, the Late Formative period can be divided into Late Formative A (A.D. 1150–1300) and Late Formative B (A.D. 1300–1450), roughly corresponding to the conventional Early and Late Classic period divisions.

Figures 6–8 are maps of the three main excavation loci (Loci A, C, and D), showing excavated features by type (see Chapter 3 for discussions of all feature types). In Locus D, the earliest and the latest features were found. In this locus, SRI excavated a series of small, circular pole-and-brush structures and associated bell-shaped storage pits dating to the Late Archaic and Early Formative periods. The focus of this settlement was clearly on the farmland along Cienega Creek. Only a small portion of this early component was located within the project area; additional early features probably were located in the western portion of the locus, closer to Cienega Creek.

The site reached its population peak in the Middle Formative A period, when Locus D was developed to such a degree that clustering and superimposition of structures were the norm. The structures varied in size, shape, and orientation, but most were reminiscent of Hohokam houses-in-pits. These dense feature clusters and conglomerates of superimposed houses signified either continuous, long-term habitation or repeated, short-term occupation over several centuries. The dramatic overbuilding suggested a densely occupied, discrete hamlet, or perhaps a village.

In the Middle Formative B period, the occupation shifted away from Locus D to portions of the site farther north and east along Mescal Wash. Instead of being contained in a single village, the population was dispersed across several discrete hamlets. Locus D showed little evidence of occupation during this period; in contrast, Locus A and most of Locus C were solely occupied during this time. In Locus A, houses were found isolated, rather than in clusters. In Locus C, they were clustered, but not as densely as in Locus D. As in the previous period, many of the houses were identical to Hohokam houses found in the Tucson Basin and elsewhere. However, eight examples of what appears to be a local architecture were found—pit structures characterized by a large, circular, recessed area in the floor adjoining the entrance. The hearth was located in the center of this sunken area, and postholes suggest that this recess had its own special roof. One of the recessed-hearth structures contained a series of parallel grooves in the floor outside the recessed area, suggesting a raised floor. Given that this structure was the largest excavated at the site and the only one with an east-facing entryway, it may have had a communal function.

No evidence was found for occupation during the Late Formative A period, perhaps because a lack of sufficient water flow in the adjacent creek bed forced the local farmers to a more favorable setting downstream. Possibly, they moved to AZ BB:14:25 (ASM) (the Pantano Town site) (see Figure 1), whose prehistoric component was a large habitation site occupied predominantly during the Late Formative A period (as determined from the abundant Tanque Verde Red-on-brown sherds observed on the site surface by the author). Four Late Formative B period adobe-walled houses with raised floors and narrow, stepped entryways were found in Locus D. Two additional Late Formative B period houses were identified at the site; one was excavated in Locus C, and another was found (but not excavated) in Locus E during Phase 1. Thus, with its focus once more on the arable land along Cienega Creek, the occupational cycle of the site was completed.

Research Issues

The site's position between the Tucson Basin and the San Pedro Valley placed it in an ecological transition between Sonoran Desertscrub vegetation to the west and Chihuahuan Desert grasslands to the east. It also was in a cultural transition zone—one between prehistoric agriculturists to the west (considered part of the Hohokam culture) and those to the north and east (recognized as Mogollon). Southeastern Arizona is one of the most intriguing regions, archaeologically, in the U.S. Southwest, yet one of the least understood. It was a crossroads for diverse cultures (e.g., "Dragoon") yet to be named and fully investigated, characterized by unique ceramic styles and architecture. The region's prehistoric "hinterland" populations appear to have been overshadowed by major cultural developments in the surrounding "heartland" areas. The excavations at the long-lived Mescal Wash site have provided a much-needed opportunity to study the complex interplay among these

Figure 6. Map of Locus A, showing excavated features.

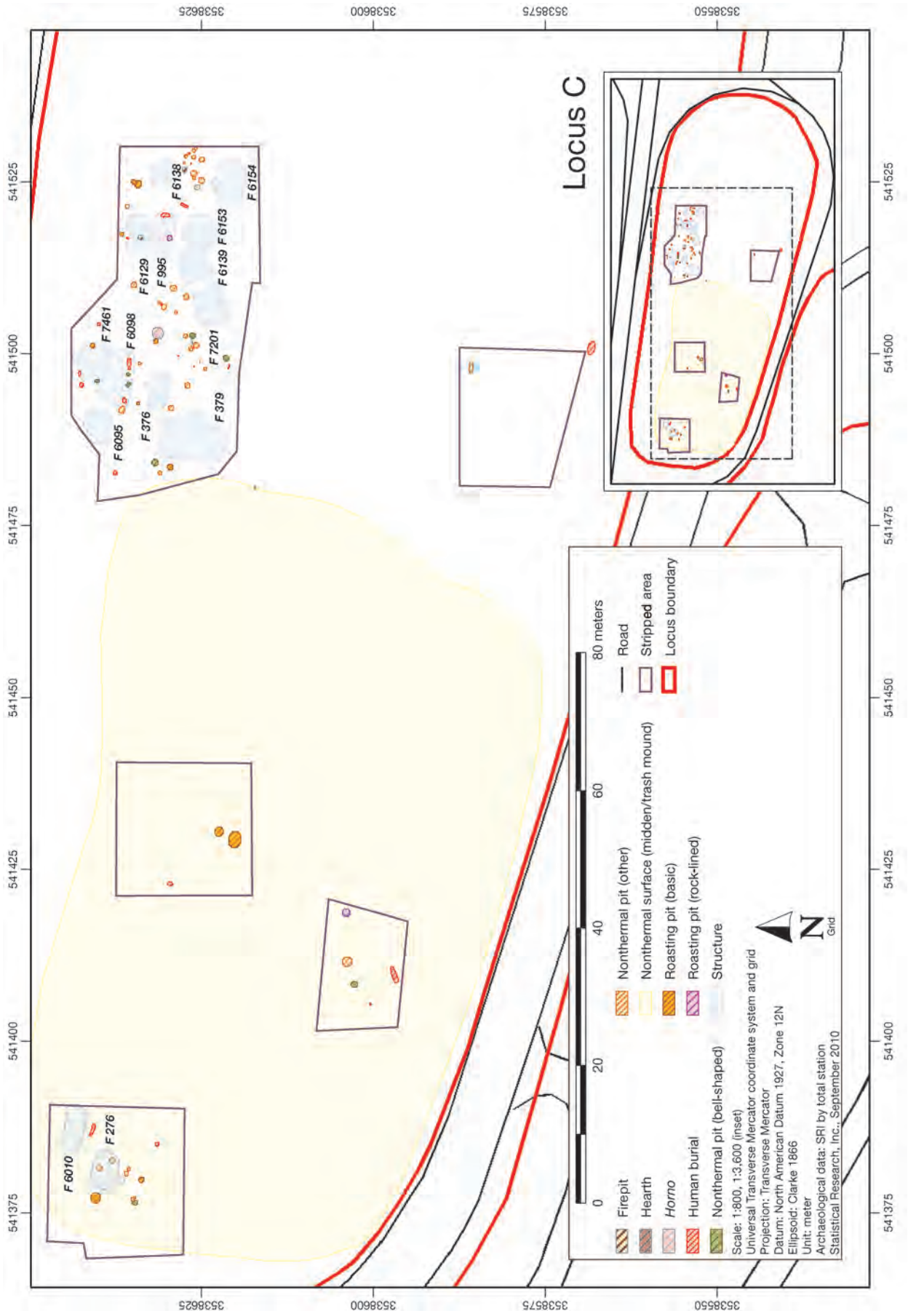


Figure 7. Map of Locus C, showing excavated features.

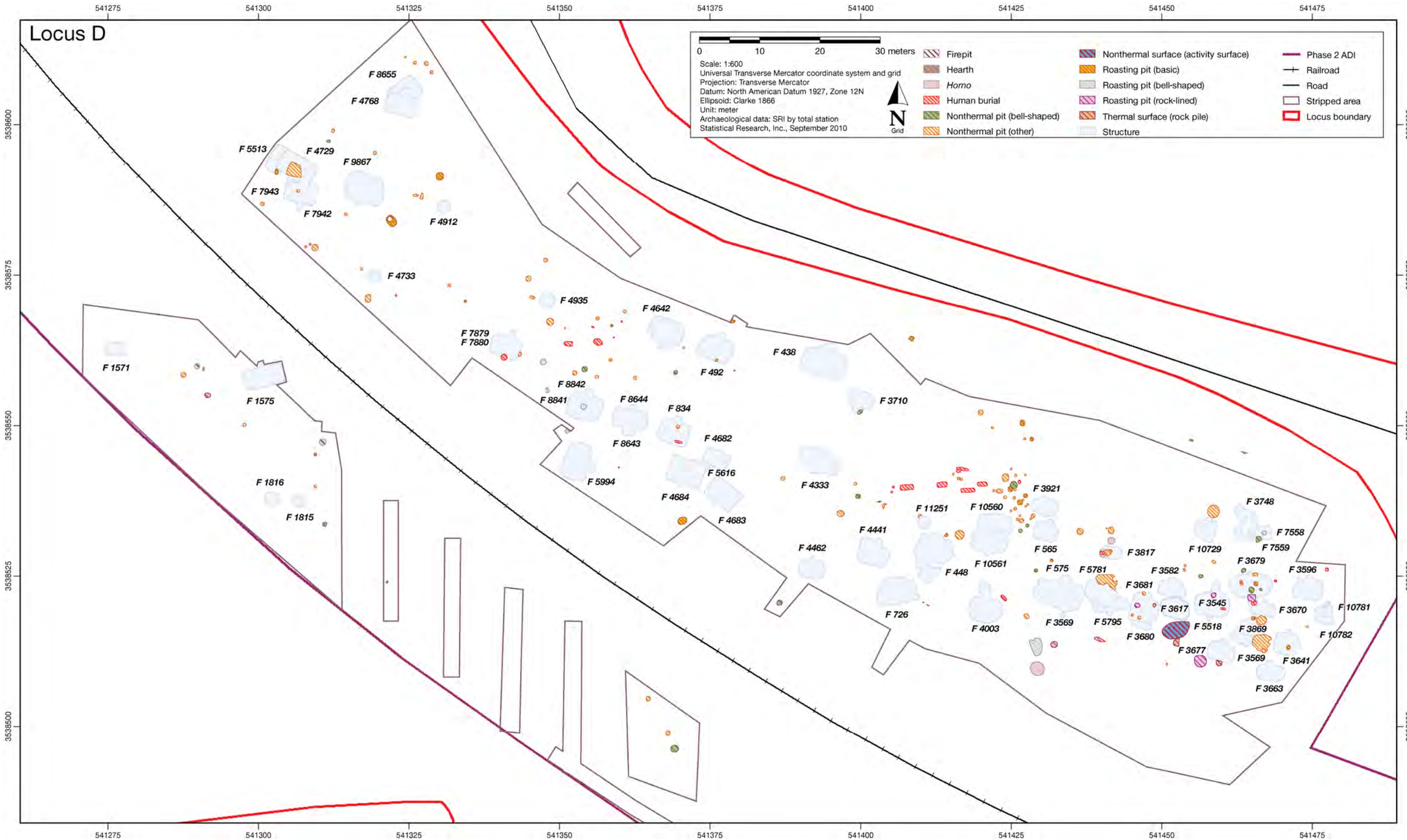


Figure 8. Map of Locus D, showing excavated features.

various cultures and to evaluate the prevalent concept of southeastern Arizona as a hinterland between heartlands.

The Mescal Wash site witnessed a nearly continuous occupation from the Late Archaic period through the Formative period sequence, interrupted only for a century and a half in late prehistory. According to Sarah Schlanger (1990:97), a "persistent place" is marked by cultural features that attract and orient reoccupation. Artifacts and architectural styles indicate that, over time, Mescal Wash was indeed visited, settled, and influenced by people of many surrounding cultures and groups. Some occupations were transient and left few or no marks, such as the hunters-and-gatherers of the Archaic period and the equally mobile Apache or Sobaipuri. The Late Archaic and Formative period occupations were more permanent—as indicated by the presence of architecture and storage pits—and probably included an indigenous core population. Between A.D. 750 and 950, the site may have reached village size on one or more occasions, possibly with as many as 100 permanent inhabitants. During A.D. 950–1150, population decreased, and the site consisted of a series of dispersed farmsteads. In the Late Formative B period, a few farmers reoccupied the site, establishing a small number of widely spaced adobe houses among the earlier ruins. It is interesting to note that site layout always remained informal, lacking a ball court or platform mound, and with none of the structures arranged in courtyards or enclosed by compound walls. The only evidence of shared symbolism may be the recessed-hearth-style pit structures.

Identifying longevity as a key attribute for the site, the project's research design (Altschul et al. 2000:5–14) centered on investigating the characteristics of the ancient community at Mescal Wash. In essence, we wanted to understand the factors and processes that repeatedly drew people from diverse backgrounds to this locale. Broadly considered, this historic context might be considered "an archaeology of place" defining the factors that promoted community development and change. It is a nested concept, ranging from single settlements to regions, and, similarly, the research themes range from the Mescal Wash community to its environment, its economy, its demography, and, finally, its regional landscape. These themes are intertwined, and they overlap with each other, rather than forming stand-alone topics. Together, they helped guide SRI's field efforts at the site and the analyses of the collected cultural and environmental materials. Up-to-date summaries of the research themes are provided in Chapter 1, Volume 2. The Mescal Wash research design will be revisited at length in Volume 3.

Volume Organization

In this volume, we present the locus and feature descriptions, as well as the project background. Volume 2 contains the artifact and other specialized analyses, which, in turn, provide much of the empirical basis for the synthetic studies to be presented in Volume 3. Following this introductory chapter, Chapter 2 provides a detailed discussion of the project environment. The chapter includes sections on geology, soils, geomorphology, hydrology, climate, and biological resources. In the remaining chapters, the eight site loci are described, with most space devoted to the main excavation loci (Loci A, C, and D). Each of the locus chapters is organized in the same manner. Following a section on site setting and condition, the various field tasks and methods are described for Phase 1 and (if applicable) Phase 2. Discussions of the excavated features are in the form of summaries by type, rather than descriptions of individual features. Summary tables for the features by type are included where appropriate. Each chapter closes with a brief summary of the findings and chronology. For comprehensive summaries of the excavated features, the reader is referred to the four tables in Appendix A (Table A.1 provides general feature data, Table A.2 summarizes the completely excavated structures, Table A.3 summarizes the partially excavated structures, and Table A.4 summarizes the extramural features). Detailed descriptions of all excavated structures and all burials are presented in Appendixes B and C, respectively. Finally, Appendix D provides a brief summary of the historical-period, linear sites crossing through the Mescal Wash site boundary.

CHAPTER 2

Environment

Jason Windingstad and Jeffrey H. Homburg

Before presenting the archaeological findings from the Mescal Wash site, we review the key environmental resources and conditions of the site and adjacent landforms, the Cienega Creek Basin, and the surrounding mountains. Such a discussion will provide a better understanding of the factors that influenced the economic behaviors of the people living at the site. The present chapter is divided into sections on the regional physiography, geology, potential lithic sources, soils, geomorphology, hydrology, climate, paleoenvironment, and vegetation of the area. Potential economic resources are summarized where appropriate. Other discussions and studies of the local environment can be found elsewhere in this series. For an overview of the modern fauna in the project vicinity, the reader is referred to Chapter 8 in Volume 2. Additional details on the flora are provided in Appendix 9.A., Volume 2, which presents the results of a study of the present-day vegetation conducted for the project. Chapter 2 in Volume 3 details the geomorphic study aimed at reconstructing the alluvial history of Cienega Creek and Mescal Wash near the Mescal Wash site. Finally, Chapter 3 in Volume 3 presents the results of the agricultural study aimed at modeling agricultural land use and soil quality of possible agricultural fields near the site.

Physiography

The Mescal Wash site lies at an elevation of 1,094–1,112 m (3,590–3,650 feet) AMSL in the northern portion of the Cienega Creek Basin (also known as Cienega Valley or Empire Valley [Eddy 1958; Eddy and Cooley 1983; Huckell 1995:17]) (Figure 9). The area is part of the Basin and Range physiographic province, a region characterized by discontinuous, narrow, generally short, northwest–southeast-trending mountain ranges separated by broad, relatively undissected alluvial basins. The mountain ranges surrounding the basin include the Empire Mountains to the west, the Santa Rita Mountains to the southwest, the Canelo Hills to the south, the Whetstone Mountains to the southeast, the Mustang Hills to the east, and the Rincon Mountains to the north (see Figure 4). The area lies at the eastern boundary of the Sonoran Desert near the transition between the semiarid grasslands of extreme southeastern Arizona and the Chihuahuan Desert that typifies much of central and southern New Mexico.

Geology

Significant faulting that ended during the Pliocene resulted in the eroded, yet rugged, mountain ranges with extensive pediments and sinuous mountain fronts present today (Morrison 1985; Shafiqullah et al. 1980). The Empire Mountains are composed primarily of marine limestones, shale, and quartzite of Cambrian through Permian age and contintental clastic sedimentary bedrock that is Cretaceous in age (Richard et al. 2000). These sedimentary rocks have been intruded by quartz monzonite, granodiorite, and dikes composed of rhyolite or basalt. The Cretaceous rocks (sandstone) dip to the southeast, where they are buried by Cienega Creek Basin alluvium. These Cretaceous sandstones are part of the Bisbee formation in this region (Richard et al. 2000). To the southwest, the northeast structural block of the Santa Rita Mountains is composed of Precambrian granodiorite overlain by Paleozoic through Mesozoic rocks (Ellett 1994; Richard et al. 2000). The Whetstone Mountains consist of Paleozoic rock thrust over Precambrian basement (Drewes 1981). This basement

Figure 9. Southeast view of the Mescal Wash site (center), with Mescal Wash in the foreground and Cienega Creek in the back.

complex is topped by 1,980 m (6,500 feet) of Paleozoic and up to 2,740 m (9,000 feet) of Cretaceous sedimentary and volcanic rock (Ellett 1994). The Rincon Mountains have a gneissic core (the Rincon Dome) that at one time was covered with Paleozoic and Mesozoic sedimentary rocks. In the middle Tertiary, these sedimentary rocks were displaced along detachment faults, exposing the Rincon Dome. These sedimentary bedrock units are visible on the southern flank of the Rincon Mountains along the low-angle Santa Catalina complex fault (Drewes 1981).

Within the Cienega Creek Basin, Tertiary sediments were deposited over complexly deformed and faulted Precambrian granitic rocks, Paleozoic carbonate and clastic rocks, and Mesozoic igneous and sedimentary rock formations that extend from the surrounding mountain ranges (Richard and Harris 1996). The first period of sediment accumulation began approximately 30 million years ago (Ma) with the deposition of the Pantano formation. This formation consists of conglomerate, sandstone, shale, and gypsiferous mudstones interbedded with volcanic flows and tuffs (Anderson 1987). These strata were tilted and faulted in conjunction with the movement of the Catalina-Rincon detachment fault during the basin-and-range tectonic event. This period of faulting resulted in the transport of rocks 18–20 km (11–12 miles) to the southwest in relation to the Rincon Dome within the northern Cienega Creek Basin area (Richard and Harris 1996). Sediments began accumulating within the newly formed basin after 15 Ma. These deposits consist of loosely to moderately lithified clay, silt, sand, and gravel and have been referred to as the Nogales formation by Drewes (1977). The basin fill represented by the Pantano formation has been reported to be at least 1,950 m (6,400 feet) thick near Davidson Canyon, whereas the younger Nogales formation is believed to be at least 160 m (525 feet) in thickness. Recent (late Quaternary) channel alluvium along axial streams and tributary washes is generally less than 30 m (100 feet) in thickness (Ellett 1994).

In addition to those of the surrounding mountains, a diverse array of geologic resources would have been available within the Cienega Creek Basin (Table 3). Quaternary deposits underlying and exposed along terraces and alluvial fans would have provided abundant sand and gravel for the production of ceramics. Though not extensively exposed, Tertiary basin-fill deposits of the Pantano formation would have been a valuable source of clay. Lithic resources for the production of tools and projectile points include quartize of the Permian Scherrer formation, the Devonian Martin formation, the Cambrian Abrigo formation and Bolsa Quartzite, and the middle Proterozoic Pioneer formation of the Apache Group. Local chert sources include the Permian Rainvalley formation, Concha Limestone, and the Earp formation along with the Mississippian Escabrosa Limestone and the Devonian Martin formation. Sandstone is locally abundant within many of the formations exposed in the basin.

Soils

The soils at and surrounding the Mescal Wash site can be broadly categorized into soils formed in stream and fan-terrace alluvium and soils developed in recent channel and

Table 3. Geologic Resources of the Lower Cienega Creek Basin

Geologic Map Unit	Geologic Description	Age	Potential Resources Available to Mescal Wash Site Occupants								
			Farmland	Clay	Sand	Gravel	Chert	Quartz-ite	Andesite	Sand-stone	Granite
	Quaternary and Late Tertiary Map Units										
Piedmont alluvium											
Qyc	Late Holocene active-channel deposits	<100 years									
Qy_2	Late Holocene alluvium	<~2 ka	X		X	X					
Qy_1	Older Holocene alluvium	~2–10 ka	X		X	X					
Qy	Undifferentiated Holocene alluvium	0–10 ka	X		X	X					
Ql	Late Pleistocene alluvium	~10–130 ka	?		X	X					
Qml	Undifferentiated late to middle Pleistocene alluvium	~10–500 ka	?		X	X					
Qm	Middle Pleistocene alluvium	~130–500 ka	?		X	X					
Qmo	Middle to early Pleistocene alluvium	~500 ka–1 Ma	?		X	X					
Qo	Early Pleistocene alluvium	~1–2 Ma	?		X	X					
Axial stream deposits											
Qycr	Modern river-channel deposits	<100 years									
Qyr	Holocene floodplain and terrace deposits	<~10 ka	X		X	X					
Qlr	Late Pleistocene river-terrace deposits	~10–130 ka	?		X	X					
Qmr	Middle Pleistocene river-terrace deposits	~130–500 ka	?		X	X					
Qmor	Middle to early Pleistocene river-terrace deposits	~500 ka–1 Ma	?		X	X					
Qor	Early Pleistocene river-terrace deposits	~1–2 Ma	?		X	X					
Hillslope deposits											
Qc	Holocene and Pleistocene hill-slope colluvium	late Quaternary				X					
Other Quaternary to late Tertiary deposits											
d	Disturbed ground	<100 years									
v	Area of thick vegetation developed on undivided surficial deposits	<100 years									
Qs	Surficial deposits, undivided	Quaternary									
QTs	Surficial deposits, undivided	Quaternary to late Tertiary									
QTd	Diotomite?	Quaternary or late Tertiary								X	

continued on next page

Geologic Map Unit	Geologic Description	Age	Potential Resources Available to Mescal Wash Site Occupants								
			Farmland	Clay	Sand	Gravel	Chert	Quartz-ite	Andesite	Sand-stone	Granite
QTsc	Pantano formation, conglomerate of Agua Verde Creek, unit of Wakefield Canyon, and mantling hill-slope deposits, undivided	Quaternary to late Tertiary				X					
	Tertiary Map Units										
Tqv	Hydrothermal silica and quartz—hematite breccia	Oligocene or early Miocene									
x	Crushed rock	Tertiary?									
Conglomerate of Agua Verde Creek		Miocene									
Tavc	Conglomerate										
Tavcs	Conglomeratic sandstone									X	
Tavs	Sandstone and sparse pebbly sandstone									X	
Unit of Wakefield Canyon		Miocene to Pliocene									
Twc	Conglomerate										
Twsc	Sandy conglomerate										
Twcs	Conglomeratic sandstone									X	
Twss	Sandstone									X	
Pantano formation, breccia facies		Oligocene to early Miocene									
Txc	Breccia derived from Paleozoic carbonate rocks										
Txm	Breccia derived from various rock types										
Txsc	Breccia derived from silty carbonate and siltstone of Paleozoic age										
Txq	Breccia derived from Cambrian Bolsa Quartzite										
Txg	Breccia derived from granite or granodiorite of map unit YXg										
Pantano formation, clastic sedimentary strata		Oligocene to early Miocene									
Tpf	Fine-grained siltstone and claystone			X							
Tps	Fine-grained silty sandstone									X	
Tpc	Coarse-grained sandstone and conglomerate, undivided									X	

Geologic Map Unit	Geologic Description	Age	Potential Resources Available to Mescal Wash Site Occupants								
			Farmland	Clay	Sand	Gravel	Chert	Quartz-ite	Andesite	Sand-stone	Granite
Tpcc	Coarse-grained sandstone and conglomerate, limestone clasts only									X	
Tpcg	Coarse-grained sandstone and conglomerate, granite clasts only									X	
Tpu	Upper Pantano formation, undivided										
Tpfu	Fine-grained siltstone and claystone			X							
Tpcu	Coarse-grained sandstone and conglomerate									X	
Tpl	Lower Pantano formation, undivided			X							
Tpfl	Fine-grained siltstone and claystone			X							
Tpcl	Coarse-grained sandstone and conglomerate										
Volcanic rocks associated with the Pantano formation		Oligocene to early Miocene									
Tt	Tuff	late Oligocene									
Tas	Andesitic volcaniclastic rocks	late Oligocene							X		
Ta	Porphyritic andesite lava flows	late Oligocene							X		
Tr	Rhyolitic tuff	early Oligocene									
Conglomerate beneath pre-Pantano tuff											
Tc	Conglomerate	Tertiary								X	
	Tertiary or Cretaceous Igneous Map Units										
TKf	Felsite	Tertiary or Cretaceous									
TKm	Mafic hypabyssal intrusive rock	Tertiary or Cretaceous									
TKgm	Muscovite granitoid	Tertiary or Cretaceous									
Ke	Empire Mountains stock	Upper Cretaceous									
	Mesozoic Map Units										
Bisbee Group		Lower Cretaceous to Upper Jurassic									
Kq	Turney Ranch formation	Lower Cretaceous								X	
Ka	Siltstone of the Apache Canyon lithofacies	Lower Cretaceous								X	
Kw	Sandstone and conglomeratic sandstone of the Willow Canyon lithofacies	Lower Cretaceous								X	
Kt	Tuff bed	Lower Cretaceous									

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Geologic Map Unit	Geologic Description	Age	Potential Resources Available to Mescal Wash Site Occupants								
			Farmland	Clay	Sand	Gravel	Chert	Quartz-ite	Andesite	Sand-stone	Granite
Kwa	Sandstone and siltstone of the undivided Willow–Apache Canyon lithofacies	Lower Cretaceous								X	
Ksr	Reddish mudstone and sandstone	Lower Cretaceous								X	
Kba	Basaltic andesite lava	Lower Cretaceous									
Kb	Feldspathic sandstone, mudstone, and associated rocks	Lower Cretaceous								X	
Kbu	Bisbee Group, undivided	Lower Cretaceous									
	Glance conglomerate of the Bisbee Group	Lower Cretaceous to Upper Jurassic									
Kjg	Conglomerate, undivided										
KJgl	Monolithic limestone-clast conglomerate										
KJgq	Monolithic quartzite-clast conglomerate										
KJgg	Monolithic granitoid-clast conglomerate										
KJgqg	Mixed quartizite-granitoric clast conglomerate										
Gardner Canyon formation		Jurassic and/or Triassic									
JTRg	Heterolithic assemblage									X	
JTRgu	Upper sandstone and conglomerate									X	
JTRgl	Lower sandstone and mudstone									X	
	Paleozoic Map Units										
Pzc	Carbonate rock	Devonian through Permian									
Pzd	Dolomitic carbonate rock	Upper? Paleozoic									
Pzl	Limestone	Paleozoic									
Prv	Rainvalley formation	Permian					X				
Pc	Concha Limestone	Permian					X				
Ps	Scherrer formation	Permian						X			
Psu	Upper Scherrer formation							X			
Psm	Middle Scherrer formation										
Psl	Lower Scherrer formation							X			
Pe	Epitaph formation	Permian									
Peu	Upper Epitaph formation										
Pem	Middle Epitaph formation									X	
Pel	Lower Epitaph formation										

Geologic Map Unit	Geologic Description	Age	Potential Resources Available to Mescal Wash Site Occupants								
			Farmland	Clay	Sand	Gravel	Chert	Quartz-ite	Andesite	Sand-stone	Granite
PPe	Earp formation	Pennsylvanian to Permian					X			X	
PPeh	Earp formation and Horquilla Limestone, undivided	Pennsylvanian to Permian									
PMi	Escabrosa limestone and Horquilla Limestone, undivided	Pennsylvanian and Mississippian									
Ph	Horquilla Limestone	Pennsylvanian									
Mek	Karst deposits	Mississippian?						X		X	
Me	Escabrosa Limestone	Mississippian					X				
Dm	Martin formation	Devonian					X	X			
Ca	Abrigo formation	Cambrian						X		X	
Cb	Bolsa Quartzite	Cambrian						X			
	Proterozoic Map Units										
Yd	Sierra Ancha diabase	middle Proterozoic									
Yp	Pioneer formation, Apache Group	middle Proterozoic						X		X	
Early to middle Proterozoic granitic rock units											
Yg	Porphyritic granite	middle Proterozoic									X
Xgd	Granodiorite	early to middle Proterozoic									X
Xp	Pinal Schist	middle Proterozoic									
Rocks below the Catalina detachment fault of uncertain protolith age											
f	Fault rocks	Proterozoic to Tertiary protolith with probable Mesozoic to Tertiary deformation									
cs	Calc-silicate tectonite	probable Paleozoic protolith age with probable Mesozoic to Tertiary deformation									

Key: ka = thousand years ago; Ma = million years ago.

floodplain deposits (Table 4). The site itself is located on a fan terrace bordered to the north by Mescal Wash (Mescal Arroyo on USGS maps) and to the west and south by Cienega Creek. Soils on this terrace landform are dominated by the Pinaleno soil series and the Nolam-Tombstone soil complex (Cochran and Richardson 2003) (Figure 10). The substratum of the site is a well-developed cobbly, argyllic to calcic paleosol with a thin mantle of Holocene alluvium. The soils within the floodplains and channels of Cienega Creek and Mescal Wash have been mapped as the Arizo series (Cienega Creek) and the Riveroad-Comoro soil complex (Mescal Wash). Some of these soils are mapped within a complex because they form an intricate pattern that is not practical to map at the selected scale.

The channel and floodplain of Cienega Creek at the confluence with Mescal Wash are mapped as the Arizo soil series and are classified as a Torriorthent to the great group level of soil taxonomy (Entisol in a torric soil moisture regime) (Soil Survey Staff 2003). These young, weakly developed soils have formed in mixed alluvium consisting of very gravelly to extremely gravelly sand. To the north of the site area, the channel and floodplain deposits within Mescal Wash have been mapped as the Riveroad-Comoro complex (Cochran and Richardson 2003). Both the Riveroad and the Comoro series are classified to the great group level of soil taxonomy as Torrifluvents, indicating that these are weakly developed soils (Entisols) with an irregular decrease in organic carbon with depth (fluv). These young soils have formed in recently deposited stratified clay loam (Riveroad series) or sandy loam (Comoro series) alluvium.

The fan-terrace or stream-terrace soils within the Mescal Wash site area have been mapped as the Pinaleno series or the Nolam-Tombstone soil complex (Cochran and Richardson 2003) (see Figure 10). The Pinaleno series is classified to the great group level of soil taxonomy as a Calciargid, indicating that this soil is an Aridisol with argillic and calcic subsurface horizons (Btk horizons) (Soil Survey Staff 2003). This soil has developed in very gravelly clay loam mixed fan and stream alluvium (Cochran and Richardson 2003). The Nolam-Tombstone soil complex forms a narrow strip on the north end of the Mescal Wash site (see Figure 10). The Nolam soil series is classified as a Calciargid; however, it has been separated from the Pinaleno (also a Calciargid) on the basis of textural differences (Nolam has a coarser-grained matrix between gravels). The Tombstone series is classified as a Haplocalcid; this classification separates it from the Nolam and Pinaleno series on the basis of the absence of an argillic subsurface horizon (Bt).

Geomorphology

Incision of the axial drainage into the Pantano and Nogales formations since the late Tertiary has produced a series of fan and stream terraces that parallel Cienega Creek (Figure 11). The highest fan surfaces adjacent to the mountain fronts are deeply incised by ephemeral drainages, whereas the lower fan terraces are draped with Pleistocene alluvium and have not been as highly dissected. Adjacent to the modern floodplain, Holocene and late Pleistocene stream-terrace surfaces have developed in Cienega Creek alluvium. Remnants of older (middle to early Pleistocene) axial stream terraces can be found abutting fan-terrace scarps throughout the lower Cienega Creek Basin. The following summary of the geomorphic surfaces present near the Mescal Wash site is based on geologic mapping conducted by the Arizona Geological Survey (Spencer et al. 2001) (see Figure 11 and Table 3).

Axial Stream Deposits

These mapping units represent alluvial deposits laid down by Cienega Creek since the early Pleistocene. Within the vicinity of the Mescal Wash drainage, these deposits are restricted to late Pleistocene and late Holocene stream terraces. Early to middle Holocene axial stream deposits are generally absent in the site area because of periods of intensified erosion in the late to middle Pleistocene (Eddy and Cooley 1983).

Qlr: Late Pleistocene river-terrace deposits dating from 130 to 10 thousand years ago (ka). This terrace is present as isolated remnants to the south and north of the site area, predominantly on the east side of Cienega Creek (see Figure 11). Soils on this surface are well developed with argillic or calcic subsurface horizons and are classified as Calciargids or Haplocalcids (typically mapped as the Nolam-Tombstone soil series).

Qy1r: Older Holocene floodplain and terrace deposits less than 10 ka. Near the site area this terrace can be found directly to the west on the west side of Cienega Creek (see Figure 11). Soils on this landform are mapped as Torriorthents or Torrifluvents (Riveroad, Comoro, or Arizo soil series).

Qyr: Late Holocene floodplain and terrace deposits less than 4 ka (Eddy and Cooley 1983). This is a widespread low terrace that abuts the modern channel of Cienega Creek. Soils are weakly developed and are classified as Torrifluvents or Torriorthents (typically mapped as the Riveroad, Comoro, or Arizo soil series). This surface is covered by mesquite *bosque* and scattered Fremont cottonwood (*Populus fremontii*), velvet ash (*Fraxinus velutina*), and willow (*Salix* sp.) in wetter areas.

Qycr: Modern coarse-grained channel deposits less than 100 years in age. Soils, if present, are very poorly developed and are classified as Torriorthents (typically mapped as the Arizo soil series).

Table 4. Soils of the Cienega Creek Basin and Associated Landforms

Soil Series	Taxonomy	Landform	Slope (%)	Dominant Vegetation
Andrada	Haplocalcid	Colluvium and alluvium from Cretaceous rocks	3–45	Mixed desert grassland and shrub species
Arizo	Torriorthents	Active channels and fans	0–15	Creosote bush and bursage
Bernardino	Calciargids	Alluvial fans extending from Cretaceous and Paleozoic sedimentary and igneous rock sources	0–30	Desert grassland species with shrub mesquite
Caralampi	Haplargids	Alluvial fans from Cretaceous and Paleozoic sedimentary and igneous bedrock sources	0–50	Desert grassland species along with shrub mesquite and few cacti
Comoro	Torrifluvents	Active floodplains	0–8	Desert grassland and shrub species with mesquite
Deloro	Haplargids	Alluvial fans extending from Cretaceous and Paleozoic sedimentary and igneous bedrock sources	1–45	Desert grassland mixed with Lower Sonoran Desert species
Diaspar	Haplargids	Alluvial fans extending from granite, rhyolite, andesite, and schist bedrock sources	0–8	Desert grassland species
Granolite	Haplargids	Alluvial fans and pediments with acidic (e.g., rhyolite) bedrock	2–65	Lower Sonoran Desert species with few grassland species
Keysto	Torrifluvents	Alluvial fans and floodplains	0–8	Mixed desert shrub and grassland species
Kimrose	Petrocalcids	Alluvial-fan terraces and colluvium overlying Pantano formation	1–20	Mixed desert shrub and grassland species
Lampshire	Torriorthents	Alluvial fans and colluvium from volcanic and metamorphic rock	0–90	Mixed desert shrub and grassland species
Mabray	Torriorthents	Alluvial fans from limestone bedrock source	3–70	Mixed Chihuahuan Desert shrub and grassland species
Nolam	Calciargids	Alluvial-fan terraces and piedmont surfaces from rhyolite and andesite bedrock sources	2–30	Lower Sonoran Desert shrub and grassland species
Oracle	Haplargids	Alluvial-fan and pediment surfaces from granitic bedrock source areas	5–45	Desert grassland mixed with evergreen woodland species
Pantak	Haplargids	Alluvial fans and colluvium from igneous bedrock sources	8–60	Lower Sonoran Desert mixed with grassland species
Pantano	Haplocalcids	Alluvial-fan terraces and colluvium overlying Pantano formation	5–50	Lower Sonoran Desert species
Pinaleno	Calciargids	Alluvial-fan and stream terraces	0–45	Sparse vegetative cover consisting of desert shrub with few grassland species
Powerline	Haplocalcids	Alluvial-fan terraces and colluvium overlying Pantano formation	5–30	Mixed desert shrub and grassland species
Redington	Torriorthents	Alluvial-fan and stream terraces	3–70	Mixed desert grassland and shrub species with mesquite
Riveroad	Torrifluvents	Floodplains	0–5	Mesquite and desert grassland species
Romero	Torriorthents	Alluvial fans from granitic and metamorphic bedrock sources	5–70	Mixed evergreen woodland, desert shrub, and grassland species
Sasabe	Paleargids	Alluvial-fan terraces	0–8	Desert grassland species with mesquite
Stagecoach	Haplocalcids	Alluvial-fan terraces	0–60	Desert grassland species with creosote bush
Tombstone	Haplocalcids	Alluvial-fan terraces and colluvium overlying Pantano formation	1–50	Mixed desert grassland and shrub species
White House	Haplargids	Alluvial fans from mixed bedrock sources	0–35	Desert grassland species with mesquite

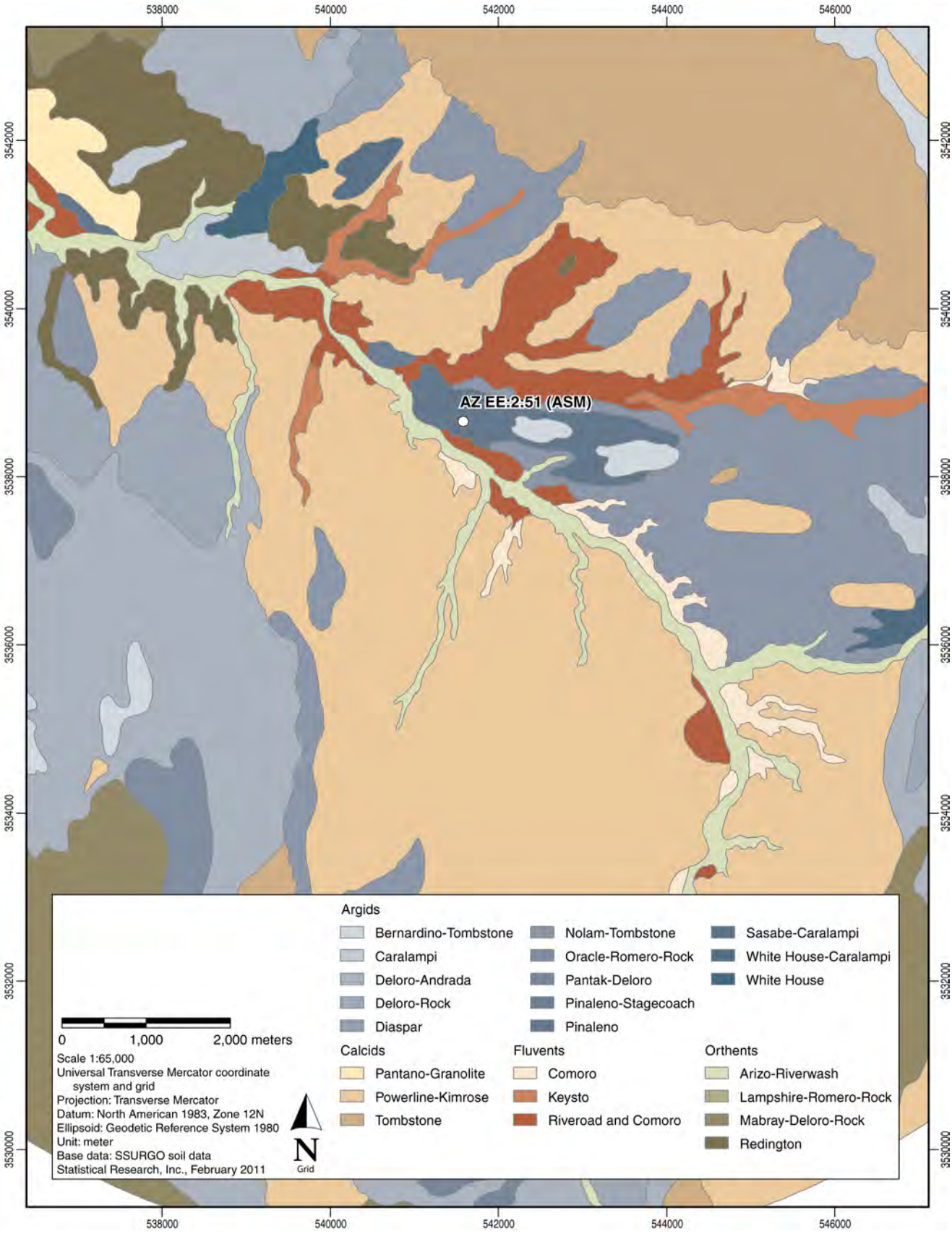

Figure 10. Soil map of the Lower Cienega Creek Basin, scale 1:65,000 (soil data from the Soil Survey Geographic [SSURGO- Database, U.S. Department of Agriculture Natural Resources Conservation Service).

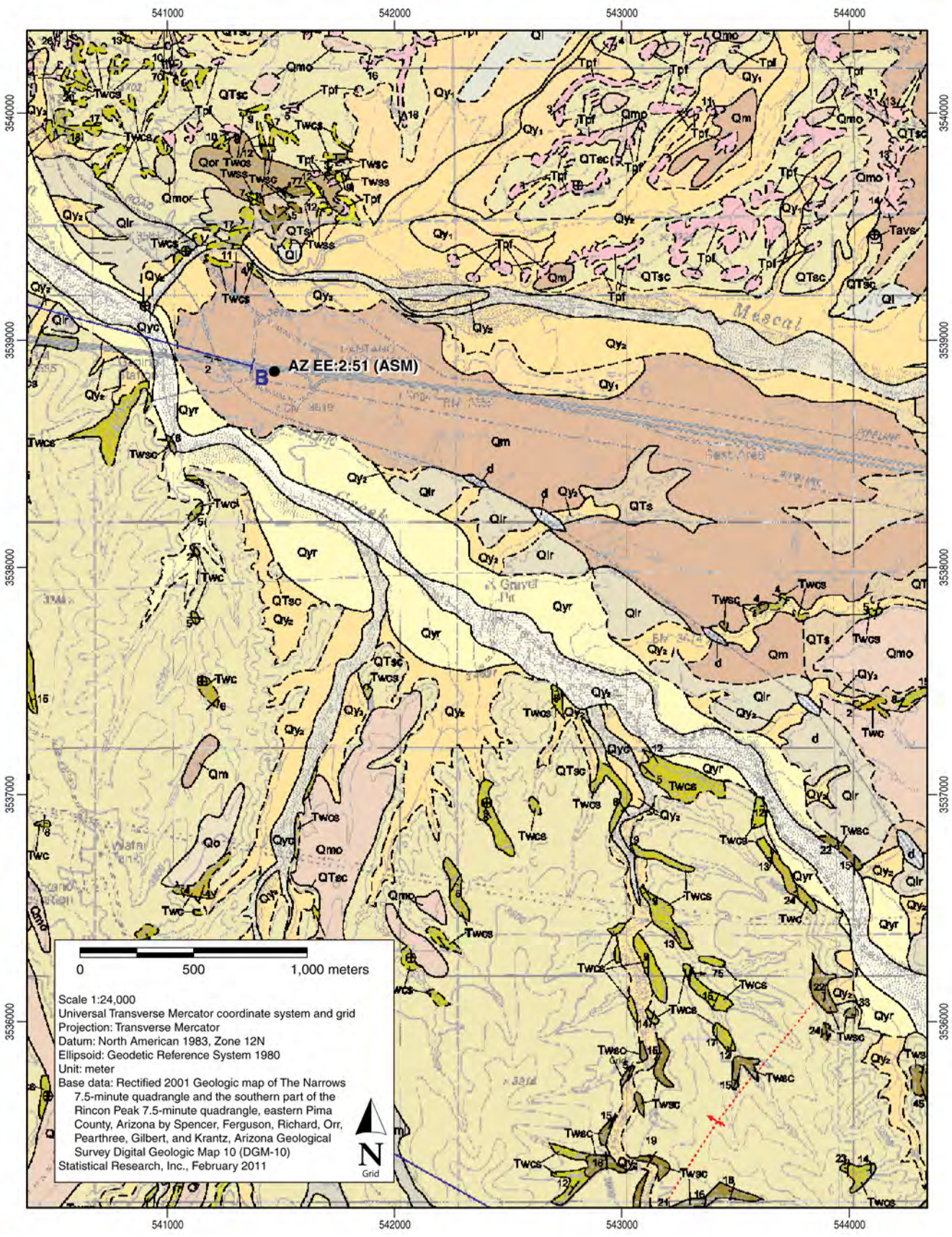

Figure 11. Surficial geology of The Narrows 7.5´ quadrangle (Spencer et al. 2001). Geologic descriptions and ages for these geological map units are presented in Table 3.

Quaternary Piedmont Alluvium

These mapping units represent Quaternary alluvial piedmont deposits. In the vicinity of the Mescal Wash site, these deposits overlie loosely consolidated gravels and/or conglomerates of the Nogales formation. Most of the site area is underlain by piedmont alluvium, middle Pleistocene in age, on the lowest fan-terrace surface. To the north, the site is bordered by Piedmont alluvium associated with Mescal Wash (see Figure 11).

Qm: Middle Pleistocene piedmont alluvium ranging in age from 500 to 130 ka. This mapping unit encompasses most of the site area. Soils are well developed with argillic and/or calcic subsurface horizons and 5YR hues. These soils are classified as Calciargids or Haplocalcids and are typically mapped as the Nolam-Tombstone soil complex.

Ql: Undifferentiated late Pleistocene alluvium from 130 to 10 ka in age. A small remnant of this late Pleistocene alluvium is located on the north side of Mescal Wash directly to the north of the site area (see Figure 11). Soils associated with this landform are classified as Petrocalcids or Haplocalcids and are within the Powerline-Kimrose soil complex.

Qy_1: Older Holocene piedmont alluvium ranging in age from 10 to 2 ka. Remnants of Qy_1 can be found along Mescal Wash and inset into older piedmont surfaces throughout the basin. Near the project area the soils developed in this alluvium have been mapped as the Nolam-Tombstone complex and are classified as Calciargids or Haplocalcids.

Qy_2: Younger Holocene piedmont alluvium less than 2 ka in age. These deposits flank Mescal Wash and can be found inset into older piedmont surfaces throughout the region. Soils associated with this surface are poorly developed and are classified as Torrifluvents (Riveroad-Comoro soil complex).

Qyc: Recent channel deposits less than 100 years in age. These deposits are located within the channel of Mescal Wash and its tributaries. Soils, if present, are classified as Torriorthents or Torrifluvents and are mapped as the Riveroad, Comoro, or Arizo soil series.

Tertiary Piedmont Alluvium

QTsc: Pantano formation and hill-slope deposits mantling the Pantano formation. These are Tertiary alluvial-fan deposits than have been incised and beveled by the axial drainage, forming fan terraces. Soils associated with this surface in the project area have been mapped as the Powerline-Kimrose soil complex and are classified as Petrocalcids or Haplocalcids.

QTs: Tertiary to Quaternary loosely consolidated gravel basin fill. This mapping unit can be found capping the Pantano formation to the northwest and southeast of the study area. Soils developed in this deposit are classified as Petrocalcids or Haplocalcids and have been mapped as the Powerline-Kimrose soil complex.

Hydrology

The Cienega Creek watershed drains a 1,200-km^2 (463-square-mile) basin between the Empire, Rincon, Whetstone, and Santa Rita Mountains. This drainage begins at an elevation of 1,740 m (5,710 feet) AMSL in the Canelo Hills (northeast of Patagonia) and flows north-northwest for 80 km (50 miles) to Pantano Wash (950 m [3,120 feet] AMSL) near Vail, Arizona. Just north of the Mescal Wash site, Cienega Creek becomes Pantano Wash, a tributary of the Rillito River, which drains 2,419 km^2 (934 square miles) of the eastern Tucson Basin and is a major tributary of the Santa Cruz River. Perennial reaches, often containing areas of ponded water, in the upper Cienega Creek Basin (area to the south of Interstate 10) start to the south of Gardner Canyon and end downstream from the Narrows (Figure 12). In the lower basin (downstream from Interstate 10), perennial discharge begins near the Jungle Road crossing.

The tributaries in the Cienega Creek watershed form a radial drainage pattern around the flanks of the bounding mountain ranges. Incision of these drainages into the Tertiary basin fill (Pantano formation and late Tertiary gravels) has resulted in the formation of numerous southeast–northwest-trending canyons on the piedmonts of the Whetstone, Empire, and Santa Rita Mountains. Some of these drainages have incised 25–30 m (82–98 feet) into the basin fill with head-cuts that extend into the upper piedmont. On the western piedmont of the Whetstone Mountains, these include Matty (Mattie on USGS maps), Apache, Fresno, and Spring Water Canyons. Canyons formed on the eastern piedmont of the Empire and Santa Rita Mountains include Gardner, North, Stevenson, Sanford, and Pump Canyons. Perennial flow also is present in some of the tributaries, including Matty Canyon, Davidson Canyon, and Empire Gulch (Pima Association of Governments [PAG] 1998). Mescal Wash has its headwaters approximately 13 km (8 miles) northeast of the site in the southeastern foothills of the Rincon Mountains (Figure 13). One of the larger washes in the area, it has a wide, sandy floodplain populated by abundant mesquite and flanked by copious agave which has given the drainage its name. No historical records indicating surface water flow exist, although groundwater levels would have been high near the confluence with Cienega Creek before the modern era.

Figure 12. Ponded water in Cienega Creek, just south of the Mescal Wash site.

Figure 13. Northeast view of Mescal Wash, showing its headwaters in the Rincon Mountains.

The hydrology of Cienega Creek is of importance today because of its influences on flood control and groundwater recharge in the Tucson Basin. Four presidentially declared flood disasters have occurred in eastern Pima County since 1977 (Ellett 1994). It has been estimated that the 100-year peak flood would increase by 25 percent and peak flow velocity would increase by 7 percent if suburban development occurred within the Cienega Creek watershed (Ellett 1994). The Arizona Department of Water Resources has estimated that the annual recharge to the Tucson aquifer (main source of water for the city of Tucson) is 3,500 acre-feet from groundwater flow and 2,700 acre-feet from perennial surface flow (Pima County Department of Transportation and Flood Control District [PCDOTFCD] 1993). Because of these factors, the Pima County Flood Control District authorized that the surface waters of Cienega Creek be designated a Unique Water (Ellett 1994). Currently, the Cienega Creek Natural Preserve protects the perennial-flow-dominated lower 16 km (10 miles) of the stream.

Climate

The Cienega Creek Basin is bordered by Chihuahuan Desert grassland on the east and the Arizona Uplands division of the Sonoran Desert to the west. The present climate of southeastern Arizona is part of the subtropical desert as defined by Trewartha (1968:39) and is described as a dry climate. In the Upland Sonoran Desert, precipitation occurs during two rainy seasons. The winter rains fall in December and January as a result of migrating low-pressure systems and low-pressure troughs associated with the southward-shifting jet stream. These systems bring in dark cloud fronts with generally low-intensity precipitation that may last for several days. In contrast, the summer monsoons consist of moisture-bearing winds from the Pacific and/or the Gulf of California flowing inland; these fill the partial vacuum created by the warm, rising continental air (Ingram 2000). The Pacific high shifts to around 40° latitude north by late summer/early fall, allowing moist air from off the coast of Baja California to move into Arizona. These summer rains come in the form of violent thunderstorms that may drop more than 50 percent of the area's annual rainfall in a single event. These rainy seasons are separated by periods of pronounced aridity; the driest months are May, June, and February. Within the grasslands to the east of the site, an increase in elevation brings slightly lower temperatures and an increase in annual precipitation.

Although weather records are not available for the immediate area, precipitation and temperature records from nearby stations in Tucson and Benson provide climatic data from 1894 to 2005. Both Tucson and Benson lie within an area of the state that receives 25–38 cm (10–15 inches) of precipitation annually (Sellers and Hill 1974). The average temperature in January for Mescal Wash is 7–10°C (45–50°F), and the average July temperature ranges from 27 to 29°C (80 to 85°F) (Sellers and Hill 1974). The average annual precipitation for the Benson area, as recorded at the Apache Powder Company 8 km (5 miles) south-southeast of Benson at an elevation of 1,125 m (3,690 feet) AMSL from 1923 to 1990, was 33 cm (13 inches), whereas in Tucson (University of Arizona, 786 m [2,580 feet] AMSL) from 1894 to 2005, the average annual precipitation was 28 cm (11 inches) (data from Western Regional Climate Center, http://www.wrcc.dri.edu/index.html; see also Sellers and Hill 1974). Monthly temperature readings indicate that the average annual temperature in Tucson from 1894 to 2005 was 20°C (68°F), whereas in the Benson area from 1923–1990, it was approximately 17°C (62–63°F). From these data it can be estimated that the average annual temperature for the site area (1,094–1,112 m [3,590–3,650 feet] AMSL) probably is approximately 17°C (62–63°F) and the average annual precipitation is between 28 and 33 cm (11 and 13 inches). Historical climatic data for the surrounding area give an indication of the variability of the annual temperature and precipitation. The data collected for the Tucson area provide the most complete record between 1894 and 2005 (Figures 14 and 15). Although it can be assumed that elevation differs have resulted in some variability in the annual temperature and precipitation between the Cienega Creek Basin and the city of Tucson, the overall fluctuations between yearly means is probably similar. The records of temperature and precipitation for the Tucson area reveal that years of unusually low precipitation (equal to or less than 13 cm [5 inches] of total rainfall) were 1894, 1924, 1947, and 1997. Years in which the annual precipitation neared or exceeded 51 cm (20 inches) were 1905, 1914, 1919, 1978, and 1983 (see Figure 14).

Mean annual temperature records for Tucson from 1894 to 2005 (see Figure 15) indicate that the warmest year was 1997 (24°C [75.6°F]) and the coolest year was 1898 (18°C [64.7°F]). The historical climate data for 1894, 1915, 1938, 1965, 1989, 1997, and 2005 are incomplete (more than 5 days of data missing). The warmest day on record was June 26, 1990 (47°C [117°F]); the coolest temperature was recorded on January 7, 1913 (-14°C [6°F]). The first freeze typically occurs on or around November 19 and the last around March 19. The growing season recorded between 1951 and 1978 was 240 days in 9 years out of 10 (Cochran and Richardson 2003). Although some data are incomplete, the 5-year moving average and the general temperature trend indicate an increase in the average annual temperature in the Tucson area over the last century (see Figure 15).

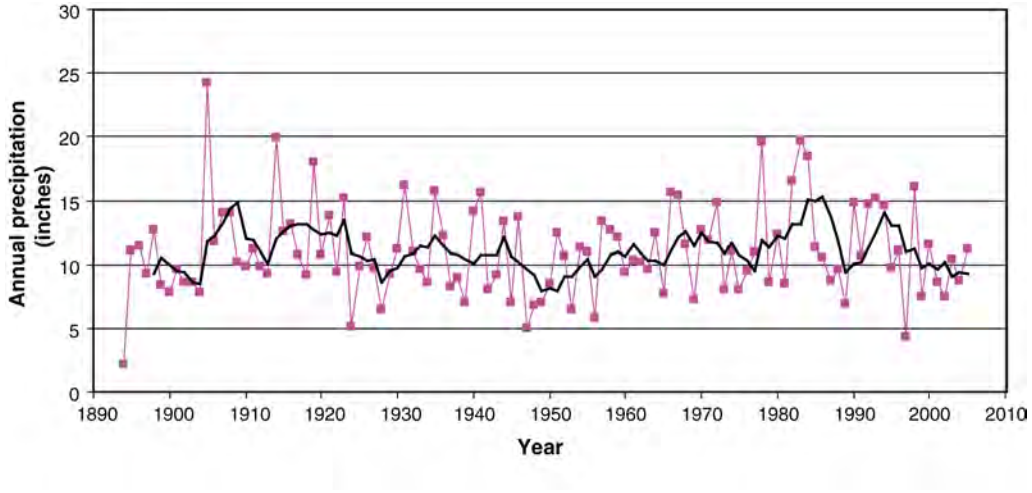

Figure 14. Annual precipitation for the Tucson area, 1894–2005. A purple square indicates the mean annual precipitation for a given year. The black line is the 5-year moving average.

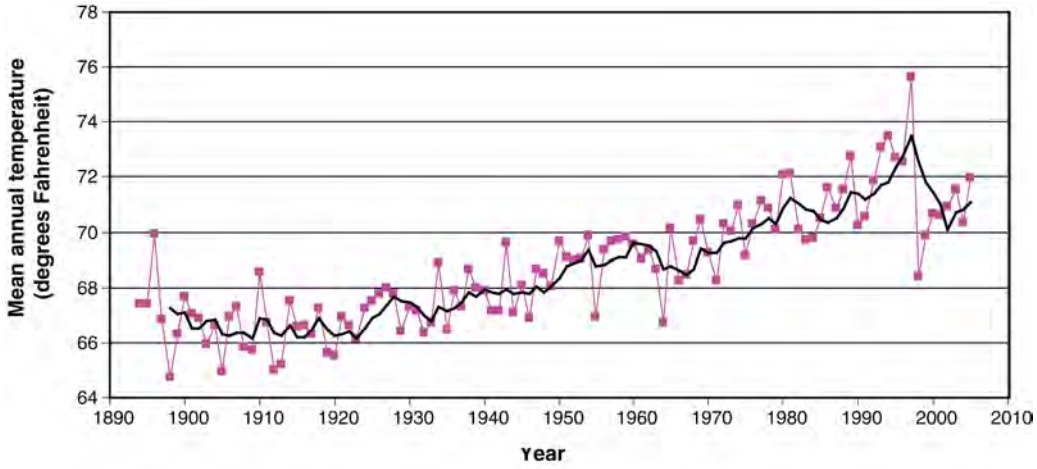

Figure 15. Mean annual temperature for the Tucson area, 1894–2005. A purple square indicates the mean annual temperature for a given year. The black line is the 5-year moving average.

Paleoenvironment

The paleoenvironmental conditions in southeastern Arizona since the late Pleistocene (22,000 B.P. to present) have been reconstructed from macrofossils in pack rat (*Neotoma*) middens and fossil-pollen assemblages from pluvial-lake records and stratified alluvial deposits. Interpretations of these data have led to differing conclusions concerning the timing of environmental change, particularly for the late Pleistocene and the early to middle Holocene; however, a broad consensus does exist for the overall shifts that have occurred since humans first populated the landscape. Paleoenvironmental data for the late Pleistocene and the early to middle Holocene are sparse for the Cienega Creek Basin because of the existence of extensive erosional discontinuities. These gaps in the alluvial record indicate periods of intensified erosion before 4000 B.P., in which most of the late Pleistocene and early Holocene alluvium was removed. These erosional episodes lowered the valley floor by 15–30 m (49–98 feet) and probably correlate to Antevs's (1955) Anathermal and Altithermal periods (Eddy and Cooley 1983). The following is a summary of the late Quaternary paleoenvironment for southeastern Arizona.

Late Pleistocene

The late Wisconsinan climate in the Southwest is controversial. The term "pluvial climate" is often used to describe the southwestern United States where continental glaciation did not occur (Van Devender and Spaulding 1979). The term "pluvial" is used because presently dry playa lake beds were then filled and the continental ice sheets were at or near their maximum extent. Within most geological deposits and paleoecological systems, however, it is difficult to separate the effects of precipitation and temperature. The general consensus is that during the glacial maximum before 12,000 B.P., Pacific westerlies and associated storm tracks would have been displaced southward into the desert Southwest. This resulted in cooler temperatures, increased winter precipitation, and lower evaporation rates (Kutzbach 1983; Spaulding and Graumlich 1986). Spaulding and Graumlich (1986) suggested that, during this time, annual precipitation in the Sonoran Desert may have been twice that of today.

The paleoenvironmental record for the late Pleistocene, as determined from macrofossils in pack rat middens, indicates that the late Wisconsinan (22,000–11,000 B.P.) vegetation community at middle elevations (550–1,520 m [1,800–4,990 feet] AMSL) in much of the Sonoran and Chihuahuan Deserts was dominated by piñon-juniper (*Pinus-Juniperus*) woodlands (Van Devender and Spaulding 1979). Modern piñon-juniper woodlands are found at higher elevation or higher latitudes with wet winters and cool summers. This correlates with paleoenvironmental data taken from Willcox Playa (Pluvial Lake Cochise) in the Sulphur Springs Valley, where strand lines circumscribe the playa at 1,274 m (4,180 feet) AMSL, indicating that this dry lake bed was part of a much larger lake in the Pleistocene (Waters 1989). Fossil pollen from this lake bed indicates that a regime wetter than at present characterized the area beginning around 22,000 B.P. (Hevly and Martin 1961). The terminal Pleistocene vegetation in the Sulphur Springs Valley was dominated by a combination of parkland, woodland, sage, and grassland flora intermixed to form a complex mosaic of microenvironments. Warming and drying trends during the Two Creek interstadial (12,000 B.P.) caused a drop in lake level and incited down-cutting of the San Pedro River (Haynes and Hemmings 1971:8). Additionally, marl deposits indicating high water tables in the San Pedro Valley at the Murray Springs Paleoindian site have been radiocarbon dated to 25,000–13,000 radiocarbon years ago (Pigati et al. 2004).

Terminal Pleistocene to Early Holocene

Spaulding and Graumlich (1986) suggested that the disintegration of the North American ice sheets between 12,000 and 9000 B.P. produced a meridional circulation pattern in the Southwest. During this time, temperatures increased sharply and winter precipitation was reduced but was still greater than in modern times (Van Devender et al. 1987). Antevs (1948), using geologic-climatic dating techniques in alluvial stratigraphy, identified this period as the Anathermal (12,000–7000 B.P). Later in the Anathermal, the warmer, drier climate was replaced by a period of more-humid conditions. Paleovegetational evidence (Spaulding and Graumlich 1986; Van Devender and Spaulding 1979), along with a high stand of Lake Cochise (Waters 1989), indicates that the late Anathermal (also referred to as the early Holocene Pluvial) had enhanced summer precipitation. An additional source of moisture during this time may have been intense rainfall associated with late-summer to early-fall tropical storms that originated in the North Pacific and tracked into the western United States (Webb and Betancourt 1990). Fossil pollen from Lehner Ranch Arroyo indicates that a major vegetational change occurred at the beginning of the Holocene (approximately 11,200 B.P.) (Mehringer and Haynes 1965). In general, the climate of the early Holocene in the desert Southwest was a continuation of the late Wisconsinan winter precipitation regime. Van Devender and Spaulding (1979) suggested that a lack of characteristic Sonoran Desert species in pack rat middens indicates that a monsoonal summer pattern of precipitation had not yet developed.

Middle Holocene

After 8000 B.P., the present climatic and vegetational regimes across much of the Southwest had been established. The period from approximately 7000 to 4500 B.P. was identified by Antevs (1962) as the Altithermal period. This middle Holocene warm period, first identified in the Great Basin, was characterized by winter rainfall and has been extended to include other areas of the Southwest that predominantly receive summer precipitation (Van Devender and Spaulding 1979). The term Altithermal suggests a dry and warm period; however, atmospheric circulation patterns that result in dry conditions in the Great Basin are unlikely to produce the same result in the Chihuahuan Desert. This is evident in the fossil-pollen record of the Murray Springs and Double Adobe sites, where the pollen data indicate a period of greater effective moisture and a shift in vegetational zones downward in elevation by 300 m (984 feet) (Martin 1970; Mehringer et al. 1967). It is believed that areas characterized by summer monsoons actually had increased summer rainfall due to warmer global temperatures favoring the development of the Bermuda High (Van Devender and Spaulding 1979). However, in contrast, the lacustrine record of Lake Cochise in the Willcox Basin indicates that a lake was not present there during the Altithermal from 7000 to 5000 B.P. and that the basin did not fill again until the end of this period (5000–4000 B.P)

(Waters 1989). These combined data suggest that the middle Holocene in southeastern Arizona was characterized by a warm, dry period from 7000 to 5000 B.P. followed by a period of increased moisture from 5000 to 4000 B.P.

Late Holocene

The Medithermal period (4500 B.P. to present) is characterized by climatic conditions similar to those of the present, although some fluctuations have been documented. Paleoflood chronologies spanning the last 5,000 years, developed on rivers in Arizona and southern Utah, indicate that floods group into distinct periods and appear to be related to climatic change (Ely 1997). High-magnitude floods were recorded from 5,000 to 3,600 radiocarbon years B.P. (dendrocalibrated age 3800 to 2200 B.C.) and again between 1100 and 900 B.P. and after 500 B.P. These periods of high-intensity flooding are related to an increase in North Pacific frontal winter storms and Pacific tropical cyclones. These storms increase in frequency when the deep midlatitude troughs steer storm systems into the Southwest. This event is strongly correlated to the frequency of El Niño events over the last 3,000 years. Additionally, high-resolution late Holocene climate reconstruction for the Southwest has been developed based on the variation in annual band thickness, growth records, mineralogy, and U-series dating of stalagmites from Carlsbad Cavern and Hidden Cave in the Guadalupe Mountains of New Mexico (Polyak and Asmerom 2001). This paleoclimatic record indicates that present-day climatic conditions with periods of increased moisture existed from 4000 to 3000 B.P., following a middle Holocene dry period. A distinct wet, cool period is indicated from 3000 to 800 B.P., followed by climatic conditions similar to those of the present. A slightly wetter period from 440 to 290 B.P. is apparent, however (Polyak and Asmerom 2001). Additional paleoclimate evidence spanning the late Holocene comes from Willcox Playa, where a high stand dates between 4000 and 3000 B.P., followed by a period of intermittent shallow, ephemeral lakes that extends to the present day (Waters 1989). The paleoflood chronology, stalagmite record, and high stands in Willcox Playa suggest increased moisture following the middle Holocene from roughly 5000 to 3000 B.P. Wet periods are also evident from 3000 to 800 B.P. in the Guadalupe Mountains and from 1100 to 900 B.P. in the paleoflood record of Arizona rivers. Both the stalagmite data and the paleoflood frequencies indicate an increase in moisture after 500 B.P. In contrast, periods of drought are evident around 1000 B.P. and between 670 and 460 B.P. in the stalagmite record.

Studies of past environments in the Cienega Creek Basin are limited to those of Eddy and Cooley (1983) and Huckell (1995). Pollen analysis by Paul Martin (1963) and radiocarbon dates from exposed stratified alluvium along Matty Canyon Wash and Cienega Creek (Eddy and Cooley 1983) provided paleoenvironmental data as far back as approximately 4000 B.P. Late Pleistocene to middle Holocene alluvium in the Cienega Creek watershed is largely absent because of an intensive period of erosion during the middle Holocene warm period, or the Altithermal of Antevs (1955, 1962). During this period, late Pleistocene to early Holocene sediments were removed by climatically induced erosion across many of the tributaries of the middle Gila watershed, including the Santa Cruz, Verde, and Salt Rivers (Huckleberry 1995; Johnson et al. 1998; Waters and Ravesloot 2000). In the Sonoita Basin, erosion and channel incision lowered the valley floor from 15 to 30 m (50–100 feet) and did not cease until approximately 2000 B.C., at the beginning of the Anathermal (Antevs 1955; Eddy and Cooley 1983). A truncated late Pleistocene paleosol near the base of the arroyo wall, characterized by slightly redder colors, common calcium carbonate nodules, and well-developed soil structure, marks this period of erosion. Previous investigations near Matty Canyon identify this paleosol as Unit 100 (Eddy and Cooley 1983). Radiocarbon dates from the alluvium directly overlying the paleosol place their deposition from 2000 to 1500 B.C., indicating that a span of at least 6,000 years is missing in the stratigraphic record (Eddy and Cooley 1983).

As temperatures decreased and precipitation increased at the onset of the Anathermal (approximately 4500 B.P., the approximate start of the San Pedro phase of the Late Archaic period), erosion along Cienega Creek diminished and a period of fine-grained sedimentation associated with high water tables ensued. These marsh, or *cienega*, deposits in the vicinity of Matty Canyon (ranging in age from 1500 B.C. to A.D. 1100) have been identified as Units 6–3 (Eddy and Cooley 1983) (Figure 16). Units 4 and 6 represent sediments laid down in the *cienega* proper and are characterized by high clay and silt contents, along with an increase in organic matter producing a darker color. Units 5 and 3 contain more sand, gravel, and incised channels, suggesting deposition along the stream channels that entered into the marshy areas near the center of the basin (Eddy and Cooley 1983). Units 6–4 were deposited largely during the Late Archaic period, from 1500 B.C. to approximately A.D. 1; however, dwindling marsh environments represented by Unit 4 continued in some locations until around A.D. 900 (Eddy and Cooley 1983). After A.D. 1, deposition along active stream channels (Unit 3) became more prevalent and the areal extent of *cienegas* began to decrease (Eddy and Cooley 1983:28–29). The earliest Unit 3 deposits directly overlying or grading into Unit 4 deposits date from the end of the Late Archaic through the Early Formative period (or the early Pioneer period [Vahki-Estrella phase] in the Hohokam sequence) (A.D. 1–750). By the Colonial period (Middle Formative A [A.D. 750–950]), environmental instability resulted in the filling of the remaining *cienegas* with the fluvial sediments that compose Unit 3. The deposition of Unit 3 continued until the Late Sedentary (Middle Formative B) to Early Classic (Late Formative A) periods (approximately A.D. 1100–1300), at which time a period of

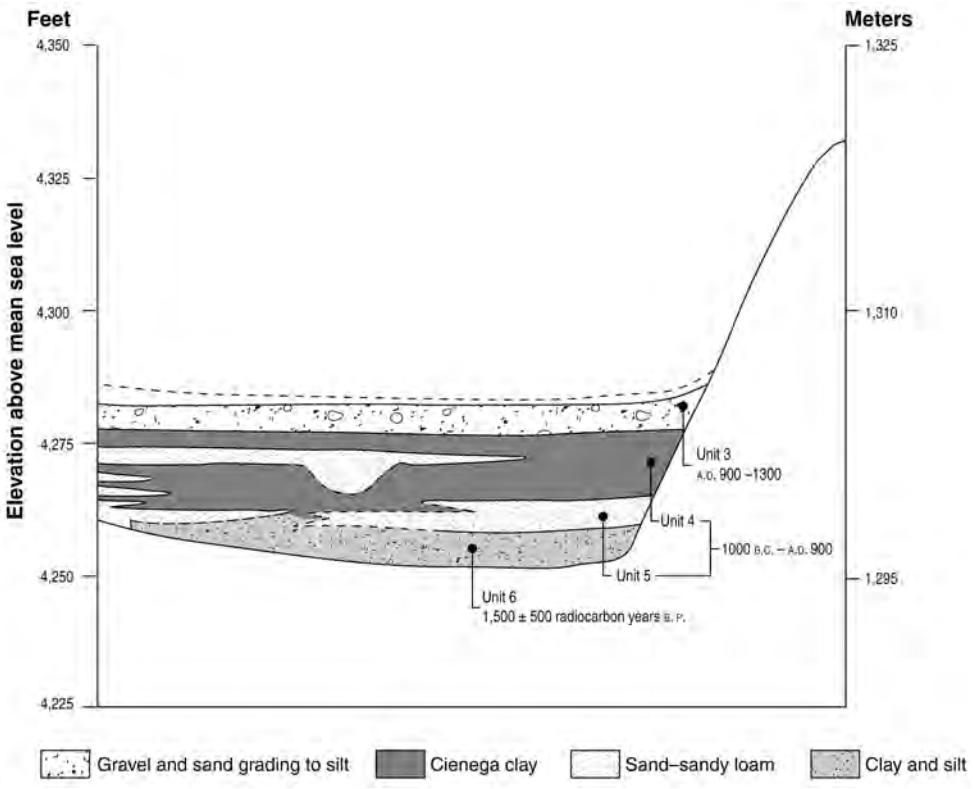

Figure 16. Composite chronostratiraphic cross section of Cienega Creek near Matty Canyon (Mattie Canyon on USGS maps).

channel incision truncated and removed the upper portions of the unit (Eddy and Cooley 1983). The period of arroyo cutting around A.D. 1200–1000 has been well established across a broad region of the Southwest that includes the Gila, Santa Cruz, and San Pedro River basins (Waters 2008; Waters and Haynes 2001). In the vicinity of Matty Canyon, this event is marked by moderately deep, gravel-filled, U-shaped channels that cut into Unit 3 deposits. After A.D. 1100, alluvial deposition commenced in slow-moving waters and marshy areas (Unit 2) and continued uninterrupted from the Late Classic (Late Formative B) to the historical period. These deposits are marked by a laterally continuous soil zone referred to as the Sanford formation (Eddy and Cooley 1983). Deposition of Unit 2 ceased during the present period of arroyo formation that began in the late nineteenth to early twentieth centuries. Incision of the historical-period arroyo created the low Holocene terrace along Cienega Creek and Matty Canyon. The overlying Unit 1 alluvium represents deposition coeval with historical-period arroyo formation from A.D. 1875 to 1900 (Eddy and Cooley 1983).

Vegetation

Cienega Creek Basin lies in a transitional area between the Sonoran and Chihuahuan Deserts and contains plant species from both ecosystems (McGann & Associates 1994). The riparian corridor along Cienega Creek hosts plant communities that were once common along most drainages of the Southwest but have been lost because of groundwater mining and urban sprawl. The upland vegetation surrounding the stream consists of Sonoran and Chihauhuan desertscrub and semidesert grassland species. Oak (*Quercus*) and juniper dominate above 1,600 m (5,250 feet) AMSL, and piñon forest is present above 2,270 m (7,450 feet) AMSL on the north-facing slope of the Santa Rita Mountains (Eddy and Cooley 1983). Slope aspect, the spatial pattern of soils, and elevation influence the distribution of the dominant plant communities within the Cienega Creek Basin. A stylized cross section of the Cienega Creek Basin showing major plant communities is illustrated in Figure 17.

Floodplain Plant Communities

Within the floodplains and washes of the basin, where water tables are highest, dense stands of mesquite (predominantly velvet mesquite [*Prosopis velutina*]) known as mesquite *bosques* (“small forests”) form a continuous crown cover with individual trees spaced 1.5–3 m (5–10 feet)

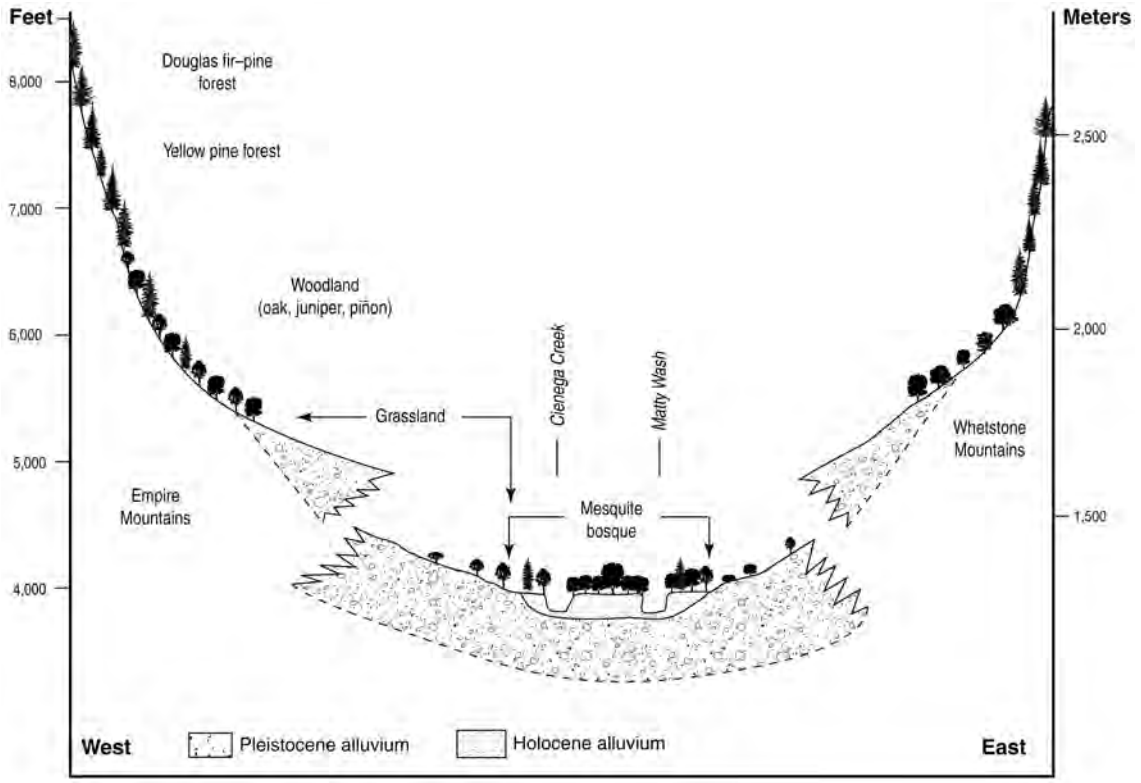

Figure 17. Cross section of Cienega Creek Basin showing major plant communities (adapted from Eddy and Cooley 1983).

apart (Figure 18). The intense shade within the *bosque* eradicates nearly all understory plant species. This results in a *bosque* floor that is composed of a fine vegetative "duff," or detritus, that may support native annuals only during the rainy seasons. During the driest parts of the year, this underlying detritus can become desiccated and may support wildfires. The mesquite detritus is nutrient rich and is high in nitrogen because mesquite is a leguminous (nitrogen-fixing), bean-pod-bearing species (mesquite is part of the pea family [Fabaceae] and is related to acacia) (Epple 1995). Prehistorically and during later times, mesquite beans served as an important protein source for many indigenous people. They are also an important food for many species of wildlife (Dimmitt 2000).

Prehistorically, large mesquite *bosques* were present along the major drainages of southern Arizona, including the Gila, San Pedro, Santa Cruz, and lower Colorado Rivers (Lowe 1964). Small remnants of these stands still remain; however, wood gathering and excessive groundwater pumping have eliminated most of these stands. Local reports from the Cienega Creek area indicate that the replacement of other native annuals and lowland tree species by mesquite took place over the early to mid-twentieth century (Eddy 1958:20). This phenomenon is related to deep arroyo cutting that took place across the Southwest in the late nineteenth and early twentieth centuries as a result of changes in mean annual precipitation, grazing by livestock, and decreases in protective plant cover (Bull 1997). Entrenched streams abandoned former floodplains, and groundwater tables dropped appreciably. This was advantageous for mesquite because its taproot system is able to reach depths of more than 30 m (100 feet) below the surface, allowing it to outcompete other plant species (Eddy and Cooley 1983). The spread of mesquite may also have been facilitated by extensive lowland grazing by cattle, which spread the seeds with their feces.

Mesquite *bosques* are associated with fluvents (Riveroad soil series) in the Cienega Creek Basin. These weakly developed soils (Entisols) are located on the lowest Holocene terrace and the floodplains of tributary washes. Mesquite thrives in these areas because the groundwater table is still relatively high but low enough to inhibit colonization of other lowland plants. These soils are considered well drained and have textures ranging from clay loam to sandy loam (Cochran and Richardson 2003). In the wetter riparian areas adjacent to the stream channel, other tree and shrub species are present, including Fremont cottonwood, willow, ash, walnut (*Juglans*), and seepwillow (batamote, *Baccharis salicifolia*), a shrub (Table 5).

Disturbed soils along floodplains would have provided suitable habitat for chenopods (Chenopodiaceae) and amaranths (Amaranthaceae) (collectively know as chenoams). Seeds from both families are known to have been

Figure 18. Mesquite bosque along Cienega Creek, south of the Mescal Wash site.

Table 5. Common Plant Species in the Cienega Creek Basin

Species	Common Name
Desert grassland species between 1,200 and 1,640 m (3,940 and 5,380 feet) AMSL	
Aristida divaricata	poverty threeawn
Bothriochloa barbinodis	cane beardgrass
Bouteloua chondrosioides	sprucetop grama
Bouteloua curtipendula	sideoats grama
Bouteloua gracilis	blue grama
Bouteloua hirsuta	hairy grama
Bouteloua repens	slender grama
Eragrostis intermedia	plains lovegrass
Hilaria belangeri	curly mesquite
Nolina texana	Texas beargrass
Common tree species of the floodplains	
Baccharis salicifolia	seepwillow
Celtis pallida	desert hackberry
Celtis reticulata	netleaf hackberry
Fraxinus velutina	velvet ash
Juglans major	Arizona walnut
Parkinsonia sp.	palo verde
Platanus wrightii	Arizona sycamore
Populus fremontii	Fremont cottonwood
Prosopis velutina	velvet mesquite
Salix gooddingii	Goodding's willow
Sambucus mexicana	Mexican elder
Chihuahuan Desertscrub species	
Flourensia cernua	tarbush
Fouquieria splendens	ocotillo
Larrea tridentata	creosote bush
Mortonia scabrella	Rio Grande saddlebush
Sonoran Desertscrub species	
Acacia constricta	whitethorn acacia
Acacia greggii	catclaw acacia

Species	Common Name
Carnegiea gigantea	saguaro
Encelia farinosa	brittlebush
Fouquieria splendens	ocotillo
Tree species between 1,640 and 2,000 m (5,380 and 6,560 feet) AMSL	
Arctostaphylos	manzanita
Juniperus deppeana	alligator juniper
Pinus cembroides	Mexican piñon
Quercus emoryi	Emory oak
Quercus oblongifolia	Mexican blue oak
Tree species above 2,000 m (6,560 feet) AMSL	
Abies concolor	white fir
Pinus arizonica	Arizona pine
Pinus strobiformis	southwestern white pine
Populus tremuloides	quaking aspen
Pseudotsuga menziesii	Douglas fir
Replacement species on thin soils in grassy areas between 1,200 and 1,600 m (3,940 and 5,250 feet) AMSL	
Agave sp.	agave
Ephedra trifurca	longleaf Mormon tea
Prosopis sp.	shrub-sized mesquite
Yucca elata	soaptree yucca

Key: AMSL = above mean sea level

an important wild-plant food source in many regions, including the southwestern and southeastern United States. Several locally important cheno-ams may have included pitseed goosefoot (*Chenopodium berlandieri*) and Palmer's amaranth (*Amaranthus palmeri)* (Huckell 1995). Although not as prevalent in the prehistoric macrobotanical record, mesquite along floodplains and on distal alluvial fans would have provided a valuable source of protein.

Grassland and Desertscrub (1,200–1,600 m [3,940–5,250 feet] AMSL)

Above the riparian areas along the piedmont and terrace surfaces of the Cienega Creek Basin, the plant community is dominated by desert grassland and desertscrub species (Eddy and Cooley 1983). This region is a complex mosaic of desert plant communities with a spatial arrangement dictated by soil type and topography (Lowe 1964). This community resembles that found in other parts of southeastern Arizona, southwestern New Mexico, and northern Mexico above 1,060 m (3,500 feet) AMSL and below the evergreen woodlands (Shreve 1939). In the Cienega Creek Basin, desert grassland species such as perennial grama grasses (*Bouteloua* spp.), plains lovegrass (*Eragrostis intermedia*), and cane beardgrass (*Bothriochloa barbinodis*) do not form extensive continuous expanses because the soils are fairly shallow and rocky on most of the piedmont surfaces between 1,200 and 1,600 m (3,940 and 5,250 feet) AMSL. In many places, particularly on north-facing slopes and areas where the soil is especially thin, perennial grasses are interrupted by discontinuous patches of desertscrub. These shrubs include species from the Lower Sonoran Life Zone, such as soaptree yucca (*Yucca elata*), catclaw acacia (*Acacia greggii*) and whitethorn acacia (*Acacia constricta*), ocotillo (*Fouquieria splendens*), and agave (*Agave* sp.). In soils formed in Paleozoic limestones, outliers of the relatively cool Chihuahuan Desert such as tarbush (*Flourensia cernua*), Rio Grande saddlebush (*Mortonia scabrella*), and creosote bush are common (Eddy and Cooley 1983). As is true for other warm-temperate grasslands, the original grass cover in this biome has been largely replaced. In the Southwest, past heavy grazing, protection from wildfire, drought, and erosion along drainages have resulted in tremendous soil erosion and shrub invasion at the expense of native grasses (Bahre 1991; Betancourt et al. 1990; Hastings and Turner 1965).

The soils of Cienega Creek Basin that are associated with desert grassland plant communities tend to be deep Argids (Aridisols with argillic subsurface horizons, Bt) formed in mixed alluvium from igneous and metamorphic bedrock source areas with loam or clay loam epipedons (surface horizons). These soils includes the Bernardino, Oracle, White House, and Diaspar soil series (see Table 4) (Cochran and Richardson 2003). At higher elevations approaching 1,600 m (5,250 feet) AMSL, woodland species such as Emory oak (*Quercus emoryi*) and alligator juniper (*Juniperus deppeana*) can be found associated with these soils (Oracle series). Below 1,400 m (4,600 feet) AMSL, shrub mesquite may also be present. These soils formed in mid- to late Pleistocene valley fill north (south-facing piedmont surface) and east of Cienega Creek and in alluvium derived from Paleozoic sedimentary and Proterozoic igneous bedrock on the eastern slope of the Empire Mountains. The Bernardino and White House series are on slopes of 35 percent or less and have gravelly loam to clay loam epipedons. The Diaspar series has a coarser-grained sandy loam epipedon but with very low gravel content and is found on slopes of 8 percent or less.

Conversely, soils with mixed desert shrub (Sonoran and Chihuahuan) and grassland vegetation are predominantly shallow, very gravelly Calcids (Aridisols with a calcic subsurface horizon, Bk) and Argids developed in alluvium from Cretaceous sedimentary bedrock sources and gravel-mantled valley fills with greater slope angles. These soils support a mixture of Lower Sonoran and Chihuahuan Desert species along with clumps of annual grasses separated by bare, open ground. Soils with shallow depths to bedrock or a hardpan along with very gravelly epipedons include the Andrada, Deloro, Kimrose, and Pantak series. The Andrada and Deloro series developed in fan alluvium derived from Cretaceous sandstones, and the Pantak series is associated with very gravelly sandy loam fan alluvium from andesite or similar igneous bedrock sources (data from U.S. Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS) Web Soil Survey, http://websoilsurvey.nrcs.usda.gov, accessed December 22, 2009; see also Cochran and Richardson 2009). The Kimrose series has a very gravelly sandy loam epipedon with a very shallow depth to a petrocalcic horizon and has developed in fan alluvium derived from gneiss, schist, and granite (data from the USDA-NRCS Web Soil Survey, accessed December 22, 2009). Other series that support desert shrub plant communities include the Tombstone (mixture of annual grasses and Chihuahuan Desert shrub), Nolam, and Powerline soil series. These soils are deeper but still have very gravelly epipedons.

The grasslands above the Cienega Creek floodplain are of particular significance archaeologically because wildgrass seeds were an important food source for aboriginal groups (Doebley 1984). Both cool- and warm-season grasses provided a source of calories in the late spring and late summer or early fall. Two important grasses include dropseed (*Sporobolus*) and wheatgrass/brome (*Agropyron/Bromus*). Dropseed is a common warm-season grass in semidesert grasslands; though small (typically <1.0 mm), its seeds are produced in large quantities and are easily cleaned for consumption (Huckell 1995). Wheatgrass/brome produces a larger grain and was exploited by prehistoric groups across the Southwest (Doebley 1984). Three-fourths of the botanical samples at the Donaldson site (near the confluence of Matty Canyon and Cienega Creek in the upper basin) contained grains from grass species, suggesting that they were an important food source for local cultural groups (Huckell 1995). In addition to grasses, important desertscrub species would have included mescal agave and yucca. Both of these plants provide a combination of valuable resources including food, drink, fiber for clothing, and soap. Other important grassland-desertscrub species probably included prickly pear (*Opuntia*), saguaro (*Carnegiea*), saltbush (*Atriplex*), and certain species of nightshade (*Solanum*) (Huckell 1995).

Woodlands (above 1,640 m [5,380 feet] AMSL)

The transition to evergreen woodlands in the Cienega Creek Basin varies with slope aspect, but at approximately 1,393 m (4,570 feet) AMSL on the north slopes and along tributary stream channels, mesquite declines and oaks (Emory oak and Mexican blue oak [*Quercus oblongifolia*]) begin to appear along with stands of grama grass (Eddy and Cooley 1983). Above 1,640 m (5,400 feet) AMSL, a variety of oaks (Emory oak, Mexican blue oak, Arizona white oak [*Quercus arizonica*]), alligator juniper, manzanita (*Arctostaphylos*), and Mexican piñon (*Pinus cembroides*) are prevalent. Tree density and height increase with elevation up to 1,970 m (6,460 feet) AMSL, above which the forest community is dominated by Arizona pine (*Pinus arizonica*), particularly on the north-facing slopes of the Santa Rita Mountains (Eddy and Cooley 1983). Soils associated with the evergreen woodlands from 1,640 to 1,970 m (5,400–6,460 feet) AMSL are considered mesic subhumid soils and are often classified as Haplustolls (Mollisols), Argiustolls (Mollisols), or Haplustalfs (Alfisols) in the Whetstone, Santa Rita, and Rincon Mountains surrounding the Cienega Creek Basin (Hendricks 1985). These tend to be rocky, shallow soils formed in the residuum and slope deposits of sedimentary and igneous rocks. At elevations above 2,290 m (7,500 feet) AMSL on the north-facing slopes of the Whetstone Mountains and the peaks of the Santa Rita Mountains, the evergreen woodlands grade into the Canadian Life Zone (Eddy and Cooley 1983; Lowe 1964). This mountainous region is dominated by Douglas fir (*Pseudotsuga menziesii*), southwestern white pine (*Pinus strobiformis*), white fir (*Abies concolor*), and

quaking aspen (*Populus tremuloides*) (Lowe 1964). In the peaks of the Santa Ritas, the soils underlying this montane forest are frigid subhumid soils with a mean annual soil temperature of 4–8°C (40–47°F) and an annual precipitation nearing 76 cm (30 inches) (Hendricks 1985). Winter precipitation may exceed 60 percent of the yearly total in these mountainous areas. Soils are generally shallow, rocky Ustorthents or Cryorthents (both Entisols) (Hendricks 1985).

The woodland biome above 1,640 m (5,380 feet) would also have provided possible wild-food sources to local prehistoric groups. The seeds of alligator juniper, acorns from Arizona white oak and Emory oak, and walnuts growing on the slopes of the Santa Rita, Whetstone, and Empire Mountains would have been used during some parts of the year. Acorns, walnuts, and juniper seeds were recovered from the Donaldson site in the upper Cienega Creek Basin, not far west from the Mescal Wash site (Huckell 1995).

CHAPTER 3

Field Efforts and Summary of Results

Rein Vanderpot

SRI's fieldwork at the Mescal Wash site was conducted in 2000 (Phase 1) and 2001 (Phase 2). During the course of the investigations, more than 1,310 m of backhoe trenches and about 14,575 m² of stripping units were excavated. In addition, SRI archaeologists excavated more than 80 m of hand trenches and 114 test pits. Of the 2,314 archaeological features found in the project area, 474 features (not counting intramural subfeatures) were excavated. In this chapter, as a prelude to the individual locus discussions in Chapters 4–11, the general field methods are discussed and a summary of the field results is presented. In the first part, the Phase 1 and Phase 2 project areas are defined, site and locus boundaries are described, and site condition is assessed. The excavation methods, sampling strategies, and recording system are outlined, and the Phase 1 and Phase 2 feature inventories are presented. In the second part, the various feature types are discussed, and collected artifacts and samples are enumerated. In the final section, the reader is provided with a quick guide on where to find specific feature data in this volume's chapters and appendixes.

Field Methods

Phase 1

The Phase 1 ADI included all areas enclosed within the roads of the interchange, as well as substantial ROW areas along I-10 and the railroad (Figure 19). In the field, the ADI was well marked with angle-iron posts and fencing. Fieldwork was conducted between June 19 and July 27, 2000. It started with a reconnaissance of the project area to identify site and locus boundaries, artifact concentrations (ACs), and surface features. All were marked with flagging tape and mapped with a Sokkia Set6E total station. Next, backhoe trenches were laid out, and artifact collections were made. Reconnaissance and mapping involved the entire site (named the project area), but collections and excavations were carried out only within the ADI. The Phase 1 investigations relied heavily on mechanical excavation, with 1,285 m of backhoe trenches and 1,315 m^2 of mostly 2.4-m-wide stripping units excavated. In addition, we excavated 49 m of hand trenches and 19 test pits. During the course of Phase 1, 26 features were partially or completely excavated. Eight of the completely excavated features were burials exposed in trench walls and potentially imperiled by rain or vandalism.

As part of the same contract, SRI archaeologists conducted a pedestrian survey of five proposed construction easements and two proposed ADOT ROW modifications in July 2000 at or adjacent to the site (Wegener 2000). The survey area measured 4.2 acres (1.7 ha). No features were encountered, but surface artifacts were found in one of the construction easements and in both ROW modifications. On the basis of the survey results, SRI recommended making these areas part of the Phase 2 investigations.

Site and Locus Boundaries

The site boundary was reassessed by systematically inspecting the surface in the greater area of the site perimeter as previously mapped by SWCA (see Chapter 1, this volume). On the basis of the presence or absence of artifacts, the erstwhile boundary was extended in some places and moved back in others. Overall, the site area was expanded rather than reduced, although not by any great measure.

To help organize the data, we identified eight loci (A–H); all but Locus H were completely or partially within the Phase 1 ADI (see Figure 19). Mescal Wash locus definition was guided first by the distribution of surface artifacts

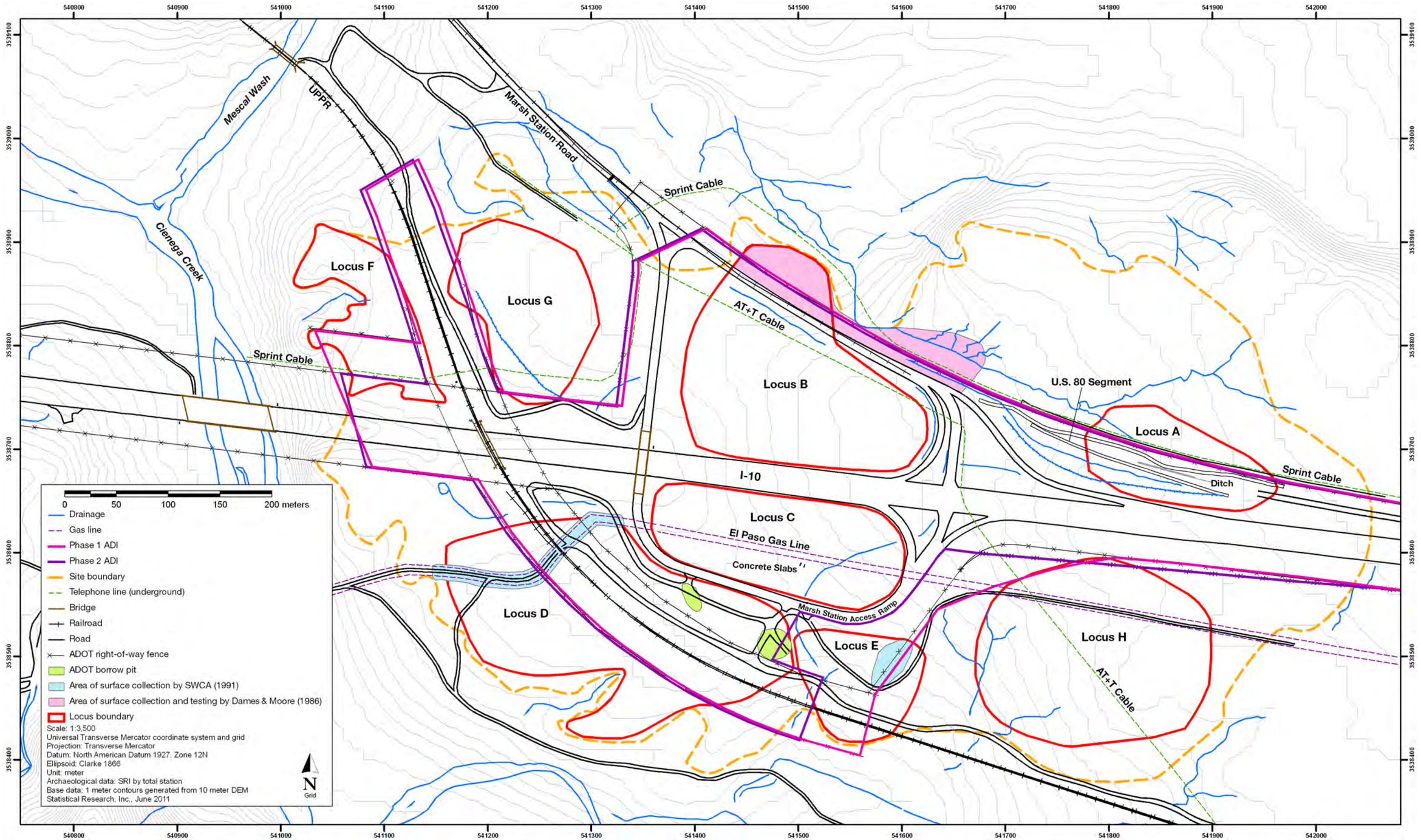

Figure 19. Map of the Mescal Wash site, showing topographic features and disturbances.

and second by modern roads. Loci A and H, and possibly Loci B and E, appeared to represent distinct archaeological localities. Locus C was defined by roads, rather than by a discrete series of cultural deposits, and probably connected with Locus D to the west and possibly Locus E to the south. As determined from size and density of features, Locus D formed the focal point of the site. Railroad construction had cut out a deep swath between Loci F and G, which together probably also formed a single discrete locality.

Disturbances

Development activities have dramatically altered the natural setting of the project area (see Figure 19). The construction of U.S. Highway 80, I-10, the Marsh Station TI, Marsh Station Road (labeled Pantano Road on the 7.5-minute USGS quad, The Narrows, Arizona, 1981), the UPRR line, and the El Paso Gas Line and the routing of various utilities have impacted the project area. Two of the roads and the railroad have been designated linear archaeological sites and are summarized in Appendix D. Numerous ADOT-built culverts and other natural and human-made drainages dissected and surrounded the site area. Cut-and-fill episodes were evidenced by bulldozer push piles, borrow pits, and layers of imported sediment covering parts of the site. Previous archaeological work had also impacted the site. Areas along the northern end of the site (including a portion of Locus B) and in Loci D and E had been subjected to surface collection and testing by Dames & Moore in 1986 (O'Brien et al. 1987) and to collection by SWCA in 1991 (Seymour et al. 1992), respectively.

Locus A was cut through by the east–west ADOT ROW fence, was paralleled by dirt roads on either side, and was flanked by a Sprint on the north side. Road construction had considerably impacted the southern, ADI portion of Locus A. Here, mechanical cutting associated with road-building activities had removed the tops of many features encountered during the excavations, and filling had covered some again with compacted roadbed fill. The locus included an abandoned and partially buried, paved segment of an old roadbed, which had truncated at least one pit structure. Fragments of pavement were still present, and a buried ditch along the north side of the segment may have been associated with the road (see Figure 19). The abandoned road segment lined up with the in-use Marsh Station Road to the west, and both are considered part of old U.S. Highway 80, recorded as AZ FF:9:17 (ASM) (see Appendix D).

The northern portion of Locus B was traversed by Marsh Station Road, an ADOT ROW fence, and the AT&T fiber-optic cable. The southern end of Locus B adjoined I-10, and to the east the locus may have been impacted by the westbound on-ramp.

The El Paso Natural Gas Line 1100 (designated AZ CC:16:24 [ASM]; see Appendix D) and ROW cut east–west through the center of Locus C, with backdirt berms flanking both sides of the 25-m-wide ROW corridor. This locus also had served as a construction staging area during the building of I-10. The eastern portion was covered by a deep layer of imported sand and gravel used as fill for I-10, its surface much compacted by heavy equipment. Cultural deposits abutted the I-10 embankment, and the northern portion of the locus probably extends underneath the road. Two concrete footers with metal uprights exposed during Phase 1 stripping probably served as support for a water tank. In the western part of Locus C, disturbance was minimal except for the gas line.

The most obvious disturbance in Locus D was caused by the construction of the Southern Pacific Railroad (SPRR) (now the UPRR) (designated AZ Z:2:40 [ASM]; see Appendix D), which had gouged a 20-m-wide east–west swath through the center of the locus. At the southeastern edge of the site, the railroad bed was cut 2 m or more below the existing ground surface. On both sides of the tracks were large berms of fill dirt, paralleled by a dirt road on the north side. The El Paso Natural Gas Line and associated maintenance road had cut through the northern end of the locus. Bulldozer cuts and numerous push piles were found in the locus portion outside the ADI. Also in Locus D, our stripping efforts exposed two large borrow pits used by ADOT, one of which we used in Phase 2 to dispose of backfill generated during stripping. As in Locus C, a thick layer of sandy gravel covered the northeastern edge of the locus.

Finally, a Sprint fiber-optic cable cut through the southern portion of Loci F and G, and Locus H was traversed by the AT&T cable as well as the gas line.

Surface Features and Artifacts

Surface features and artifacts were identified by systematically surveying the site area. Surface features consisted of 10 trash mounds, 11 rock clusters, and 2 rock alignments. Whereas the trash mounds were definitely prehistoric, many of the rock features appeared to be modern or from the late historical period. Unique artifacts (e.g., projectile points, certain types of ground stone) were pin-flagged and mapped before collection as point-located artifacts; boundaries of discrete ACs were similarly mapped.

Surface Artifact Collection

Two basic methods were used to collect artifacts from the site surface: collection units and point locations. Because much of the site surface was heavily disturbed, the collection units were defined judgmentally. In some areas, they were enclosed between trenches (Loci A and D), ROW fences (Loci D and E), and roads (Locus D); in other areas, ACs formed individual collection units (Loci B, C, E,

and F). Together, the collection units measured 48,140 m² in area (Table 6). Within the collection units, only potentially diagnostic ceramics (painted and rim sherds), as well as a sample of lithic raw material, were collected. AC 14 in Locus B consisted of a sparse scatter of late-historical-period materials, which were not collected. Point-located artifacts included projectile points, flaked stone tools, and ground stone. Given the degree of disturbance and displacement of materials at the site, sherds were not point-located. In total, 1,233 artifacts were collected from the surface (1,097 from collection units and 136 as point locations) (see Table 6).

Excavation Units

Phase 1 excavation units are shown in Figure 20 and are summarized in Tables 7 and 8. Most of the 59 backhoe trenches were placed in areas with potential for surface deposits. Other trenches—including 10 placed outside the locus boundaries—were excavated to ensure that no archaeologically sensitive areas were missed, even in areas without surface artifacts. In addition to the conventional 2-foot-wide trenches, we used the backhoe to excavate shallow, 8-foot-wide (2.4-m-wide) stripping units. The stripping units (a total of 35, with a combined area of 1,315 m^2), did not cut through features, as trenches did, but instead exposed their tops in plan view; thereby most of the feature was preserved (Figure 21). Given the great extent of cut-and-fill disturbance across the site, this method proved highly successful. With relatively little effort, we obtained important information on feature layout and density. Given the size of the site, spacing between trenches and stripping units in the various loci was necessarily broad, averaging about 25 m in areas with dense surface artifacts and 50 m or more outside these areas. Locus F was not accessible to the backhoe; here we excavated all trenches by hand. Spacing between the hand trenches in Locus F, which were 0.5 m wide, was much tighter, averaging 12–15 m. In addition, 10 trenches, together measuring 153 m in length, were excavated in the general site area outside the loci.

Summary forms were completed for all excavated trenches, and profiles were drawn for sections of all trench walls showing cultural materials. Detailed profiles were drawn and photographs taken of features identified in trench walls. The outlines of all features exposed in stripping units were traced with spray paint and then were mapped with the total station.

Nineteen hand-dug test pits were excavated to sample midden deposits and to guide excavation of other features such as pits and burials (see Table 8). Most of the test pits were 1 by 1 m in size and were excavated in 10-cm levels. In Locus F, the test pits were incorporated within the trenches and measured 1 by 0.5 m. Besides artifacts, flotation and pollen samples were collected from the test pits and excavated features.

Feature Inventory

During Phase 1, 237 features were identified within the site boundary, of which 24 were found on the surface and 213 were exposed by the excavations (Table 9). This feature inventory is an adjusted count, eliminating any features (such as a possible ball court in Locus D and a possible adobe wall in Locus E) later found to be natural disturbances, products of modern activity, or other kinds of nonfeatures. Features included 33 definite and 8 possible pit structures, 2 extramural postholes, 9 burials, 1 borrow pit, 1 *horno*, 30 roasting pits, 129 other extramural pits, and, on the surface, 2 rock alignments, 11 rock clusters, 10 trash mounds, and 1 road segment.

Feature Excavations

Of the identified inventory, SRI excavated 26 features in Phase 1 (Table 10). In general, only imperiled features were excavated: that is, features that were likely to be destroyed by backfilling and reopening trenches and stripping units. Features identified on the site surface (rock clusters, primarily) were not excavated. SRI excavated all exposed burials (8 of the 9 identified) likely to be impacted during the break between the two phases of the project. Burial excavation strictly adhered to the project's burial agreement. All human remains and associated grave goods were repatriated by members of the Tohono O'odham Nation immediately after removal from the site.

Soils and Stratigraphy

Soils at the Mescal Wash site were investigated in Phase 1 as part of an attendant field study to document the variability in soil development in different landscape positions and the spatial relationship between soils and cultural features. Five soil profiles were described, including two profiles in Locus B (Trenches 243 and 246), two in Locus C (Trenches 234 and 237), and one in Locus F (Trench 615). A reconnaissance also was made to examine other backhoe trenches and to record diagnostic subsurface horizons throughout the site area.

All soils at the Mescal Wash site were classified as Aridisols—soils that are dry for more than half of the year and moist for fewer than 90 consecutive days per year. Soils were differentiated on the basis of the following diagnostic subsurface horizons: (1) calcic horizons (soils enriched with significant alluvial accumulations of calcium carbonate), (2) argillic horizons (soils enriched by alluvial clay), and (3) cambic horizons (soils with structural development or color changes). Calcic horizons are widespread throughout most of the Mescal Wash site; they were most prominent in Locus A. Calcic development was weak to

Table 6. Summary of Phase 1 Surface Artifact Collections

Artifact Class	Number of Artifacts												Total (48,140 m²)
	Locus A		Locus B		Locus C		Locus D		Locus E		Locus F		
	CUs (9,057 m²)	PLs	CUs (4,467 m²)	PLs	CUs (6,041 m²)	PLs	CUs (19,963 m²)	PLs	CUs (4,102 m²)	PLs	CUs (4,510 m²)	PLs	
Ceramic	178	—	53	—	162	—	146	—	11	—	4	—	554
Flaked stone	60	16	66	12	137	20	236	26	9	11	15	13	621
Ground stone	15	8	—	6	—	11	1	9	—	2	—	1	53
Other	3	—	—	—	—	—	1	1	—	—	—	—	5
Total	256	24	119	18	299	31	384	36	20	13	19	14	1,233

Key: CU = collection unit; PL = point location

Figure 20. Map of the Mescal Wash site, showing excavated features and Phase 1 and Phase 2 excavation units.

Table 7. Phase 1 Excavation Units, per Locus and General Site Area

Locus	Trenches		Stripping Units		Test Pits	
	Number of Units	Total Length (m)	Number of Units	Total Area (m^2)	Number of Units	Total Area (m^2)
A	6	148	8	298	3	3.09
B	10	357	8	311	—	—
C	7	216	9	369	2	1.05
D	20	196	6	295	5	5
E	6	215	3	40	4	5
F	5[a]	49[a]	1[a]	2.3	5	2.5
General site	10	153	—	—	—	—
Total	64	1,334	35	1,315.3	19	16.64

[a] Hand-excavated units

Table 8. Test Pits Excavated in Phase 1

Test Pit No.	Length (m)	Width (m)	Depth (m)	No. of Levels	Screen Size	Associated Features	Purpose/Comments
				Locus A			
182	1	1	20	2	1/4 inch	188	Sample possible south extension of trash mound (Feature 523); exposed *horno* (Feature 188).
221	1	1	61	7	1/4 inch	522	Sample possible south extension of trash mound (Feature 522).
554	0.35	0.35	0.47	2	sampled	220	Removal of cremation (Feature 220).
				Locus C			
323	1	1	0.2	1	not screened	320	Removal of overburden from cremation (Feature 320), visible in Trench 237.
911	1	1	0.45	4	1/4 inch	278, 999	Explore and sample midden (Feature 999); exposed corner of structure (Feature 278).
				Locus D			
467	1	1	0.29	1	not screened	464	Remove overburden from cremation (Feature 464) along eastern edge of Trench 161.
805	2.5	1	0.11	1	1/4 inch	723, 724	Placed over pits (Features 723 and 724) to remove overburden and expose features in plan view.
835	1	1	0.14	1	not screened	432	Placed over pit (Feature 432) to remove overburden and expose feature in plan view.
866	1	0.85	0.19	1	not screened	457	Placed over pit (Feature 457) to remove overburden and expose feature in plan view.
877	1	1	0.35	2	1/4 inch	446	Placed over pit (Feature 446) to remove overburden and expose feature in plan view.

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Test Pit No.	Length (m)	Width (m)	Depth (m)	No. of Levels	Screen Size	Associated Features	Purpose/Comments
				Locus E			
396	2	1	0.3	1	not screened	380, 381	Remove overburden from two cremations (Features 380 and 381) found in Trench 375.
662	1	1	0.4	1	not screened		Investigate a possible adobe wall (determined to be a modern disturbance).
938	1	1	0.33	3	1/4 inch		Sample deposits along Trench 540.
972	1	1	0.46	4	1/4 inch		Sample deposits along Trench 375.
				Locus F			
605	1	0.5	0.34	2	1/8 inch		Sample segment of Trench 604.
621	1	0.5	0.43	5	1/8 inch	666	Extend east end of Trench 619; discovered pit (Feature 666).
633	1	0.5	0.41	4	1/8 inch	672	Sample midden (Feature 672).
634	1	0.5	0.34	4	1/8 inch	652	Sample dark sediment in Trench 623; discovered structure (Feature 652).
675	1	0.5	0.76	6		745, 746	Placed at east end of Trench 673; exposed two pits (Features 745 and 746).

Figure 21. Narrow stripping unit excavated during Phase 1, showing feature stains (Locus B).

Table 9. Features Identified during Phase 1

Feature Type[a]	Locus								Total
	A	B	C	D	E	F	G	H	
Pit house	4	—	5	15	7	2	—	—	33
Possible pit house	—	4	4	—	—	—	—	—	8
Posthole	—	—	—	2	—	—	—	—	2
Burial (inhumation)	—	—	—	1	—	—	—	—	1
Burial (secondary pit cremation)	1	—	1	3	2	—	—	—	7
Burial (secondary urn cremation)	—	—	1	—	—	—	—	—	1
Ditch or borrow pit	—	1	—	—	—	—	—	—	1
Horno	1	—	—	—	—	—	—	—	1
Pit (roasting)	—	—	12	17	—	1	—	—	30
Pit (unknown)	5	—	20	78	16	10	—	—	129
Rock alignment (on site surface)	—	—	—	—	—	1	—	1	2
Rock cluster (on site surface)	—	5	—	4	—	—	2	—	11
Trash mound (on site surface)	2	1	1	—	—	1	4	1	10
Road (U.S. 80 segment)	1	—	—	—	—	—	—	—	1
Total features	14	11	44	120	25	15	6	2	237

[a] Feature designations were tentative; some were modified on the basis of Phase 2 results.

Table 10. Summary of Features Excavated at the Mescal Wash Site (Both Phases)

Feature Type	Locus A Phase		Locus B Phase		Locus C Phase		Locus D Phase		Locus E Phase		Locus F Phase		Total Phase		Total
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	
Structures															
Pole and brush	—	—	—	—	—	—	—	9	—	—	—	—	—	9	9
House-in-pit	—	5	—	—	—	11	—	57	—	—	—	—	—	73	73
Recessed hearth	—	3	—	—	—	3	—	2	—	—	—	—	—	8	8
Adobe walled	—	—	—	—	—	1	—	4	—	—	—	—	—	5	5
Unknown	—	—	—	—	—	—	—	1	—	—	1	—	1	1	2
Subtotal, structures	—	8	—	—	—	15	—	73	—	—	1	—	1	96	97
Extramural Thermal Features															
Roasting pit, basic	—	5	—	—	—	11	7	17	—	—	—	—	7	33	40
Roasting pit, bell-shaped	—	—	—	—	—	—	2	6	—	—	—	—	2	6	8
Roasting pit, rock-lined	—	—	—	—	—	2	1	5	—	—	—	—	1	7	8
Horno	—	1	—	—	—	1	—	2	—	—	—	—	—	4	4
Hearth	—	—	—	—	—	1	—	1	—	—	—	—	—	2	2
Firepit	—	—	—	—	—	4	—	5	—	—	—	—	—	9	9
Rock cluster/rock pile	—	—	—	—	—	—	—	4	—	—	—	—	—	4	4
Subtotal, extramural thermal features	—	6	—	—	—	19	10	40	—	—	—	—	10	65	75
Extramural Nonthermal Features															
Pits															
Nonthermal pit, general	—	32	—	—	1	36	2	83	—	—	—	—	3	151	154
Nonthermal pit, bell-shaped	—	—	—	—	—	8	2	20	—	—	—	—	2	28	30

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Feature Type	Locus A Phase		Locus B Phase		Locus C Phase		Locus D Phase		Locus E Phase		Locus F Phase		Total Phase		Total
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	
Cache	—	—	—	—	—	—	—	3	—	—	—	—	—	3	3
Borrow pit	—	—	—	—	—	—	—	7	—	—	—	—	—	7	7
Subtotal, extramural nonthermal pits	—	32	—	—	1	44	4	113	—	—	—	—	5	189	194
Midden/trash mound	—	2	—	1	—	1	—	1	—	—	1	—	1	5	6
Activity surface	—	—	1	—	—	—	—	1	—	—	—	—	1	1	2
Animal burial (nonhuman)	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
Human burials															
Primary cremation	—	—	—	—	—	—	—	4	—	—	—	—	—	4	4
Secondary urn cremation	—	—	—	—	—	3	—	2	—	—	—	—	—	5	5
Secondary pit cremation	1	—	—	—	1	6	3	8	2	—	—	—	7	14	21
Inhumation	—	—	—	—	—	8	1	9	—	—	—	—	1	17	18
Subtotal, human burials	1	—	—	—	1	17	4	23	2	—	—	—	8	40	48
Subtotal, extramural nonthermal features	1	34	1	1	2	63	8	138	2	—	1	—	15	236	251
	Total Number of Excavated Features														
Total	1	48	1	1	2	97	18	251	2	—	2	—	26	397	423[a]

[a] This count does not include the 37 probed features or the 14 multiple features.

moderate, indicated by whitish filaments and masses of calcium carbonate and coatings on rock fragments and artifacts. Argillic horizons also were widespread at the site, often present in the same places where calcic horizons are present. Argillic horizons are marked by the presence of thin, reddish brown clay coatings on the faces of subangular blocks or prisms. The most strongly developed argillic horizons are located in the western part of Locus B, where calcium carbonate was absent. Cambic horizons indicate areas with the least soil development, especially areas where colluvium accumulated during the late Holocene. Cambic horizons were noted mainly in Locus E and in the western part of Locus C.

Cultural features were strongly associated with areas containing calcic-argillic horizons and cambic horizons. Areas with the most strongly developed argillic horizons, especially the shallow ones in the western part of Locus B, generally lacked cultural features. Occupants of the Mescal Wash site probably built their houses away from the shallow argillic horizons to avoid drainage problems. Argillic horizons in this area have a moderately slow permeability, which would cause water to pond on the surface after rainstorms.

Phase 2

For Phase 2, because of the unexpectedly large number of features, ADOT adjusted the ADI by eliminating nearly all area encompassed by Loci E and F. Fieldwork was conducted between January 16 and June 15, 2001. In this phase, the backhoe stripped overburden from large areas (together measuring 13,259 m^2 [3.3 acres]) in Loci A–D. In total, 2,077 new features were exposed, and 96 structures, 338 extramural features, and 14 multiple features were excavated (Table 11). In addition, 95 test pits (76 control units in structures and 19 extramural units) and 32 m of hand trenches were excavated. In general, the excavation methods adhered to those outlined in the Phase 2 data recovery plan (Vanderpot and Altschul 2000:20–25). Most of the work focused on Loci A, C, and D, with little additional work done in Locus B. The greatest effort was spent on the excavation of Locus D, which contained a prodigious density of structures and extramural features. In particular, the number of extramural pits greatly exceeded our estimates based on the Phase 1 results. The overwhelming superimposition of houses and pits in Locus D encumbered the separation of individual features and also caused unwanted mixing of cultural materials. As a result, we changed our initial plan, which had been to excavate all structures, even all of those that were superimposed.

Mapping

Mapping constituted a considerable portion of the field efforts. Corners or boundaries of excavation units, outlines of features exposed during mechanical stripping, mapping nails, roads, and historical-period and modern disturbances

Table 11. Completed Phase 2 Excavation Tasks, per Locus

Task	Locus				Total
	A	B	C	D	
	Excavation Units				
Extramural test pits (n)	3	2	4	10	19
Test pits in structures (n)	41	—	9	26	76
Mechanical stripping (m^2)	1,526	464	2,360	8,909	13,259
Mechanical/hand trenching (length in m)	—	—	—	26/32	58
	Features (n)				
Structures (complete)	6	—	8	40	54
Structures (partial)	2	—	7	33	42
Extramural features (complete)	5	—	16	56	77
Extramural features (partial)	35	1	49	99	184
Extramural features (probed)	—	—	—	37	37
Burials	—	—	17	23	40
Multiple features	—	—	—	14	14
Total (features)	48	1	97	302	448

were mapped with a Sokkia SET 6E total station. Plan views, cross sections, and profiles of excavated features were hand drawn.

Midden Sampling

Middens and trash mounds inform on several key research issues, in particular those focusing on subsistence and site structure and formation. Therefore, selected middens or trash deposits were sampled during Phase 2 with 10 1/4-inch-screened, 2-by-2-m test pits (Table 12) to obtain paleobotanical samples and other materials. Midden deposits in Loci A and B were visible on the surface as discrete trash areas or mounds. In Locus C, a large midden area was buried under a thick layer of modern overburden, and in Locus D, an even larger midden area had been partially buried (and also exposed) by road and railroad construction. Much of the top surface had been removed from the middens in other parts of Loci C and D by road-building activities. The midden deposits were shallow (15 cm) in Locus B but thicker in the other loci (22 cm in Locus A, 35 cm in Locus C, and 40 cm in Locus D).

Mechanical Stripping

After the midden sampling, about 13,259 m^2 (3.3 acres) of overburden in Loci A–D were mechanically stripped to expose the tops of features (see Figure 20). In Locus A and in the portion of Locus D located north of the railroad (Figure 22), backhoe stripping was done in a large, single block that was subdivided into smaller units to control artifact collection. In Loci B and C and in the southern portion of Locus D, disjointed series of stripping units of various sizes were excavated. Placement of the units was based on the Phase 1 testing results, with a focus on areas with the greatest feature density. A second phase of mechanical stripping took place toward the end of fieldwork, when all cultural deposits and remaining features within the stripped areas were removed to find any undiscovered burials. At this time, the bulk of the overburden was removed by means of a front-end loader; a regular backhoe was used to strip off deposits just above the feature tops and, in the end, to look for burials. Backdirt was moved to various strategic areas within the ADI; in Locus D, the backdirt was placed on top of a borrow pit created by ADOT during construction of I-10. Stripping was restricted by the corridor of the El Paso Natural Gas line in Locus C, the railroad crossing through Locus D, the I-10 access ramp between Loci C and D, and I-10 itself. Where needed, unpaved access roads were stripped. Selected artifacts observed during stripping were collected.

Feature Inventory

Features exposed during stripping were marked with spray paint, tentatively classified according to type, and given feature numbers. Reopened features originally discovered in Phase 1 retained their old numbers except in a few cases when new numbers were assigned. Features found underlying or intruding into features being excavated also were given numbers and were drawn on the plan maps for the main features. From these plan maps, they were later transposed to the overall site map forming the base for the locus maps illustrated in the succeeding chapters. In several portions of the site (in particular,

Table 12. Extramural Test Pits Excavated in Phase 2

Test Pit No.	Length (m)	Width (m)	Depth (m)	No. of Levels	Screen Size	Associated Features	Purpose/Comments
					Locus A		
1101	2	2	0.22	3	1/4 inch	522	Sample trash mound (Feature 522).
2145	2	2	0.17	2	1/4 inch	2143, 2153	Sample midden (Feature 2143); encountered intrusive pit (Feature 2153).
2148	2	2	0.17	2	1/4 inch	2143	Sample midden (Feature 2143).
					Locus B		
1105	2	2	0.15	2	1/4 inch		Sample substrate of AC 5.
1110	2	2	0.13	2	1/4 inch	1018	Sample AC 2 (later midden Feature 1018).
					Locus C		
1117	2	2	0.35	4	unscreened/ 1/4 inch	999, 6073	Sample midden (Feature 999); 1st level grab-sampled.
1120	2	2	0.13	3	unscreened/ 1/4 inch	999	Sample midden (Feature 999); 1st level grab-sampled.
1128	2	2	0.33	4	unscreened/ 1/4 inch	999, 6171	Sample midden (Feature 999); 1st level grab-sampled.
1134	2	2	0.32	3	unscreened/ 1/4 inch	999, 1141	Sample midden (Feature 999); 1st level grab-sampled.
					Locus D		
1166	2	2	0.27	3	1/4 inch	11,352	Sample midden (Feature 11,352).
1501	2	2	not recorded	4	unscreened/ 1/4 inch		Investigate possible ball court; later determined to be a nonfeature; 1st level grab-sampled.
1507	2	2	not recorded	4	unscreened/ 1/4 inch		Investigate possible ball court; later determined to be a nonfeature; 1st level grab-sampled.
1512	2	2	not recorded	3	unscreened		Investigate possible ball court; later determined to be a nonfeature; 1st level grab-sampled.
1513	2	2	not recorded	3	unscreened		Investigate possible ball court; later determined to be a nonfeature; 1st level grab-sampled.
1518	2	1	not recorded	3	unscreened		Investigate possible ball court; later determined to be a nonfeature; 1st level grab-sampled.
1528	2	1	not recorded	3	unscreened		Investigate possible ball court; later determined to be a nonfeature; 1st level grab-sampled.
1534	2	2	0.27	3	1/4 inch	11,352	Sample midden (Feature 11,352).
1540	1	1	0.39	1	unscreened/ 1/4 inch	1545	Investigate possible ball court; later determined to be a nonfeature; 1st level grab-sampled.
1605	1	1	not recorded	1	unscreened		Grab-sampled.

Key: AC = Artifact Concentration

Figure 22. Aerial view (to the east) of western part of Locus D after excavation.

Locus D), feature density was so high that superimposition was the norm. When individual features could not immediately be discerned in the dark-stained surface, the entire stain was classified as "multiple features" and given a single number. Upon excavation, the individual features were assigned their own numbers, but the "multiple features" number was retained as an organizational device, though not considered part of the total feature count.

The inventory of features newly discovered in Phase 2 consisted of 77 definite or possible structures and 2,000 extramural features (145 thermal pits, 1,796 indeterminate [nonthermal] pits, 7 borrow pits, 3 caches, 4 rock clusters, 3 middens, 2 activity surfaces, 39 human burials, and 1 nonhuman animal burial) (Table 13).

Feature Excavation

In choosing features for excavation, SRI's sampling strategies were tailored to the research goals set out in the project's data recovery plan (Altschul et al. 2000). We emphasized the excavation of features that would provide us with unique data. As outlined in the Phase 2 plan of work (Vanderpot 2001), different levels of detail were applied to the excavations; feature type, size, and location were deciding factors in selecting the specific methods applied.

A number of features classified as such in Phase 1 were determined to be noncultural during Phase 2 and subsequently were eliminated from the feature inventory. Among these was the possible ball court in Locus D, which in Phase 2 was explored with a series of seven test pits (see Table 12) and found to be a natural depression filled with trash-laden sediments.

Structures

Mechanical stripping provided us with plan-view information on house shape and size, orientation, and clustering. Structure excavation was complete or partial. Complete excavation was reserved for houses that appeared to be well preserved, were burned, contained in situ floor artifacts, had unique architectural traits, or were part of a feature conglomerate that was excavated in its entirety. Most of the structures first were evaluated with a 2-by-2-m or smaller control unit, usually placed over the doorway and hearth, then were dug in 10-cm levels and screened through 1/4-inch mesh. Seventy-six such control units were excavated. The rest of each structure was excavated in halves or quarters; only the floor fill (i.e., the layer, about 5 cm thick, above the floor surface) was screened. The top fill was excavated mechanically or by hand, with all observed artifacts collected ("grab-sampled"). If complete excavation was desired but sampling by means of the control unit was considered sufficient, the upper fill outside the

Table 13. Features Identified during Phase 2

Feature Type[a]	Locus				Total
	A	B	C	D	
Pit house	5	—	10	57	72
Possible pit house	—	—	—	5	5
Burial (inhumation)	—	—	8	9	17
Burial (primary pit cremation)	—	—	—	4	4
Burial (secondary pit cremation)	—	—	6	8	14
Burial (secondary urn cremation)	—	—	2	2	4
Animal burial (nonhuman)	—	—	1	—	1
Ditch or borrow pit	—	—	—	7	7
Horno	1	—	2	3	6
Pit (roasting)	8	—	30	71	109
Firepit	—	—	4	20	24
Hearth	—	—	1	5	6
Pit (unknown)	48	1	215	1,532	1,796
Cache	—	—	—	3	3
Rock cluster (unknown)	—	—	—	4	4
Trash mound or midden	1	1[a]	1	—	3
Activity surface	—	1[a]	—	1	2
Total features	63	3	280	1,731	2,077

[a] Feature was identified during Phase 1 as a different feature type.

unit was removed mechanically, and only the floor fill was screened. As a rule, all intramural pits, including postholes, were excavated. These floor features included large numbers of bell-shaped pits and other storage features. All other floor features were excavated and documented with the same level of detail devoted to extramural pits. After the structure excavation was completed, archaeomagnetic samples were collected from the plastered hearth or other burned parts of the house (Figure 23). Partial excavation of structures generally entailed mechanical exploration without the excavation of a control unit, the main goal being to expose hearths for excavation and archaeomagnetic sampling.

More-complex situations demanded a different approach. In Locus D, in particular, large, amorphous soil stains representing multiple superimposed features were exposed. No individual structures could be recognized in these stains. In selected feature conglomerates, one or more hand trenches were excavated to isolate the various structures. Any walls encountered were traced until the general overall feature layout was visible. One or more control units were then excavated, followed by further excavation if desired. Other feature conglomerates and isolated structures were explored mechanically without the excavation of a control unit. The main goal of these mechanical excavations was to expose hearths for excavation and archaeomagnetic sampling. In several cases—in particular, Early Formative period structures that were not built in house pits—the backhoe stripped down to the floor surface, and manual excavation was limited to floor features.

One house in Locus A was excavated in a special manner for a methodological study. The floor fill of this house was collected by means of a 1-by-1-m grid and then was water screened through 1/8-inch mesh. The purpose of this method was twofold. First, we wanted to obtain a sample of flaked stone microdebitage from the floor and floor fill to detect possible differences in lithic manufacture within the structure. Second, we wanted to find out if the 1/8-inch-mesh screen size would provide us with a better sample of faunal materials. The gridded-floor-fill excavation became complicated when a recessed-hearth area was discovered in the house. Subsequent analysis of the materials from these gridded test pits showed no substantial differences among the units (see Volume 3).

Extramural Pits

About 15 percent of the exposed extramural features were excavated. Selection for excavation was based on feature type and location. Before excavation, extramural features were classified into various types on the basis of their surface exposures. Although not identifiable in plan view, possible bell-shaped pits were flagged in a suspected Late Archaic/Early Formative period area of Locus D where features of this type were found during Phase 1. Some early pits were identified on the basis of diagnostic lithic artifacts exposed in the fill. They also were tentatively marked on the basis of a high calcic content in the fill. Representative samples of each extramural-feature type were selected for excavation, with an emphasis on less common types, such as bell-shaped pits. Where we

Figure 23. Collecting archaeomagnetic samples from adobe-walled structure (Feature 1575) in Locus D.

could recognize features associated with particular houses, a relatively large sample of features was chosen. In Locus D, a large number of extramural features were found underlying or intruding into the features being excavated, and many of these also were excavated.

The investigation of extramural features followed one of four procedures: complete excavation, partial excavation, sampling, or probing. Complete excavation was reserved for well-preserved or rare features whose fill and morphology promised to contain clues to original use or age. As a rule, features were first halved, with one half excavated in ¼-inch-screened, 10-cm levels, or as a single level if less detail was desired. The soil profile of the remaining half was then drawn to document the depositional units of the feature. Next, the remaining portion was excavated, generally as a single level, or, if any stratigraphy was visible, in levels corresponding to the different depositional units. Flotation and palynological samples were collected, in the case of large features, such as *hornos*, from each level or stratum. Of the very small pits, the entire fill was usually collected as a flotation sample, with some saved for pollen. For cooking features, the deposit of most interest for recovering archaeobotanical materials was the fill. For pits that might represent food preparation (other than cooking) or food storage, the deposit of most interest was the bottom surface of the pit. Upon completion of the excavation, feature cross sections were drawn, if they differed substantially from the section observed in the soil profile. Typically, one cross section was drawn when the feature was symmetrical around the vertical axis, and two or more were drawn if the feature was asymmetrical around the vertical axis. The purpose of these cross sections was to record all needed information about the form and volume of the feature; therefore, they were drawn along perpendicular planes that intersected at the center of the feature.

Partial excavation was the most common method. In this case, only one half was excavated, following the same procedures as for the first half described above for completely excavated features, including drawing the soil profile. This excavation procedure was designed to provide a rapid exploration of the feature and to recover environmental/subsistence samples, while still obtaining the necessary information on feature morphology.

The third and fourth procedures were the most limited. In the case of sampling, the primary objective was to recover environmental and subsistence information from the feature. This procedure was used when there was limited time for exploration, as when an extramural feature was exposed during stripping and it was necessary to resume mechanical excavations as soon as possible. This method was usually limited to extramural hearths or roasting pits with ashy or charcoal-laden sediments. The feature was probed with a pick, shovel, or trowel, and a representative sample (biased toward the richest parts of the fill) of the sediments was recovered. Finally, 37 nonthermal pits

were probed in the search for burials. Probing was done by removing several shovelfuls of fill without collecting samples, although observed artifacts were collected.

Burials

A thorough effort to locate and remove all burials that would be disturbed by construction activities was mounted through extensive backhoe stripping and hand and mechanical exploration. Burial identification and removal occurred in four basic episodes: (1) during Phase 1 trenching to test the site for buried deposits; (2) during mechanical stripping to identify pit houses and extramural features; (3) at the end of fieldwork, when unexcavated pits potentially containing burials (as determined from size, exposed fill, or location) were hand probed to ascertain whether human remains were present; and (4) also at the end of fieldwork, when all areas where buried deposits had been identified were stripped to the sterile substrate to ensure that no human remains were left within the ADI.

Burials were identified on the basis of pit shape or the presence of cremated bone. Burial excavation and field inventory and analysis were conducted by Bio-Arch, in complete accordance with the project's Burial Memorandum of Agreement (BMOA). Upon discovery of the pit, the fill was removed and screened through $^1/_8$-inch-mesh screen. Trowels and brushes were used to expose the contents of the burial. After the pit boundaries were identified and the contents were exposed, a plan-view map was drawn to illustrate the size and shape of the pit, and to show the distribution of human remains, artifacts, and anomalies. By means of mapping nails, elevations were recorded at the point of discovery, and during the excavation and removal of the remains and artifacts. All remains were recovered in a single level, defined by the presence of human remains and artifacts. Once the burial and its contents were removed, a cross section was drawn to show the depth and shape of the pit. A bioarchaeologist oversaw the burial removal and in-field recording.

All analysis was conducted in the field and no photographs were taken; no pollen or flotation samples were collected. Ceramic vessels, stone censers, and other grave goods were drawn in the field and subsequently were repatriated along with the human remains. For several vessels, permission was obtained from the Tohono O'odham Nation to make additional drawings in the SRI laboratory. Washing of the interior of cremation vessels was prohibited, but the exterior could be wiped with a dry or damp cloth to reveal the painted designs.

Provenience Designations

To efficiently keep track of all data (e.g., artifacts, samples, notes, photographs, and datums) collected during fieldwork, SRI uses the provenience designation (PD) system. PDs are an arbitrary set of unique, sequential numbers created to attribute space and to manage the collection of data. Each PD number refers to one and only one unit of space (point, line, polygon, or three-dimensional). The space can be as large as an entire site or as small as a single artifact. The space can be a point, such as an artifact; two-dimensional, such as the present ground surface, the floor of a house, or a trench wall; or three-dimensional, such as the volume of a backhoe trench or test pit, a level, or a stratum. The space can be limited by nonarbitrary boundaries (e.g., a feature or an artifact) or by arbitrary boundaries (e.g., test pits, trenches, collection units). PDs were numbered sequentially, and PD 1 was reserved for the general site surface. In this report, we use the actual PD numbers to refer to trenches, test pits, stripping units, collection units, and point-located artifacts, but feature and subfeature designations are consecutive (non-PD) numbers starting with "1" for each parent feature.

Each PD number has an associated paper record that describes what the recovery mode was and how the information was recorded. Every time a PD number was assigned, a form was filled out *except* for point-located artifacts and samples and for unexcavated features and subfeatures.

Attendant Field Studies

Concomitant with the 2001 archaeological investigations, two auxiliary field studies were conducted in the project area. Paleobotanical research included a field study done in three separate visits of the greater project area. The purpose was (1) to develop a list of plants for different landforms in the area, (2) to gather modern comparative plant materials, and (3) to gather seasonality information specific to the site area. The results of this study are detailed in Appendix 9.A, Volume 2. To aid in our paleoclimatic reconstruction and agricultural modeling, a geomorphological study of the Cienega Creek and Mescal Wash alluvium was conducted. Fieldwork involved documenting the stratigraphy of arroyo walls in the Cienega Creek–Mescal Wash confluence area. Sediment and radiocarbon samples were collected for analysis. In addition, a field study was undertaken to describe and collect soils from a variety of bottomland and upland landforms to help assess agricultural productivity. The results of these geomorphological studies are presented in Chapters 2 and 3, Volume 3.

Public Outreach

SRI's public-outreach program for the project was conducted by (then) Program Director Ms. Carol Ellick, with assistance from Mr. Daniel Preston, functioning as cultural consultant for the Tohono O'odham Nation. The program consisted of three individual efforts. The first component was incorporated within SRI's existing Parallel Perspectives program. Tohono O'odham students participating in the Service Learning program at Challenger Middle School, Sunnyside School District, learned about archaeology and the kinds of plants traditionally grown in the project area. The students developed a traditional

garden at school and brought samples out to the Mescal Wash site to show to tour groups. O'odham students from reservation and nonreservation schools also visited the site along with elders, experiencing the past from both the archaeological and traditional perspectives. The second component of the program consisted of a series of tours for the general public. Ten days of five tours each were offered from March through May 2001, when much of the site had been excavated. The development of a static display was the third part of the outreach effort. The portable display offered information on the ongoing research and advertised site tours. It was set up at Colossal Cave Mountain Park just east of Tucson and at that year's Archaeology Expo in Globe, Arizona.

Field Results

Feature Types

Of the 2,314 archaeological features identified at Mescal Wash, 97 structures, 363 extramural features, and 14 multiple features were excavated (see Table 10). The features displayed a wide range of architectural styles and functional types. All excavated features (including "multiple features") are tabulated and summarized in the tables in Appendix A. Detailed descriptions of the excavated structures and burials are provided in Appendixes B and C, respectively. The following sections provide information about the different types. Not part of this discussion are the large amorphous soil stains ("multiple features") exposed in the stripped site surface in Locus D. These feature conglomerates are not an actual feature type but, rather, an organizational device.

Structures

We identified four basic types of structures at Mescal Wash: pole-and-brush, house-in-pit, recessed-hearth-style (RHS), and adobe-walled structures. Most of the pole-and-brush houses dated to the Late Archaic/Early Formative period, the houses-in-pits and RHS houses dated to the Middle Formative period, and the adobe-walled structures dated to the Late Formative period.

Pole-and-Brush Structures

Nine pole-and-brush structures were excavated (all in Locus D), representing two basic types. Five (Features 4753, 4518, 4912, 7558, and 7559) were built in shallow pits, and four others (Features 1815, 1816, 4935, and 11,251) were surface structures with no house pits (Figure 24). This house style is similar to that of Late Archaic and Early Formative period structures documented throughout southern Arizona (Gregory 2001; Mabry et al. 1997). Most contained a wall groove encircling the unprepared floor area and had perimeter postholes. Other than a gap in the wall groove in seven of the houses, there were no signs of formal entrances. They had an average floor area of 4 m^2. None of the houses had burned, and no floor artifacts were present. A Cienega phase projectile point was collected from a posthole in one of the houses, and small numbers of plain ware sherds were found in the fill of most structures. Most of the structures dated to the Late Archaic or Early Formative periods; one (Feature 7559) was assigned to the Middle Formative period.

Houses-in-Pits

Most of the site's excavated structures dated to the Middle Formative A period, the time when the site reached its population peak, and nearly all of these were found in Locus D. Houses-in-pits also were typical for the succeeding Middle Formative B period, when Loci A and C were occupied but Locus D hardly at all. The structures varied in size, shape, and orientation, but most were reminiscent of Hohokam houses in pits (Haury 1976). Overbuilding was considerable during this time, and house pits were reused for seven pairs of structures (Features 3679/3868, 10,781/10,782, 3545/5518, 7942/7943, 5986/7978, 7879/7880, and 8643/8644); in Feature 7697, three structures were superimposed in the same house pit (Figure 25).

Recessed-Hearth-Style Houses

The Middle Formative B period houses included eight examples of what seems to have been a local architectural style. They were pit houses wherein the floor portion in front of the entrance of each formed a circular and straight-walled depression. The hearth in each, surrounded by three postholes, was in the center of this sunken area. The postholes suggest that each area had its own special roof. Remnants of reed matting may indicate that a bench partially encircled the hearth. A similar architectural style was documented during excavations in the late 1930s and 1940s by the Amerind Foundation, at Gleeson near the Dragoon Mountains (Fulton and Tuthill 1940) and at Tres Alamos along the San Pedro River (Tuthill 1947). At Mescal Wash, RHS houses were found in Loci A, C, and D. The style was epitomized by a large house (Feature 379) in Locus C, where a series of 12 parallel grooves in the floor outside the recessed area suggested a raised floor (Figure 26). This variant of the recessed-hearth style has not been previously documented. Measuring 10 by 6 m, this house was not only the largest structure excavated at the site but also one of the few houses at the Mescal Wash site with an east-facing entryway, and it is likely that this large house had a communal function.

It is noteworthy that Feature 200 in Locus A showed evidence of a major remodeling episode during which the recess was filled and leveled and a new hearth was built at

Figure 24. Crew excavating a pole-and-brush structure (Feature 4935) in Locus D.

Figure 25. Crew member mapping Feature 7697, consisting of three structures superimposed in a single house pit (Locus D).

Figure 26. West view of Feature 379, a large recessed-hearth structure with 12 parallel floor grooves (Locus C).

the upper level, thereby returning to the previous architectural style, resembling that of the Hohokam. Furthermore, a pair of burned houses with recessed hearths (Features 995 and 6098) in Locus C were adjoined or clipped by two later, conventional pit structures (Features 7461 and 6129) intrusive into the entrances of the first (Figure 27). Except for the absence of recessed hearths, the intrusive houses were identical to the earlier ones, including the same orientation and deep storage pits in the same locations. Both earlier houses also contained intrusive inhumations, perhaps signifying ritualistic abandonment. The recessed-hearth style of architecture is the most unusual aspect of the Mescal Wash site. Its presence at Tres Alamos and Gleeson—and probably at other sites, not yet excavated, in this part of southeastern Arizona—suggests that it was an indigenous cultural development, perhaps associated with the Dragoon "culture."

Adobe-Walled Structures

Six adobe-lined pit structures were found far apart in Locus C, in the western half of Locus D, and in Locus E. Five of these (in Loci C and D) were excavated, and all dated to the Late Formative B period. Feature 235 (excavated in Locus C) was a rather shallow pit structure that retained part of an adobe wall perhaps added to stabilize the structure. The remaining four excavated adobe structures (Features 1575, 4683, 4684, and 4729) were all in Locus D. Features 4683 and 4684 were immediately adjacent to each other and may have been contemporaneous. The four structures occupied a broad arch in the western half of the locus. One (Feature 4729) was the latest house in an impressive cluster of four superimposed structures (Figure 28). The rectangular adobe structures were generally larger than the older houses-in-pits. They were made of freestanding, aboveground walls of puddled adobe. The structures were accessed through narrow, stepped entryways. Each of the structures had a shallow floor pit at the threshold of the entryway, interpreted as a puddling area, for adobe mixing. Each of the adobes had a roughly similar floor plan consisting of a series of interior postholes placed in an evenly spaced, regular grid next to the well-worn, plastered surface of the hearth area. This suggests that the floors had been raised, possibly for storage purposes. All of the Locus D adobe-walled structures had been burned and had fairly extensive floor assemblages. No associated compound wall was found. Similar houses were excavated by Di Peso (1956:Figure 83) at the Paloparado site (San Cayetano de Tumacácori). The presence of no more than a few scattered houses at Mescal Wash is no unique phenomenon for this period. It fits well within the pattern of nucleated settlements surrounded by sparser occupations noted throughout the region.

Figure 27. North view of recessed-hearth structure (Feature 6098) (*foreground*) clipped by conventional house in pit (Feature 7461) (Locus C).

Figure 28. Adobe-walled structure (Feature 4729) (*right*), the latest house in a cluster of four superimposed structures (Locus D).

Extramural Features

The 363 extramural features excavated at Mescal Wash consisted of 75 thermal features, 251 nonthermal features, and 37 indeterminate (probed) extramural pits (see Table 10 and Appendix A:Table A.4). Most of these features were pits, and from the contents of these pits we expected to learn more about the site's economy. Large and small, thermal and nonthermal bell-shaped pits were used for storage, as well as for food baking, roasting, or other heat-assisted cooking or processing methods. A functional analysis of the excavated extramural (as well as intramural) pit features is presented in Volume 3.

Thermal Features

Of the excavated thermal features, 71 were pits and 4 were fire-cracked-rock clusters. Pit types consisted of roasting pits (including basic, rock-lined, and bell-shaped types), *hornos*, firepits, and hearths.

Basic Roasting Pits

Basic (for lack of a better term) roasting pits were the most common thermal feature: 40 were excavated in Loci A, C, and D. Given their copious use throughout the site's history, they are important for the study of household food processing. A wide range of plant and animal foods was cooked in such features. More than just roasting, they represent a variety of processing methods, including seed parching. The pits varied in size and shape (basin, conical, and cylindrical forms were noted), but all had fills of FCR, charcoal, and ashes. The basin-shaped variety was most common, and of these, the shallow examples were consistent with "open" thermal pits defined by Halbirt et al. (1993:132–135) as "a shallow, saucer-shaped pit with a high surface area to depth ratio." In contrast to the deeper roasting pits (including *hornos* and the bell-shaped and rock-lined variants) used to bake food within a reduction atmosphere, open thermal pits used an oxidizing atmosphere for food roasting, seed parching, and other types of cooking, on hot coals or even over an open flame.

Rock-Lined Roasting Pits

This unique type of roasting pit has slab-lined, moderately to heavily oxidized walls, and often several large rocks covering its base (Figure 29). The pits are basin shaped in cross section, with steep walls and round or flat bases. Rock-lined pits of this type have previously been recorded in the Rosemont area in the Santa Rita Mountains (Ferg 1984a:163, 1984b:746). They are also discussed in the ethnographical literature (e.g., Castetter et al. 1938:45; Greenhouse et al. 1981). Eight rock-lined roasting pits (Features 6187 and 9409 in Locus C, and Features 432, 3366, 3668, 3878, 4120, and 4702 in Locus D) were selected for excavation. Several features (Features 3366, 3668, 3878, 4120, and 4702) of this type excavated in the southeastern portion of Locus D originated near the modern ground surface, suggesting that they date to the late prehistoric period. The fill of some of these roasting pits contained much faunal bone and flaked stone but few ceramics.

Bell-Shaped Roasting Pits

Bell-shaped roasting pits were excavated only in Locus D. Most were large (0.8–1.3 m in diameter) and had evidence of repeated use. It is uncertain whether they were reused storage pits or were constructed specifically for roasting purposes. As determined from spatial context and artifacts (including early plain ware and red ware ceramics) in the fill, this type of roasting pit is early, predating the rock-lined pits. The bell-shaped roasting pits at Mescal Wash were similar in shape to bell-shaped *hornos* documented at Gleeson and Tres Alamos in the Sulphur Springs Valley by Fulton and Tuthill (1940:20–25, Figure 2; Tuthill 1947:Figure 4:No. 2) and nearby, in the same area, by Trischka (1933). These features appeared to be restricted to the early Ceramic (i.e., Early Formative period) horizons across southern Arizona and northern Mexico. A subtype of bell-shaped roasting pit with secondary holes in its base found at Gleeson (Fulton and Tuthill 1940:Figure 2:Nos. 35, 36, 37, and 39) was called "Dragoon type pit oven" by Tuthill (1947:35). Fulton and Tuthill (1940:23) suggested that deep, undercut (bell-shaped) pit ovens are a hallmark of southeastern Arizona, specifically the Dragoon "culture," whereas flare-rimmed (basin-shaped) pit ovens were the hallmark of the Hohokam. It is interesting to note that the Mescal Wash features lack the secondary holes in the pit base found at Gleeson.

Hornos

Hornos, defined as roasting pits with diameters of 1 m or more and coated with a thick, carbonized rind, were relatively rare at the site. *Hornos* are also known as "pit ovens" (Fulton and Tuthill 1940:20; Halbirt et al. 1993:135; Tuthill 1947:35) or mescal pits (Ferg 2003a, 2003b) and are the largest of the thermal pits. Found throughout the U.S. Southwest and dating from the Archaic period through the historical period, *hornos* are often visible on the surface as a circle of rocks. They were constructed to produce an extremely hot roasting context (evidenced by their carbonized surface); thick surrounding middens indicate multiple cooking events. Ethnographically, *hornos* were often used for agave and yucca processing during special cooking events for an entire community (Castetter et al. 1938; Dobyns 1988; Ferg 2003a, 2003b). Although *hornos* are typically used for agave roasting, other plant products and animal remains are often encountered in flotation samples. Four *hornos* were excavated: one (Feature 1149) in Locus A, one (Feature 7153) in Locus C, and two (Features 3818 and 4220) in Locus D.

Firepits

As defined for this project, firepits are small ash-filled pits with oxidized walls. Nine of these features were excavated

Figure 29. Rock-lined roasting pit (Feature 3668) after partial excavation (Locus D).

(Features 1141, 6145, 6146, and 10,380 in Locus C and Features 1555, 1794, 4649, 5520, and 10,692 in Locus D). In cross section, they usually were basin shaped. The fill contained ash but few or no FCR. These features might have functioned as informal extramural hearths, possibly used for heat rather than for cooking.

Hearths

The two extramural hearths found in Loci C (Feature 7195) and D (Feature 1556) were similar to the formal hearths found in houses. They were plastered, and it is possible that they were inside unrecognized ramada areas or that they belonged to destroyed houses.

Rock Clusters

Four small rock clusters (Features 1582, 3579, 3672, and 3673) were excavated in Locus D. All contained FCR, including lithics. There was little subsurface depth, and the rocks probably represented cleanout episodes from nearby roasting activities.

Nonthermal Features

General Pits

Features in this class predominantly are basin-shaped pits that vary in size and have nondescript fill. Rectangular, cylindrical, conical, and other shapes are also classified as this general style. In most cases, the functions of these pits remain unknown, even after complete excavation. Many probably had a storage function, with smaller pits serving as basket rests or pot rests. The large number of pits of this type identified at the site attests to their importance. A relatively large number of nonthermal "general" pits were excavated, many in the search for bell-shaped pits. For 37 nonthermal pits, excavation consisted of no more than probing to look for burials, and these probed features are not part of the excavated-features count.

Bell-Shaped Pits

Thirty extramural bell-shaped pits were excavated, most in Locus D and none in Locus A. Storage is the most plausible function attributed to these features. A number of the Locus D features had fill containing numerous bifacial-thinning flakes and no ceramics; some included dart points. Radiocarbon dates obtained from maize (*Zea mays*) and other plant materials indicated that several of these pits dated to the Late Archaic period (Features 411, 3557, 3976, 3983, and 4849) or the Late Archaic/Early Formative period (Feature 4312) (see Appendix A). In southeastern Arizona these features are associated primarily with the Late Archaic and Early Formative periods.

Figure 30. One of three censers found in a cache (Feature 1545) in Locus D.

Borrow Pits

Borrow pits also are included in the nonthermal-pit category. The seven excavated features of this type (all found in Locus D) were of varying shapes and sizes and, as the name implies, probably were used to obtain fill for use elsewhere. In general, they were excavated because they were initially thought to be pit structures.

Caches

Three nonthermal pits in Locus D (Features 1545, 7501, and 11,442) were identified as caches. All three features contained censers or censer fragments (Figure 30).

Dog Burial

One prehistoric-period dog burial (Feature 7330) was excavated in Locus C. The burial was found in a well-defined, shallow pit and contained what was believed to be an entire skeleton.

Human Burials

In all, 48 burials were excavated in Loci A, C, D, and E. Eight of the burials were excavated in Phase 1, the remainder in Phase 2. As expected at a long-lived site situated on a cultural boundary, mortuary practices vary greatly. The burials included 4 primary cremations, 21 secondary pit cremations, 5 secondary urn cremations, and 18 inhumations.

Each of the four primary cremations consisted of a subrectangular pit containing interior postholes. All four pits were oriented roughly east–west. The base and walls of each of these pits were heavily oxidized, suggesting that they were used multiple times. Little cremated bone remained in these crematoriums. One of the features included a stone censer, a bone awl, and a portion of a vessel. The features were found in a cemetery area in the north-central portion of Locus D.

Secondary cremations were found in several cremation areas and were scattered across Loci A, C, D, and E. Each of several secondary pit cremations was capped with an inverted bowl or jar, including a Sacaton Red-on-buff jar, a plain ware bowl, and a red ware jar. One of the secondary urn cremations was also covered with a plain ware bowl. Secondary-urn-cremation vessels included a fragment of a Tres Alamos Red-on-white jar.

Secondary pit cremations were the most common burial type. Varying as to location and orientation, many burials were found intruding into houses or pits. Flexed and sitting types were documented. Grave goods were sparse and included a Dragoon Red-on-brown bowl and an Archaic period dart point.

Activity Surface

Two activity surfaces were partially excavated. Feature 364 in Locus B consisted of a flat surface without walls

or floor features from which an ax head, a mano, and a piece of hematite were collected. A single activity surface (Feature 11,342) was excavated in Locus D. Most of this feature—noted as an artifact-rich, level area with an unprepared use surface and without pits or postholes—was exposed during mechanical stripping.

Middens and Trash Mounds

These excavated refuse receptacles ranged from an artifact scatter with little subsurface depth in Locus B to broad sheet middens in Loci C, D, and F to formal trash mounds in Locus A. Much of the top surfaces of the middens in Loci C and D had been removed by road-building activities. Four middens (Features 999, 1018, 2143, and 11,352) and two trash mounds (Features 522 and 672) were tested with 2-by-2-m or smaller units, primarily to obtain samples.

Artifacts and Samples

Approximately 107,709 artifacts (ceramics, lithics, and worked shell and faunal bone), 10,406 pieces of unworked shell and faunal bone, 1,629 botanical samples, and 107 archaeomagnetic samples were collected from the site during the two phases of the project. Counts of artifacts and ecofacts per class, as well as counts of botanical and archaeomagnetic samples collected from the site, are provided in Table 14.

Table 14. Artifacts and Samples Collected during Phases 1 and 2

Category and Class	Count
Ceramics	
Sherds	54,076
Restorable vessels	74
Figurines	2
Subtotal, ceramics	54,152
Lithics	
Flaked stone	51,937
Ground stone	1,309
Subtotal, lithics	53,246
Shell	
Worked	247
Unworked	65
Subtotal, shell	312
Faunal bone	
Worked	64
Unworked	10,341
Subtotal, faunal bone	10,405
Total artifacts[a]	107,709
Total unworked shell and faunal bone	10,406
Botanical samples	
Flotation	776
Pollen	640
Charred wood/plant	213
Subtotal, botanical samples	1,629
Archaeomagnetic samples	107
Total samples	1,736

[a] Excludes unworked shell and faunal bone.

A Guide to the Feature Data

In the following chapters, we present detailed descriptions of all eight loci, with most space devoted to the main excavation loci (Loci A, C, and D). Each of the locus chapters is organized in the same manner. Following a section on site setting and condition, the various field tasks and methods are described for Phase 1 and (if applicable) Phase 2. Discussions of the excavated features are in the form of summaries by type, rather than descriptions of individual features. Summary tables for the features by type are included where appropriate. Detailed maps show all excavation units and features. Each chapter closes with a brief summary of the findings and chronology. For comprehensive summaries of the excavated features, the reader is referred to the four tables in Appendix A (Table A.1 provides general feature data, Table A.2 summarizes the completely excavated structures, Table A.3 summarizes the partially excavated structures, and Table A.4 summarizes the extramural features). The structure tables include a look-up tool to find each feature quickly on the relevant map. Detailed descriptions of all excavated structures and all burials are presented in Appendixes B and C, respectively.

CHAPTER 4

Locus A

Rein Vanderpot and William M. Graves

Locus A was located in the northeastern portion of the site, about 130 m south of the Mescal Wash floodplain and 600 m northeast of Cienega Creek (see Figure 2). Elevation ranged from 1,109 to 1,112 m (3,638 to 3,647 feet) AMSL, the highest range of the site's eight loci. On the surface, the locus was defined as a 95-by-190-m (12,385-m²) artifact concentration to the north of I-10 and west of the existing Marsh Station traffic interchange. The ADOT ROW fence traversed the locus roughly northwest–southeast along its long axis, and the approximate southern half was located within the ROW. Here, our trenching and stripping efforts exposed a cluster of 9 pit structures and nearly 70 extramural features (Figure 31). Eight structures and 41 extramural features were excavated. Our investigations revealed the remains of a relatively small, discrete settlement occupied during the Middle Formative B period (A.D. 950–1150).

In the unexcavated northern portion of the locus, we mapped two conspicuous trash mounds (Features 522 and 523), which suggested the likelihood of additional buried features, including pit structures, outside the ROW. After SRI's work, in 2008, WestLand conducted data recovery in this northern part of the locus in advance of construction for the relocation of the Union Pacific Railroad line (Deaver 2010). WestLand identified 12 additional pit structures as well as numerous other features, including thermal and nonthermal pits, middens, activity areas, animal burials, and human burials (Buckles et al. 2010:Table 3.1). These features were assigned dates ranging from approximately A.D. 1050 to 1100.

Setting and Disturbances

The locus occupied a level portion of a broad terrace overlooking Mescal Wash to the north. Vegetation in the northern portion of the locus included small mesquite trees, creosote bush, prickly pear, cholla (*Opuntia* sp.), yucca, and various grasses (Figure 32). At the time of fieldwork, recent cattle grazing on the north side of the ROW fence was indicated by the presence of grasses and other palatable plants bitten off to the ground. The southern half of the locus was markedly more barren than the northern half, with a noted presence of grasses and plants favoring disturbed areas (Figure 33). Other disturbance in this northern portion of Locus A was minimal, consisting of a faint two-track immediately parallel to and north of the ROW fence; a small looter's hole in the northernmost trash mound, Feature 523; and minor head-cutting erosion evident in the northwestern part of the locus.

The south half of Locus A was considerably impacted by historical-period and modern road building (see Figure 19). Mechanical cutting associated with road-building activities had removed the tops of many features that we encountered during our excavations, and filling had covered some again with compacted roadbed fill. Roads within the ROW included an abandoned and partially buried segment of an elevated, asphalt roadbed (Feature 8205), oriented roughly east–west. The road segment aligned with Marsh Station Road to the west of the locus, and both represented portions of the abandoned U.S. Highway 80 (previously recorded as AZ FF:9:17 [ASM]; see Appendix D). Substantial mechanical cutting and filling had accompanied the construction of the road. The asphalt bed had largely been removed in Locus A after it was abandoned in the early 1960s. In particular, one of the pit structures we encountered during excavations (Feature 2195) had been badly truncated by the construction of this road and was covered with up to 90 cm of compacted fill.

Closer to, and paralleling, the ROW fence was an ephemeral dirt road. This road had been bladed into the site surface, in places as deep as 30–40 cm, thereby truncating several features encountered during our excavations. The road also had truncated the southern extension of one of the trash mounds,

Figure 31. Aerial overview of southern portion of Locus A after excavation, looking northwest.

Figure 32. East view of northern portion of Locus A.

Figure 33. East view of southern portion of Locus A.

Feature 522, its disturbed fill mounded up against the ROW fence. The fence and two drainage channels also contributed to the disturbance in this portion of the locus. The two small drainages probably were excavated by ADOT to divert runoff water away from I-10. In general, the overburden covering features within the ROW was fairly deep along the fence, shallow (less than 10 cm) in the vicinity of the dirt road, and relatively deep (90 cm or more) to the south. Finally, a pre-existing, east–west-oriented trench or ditch of unknown purpose was found during the Phase 2 subsurface investigations.

Phase 1 Investigations

Locus Definition and Surface Features

As mapped on the basis of surface materials, the southern portion of the locus measured 7,766 m² in area; the northern half measured 4,619 m² (Figure 34). Surface artifact density was greater in the less disturbed northern half, where the two trash mounds were located. The presence of these two features suggested to us that other, buried, intact features, possibly including pit structures, would be present (a fact borne out by WestLand's 2008 excavations [Deaver 2010]). Surface artifact density dropped off gradually to the north; artifacts were present sporadically outside the locus in a broad area above the Mescal Wash floodplain.

The two trash mounds were the only prehistoric features recorded on the modern surface of Locus A. As defined on the surface, Feature 523 covered a 17-by-20-m (238-m²) area. Feature 522 was much larger and measured 62 by 16 m (716 m²). Both had a height of about 0.4 m above the surrounding ground surface. A 2-m-diameter looter's hole was present in Feature 523, and the upper fill of the southern extent of Feature 522 had been removed within the ADOT ROW.

A third archaeological surface feature (Feature 8205) consisted of the poorly preserved segment of U.S. Highway 80 (AZ FF:9:17 [ASM]) (see Figure 19; see Appendix D). The portion of the road crossing through the Mescal Wash site was built sometime from the mid-1920s to the early 1930s (ASM Site Card, AZ FF:9:17 [ASM], accessed via http://www.azsite.arizona.edu/); Keane and Bruder 2004). The segment was abandoned in the early 1960s when I-10 was constructed (ASM Site Card, AZ FF:9:17 [ASM]).

Surface Collections

Surface collection was restricted to the southern half of the locus. First, 24 fragmented lithic tools were point-located and collected individually (see Figure 34). These included a drill tip, a section of a dart point, a biface fragment, and a censer, among others. Next, after the trench locations

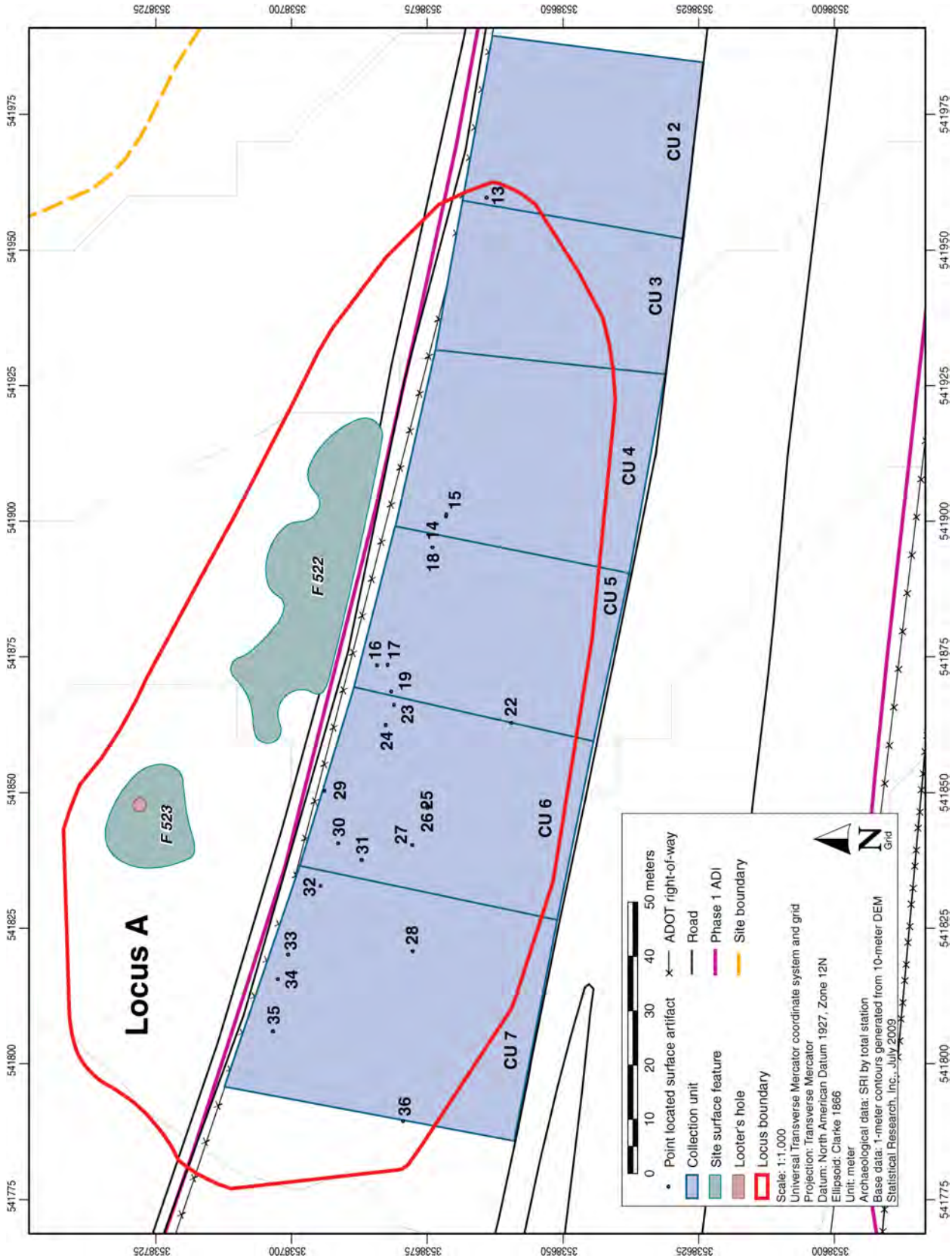

Figure 34. *Map of Locus A, showing features recorded on the modern surface, collection units, and point-located artifacts (Phase 1).*

were laid out, but before these trenches were excavated, 256 additional artifacts were collected by means of a series of six collection units (Collection Units 2–7). A seventh collection unit (Collection Unit 1) was planned but contained no artifacts. In total, 280 artifacts were recovered from the surface of Locus A. These consisted of 178 ceramic sherds, 99 lithics (76 flaked stone and 23 ground stone), and 3 fragments of worked shell.

Excavations

Phase 1 test excavation began with a series of six backhoe trenches (Trenches 8–12, 21) oriented roughly north–south and totaling 148 m in length. All Phase 1 excavation units and exposed prehistoric subsurface features are shown in Figure 35. Trench 21 was excavated in two segments to avoid an existing ADOT drainage channel or ditch. Next, we used a backhoe blade to excavate seven stripping units (Stripping Units 268, 283, 293–297), each approximately 2.5 m wide and together covering 291 m². These units were laid out oriented east–west and, for the most part, in a contiguous but staggered fashion, parallel to the dirt road and ROW fence. The stripping units averaged about 30 cm in depth. A much smaller (2.8-by-2.6-m) eighth unit (Stripping Unit 403) was excavated to expose a disturbed cremation (Feature 220) identified in the west profile of Trench 11.

Three test pits were also excavated. Test Pits 182 and 221 were 1-by-1-m units used to excavate possible southern extensions of the two trash mounds, Features 522 and 523, mapped north of the ROW fence. Test Pit 182 exposed no actual midden, but Level 2 exposed the top of an *horno* (Feature 188). Excavation of the test pit was stopped after exposing the *horno*. Test Pit 221 yielded moderate numbers of artifacts before reaching sterile sediments at about 50 cm below the ground surface. No conclusive evidence was obtained that the sediments excavated in the test pit were part of Feature 522. The third test pit (Test Pit 554) was a 0.4-by-0.5-m unit excavated within Stripping Unit 403 to remove the cremation.

In total, our Phase 1 investigations at Locus A exposed 12 features consisting of 4 pit structures (Features 200, 207, 214 [renumbered as Feature 2195 in Phase 2] and 290), 1 *horno* (Feature 188), 5 extramural pits (Features 285, 286, 287 [renumbered as Feature 1179 in Phase 2], 288, and 298), 1 cremation (Feature 220), and a short, disturbed segment of U.S. Highway 80 (Feature 8205). The cremation was the only Locus A feature completely excavated during Phase 1.

Phase 2 Investigations

All Phase 2 excavation units, excavated features, and features exposed but not excavated are shown in Figure 36. Phase 2 investigations began with the excavation of a 2-by-2-m test pit (Test Pit 1101) to further sample the buried deposits possibly representing the subsurface extension of Feature 522. Next, we mechanically removed overburden in 1,526-m² Stripping Unit 2199, which was divided in two smaller stripping units (Stripping Units 1137 and 1151) to control the collections. The excavation of Stripping Unit 2199 focused on the area around Trenches 11 and 12 and Stripping Units 283, 293, and 295, where pit structures were identified in Phase 1 (see Figure 35). Outlines of the exposed features were marked with spray paint (Figure 37), and the tentative type of each feature was recorded. The average depth of the stripping area was 0.40 m, and the approximate volume of removed deposits was 610 m³. Fill from Stripping Unit 2199 was not screened, although some large and/or visually distinctive artifacts were collected during these excavations. No additional trenches were excavated in Locus A during Phase 2.

During Phase 2, we exposed a total of 63 new features (see Figure 36). These consisted of 5 structures, 57 pits, and 1 midden. Thus, the final Locus A feature inventory consists of 77 features: 9 structures, 63 extramural pits, 2 trash mounds, 1 midden, 1 cremation, and the historical-period segment of U.S. Highway 80 (AZ FF:9:17 [ASM]). During Phase 2, SRI completely or partially excavated 8 structures and 38 pits. In addition, we partially excavated one of the trash mounds (Feature 522) and a midden (Feature 2153).

Feature Descriptions

In the following sections, we summarize the structures and extramural features excavated in Locus A. For detailed descriptions of all completely excavated structures, we refer the reader to Appendix B. A detailed description of the cremation (Feature 220) can be found in Appendix C.

Structures

The nine structures encountered in Locus A were spread relatively evenly across the stripped area (see Figures 31 and 36). Although no formal courtyard was identified, several of the structures appear to have formed pairs (Features 200, 290, 2157, and 2160) (Figure 38). Six of the structures were completely excavated, whereas two (Features 1189 and 2195) were only partially excavated (Table 15). One structure (Feature 2198) was left unexcavated because it was badly disturbed and poorly defined. In Feature 1189, excavations were limited to a 2-by-2-m test pit (Test Pit 1222), which exposed the floor area and a hearth adjacent to the entryway In Feature 2195, most of the fill and the floor were inadvertently removed by the backhoe during the stripping process, leaving not much

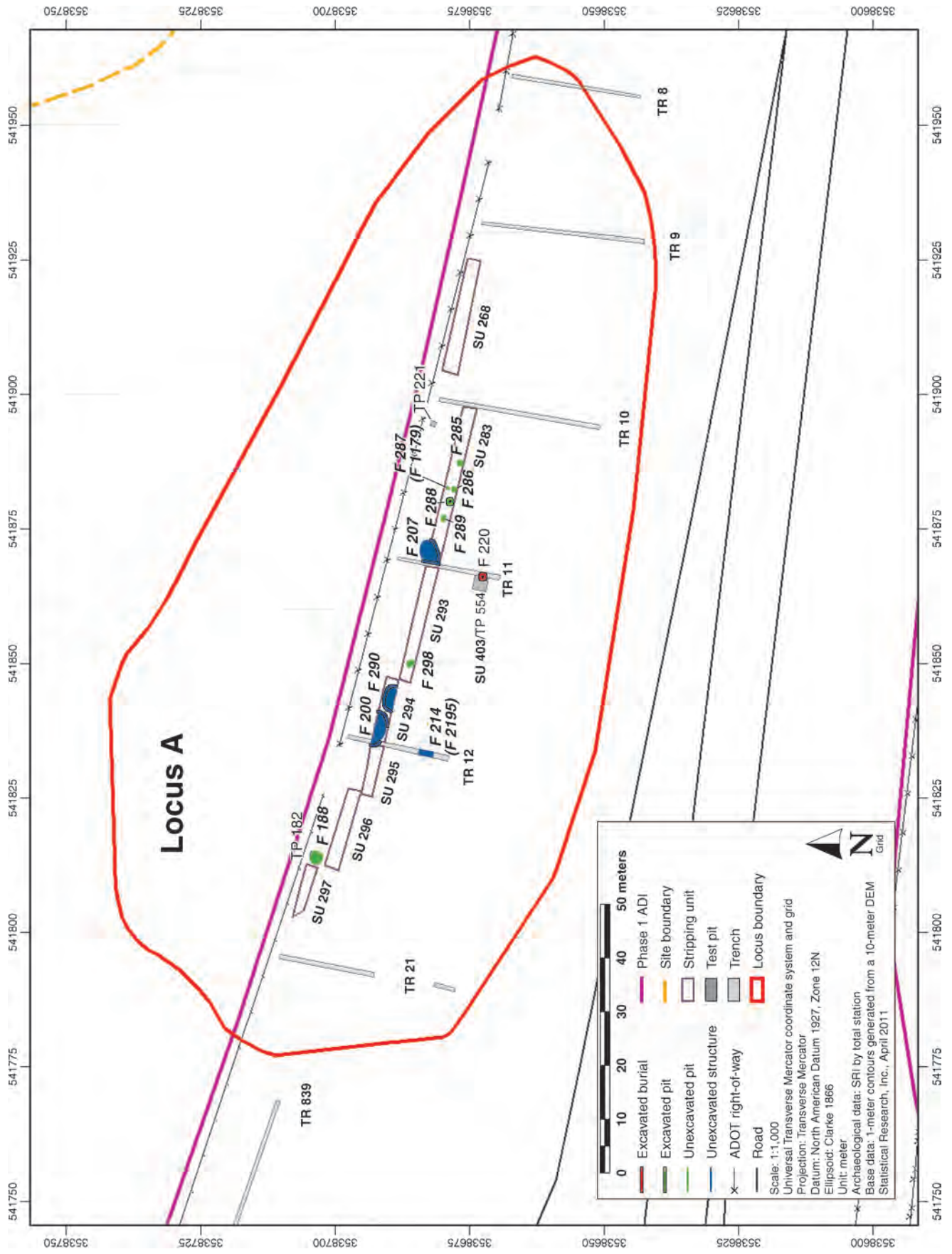

Figure 35. Map of Locus A, showing Phase 1 excavation units and discovered features.

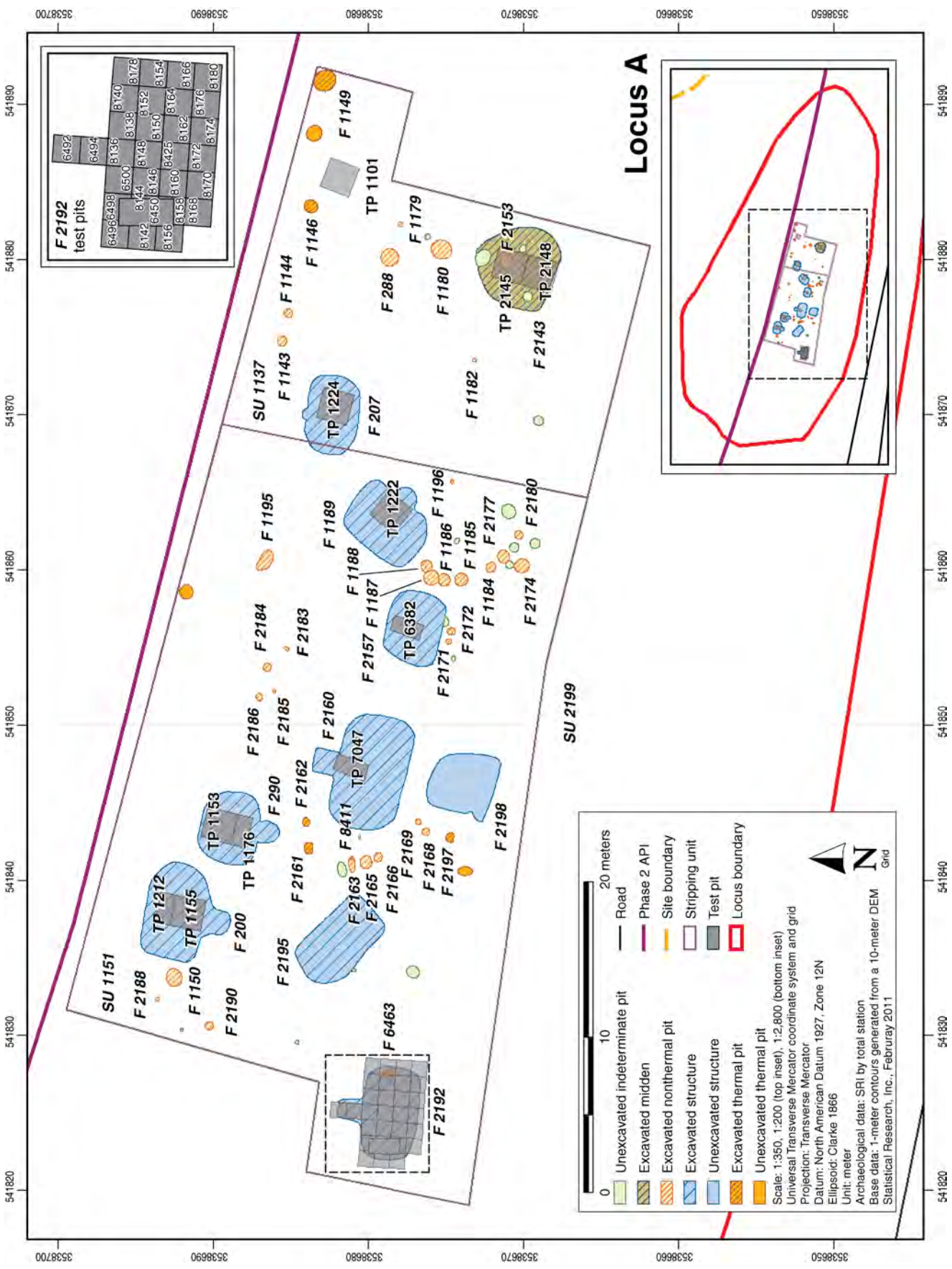

Figure 36. Map of Locus A, showing Phase 2 excavation units and exposed and excavated features.

Figure 37. Southeast view of Stripping Unit 2199, showing exposed features marked with spray paint.

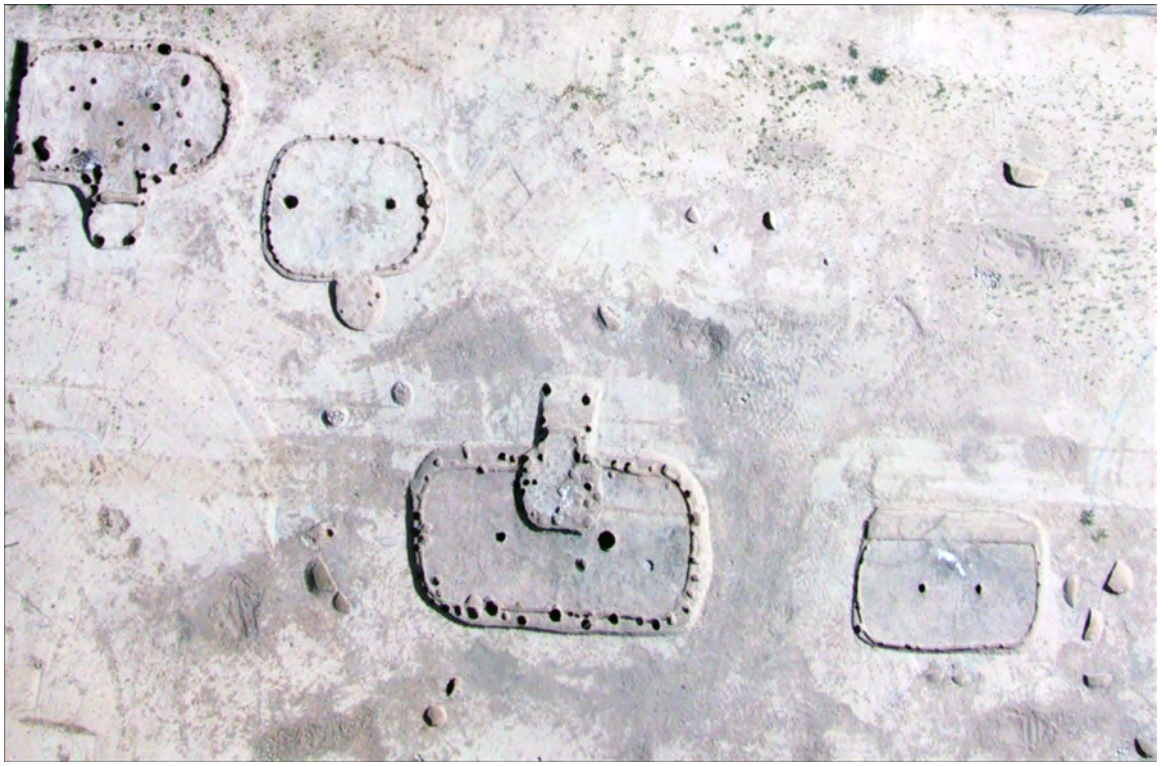

Figure 38. Aerial overview of western portion of Locus A after excavation, looking north.

Table 15. Structures Excavated in Locus A

Feature No.	House Type	Date Range	Excavation LOE	Length (m)	Width (m)	Depth (m)	Total Floor Area (m^2)	Usable Floor Area (m^2)	Entry Type	Entry Orientation	Analyzed Flotation Samples (PD)	Analyzed Pollen Samples (PD)	Comments
200	house-in-a-pit; recessed hearth	A.D. 935–1040	all	6.2	3.84	0.22	24.5	15.6	rectangular, ramped and stepped	south	1259, 1363, 11359	1158, 1200	Remodeled; burned; floor assemblage.
207	house-in-a-pit	A.D. 935–1150	all	5.08	3.34	0.29	15.2	11.9	protruding	north	1235, 1366		
290	house-in-a-pit	A.D. 1010–1150	all	4.62	3.73	0.13	17.01	12.1	bulbous	south	1177, 1265	1164	Burned
1189	house-in-a-pit	A.D. 935-1040	part	5.34	3.82	0.37	approximately 20	unknown	unknown	southeast			
2157	house-in-a-pit	A.D. 935–1040	all	4.96	3.54	0.16	19.5	10.8	unknown	north?	6384		Burned
2160	house-in-a-pit; recessed hearth	A.D. 935–1040	all	6.2	3.84	0.27	33.4	15.6	square	north	6448	6380, 7064	Burned; floor assemblage.
2192	house-in-a-pit; recessed hearth	A.D. 700–1150	all	6.01	3.56	0.34	21.7	15.7	rectangular	north	8239, 8249		
2195	house-in-a-pit	A.D. 860–990	part	5.24	3.87	0.22	approximately 20	unknown	unknown	southwest	2201		

Key: LOE = level of effort; PD = provenience designation.

else of the feature besides the structure outline, parts of the floor, and the hearth, which was excavated. Both partially excavated structures were approximately 5.3 m long by 3.8 m wide, with an estimated floor area of about 20 m² for each. For both, archaeomagnetic (AM) data were obtained from the hearths (see Table 15).

The six completely excavated structures were all first sampled with one or two test pits of varying sizes, followed by the manual removal of the remaining fill in two halves (north and south), generally in two stratigraphic or arbitrary levels of which only the bottom was screened (using 1/4-inch mesh). Thus, except in the test pits, no artifacts were systematically collected from the upper fill of features. Subfeatures such as hearths, floor pits, recessed-hearth areas, and entryways were excavated as separate units.

A different approach was used for Feature 2192. In this structure, the fill remaining after the excavation of the control unit (Test Pit 6450) was removed following two methods. First, the upper fill was removed mechanically and manually as a single, unscreened unit to about 3 cm above the floor surface, after which the lower fill was excavated by means of a series of 29 1-by-1-m or smaller test pits (Figure 39). This was done in order to obtain lithic microdebitage potentially present on the floor. Our intention was that, if any microdebitage were indeed present, we might be able to identify places of lithic manufacture within the house. During the process, Feature 2192 proved to have a recessed-hearth area, and here the test pits were deeper.

All of the excavated structures were houses-in-pits, three of which (Features 200, 2160, and 2192) had the style of architecture with a recessed-hearth area (see Table 15; see Chapter 3). Four of the six completely excavated houses (Features 200, 290, 2157, and 2160) had burned, as evidenced by oxidized floors and the presence of charred building debris in the fill, and two of these (Features 200 and 2160) had floor assemblages. With the exception of southwest-facing Feature 2195 and southeast-facing Feature 1189, the entryways of houses faced either north or south.

All three recessed-hearth-style houses were well preserved. Feature 200 had been remodeled, as showed by the presence of a recessed-hearth area that had been filled in and covered by a new, plastered floor and hearth (Figure 40). Numerous pieces of structural debris (Figure 41) and artifacts (including three reconstructible vessels) were found on the floor. The structure had a ramped-and-stepped entryway, with the partially burned, well-preserved pine sill plank (PD 2067) still in place at the edge of the low step (Figure 42). A series of 15 regularly spaced postholes lined the perimeter of the sunken hearth area to the west, east, and north sides. Feature 2160 (Figure 43) had also burned and similarly contained charred construction materials, as well as three reconstructible vessels and an intact jar, on the floor. Again, the entry step was enforced by a formal sill holding a preserved wooden plank. The D-shaped pit of the recessed-hearth area contained a series of 14 post holes (Figure 44). Feature 2192 had not burned and contained no floor assemblage. The recessed-hearth area similarly contained a series of postholes. For all three structures, we postulate that some of the more centrally placed posts may have supported a bench around the hearth, whereas perimeter posts perhaps supported a screen that separated the recessed area from the rest of the structure.

Extramural Pits

Of the 63 extramural pits encountered during our investigations, 6 thermal pits and 32 nonthermal pits were excavated. Two of the pits identified in Phase 1 (Features 288 and 1179, nonthermal pits) were excavated in Phase 2.

Thermal Pits

Eleven features found in Locus A were classified as thermal pits, including the Feature 188 *horno* found in Phase 1. As was true for the structures, thermal pits were distributed fairly evenly across the stripped area (see Figure 36). Of the 11, 6 were excavated. The excavated thermal pits consisted of a second *horno* (Feature 1149) and 5 roasting pits (Features 1146, 2161, 2162, 2197, and 6463).

Hornos

Hornos, such as Features 188 and 1149, were typically used for agave processing and communal cooking (see Chapter 3). They were identified, in part, by their orifice diameters, which were large in comparison to those of other thermal-pit-feature types. Feature 188 was identified as a *horno* because of the following: its inferred diameter of more than 1 m; the presence of a thick and oxidized, hard-baked rind; and fill containing charcoal, burned daub, and fire-cracked rock (FCR). Exposed in Test Pit 182 during Phase 1 in an area to the west of the future Phase 2 stripping units (see Figure 35), it was not chosen for excavation in Phase 2.

Feature 1149 was located in the northeast corner of Stripping Unit 1137 near two other, smaller thermal pits (excavated Feature 1146 and unexcavated Feature 1147). Table 16 provides summary data for the feature. We partially excavated this *horno* by removing the fill of the southern portion in a single level. The orifice of Feature 1149 was ovate in plan view and measured 1.2 by 0.7 m (Figure 45). The feature was conical in cross section and had an excavated depth of 0.6 m. At 0.13 m^3 in volume, Feature 1149 was relatively small for an *horno*. However, it was approximately 1.5 times larger than the next-largest thermal-pit feature excavated in Locus A. The

Figure 39. Photograph of crew excavating Feature 2192 by means of 29 test pits.

Figure 40. East view of Feature 200, showing remodeled floor and hearth overlying original recessed-hearth area.

Figure 41. Photograph of Test Pits 1155 and 1212 in Feature 200, showing burned structural debris on the house floor.

Figure 42. South view of the Feature 200 entryway, showing the sill plank of the remodeled structure.

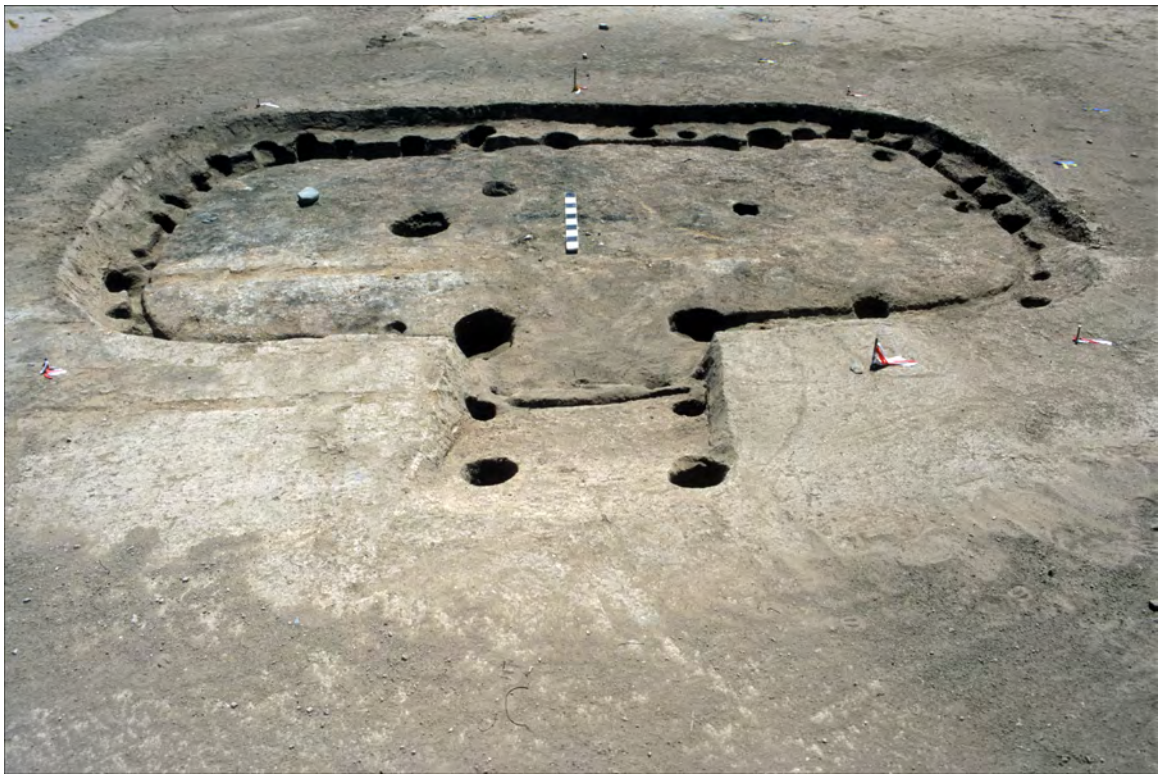

Figure 43. South view of Feature 2160 under excavation, showing the entry sill plank in place.

Figure 44. North view of entryway and recessed-hearth area of completely excavated Feature 2160.

Table 16. Thermal Pits Excavated in Locus A

Feature No.	Age	Excavation LOE	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Comments
					Horno					
1149	not dated	part	southern portion, 1 level; 1/4-inch screen	1.24 × 0.67 × 0.59	ovate	conical	0.128	0.064	8342	Oxidized rind; filled with FCR fragments; monocotyledon fiber fragments in fill.
					Roasting Pits					
1146	not dated	part	southern 1/2, 1 level; 1/4-inch screen	0.97 × 0.84 × 0.33	irregular	basin	ND	ND	8352	Numerous FCR and charcoal fragments; monocotyledon fiver fragments, maize capule, grass stems in fill.
2161	not dated	all	whole, 1 level; 1/4-inch screen	0.76 × 0.54 × 0.26	subrectangular	basin	0.080	0.080		Oxidized pit walls, many FCR fragments.
2162	not dated	all	whole, 1 level; 1/4-inch screen	0.66 × 0.58 × 0.11	ovate	basin	0.022	0.022		Slightly oxidized, base of pit only.
2197	A.D. 950–1150	part	western 1/2, 1 level; 1/4-inch screen	0.58 × 0.55 × 0.21	ovate	basin	0.035	0.018		Numerous FCR and charcoal fragments.
6463	A.D. 950–1150	part	western 1/2, 1 level; 1/4-inch screen	0.75 × 0.68 × 0.23	ovate	irregular (basin)	0.061	0.031		Intruded into Feature 2192 (pit structure).

[a] Length × width × depth.

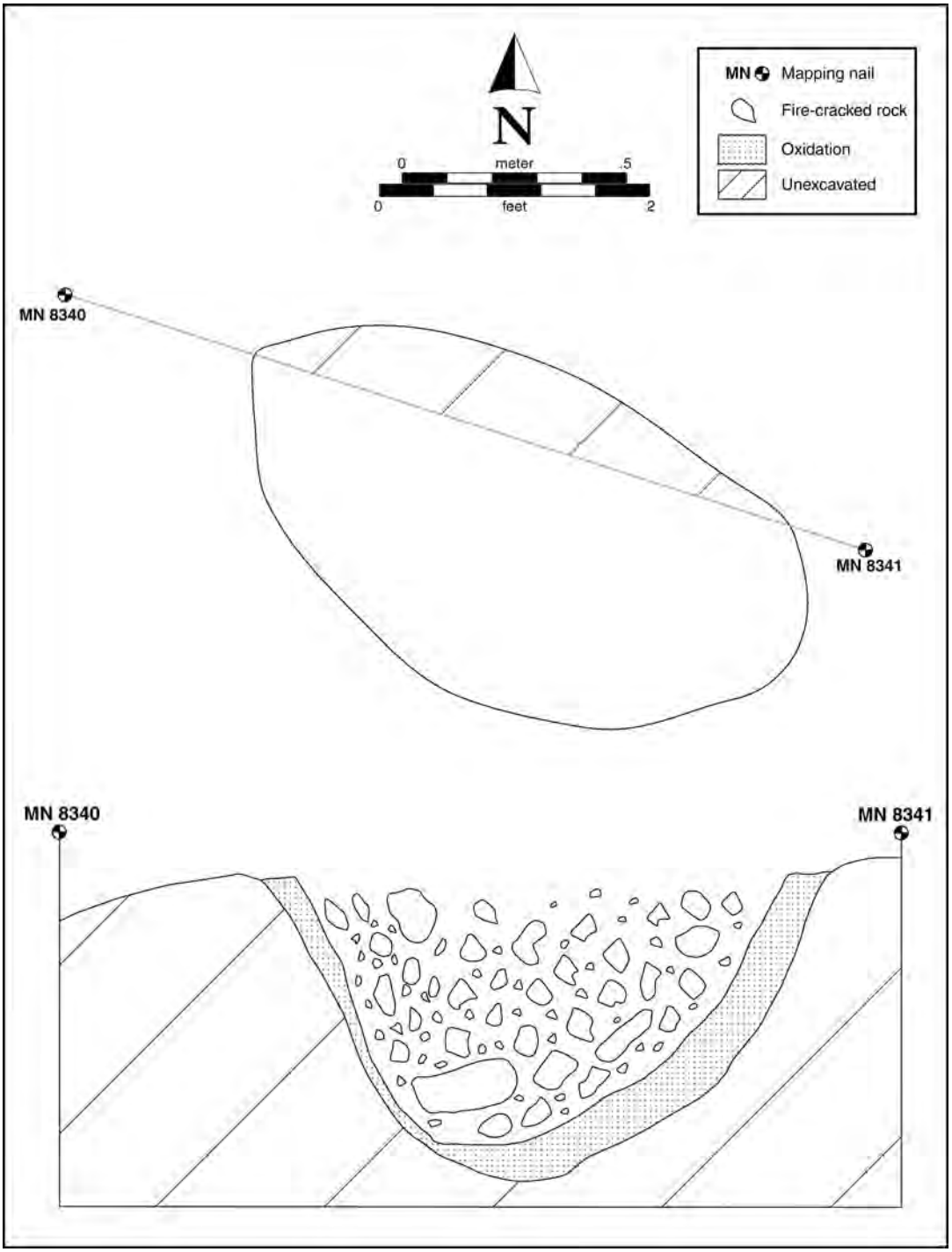

Figure 45. Plan view and north profile of Feature 1149, an *horno*.

sides of Feature 1149 exhibited a well-defined blackened and oxidized rind averaging 7 cm in thickness.

The fill of the feature contained charcoal, ash, FCR, and oxidized patches of soil. A flotation sample (PD 8342) contained monocotyledon fiber fragments, indicating that plants of the agave family (Agavaceae) (agave, sotol [*Dasylirion*], or beargrass [*Yucca glauca*]) were being roasted in the pit. No faunal remains were recovered. No dates were obtained from the feature.

Roasting Pits

Five roasting pits were excavated in Locus A (see Table 16). Two (Features 2161 and 2162) were completely and three (Features 1146, 2197, and 6463) partially excavated. These pits had variable orifice shapes in plan view, ranging from ovate (n = 3) to subrectangular and irregular, and all were basin shaped in cross section. Orifice diameters ranged from 0.54 to 0.97 m, and excavated pit depth ranged from 0.11 to 0.33 m. Volume was measurable for four of the five features and ranged from 0.02 to 0.08 m^3. No bell-shaped or rock-lined roasting pits like those found in other loci were identified in Locus A.

All five had oxidized walls, and all contained charcoal, ash, and FCR in their fill. Three of the five also contained unburned cobbles. Ceramics were present in the fill of all five features, though in relatively low frequencies (ranging from 1 to 24). Flaked stone was present in four of the five pits and ranged from 2 to 28 artifacts. Ground stone and faunal remains were encountered at much lower frequencies. Only two pits (Features 2162 and 6463) contained 1 ground stone artifact each in their excavated fill, whereas only 1 faunal bone was recovered from only one pit (Feature 6463). A flotation sample (PD 8352) from Feature 1146 contained monocotyledon fibers (suggesting Agavaceae roasting), a maize cupule, and grass stems, in addition to the usual fuel woods.

Based on ceramics in their fill, dates could be determined for two of the five roasting pits. Features 2197 and 6463 both dated to the interval A.D. 950–1150, or the Middle Formative B period.

Nonthermal Pits

SRI excavated 32 of the 52 nonthermal pits exposed in Locus A (Table 17). None of the excavated pits was rock lined or bell shaped. Except for Features 288 and 1179, all were discovered during Phase 2. Of the 32 features, 29 were partially excavated and 3 (Features 1180, 2168, and 8411) were completely excavated. Selection for excavation favored pits in clear spatial association with structures. As is evident from Figure 36, the nonthermal pits formed several distinct clusters near structures. There were two clear clusters in Stripping Unit 1151: one located to the south and southeast of Features 1189 and 2157, and another partially surrounded by Features 2160, 2195, and 2198. Two less dense clusters could be seen, one to the west of Feature 200, and one north of Features 290, 1189, 2157, and 2160.

This category of pits encompasses much variability in size, plan-view and cross-section shape, and fill contents. As a group, these features apparently may have been used for a variety of functions, including storage and food processing. Two pits (Features 1180 and 2168) contained restorable vessels (PDs 2142 and 7492, respectively) (Figure 46), lending support to the inferred storage function of this feature type.

The orifices of these pits were generally ovate (n = 18) or roughly circular (n = 13) in plan view. One additional pit had an irregular orifice shape. Most of these features had basin shapes in cross section, although cylindrical (n = 7) and irregular (n = 5) cross sections were also encountered. These features also tended to be relatively small. Estimated volumes for this pit type ranged from 0.003 m^3 to 0.42 m^3.

No oxidation was found in either the side walls or the fills of these features. Charcoal, ash, and FCR were commonly encountered, however. Charcoal was present in 23 pits (72 percent). Ash was present in 29 pits (91 percent). FCR was present in 9 pits (28 percent). Artifact ubiquity was high within this pit category, although artifact frequency was generally low, ranging from 1 to 121 in pits with artifacts. Only 4 nonthermal non-bell-shaped pits did not contain artifacts in their excavated fills. The frequency and ubiquity of faunal remains were also low. Faunal bone was recovered from only 2 pits: Feature 288 contained 26 bones and Feature 2180 contained 1 bone.

Collected macrobotanical remains were analyzed from two of the nonthermal pits: Features 1180 and 2184. The flotation sample (PD 2142) from Feature 1180 contained a variety of charred wood, including acacia, saltbush, and mesquite; monocotyledon parts were also identified. Charred plant remains in the sample from Feature 2184 (PD 8199) included monocotyledon bundles, a maize cupule, a grass-stem fragment, and seeds of melon-loco (*Apodanthera undulata*) and goosefoot.

Rough dates derived from ceramics in the fill could be determined for 11 of the pits. Feature 1179 yielded a date range of A.D. 700–950, or the Middle Formative A period. The remaining 10 datable pits all yielded date ranges of A.D. 950–1150, or the Middle Formative B period.

Midden and Trash Mound

Feature 522 was one of two trash mounds identified on the surface just north of the ADOT ROW in the unexcavated northern portion of Locus A. There were some surface indications (i.e., dark, trash-filled sediments slightly mounded up along the fence) of this feature within the ROW. Therefore, we excavated two units (1-by-1-m Test Pit 221 in Phase 1 and 2-by-2-m Test Pit 1101 in Phase 2)

Table 17. Extramural Nonthermal Pits Excavated in Locus A

Feature No.	Age	Excavation LOE	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Comments
288	A.D. 950–1150	part	western 1/2, 1 level; 1/4-inch screen	1.36 × 1.16 × 0.39	ovate	basin	0.322	0.161		
1143	not dated	part	southern 1/2, 1 level; 1/4-inch screen	0.64 × 0.6 × 0.18	circular	basin	0.036	0.018		Few artifacts.
1144	not dated	part	southern 1/2, 1 level; 1/4-inch screen	0.62 × 0.62 × 0.17	circular	irregular	ND	ND		
1150	not dated	part	western 1/2, 1 level; 1/4-inch screen	1.17 × 1.08 × 0.24	circular	basin	0.159	0.079		Few artifacts.
1179	A.D. 700–950	part	western 1/2, 1 level; all fill collected for flotation	0.44 × 0.35 × 0.22	ovate	cylindrical	0.027	0.013		
1180	A.D. 950–1150	all	whole, 2 levels; 1/4-inch screen	1.62 × 1.22 × 0.12	ovate	basin	0.124	0.124	2142	Whole plain ware jar (PD 2142) found upside down in fill.
1182	not dated	part	northern 1/2, 1 level; fill collected for flotation	0.32 × 0.26 × 0.23	ovate	cylindrical	0.015	0.008		Possible posthole.
1184	not dated	part	southern 1/2, 1 level; 1/4-inch screen	0.74 × 0.63 × 0.25	ovate	basin	0.061	0.030		
1185	A.D. 950–1150	part	southern 1/2, 1 level; 1/4-inch screen	0.74 × 0.68 × 0.21	ovate	basin	0.055	0.028		
1186	not dated	part	eastern 1/2, 1 level; 1/4-inch screen	0.8 × 0.79 × 0.25	circular	basin	0.083	0.041		Few artifacts.
1187	not dated	part	western 1/2, 1 level; 1/4-inch screen	0.98 × 0.84 × 0.22	irregular	irregular (basin)	0.095	0.047		
1188	A.D. 950–1150	part	eastern 1/2, 1 level; 1/4-inch screen	1.03 × 0.88 × 0.3	ovate	basin	0.142	0.071		
1195	A.D. 950–1150	part	southern 1/2, 1 level; 1/4-inch screen	1.2 × 1.18 × 0.38	circular	cylindrical	0.422	0.211		
1196	not dated	part	southern 1/2, 1 level; fill collected for flotation	0.3 × 0.24 × 0.34	circular	cylindrical	0.019	0.010		Possible posthole.

continued on next page

Feature No.	Age	Excavation LOE	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Comments
2153	A.D. 950–1150	part	southern 1/2, 1 level; 1/4-inch screen	0.9 × 0.78 × 0.17	irregular (ovate)	irregular (basin)	0.062	0.031		Disturbed by rodents.
2163	not dated	part	southern 1/2, 1 level; 1/4-inch screen	0.35 × 0.31 × 0.14	ovate	basin	0.008	0.004		Intruded by Feature 8411 (non-thermal pit or possible posthole).
2165	not dated	part	western 1/2, 1 level; 1/4-inch screen	1.02 × 0.96 × 0.25	circular	basin	0.128	0.064		
2166	not dated	part	whole of western 1/2 collected for flotation, 1 level	0.62 × 0.57 × 0.15	circular	basin	0.028	0.014		
2168	A.D. 950–1150	all	whole, 1 level; 1/4-inch screen	0.56 × 0.54 × 0.17	circular	basin	0.027	0.027	7492	Restorable vessel (PD 7492) found on pit base.
2169	A.D. 950–1150	part	whole of northwestern 1/2 collected for sampling	0.52 × 0.46 × 0.22	ovate	cylindrical	0.041	0.021		
2171	not dated	part	southern 1/2, 1 level; all fill collected for flotation	0.44 × 0.4 × 0.09	ovate	basin	0.008	0.004		
2172	not dated	part	southern 1/2, 1 level; all fill collected for flotation	0.66 × 0.57 × 0.1	ovate	basin	0.020	0.010		
2174	not dated	part	southern 1/2, 1 level; 1/4-inch screen	1.08 × 0.88 × 0.17	ovate	basin	0.085	0.042		
2177	not dated	part	northeastern 1/2, 1 level; 1/4-inch screen	0.87 × 0.83 × 0.17	irregular (ovate)	irregular (basin)	0.064	0.032		
2180	not dated	part	southern 1/2, 1 level; 1/4-inch screen	0.62 × 0.58 × 0.22	ovate	basin	0.041	0.021		
2183	not dated	part	southern 1/2, 1 level; all fill collected for flotation	0.43 × 0.21 × 0.12	ovate	basin	0.006	0.003		
2184	A.D. 950–1150	part	western 1/2, 1 level; 1/4-inch screen	0.54 × 0.52 × 0.3	circular	irregular (cylindrical)	0.066	0.033	8199	Ash lens at base.

Feature No.	Age	Excavation LOE	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Comments
2185	not dated	part	western 1/2, 1 level; all fill collected for flotation	0.25 × 0.24 × 0.11	circular	basin	0.003	0.002		
2186	A.D. 950–1150	part	western 1/2, 1 level; all fill collected for flotation	0.54 × 0.4 × 0.14	ovate	cylindrical	0.024	0.012		Charcoal flecks present.
2188	not dated	part	southern 1/2, 1 level; 1/4-inch screen	0.44 × 0.44 × 0.2	circular	basin	0.019	0.010		
2190	not dated	part	southern 1/2, 1 level; 1/4-inch screen	0.56 × 0.5 × 0.19	ovate	basin	0.028	0.014		
8411	not dated	all	whole, 1 level; all fill collected for flotation	0.12 × 0.11 × 0.2	circular	cylindrical	0.002	0.002		Possible post-hole; intrusive on Feature 2163 (non-thermal pit).

Figure 46. Feature 1180 (extramural nonthermal pit) after excavation, showing vessel on pit base.

to identify any buried deposits that might have been associated with Feature 522 (see Figures 35 and 36). Test Pit 221 yielded moderate numbers of artifacts before reaching sterile sediments at about 50 cm below the ground surface. No conclusive evidence was obtained that the sediments excavated in the test pit were part of Feature 522. Excavations in Test Pit 1101 encountered a single, 20-cm-deep stratum of artifact-laden silty sand that lay over an undulating, sterile calcic horizon. A flotation sample was taken from this stratum, and excavation ceased once sterile sediment was encountered underneath the layer of cultural materials. The flotation sample (PD 1103) contained remains of a variety of plants, although most were uncharred and not associated with prehistoric use of the site. Charred plant materials included hedgehog cactus (*Echinocereus*) seeds, a maize cupule, and mesquite wood. Given the high ratio of uncharred plant remains and the moderate numbers of artifacts, it remained uncertain whether the excavated sediments represented the southern extension of Feature 522.

Feature 2143, a midden deposit, was exposed as a discrete, ovate, ash-rich area underneath the U.S. Highway 80 segment (Feature 8205) in the southeast corner of Stripping Unit 1137 (see Figure 36). The midden was just east of the exposed group of pit structures. Initially thought to be another structure, Feature 2143 was partially excavated by means of two adjoining 2-by-2 m units (Test Pits 2145 and 2148). In each test pit, we excavated two 10-cm levels before sterile soil was reached. The midden measured approximately 5.25 by 5.25 m in plan view and was basin shaped in cross section. It had an excavated depth of 17 cm. An intrusive nonthermal pit (Feature 2153) was found in Test Pit 2145, and three unexcavated nonthermal pits intruded into Feature 2143, outside the two test pits (see Figure 36).

Burial

One burial—Feature 220, a secondary cremation—was encountered in Locus A (see Appendix C for a full description). It consisted of cremated human remains found within a rodent burrow exposed in Trench 11 during Phase 1. The feature was further exposed with Stripping Unit 403 and was excavated with Test Pit 554, all during Phase 1. No burial artifacts were present. The age and sex of the individual could not be determined from the available skeletal materials.

Summary and Interpretation

Locus A represented the remains of a relatively small and isolated settlement occupied primarily during the Middle Formative B period (ca. A.D. 950–1150). As determined from the total of 21 structures identified by SRI (n = 9) and WestLand (n = 12), this settlement functioned as a hamlet for much of its life. SRI excavated 8 structures (including 3 with recessed-hearth areas), 38 extramural pits, 1 trash mound, 1 midden, and 1 disturbed cremation within the locus. Only 2 of the structures were superimposed with other features (each of these 2 structures was intruded by an extramural pit). The noticeable lack of stratigraphy among the structures suggests that the locus was occupied fairly briefly in comparison to other areas of the site. The remodeling of one of the recessed-hearth-style houses (Feature 200) into a more traditional Hohokam-like house-in-a-pit is intriguing. The joint presence of the two styles of structures may indicate some level of coresidence, a possibility which will be explored further in Volume 3.

The temporal data collected from the features excavated in Locus A provide further evidence of the fairly brief duration of the settlement. AM data were recovered from seven of the eight structures excavated by SRI; they suggest that all structures but one were occupied and abandoned roughly coevally. This is supported by the spatial arrangement of the structures, in that the probable earliest (A.D. 860–990) structure (Feature 2195) is oriented differently (its entry faces southwest) from the other structures and is located between a series of south- and north-facing structures. The AM data indicate that the primary occupation in this area ended sometime between A.D. 935 and 1040. This agrees with the painted-ceramic assemblage, most (93 percent) of which has a combined production-date range of A.D. 950–1150. No ceramics postdating A.D. 1150 were recovered from this locus, suggesting that it was primarily, if not exclusively, occupied during Middle Formative B.

The features excavated by WestLand in the northern portion of the locus primarily date from about A.D. 1050 to 1100 (Deaver 2010:6-1). This is somewhat later than the dates obtained from the southern half of the locus. The combined chronological reconstructions for Locus A demonstrate a settlement history spanning about 200 years. An occupational shift from south to north within the locus over time is evident. Considering only dated structures, the locus began as a farmstead occupied by consecutive single households living in Features 2195, 1189, and 2160. The settlement then grew into a hamlet, with Features 200, 207, 290, and 2157 occupied coevally (see Volume 2, Chapter 2). At least two more subsequent episodes of occupation as a hamlet occurred in the northern half of the locus excavated by WestLand, represented first by Features 216, 299, 304, and 311, and finally by Features 210, 298, and 349 (Buckles et al. 2010:Figure 3.4).

CHAPTER 5

Locus B

Rein Vanderpot and Heather J. Miljour

Locus B was enclosed within the northern half of the Marsh Station traffic interchange, bounded by I-10 to the south; by the eastbound and westbound access ramps to the west and east, respectively; and, partially, by Marsh Station Road to the north (Figure 47; see Figure 3). The locus was about 150 m south of Mescal Wash, closer to the drainage than any other part of the site. As defined by surface artifacts, the locus measured 237 m east–west by 209 m north–south, encompassing an area of 33,927 m^2. Locus elevation ranged between 1,099 and 1,105 m (3,606–3,625 feet) AMSL. Although it was the second-largest locus (after Locus D) at the Mescal Wash site, Locus B contained relatively few artifacts and features, at least within the project ADI. SRI excavated only 2 features (an activity surface and a midden) within the locus, out of a total of 9 features identified. These features were all in the southern part of the locus, which also contained the densest surface artifacts of the locus. The most extensive area of surface artifacts was AC 1 in the northern end of the locus, but this area had the lowest density of all Locus B artifact concentrations. Backhoe trenching by SRI in this northern area exposed no features or other cultural deposits. In contrast, in the portion of AC 1 outside the ADI (an area of 2,375 m^2), EcoPlan excavated 60 features (including 33 cremations) during data recovery efforts at the site in 2009 (Heilman et al. 2010; Neuzil 2009b:6).

Setting and Disturbances

The locus surface sloped down slightly to the west and the north but was overall quite level. To the north of Marsh Station Road, the surface sloped down toward the nearby Mescal Wash channel (see Figure 47). An ephemeral drainage originating somewhere between Loci A and B may have eroded parts of this northern area of Locus B. Vegetation consisted of grasses and low scrub, with small mesquite trees flanking the road berms and yucca scattered through the area (Figure 48). Parts of the locus had been impacted by road building activities (see Figure 19). The most obvious disturbance was caused by the construction of Marsh Station Road, which cut though the area with dense surface artifacts in the northern part of the locus. The road was flanked by the ADOT ROW fence to the north and a culvert to the south, both also impacting the artifact concentration. A fiber-optic cable traversed the northern portion of the locus from east to west.

Phase 1 Investigations

Locus Definition and Surface Features

Seven prehistoric artifact concentrations (ACs 1–7), a scatter of late-historical-period artifacts (AC 14), and five rock clusters (Features 62, 63, 65, 68, and 76) were identified on the surface of Locus B during Phase 1 (Figure 49). A very light artifact scatter was present in the remaining part of the locus. The artifact concentrations varied in area, ranging from 61 m^2 (AC 5) to 6,452 m^2 (AC 1). The rock clusters also were of varying sizes (ranging from 0.8 to 20 m^2 in area), mostly consisting of larger, cobble-sized stones; some of the rocks appeared thermally altered. In the larger clusters (Features 63 and 76), the stones were loosely scattered, and the rocks were not deeply embedded in any of

Figure 47. Aerial view of the Mescal Wash site, with Locus B outlined in the center of the photograph and Mescal Wash in the foreground; view to the south.

Figure 48. Aerial view of southern portion of Locus B; view to the southwest.

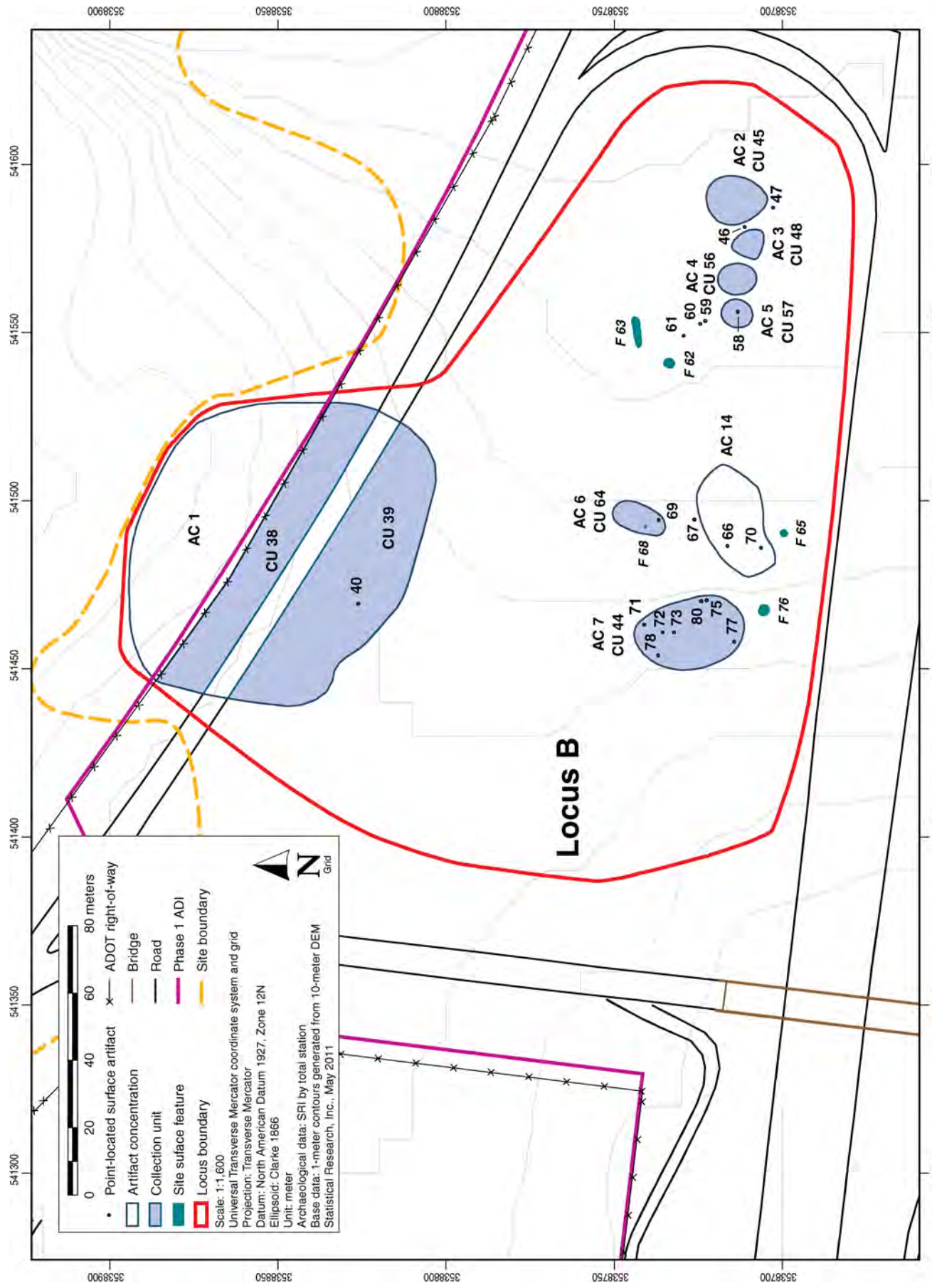

Figure 49. Map of Locus B, showing features recorded on the modern surface, collection units, and point-located artifacts (Phase 1).

the features. A few flaked stone and ceramic artifacts were present in three of the features (Features 62, 63, and 76), and one feature (Feature 68) was located within an artifact concentration (AC 6). None of the stones composing the features appeared deeply embedded, and it was uncertain whether the rock clusters were prehistoric. Except for the northernmost artifact concentration traversed by Marsh Station Road (AC 1), most artifacts and all features were found in the southern portion of the locus.

Surface Collections

Eighteen diagnostic prehistoric artifacts were point-located and collected individually from outside and within the artifact concentrations (see Figure 49). These included 12 flaked stone artifacts, 3 manos, 1 metate, and 2 indeterminate ground stone artifacts. Next, all prehistoric surface artifacts were collected from each artifact concentration by means of collection units, which corresponded exactly in location and size (see Figure 49). The exception was AC 1, in which nearly half of the concentration was located on the north side of the ADOT ROW. This northern part of AC 1 was outside the Phase 1 ADI and was therefore not collected. The southern part of AC 1 was collected as Collection Units 38 and 39, located north and south of Marsh Station Road, respectively. ACs 2–7 were collected by means of Collection Units 44, 45, 48, 56, 57, and 64. The historical-period artifacts within AC 14 (all glass and metal dating to the 1950s or later, and probably left behind by workers during road construction) were not collected. In total, 119 artifacts (53 ceramics and 66 flaked stone artifacts) were collected from the artifact concentrations.

Most of the surface artifacts were found in AC 1 (n = 49); however, that concentration was eight times larger than the next-largest concentration. In comparing artifact densities among the concentrations, AC 5, the smallest concentration, had the greatest artifact density, followed by ACs 2 and 3 (also two of the smallest concentrations). AC 1 (or at least the portion within the ADI) contained the lowest artifact density.

Excavations

SRI excavated 10 backhoe trenches and 8 narrow (approximately 2.5-m-wide) stripping units in Locus B; 2 of the trenches (Trenches 43 and 248) extended outside the locus (Figure 50). The trenches had a combined length of 357 m, and the stripping units totaled 311 m^2 in area. The excavation units were distributed evenly across the locus; this distribution ensured that most of the ACs were sampled. Neither ACs 6 and 14 nor any of the five surface features (Features 62, 63, 65, 68, and 76) were covered, however. In the southeastern part of the locus (east of the surface features), the test excavations exposed four possible pit structures (Feature 245 underneath AC 4 in Trench 49, Feature 342 in Stripping Unit 341, Feature 364 in Stripping Unit 345, and Feature 371 in Stripping Unit 344) but no extramural pits or burials. Trench 49 also exposed a depression (Feature 244) underneath AC 3. This depression was interpreted as a 1.14-m-deep borrow pit or perhaps a natural drainage filled with cultural materials during or shortly after the site was abandoned. No subsurface features were found in the western portion of the locus—not surprising given that this area contained the most developed argillic horizon observed at the site. This argillic horizon extended to immediately below the surface. It would have been cumbersome to dig out large areas for houses in such argillic soils, which were generally avoided by prehistoric occupants. In the eastern part of the locus, where subsurface features *were* found, cultural deposits were shallow (15 cm or less below the modern ground surface), resting just above the argillic horizon. In general, these features showed up as poorly defined, thin layers of slightly darker sediments with some organic materials and sparse or no artifacts. None of the suspected pit structures was burned, and floors and especially the walls were poorly defined; thus, they were not excavated further. Feature 364 was the only one of the possible pit structures excavated in any form (partially). The feature contained an ax, a mano, and a chunk of hematite in the portion exposed in the stripping unit. The feature was not excavated further, and it was not clear whether the artifacts were in the feature fill or rested on a floor surface. Another noteworthy artifact was a stone palette (PD 521) (see Chapter 5:Figure 5.8b, Volume 2) removed by the backhoe from the fill or floor of Feature 245.

To summarize, the Phase 1 feature inventory consisted of five rock clusters (Feature 62, 63, 65, 68, and 76), four possible pit structures (Features 245, 342, 364, and 371), and one borrow pit or natural depression (Feature 244).

Phase 2 Investigations

Compared to the effort in Loci A, C, and D, little work was done in Locus B during Phase 2. The Phase 2 investigations in Locus B were limited to the excavation of two 2-by-2-m test pits (Test Pits 1105 and 1110) and three stripping units (Stripping Units 7090, 7092, and 7094) (Figure 51). Together, the stripping units covered a 464-m^2 area. Test Pit 1105 was excavated in the northeast portion of AC 5, along the south side of Phase 1 Trench 49. Test Pit 1110 was excavated near the center of AC 2. The purpose of both test pits was to determine whether these artifact concentrations were the tops of middens rather than just surface manifestations. AC 5 was chosen for sampling and exploration because this area had the highest artifact density noted in the entire locus. Test Pit 1105, however, encountered

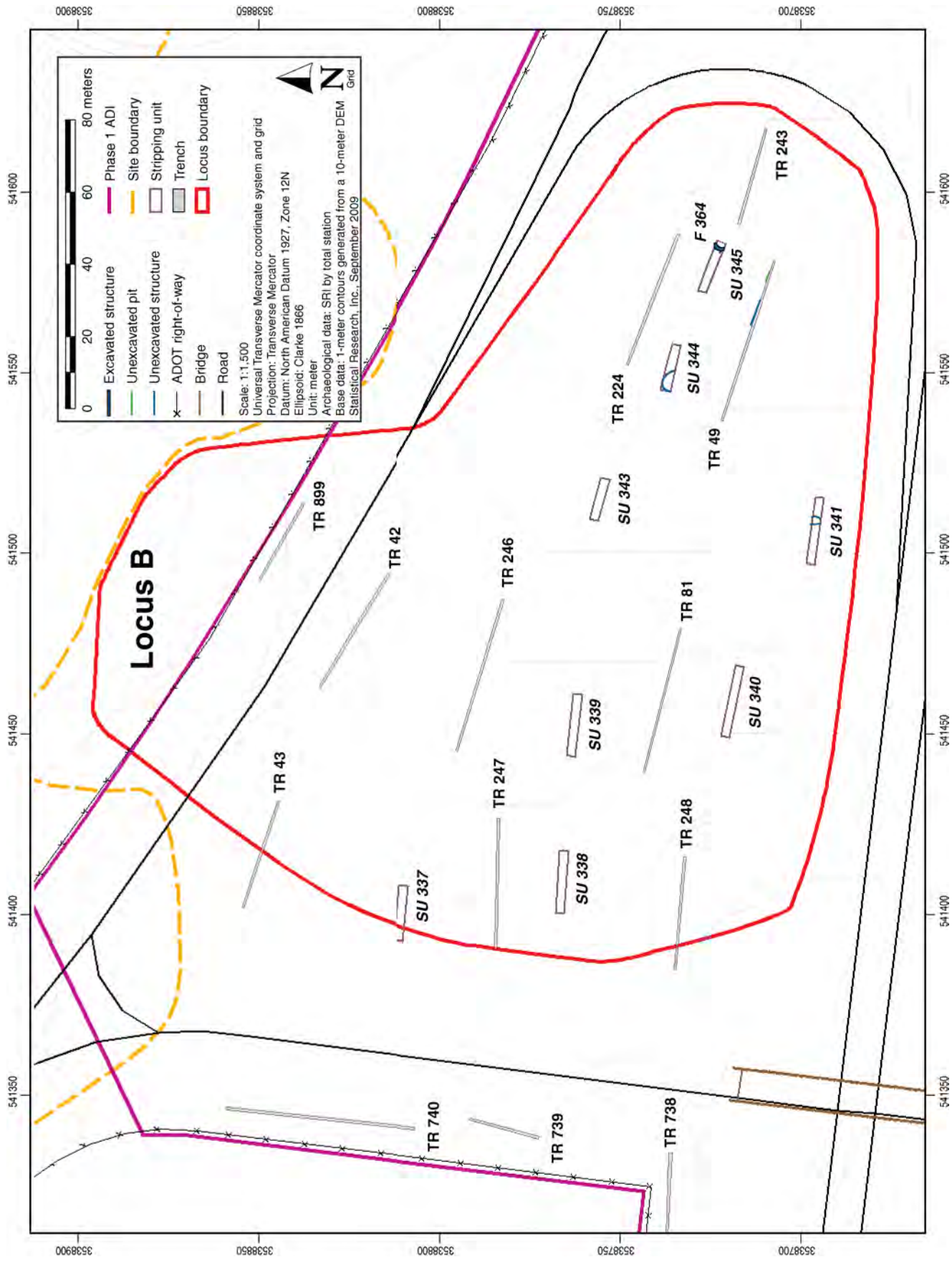

Figure 50. Map of Locus B, showing Phase 1 excavation units and subsurface features.

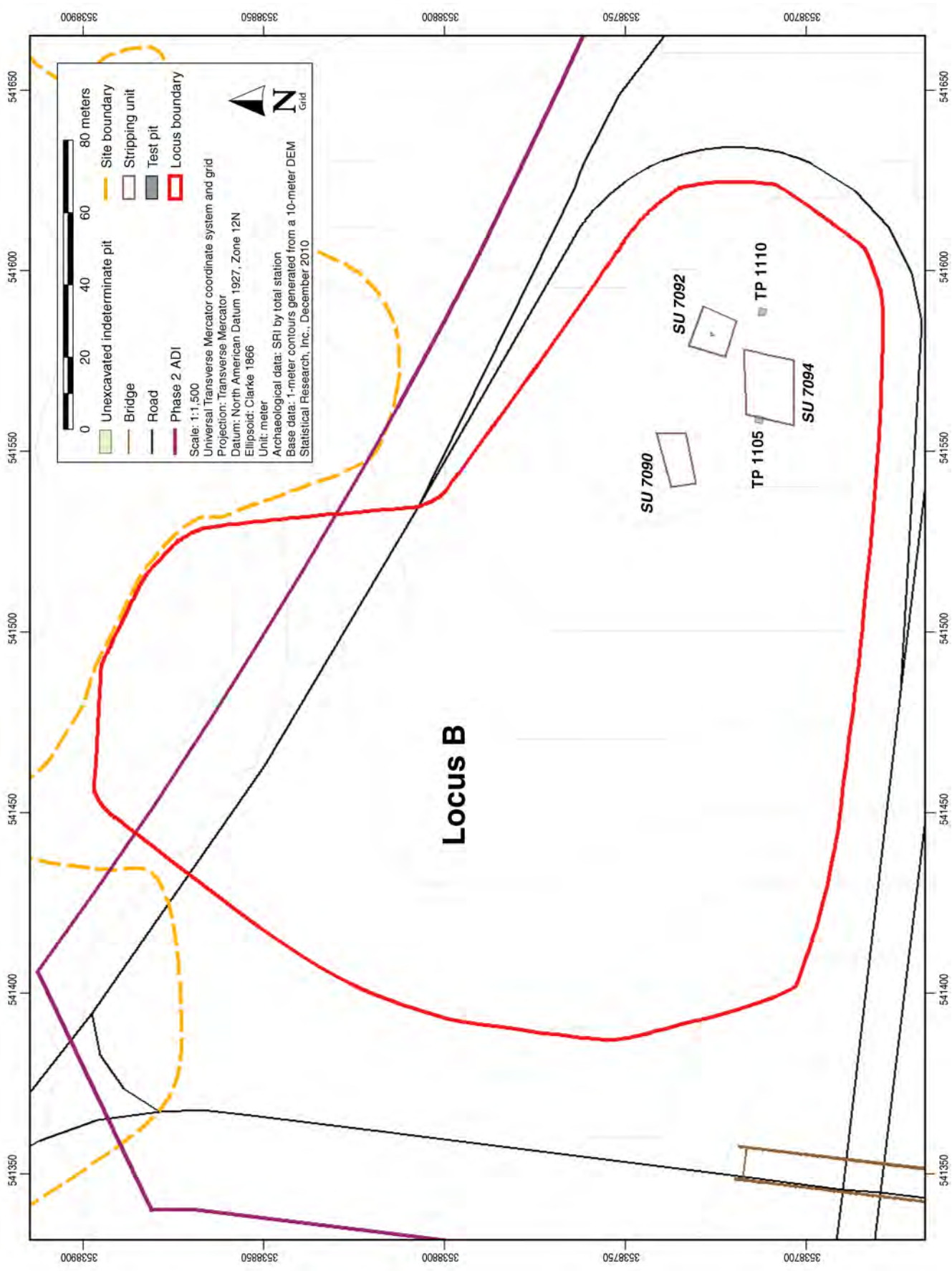

Figure 51. Map of Locus B, showing Phase 2 excavation units and exposed and excavated features.

no more than a small number of artifacts, all found just below the surface, indicating that AC 5 was just a surface scatter of artifacts. AC 2 had the second-highest density of artifacts noted within the locus. Test Pit 1110 yielded substantial numbers of artifacts, and AC 2 was determined to represent the top of a midden, designated Feature 1018 (see feature description below). In total, 64 ceramics were recovered from the test-pit excavations, but nearly half were too small for type or ware identification. All identifiable artifacts were Type II plain ware sherds.

The stripping units were excavated in the southeastern part of the locus, where most of the subsurface features had been found. Stripping Unit 7090 resulted in the complete exposure of Feature 371, which was determined to be a natural depression filled with organically enriched sediments (not a structure). The unit also removed Feature 62, which turned out be no more than a surface scatter of rocks of undetermined function and age, although probably modern or dating to the late historical period.

Stripping Unit 7092 was placed in the area where Feature 364 was found during Phase 1. Feature 364 was reexposed and reassessed to represent an ephemeral activity surface rather than an actual structure, because no walls or floor features were identified (see feature description below). A nonthermal pit (Feature 6192), the only new feature found in Phase 2, also was found in the stripping unit but was not excavated.

Stripping Unit 7094 was excavated to more completely expose Features 244 and 245, previously discovered in the profile of Trench 49. Feature 244 proved, indeed, to be no more than a shallow, natural depression (as opposed to a borrow pit), and Feature 245 was assessed as a natural drainage feature (not a structure). This was the only stripping unit in which any artifacts (all ceramics) were encountered. Of the seven sherds collected from the unit, six were Type II plain ware sherds and one was an indeterminate red-on-brown sherd.

Finally, Feature 342 was reexamined by exposing it again (in Phase 1 Stripping Unit 341); it was assessed as no more than a shallow midden area (not a structure). No good feature outline was obtained in the exposure, and feature size remained unknown. No excavation was attempted. Further, the remaining surface clusters of rocks (Features 63, 65, 68, and 76) were examined by handscraping and proved to have no subsurface depth. They were assessed as late historical period or modern and therefore not warranting further excavation.

The final feature inventory for Locus B as revised for Phase 2 consisted of nine features: one activity surface (Feature 364), two middens (Features 342 and 1018), one nonthermal pit (Feature 6192), and five rock clusters (Features 62, 63, 65, 68, and 76). Of these, only Features 364 and 1018 were excavated, both partially. No flotation or pollen samples were analyzed from these excavated features.

Feature Descriptions

Activity Surface

Feature 364 was exposed during Phase 1 in the eastern end of Stripping Unit 345 (Figure 52). The feature was immediately north of AC 2, the artifact concentration determined to be a midden and designated Feature 1018 in Phase 2. The feature was defined by its faint matrix of organic fill within the more reddish, argillic natural stratum. Its outline was exposed at a depth of about 0.15 m below the modern site surface. A portion of the feature measuring approximately 2.5 by 1.8 m was visible in the stripping unit. Shovel-and-trowel scraping of the exposed feature area uncovered a three-quarter-grooved ax head (PD 365), a mano (PD 369), and a chunk of hematite (PD 366). These artifacts were mapped and collected, but no further feature excavation was attempted. Three sand-tempered plain ware sherds were also collected from the feature. In Phase 2, sediments above the feature were mechanically removed as part of Stripping Unit 7092. No complete feature outline was found because of the diffuse, disturbed nature of the fill. The feature proved to be shallow, and the artifacts collected in Phase 1 clearly were located on the floor surface, which was situated at approximately 10 cm below the feature outline as exposed in Phase 1. Feature 364 was determined to be an activity surface rather than an actual structure, because no walls, postholes, or other floor features were identified.

Midden

Feature 1018, a shallow midden, was originally identified on the surface as an artifact scatter (AC 2) in Phase 1. During Phase 2 sampling with a 2-by-2-m test unit (Test Pit 1110), AC 2 was determined to be a midden. Test Pit 1110 was placed in the center of the former location of the artifact concentration (which was completely collected in Phase 1), with two levels excavated. Level 1 was 10 cm thick and Level 2 only a few centimeters. The sediments consisted of an artifact-laden sandy loam with subangular sheetwash gravels and roots throughout. Artifacts included ceramics, flaked stone debitage, one hematite fragment, and faunal bone. At the base of Level 2, a cobble lens and a possible streambed were encountered, after which the excavation was terminated. The midden measured approximately 15 m east–west by 18 m north–south and was 0.13 m deep in the test pit.

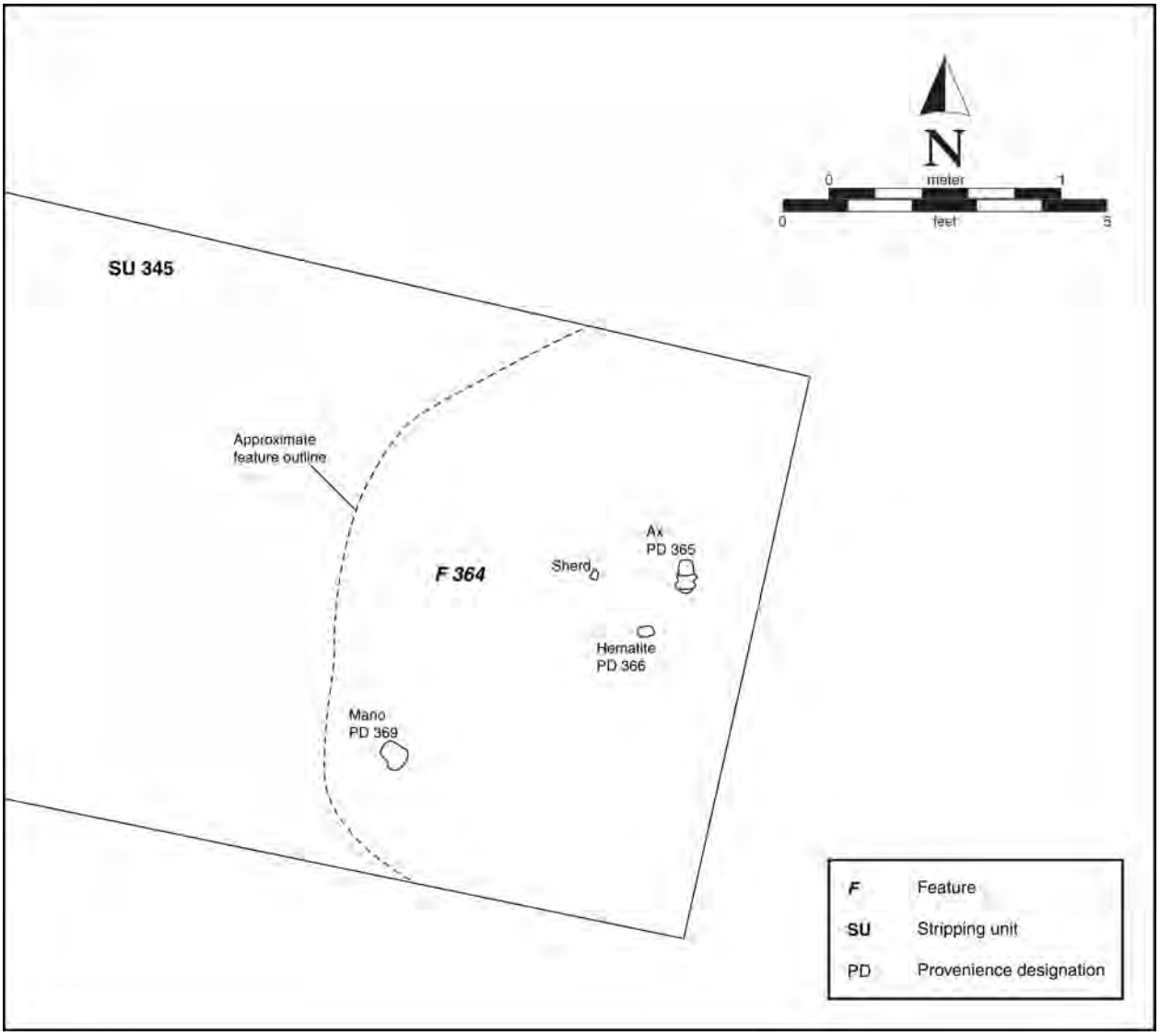

Figure 52. Plan map of Feature 364 (activity surface) as exposed in Stripping Unit 345, showing point-located artifacts.

Summary and Interpretation

On the basis of SRI's investigations, not much can be said about the age and function of Locus B. The collected ceramics (mostly plain ware sherds, with several Dragoon and indeterminate red-on-brown ware sherds) indicate that the locus was used during the Middle Formative period, but a more precise temporal placement cannot be offered on the basis of our data. The activity surface and middens indicate that resource processing occurred, although the limited excavations provided no data on what was being processed. The dearth of habitation features is conspicuous, in particular given the large number of features excavated by EcoPlan in the locus. EcoPlan's feature inventory consisted of 33 cremations, 1 *horno*, 12 roasting pits, 9 nonthermal pits, 4 postholes, and 1 midden (Neuzil 2009b:6), all found in the northern portion of the locus outside the ADI for the current project. This feature density is particularly striking when contrasted with the absence of cultural features or artifacts in the exposures of Trenches 42 and 899 excavated by SRI just south of the area where EcoPlan worked. Like SRI, EcoPlan found no structures in Locus B, although the 4 postholes suggest that ephemeral shelters were present. EcoPlan's excavations were along the northern boundary of the site, far from any excavated structures. The nearest structures have

been found in Locus C, about 200 m to the south (see Chapter 6); in Locus G (Buckles et al. 2010), about 200 m to the west; and in Locus A, some 330 m to the southeast (see Chapter 4). It is interesting to note that the number of cremations excavated by EcoPlan in Locus B is larger than the number (n = 30) found by SRI within the entire site. Perhaps this northern portion of Locus B served as a spatially discrete cemetery, purposely established away from any residential areas. As to the other features, the intensive use of this northern part of Locus B is probably best explained by its proximity to Mescal Wash. Pockets of Holocene alluvium in periodically inundated, low-lying areas, like those present below Locus B (see Figure 48), probably were farmed. This would explain the proliferation of resource-processing features on the terrace immediately above the hypothesized field areas. Furthermore, arroyo development and erosion in the late 1800s severely altered the Mescal Wash environment (see Chapter 2, Volume 3) and may have obliterated any structural remains and other features in the lower parts of the Locus B settlement.

CHAPTER 6

Locus C

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Locus C was located in the approximate center of the site, entirely within the ADI (see Figure 3). As defined by surface artifacts, the locus measured about 250 m east–west and 90 m north–south, with a total area of 20,602 m². The locus was about 230 m north of Cienega Creek and the same distance south of the Mescal Wash floodplain. Its elevation range was 1,098–1,104 m (3,602–3,622 feet) AMSL. Enclosed within the southern half of the Marsh Station traffic interchange, Locus C was bounded on all sides by roads (Figure 53; see Figure 19). I-10 was immediately to the north and had impacted the northern edge of the locus. The Marsh Station access ramp was directly to the south, separating Locus C from Locus D without any clear break evident between the two loci.

The apparent habitation core of the locus was found in its northeastern part, where we excavated a cluster of 13 structures and numerous extramural features. Two additional houses were excavated in the western portion of Locus C, whereas a single structure in the southern part remained unexcavated.

Setting and Disturbances

The Locus C surface sloped slightly to the west and was covered with vegetation of mostly grasses, punctuated with small mesquite and acacia brush, yucca, and various cacti (see Figure 52). Larger mesquite trees lined the Marsh Station access ramp partially encircling the locus. Disturbance was extensive throughout Locus C. Most obvious was the in-use El Paso Natural Gas Line, which cut roughly east–west through the center of the locus, with backdirt berms flanking both sides of the 25-m-wide ROW corridor. We were unable to conduct subsurface investigations within this ROW.

Much of the locus, in particular the eastern half, was covered by a 50-cm-deep layer of sand and gravel that was imported and used as fill for the construction of I-10. In much of this eastern part of the locus, the surface had been compacted by heavy equipment, and in Stripping Unit 409 (see discussion below), several concrete slabs were exposed, which probably served as a platform for a water tank. This evidence suggests that the area may have been used as a construction staging area during the building of I-10. Other disturbances included an ADOT culvert cutting through the east part of the locus and, of course, the road segments forming the locus boundary. In the western part of the locus (in particular, in the area where artifact concentrations were defined on the surface), disturbance appeared to have been minimal.

Phase 1 Investigations

Locus Definition and Surface Collections

A broad and, in places, relatively dense artifact concentration covered the less disturbed western half of Locus C. Divided by the El Paso Gas line and ROW, it was designated AC 9 and AC 10: the former was to the north and the latter to the south of the gas-line disturbance (Figure 54; see Figure 19 for gas-line location). A smaller concentration, AC 8, was located in the southeast portion of the locus (see Figure 54). On the basis of surface artifact distributions in surrounding areas of the site, we believe that Locus C may have been physically connected to Locus B to the north and Locus D (and perhaps Locus E) to the south before road construction. Given the degree of surface

Figure 53. Aerial overview of Locus C (*left center, enclosed between roads*) after excavation; view to the southeast.

disturbance, it is not surprising that no surface features were identified in Locus C.

Surface artifacts were collected mainly within the artifact concentrations of Locus C. First, 31 fragmented lithic tools were point-located and collected individually (see Figure 54). These included a fragment of a phyllite palette, 2 projectile point fragments, a drill fragment, a hammerstone, and fragments of various ground stone and flaked stone implements. Most of the point-located artifacts were located in AC 9, which had the greatest density and variety of surface artifacts. Next, 299 additional artifacts (137 pieces of flaked stone and 162 sherds) and 1 piece of animal bone were collected by means of three collection units: Collection Unit 85 was used to collect artifacts in AC 8, Collection Unit 94 was used to collect artifacts in AC 9, and Collection Unit 118 was used to collect artifacts in AC 10 (see Figure 54). In total, 330 artifacts and 1 piece of faunal bone were recovered from the surface of Locus C. These 330 artifacts consist of 162 sherds, 157 pieces of flaked stone, 10 ground stone artifacts, and 1 palette fragment.

Excavations

Phase 1 testing began with the excavation of seven backhoe trenches measuring 216 m in total length, followed by nine narrow stripping units measuring 369 m^2 in area (Figure 55). Originally, in our Phase I test excavations, we identified a total of 46 features; however, as discussed below, subsequent Phase 2 investigations revised this total down to 44. As reported by Vanderpot and Altschul (2000), we originally identified 8 definite and 6 possible pit houses, one of which consisted of a series of 6 postholes. We also identified 2 possible *hornos* (Features 229 and 230) and 8 smaller roasting pits, 19 nonthermal pits, and 2 secondary cremations, 1 in a pit and 1 in an urn (Vanderpot and Altschul 2000). In addition, a midden feature (Feature 999, not mapped in Figure 55) was identified in the area of ACs 9 and 10 in the western part of the locus under the modern overburden associated with the construction of I-10 (Vanderpot and Altschul 2000). It appeared from our Phase I work, as well as subsequent Phase 2 excavations (see discussion below), that ACs 9 and 10 were the surface manifestations of the underlying Feature 999.

Subsequent Phase 2 investigations revealed that, of the 14 pit houses and possible pit houses identified in Phase 1, only 5 could be confidently identified as pit structures after full exposure. Four structures identified in Phase 1 were left unexcavated during Phase 2 and remained classified as possible pit houses. In addition, during Phase 2, 3 of the 14 were reclassified as roasting pits and 1 was reclassified as a nonthermal pit. Thus, the total feature inventory for Phase 1 was 44 and consisted of 5 pit structures, 4 possible pit structures, 12 roasting pits, 20 nonthermal pits, 2 secondary cremations, and 1 midden.

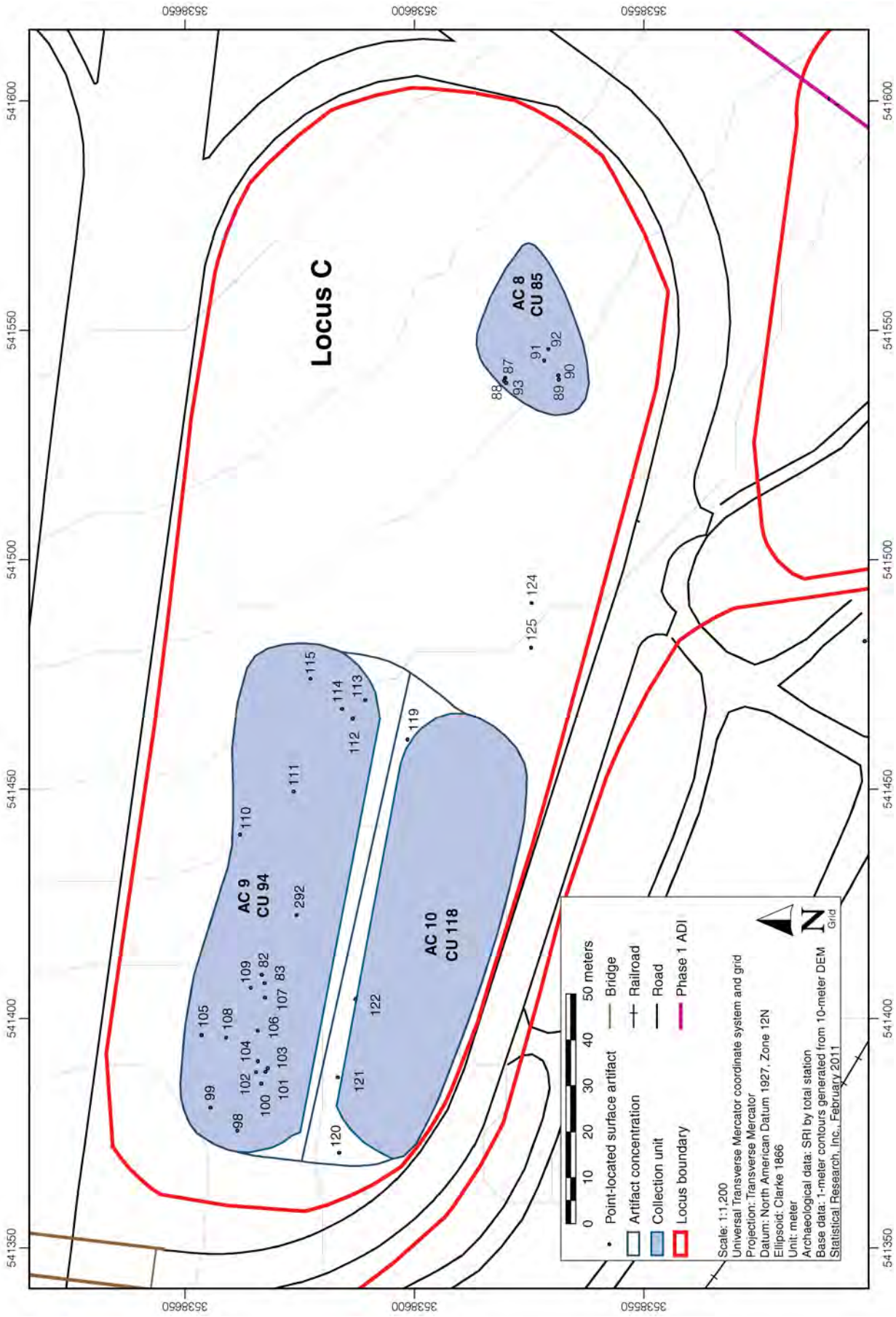

Figure 54. Map of Locus C, showing artifact concentrations, collection units, and point-located artifacts (Phase 1).

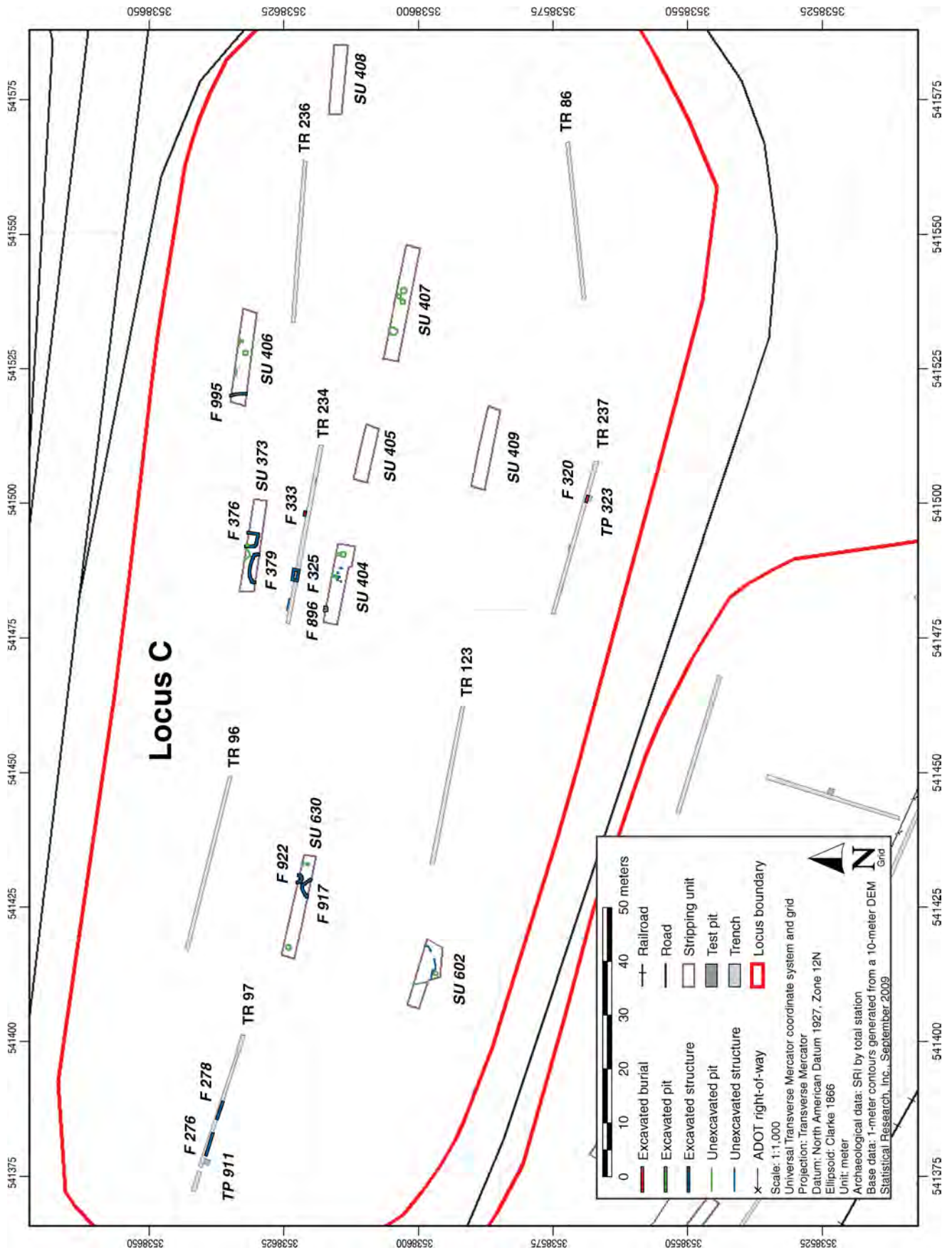

Figure 55. Map of Locus C, showing Phase 1 excavation units and discovered features.

Two test pits were excavated (see Figure 55). Test Pit 323, a 1-by-1-m unit, was excavated along the south side of Trench 237 in order to remove the secondary pit cremation (Feature 320). Test Pit 911 was a 1-by-1-m unit excavated along the south side of Trench 97, between two structures (Features 276 and 278) identified in the trench, in order to better understand the stratigraphy and depth of the Feature 999 midden discovered underneath ACs 9 and 10. Excavations in Test Pit 911 encountered midden deposit (charcoal- and ash-rich sediment with abundant artifacts) from the surface to approximately 40 cm below the surface.

The secondary urn cremation (Feature 333) was partially excavated during Phase 1. This burial was visible in the north wall of Trench 234, with a portion removed by the backhoe (see Figure 55). We screened the backdirt for cremated bone and ceramic fragments but left the rest of the cremation in the trench wall for complete removal during Phase 2. Both cremation burials, Features 320 and 333, are described in detail in Appendix C.

The only other feature excavated in Phase 1 (besides Features 333 and 999) was a nonthermal pit (Feature 896), partially exposed in Stripping Unit 404 (see Figure 55). The south half of the pit, which was exposed in plan in Stripping Unit 404, measured approximately 60 by 30 cm. From its exposure and excavation, Feature 896 appeared to have an oval to circular orifice, relatively straight sides, and a flat bottom. Feature 896 had an excavated depth of 12 cm.

Phase 2 Investigations

Phase 2 excavation units, excavated features, and exposed but unexcavated features are shown in Figures 56 and 57. Phase 2 excavations began with the placement of four 2-by-2-m test pits to further explore and sample Feature 999, the midden underlying ACs 9 and 10. One of the units (Test Pit 1120) was placed at the east edge of AC 9 (see Figure 57); the others (Test Pits 1117, 1128, and 1134) were located in the central portion of the midden (see Figure 56). Feature 999 midden deposit was encountered in all four test pits, confirming that Feature 999 extended throughout all or much of the western portion of Locus C. As documented in these test pits and in Phase 1 Test Pit 911 and various trenches, the midden extended to a depth of 32–40 cm below the modern surface. One additional feature (Feature 1141, a firepit) was encountered during the excavation of Feature 999 deposits in Test Pit 1134.

Next, a series of six stripping units was excavated, focusing on the areas where structures and extramural features were identified in the Phase 1 trenches and stripping units (see Figures 56 and 57). A total area of 519 m^2 was mechanically stripped. Three stripping units (Stripping Units 5188, 5189, and 7012) were placed in the northwestern portion of the locus in the area where Feature 999 was located. Two other stripping units (Stripping Units 5190 and 5195) were placed in the northeastern part of the locus, where most of the features were identified in Phase 1. Finally, a sixth stripping unit (Stripping Unit 7013) was excavated in the southeast part of the locus along the north side of the Phase 1 Trench 237. Although only a portion of the Locus C surface was stripped off, we were confident that most of the features—including all burials—were found.

Features

As a result of the Phase 2 stripping efforts, 280 new features were discovered; at the end of fieldwork, the total feature inventory for Locus C was 322 features. These 322 features consisted of 19 structures (of which 4 remained classified as possible structures), 282 extramural pits, 18 burials, 2 middens, and 1 dog burial. Most houses and extramural features were concentrated in a 25-by-45-m area in the northeast part of the locus, in Stripping Units 5190 and 5195 (see Figure 57). Additional extramural features and 1 new structure (Feature 6010) were also found during Phase 2 excavations in the western portions of the locus, in Stripping Units 5188, 5189, and 7012.

Structures

The Phase 1 and 2 investigations yielded a total Locus C inventory of 15 definite and 4 possible structures (Table 18). Of the definite structures, 8 were completely excavated and 7 were partially excavated (see Table 18). For detailed descriptions of the completely excavated structures, the reader is referred to Appendix B. Of the 8 definite (Features 231, 235, 241, 276, 278, 379, 609, and 917) and 6 possible (Features 233, 334, 376, 897, 922, and 995) pit structures identified in Phase 1, only 5 (Features 235, 276, 376, 379, and 995) were retained as actual structures on the basis of complete or partial excavation in Phase 2. Four (Features 231, 233, 609, and 897) remained unexcavated and therefore lack a final assessment. Of the others, Feature 241 turned out to be the southern portion of Feature 379; Features 278, 917, and 922 were reclassified as roasting pits; and Feature 334 was reclassified as a nonthermal pit and renumbered Feature 7339.

All except 2 of the 15 excavated structures were part of the house cluster exposed in Stripping Units 5190 and 5195, which in turn contained two groups of houses separated by a dense concentration of extramural pits (see Figure 57). The other 2 structures were found at the west end of the locus (see Figure 56).

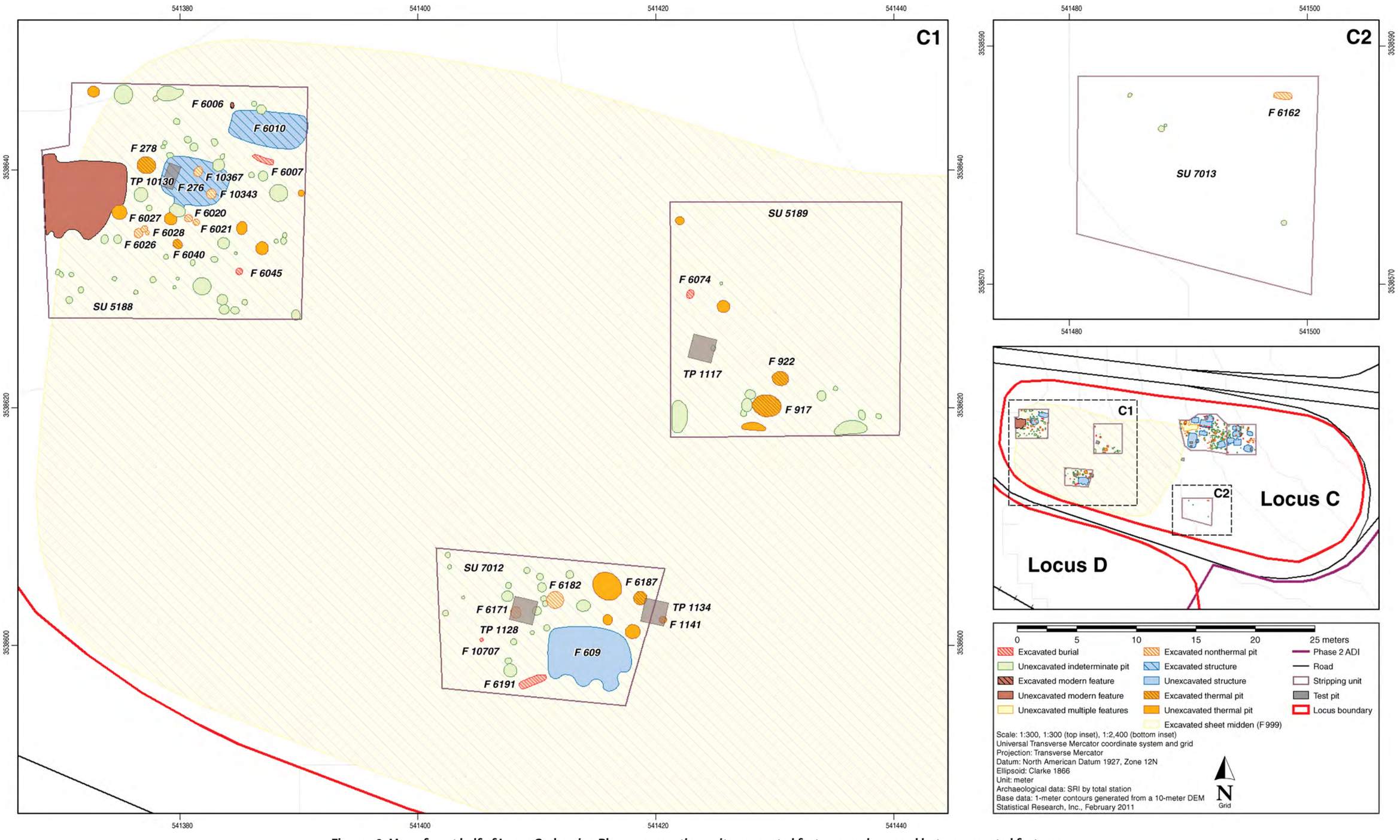

Figure 56. Map of west half of Locus C, showing Phase 2 excavation units, excavated features, and exposed but unexcavated features.

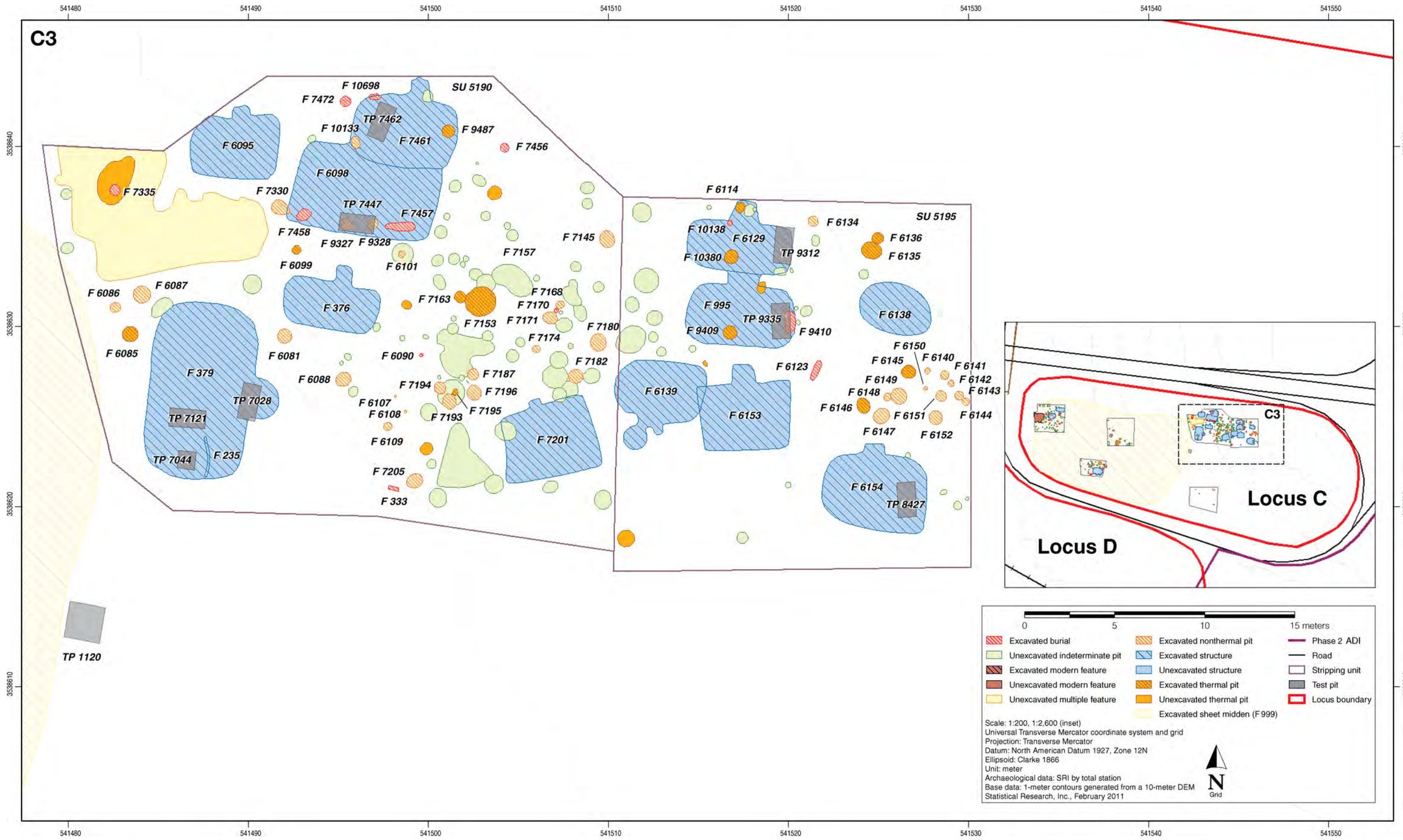

Figure 57. Map of east half of Locus C, showing Phase 2 excavation units, excavated features, and exposed but unexcavated features.

Table 18. Structures Excavated in Locus C

Feature No.	Location (SU)	House Type	House Shape	Date Range	AM Sample No. (SRI-)	Level of Excavation	Length (m)	Width (m)	Depth (m)	Total Floor Area (m^2)	Estimated Usable Floor Area (m^3)	Entry Type	Entry Orientation	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
235	5190	pit structure; adobe walled	ovate or subrectangular	A.D. 1160–1450	2370	all	4.05	2.68	0.03	10.80	unknown	unknown	unknown	none	none	intrusive in Feature 379.
276	5188	house-in-a-pit	subrectangular	A.D. 650–1150	2441	all	5.24	3.87	0.22	19.80	9.71	protruding, ramped	south	10,252	none	No written description in Appendix B
376	5190	house-in-a-pit	subrectangular	A.D. 835–1015	2425	part	5.35	2.64	0.43	~14	unknown	unknown	north	none	none	largest structure excavated at the site; rare east-facing entrance; 12 parallel floor grooves
379	5190	house-in-a-pit, recessed hearth	subrectangular	A.D. 1010–1140	2424	all	9.80	5.78	0.42	54.70	34.70	protruding, ramped and stepped	east	7378, 7397, 7399	7400, 7420	Structure had burned; no floor assemblage; intruded by Feature 235.
995	5195	house-in-a-pit; recessed hearth	subrectangular	A.D. 935–1100	2432	all	6.01	3.33	0.26	20.00	12.83	protruding, bulbous, ramped	north	8459	9336, 8463, 9374, 9406	Structure had burned; no floor assemblage; intruded by Feature 6129.
6010	5188	house-in-a-pit	subrectangular?	A.D. 700–950	none	part	6.44	2.99	unknown	~19	unknown	unknown	unknown	none	none	No written description in Appendix B
6095	5190	house-in-a-pit	subrectangular?	A.D. 935–1040	2426	part	4.89	3.59	0.22	~17	unknown	unknown	north	none	none	No written description in Appendix B
6098	5190	house-in-a-pit; recessed hearth	subrectangular	A.D. 935–1015	2429	all	8.10	4.83	0.13	34.40	26.17	protruding?	north	none	7449, 9301, 9363, 9356	Structure had burned; floor assemblage present; intruded by Feature 7461.
6129	5195	house-in-a-pit	subrectangular	A.D. 935–1015	3965	all	5.54	2.79	0.25	16.70	8.58	protruding, rectangular, ramped	north	none	8448, 10,128	Structure had burned; no floor assemblage; intruded by Feature 995.
6138	5195	house-in-a-pit	ovate or subrectangular	A.D. 935–1315	2395	part	3.93	2.61	0.21	~10	unknown	unknown	unknown	none	none	No written description in Appendix B
6139	5190	house-in-a-pit	ovate or subrectangular	A.D. 700–1040	none	part	5.02	3.33	0.24	~16	unknown	unknown	south	none	none	No written description in Appendix B
6153	5195	house-in-a-pit	subrectangular	A.D. 1010–1040	2398, 2399	part	5.07	3.71	0.26	~18	unknown	unknown	north	none	none	No written description in Appendix B
6154	5195	house-in-a-pit	subrectangular	A.D. 935–1015	2427	all	5.80	4.23	0.18	22.60	15.89	protruding, rectangular, ramped	north	none	9128	No written description in Appendix B
7201	5190	house-in-a-pit	subrectangular	A.D. 935–1015	2402	part	4.83	4.15	0.13	~20	unknown	unknown	north	none	none	No written description in Appendix B
7461	5190	house-in-a-pit	subrectangular	A.D. 935–1040	2430	all	5.86	3.92	0.19	21.70	14.28	protruding, ramped	north	none	10,061, 10,125	Structure had burned; no floor assemblage; intruded by Feature 6098.

Key: AM = Archaeomagnetic; PD = Provenience Designation; SU = Stripping Unit

Excavation Methods

Each of the 8 completely excavated structures (Features 235, 276, 379, 995, 6098, 6129, 6154, and 7461) was sampled with a 1-by-2-m unit to locate the floor and hearth. Houses were then bisected in the cases where a large amount of fill still remained in the structures. This remaining fill was removed mechanically or manually and generally was not screened. The floor fill was excavated by hand and always 1/4-inch screened. The entryways were removed as separate units, as were other subfeatures such as hearths, floor grooves, and intramural pits.

The seven partially excavated structures (Features 376, 6010, 6095, 6138, 6139, 6153, and 7201) were explored to find the hearth by removing the fill with a backhoe. If a hearth was identified, it was excavated and sampled (including AM samples).

Features 231, 233, 609, and 897 remained unexcavated and retained their "possible structure" designation. Feature 231 was originally discovered in profile in the north wall of Trench 96 at its east end during Phase 1 (see Figure 55) and was not exposed or excavated in Phase 2. Little is known of this feature, which appeared as a lens of artifact-rich deposit overlying what appeared to be a possible plastered floor. The presence of Feature 231 was first revealed when the backhoe excavating Trench 96 removed an intact trough metate with a matching one-handed mano. Feature 233 was originally discovered in profile in the north wall of Trench 234 at its east end during Phase 1 (see Figure 55) and was also not exposed or excavated in Phase 2. The presence of Feature 233 was identified by a dark, charcoal- and ash-rich lens of sediment in the trench wall. Feature 609—originally discovered in Phase 1 in Stripping Unit 602—was exposed completely in plan view in Phase 2 in Stripping Unit 7012 (see Figures 55 and 56). The exposure was of a proper size to be a house but was irregular in shape, and no further excavation was attempted. Located in the southern end of the locus, it appeared to be similar to the irregular-shaped soil stains in nearby Locus D (see Chapter 7). Feature 897 consisted of a series of six post holes (one of which was encapsulated in plaster) exposed in Stripping Unit 404 (see Figure 55). This posthole pattern appeared to have been the remains of a pit structure or perhaps a ramada, the floor of which was removed by the backhoe during the excavation of Stripping Unit 404. Feature 230, a roasting pit, was located within the posthole pattern and appeared to have been intrusive into Feature 897. No part of Feature 897 was excavated, and no samples or artifacts other than a single hammerstone located within the posthole pattern were collected from this feature.

Feature Characteristics

The group of 13 structures excavated in the northeast quadrant of the locus appears to represent a discrete habitation core in a 25-by-45-m area. The group consisted of an east lobe and a west lobe, separated by a dense cluster of more than 80 nonthermal, extramural pits (see Figure 57). A large *horno* (Feature 7153) was excavated in the center of the pit cluster, which contained few other thermal features. All of the excavated structures were houses-in-pits. Feature 235 was a rather shallow pit structure that retained part of an adobe wall (see below). Three excavated structures (Features 379, 995, and 6098) had recessed-hearth areas. Each of two house pairs (Features 995/6129 and 6098/7461) along the north side of the eastern half of the locus represented a house-in-a-pit built partially over the back side of a recessed-hearth house shortly after its abandonment. The structures for which the entryway orientation could be determined generally faced north, with the exception of Feature 379, which faced east, and Feature 6139, which faced south. All structures that could be dated belonged to Middle Formative B, except for Feature 235, which appeared to be Late Formative.

The two house pairs were about 15 m apart with no additional structures between them. Because I-10 had been constructed immediately to the north, it is unknown if other houses ever existed farther north within the locus. All four structures were oriented in the same northerly direction. In the Features 995/6129 pair, both structures were of about the same size and shape and contained similar floor features, including a large, bell-shaped storage pit near the west wall of the structure and a distinct arrangement of postholes surrounding the hearth (Figures 58 and 59). These similarities suggest that Feature 995 may have provided the architectural template (minus the recessed hearth) for the construction of the later structure and that the houses probably were built and occupied within a short period, perhaps by the same group of people. In the Features 6098/7461 pair (Figure 60), the earlier structure (Feature 6098) was significantly larger than the later one and had a more pronounced rectangular shape. It had a large, bell-shaped storage pit, which, like the recessed hearth, was not repeated in the later house. Compared to the other house pair, the later structure was positioned more off center from the earlier one, obliterating its entrance and part of the front wall. It is interesting to note that the earlier structure contained numerous charred post segments and had an extensive floor assemblage, suggesting that it had burned catastrophically. The earlier structure of the other house pair had also burned, although it contained no floor assemblage. In spite of these differences, the two adjacent house pairs formed nearly identical mirror images and provide insight into the coeval nature of the recessed-hearth style and the more traditional pit structures at the site.

Feature 379 was the largest house excavated at the site and one of the latest to be abandoned at the locus. The large (10 by 6 m) structure, which contained a recessed-hearth area, was unique, not only because of its size and east-facing entrance, but also because a series of 12 parallel grooves in the floor outside the recessed area suggested the presence of a raised floor (Figures 61 and 62). Given its size, we suspect that this house had a communal function. Besides the hearth, the house

Figure 58. East view of Feature 995, showing recessed-hearth area and large storage pit.

contained a single floor pit that was small and bell shaped. The dearth of floor artifacts suggested that the structure had been cleaned out before abandonment.

Feature 235, the Late Formative period structure, had been built over the southwest corner of Feature 379. ADOT staging activities or road construction had scraped off an unknown portion of the top of the house pit and walls, and not enough of the structure remained to determine its original size or shape. Its east wall (made of adobe) had preserved in the area overlying Feature 379, and a line of postholes indicated the location of the south wall. The only other remnants of the structure were some patches of floor plaster and the hearth, which had been cut by Phase 1 Trench 234, in which the house had been discovered.

The two structures excavated in the western end of the locus (both in Stripping Unit 5188) represent an earlier occupation. Features 276 and 6010 were dated to the Middle Formative A period on the basis of time-sensitive ceramics in the fill. Each was a house-in-a-pit, and Feature 276 was one of two structures with a south-facing entrance found in Locus C.

Extramural Pits

In total, 282 extramural pits were found in Locus C during Phases 1 and 2 (see Figures 55–57). Not surprisingly, most were found within and among the cluster of houses located in Stripping Units 5190 and 5195 in the east half of the locus (see Figure 57). Most of these were located in a roughly 15-by-20-m area separating two distinct groups of houses. A smaller cluster of extramural pits was also exposed in Stripping Unit 5195 along the eastern edge of this house cluster. Pit features were also exposed in Stripping Units 5188, 5189, and 7012 in the western portion of the locus (see Figure 56).

During Phase 1, we identified 29 extramural pits, of which 1 nonthermal pit (Feature 896) was partially excavated. For the most part, Phase 2 extramural-feature excavation bypassed the Phase 1 features, instead focusing on examples chosen from the new inventory found during mechanical stripping. Most of these were chosen because they were associated with nearby excavated structures. The Phase 2 efforts resulted in the excavation of 64 extramural pits, 16 of which were completely and 48 partially excavated. Of these, 45 were nonthermal and 19 were thermal features. Unexcavated pits in Locus C totaled 218, of which 188 appeared to have been nonthermal and 30 appeared to have been thermal pits.

Thermal Pits

The 19 excavated thermal pits in Locus C included 1 *horno*; 13 roasting pits, 2 of which were rock lined; 4 firepits; and 1 extramural hearth (Table 19).

Horno

An *horno*, Feature 7153, was discovered within the large cluster of nonthermal pits located between the two house

Figure 59. East view of Feature 6129, showing large storage pit.

groups in Stripping Unit 5190 and was partially excavated during Phase 2 work (see Table 19). Another large roasting pit located within a broad midden area (Feature 6091) located along the west edge of the house groups remained unexcavated but probably also represented an *horno*. Feature 7153 was one of four *hornos* excavated at Mescal Wash (see Chapters 4 and 7 for descriptions of the other three). As discussed in Chapter 3, *hornos* were often used for agave processing and communal cooking. The orifice of Feature 7153 was ovate in plan view and measured nearly 1.7 m at its widest (Figure 63). The *horno* was 1 m deep and had a cylindrical cross section. At a little more than 1.6 m^3 in volume, Feature 7153 was three times larger than the next-largest pit features excavated at Locus C. The sides of the *horno* were heavily oxidized, and a 3–10-cm-thick greenish gray rind was exposed at its top. These characteristics indicate the intensive, repeated thermal use of the feature and the oxidizing and reducing atmospheres that occurred within the pit interior.

The fill of Feature 7153 consisted of dark gray sands and silts and contained abundant FCR, charcoal, cobbles, and pockets of ash. Analysis of a macrobotanical sample taken from the fill of the south half of the pit (PD 11167) resulted in the identification of charred plant materials, including monocotyledon parts, maize, and *Chenopodium*, as well as various woods. Ceramics (n = 137), flaked stone (n = 26), ground stone (n = 2), faunal remains (n = 4), and one piece of shell were also recovered from Feature 7153. The context of Feature 7153 suggests that its fill was deposited as a result of some combination of activities related to its primary thermal uses as well as secondary refuse disposal.

On the basis of AM samples and decorated ceramics, Feature 7153 has been assigned a Middle Formative B period date range of A.D. 985–1040. The *horno* was located

Figure 60. Southeast view of abutting structures, Features 6098 and 7461.

Figure 61. South view of Feature 379, the largest structure at the Mescal Wash site.

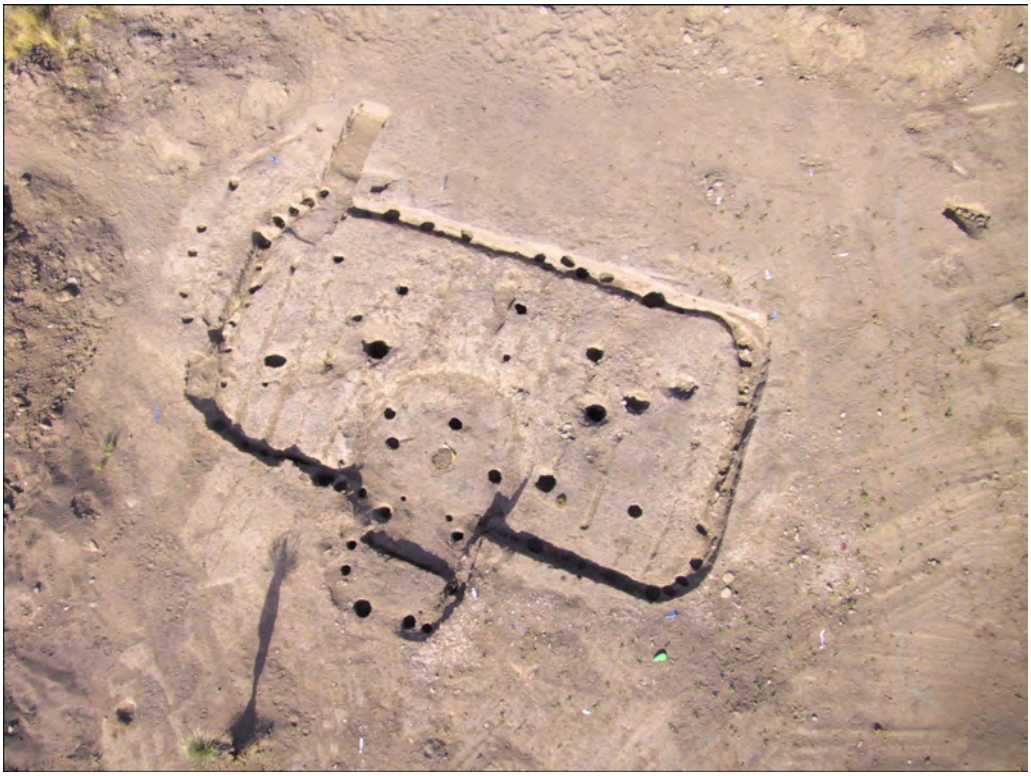

Figure 62. Aerial view of Feature 379, facing southwest.

in the middle of the dense concentration of extramural pits encountered in Stripping Unit 5190 (see Figure 57). Feature 7153 was only one of three thermal pits identified within this space. The size of this feature, as well as its location within the middle of this concentration of pit features surrounded by house structures, suggests that it may have been used for communal cooking. The presence of a single *horno* near the middle of this concentration of extramural pits seems to indicate that this open space may have been shared by several families or households living in the houses encircling this concentration. The presence of monocotyledon parts in the feature fill suggests that the cooking included members of the agave family.

Basic Roasting Pits

Eleven basic (non-rock-lined and non-bell-shaped) roasting pits were excavated in Locus C (see Table 19). Three of the 11 were discovered in Phase 1 and all were excavated in Phase 2. Only 2 (Features 6114 and 9487) were completely excavated; the remaining 9 were partially excavated. Although these features were used for thermal purposes (specifically, the subsurface cooking of various foods), like other extramural pit types, fill characteristics (see below) suggest that they were often used secondarily for refuse disposal.

These roasting pits were circular to ovate in plan view and, for the most part, basin shaped in cross section. One pit, Feature 922, was conical in cross section. Orifice diameters ranged from 0.36 to 1.70 m, and pit depth ranged from 0.13 to 0.67 m. The distribution of pit volumes may indicate two size classes. Smaller roasting pits (n = 7) ranged in volume from 0.02 to 0.06 m^3. Most of the larger roasting pits (n = 4) had volumes between approximately 0.10 and 0.20 m^3; one had a volume of approximately 0.5 m^3. In comparing these volumes, we should keep in mind that, especially in the east half of the locus, the site surface had been disturbed significantly by road-construction activities and that the tops of many features may have been lost.

All 11 pits exhibited strong evidence of their past thermal use: oxidized walls and either charcoal or ash or both in their fills. Charcoal was present in all 11 features, and ash was also present in 2 pits. With the exception of Feature 6099, FCR was present in the fill of all 10 pits that had charcoal in their fills. Burned daub and cobbles were also present in several of the pits; blackened cobbles were conspicuous on the base of Feature 6099 (Figure 64). The burned materials present in the fills of these features may have been deposited as a result of the primary thermal uses of these features, as secondary refuse disposal after the features ceased to be used, or as some combination of these two processes. We strongly suspect that it was the latter of these processes that was responsible for the deposition of the contents of these pits. In general, as based on ethnographic and ethnobotanical accounts, roasting pits were intentionally filled with the cooking debris after use. Thus, although not *everything* encountered in feature fill can be equated with feature use, most probably was part of the cooking process.

Table 19. Extramural Thermal Pits Excavated in Locus C

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
					Firepits							
1141	outside	A.D. 950–1150	part	western 1/2, 1/4-inch screened	1 × 0.9 × 0.08	circular	basin	0.04	0.02	none	none	Oxidized pit base.
6145	5195	not dated	part	AM sample	0.84 × 0.84 × 0.1	circular	basin	0.01	0.01	none	none	Oxidized pit base.
6146	5195	A.D. 950–1150	part	southern 1/2, 1 level, 1/4-inch screened	0.9 × 0.9 × 0.25	circular	basin	0.07	0.04	none	none	Trash filled; oxidized walls and base.
10,380	5195	2000 B.C.–A.D. 1015	part	southern 1/2, 1 level, 1/4-inch screened	0.78 × 0.76 × 0.25	circular	basin	0.08	0.04	none	none	Predates Feature 6129 (pit structure;) pit walls oxidized.
					Hearth							
7195	5190	not dated	all	whole, 1 level, all fill collected for flotation	0.18 × 0.18 × 0.1	circular	basin	0.002	0.002	11,175	11,176	Caliche plastered; ash filled.
					Horno							
7153	5190	A.D. 985–1040	part	western 1/2, 1 level, 1/4-inch screened	1.66 × 1.25 × 1.00	ovate	cylindrical	1.63	0.814	11,167	none	3–10-cm-thick greenish gray rind.
					Basic Roasting Pits							
278	5188	not dated	part	western 1/2, 1 level, 1/4-inch screened	1.5 × 1.3 × 0.17	circular	basin	0.173	0.087	10,412	none	Many FCR and charcoal fragments.
917	5189	not dated	part	eastern 1/2, 1 level, 1/4-inch screened	1.7 × 1.3 × 0.32	circular	basin	0.456	0.228	10,478	none	Many FCR and charcoal fragments.
922	5189	not dated	part	western 1/2, 1 level, 1/4-inch screened	1.12 × 0.75 × 0.67	ovate	conical	0.147	0.074	10,481	none	Many FCR and charcoal fragments; vitrified soil collected.
6040	5188	not dated	part	western 1/2, 1 level, 1/4-inch screened	0.84 × 0.7 × 0.35	ovate	basin	0.108	0.054	10,408	none	Many FCR and charcoal fragments.
6085	5190	not dated	part	southern 1/2, 1 level, 1/4-inch screened	0.85 × 0.6 × 0.24	ovate	basin	0.064	0.032	11,219	none	Many FCR and charcoal fragments.
6099	5190	not dated	part	western 1/2, 1 level, 1/4-inch screened	0.46 × 0.46 × 0.23	circular	basin	0.025	0.013	11,199	none	Many charcoal fragments and ash pockets.

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
6114	5195	A.D. 950–1150	all	southern 1/2 and northern 1/2, 1 level, 1/4-inch screened	0.49 × 0.46 × 0.15	circular	basin	0.018	0.018	none	none	Many FCR and charcoal fragments.
6135	5195	A.D. 950–1150	part	western 1/2, 1 level, 1/4-inch screened	0.9 × 0.8 × 0.16	ovate	basin	0.06	0.03	11,233	none	Trash filled; many FCR and charcoal fragments.
6136	5195	2000 B.C.–A.D. 1150	part	western 1/2, 1 level, all fill collected for flotation	0.61 × 0.56 × 0.13	ovate	basin	0.023	0.012	11,235	none	Many FCR and charcoal fragments; ash pockets.
7163	5190	not dated	part	southern 1/2, 1 level, 1/4-inch screened	0.58 × 0.48 × 0.17	ovate	basin	0.025	0.012	11,159	none	Many charcoal and FCR fragments.
9487	5190	A.D. 935–1450	all	whole, 1 level, unscreened, artifacts collected	0.36 × 0.36 × 0.32	circular	basin	0.024	0.024	none	none	Many FCR and charcoal fragments.
					Rock-lined Roasting Pits							
6187	7012	not dated	part	western 1/2, 1 level, 1/4-inch screened	1.16 × 1.10 × 0.50	circular	basin	0.33	0.17	10,464	none	Trash filled; many FCR and charcoal fragments.
9409	5195	A.D. 935–1450	all	whole, 1 level, 1/4-inch-screened	0.72 × 0.71 × 0.23	circular	basin	0.06	0.06	none	none	Intruded into Feature 995 (pit structure); many FCR and charcoal fragments.

Key: AM = archaeomagnetic; FCR = fire-cracked rock; PD = Provenience Designation; SU = Stripping Unit

[a] Length × width × depth

Figure 63. Photograph of Feature 7153, a partially excavated *horno*.

Figure 64. Photograph of Feature 6099, a partially excavated roasting pit.

Ceramics (present in 10 of 11 pits) and flaked stone artifacts (present in 9 of 11 pits) were commonly encountered in feature fill. The frequency of ceramics ranged from 1 to 42, and the frequency of flaked stone artifacts ranged from 1 to 18 pieces. Ground stone artifacts (present in 7 of 11 pits) and faunal remains (present in 2 of 11 pits) were less common. Ground stone generally was present in low frequencies (ranging from 1 to 9 pieces when present). Only 3 pieces of faunal bone were recovered, suggesting that meat preparation was not a common use of these pits. Macrobotanical flotation samples were analyzed from 9 of the 11 pits (see Table 19). Monocotyledon parts were found in 4 of the pits (Features 278, 922, 6085, and 6099), suggesting that members of the agave family were being processed. Maize was found in 3 of the pits (Features 917, 922, and 6099).

Dates could be determined for 4 of the 11 features. Features 6114 and 6135 yielded Middle Formative B period date ranges of A.D. 950–1150, based on the presence of datable ceramics in their fills. The dates of the other 2 pits were based on their stratigraphic associations with other features. Feature 9487 dated to sometime between A.D. 935 and 1450, given that it was intrusive into the fill of Feature 7461, a structure dated to A.D. 935–1040 on the basis of ceramics and an AM sample (see discussion above). Feature 6136 was intruded by Feature 6135 and therefore has been assigned a date range of 2000 B.C.–A.D. 1150.

The roasting pits were distributed fairly evenly across the excavated portions of the locus. It is worth noting that only 1 of the 11 roasting pits (Feature 7163) was excavated in the dense cluster of more than 80 extramural pits located between the two house groups in Stripping Units 5190 and 5195. The feature abutted the *horno* (Feature 7153), and, together with a firepit (Feature 7195), these were the only thermal features excavated in this pit cluster, which further included 3 thermal pits that remained unexcavated. Clearly, cooking was preferably kept separate from the activities associated with the nonthermal pits.

Rock-Lined Roasting Pits

Two rock-lined roasting pits, Features 6187 and 9409, were excavated in Locus C, the first one partially and the second completely (see Table 19). Feature 6187 was located in Stripping Unit 7012, just north of the unexcavated structure (Feature 609) (see Figure 56). Feature 9409 was located in Stripping Unit 5195 and intruded into the fill of one of the paired structures (Feature 995) (see Figure 57). Both pits were roughly circular in plan view, basin shaped in cross section, and lined with rock slabs, cobbles, and ground stone artifacts (Figures 65 and 66). Rock lining formed a regular, formal pattern, with smaller rocks interspersed between the larger ones, so as to completely cover the walls and base (Figure 67). The walls of both pits were oxidized and their fills contained charcoal, ash, cobbles, and FCR. Feature 6187 and 9409 were approximately 1.10 m and 0.70 m in diameter, respectively. Feature 6187 had an excavated volume of 0.33 m^3; Feature 9409 had a much smaller estimated volume of 0.06 m^3.

The fill of both pits contained ceramics and flaked stone artifacts. In addition, 13 pieces of ground stone were recovered from Feature 6187 and 1 piece of faunal bone from Feature 9409. The density of artifacts in the fill of the two pits was roughly the same, about 215 artifacts per m^3. One macrobotanical sample from Feature 6187 was analyzed. Monocotyledon parts and maize were found among the charred plant fragments.

Only one of the two rock-lined roasting pits could be dated, though not very precisely. Feature 9409 dates to sometime between A.D. 935 and 1450, on the basis of its being intrusive into Feature 995, which dated to A.D. 935–1100. With only two excavated examples of rock-lined roasting pits present in Locus C, it is not possible to discuss in any detail the spatial patterning of this feature type. However, both pits were located approximately the same distance from the rear walls of houses: Feature 6187 was located approximately 3–4 m behind the rear wall of Feature 609 in Stripping Unit 7012 (see Figure 56), and Feature 9409 was located approximately 3–4 m behind Feature 6129 in Stripping Unit 5195 (see Figure 57). However, much more excavation and many more analyses will have to be conducted to understand what specific spatial relationship or relationships, if any, existed between this feature type and others.

Firepits

Four firepits (Features 1141, 6145, 6146, and 10380) were excavated in Locus C (see Table 19). All were discovered and partially excavated during Phase 2. As is true for most thermal pits in Locus C, none of the excavated firepits was located in the large cluster of extramural, nonthermal pits between the two house groups in the east half of the locus (see Figures 56 and 57). As is true for other pit types, fill characteristics of these features suggest that they were often used secondarily for refuse disposal. The firepits were circular in plan view and were basin shaped in cross section (Figures 68 and 69). They ranged from 0.76 to 1.00 m in diameter, from 0.08 to 0.25 m in depth, and from 0.01 to 0.08 m^3 in volume. All four exhibited red-oxidized walls attesting to their past primary thermal uses, but their fills contained smaller amounts of burned material than those noted for the roasting pits. Charcoal was present in two of the features, and ash was present in the other two. Some cobbles and FCR were present in three of the four pits. Feature 6145 contained no artifacts or faunal remains. The other three firepits contained relatively small amounts of ceramics, flaked stone, ground stone, and faunal remains in varying frequencies and proportions. Total recovered artifact frequencies for these three ranged from 8 to 84 artifacts. The firepit with the highest frequency of artifacts, Feature 6146, also contained 6 faunal remains, 1 of which was a piece of shell.

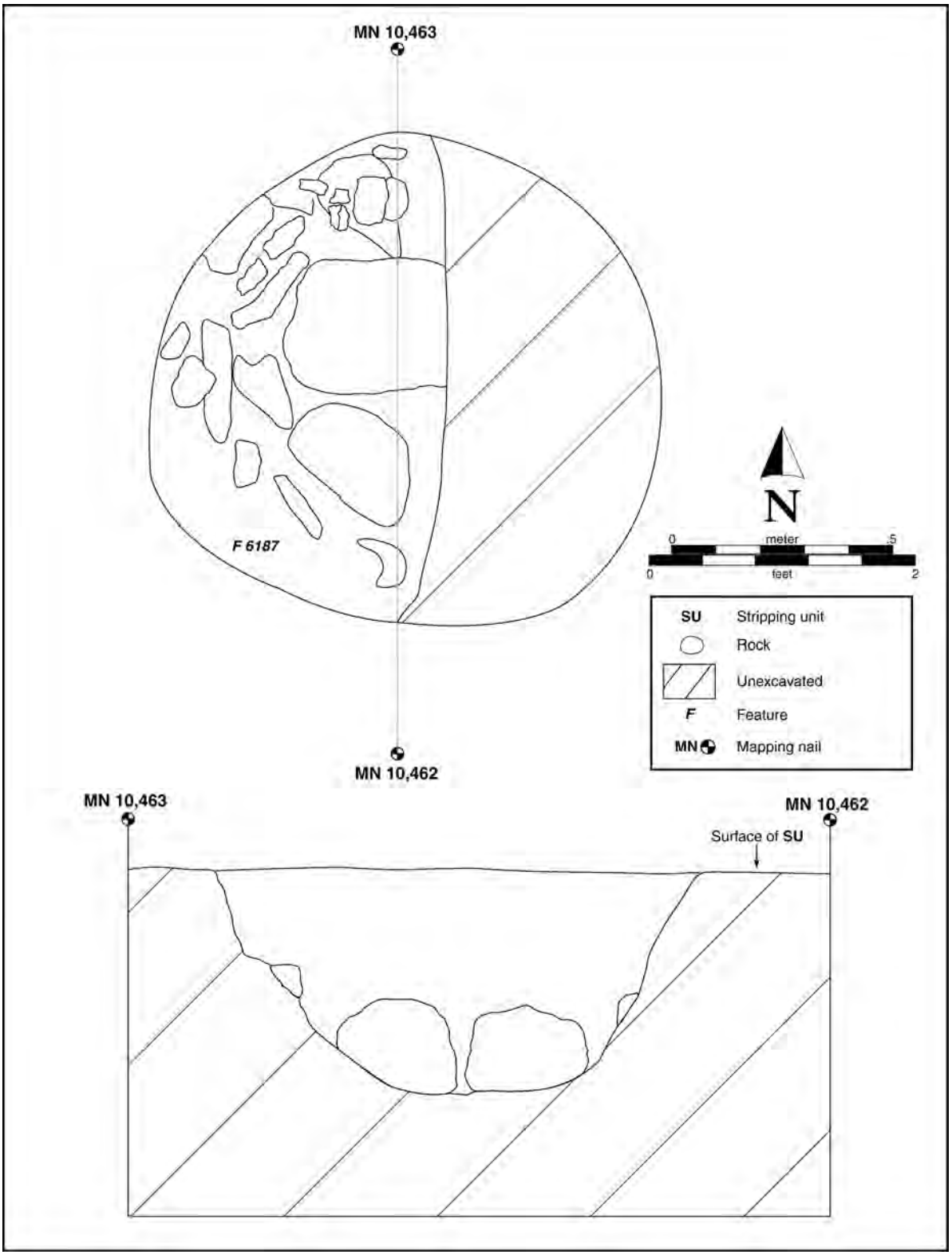

Figure 65. Plan map and profile of Feature 6187, a rock-lined roasting pit.

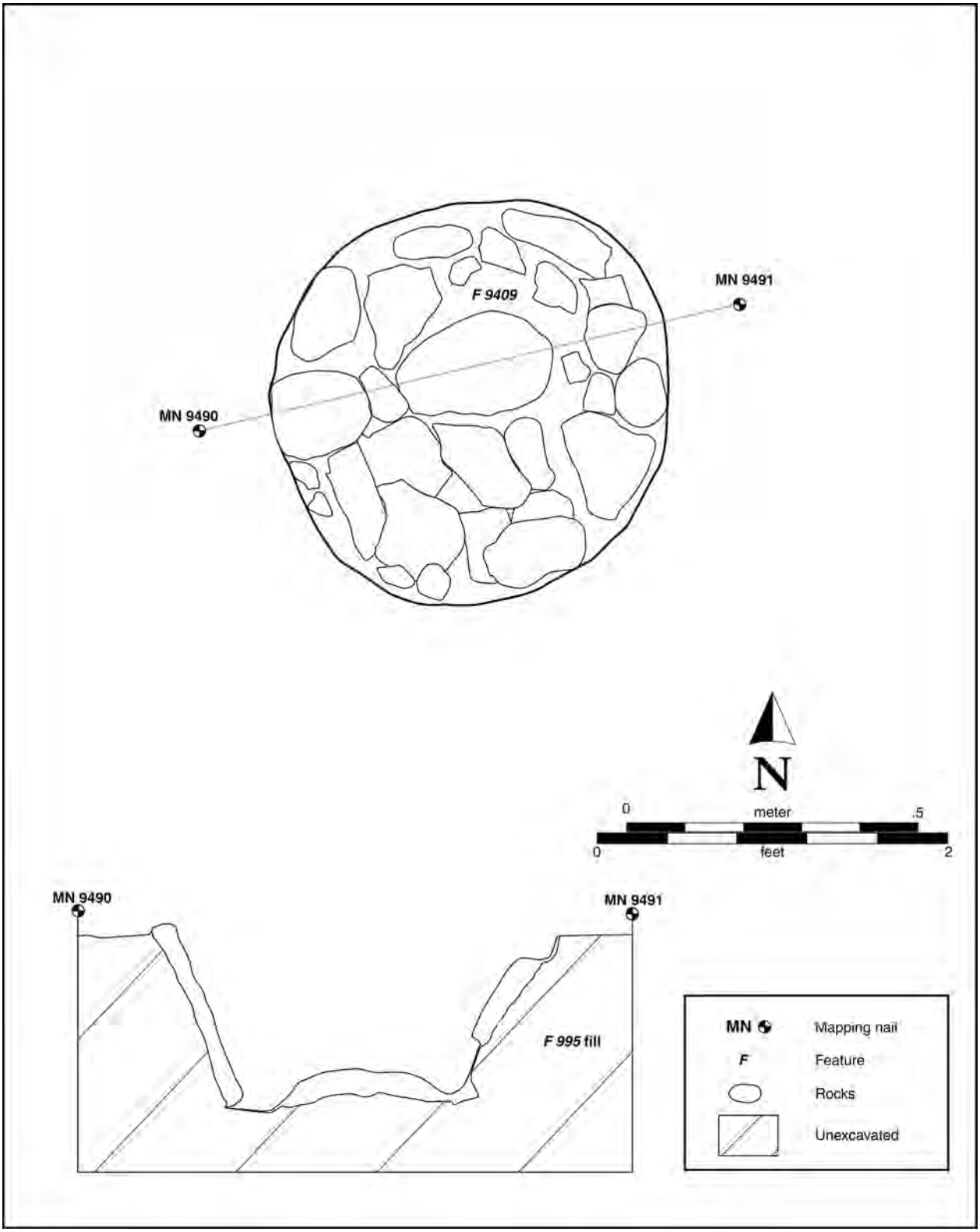

Figure 66. Plan map and cross section of Feature 9409, a rock-lined roasting pit.

Figure 67. Photograph of Feature 9409, a rock-lined roasting pit.

We were able to assign dates to three of the features. Two of the three, Features 1141 and 6146, were dated to A.D. 950–1150, or the Middle Formative B period, on the basis of the presence of datable ceramics in their fills. A Rincon-style projectile point, also dating to the Middle Formative B period, was recovered from Feature 6146. Feature 10380 was dated to 2000 B.C.–A.D. 1015, on the basis of its stratigraphic association with Feature 6129; Feature 10380 predates Feature 6129, a structure in which a posthole cut through the center of the firepit (see Figures 57 and 69).

Hearth

Feature 7195 was an extramural hearth exposed and fully excavated in the southeast quarter of Stripping Unit 5190 during Phase 2 (see Figure 57 and Table 19). It was well plastered and similar to intramural hearths encountered at the site (Figure 70). It is possible that Feature 7195 was originally located inside a ramada structure that was not recognized during excavations. Alternatively, the hearth may have belonged to a house that was destroyed. Feature 7195 was circular in plan view and basin shaped in cross section, measuring 0.18 m in diameter and 0.10 m deep (Figure 71). Its plastered walls were oxidized and its fill contained charcoal and ash. Three small pieces of ground stone were present in the fill, but no other artifacts were encountered. The macrobotanical sample taken from this feature was analyzed. The only charred materials in the sample were Fabaceae wood and tissue of an unknown plant. No datable materials were recovered from the hearth.

Nonthermal Pits

Pits (General)

Thirty-seven pits were assigned to this general category, which excludes the nonthermal bell-shaped pits (Table 20). This total includes Feature 896, which was discovered and excavated during Phase 1; all others were identified and excavated in Phase 2. Nine of these pits were completely and 28 partially excavated. This category of pits encompasses much variability in feature size, plan and cross-sectional shape, and fill contents. As a group, it appears that these features probably were used initially for various functions, including food storage, food processing, and, perhaps, caching of miscellaneous items.

Nonthermal non-bell-shaped pits were generally ovate (n = 16) or circular (n = 19) in plan view. Most of these features were basin shaped in cross section (n = 22), although cylindrical (n = 8), conical (n = 4), irregular (n = 2), and indeterminate (n = 1) profiles were also documented. These features also tended to be relatively small, with feature diameters ranging between 0.18 and 1.80 m. Estimated pit volumes for this feature type ranged from 0.002 to 0.2 m^3.

No oxidation was present in the walls or the fills of these features, although charcoal and ash were present

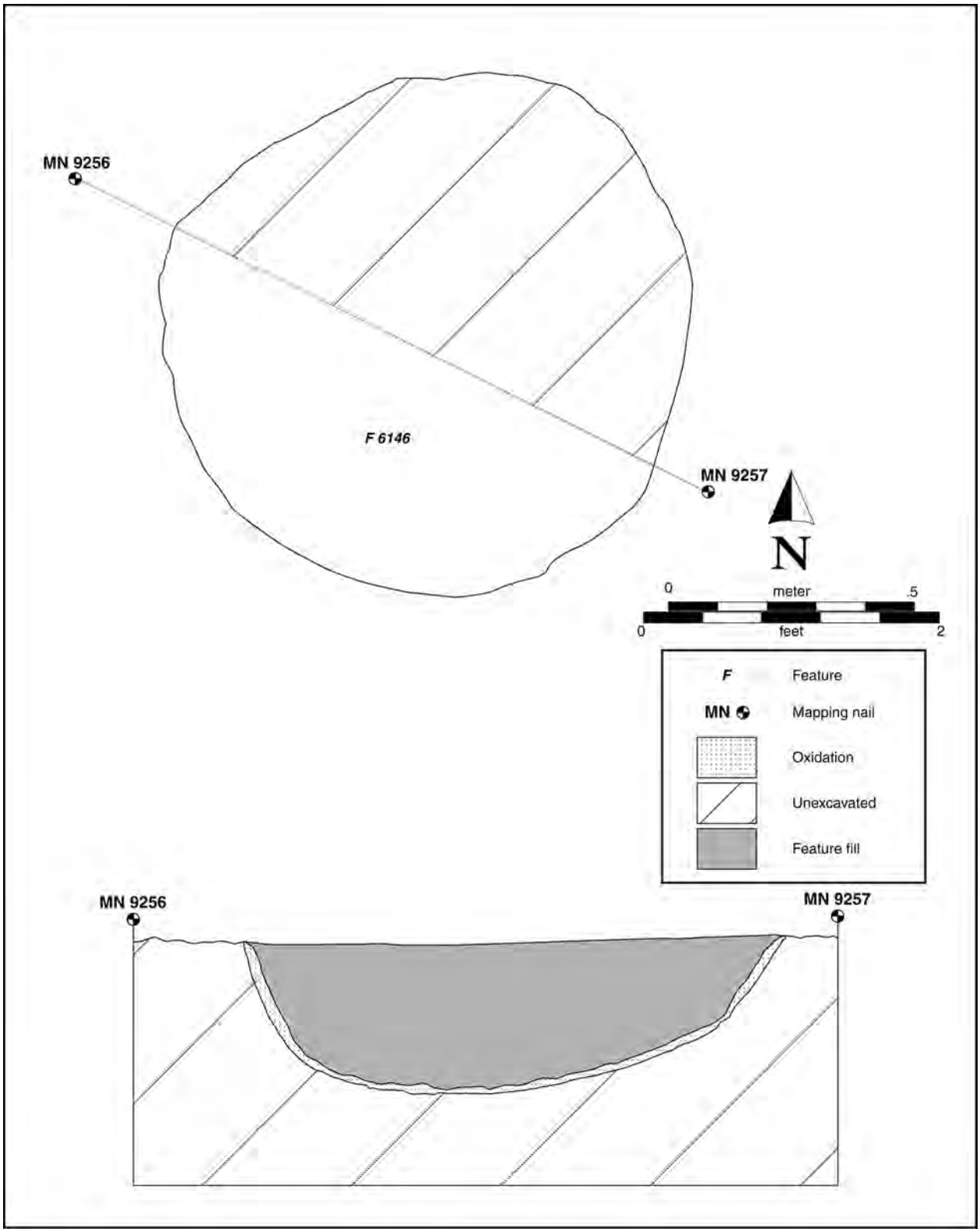

Figure 68. Plan map and profile of Feature 6146, a firepit.

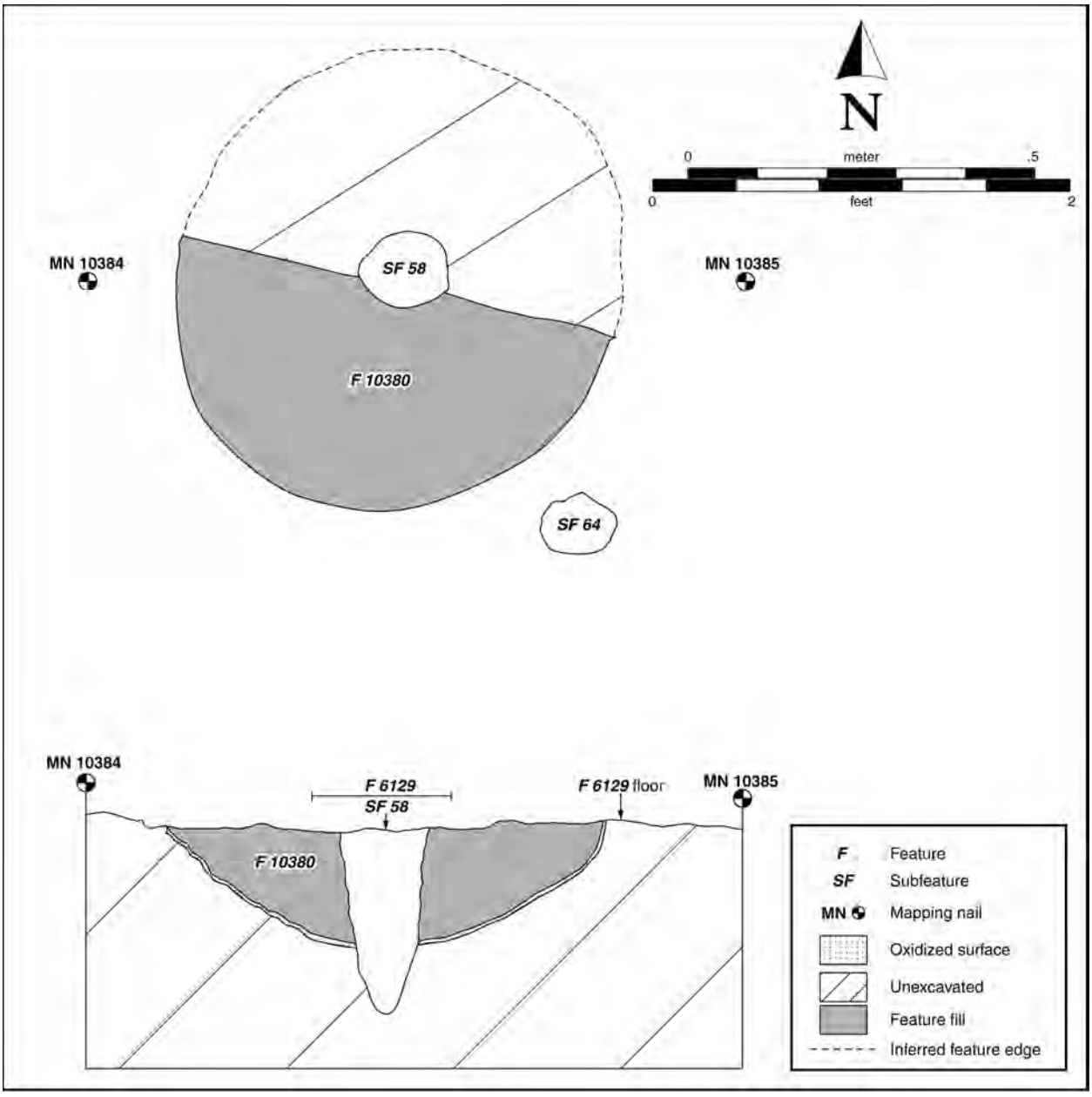

Figure 69. Plan map and profile of Feature 10380, a firepit found underneath Feature 6129, a structure.

in the fill of many. Charcoal was present in 21 (57 percent) of the pits, and ash was present in 32 (86 percent) of the features. Artifacts and faunal remains were relatively common in these features; only 6 (16 percent) contained no artifacts or faunal remains. The frequency of artifacts and/or faunal material present in the remaining 31 features ranged from 1 to 104. Both the frequencies and the varieties of artifacts and faunal remains present in the fills of these pits, as well as the ubiquity of ash and charcoal, suggest to us that many (if not all) pits were filled with refuse after their initial uses. Collected macrobotanical samples were analyzed from 5 features (Features 6021, 6028, 6140, 7180, and 7182), and one pollen sample was analyzed from Feature 6143. Charred plant materials in the flotation samples probably were deposited in the features after their original use and are not indicative of the initial use of the pits.

Dates could be determined for only six pits. Features 10343 and 10367 were located within the fill of Feature 276, which places their dates of use and/or infilling to sometime between A.D. 650 and 1450. Feature 6148 contained a Rincon-style projectile point in its fill, placing its infilling in the interval A.D. 950–1150. The original excavation of Feature 6149 partially intruded into Feature 6148, thus placing the use and abandonment of this feature to the interval A.D. 950–1450. Finally, on the basis of ceramic

Figure 70. Photograph of Feature 7195, an extramural plastered hearth.

cross-dating, the use and infilling of Features 6162 and 7194 date to the interval A.D. 950–1150. Thus, of the six excavated nonthermal non-bell-shaped pits in Locus C, four have date ranges that largely indicate a Middle Formative B period of use. The remaining two postdate A.D. 650, as determined from their stratigraphic associations.

Because their selection for excavation was based in part on their spatial association with other feature types of interest (e.g., thermal pits and structures), the spatial distribution of the excavated pits of this type does not reflect their past use. However, if we look at the combined distribution of all nonthermal extramural pits in the locus (including the numerous unexcavated examples, colored green in Figures 56 and 57), distinct clustering is evident. Foremost is the 20-by-15-m cluster of more than 80 features between the two house groups in the east half of the locus. Significant is the paucity of thermal pits in this cluster. Smaller clusters are associated with structures in Stripping Units 5188 and 7012 in the west half of Locus C.

Bell-Shaped Pits

Eight extramural nonthermal bell-shaped pits were excavated in Locus C (Table 21). All eight were discovered and excavated during Phase 2. Three were fully excavated and five were partially excavated. We believe these pits were used primarily for storage. Fill characteristics (see below) suggest secondary use for refuse disposal.

Five of the eight were circular in plan view, two were ovate, and one had an irregular orifice. Orifice diameters ranged from 0.34 to 1 m, and pit depths were between 0.20 and 0.66 m. The average volume of the pits was 0.17 m^3, with a range from 0.02 to 0.33 m^3. Thus, they varied considerably in capacity but were not particularly large.

No oxidation was present in the walls or fills of the features, although ash and charcoal were commonly present. Seven of the eight features contained ash in their fills, and six of the eight contained charcoal. In addition, cobbles were present in four features and FCR in one. The frequencies of artifacts and faunal remains in nonthermal bell-shaped pits ranged from 7 to 216. Ceramics and flaked stone artifacts were present in relatively high frequencies in all eight pits, faunal remains were present in seven of eight pits, and ground stone was present in two. Both the frequencies and the varieties of artifacts and faunal remains present in the fills of these pits, as well as the ubiquity of ash and charcoal, suggest to us that many nonthermal bell-shaped pits were filled with refuse following their initial uses. Collected macrobotanical samples were analyzed from two features (Features 6026 and 6171), but no pollen samples were analyzed. The flotation samples contained a variety of charred plant materials, which, probably all part of secondary deposits, say little about the features' storage function. Feature 6026 was one of the few features at the site from which an unequivocal agave part (a stem fragment) was collected.

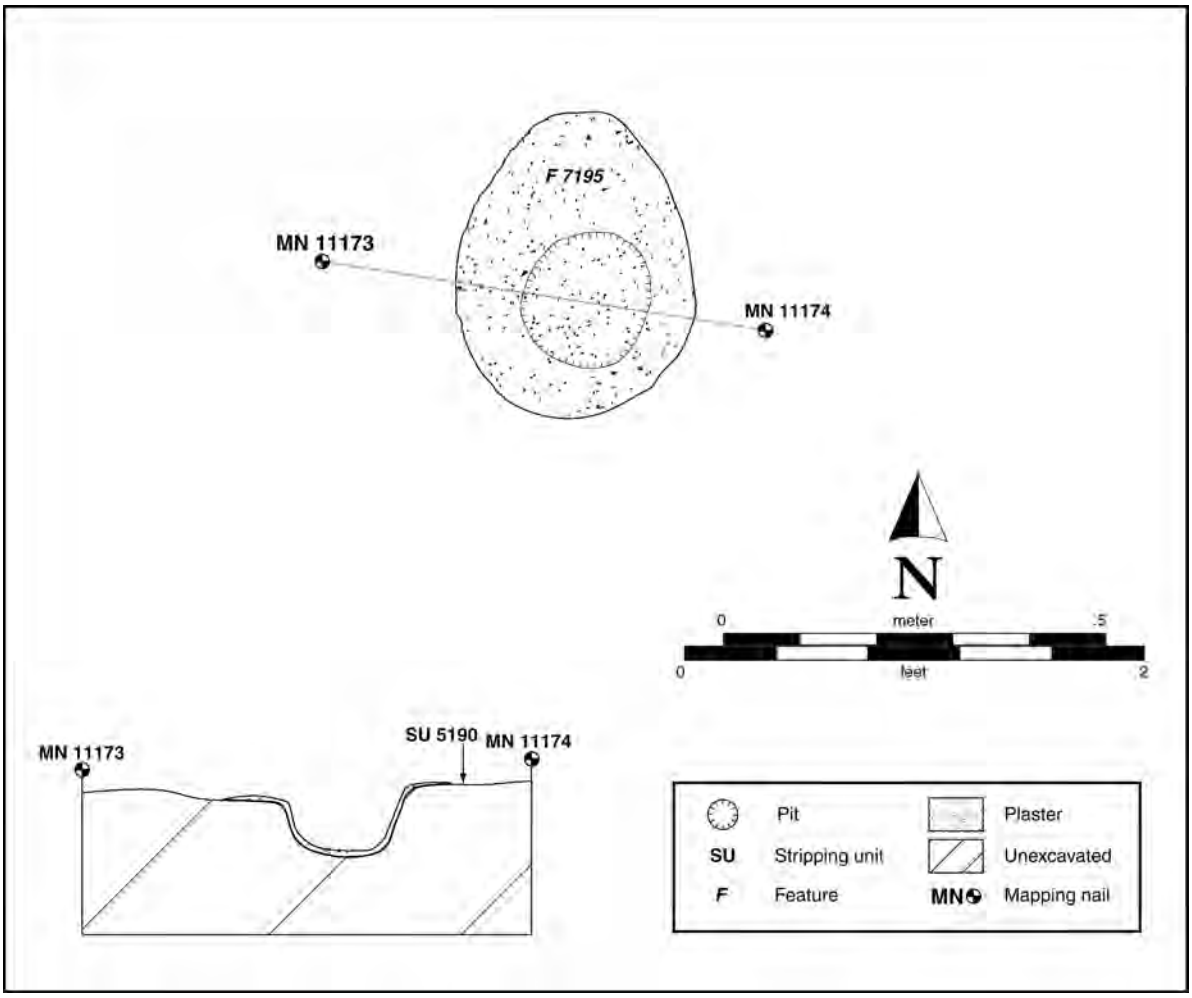

Figure 71. Plan map and cross section of Feature 7195.

Five nonthermal bell-shaped pits could be dated. Ceramics and a single Empire-style projectile point recovered from the fill of Feature 6171 place its infilling to sometime within the interval A.D. 700–1450. Ceramics recovered from the fills of Features 7196, 9327, and 9328 place their infilling to sometime within the interval A.D. 950–1150. We also know that Features 9327 and 9328, which were originally excavated into the fill of the Feature 6098 structure (see Figure 57), must postdate that house and thus would also postdate its occupation, A.D. 935–1015 (see discussion above). Feature 10133 was originally excavated into the fill of the Feature 7461 structure, which dates to A.D. 935–1040 (see discussion above). Thus, Feature 10133 postdates Feature 7461 and dates to sometime between A.D. 935 and 1450. In summary, as a group, the nonthermal bell-shaped pits appear to suggest a Middle Formative B period of construction, use, and infilling. The date ranges of three of the five dated nonthermal bell-shaped pits coincide with the date ranges of the Middle Formative B period. The remaining two pits have wider date ranges that encompass Middle Formative B.

Although six of the features were encountered in Stripping Unit 5190 (see Figure 57), we do not see evidence of any clear clustering or associations with specific features or feature types. Overall, the excavated features are distributed fairly evenly across the locus.

Middens

Feature 999

Feature 999 was a large sheet midden found underlying ACs 9 and 10 (see Figure 54) during Phase 1 in the western portion of the locus. The midden covered an area of about 6,369 m² and was approximately 0.2–0.3 m in thickness. The El Paso Natural Gas Line ROW cut a 25–30-m-wide, east–west swath through its center. The midden was explored and sampled with four test pits. Test Pit 911, a 1-by-1-m unit, was excavated in Phase 1 (see Figure 55). Three 2-by-2-m units (Test Pits 1117, 1120, and 1134) were then excavated in Phase 2 (see Figure 56 and 57). Midden fill was an artifact-laden, unconsolidated light-brown silty

Table 20. Extramural Nonthermal Pits (General) Excavated in Locus C

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Plan	Cross Section	Dimensions[a] (m)	Approximate Pit Volume (m^3)	Approx Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)
896	outside	not dated	part	southern 1/2, 1 level, 1/4-inch screened	ovate	conical	0.57 × 0.30 × 0.12	0.005	0.003	none	none
6020	5188	not dated	part	northern 1/2, 1 level, 1/4-inch screened	irregular (ovate)	cylindrical	0.70 × 0.46 × 0.44	0.110	0.056	none	none
6021	5188	not dated	all	1 level, 1/4-inch screened	ovate	cylindrical	0.45 × 0.27 × 0.37	0.035	0.018	10,477	none
6027	5188	not dated	part	western 1/2, 1 level, all fill collected as flotation and pollen	ovate	basin	0.54 × 0.46 × 0.08	0.010	0.005	none	none
6028	5188	not dated	part	southern 1/2, 1 level, 1/4-inch screened	ovate	cylindrical	0.36 × 0.22 × 0.22	0.014	0.007	10,408	none
6081	5190	not dated	part	southern 1/2, 1 level, 1/4-inch screened	ovate	basin	0.94 × 0.82 × 0.25	0.101	0.500	none	none
6086	5190	not dated	part	southern 1/2, 1 level, 1/4-inch screened	circular	basin	0.65 × 0.63 × 0.17	0.036	0.018	none	none
6088	5190	not dated	part	western 1/2, 1 level, 1/4-inch screened	ovate	irregular (basin)	0.75 × 0.48 × 0.24	0.045	0.023	none	none
6101	5190	not dated	all	1 level, all fill collected as flotation and pollen	circular	basin	0.37 × 0.34 × 0.14	0.009	0.009	none	none
6107	5190	not dated	all	1 level, all fill collected as flotation and pollen	circular	basin	0.18 × 0.16 × 0.11	0.002	0.002	none	none
6108	5190	not dated	all	1 level, all fill collected as flotation and pollen	circular	cylindrical	0.20 × 0.19 × 0.19	0.006	0.006	none	none

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Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Plan	Cross Section	Dimensions[a] (m)	Approximate Pit Volume (m^3)	Approx Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)
6109	5190	not dated	part	southern 1/2, 1 level, all fill collected as flotation and pollen	circular	basin	0.54 × 0.48 × 0.08	0.011	0.005	none	none
6134	5195	not dated	part	northern 1/2, 1 level, 1/4-inch screened	ovate	cylindrical	0.60 × 0.55 × 0.31	0.080	0.040	none	none
6140	5195	not dated	part	southern 1/2, 1 level, all fill collected as flotation and pollen	circular	basin	0.38 × 0.34 × 0.09	0.006	0.003	8494	none
6141	5195	not dated	part	southern 1/2, 1 level, all fill collected as flotation and pollen	ovate	basin	0.54 × 0.44 × 0.07	0.009	0.004	none	none
6142	5195	not dated	part	southern 1/2, 1 level, all fill collected as flotation and pollen	ovate	basin	0.37 × 0.34 × 0.24	0.016	0.008	none	none
6143	5195	not dated	all	1 level, 1/4-inch screened	circular	cylindrical	0.46 × 0.42 × 0.19	0.029	0.014	none	9249, 9250
6144	5195	not dated	part	southern 1/2, 1 level, 1/4-inch screened	circular	conical	0.45 × 0.38 × 0.29	0.013	0.006	none	none
6147	5195	not dated	part	southern 1/2, 1 level, 1/4-inch screened	circular	basin	0.87 × 0.85 × 0.07	0.027	0.014	none	none
6148	5195	A.D. 950–1150	all	1 level, all fill collected as flotation and pollen	ovate	basin	0.46 × 0.40 × 0.09	0.009	0.004	none	none
6149	5195	A.D. 950–1450	part	northern 1/2, 1 level, all fill collected as flotation and pollen	circular	basin	0.86 × 0.86 × 0.07	0.006	0.003	none	none

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Plan	Cross Section	Dimensions[a] (m)	Approximate Pit Volume (m^3)	Approx Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)
6150	5195	not dated	part	southern 1/2, 1 level, all fill collected as flotation and pollen	circular	basin	0.29 × 0.25 × 0.04	0.002	0.001	none	none
6151	5195	not dated	part	western 1/2, 1 level, 1/4-inch screened	circular	cylindrical	0.58 × 0.56 × 0.21	0.054	0.027	none	none
6152	5195	not dated	part	western 1/2, 1 level, 1/4-inch screened	circular	basin	0.80 × 0.80 × 0.28	0.075	0.038	none	none
6162	7013	A.D. 950–1150	all	grab-sampled	sub-rectangular	basin	0.68 × 0.60 × 0.10	0.101	0.101	none	none
6182	7012	not dated	part	northern 1/2, 1 level, 1/4-inch screened	ovate	irregular (basin)	1.80 × 0.72 × 0.29	0.197	0.098	none	none
7145	5190	not dated	part	northern 1/2, 1 level, 1/4-inch screened	circular	basin	0.80 × 0.77 × 0.13	0.042	0.021	none	none
7168	5190	not dated	part	western 1/2, 1 level, all fill collected as flotation and pollen	circular	conical	0.44 × 0.40 × 0.20	0.009	0.005	none	none
7171	5190	not dated	part	unknown	ovate	unknown	0.72 × ? × ?	unknown	unknown	none	none
7174	5190	not dated	part	northern 1/2, 1 level, 1/4-inch screened	ovate	basin	0.58 × 0.46 × 0.27	0.038	0.019	none	none
7180	5190	not dated	part	southern 1/2, 1 level, 1/4-inch screened	circular	cylindrical	0.87 × 0.85 × 0.34	0.197	0.099	10,485	none
7182	5190	not dated	part	western 1/2, 1 level, 1/4-inch screened	circular	conical	0.76 × 0.76 × 0.29	0.044	0.022	10,489	none
7187	5190	not dated	part	eastern 1/2, 1 level, 1/4-inch screened	ovate	basin	0.60 × 0.54 × 0.17	0.029	0.014	none	none
7193	519	not dated	part	western 1/2, 1 level, 1/4-inch screened	circular	basin	0.87 × 0.84 × 0.21	0.080	0.040	none	none
7194	5190	A.D. 950–1150	part	eastern 1/2, 1 level, 1/4-inch screened	ovate	basin	0.70 × 0.58 × 0.28	0.059	0.030	none	none

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Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Plan	Cross Section	Dimensions[a] (m)	Approximate Pit Volume (m^3)	Approx Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)
10 343	5188	A.D. 650–1450	all	1 level, 1/4-inch screened	circular	basin	0.81 × 0.81 × 0.12	0.017	0.017	none	none
10 367	5188	A.D. 650–1450	all	1 level, 1/4-inch screened	ovate	basin	0.90 × 0.80 × 0.26	0.098	0.098	none	none

Key: PD = Provenience Designation; SU = Stripping Unit
[a] Length × width × depth

Table 21. Extramural Nonthermal Bell-Shaped Pits Excavated in Locus C

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
6026	5188	not dated	part	western 1/2, 1 level, 1/4-inch screened	0.96 × 0.43 × 0.54	circular	nd	nd	10,447	none	Trash filled.
6087	5190	not dated	part	southern 1/2, 1 level, 1/4-inch screened	0.8 × 0.76 × 0.4	ovate	0.20	0.10	none	none	Trash filled.
6171	7012	A.D. 700–1450	part	southern 1/2, 1 level, 1/4-inch screened	1 × 0.93 × 0.66	circular	0.33	0.24	10,468	none	Trash filled.
7196	5190	A.D. 950–1150	part	eastern 1/2, 1 level, 1/4-inch screened	0.82 × 0.75 × 0.27	circular	0.03	0.02	none	none	Trash filled.
7205	5190	not dated	part	eastern 1/2, 1 level, 1/4-inch screened	0.73 × 0.68 × 0.42	ovate	0.31	0.15	none	none	Trash filled.
9327	5190	A.D. 950–1150	all	whole, 1 level, 1/4-inch screened	0.35 × 0.34 × 0.31	circular	0.02	0.02	none	none	Intruded into floor of Feature 6098 pit structure; trash filled.
9328	5190	A.D. 950–1150	all	whole, 1 level, 1/4-inch screened	0.61 × 0.61 × 0.21	circular	0.25	0.25	none	none	Intruded into Feature 6098 pit structure; trash filled.
10,133	5190	A.D. 935–1450	all	whole, 1 level, 1/4-inch screened	0.63 × 0.35 × 0.20	irregular	0.18	0.18	none	none	Intruded into Feature 7461 pit structure.

Key: nd = no data; PD = Provenience Designation; SU = Stripping Unit
[a] Length width × depth

loam that became more compact with depth. Gravels and cobbles were present in Test Pit 1120. The density of artifacts varied across the test pits: Test Pit 1120 had lower artifact densities than Test Pits 911, 1117, and 1134. In all test pits, the upper 5 cm or so appeared to have been disturbed, probably in association with road-building activities. Bioturbation disturbance was also noted in several of the test pits. Interestingly, a complete desert tortoise (*Gopherus agassizii*) skeleton was recovered from Test Pit 1117. In Test Pit 1134, the Feature 1141 firepit was encountered. The dates of manufacture of painted ceramics recovered from the test pits range primarily from the Middle Formative A period to the Middle Formative B period.

Feature 6091

Feature 6091 was a midden deposit discovered during Phase 2 work in the eastern part of the locus. It was exposed over a 54-m² area in the northwest corner of Stripping Unit 5190 (see Figure 57). The feature was not formally sampled and remained unexcavated. A large thermal pit, Feature 7146, was exposed in the northern portion of the midden and also was not excavated. Feature 7335, a secondary pit cremation, intruded into the thermal pit. This cremation was completely excavated (see Appendix C and the discussion below). During the mechanical excavation of Stripping Unit 5190, five fragmented vessels were recovered from the Feature 6091 midden as it was being exposed. These vessel fragments consist of portions of a plain ware scoop, a Dragoon Red-on-brown bowl, and three Rincon Red-on-brown bowls. These vessel fragments suggest a Middle Formative B period (approximately A.D. 950–1150) date for this midden.

The origin of the midden deposit and its relationships to other features are not well understood. Given its close proximity to the Feature 999 midden deposit (see Figure 57), Feature 6091 may have been an extension of this larger midden deposit. However, Feature 999 was basically a mantle overlying most of the features exposed in Stripping Units 5188, 5189, and 7012. Furthermore, much smaller Feature 6091 was recorded at the same elevation as the other features exposed in Stripping Unit 5190. This seems to suggest that the two middens were not part of the same, larger deposit. It is more likely that Feature 6091 consisted of materials from the cleanout of Feature 7146, the unexcavated large thermal pit.

Canid Burial

Feature 7330 was a shallow, basin-shaped pit containing the unburned and weathered, fragmentary remains of a medium to large adult canine (see Figure 57). This was the only prehistoric canid burial found during SRI's investigations at Mescal Wash; three canid burials were discovered by WestLand during their 2008 investigations at the site (two in Locus A and one in Locus G) (Buckles et al. 2010:52).

Feature 7330 was found in Stripping Unit 5190 during Phase 2 and was completely excavated. The feature was assigned a date of A.D. 935–1450 based on its stratigraphic association with Feature 6098, a structure. Feature 6098 was assigned a date of A.D. 935–1015, and the canid burial pit cut through the southwest corner of the house-pit wall. Thus, Feature 7330 postdated the abandonment of Feature 6098.

The bones were articulated, showing that the animal had been laid on its left side in an extended position with the head facing west and the front paws flexed (Figure 72). The skeleton appeared to be complete, although most bones splintered upon excavation. Portions of the cranium, mandible, neck, a few ribs, right and left forelimbs, and right and left hind limbs could be identified. A scapula was noted but crumbled after excavation. Fragments of unidentified flat bone may represent vertebrae. The mandibular and maxillary molars were heavily worn, but the maxillary premolar was much less so. No osteoarthritis was noted, but few articular surfaces were intact. The teeth, radius, and ulna were comparable in size to modern coyote (*Canis latrans*) reference specimens, but the fragmentary nature of the cranium and mandible prevented definite species identification.

Human Burials

In total, 18 human burials were excavated in Locus C (see Appendix C:Table C.1). For detailed descriptions of these burials, the reader is referred to Appendix C. Two of the burials (Features 320 and 333, both secondary cremations) were discovered and removed (partially in the care of Feature 333) during Phase 1. Feature 333 was contained in an urn; Feature 320 was contained in a pit with an inverted ceramic cauldron placed over the remains.

The other 16 burials—8 inhumations and 8 cremations—were found and removed during Phase 2. Burial layout could be determined for 6 of the inhumations: 3 individuals were extended, 3 were semiflexed, 4 were interred in a supine position, 1 was on the left side, and 1 was in a seated position. Only 1 individual was discovered with grave goods. Feature 7170 included shell beads and a shell ring or pendant. The other 7 inhumations did not include any associated artifacts.

The eight cremations removed during Phase 2 consisted of six pit cremations and two urn cremations. Each was a secondary deposit of cremated remains. Only one of the pit cremations included burial artifacts other than the cremation vessels. Feature 10138, a secondary pit cremation, included several shell beads. All other artifacts associated with the Locus C cremations—including those recovered during Phase 1—consisted of the various urns and vessels capping or containing the cremated remains.

Six of the interred individuals could be assigned to a particular sex: three were males and three were females. Twelve adult individuals and five juveniles (ranging in age from neonatal to early adolescent) were identified; the

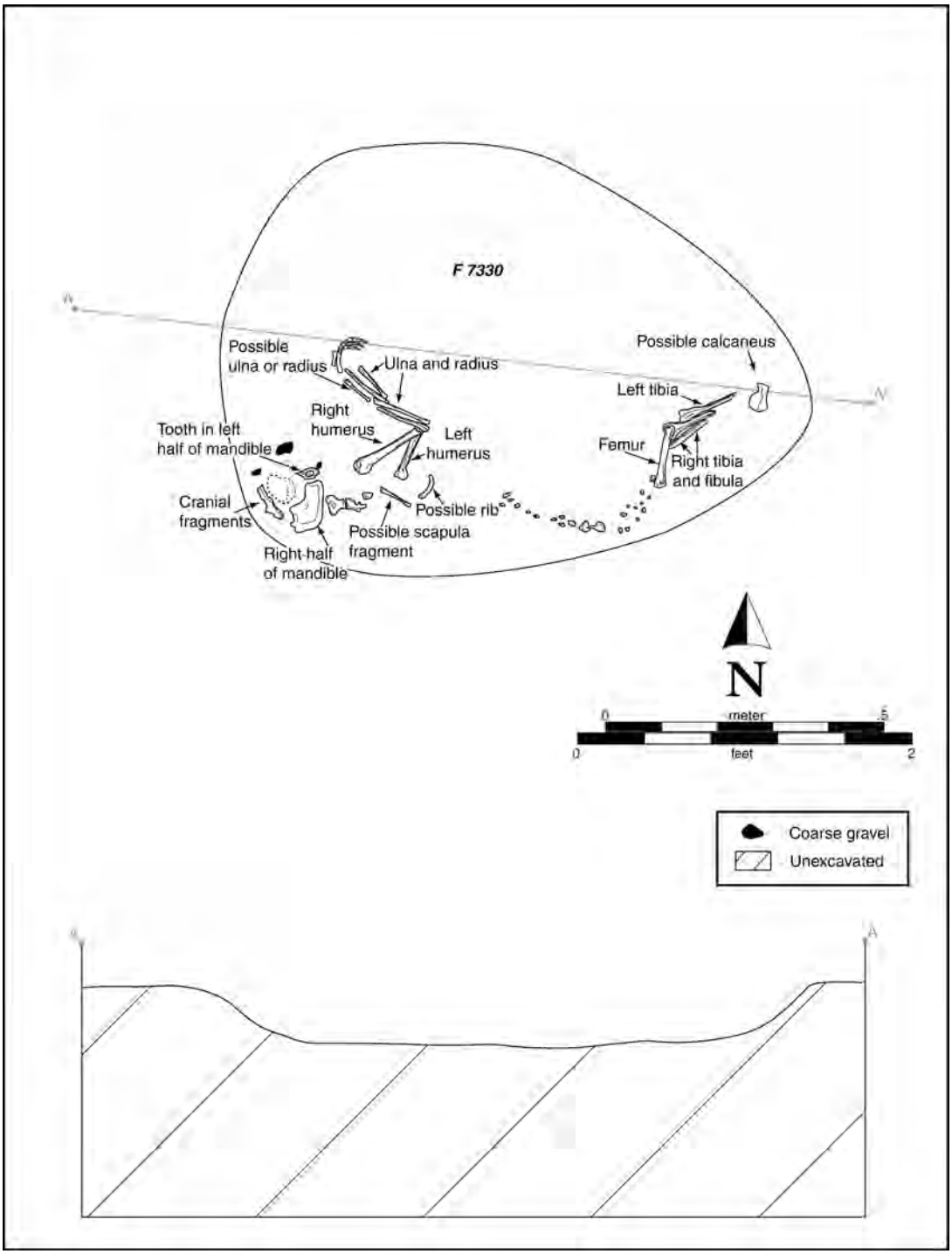

Figure 72. Plan map and cross section of Feature 7330, a canid burial

remaining individuals provided no adequate skeletal characteristics to establish the extent of maturation.

Summary

Locus C had a longer and more complex occupational history than Locus A. Fifteen structures and 84 extramural features (45 nonthermal pits, 19 thermal pits, 1 midden, 1 animal burial, and 18 human burials) were excavated in the locus. The main occupation was in the northeast quadrant of the locus, which was the farthest from Locus D. Here we excavated all 13 structures identified in the approximately 25-by-45-m area encompassed by Stripping Units 5190 and 5195 (see Figure 57). The group of 13 structures appears to represent a discrete habitation core. The house group consisted of an east half and a west half, separated by a dense cluster of more than 80 extramural nonthermal pits and only a few thermal pits. This part of the locus appears to have been a small settlement best characterized as a small hamlet, much like Locus A. All structures were houses-in-pits, with the exception of Feature 235, a shallow pit structure that retained part of an adobe wall. Three structures (Features 379, 995, and 6098) had recessed-hearth areas. Each of two house pairs (Features 995/6129 and 6098/7461) represented a house-in-a-pit built partially over the back side of a recessed-hearth house shortly after its abandonment. The structures generally had north-facing entryways, with the exception of Feature 379, which faced east, and Feature 6139, which faced south. Chronometric and archaeological data suggest that this east part of the locus was occupied primarily during the Middle Formative B period. Stratigraphic superpositioning of the structures indicates that this area was utilized repeatedly during this time, and the AM data recovered from the recessed-hearth-style pit structures and the more traditional pit structures reveal that these architectural styles were coeval and did not form temporally discrete replacement groups. Most notably, these data indicate that the large, east-facing, recessed-hearth-style structure (Feature 379, which probably had a communal function) was one of the last structures abandoned in this area. Feature 235, which had been built over the south side of Feature 379, appeared to date to the Late Formative period.

Two structures (Features 276 and 6010) excavated in the western end of the locus (both in Stripping Unit 5188) (see Figure 56) represented an earlier occupation. Both structures were houses-in-pits dated to the Middle Formative A period on the basis of time-sensitive ceramics in the fill. Given the proximity of this area to Locus D, which dated predominantly to the same period, we believe that this western area of Locus C was part of the same occupation as Locus D.

The total material culture assemblage recovered from Locus C indicated that the area was utilized intermittently for nearly 2,000 years. Most (83 percent) of the painted-ceramic collection from this locus has a combined production range of A.D. 900–1150, although the full inventory spans most of the Middle and Late Formative. Roughly 6 percent of the collection has production date ranges that predate A.D. 950, although most of these artifacts were recovered from near the modern surface or from midden excavations. Likewise, a handful of sherds recovered from the fill of structures had production date ranges that postdate A.D. 1150. It is likely that these later sherds are related to the single Late Formative–aged surface structure at the locus (Feature 235), which was dated to A.D. 1160–1450 through AM data. The remaining nine archaeomagnetically dated structures appear to have been occupied and abandoned between roughly A.D. 800 and 1100, although most probably were abandoned between A.D. 900 and 1050. Altogether, the 44 dated features from Locus C span the interval between A.D. 650 and 1450, and most of these date to the Middle Formative B period (ca. A.D. 900–1150). This confirms that the area was utilized most intensively during the latter half of the Middle Formative period.

CHAPTER 7

Locus D

Rein Vanderpot, Christopher P. Garraty, Heather J. Miljour, and Stacey Lengyel

Locus D was the largest locus of the Mescal Wash site, evidenced its greatest time depth, and contained the largest number and greatest variability of the site's features and artifacts. The locus measured 332 m east–west by 213 m north–south, with a total area of 43,557 m^2. Locus elevation ranged from 1,098 to 1,111 m (3,601–3,643 feet) AMSL. The locus was located to the south of I-10 and the Marsh Station access ramp, and more than half of the locus was within the project area on land consisting of the UPRR and ADOT ROWs (see Figure 3). The railroad traversed the center of the locus along a northwest–southeast axis; most of SRI's excavations were conducted on the north side of the tracks (Figure 73).

A wealth of data on chronology, domestic organization, and subsistence, among other themes, has been provided by the excavation of 73 structures and 165 extramural features in Locus D. Occupation of the locus began at least as early as the beginning of the Late Archaic period and continued for nearly 3,000 years. Small pole-and-brush structures and bell-shaped pits dating to the Late Archaic or Early Formative periods were excavated in the western part of the locus. Most of the structures and other features in Locus D were used during the Middle Formative period (ca. A.D. 750–1150), particularly the Middle Formative A period (ca. A.D. 750–950), when the settlement may have functioned as a village. The locus appears to have been unused or only lightly used during the subsequent Late Formative A period (ca. A.D. 1150–1300). However, the presence of four adobe-walled structures (with abundant Roosevelt Red Ware ceramics) indicates a small occupation component in Locus D dating to the Late Formative B period (ca. A.D. 1300–1450).

Setting and Disturbances

Together with Locus C, Locus D formed the southwest quadrant of the Mescal Wash site. The locus extended from Cienega Creek to I-10 and Marsh Station Road to the north, and to the east to a disturbed area separating Loci D and E (see Figure 19). The slightly undulating local terrace sloped down gently toward the southwest, dropping steeply into the creek channel just below the site boundary. Vegetation was similar to the desertscrub described for the previously discussed loci; mesquite trees were largely confined to linear areas along the roads and railroad, and in particular on the slope above Cienega Creek, where the trees formed a thick *bosque* (Figure 74).

The most obvious disturbance in Locus D was caused by the railroad construction, which had gouged a 15- to 20-m-wide east–west swath through the center of the locus (Figure 75). As evidenced by a backhoe trench excavated perpendicular to the south side of the tracks, cut-and-fill activities probably have destroyed or obscured any preexisting features situated within or adjacent to this swath. Another large disturbance was encountered in the north-central part of the locus, just north of a concentration of multiple primary cremations, where stripping excavations exposed a large depression (initially designated Feature 3708) containing modern materials, which was interpreted as an ADOT borrow pit. SRI archaeologists subsequently used the borrow pit area to dispose of backfill generated during the Phase 2 stripping excavations.

Additional disturbances included two frequently used dirt roads (one in the ADOT ROW and another in the railroad ROW), several pull-off areas adjacent to the two roads, another deep borrow pit at the east end of the locus, and several rows of fences defining the railroad ROW. As in Locus C, a thick layer of imported sandy gravel covered the northeastern edge of the locus. The paved road to the northeast was raised above the surface and probably capped any subsurface cultural deposits located between Loci C and D. Some features in this area may have been partially truncated, but the presence of several intact prehistoric rock features on the

Figure 73. Aerial overview of the excavated portion of Locus D, also showing Locus C in the upper left corner of the photograph; view to the east.

Figure 74. Aerial overview of part of the Mescal Wash site, showing Locus D and Cienega Creek in the upper half of the photograph; view to the southwest.

Figure 75. Union Pacific Railroad tracks cutting through Locus D; view to the southeast. The Whetstone Mountains appear in the background.

surface indicated that overall cut-and-fill disturbance was not as severe as that observed in the eastern portion of Locus C.

Phase 1

Locus Definition and Surface Features

Locus D was located in the southwest portion of the site, outside the traffic interchange as it existed at the time of fieldwork (Figure 76). To the northeast, the locus was separated by a road (the Marsh Station access ramp) from Locus C, with which Locus D probably was connected. To the east was Locus E, from which it was separated by a narrow area in which no surface artifacts or subsurface features have been detected. To the north of Locus D, within about 50 m from I-10, the observed surface artifact density declined to zero, thus defining the northern boundary. The southern boundary of the locus was defined by the terrace edge that overlooks the floodplain of Cienega Creek.

Fieldwork in Locus D started with a pedestrian reconnaissance of the project area to identify site and locus boundaries (see below), artifact concentrations, and visible surface features. During the pedestrian survey, the locus was defined as a large area with generally very dense surface artifact concentrations. The densest concentration of surface artifacts was visible in the area to the north of the railroad track, where much of the ground surface had been stained to a dark-gray color, suggesting a probable sheet midden (designated Feature 11,352 during Phase 2; see below). Figure 76 shows the locations of the Phase 1 collection units, point-located artifacts, and surface features in Locus D. The large and amorphous midden area (Feature 11,352) was not yet mapped in Phase 1 and, therefore, is not shown in this figure.

Three surface features (Features 164, 173, and 884) were identified in the midden area within the ADI and three others (Features 1002, 1003, and 1004) on the west side of the railroad outside the ADI. Features 164 and 173 were both small rock clusters that probably were modern. Feature 884, exposed in the surface of the road located within the railroad ROW, appeared to be a roasting pit. Features 1002 and 1004 were large rock clusters that were prehistoric, as determined from associated artifacts. Feature 1002 measured 4.8 m north–south by 4.9 m east–west for a total area of 18 m^2. Feature 1004 measured 2.3 m in diameter, with a total area of 4 m^2. Moderate amounts of FCR among the stones suggest that the rock clusters were the deflated tops of large roasting pits. Feature 1003 was interpreted as a trash mound. The

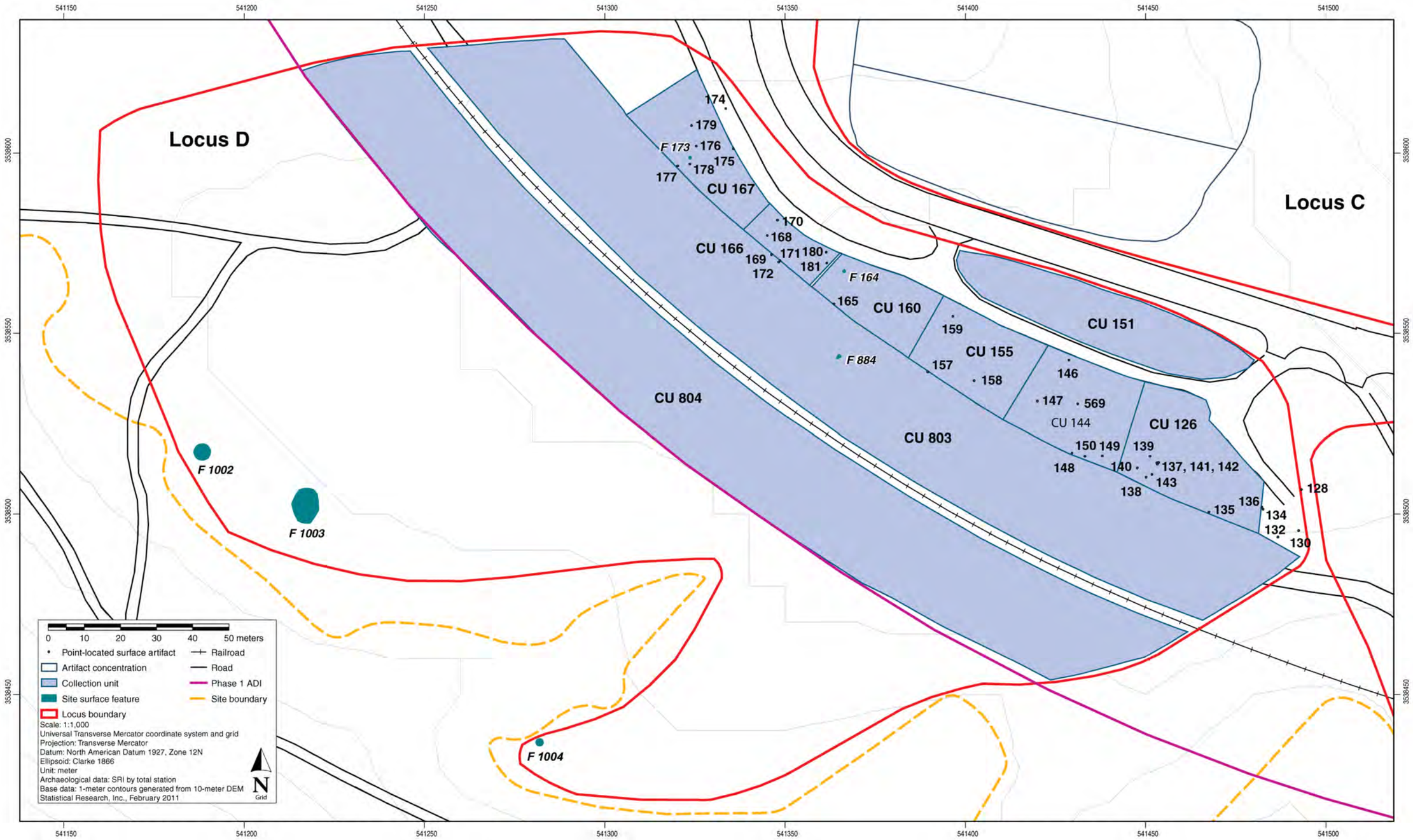

Figure 76. Map of Locus D, showing features recorded on the modern surface, collection units, and point-located artifacts (Phase 1).

feature measured 10 m north–south by 7.7 m east–west, with a total area of 59 m^2. Artifacts and rubble were piled about 0.3 m high.

Surface Collections

Locus D contained denser surface scatters than any of the other loci at Mescal Wash. As noted, surface artifacts were especially dense within and along the dirt road flanking the north side of the railroad (the area largely encompassed by Feature 11,352, a vast sheet midden). Use wear and down-cutting along the road alignment had exposed the midden deposits in this part of the locus. Surface artifacts were collected throughout the locus during Phase 1 by means of nine mostly contiguous collection units of varying size. Layout of the collection units was guided by encircling roads (Collection Unit 151), trench layouts (Collection Units 126, 144, 155, 160, 166, and 167), and areas located to the east and west of the railroad ROW (Collection Units 803 and 804). In sum, 384 ceramic, flaked stone, ground stone, shell, and faunal-bone artifacts were recovered from the collection units. These were all the artifacts encountered within the collection units. In addition, 36 lithic and shell artifacts were point-located both within and outside these collection units (see Figure 76). The point-located artifacts included a San Pedro projectile point, a drill base, a piece of a *Glycymeris* shell bracelet, several netherstone and mano fragments, and a number of other lithic artifacts. In total, 420 artifacts were recovered from the surface of Locus D. These consisted of 146 ceramic sherds, 272 lithics (240 flaked stone, 10 ground stone, and 22 unanalyzed lithic artifacts), 1 fragment of worked shell, and 1 piece of burned faunal bone.

Excavations

Phase 1 testing in Locus D began with the excavation of 20 backhoe trenches, totaling 196 m in length (Figure 77). These trenches were laid out either roughly perpendicular to or parallel with the railroad alignment. Next, the backhoe excavated 6 stripping units between or alongside the trench locations (see Figure 77), which, all together, exposed a subsurface area of 295 m^2. The advantage of the shallow, approximately 2.4-m-wide stripping units was that they did not cut through features as trenches did but instead exposed their tops in plan view, thereby preserving most of the features (Figure 78). In total, 18 features were investigated in Locus D during Phase 1, including 4 human burials, 10 thermal pits, and 4 nonthermal pits. One hundred three additional extramural features were recorded but were not excavated or tested in this phase of the project.

The Phase 1 subsurface testing within the ADOT and railroad ROWs in Locus D exposed eight individual pit houses and five superimposed or overlapping pit houses (see Figure 77). These structures were either exposed in plan during stripping or exposed in profile during trench excavations. No structures were excavated in Locus D during Phase 1, but SRI fully excavated four of these Phase 1 structures (Features 437, 438, 472, and 784) and partially excavated eight others (Features 448, 492, 565, 575, 726, 825, 833, and 834) during Phase 2 (see below). In addition, a pit (Feature 4441), originally identified as Feature 765 during Phase 1, was partially excavated during Phase 2 and found also to be a structure.

During Phase 1, we also exposed 17 extramural thermal features (14 roasting pits, 2 bell-shaped roasting pits, and 1 rock-lined roasting pit), 78 pits of miscellaneous or indeterminate function, 4 human burials, 4 rock clusters, 2 postholes, and 1 trash mound (see Figure 77). Nine of the Phase 1 thermal features were fully excavated (Features 415, 432, 446, 457, 491, 493, 494, 572, and 771) and 1 (Feature 714) partially excavated during Phase 1. Feature 714, which was exposed in a trench profile, had samples collected from the profile without further excavation. Four extramural nonthermal pits also were investigated during Phase 1 (Features 411, 578, 723, and 724): 3 were partially excavated (bisected), and 1 was fully excavated. One Phase 1 pit (Feature 5982, previously Feature 597) was partially excavated during Phase 2.

Particularly noteworthy is that two bell-shaped roasting pits (Features 714 and 771) and two bell-shaped nonthermal pits (Features 411 and 724) appeared to date to the Late Archaic period on the basis of associated artifacts. These early pits were found clustered within the railroad ROW on the north side of the tracks (see below). In addition, four human burials (Features 336, 464, 561, and 562) were completely excavated during Phase 1, including three secondary pit cremations and one inhumation (see Appendix C).

Also recorded was a possible ball court (designated Feature 799), an enigmatic feature exposed on the south side of the railroad. In the trench profiles, the feature was visible as a large flat area with a seemingly well-prepared surface and a slightly upcurving border, which gave it a dish shape. Feature fill showed up as a dark lens with artifacts. More than 12 m of the feature was exposed in the profile of Trench 648; in Trench 813, which was cut perpendicular to Trench 648, more than 7 m was exposed in profile (see Figure 77). Further investigation during Phase 2, however, determined the feature to be noncultural (a natural depression).

Phase 2

Most of SRI's Phase 2 work at Mescal Wash focused on Locus D. The revised ADI developed for Phase 2 encompassed much of the locus but excluded a small portion near the eastern edge that was contained within the Phase 1 ADI, an area where few artifacts and no features had been

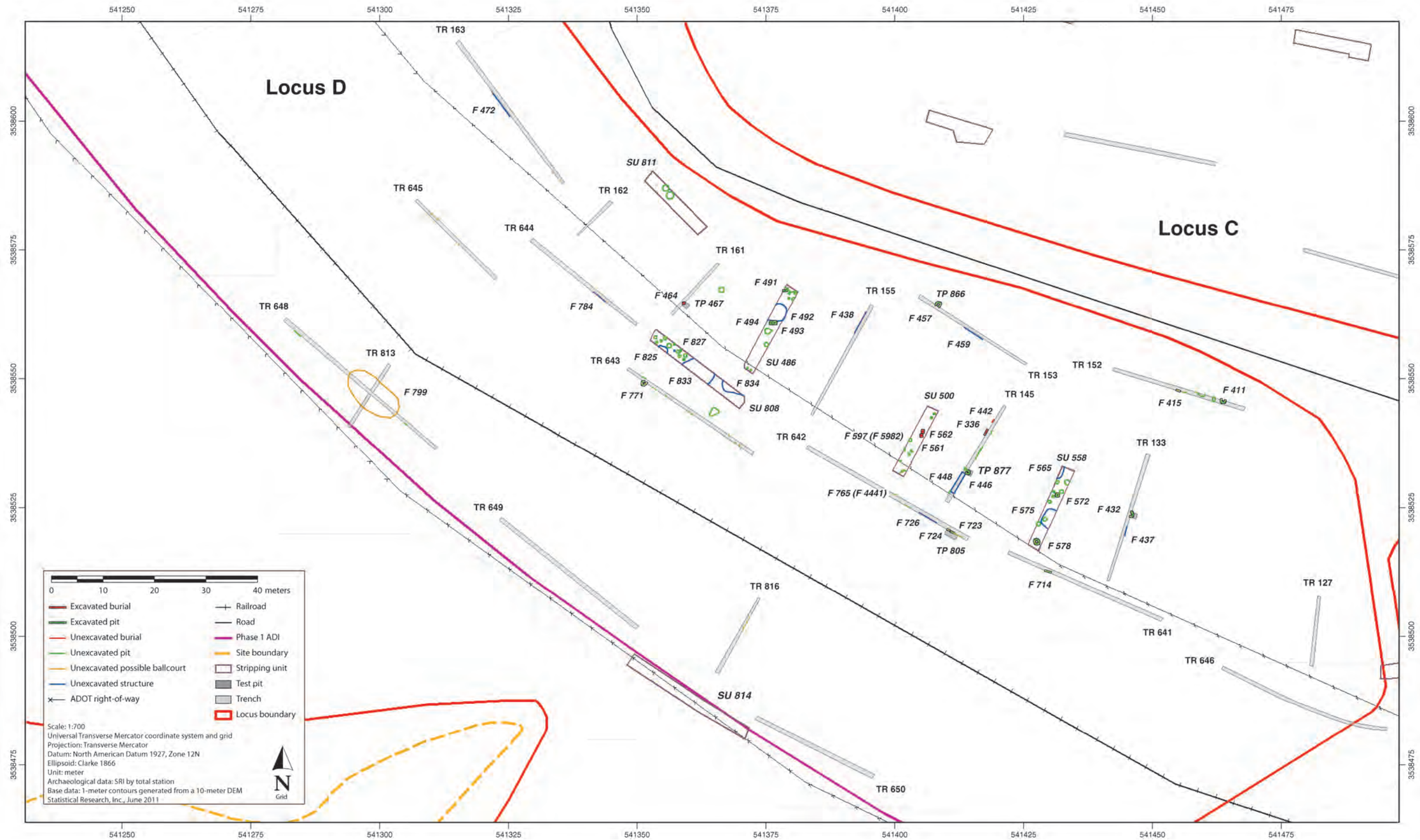

Figure 77. Map of Locus D, showing Phase 1 excavation units and discovered subsurface features.

Figure 78. Photograph of backhoe excavating narrow and shallow stripping units in Locus D during Phase 1.

previously recorded. The portion of Locus D contained within the Phase 2 ADI covered an area of 24,237 m^2, or 56 percent of the entire locus area.

Excavation Units

All of the Phase 2 excavation units are depicted in Figure 79. Figure 80 is an overview map of Locus D, depicting the Phase 2 excavations and features. All features exposed and excavated during Phase 2 in Locus D, as well as the Phase 2 excavation units, are shown in Figures 81–86, a series of six maps covering the entire locus in detail. On these maps, only the excavated features are numbered. The SRI team first excavated a pair of test pits (Test Pits 1166 [a 2-by-2-m unit] and 1534 [a 1-by-2-m unit]) to sample the spatially extensive midden (Feature 11,352) visible on the surface and in the Phase 1 trench profiles in the central and east portion of the locus. They then employed a backhoe to excavate stripping units of various sizes and shapes, which exposed a subsurface area totaling 8,909 m^2. As a result, nearly the entirety of Locus D on the north side of the railroad was stripped in one very large unit composed of contiguous stripping units (see Figures 80–84). This large stripped area was divided into roughly 20-by-20-m subunits to facilitate data recording and collection management. The area south of the railroad was stripped in six disconnected blocks (see Figures 85 and 86), the largest of which lay over the area where the possible ball court was recorded during Phase 1. This large block (Stripping Unit 1757) was subdivided into five smaller stripping units. Stripping in Locus D occurred over

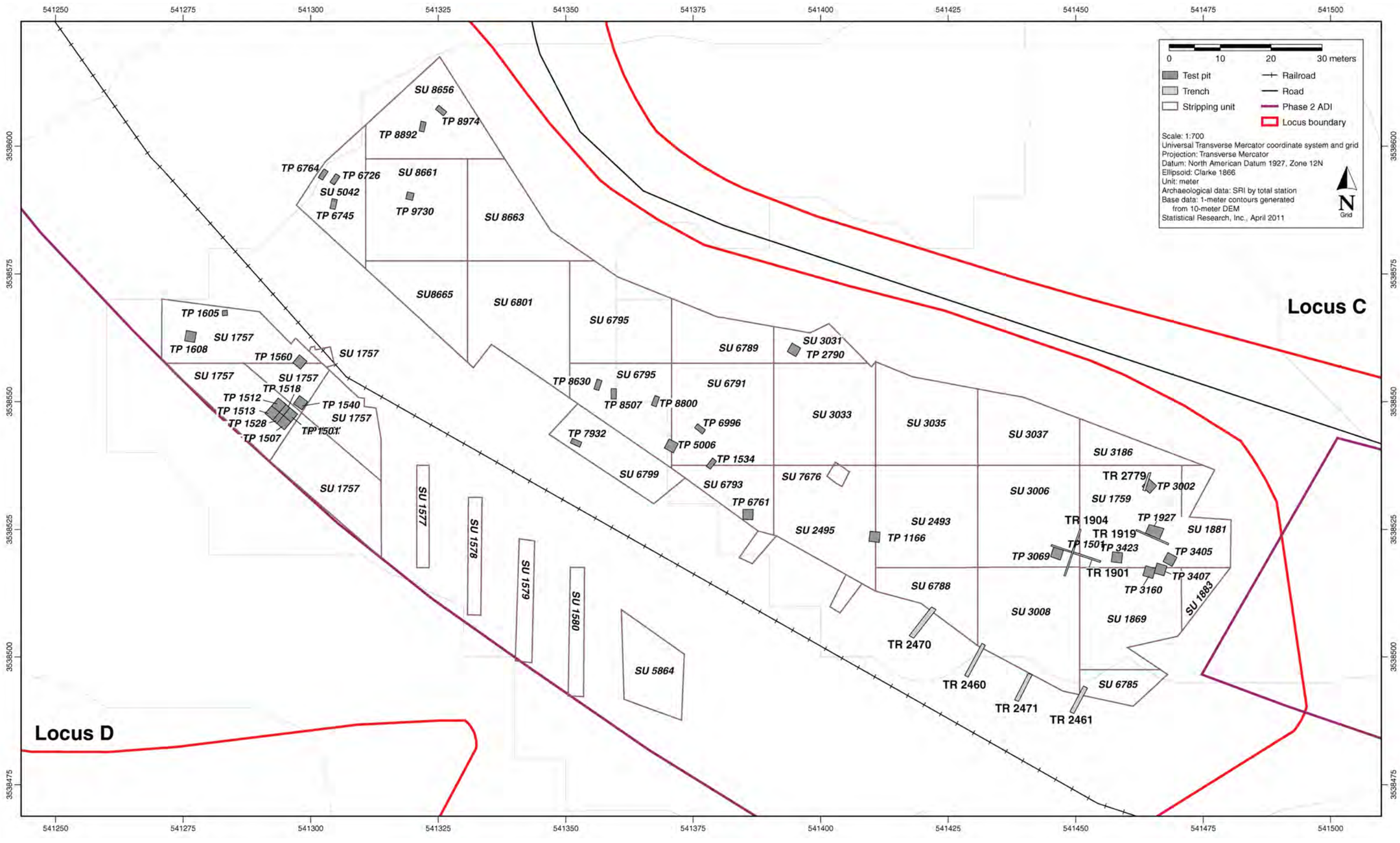

Figure 79. Map of Locus D, showing all Phase 2 excavation units.

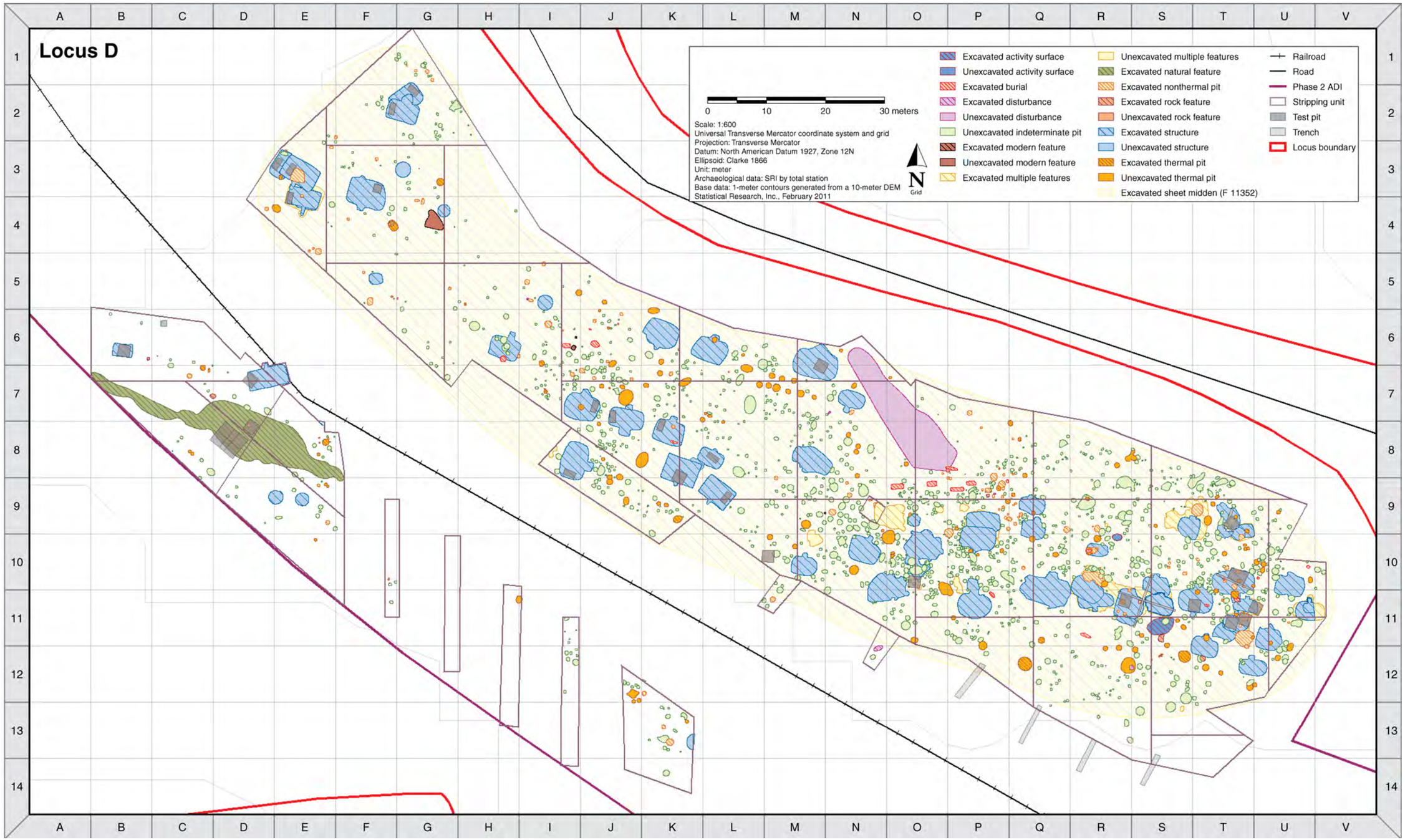

Figure 80. Overview map of Locus D, showing Phase 2 excavations and features.

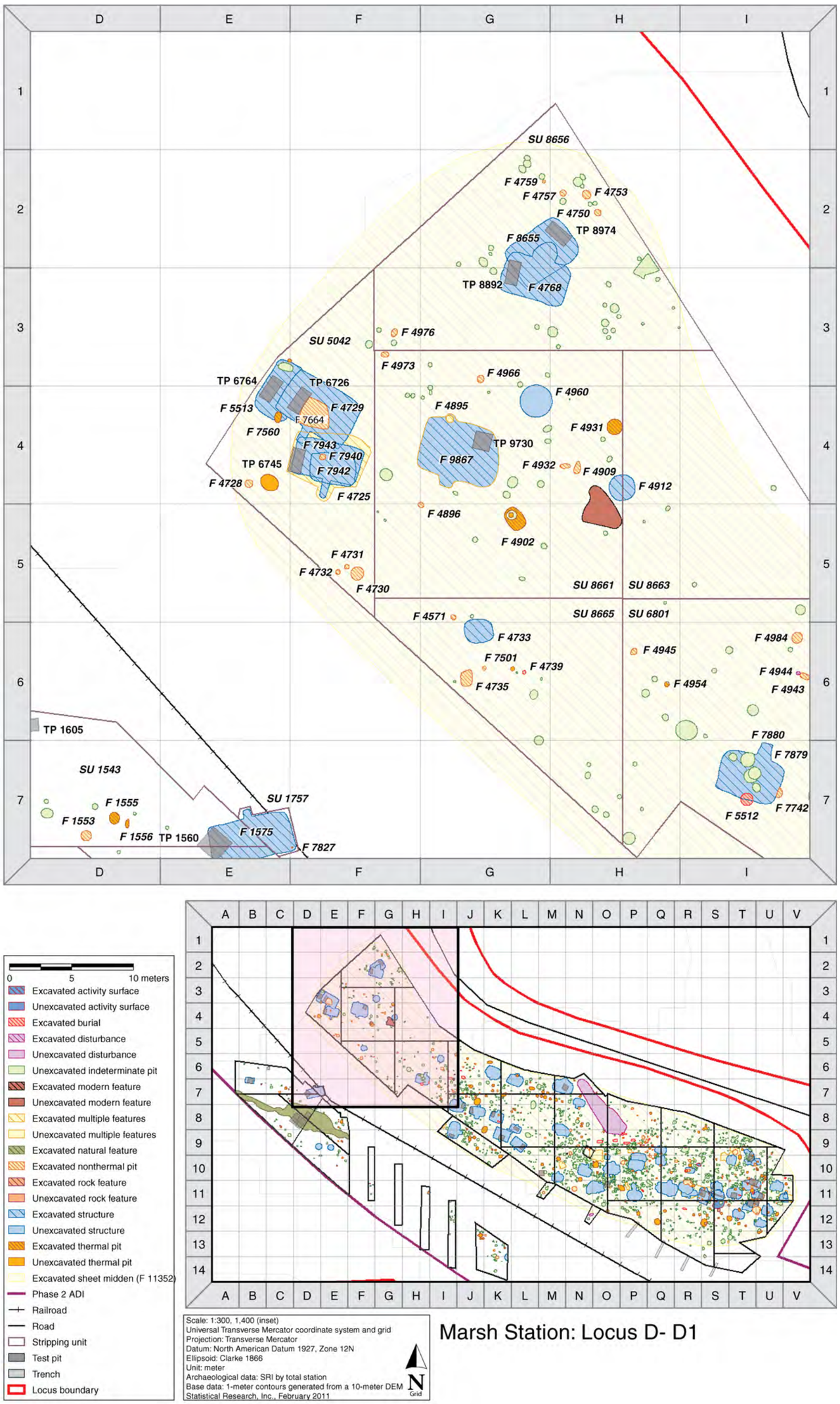

Figure 81. Map of Locus D, Section 1, showing Phase 2 excavations and features.

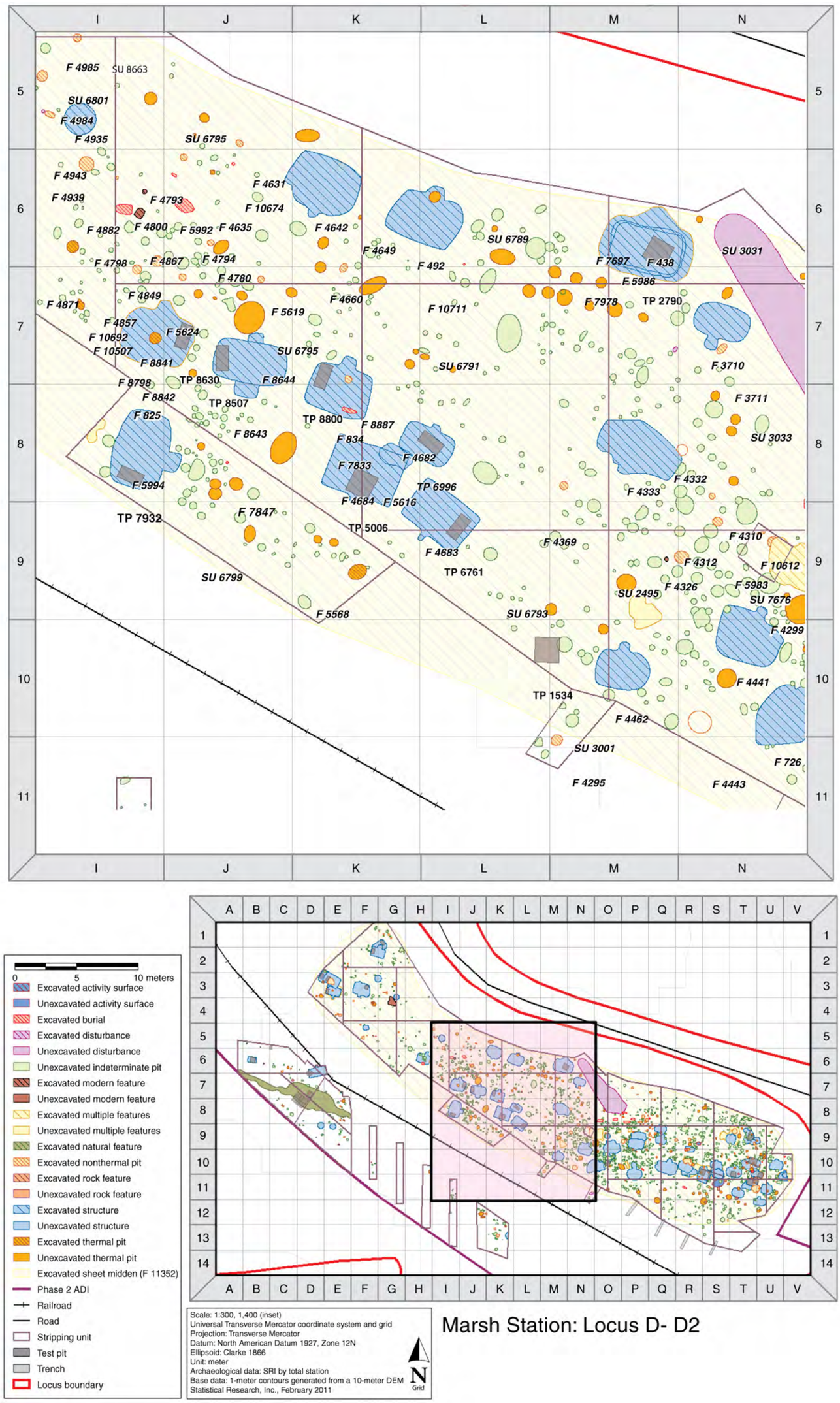

Figure 82. Map of Locus D, Section 2, showing Phase 2 excavations and features.

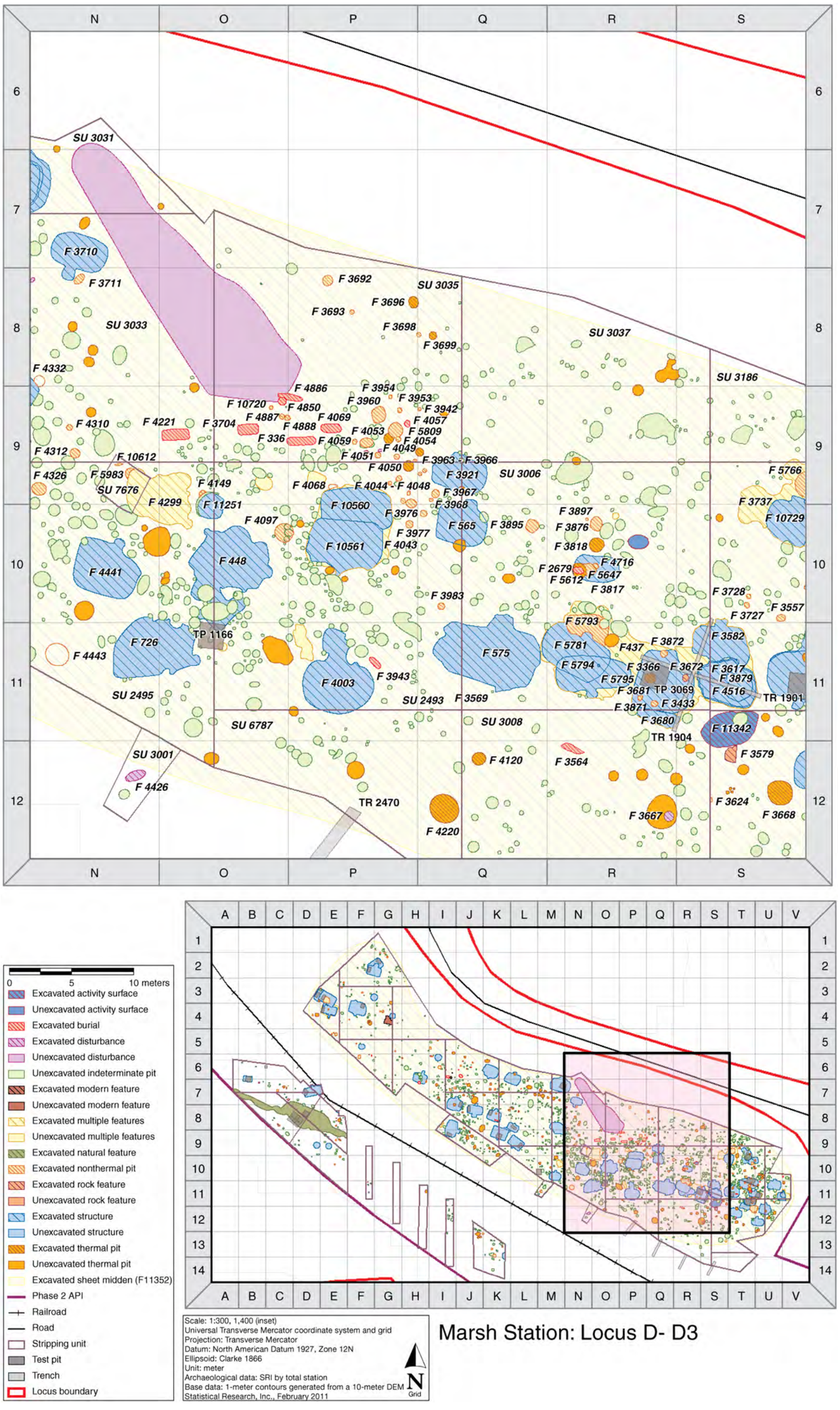

Figure 83. Map of Locus D, Section 3, showing Phase 2 excavations and features.

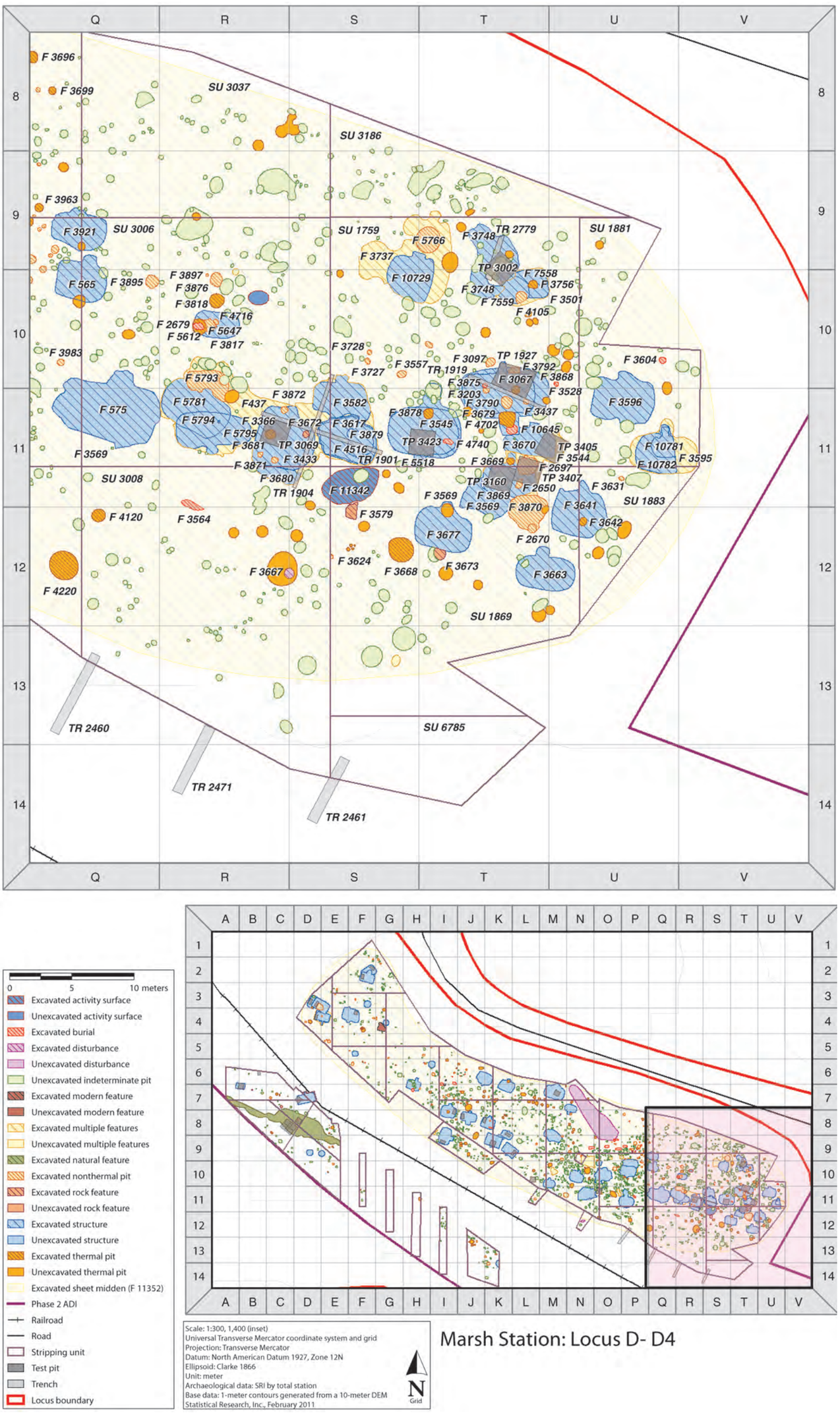

Figure 84. Map of Locus D, Section 4, showing Phase 2 excavations and features.

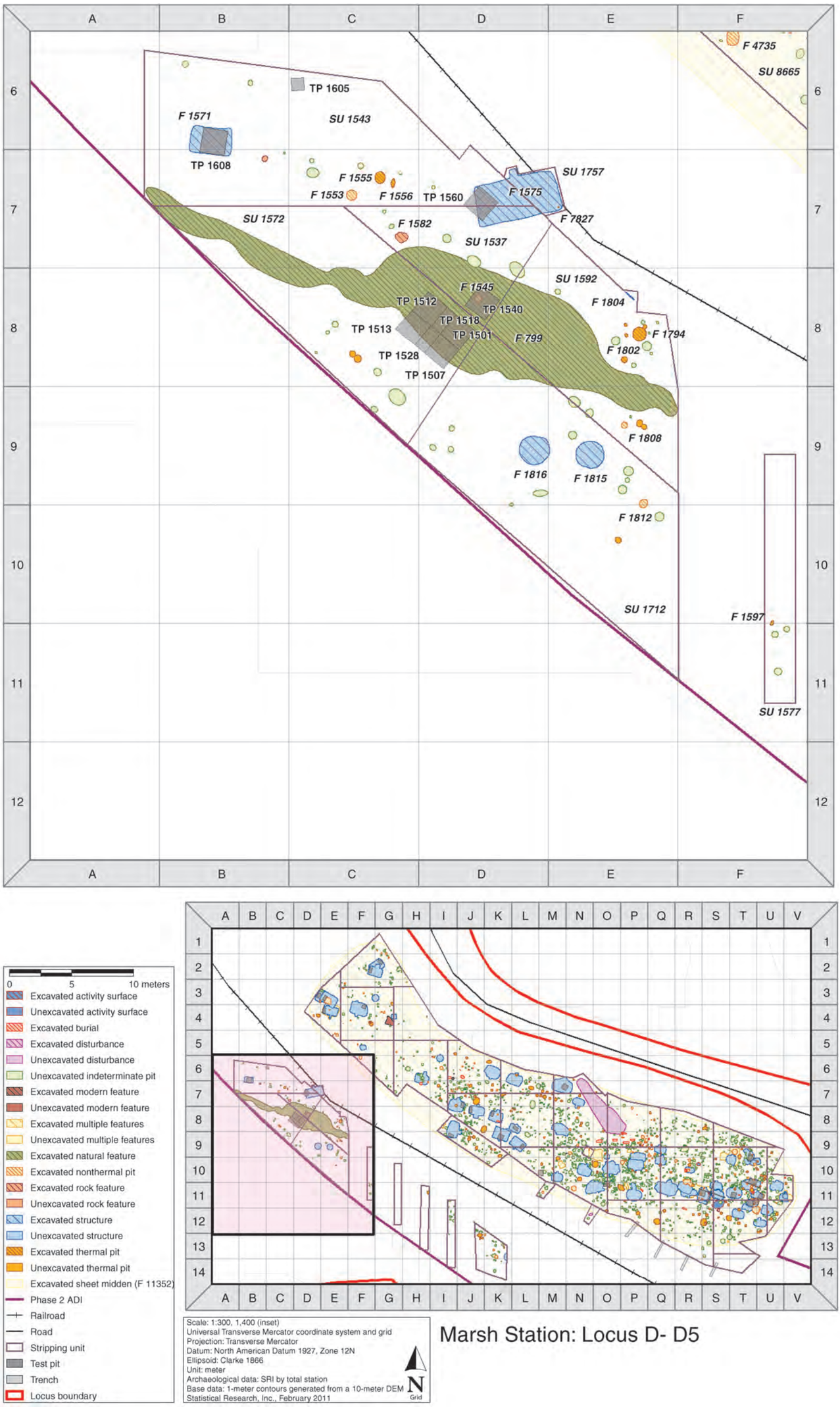

Figure 85. Map of Locus D, Section 5, showing Phase 2 excavations and features.

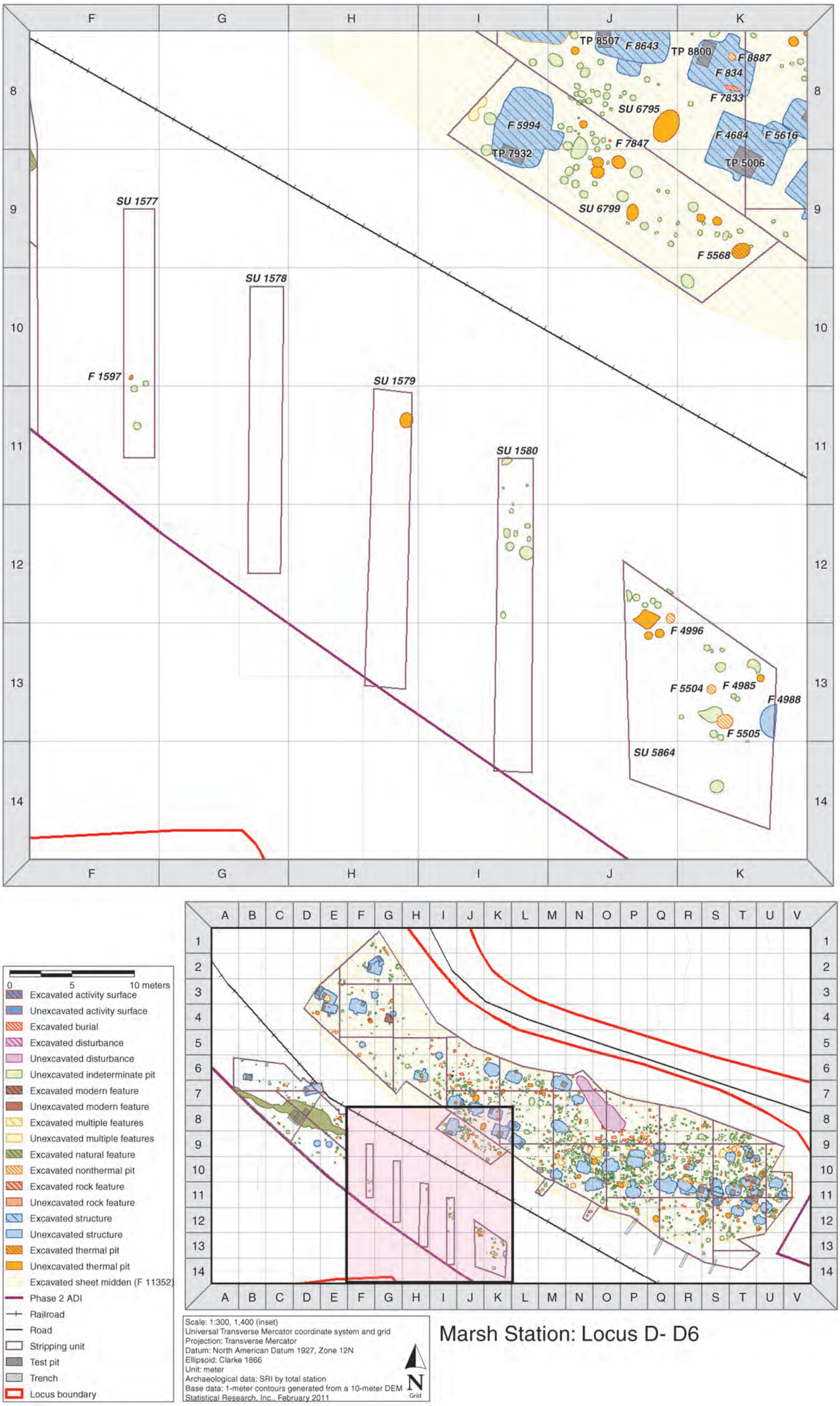

Figure 86. Map of Locus D, Section 6, showing Phase 2 excavations and features.

several weeks, during which time the field crew began excavating selected exposed subsurface features—especially potential structures and human burials. Four additional trenches (Trenches 2460, 2461, 2470, and 2471) were mechanically excavated during Phase 2 to determine site stratigraphy and degree of disturbance along the north side of the railroad, in the east portion of the locus.

Feature Excavations

As a result of the large-scale stripping excavations in the Locus D ADI, 1,731 features were exposed during Phase 2. Of these, 302 features were partially or completely excavated, or probed (not including the 18 features that were investigated during Phase 1). In total, 1,429 features were left unexcavated in order to focus the efforts on investigating structures, human burials, and other significant features. On the basis of the visual assessment and subsurface probing, these unexcavated features were classified as indeterminate pits (n = 1,173), adobe-lined pits (n = 2), thermal features (n = 245), and nonthermal features (n = 9). Of the Phase 1 inventory, 87 features remained unexcavated.

The feature distribution in some areas of Locus D (e.g., in the central and eastern portion of the locus) was so dense (Figure 87) that many of the more extensive and complex dark-stained areas were classified broadly as "multiple features" and were subsequently explored by means of test pits and hand trenches (see below). These dense conglomerates of features generally could not be classified as a discrete feature type. They mainly included four combinations of overlapping features: two overlapping structures, multiple overlapping structures, multiple overlapping pits, and multiple overlapping structures and pits. Two (Features 437 and 3544) of the conglomerates were especially large and complex (see Appendix B: Figures B.32 and B.58).

In addition to the four backhoe trenches mentioned above, five trenches were hand-excavated to investigate several of the aforementioned conglomerates of features. Four trenches were excavated by hand to investigate large feature conglomerates in the eastern portion (Trenches 1901 and 1904 in Feature 437) and the northeastern portion (Trench 1919 in Feature 3544; Trench 2779 in Feature 3748) of Locus D. A 1-m-long trench (Trench 10,541) was excavated by hand to investigate a large borrow pit (Feature 7664).

The 302 Locus D features that were fully or partially excavated during Phase 2 consisted of 73 structures, 40 extramural thermal features, 113 extramural nonthermal pits, 37 indeterminate extramural pits that were probed, 14 multiple features, 23 human burials, 1 midden/trash mound, and 1 nonthermal activity surface (see Figures 81–86). More than half of the structures recorded during Phase 2 (40 of 73, or 55 percent) were fully excavated. The other 33 structures were partially excavated, with varying levels of effort. More than one-third (64 of 153, or 42 percent) of the extramural thermal and nonthermal pits were fully excavated; the remainder were partially excavated (usually bisected and profiled), sampled for pollen and/or flotation analyses, or probed. Thirty-seven nonthermal pits were probed in the search for burials. Probing was done by removing several shovelfuls of fill without collecting samples, although observed artifacts were collected. Because no information was obtained about shape or other morphological characteristics, these features kept their "indeterminate" designation. All human burials were fully excavated. In the following sections, the total feature inventory excavated during both Phase 1 and Phase 2 is discussed together.

Structures

Phase 2 investigations in Locus D resulted in an inventory of 73 excavated structures (Table 22). Of these, 15 were identified in Phase 1 and 58 in Phase 2. In all, 39 structures were completely excavated, and 34 were partially excavated. The excavated structures were divided into four types: pole-and-brush structures (n = 9), houses-in-pits (n = 57), recessed-hearth houses (n = 2), and adobe structures (n = 4). One additional structure (Feature 8607) could not be classified into any of these categories; it was only partially excavated. For detailed descriptions of the completely excavated structures, the reader is referred to Appendix B.

The most basic excavation procedure employed a 1-by-2-m or 2-by-2-m test pit to locate the floor of the house. The structure was then either bisected and excavated in halves or removed as a single unit. House fill was excavated manually, mechanically, or through a combination of these methods. The fill immediately above the floor was removed by hand and, in some features, was screened with 1/4-inch mesh. Artifacts in contact with the floor were point-located. For small pole-and-brush structures, very little fill remained, and the feature was entirely excavated by hand as a single unit. When two structures were discovered within a single house pit, the documentation procedures were modified during the course of the excavation. Four structures were recorded but not excavated (Features 459, 1804, 4960, and 4988).

Different excavation methods were used for the feature conglomerates ("multiple features" or complexes), however, where the boundaries between the features within the continuous area of dark cultural fill was not immediately apparent. Depending on the circumstances, several different methods were employed to define the horizontal and vertical boundaries of individual features in these areas. In one large conglomerate in the eastern portion of Locus D

Figure 87. Aerial overview of central portion of Locus D after Phase 2 excavations, showing dark-stained areas; view to the southwest.

(Feature 437; see Appendix B:Figure B.32), for example, hand trenches were used to delineate seven separate structures. In other areas with superimposed feature clusters, test pits or trenches were used to locate structure walls.

In some cases, partial structure excavation was limited to locating and sampling the structure's hearths for archaeomagnetic dating. Control units were not excavated within these structures. Nor was any attempt made to locate intramural subfeatures, to expose the floor, to excavate the entryway and intrusive pits, or to produce a detailed plan map of the structure. Hearths were located and sampled in 9 of the 14 structures excavated in this manner (see Table 22). Partial excavations of structures involved the removal of the fill above the inferred hearth location at the juncture of the house and entryway. After the outline of a structure had been defined through mechanical stripping, 75–100 percent of the overlying fill was removed by the backhoe to within a few centimeters of the floor. A small portion of the floor was then hand-excavated to locate the hearth. Artifacts observed in the house fill were collected, but the fill was not screened. In general, the fill from a hearth was collected for flotation, and a pollen sample was scraped from the base. Afterward, the hearth was fully documented and sampled for archaeomagnetic dating. All of the structures investigated in this manner were house-in-pit structures, which were generally subrectangular to ovate in plan view with north- or south-facing, protruding entryways and predictable hearth locations. They were also discrete structures, except for Feature 4043 (see Figure 83), which consisted of 2 superimposed structures in which the southern wall of the earlier structure (Feature 10,560) had been truncated by the back wall of the later structure (Feature 10,561). Feature 4003 (see Figure 83) also may have also consisted of 2 superimposed structures, as evidenced by the presence of 2 distinct floor surfaces; however, only the upper surface was investigated.

Pole-and-Brush Structures

The nine pole-and-brush structures were of two basic types (Table 23). Five (Features 4733, 4516, 4912, 7558, and 7559) were built in shallow pits, whereas four others (Features 1815, 1816, 4935, and 11,251) consisted of surface remains with no visible evidence of a house pit. All of these features, except Feature 4912, exhibited a wall groove encircling the floor area, and all except Feature 1815 had perimeter postholes for supports. Four structures had a central support posthole. A hearth was found in Feature 4516 only; basin- or bell-shaped storage pits were present in four of the features. Other than a gap in the wall groove or perimeter postholes in seven of the houses, there were no signs of a formal entrance.

The pole-and-brush structures were generally small and circular in plan (see Table 23). Maximum diameters

Table 22. Structures Excavated in Locus D

Feature No.	Conglomerate Feature No.	Location (SU)	House Type	House Shape	Date Range	Archaeomagnetic Sample No. (SRI-)	Level of Effort	Feature Length (m)	Feature Width (m)	Pit Depth (m)[a]	Total Floor Area (m²)	Estimated Total Usable Floor Area (m²)	Entry Type	Entry Orientation	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
438	7697	3031	house-in-a-pit	subrectangular	A.D. 735–865	3989	all	7.61	4.35	0.45	34.60	31.50	protruding, stepped	north		2901	Structure had burned; floor assemblage present; superimposed Features 5986 and 7978.
448		2493	house-in-a-pit	subrectangular	not dated		part	5.80	4.24	0.68	~24	unknown	unknown	unknown			No written description in Appendix B.
492		6789	house-in-a-pit	ovate	A.D. 735–840	2454	part	5.63	4.97	0.42	~27	unknown	protruding	south			No written description in Appendix B.
565		2493	house-in-a-pit	ovate	A.D. 735–840	2442	part	4[b]	3.01[b]	0.10	12.00	9.84	unknown	north			Structure had burned.
575		3006	house-in-a-pit	subrectangular?	A.D. 700–1150		part	8.45[c]	4.17[c]	0.37	34[d]	unknown	protruding	north			No evidence of burning.
726		2495	house-in-a-pit	unknown	A.D. 1–1450		part	6.28	4.86	0.25	~30	unknown	protruding	north			No written description in Appendix B.
834		6795	house-in-a-pit	subsquare	A.D. 685–915	2437	part	5.09[c]	3.87[c]	0.37	19[d]	unknown	protruding	north			No evidence of burning; floor assemblage.
1571		1543	house-in-a-pit	subrectangular	A.D. 1–1150	2406	all	3.37	2.13	0.13	7.06	7.05	informal?	south?			No evidence of burning; floor assemblage present.
1575		1543	adobe-walled house-in-a-pit	rectangular	A.D. 1385–1450	3990	all	6.70	3.26	0.37	22.50	22.06	protruding, rectangular, ramped	northwest	1880	1858, 7731	Structure had burned; floor assemblage present.
1815		1712	pole-and-brush surface structure	circular	1500 B.C.–A.D. 700		all	2.28	2.20	0.02	3.90	2.97	unknown	unknown		7821, 7868	No evidence of burning; no floor assemblage.
1816		1712	pole-and-brush surface structure	circular	1500 B.C.–A.D. 700		all	2.43	2.23	0.01	3.36	3.37	informal	north?		7874	No evidence of burning; no floor assemblage.
3545		1759	house-in-a-pit	subrectangular	A.D. 860–1015	2377	all	5.78	3.70	0.17	23.20	20.20	protruding, bulbous, ramped	north	2397, 2524		Structure had burned; floor assemblage; superimposed Feature 5518.
3569	3544	1869	house-in-a-pit	subrectangular?	A.D. 935–1015	2445	all	3.67[e]	1.98[e]	unknown	6.80	unknown	unknown	south?	1886		Unknown if structure burned or floor assemblage was present; intruded Feature 3869; mechanical stripping truncated the house pit and part of the floor.
3582	437	3006	house-in-a-pit	subrectangular	A.D. 700–950		all	4.52	2.41	0.17	11.90	7.24	protruding, ramped and stepped	north			No evidence of burning; floor assemblage present; portions of floor removed by superimposed structures.
3596		1881	house-in-a-pit	ovate to subrectangular	A.D. 500–1450	2445	part	4.95	3.33	0.33	~16	unknown	protruding	north			No written description in Appendix B.
3617	437	3006	house-in-a-pit	subrectangular	A.D. 700–950		all	5.02	3.30	0.17	14.50	8.53	protruding	north	3135		No evidence of burning; unknown floor assemblage; possibly overexcavated through floor into trash fill.
3641		1883	house-in-a-pit	ovate to subrectangular	A.D. 1–690	2446	part	4.40	3.63	0.26	~15	unknown	protruding	north			No written description in Appendix B.
3663		1869	house-in-a-pit	ovate	A.D. 935–1040	2447	part	4.76[c]	2.62[c]	0.10	12[d]	unknown	protruding	north			No evidence of burning; unknown floor assemblage.
3670	3544	1759	house-in-a-pit	subrectangular	A.D. 685–990	2463	all	4.08	2.16	0.17	8.10	unknown	protruding, ramped	north			Possibly burned; no floor assemblage.
3677		1869	house-in-a-pit	ovate to subrectangular	A.D. 1–1450	2448	part	4.61	2.92	0.38	~13	unknown	protruding	north			No written description in Appendix B.
3679	3544	1759	house-in-a-pit	subrectangular	A.D. 835–865	3991	all	7.24	3.78	0.08	17.80	11.90	unknown	north	1945, 1949		Evidence of burning; no floor assemblage; superimposed Feature 3868.
3680	437	3008	house-in-a-pit	subrectangular	2000 B.C.–A.D. 950		all	unknown	unknown	0.12	unknown	unknown	unknown	unknown			No evidence of burning; intruded by Feature 3681; not much of feature remained.
3681	437	3006	house-in-a-pit	subrectangular	A.D. 700–950	2459	all	4.72[e]	3.82[e]	0.18	19.90	11.37	unknown	north			No evidence of burning; floor assemblage present; intruded by Feature 3871; intrudes Feature 3680; unknown relationship to Feature 8607.
3710		3033	house-in-a-pit	subrectangular	A.D. 685–915	2390	all	4.47	2.69	0.13	11.90	8.11	protruding, bulbous	south	2703		No evidence of burning or floor assemblage.
3817		3006	house-in-a-pit	ovate	A.D. 700–1015	2382	all	3.75	2.11	0.09	6.80	5.39	unknown	north?		2504	No evidence of burning or floor assemblage.

Feature No.	Conglomerate Feature No.	Location (SU)	House Type	House Shape	Date Range	Archaeomagnetic Sample No. (SRI-)	Level of Effort	Feature Length (m)	Feature Width (m)	Pit Depth (m)[a]	Total Floor Area (m^2)	Estimated Total Usable Floor Area (m^2)	Entry Type	Entry Orientation	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
3868	3544	1759	house-in-a-pit	ovate	A.D. 600–865		all	7.24	3.78	0.68	26.57	25.12	protruding	south			Unknown if burning or floor assemblage present; under Feature 3679; shared floor and pit with Feature 3679.
3869	3544	1759	house-in-a-pit; recessed hearth	subrectangular	A.D. 700–1050	2464	all	4.54	2.87	0.15	9.57	10.17	protruding, ramped	north		2363	Structure had burned; unknown floor assemblage because of disturbance.
3879	437	3006	house-in-a-pit	subrectangular	A.D. 700–950	2378	all	4.82	3.30	0.12	13.00	8.54	protruding, ramped	north	2473		No evidence of burning; Feature 4516 utilized the floor of Feature 3879.
3921		3006	house-in-a-pit	ovate to subrectangular	not dated		part	4.36	2.77	0.24	~12	unknown	unknown	unknown			No written description in Appendix B.
4003		6787	house-in-a-pit	ovate to subrectangular	A.D. 1–1445		part	5.76	3.89	0.43	~22	unknown	protruding	unknown			No written description in Appendix B.
4333		6791	house-in-a-pit	ovate to subrectangular	A.D. 685–1015	2391	part	6.89	3.05	0.21	~21	unknown	unknown	unknown			No written description in Appendix B.
4441		2495	house-in-a-pit	ovate to subrectangular	not dated		part	5.29	4.19	0.37	~22	unknown	protruding	north			No written description in Appendix B.
4462		6793	house-in-a-pit	ovate to subrectangular	A.D. 1–1450		part	4.36	3.01	0.44	~13	unknown	protruding	north			No written description in Appendix B.
4516	437	1759	pole-and-brush house-in-a-pit	circular	A.D. 700–950	2379	all	2.05	2.01	unknown	4.10	2.60	informal?	northwest			No evidence of burning; within remodeled Feature 3879.
4642		6795	house-in-a-pit	ovate to subrectangular	A.D. 500–915	2453	part	5.80	3.20	0.59	~18	unknown	unknown	unknown			No written description in Appendix B.
4682		6791	house-in-a-pit	subrectangular	A.D. 825–1015	3992	all	4.27	2.65	0.17	11.13	9.14	protruding, ramped	northeast			Structure had burned; no floor assemblage.
4683		6793	adobe-walled pit structure	rectangular	A.D. 1385–1450	2383	all	5.45	3.65	0.57	20.60	13.55	protruding, ramped	southwest		5034, 6651	Structure had burned; floor assemblage present.
4684		6795	adobe-walled pit structure	rectangular	A.D. 1310–1690	2384	all	5.87	4.31	0.39	25.60	25.12	protruding, ramped	south	5326		Structure had burned; floor assemblage present.
4729		5042	adobe-walled pit structure	rectangular	A.D. 1340–1390	2385	all	6.27	4.02	0.42	25.00	21.98	protruding, rectangular, ramped and stepped	southwest	6728	5299, 5455, 6731	Structure had burned; floor assemblage present; intruded Features 5513 and 7943.
4733		8665	pole-and-brush house-in-a-pit	ovate	A.D. 500–1450		all	2.29	1.82	0.09	3.80	2.46	unknown	south?			Evidence of burning; no floor assemblage.
4768	472	8656	house-in-a-pit	subrectangular	A.D. 1010–1090	3993	all	5.37[f]	3.42[f]	0.48	19.60	15.34	protruding, bulbous, ramped and stepped	north		8932, 8982	Structure had burned with a floor assemblage; intruded on Feature 8655.
4912		8661	pole-and-brush house-in-a-pit	circular	200 B.C.–A.D. 700		all	2.04	1.96	0.25	3.50	2.42	informal	unknown			Evidence of burning; no floor assemblage.
4935		6801	pole-and-brush surface structure	circular	200 B.C.–A.D. 1450		all	2.53	2.42	0.01	5.15	4.15	informal	southeast?			Unknown if structure burned or had floor assemblage; fill and floor truncated by mechanical stripping.
5513		5042	house-in-a-pit	subrectangular	A.D. 500–1390		all	4.74[e]	3.0[e]	0.14	14.22	unknown	unknown	east			No evidence of burning; floor assemblage present; intruded by Feature 4729.
5518		1759	house-in-a-pit	subrectangular	A.D. 700–1015		part	5.78[g]	3.7[g]	0.17	~21[h]	~20.2[h]	protruding	south			Unknown if structure had burned or had floor assemblage; shared floor and pit with more recent Feature 3545.
5616		6791	house-in-a-pit	round to ovate	A.D. 500–1310		part	unknown	unknown	0.20	unknown	unknown	unknown	unknown			Unknown if structure had burned or had floor assemblage.
5781	437	3006	house-in-a-pit	subrectangular to oval	A.D. 660–940	2414	all	5.61[f]	3.31[f]	0.59	16.80	unknown	unknown	unknown			No evidence of burning or floor assemblage; intruded by Features 5794 and 5795.

continued on next page

Feature No.	Conglomerate Feature No.	Location (SU)	House Type	House Shape	Date Range	Archaeomagnetic Sample No. (SRI-)	Level of Effort	Feature Length (m)	Feature Width (m)	Pit Depth (m)[a]	Total Floor Area (m^2)	Estimated Total Usable Floor Area (m^2)	Entry Type	Entry Orientation	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
5794	437	3006	house-in-a-pit	unknown	A.D. 910–1015	2415	part	unknown	unknown	0.19	unknown	unknown	unknown	unknown			No evidence of burning; portion of floor truncated by Feature 5795.
5795	437	3006	house-in-a-pit	subrectangular to ovate	A.D. 910–1150	2416	part	6.04[c]	2.71[c]	0.16	16[d]	unknown	unknown	unknown			No evidence of burning or floor assemblage.
5986	7697	3031	house-in-a-pit	subrectangular	A.D. 700–865		all	5.50	3.15	unknown	18.00	16.80	informal?	north			No evidence of burning; unknown floor assemblage; superimposed by Feature 438; unknown relationship to Feature 7978.
5994		6799	house-in-a-pit	subrectangular	A.D. 650–950	2409	part	6.34[c]	4.04[c]	0.50	25[d]	unknown	protruding, stepped	east			Structure had burned; unknown floor assemblage.
7558	3501	1759	pole-and-brush house-in-a-pit	subrectangular?	A.D. 710–740	2371	all	2.32	2.11	0.02	3.97	3.09	unknown	unknown	3190	3190	Unknown if structure had burned or had a floor assemblage; shared floor and pit with younger Feature 7559.
7559	3501	1759	pole-and-brush house-in-a-pit	circular	A.D. 785–840	2372	all	2.28	1.93	0.02	3.82	2.82	informal	east?			No evidence of burning; unknown floor assemblage; unknown association between the floors of Features 7558 and 7559.
7879	784	6801	house-in-a-pit	subrectangular	2000 B.C.–A.D. 865		all	4.98	3.49	0.49	18.40	10.40	ramped, protruding	north			Unknown if structure had burned or had floor assemblage; intruded by Feature 7880, which shared a common floor and pit.
7880	784	6801	house-in-a-pit	subrectangular	A.D. 735–865	2407	all	4.98	3.49	0.49	18.40	10.91	ramped, protruding	north		6856	Structure had burned; floor assemblage present; superimposed Feature 7879.
7942	4725	5042	house-in-a-pit	subrectangular	A.D. 700–925	2449	all	3.73	2.60	0.33	8.66	7.25	protruding	south		8851	Evidence of burning; no floor assemblage.
7943	4725	5042	house-in-a-pit	rectangular	A.D. 700–925		all	5.41[f]	3.04[f]	0.33	17.02	15.85	protruding, stepped	south			Evidence of burning; intruded by Feature 4729 and superimposed by Feature 438; unknown relationship to Feature 5986.
7978	7697	3031	house-in-a-pit	subrectangular	A.D. 700–865		all	5.95[f]	3.65[f]	0.11	21.60	21.20	informal?	north			No evidence of burning; superimposed by Feature 438; unknown relationship with Feature 5986.
8607	437	3006	unknown	unknown	not dated	2417	all	unknown	unknown	0.17	unknown	unknown	unknown	unknown			Represented only by a hearth; unknown if structure had burned or had floor assemblage.
8643	833	6795	house-in-a-pit	subrectangular	A.D. 700–915	2412	part	5.95[c]	3.41[c]	0.44	20[d]	unknown	protruding, stepped	south			Unknown if structure had burned or had floor assemblage; shared floor and pit with more recent Feature 8644.
8644		6795	house-in-a-pit	subrectangular	A.D. 685–915	2413	part	5.95[c]	3.41[c]	0.44	20[d]	unknown	protruding	north			Evidence of burning.
8655	472	8656	house-in-a-pit	subrectangular	A.D. 825–1090	2452	all	5.38[f]	3.68[f]	0.36	19.50	16.53	informal	southeast?	8976, 9643		Evidence of burning; no floor assemblage; intruded by Feature 4768.
8841	825	6795	house-in-a-pit	subrectangular	A.D. 835–865	2422	part	4.0[g]	unknown	0.55	unknown	unknown	protruding, ramped	north			Structure had burned; floor assemblage present.
8842	825	6795	house-in-a-pit	subrectangular	A.D. 735–840	2435	part	5.72[c]	4.27[c]	0.55	~24	unknown	protruding, ramped	north			Unknown if structure had burned or had floor assemblage; floor reused in Feature 8841.
9729	4895	8661	house-in-a-pit	subrectangular?	A.D. 500–840		part	unknown	unknown	0.36	unknown	unknown	unknown	south?			Structure had burned; unknown floor assemblage.
9867	4895	8661	house-in-a-pit	subrectangular	A.D. 760–840		part	unknown	unknown	0.48	unknown	unknown	protruding	south			Structure had burned; unknown floor assemblage.
10,560	4043	2493	house-in-a-pit	ovate to subrectangular	A.D. 735–840	2443	part	5.65	2.72	0.27	~15	unknown	unknown	probably south, but removed by Feature 10,561			No written description.
10,561	4043	2493	house-in-a-pit	ovate to subrectangular	A.D. 835–990	2467	part	5.97	3.92	0.47	~23	unknown	protruding	south			No written description.
10,729	3737	1759	house-in-a-pit	subrectangular	A.D. 935–1015	2466	part	unknown	unknown	0.46	unknown	unknown	protruding	north			No evidence of burning; unknown floor assemblage.
10,781	3595	1881	house-in-a-pit, recessed hearth	subrectangular	A.D. 935–1015	2465	part	6[c]	3.2[c]	0.11	18[d]	unknown	protruding	north		10606	Structure had burned; superimposed by Feature 10,782.
10,782	3595	1883	house-in-a-pit	ovate	A.D. 935–1015	2444	part	4[g]	3[g]	0.11	12[d]	unknown	protruding	north			No evidence of burning; unknown floor assemblage; intrusive to Feature 10,781.
11,251		2495	pole-and and-brush surface structure	circular	200 B.C.–A.D. 700		all	2.11	2.07	0.00	3.55	3.55	informal	northeast?		11,257	Unknown if structure had burned or had floor assemblage; structure fill and floor removed during mechanical stripping.

Feature No.	Conglomerate Feature No.	Location (SU)	House Type	House Shape	Date Range	Archaeomagnetic Sample No. (SRI-)	Level of Effort	Feature Length (m)	Feature Width (m)	Pit Depth (m)[a]	Total Floor Area (m^2)	Estimated Total Usable Floor Area (m^2)	Entry Type	Entry Orientation	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
11,390	4895	8661	house-in-a-pit	unknown	A.D. 760–1450		part	unknown	unknown	0.48	unknown	unknown	unknown	south?			Unknown if structure had burned or had floor assemblage.

Key: PD = Provenience Designation; SU = Stripping Unit.

[a] The structure depths are the maximum measurement recorded during excavation.

[b] If a structure was partially excavated, but the floor was completely exposed, the dimensions were the length and width of the pit.

[c] The structure was partially excavated, and the length and width were taken from the structure outline identified in the stripping unit.

[d] The floor area of the partially excavated structures is an estimate derived from multiplying the length × width.

[e] If a structure was intruded on by another feature and the remaining portion was completely excavated, the dimensions were extrapolated from the remaining portion of the feature.

[f] The structure was intruded on by another feature, but the floor area and pit dimensions are known.

[g] If the structure was partially excavated and identified during excavation, the dimensions were extrapolated from the portion that was excavated.

[h] Relationship between features is unclear.

Table 23. Pole-and-Brush-Structure Characteristics

Feature No.	Shape	Dimensions[a] (m)	Construction Type	Walls	Central Support Posthole	Entryway	Hearth	Floor Pits	Date Range	Period
1815	circular	2.28 × 2.20 × 0.02	on surface	wall groove	no	unknown	no		1500 B.C.–A.D. 700	LA/EF
1816	circular	2.43 × 2.23 × 0.01	on surface	wall groove	yes	gap in groove	no		1500 B.C.–A.D. 700	LA/EF
4516	circular	2.05 × 2.01 × ?	in pit	postholes	yes	gap in postholes	yes		A.D. 700–950	EF?
4733	ovate	2.29 × 1.82 × 0.09	in pit	wall groove and postholes	yes	gap in groove	no	bell-shaped storage pit, basin-shaped pit	post–A.D. 500	EF?
4912	circular	2.04 × 1.96 × 0.25	in pit	postholes	no	gap in postholes	no		200 B.C.–A.D. 700	LA/EF
4935	circular	2.53 × 2.42 × 0.01	on surface	wall groove	no	gap in groove	no	2 basin-shaped pits	post–200 B.C.	EF?
7558	subrectangular?	2.32 × 2.11 × 0.02	in pit	wall groove and postholes	no	unknown	no	bell-shaped storage pit	A.D. 710–740	EF
7559	circular	2.28 × 1.93 × 0.02	in pit	wall groove	yes	gap in groove	no		A.D. 785–840	MF-A
11,251	circular	2.11 × 2.07 × 0	on surface	wall groove and postholes	no	gap in postholes	no	bell-shaped pit	200 B.C.–A.D. 700	LA/EF

Key: EF = Early Formative; LA = Late Archaic; MF-A = Middle Formative A.
[a] Length × width × depth.

ranged from 2.0 to 2.5 m, with a mean of 2.2 m. Floor areas ranged from 3.4 to 5.2 m^2, with a mean of 3.9 m^2. The usable floor area was estimated for these features by measuring the area of the floor within the outer ring of post holes, if present. These calculations indicate a size range from 2.4 to 4.2 m^2, with a mean of 3.0 m^2. Overall, these data underscore the very small sizes of these features, which are consistent with the theoretical expectations for seasonal or short-term residences. However, we cannot rule out other, nonresidential functions, such as storage, cooking, or shaded locations (i.e., ramadas) for extramural activities, such as food processing or craft production.

Six of the nine pole-and-brush structures were spatially discrete, with no overlapping features. The exceptions were Features 7558, 7559, and 4516, which were part of dense conglomerations of overlapping features in the eastern part of the locus. Superimposed Features 7558 and 7559 (Figure 88) were part of a conglomerate (Feature 3501) in the northeastern corner of the locus (see Figure 84). Feature 7558, the earlier (date range A.D. 710–740) of the two structures, consisted of a series of postholes (Subfeatures 3–26) within a shallow floor groove (Subfeature 2), a small patch of floor plaster, and a subfloor storage pit (Subfeature 1). Feature 7559 (date range A.D. 785–840) truncated the eastern end of Feature 7558 and consisted of portions of a floor groove (Subfeature 2), 2 postholes (Subfeatures 1 and 3), and intact floor plaster. Feature 4516 (date range A.D. 700–950) was part of conglomerate Feature 437, where it shared a common house pit with two other structures (earlier Feature 3879 and later Feature 3617) (see Appendix B:Figure B.32). Feature 4516 was a small, circular structure located entirely within the eastern half of the Feature 3879 house pit. The basic outline of the structure was delineated by a series of 16 perimeter postholes, with one hearth and an additional posthole located in the interior.

All six spatially discrete structures except Feature 11,251 were excavated in the western part of Locus D. Features 4733 and 4912 were found in the northwest corner of the locus, where another small round structure (Feature 4960), probably also a pole-and-brush structure, remained unexcavated (see Figure 81). Feature 4935 was about 30 m to the southeast of these features (see Figure 82), and Features 1815 and 1816 were located in the southwest corner of the locus on the south side of the railroad (see Figure 85). Although remaining unexcavated and only partially exposed in Stripping Unit 5864, Feature 4988, also to the south of the railroad, had the proper small size and round shape to have been yet another pole-and-brush structure (see Figure 86). Finally, Feature 11,251 was excavated just east of the center of the locus (see Figure 83).

Of these six features, Features 1815, 1816, and 4935 were very similar to one another. All three lacked a house pit but contained a shallow, circular floor groove without a well-defined perimeter posthole pattern (Figures 89 and 90). Features 1815 and 1816 (date range 1500 B.C.–A.D. 700 for both) had no floor pits, but Feature 4935 (date range post–200 B.C.) had two shallow, basin-shaped pits in the floor. In contrast, Features 4733 (date range post–A.D. 500) (Figure 91) and 11,251 (date range 200 B.C.–A.D. 700) (Figure 92) each contained a large, bell-shaped storage pit and had a perimeter floor groove with regularly spaced postholes. Feature 4912 was unique within the suite of pole-and-brush structures in having been built in a relatively deep (25-cm) pit and in containing an enigmatic boulder embedded in the floor (Figure 93).

Ceramics and flaked stone were recovered in the fill of all nine pole-and-brush structures. Diagnostic ceramics included a Gila Butte Red-on-buff sherd out of a bell-shaped pit (Subfeature 1) in Feature 4733 and Mimbres Black-on-white and Snaketown Red-on-buff ceramics within the structure fill of Feature 4912. Drills were recovered from the hearth (Subfeature 1) of Feature 4516 and the floor fill of Feature 4912. Ground stone was identified in three of the structures (Features 1815, 4733, and 4912) and was particularly abundant in Features 4733 and 4912: a possible mano was recovered from the floor groove of Feature 1815; a palette blank from the floor fill of Feature 4733; two complete oval manos, one fragmentary subrectangular mano, two fragmentary netherstones, and a small ground piece of chrysocolla from the bell-shaped pit (Subfeature 1) in the floor of Feature 4733; three polishing stones, two oval handstones, and other indeterminate ground stone in the fill of Feature 4912; and one-half of a trough metate from Subfeature 1 in Feature 4912. A bone awl was also recovered from the fill of Feature 4733, and the fill of Feature 4912 included a *Glycymeris* bracelet.

Artifact densities varied among seven of the pole-and-brush structures (excluding Features 4516 and 11,251, for which volumetric data were not calculable). Features 4192, 4935, 7558, and 7559 contained relatively low densities, ranging from 100 to 376 artifacts per m^3. In contrast, Features 1815, 1816, and 4733 contained much higher artifact densities ranging between 1,029 and 1,295 artifacts per m^3. These latter structures probably were more frequently (and intensively) used for trash deposition after their abandonment than were the other structures.

Period assignments were inferable for all nine pole-and-brush structures based on a combination of AM results and various relative dating techniques (temporally diachronic ceramics and flaked stone artifacts; stratigraphic associations) (see Table 23). Four structures (Features 1815, 1816, 4912, and 11,251) were assigned to the Late Archaic/Early Formative periods, one structure (Feature 7558) was assigned to the Early Formative period, three structures (Features 4516, 4733, and 4935) probably dated to the Early Formative period, and one structure (Feature 7559) was assigned to the Middle Formative A period.

Pole-and-brush construction in southern Arizona is typically associated with the Late Archaic and Early Formative periods (1500 B.C.–A.D. 750). Most of the pole-and-brush

Figure 88. Two superimposed pole-and-brush structures (Features 7558 and 7559) excavated within conglomerate Feature 3501.

Figure 89. Two adjacent pole-and-brush surface structures (Features 1815 and 1816), showing well-defined wall grooves.

Figure 90. Pole-and-brush surface structure (Feature 4935), showing entry gap in wall groove and two floor pits.

Figure 91. Pole-and-brush structure (Feature 4733), built in shallow pit; note deep, bell-shaped storage pit.

Figure 92. Pole-and-brush structure (Feature 11,251), built on the surface; note deep, bell-shaped storage pit.

Figure 93. Pole-and-brush structure (Feature 4912), built in a 25-cm-deep pit.

structures at Mescal Wash were distributed throughout the western half of Locus D, where several early bell-shaped pits assigned to the Late Archaic period also were excavated. A Cienega phase projectile point (PD 7870) was collected from a posthole in Feature 1815, which underscores a Late Archaic period association. Only Features 7558 and 7559 were subjected to AM dating, producing date ranges during the Early Formative and Middle Formative A periods, respectively. This indicates that some pole-and-brush structures postdate the Late Archaic and Early Formative periods. These later structures might have been insubstantial constructions intended for temporary use or limited nonresidential activities.

House-in-Pit Structures

Fifty-seven Hohokam-style houses-in-pits were investigated in Locus D, a roughly equal number of which were partially excavated (n = 32) and fully excavated (n = 25) (see Table 22). These structures were primarily subrectangular to ovate in plan; a few were circular or rectangular. Most of these structures had protruding entryways, some of which also exhibited visible ramps, steps (Figure 94), or vestibules (Figure 95) in the entryway. One structure (Feature 8655) (and possibly also Features 1571, 5486, and 7978) included an informal (i.e., a simple break in the wall or posthole pattern) entryway (Figure 96), and three others (Features 3545, 3710, and 4768) exhibited a bulbous entryway (Figure 97). Most of the structures' entryways were oriented to the north or south.

These features ranged in maximum length from 3.4 to 8.5 m (see Table 22), with a mean of 5.2 m. Excluding 8 indeterminate cases, the floor areas of these structures ranged widely in size from 6.8 to 34.6 m^2, with a mean of 17.1 m^2. The usable floor area was estimated for 22 features (see Table 22). The estimated average usable floor area for the 22 houses-in-pits was 13.6 m^2, with a range from 5.4 to 31.5 m^2. Overall, the broad range of structure sizes probably reflects variability in the structure functions and intended activities. Very small structures might have been used for a limited number of activities, such as storage or cooking. Some of the larger structures may have been used for communal and civic-ceremonial activities. Residential structures probably were constructed in a variety of sizes, however, depending on differences in household size and other factors.

Many of the house-in-pit structures in Locus D were part of larger conglomerates of features (see Table 22). Overlapping house-in-pit structures consisted of seven pairs of structures (Features 3679/3868, 10,781/10,782, 3545/5518, 7942/7943, 5986/7978, 7879/7880, and 8643/8644) (Figure 98), and in the case of conglomerate Feature 7697, three structures (Features 438, 5986, and 7978) were superimposed and shared the same house pit (Figure 99). These overlapping structures indicate multiple rebuilding episodes in specific locations and long-term reuse of house pits in Locus D.

Artifact densities among a sample of 35 features with volumetric data indicate substantial variability, ranging from a low of 2.6 to a high of 1,733.3 artifacts per m^3, with a mean of 459.5 artifacts per m^3. A break in the distributions of artifact densities is evident at roughly 500 artifacts per m^3, suggesting possible modalities. Most contained densities of fewer than 500 artifacts per m^3, and 12 contained denser collections. Only 6 contained densities greater than 1,000 artifacts per m^3. This wide range of artifact densities partly reflects variability in the extent to which these structures were used as trash-dumping locations after their abandonment. However, we also might expect higher densities near the feature conglomerations, given the presumed high frequency of feature-related activities (and depositional events) in those areas. Indeed, 3 of the 4 house-in-pit structures with the highest artifact densities (Features 3545, 3680, 3681, and 3817) were part of dense conglomerates. The variability in artifact densities probably reflects differences in both (1) the postabandonment dumping frequency and (2) the long-term land-use history of the feature locations.

Period assignments were inferable for 54 house-in-pit structures based on a combination of AM results and various relative dating techniques (temporally diachronic ceramics; stratigraphic associations). Among these features, slightly fewer than half (23 of 54, or 43 percent) were assigned to the combined Early Formative/Middle Formative A period, 3 (Features 3679, 8841, and 9876) could be assigned to the Middle Formative A period, 1 (Feature 4768) was assigned to the Middle Formative B period, and 10 more were broadly assigned to the Middle Formative period. In all, one-fifth of the house-in-pit structures (11 of 54, or 20 percent) could be confidently assigned to the Middle Formative period. Of note is that 1 house-in-pit structure (Feature 3641) was assigned to the Early Formative period, suggesting an early development of this construction style. This small house-in-a-pit was placed in the Early Formative period on the basis of an AM-derived date range of A.D. 1–690, further supported by the presence of early plain ware sherds in the fill. Seven other features were assigned to the ambiguous Early/Middle Formative period (6) and Middle/Late Formative period (1).

Recessed-Hearth Structures

Two recessed-hearth house-in-pit structures (Features 3869 and 10,781) located near the eastern edge of Locus D (see Figure 84) were excavated during Phase 2. These structures resembled the other house-in-pit structures in most respects but were distinguished from them by the

Figure 94. House-in-pit (Feature 4768) with stepped entryway containing wooden sill.

Figure 95. House-in-pit (Feature 3582) with vestibule-type entryway.

Figure 96. Southeast view of house-in-pit (Feature 8655) (*bottom*) with informal entrance to the southeast; an intrusive structure (Feature 4768) is also shown.

Figure 97. House-in-pit (Feature 3710) with bulbous entryway.

Figure 98. Two overlapping house-in-pit structures (Features 3679 and 3868).

Figure 99. Conglomerate Feature 7697, containing three superimposed structures (Features 438, 5986, and 7978) sharing the same house pit.

presence of a recessed-hearth area (as opposed to a floor-level hearth). Both structures were subrectangular in plan, with protruding and north-facing entryways. Feature 3869 was excavated completely and measured 4.5 by 2.9 m, with an estimated usable floor area of 10.2 m^2 (Figure 100). Besides the plastered hearth, the structure contained two basin-shaped pits that probably were used for storage. Feature 10,781 was only partially excavated, but the dimensions were estimated to be 6 by 3.2 m. Both of the recessed-hearth structures were part of feature conglomerates (Features 3544 and 3595) composed of multiple overlapping structures. As in Loci A and C, houses-in-pits were constructed over both of these structures shortly after they were abandoned. Feature 10,781 was filled in for some period after its abandonment and was superimposed by Feature 10,782; Feature 3869 was superimposed by Feature 3569.

A date range of A.D. 935–1015 was inferred for Feature 10,781 based on AM analysis and other chronological evidence, suggesting a span of use during the end of the Middle Formative A period or during the early Middle Formative B period. Feature 3869 was not subjected to chronometric analysis but was broadly assigned to the Middle Formative (A.D. 700–1050). The two structures might have been contemporaneous.

Adobe-Walled Structures

The four rectangular adobe-walled structures in Locus D (Features 1575, 4683, 4684, and 4729) were all completely excavated. They were located in the western half of the locus. Feature 1575 was found immediately south of the railroad (see Figure 85); special permission was obtained to excavate within several meters from the tracks (Figure 101). Feature 4729 formed part of a visually spectacular conglomerate of four overlapping structures (Figure 102) along the western edge of the locus (see Figure 81). Features 4683 and 4684 were found side by side close to the center of the locus (see Figure 82); Feature 4684 overlapped with Feature 5616 and abutted Feature 4682, both earlier houses-in-pits (Figure 103). Their construction was characterized by freestanding, aboveground walls of puddled adobe. Each of the structures possessed a shallow floor pit at the threshold of the entryway, probably used as a puddling basin for adobe. The floors of these structures were dotted with evenly spaced postholes that supported raised floors. All of the adobe-walled structures had been burned and contained fairly extensive floor assemblages. Each of the structures had at least one reconstructible vessel on the floor, and, with the exception of Feature 4683, at least one of these vessels was Tonto or Gila Polychrome. A variety of ground stone tools, such as handstones and netherstones, were part of the floor assemblages. All of the floors contained manos, and, with the exception of Feature 4684, each floor contained one or more grinding slabs. Flaked stone tools were also present on the floor of each structure. A chopper was recovered from the floor of Feature 4683 and retouched or utilized flakes from Features 4729, 4683, and 1575. Particularly noteworthy, Feature 4684 held four projectile points: a Classic period and a Sinagua obsidian projectile point, and two Salado Side-notched points. A deer (*Odocoileus*) cranium was recovered from the back northeastern wall of Feature 4684, and another near the central back wall of Feature 1575. A bone awl made from a long bone of a pronghorn (*Antilocapra americana*) was part of the floor assemblage of Feature 4683. Fill artifact densities were also relatively high, ranging from 2,470 to 3,135 artifacts per m^3.

One of the four adobe-walled structures (Feature 1575) was clearly situated in a house pit, but the other three may have been constructed on the surface or within small, indistinct depressions. All four structures had protruding entryways, which were generally oriented to the south or southwest, with the exception of Feature 1575, which had a northwest-facing entryway. Feature 4729 had a long vestibule entry, with a 25–30-cm-wide adobe pad at the outer opening creating a 25-cm-deep step into the entry pit (Figure 104). A shallow step was carved into the native subsoil about 10 cm beyond the adobe pad, from which the entry floor ramped down slightly to meet the house floor. The entry vestibule had adobe walls that wrapped around.

These structures were generally larger than the generally older house-in-pit structures, with a mean maximum length of 6.1 m and an average total floor area of 23.4 m^2. The narrow ranges of maximum length (5.5–6.7 m) and floor area (20.6–25.6 m^2) suggest relatively consistent (possibly standardized) structure sizes, although the few cases do not provide a sufficient sample to infer this pattern with certainty. The range of usable floor area is slightly more variable, from 13.6 to 25.1 m^2, with a mean of 20.7 m^2. Overall, this range of sizes is considerably smaller than the range for the various house-in-pit structures, which might suggest a more limited range of structure functions relative to the various house-in-pit structures.

This construction style is indicative of Late Formative period settlements in southern Arizona. All four structures were subjected to AM dating, which, along with indirect dating methods (e.g., temporally diagnostic ceramics), produced an inclusive date range of A.D. 1310–1450. Prevalent Roosevelt Red Ware sherds also agree with the Late Formative period assignment. On the basis of these lines of evidence, the structures were assigned to the Late Formative B period. The two neighboring structures, Features 4683 and 4684, may have been contemporaneous and possibly were part of single kin-related house group.

Figure 100. Plan view of recessed-hearth structure (Feature 3869), looking southwest into the body of the structure.

Figure 101. North view of adobe-walled structure (Feature 1575), excavated along the railroad tracks.

Figure 102. Overview of four superimposed structures (Features 4729, 5513, 7942, and 7943) located in the western end of Locus D. The large adobe-walled pit structure (Feature 4729) is located in the upper right corner of the photograph.

Figure 103. Two adobe-walled structures (Features 4683 and 4684) found side by side in the center of Locus D, with Feature 4684 abutting an earlier house-in-a-pit (Feature 4682).

Figure 104. Southeast view of stepped vestibule entryway of Feature 4729.

Extramural Features

During Phase 1, 102 features were determined to be extramural features (not including human burials). Fourteen of these features were excavated during Phase 1 (10 completely, 4 partially). These included 4 bell-shaped pits (2 thermal, 2 nonthermal) and 10 additional pits (8 thermal, 2 nonthermal). During Phase 2, an additional 1,602 extramural features were identified, resulting in a total of 1,704 in Locus D. Excluding burials, SRI archaeologists partially or completely excavated 192 extramural features during the Phase 2 investigations, including 40 thermal features, 113 nonthermal pits, 37 indeterminate (probed) nonthermal pits, 1 activity surface, and 1 midden. Over both Phase 1 and Phase 2, SRI fully excavated 64 extramural features and partially excavated 103 extramural features (excluding the midden and activity surface). In addition, 37 nonthermal pits were probed in Phase 2. Because probing did not result in obtaining information on pit shape or other morphological characteristics, the 37 probed nonthermal pits retained their "indeterminate" qualifier. Probing was done to test for the presence of human remains.

Extramural Thermal Features

SRI archaeologists excavated 50 thermal features in Locus D (of which 23 were completely and 26 partially excavated). The 49 features can be placed into more-refined categories. Most (37 features) were classified as roasting pits, which were subdivided into bell-shaped roasting pits (8 features), rock-lined roasting pits (6 features), and "basic" roasting pits (24 features) that exhibited neither of these characteristics. Additional thermal features include 2 *hornos*, 5 firepits, 1 extramural hearth, and 4 rock clusters. All of these feature types were pit features, with the exception of the rock clusters, which appear to have been surface deposits.

Nearly all of the pit features were circular or ovate in plan view, and all had oxidized walls. The cross sections were basin shaped, cylindrical, bell shaped, or conical, but several were irregular or amorphous in profile. Some spatial patterning was evident among these features. In particular, thermal pits were concentrated around a cluster of houses (Features 10,560, 10,561, 3921, and 565) in the eastern portion of Locus D. For the most part, however, the sheer number and density of structures and pits have obscured the spatial associations.

Roasting Pits

Basic Roasting Pits

Twenty-four excavated thermal features in Locus D were classified as "basic" (for lack of a better term) roasting pits (Table 24), none of which had the characteristic bell-shaped profiles or rock-lined bases and walls that defined the other two subtypes discussed below. Seven pits of this broad type were excavated during Phase 1 investigations, and 17 were excavated during Phase 2. As would be expected from the broad and general nature of this subtype, the 24 excavated features encompassed considerable variability in pit dimensions and other attributes. The pit profiles exhibited a variety of cross-sectional shapes, including rounded basin-shaped pits (n = 15), cylindrical pits with flat bases (n = 5), conical pits with tapered bases (n = 1, Feature 457), and amorphous, irregular-shaped pits (n = 1, Feature 446). In two other pits, the shape was not discernible because of postdepositional disturbances. Plan shapes were typically circular (n = 10) or ovate (n = 11). Two pits (Features 446 and 3426) were recorded as irregular-shaped in plan, and in one other pit (Feature 3642), the plan shape was not discernible because of disturbance.

The maximum length of these pits ranged from about 0.3 to 1.1 m, with a mean of 0.71; only four pits were at least 1 m wide. Pit depths ranged from 0.07 to 0.70 m, with a mean of 0.30 m, but most (n = 21) exhibited depths of 0.5 m or less. Pit volumes range from 0.01 to 0.47 m^3, with a mean of 0.12 m^3. Overall, these metric attributes suggest mostly small pits probably intended for use by a single family or small group. Three possible exceptions, however, were Features 4902, 4931, and 5568, all of which were about 1.0 to 1.1 m in maximum diameter with depths that ranged from roughly 0.6 to 0.7 m. All three of these larger pits accommodated volumes between 0.32 and 0.47 m^3; these pits were about 50–100 percent larger than the pit with the next highest volume (0.22 m^3). The large size of these features might suggest a function of preparing food for larger groups, such as a large kin group (e.g., a patio group) or communal congregation. Although the size of these features would qualify them as *hornos*, they lacked a carbonized rind; therefore, we did not include them in the *horno* category.

All of the roasting pits in this subtype were characterized by oxidized walls; one (Feature 494) also included oxidized soil in the fill. Some combination of charcoal, ash, and FCR also was present in the fill portions of these features, suggesting that they probably were not cleaned (or were incompletely cleaned) after their final use; thermal debris in the bases of these features was probably left in situ. One salient exception to this pattern was Feature 7560, which contained no thermal debris or artifacts in its fill, implying that it had been thoroughly cleaned of thermal debris after its final use and was later filled in with culturally sterile sediments. Daub fragments were recovered in two features (Features 3699 and 4931).

All but two of these features contained artifacts, including ceramics, flaked stone debitage, ground stone, and faunal bone. Artifact densities (calculated for 17 features) varied widely among the excavated features, ranging from 47 to 3,048 artifacts per m^3, with a mean of 1,042 artifacts per m^3. The presence of dense artifact debris suggests that these features were reused as disposal areas after their final use as thermal features, although some of these remains might have been deposited in the feature fill as a result of postdepositional sedimentation. Flotation samples from 8 roasting pits were analyzed. The reproductive parts found in these samples included the seeds and fruits (melon-loco, cheno-ams [Chenopodiaceae/Amaranthaceae], and maize cupules) most frequently found in the overall macrobotanical inventory from the site. Monocotyledon parts were found in only two samples, suggesting that the processing of agaves or other monocots was not a focus of these pits. Additionally, two pits contained mesquite seeds, suggestive of bean roasting.

Two small roasting pits (Features 493 and 494) excavated side by side during Phase 1 in Stripping Unit 486 (see Figure 78) deserve special mention. Both pits were basin shaped, measuring 50 cm in diameter and between 7 and 12 cm deep. Each contained an unworked stone slab (each approximately 30 by 12 by 12 cm) that just fit within the pit, and both were oriented in the same north-to-south direction (Figure 105). The function of these slabs and pits is unknown.

Date ranges were inferred for 15 of the excavated features. The inferred date ranges suggest that roasting pits were constructed and used at the site over a long span of time from the Late Archaic or Early Formative period through the end of the Late Formative period. Probably, most of them were used during the Middle Formative period, however, given the prevalence of structures and features assigned to that period in Locus D.

Table 24. Basic Roasting Pits Excavated in Locus D

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Comments
415	outside	not dated	all	excavated whole, 1 level, 1/4-inch screened	0.52 × 0.51 × 0.09	circular	basin	0.012	0.012	935	Identified in profile in Trench 152; remaining fill was excavated.
446	2493	not dated	all	excavated whole, 1 level, 1/4-inch screened and flotation sample	0.70 × 0.70 × 0.33	irregular	irregular	nd[b]	nd[b]	903	Exposed in profile in Trench 145; remaining fill was excavated.
457	outside	A.D. 500–1450	all	excavated whole, 3 levels, 1/4-inch screened	0.75 × 0.75 × 0.50	circular	conical	0.124	0.124	885	Exposed in profile in Trench 153.
491	outside	A.D. 500–1450	all	excavated whole, 1 level, 1/4-inch screened	0.63 × 0.55 × 0.50	ovate	cylindrical	0.136	0.136	888	
493	6789	not dated	all	excavated whole, 1 level, all fill collected for flotation	0.50 × 0.50 × 0.12	circular	basin	0.010	0.010	902	Unworked tabular cobble on base; oxidized soil in fill.
494	6789	not dated	all	excavated eastern and western 1/2, 1 level, fill collected for flotation	0.50 × 0.46 × 0.07	circular	basin	0.008	0.008	848, 849	Unworked tabular cobble on base; oxidized soil in fill.
572	3006	not dated	all	excavated whole, 1 level, fill collected for flotation	0.50 × 0.50 × 0.30	circular	basin	0.042	0.042	904	
1597	1577	not dated	part	excavated eastern 1/2, 1 level, 1/4-inch screened	0.48 × 0.60 × 0.07	ovate	basin	0.005	0.003		Upper portion removed during mechanical stripping.
1802	1592	not dated	part	excavated southwestern 1/2, 1 level, 1/4-inch screened	0.50 × 0.50 × 0.11	circular	basin	0.008	0.004		Fill exhibited Stage I $CaCo_3$ filament development; soil development indicates Archaic age.
3067	1759	A.D. 835–1450	all	excavated southern 1/2, 2 levels, 1/4-inch screened; excavated northern 1/2, 1 level, 1/4-inch screened	0.67 × 0.65 × 0.35	circular	cylindrical	0.120	0.120		Oxidized walls; FCR in fill; pit intrusive to Feature 3679.
3426	unknown	A.D. 500–1450	part	excavated western 1/2, 1 level, 1/4-inch screened	1.00 × 0.80 × 0.14	irregular	basin	0.059	0.029		Oxidized walls; large rocks at base associated with Pleistocene riverbed; no FCR.

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Comments
3642	1883	A.D. 1–1450	part	flotation sample collected from fill	? × ? × 0.25	unknown	unknown	unknown	unknown		Size and shape not discernible because of disturbance.
3669	1759	A.D. 685–1450	all	excavated western 1/2, 1 level, 1/4-inch screened; excavated eastern 1/2, 1 unscreened level	0.72 × 0.55 × 0.23	ovate	cylindrical	0.071	0.071		Oxidized walls; FCR abundant throughout fill; straight.
3696	3035	A.D. 835–915	part	excavated eastern 1/2, 2 levels, 1/4-inch screened	0.92 × 0.77 × 0.40	ovate	cylindrical	0.222	0.111		Thick, oxidized rind; trash filled.
3699	3035	not dated	part	flotation sample collected from fill; no other excavation	0.70 × 0.70 × 0.10	circular	unknown	unknown	unknown		Not enough excavation to identify cross section; daub in fill.
3963	3035	A.D. 1–1450	part	excavated western 1/2, 1 unscreened level, artifacts collected	0.74 × 0.60 × 0.21	ovate	basin	0.049	0.024	5827	Slightly oxidized; abundant FCR.
4050	3035	A.D. 1–1450	part	excavated southern 1/2, 1 unscreened level, artifacts collected	0.85 × 0.80 × 0.42	circular	basin	0.149	0.075		Slightly oxidized walls; abundant FCR; pit base lined with cobbles.
4053	3035	A.D. 1–1450	part	excavated northern 1/2, 1 unscreened level, artifacts collected	0.80 × 0.75 × 0.20	ovate	basin	0.063	0.031	5856	Heavily oxidized walls; abundant FCR, ash, and charcoal; intrusive to Feature 5809.
4635	6795	A.D. 1–1450	all	excavated whole, 1 level, all fill collected for flotation, artifacts collected	0.33 × 0.33 × 0.12	circular	basin	0.007	0.007	6235	Pit base oxidized.
4902	8661	A.D. 1–1450	part	excavated southern 1/2, 1 unscreened level, artifacts collected	1.10 × 0.77 × 0.70	ovate	cylindrical	0.465	0.233	3211	Heavily oxidized walls; abundant FCR.

continued on next page

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Comments
4931	8661	A.D. 985–1315	part	excavated eastern 1/2, 2 levels: upper unscreened (artifacts collected), lower 1/4-inch screened	1.12 × 0.96 × 0.56	ovate	basin	0.315	0.158	6233	Heavily oxidized walls; abundant FCR in lower fill; daub in fill.
4954	6801	not dated	part	excavated southern 1/2, 1 unscreened level	0.47 × 0.60 × 0.30	ovate	basin	0.022	0.011		Slightly oxidized walls; 6 pieces of FCR; no artifacts observed.
5568	6799	A.D. 1–1450	part	excavated southern 1/2, 1 unscreened level, artifacts collected	1.10 × 1.00 × 0.70	ovate	basin	0.403	0.201		Abundant FCR in lower fill including ground stone and large rock at base of pit.
7560	5042	A.D. 500–1450	all	excavated whole, 1 level, 1/4-inch screened	0.83 × 0.56 × 0.41	ovate	basin	0.100	0.100		Intrusive to Feature 5513; no thermal debris or artifacts.

Note: For a definition of basic roasting pits, see text.

Key: FCR = fire-cracked rock; nd = no data; PD = Provenience Designation; SU = Stripping Unit.

[a] Length × width × depth.

[b] Pit volume not calculated because of irregularity in feature shape.

Figure 105. Photograph of Features 493 and 494, roasting pits associated with stone slabs.

Bell-Shaped Roasting Pits

Eight bell-shaped thermal pits were excavated in Locus D (Table 25), most of which were clustered in a relatively small area in the western part of the locus (see Figures 81 and 82); two were excavated during Phase 1 (Features 714 and 771), and six were excavated during Phase 2 (Features 3756, 4871, 5612, 7827, 8798, and 10,507). Four of the features were completely excavated, and four were partially excavated. One of the partially excavated features (Feature 714) was exposed in profile during Phase 1 trench excavations: it was illustrated in profile, and all visible artifacts were collected, but it was not further excavated.

Most of these features varied from about 0.5 to 1.0 m in depth; maximum diameters ranged from 0.8 to 1.3 m. The mean depth was 0.71 m and the mean maximum diameter was 0.99 m. One exception was Feature 5612 (found under the floor of a structure, Feature 3817, and containing a burial, Feature 2679, in its upper portion), which was larger than the others: it was about 1.3 m in diameter, with a depth of about 1 m (Figure 106). Also large was Feature 3756, which had a maximum diameter of 1.12 m and a depth of 0.96 m. Overall, these data imply generally small pits that presumably were used by a single family. However, larger Features 714, 3756, and 5612 may have been constructed for use by a larger group composed of multiple families or for preparation of large communal meals (e.g., for feast congregations). More-detailed comparative information will be needed, however, to correlate variability in pit sizes with household size or other demographic attributes.

All features had oxidized walls, but the fill contents were inconsistent. Most of these features contained a variable mix of charcoal, ash, FCR, and cobbles, but only two contained daub fragments (Features 3756 [found capped under the floors of two structures, Features 7558 and 7559] and 8798) (Figure 107). Feature 3756 contained noteworthy large quantities of FCR (Figure 108). The average artifact density in three features (excluding those for which volumetric measurements were not possible) was 3,393 artifacts per m^3. Ceramics, flaked stone, ground stone, and faunal bone were generally prevalent, most of which probably entered the fill of these features as a result of postabandonment trash deposition or infilling with culture-bearing sediments. Flotation samples from all eight bell-shaped roasting pits were analyzed and indicated that a wide variety of edible plants were cooked. Sotol tissue found in one pit probably was residue from roasting of the heads. Yucca seeds suggested potential fruit roasting. Monocotyledon parts probably belonged to members of the agave family.

Bell-shaped *nonthermal* pits frequently date to the Archaic period in southern Arizona; however, the inferred date ranges for these thermal features at Mescal Wash suggest use during the Early and Middle Formative periods, primarily the latter. The inferred date ranges for four of seven dated features suggest use during a time span from about A.D. 650 to 1000; all of these features probably were used during the Middle Formative A period

Table 25. Bell-Shaped Roasting Pits Excavated in Locus D

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Aperture and Depth[a] (m)	Maximum Diameter (m)	Plan	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Comments
714	6787	A.D. 500–1450	part	exposed in Trench 641 and profiled; artifacts collected from feature profile	1.00 × 1.00 × ?	1.2	circular	unknown	unknown		Exposed portion of feature was simply grab-sampled for artifacts; oxidized walls noted.
771	outside	not dated	all	excavated all, 1 level; 1/4-inch screened	0.70 × 0.55 × 0.50	0.86	ovate	nd[b]	nd[b]		Discovered in Trench 643; oxidized walls noted; possibly Archaic as 2 San Pedro point bases were recovered.
3756	1759	A.D. 685–740	all	completely excavated	0.80 × 0.66 × 0.96	1.12	ovate	0.401	0.401		FCR, burnt daub, and oxidized walls noted; ash and charcoal in the bottom 30 cm.
4871	6801	A.D. 990–1160	part	excavated northern 1/2, 1 level, unscreened, artifacts collected	0.72 × 0.72 × 0.78	0.76	circular	0.415	0.208	6227	Oxidized walls; abundant FCR in lower pit fill; basin metate in base of pit.
5612	3006	A.D. 650–950	all	excavated all, 1 level, unscreened, artifacts collected	0.75 × 0.65 × 1.00	1.3	ovate	nd[b]	nd[b]		Abundant ground stone; oxidized walls; associated with Feature 3817; thought to have been remodeled and reused as a roaster.
7827	1757	A.D. 660–790	part	excavated northern 1/2, 1 level, 1/4-inch screened	0.83 × 0.83 × 0.53	0.95	circular	0.305	0.153	7828	Truncated by Feature 1575; heavily oxidized walls; 5 pieces of FCR.
8798	6795	A.D. 1–865	part	excavated southeastern 1/4, 1 level, unscreened, artifacts collected	unknown	unknown	circular	unknown	unknown	8799	Capped by floor of Feature 203; burned daub present.
10,507	6801	A.D. 600–1000	all	excavated all: western 1/2, 2 levels, 1/4-inch screened; eastern 1/2, 1 level, 1/4-inch screened	0.60 × 0.60 × 0.50	0.75	circular	0.183	0.183	10515	Oxidized walls noted; burned dirt in fill; abundant faunal bone present; 2 points recovered.

Key: FCR = fire-cracked rock; nd = no data; PD = Provenience Designation; SU = Stripping Unit.

[a] Length × width × depth.

[b] Volumes could not be calculated because of irregular shape of feature.

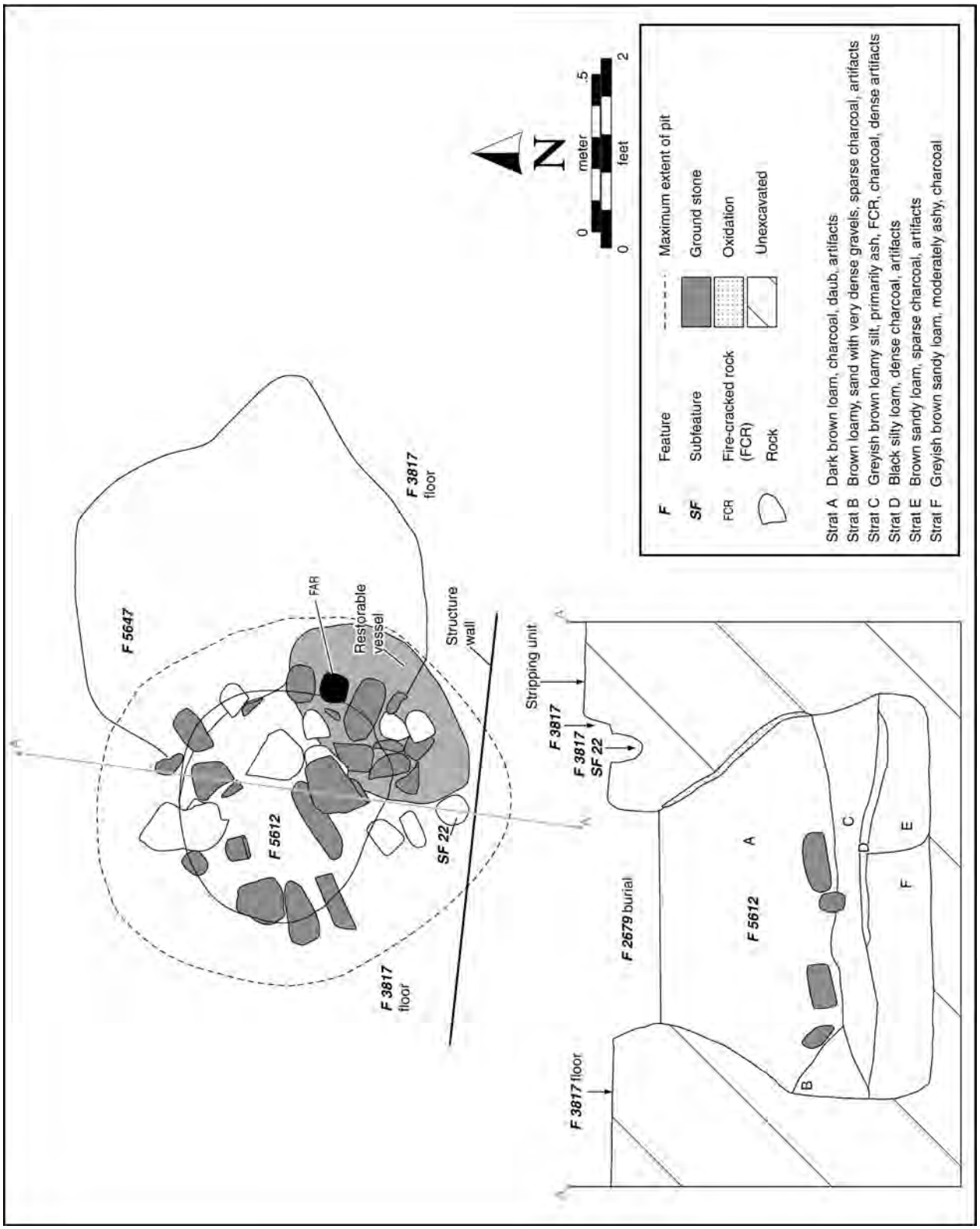

Figure 106. Plan map and profile of Feature 5612, a large, bell-shaped roasting pit found underneath the Feature 3817 floor.

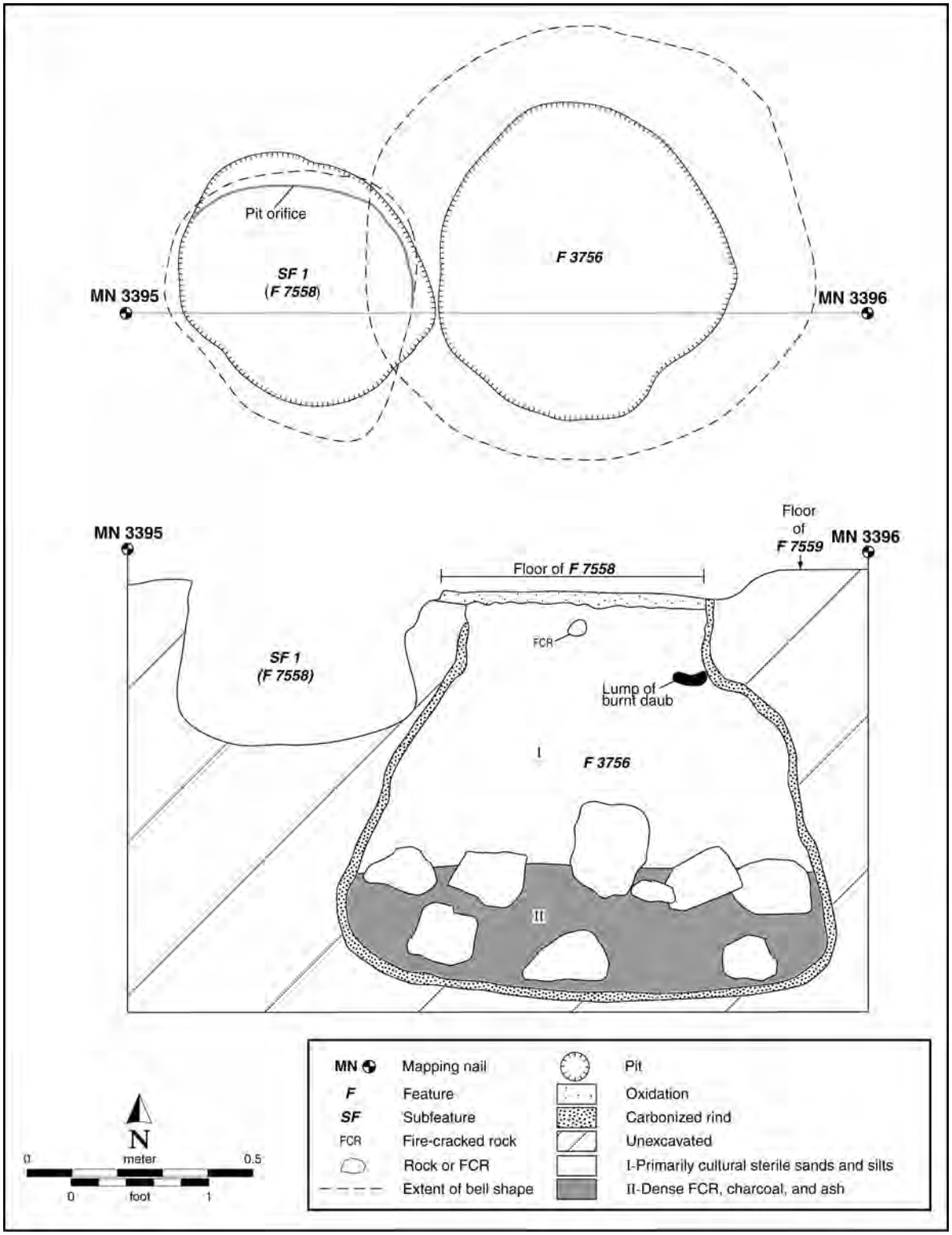

Figure 107. Plan map and profile of Feature 3756, a bell-shaped roasting pit found capped under the floor of Feature 3501.

Figure 108. Photograph of Feature 3756, showing dense fill of FCR.

(ca. A.D. 750–950)—the dominant occupation component in Locus D. This begs the question whether these Middle Formative features were Late Archaic/Early Formative storage pits reconstructed for use as roasting pits.

Rock-Lined Roasting Pits

Six extramural thermal pits found in the eastern portion of Locus D (Table 26; see Figures 83 and 84) were classified as rock-lined roasting pits. One (Feature 432) was investigated during Phase 1, and the other five were investigated during Phase 2. Five were fully excavated and one was partially excavated. The partially excavated feature was bisected.

The defining characteristic of these features was the presence of one or several tiers of rocks extending from the bases of the pits. Feature 4120, for example, consisted of a basin-shaped pit with 4–5 courses of rocks lining both the base and the side walls (Figure 109). Two rocks appear to have been placed at the base of the pit, with successive encirclin layers added on top, slightly overlapping one another. The multiple courses of rock prevented oxidation of the sides and base of the pit. In contrast, Feature 3366 contained only a few large rocks on the base of the pit (Figure 110), which exhibited deep red oxidization on the side walls (Figure 111). The relatively small number of rocks did not shield the base and side walls of the pit from heat exposure, resulting in heavy soil discoloration and oxidation. The largest of the six features, Feature 3668, contained a dense lining of rock slabs on the walls, with larger rocks (several of which were boulders) placed on the base (Figures 112 and 113).

These features ranged from circular to ovate in plan with basin-shaped (n = 4) or cylindrical (n = 2) cross-sectional profiles. The mean maximum diameter was 0.96 m; the mean depth was 0.61 m and the average estimated pit volume 0.49 m^3. These pits thus tended to be wider in plan but shallower than the bell-shaped roasting pits described above. A comparison of pit dimensions suggests three possible size classes. One small pit (Feature 432) was 0.46 m in diameter with a depth of 0.33 m. Three medium-sized pits (Features 3366, 3878, and 4120) had maximum diameters between 0.8 and 0.9 m, with depths ranging from 0.35 to 0.66 m. The two larger pits (Features 3668 and 4702) exhibited maximum diameters of roughly 1.4 m and depths of about 1.0 m. We estimate that the pit volumes were less than 0.25 m^3 for the inferred small and medium-sized pits, but the larger ones probably accommodated a volume of 0.9–1.5 m^3, which underscores the extent of the size differences between the two larger pits and the four smaller ones. These size differences could reflect variability in family or group size or the variable use of rock-lined roasting pits for both household-level (smaller) and communal-level (larger) cooking activities. The sample is too small to infer size classes with confidence, however, and thus a larger sample will be needed to corroborate these modalities.

Each of the six features contained FCR and charcoal in the feature fill, along with varying densities of ground stone, ceramics, and flaked stone debitage, most of which

Table 26. Rock-Lined Roasting Pits Excavated in Locus D

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Comments
432	3006	not dated	all	excavated whole, 1 level, 1/4-inch screened	0.46 × 0.46 × 0.33	circular	cylindrical	0.06	0.06	837	FCR, charcoal in fill.
3366	3006	A.D. 700–1450	all	excavated whole, 2 levels, 1/4-inch screened	0.86 × 0.77 × 0.35	circular	basin	0.12	0.12		Oxidized walls; FCR, charcoal in fill; trash filled; intrusive to Feature 3681.
3668	1869	A.D. 835–915	all	excavated west 1/2, 6 levels, 1/4-inch screened; excavated east 1/2, 1 level, grab-sampled	1.40 × 1.20 × 1.00	ovate	basin	0.88	0.88	3321, 3382	Thick, oxidized rind as in an *horno*; pockets of vitrified soil, crumbly FCR, and charcoal throughout fill.
3878	1759	A.D. 860–1450	all	excavated whole, 2 levels, 1/4-inch screened	0.80 × 0.72 × 0.40	ovate	basin	0.12	0.12	2418	Oxidized walls; FCR and charcoal in fill; inverted trough metate at pit bottom.
4120	3008	A.D. 500–1450	all	excavated north and south 1/2, 1 level, grab-sampled	0.80 × 0.80 × 0.66	circular	basin	0.25	0.25	2499	Filled with ash, charcoal, and FCR; no faunal bone present.
4702	1759	A.D. 600–865	part	excavated northern 1/2, 4 levels, 1/4-inch screened	1.45 × 1.45 × 0.92	circular	cylindrical	1.52	0.76	5018	Heavily oxidized walls; base lined with large cobbles; FCR and charcoal in fill; sampled for archaeomagnetic dating.

Key: FCR = fire-cracked rock; nd = no data; PD = Provenience Designation; SU = Stripping Unit.

[a] Length × width × depth.

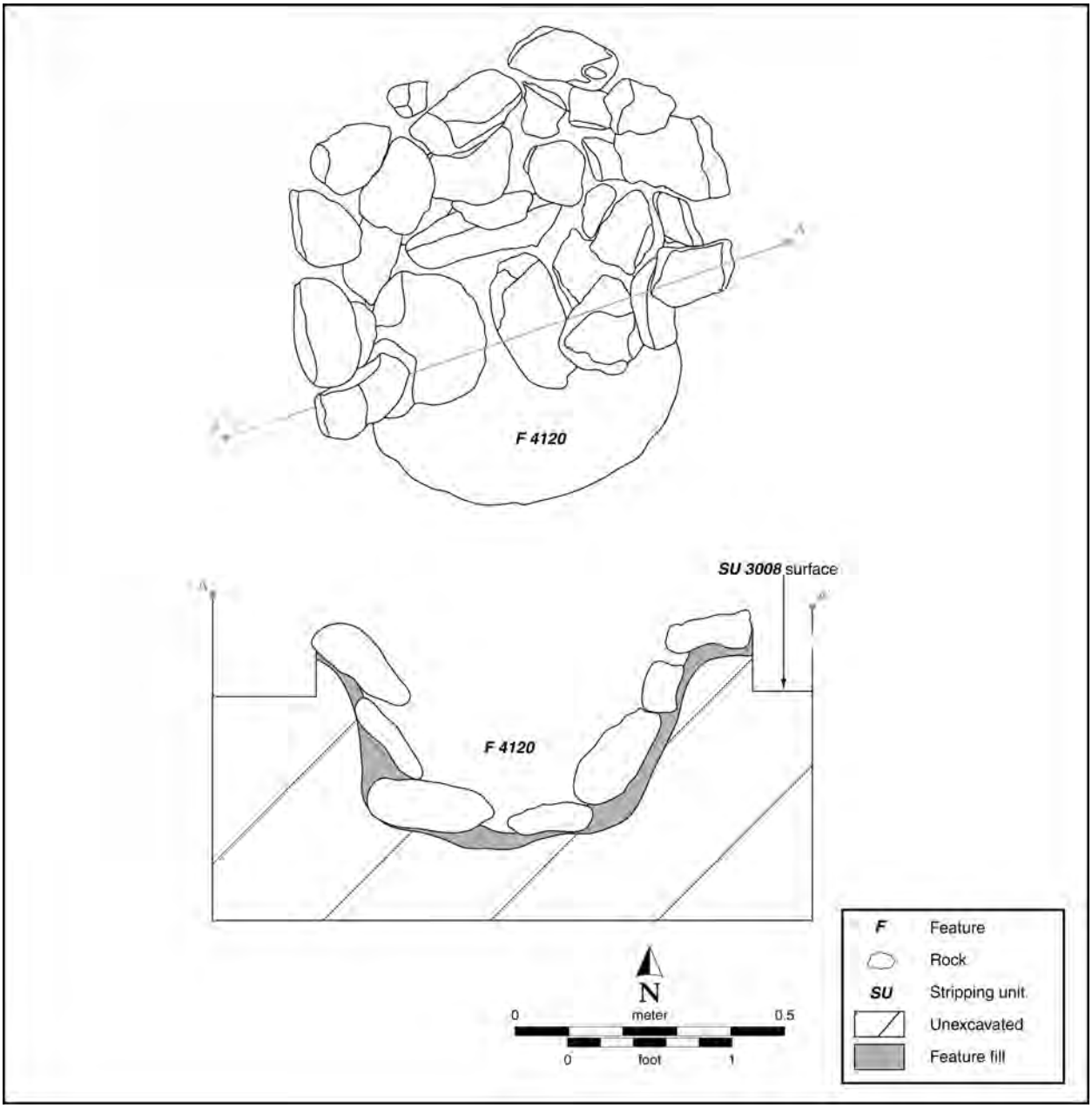

Figure 109. Plan map and cross section of Feature 4120, a rock-lined roasting pit.

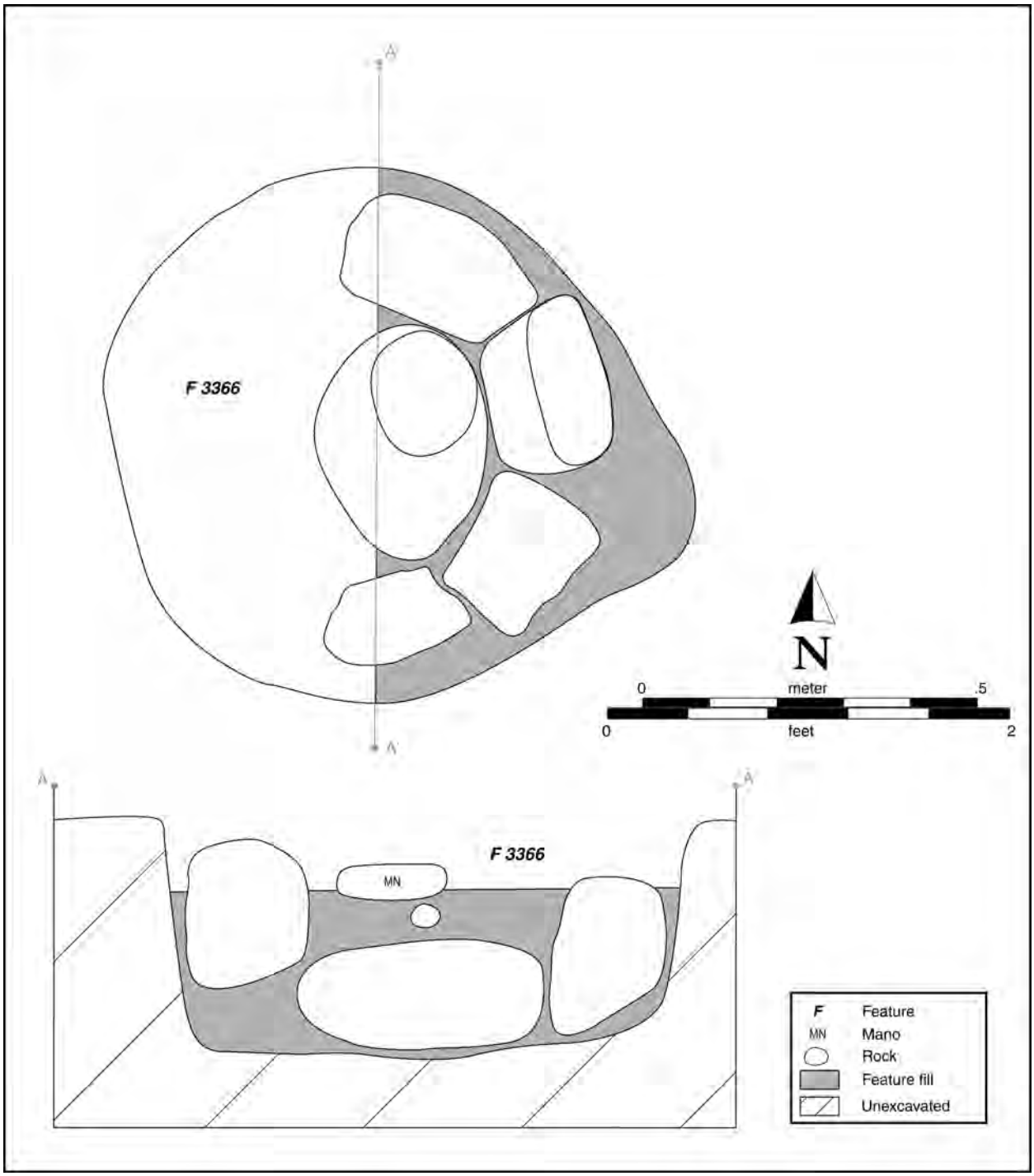

Figure 110. Plan map and profile of Feature 3366, a rock-lined roasting pit.

Figure 111. Photograph of Feature 3366, showing red oxidized walls.

probably entered the fill as a result of postabandonment trash deposition or natural infilling. Four of the six features also contained visible lenses or patches of ash, and all but one contained faunal bone, which was mostly unburned and probably unassociated with the pit's thermal use. Flotation samples were analyzed from all features except Feature 3366. Cholla seeds had a higher ubiquity in the rock-lined roasting pit samples than in those from other thermal-feature types, suggesting that cholla buds were roasted in the pits. Monocotyledon tissues were present at lower ubiquity levels than noted for other types of roasting pits, suggesting that agave roasting was not the typical use for these pits.

The average artifact density was 638 artifacts per m^3, with a range from 328 to 1,080 artifacts per m^3. For reasons we are unable to determine, however, the rock-lined roasting pits contained lower artifact densities than the bell-shaped thermal pits described above. Perhaps they were less frequently or less intensively reused as trash pits. Inferred date ranges for five of the six features suggest possible spans of use ranging from the latter part of the Early Formative through the Middle Formative period, but probably most of them were used during the latter period. In fact, the tops of several of these features were found at or just below the nonstripped site surface, suggestive of the Late Formative, if not the protohistoric period. If the features were indeed used during the Late Formative period, the lower artifact densities are easily explained by the fact that the sparse and scattered settlement at that time accumulated relatively little trash.

Hornos

Hornos are defined as thermal pits with diameter greater than 1 m and coated with a thick carbonized rind along the side walls and base. They tend to be larger than most other thermal pits and, therefore, were probably used for large-scale cooking activities for large groups or communal-level events. Ethnographic and archaeological research suggests that they were often were used for roasting agave, but other cooking functions were also possible. Two *hornos* (Features 3818 and 4220) situated in different areas of Locus D were partially excavated (bisected). They were circular in plan view and roughly comparable in maximum diameter (1.7 and 2.0 m) and depth (0.86 and 0.92 m). However, they differed in cross-sectional profile: Feature 3818 was cylindrical and exhibited steep vertical side walls grading into a rounded base, forming a basin shape (Figure 114); Feature 4220 exhibited a truncated-conical profile, i.e., inward-sloping side walls that graded into a vertical trajectory in the deeper portion of the pit, with a flat base (Figure 115).

In accordance with our definition, both features contained heavily oxidized side walls with a hard rind measuring 5–10 cm in thickness; in Feature 4220, the rind extended into the basal section of the pit but was not present on the bottom. The fill contents also differed between the two pits. The fill of Feature 4220 was essentially a single stratum of light grayish brown fine silt and sand, dense FCR, cobbles, dispersed charcoal, and ash, possibly suggesting that it had been filled with trash and thermal debris soon after its final use. In contrast, Feature 3818 contained multiple strata indicating different postabandonment depositional episodes, the deepest two of which consisted of charcoal (with little sediment) overlying ash and large rocks (probably in situ) (see Figure 114); this pit probably was not cleaned after its final use and was left exposed afterward, resulting in postdepositional infilling.

The two features contained moderate densities of artifacts (approximately 200–500 artifacts per m^3), most of

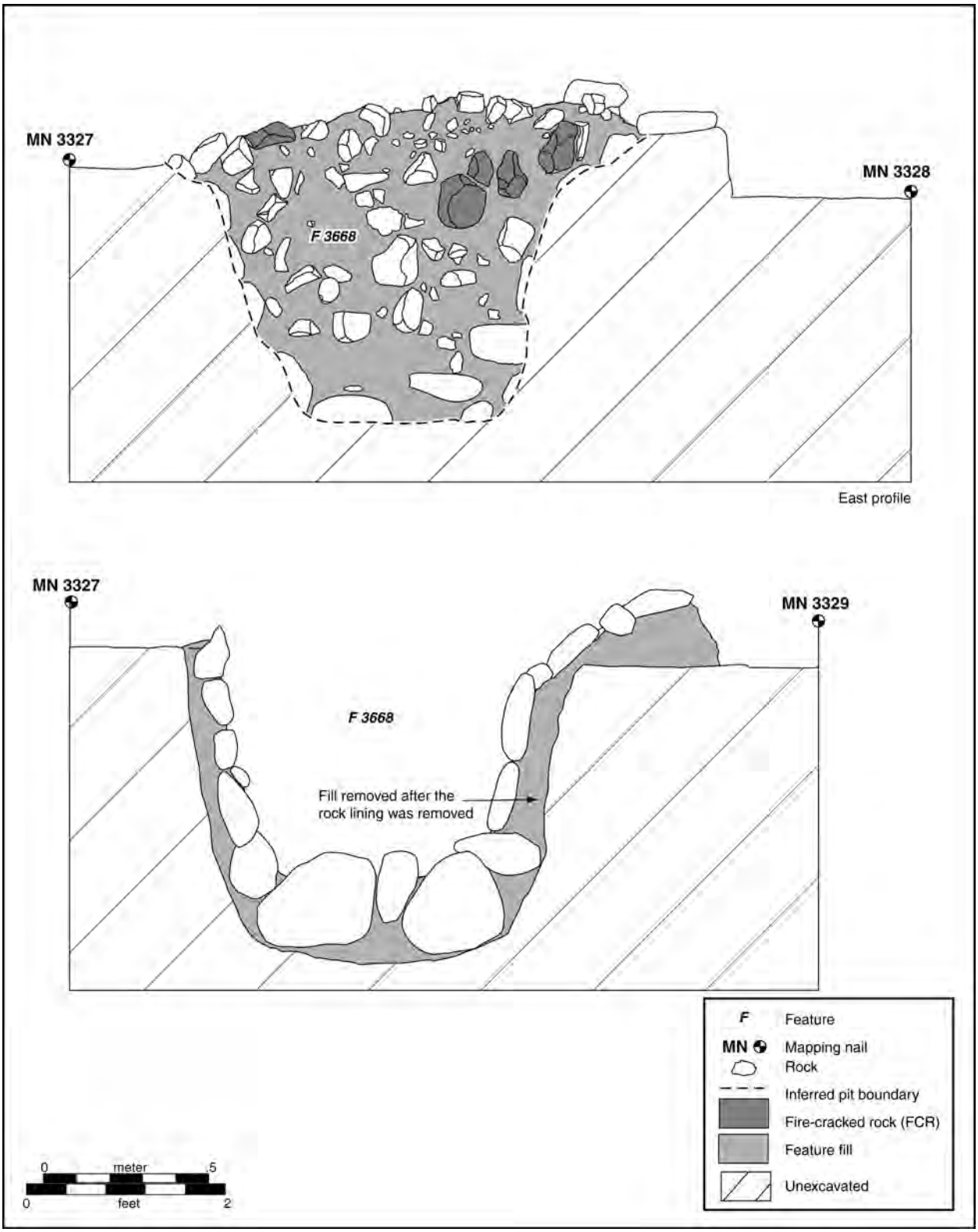

Figure 112. Profile and cross section of Feature 3668, a large rock-lined roasting pit.

Figure 113. Photograph of Feature 3668, showing elaborate rock lining.

which probably entered the feature fill as a result of trash deposition or postabandonment infilling with culture-bearing sediments. Flotation samples from each of the *hornos* were analyzed. Although the overall taxon richness was low, the ubiquity of monocotyledon parts in the samples was relatively high. This indicates a focus on the roasting of members of Agavaceae, in particular agave, sotol, and beargrass.

One AM sample taken from the carbonized rind of Feature 3818 returned a date range of A.D. 935–1015 or 1210–1690, but additional chronological evidence is more consistent with the former date range, suggesting likely use during the very late Middle Formative A period or the Middle Formative B period. Both features probably were used during the site's peak era of occupation in the Middle Formative period.

Firepits

Firepits are defined as shallow pits with oxidized walls, ash deposits, and few or no FCR fragments. These thermal features might have functioned as informal and expediently prepared hearths and possibly were intended for generating heat for warmth rather than for cooking activities. Five features (Features 1555, 1794, 4649, 5520, and 10,692) excavated in Locus D (all during Phase 2) were classified as firepits (Table 27). Three firepit features were completely excavated, and two others were bisected to expose the feature profile; all five were excavated as a single level.

The five features were circular or ovate in plan with basin-shaped profiles. Size measurements indicate a range of maximum diameters from 0.2 to 1.2 m, with shallow depths (0.04–0.25 m). Pit volumes tended to be very small, ranging from 0.007 to 0.065 m^3. All of the features contained ash in their fill, and three of the four contained charcoal fragments. One feature (Feature 1794) contained a small amount of FCR. Artifact densities were generally moderate to high (400–1,611 artifacts per m^3), with the exception of Feature 5520, which contained no artifact inclusions. Hence, the four features that contained artifacts were probably used as trash receptacles after their final thermal use. Fill artifacts were mostly ceramics and flaked stone debitage, with a few ground stone fragments and faunal bones. Feature 5520, which contained no artifacts (despite full excavation), probably was not reused for trash deposition after its final thermal use and was filled in by noncultural sediments.

None of the five features was subjected to chronological analysis, and date ranges were inferred at a very general level based on associations with more-precisely dated features. Features 1555 and 1794 were broadly determined to be Formative period in age (post–A.D. 1); Feature 4649 was inferred to have been used after A.D. 500, Feature 5520 after A.D. 735, and Feature 10,692 between 2000 B.C. and A.D. 600. Probably, all of these features were used during the Middle Formative period.

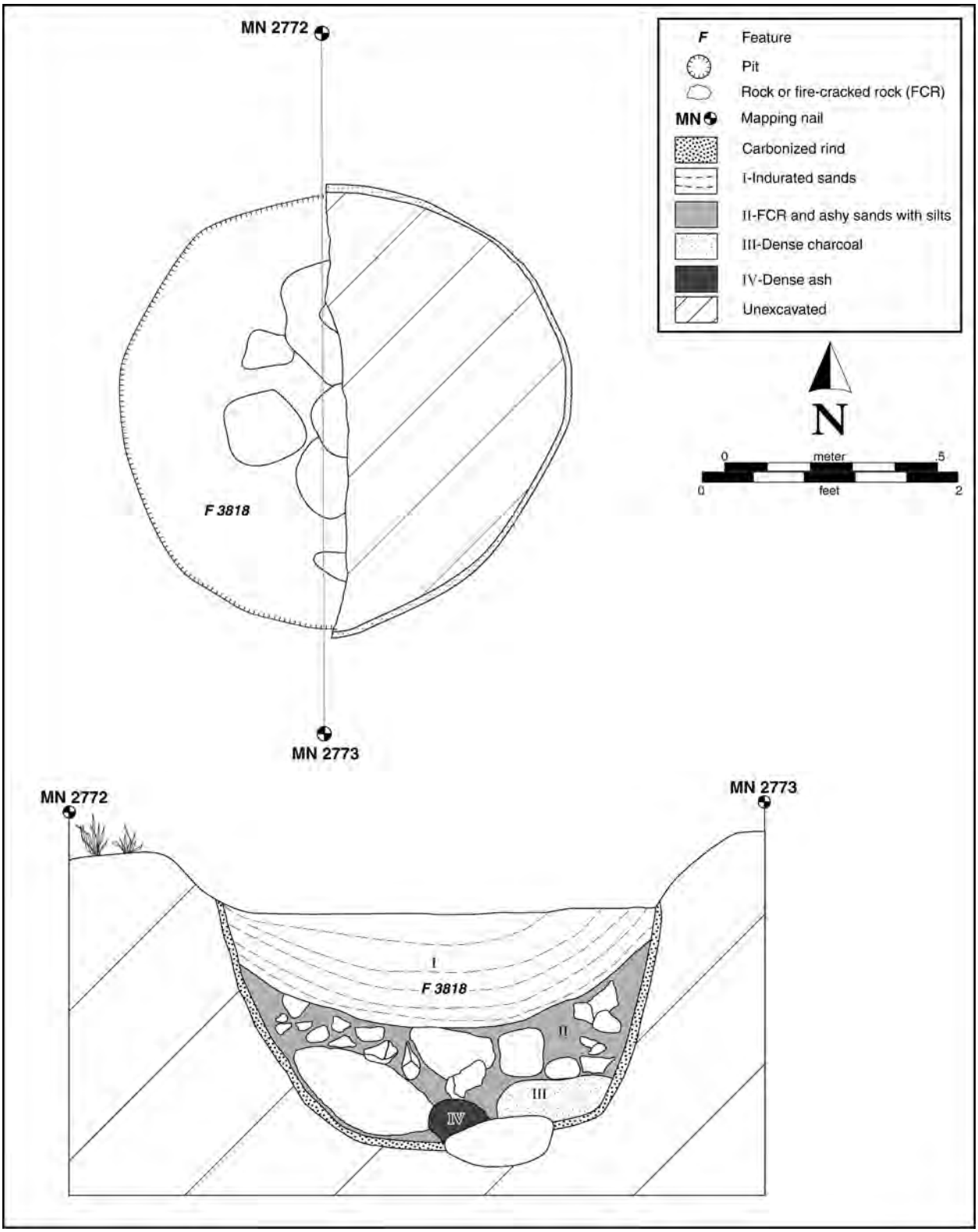

Figure 114. Plan map and profile of Feature 3818, an *horno.*

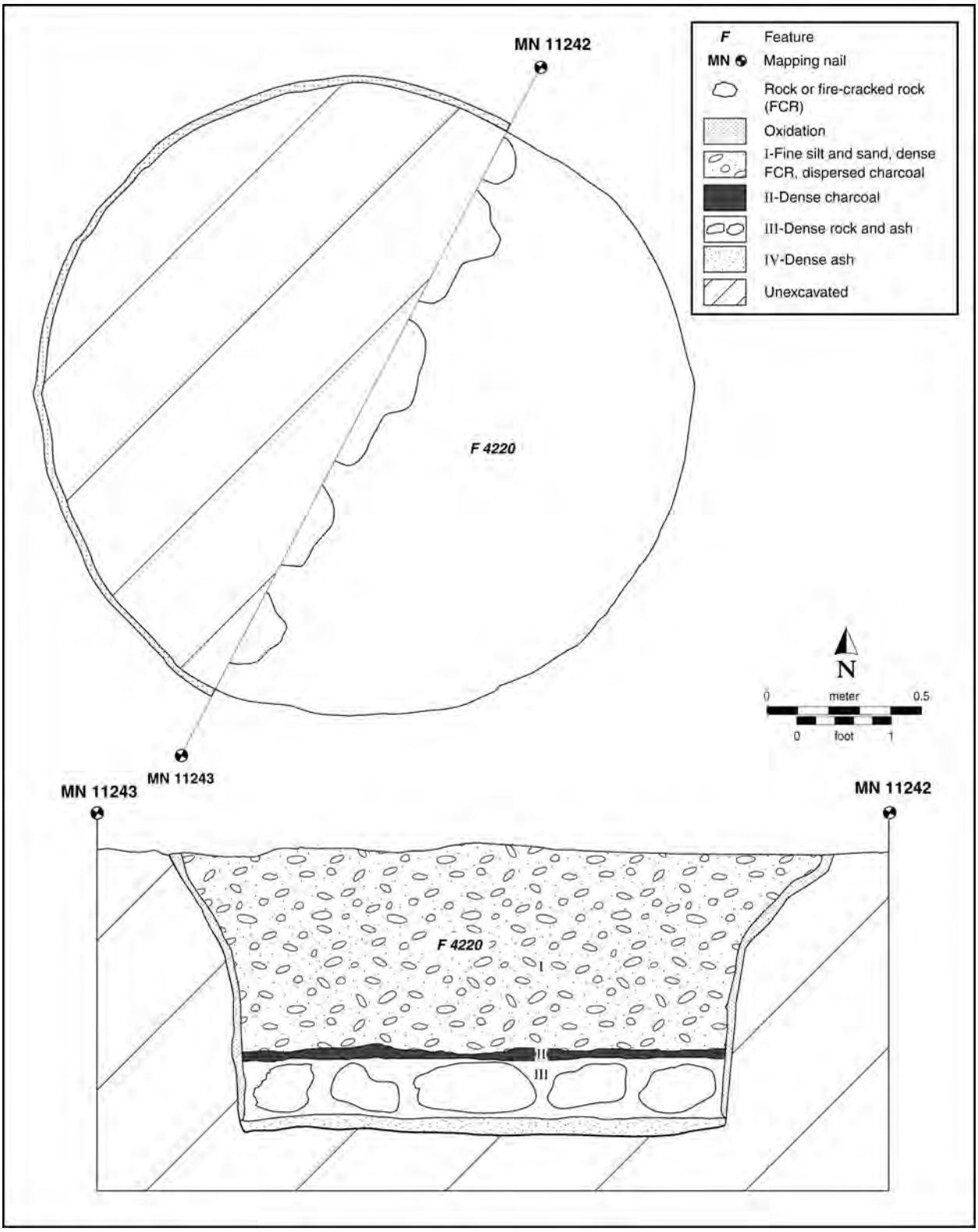

Figure 115. Plan map and profile of Feature 4220, an *horno*.

Table 27. Firepits Excavated in Locus D

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Comments
1555	1543	A.D. 1–1450	part	excavated southern 1/2, 1 level, 1/4-inch screened	0.99 × 0.90 × 0.14	circular	basin	0.065	0.033	11,321	Slightly oxidized walls and base; low artifact density.
1794	1592	A.D. 1–1450	part	excavated northern 1/2, 1 level, 1/4-inch screened	1.20 × 0.95 × 0.10	ovate	basin	0.060	0.030	11,300	Highly oxidized walls; trash filled; FCR in fill.
4649	6795	A.D. 500–1450	all	excavated whole, 1 level, unscreened, artifacts collected	0.36 × 0.29 × 0.25	ovate	basin	0.007	0.007		No charcoal present.
5520	unknown	A.D. 735–1450	all	excavated whole, 1 level, unscreened	0.17 × 0.17 × 0.06	circular	basin	nc[b]	nc[b]		Truncated Feature 784; no artifacts.
10,692	6801	2000 B.C.–A.D. 600	all	excavated whole, 1 level, all fill collected for flotation	0.30 × 0.22 × 0.04	ovate	basin	0.008	0.008	10,693	Connected with Feature 10,507.

Key: FCR = fire-cracked rock; nc = not calculated; PD = Provenience Designation; SU = Stripping Unit.

[a] Length × width × depth.

[b] Volume not calculated because of irregular pit cross section or lack of data.

Extramural Hearth

One extramural hearth (Feature 1556) was partially excavated in Locus D. The feature was similar in size and content to the many intramural hearths excavated at the site. This hearth might have been situated within an undetectable ramada or outdoor kitchen area, but we cannot rule out that it was an intramural hearth for which the structure footprint was no longer recognizable.

Like many intramural hearths excavated at Mescal Wash, Feature 1556 was formally constructed with oxidized plastered walls. It was ovate in plan and basin shaped in cross section. This feature was small, with a maximum diameter of 0.75 m, a depth of 0.11, and an estimated volume of about 0.01 m^3, suggesting probable use to prepare meals for a single family or household. The feature fill contained charcoal and ash, along with a very small number of artifacts (two sherds and one flaked stone artifact). The hearth probably was cleaned regularly and was not extensively used as a trash receptacle after its final thermal use, given the dearth of artifacts. This feature was not subjected to chronological analyses but presumably was used during the Middle Formative period, given the overall prevalence of features assigned to this period in Locus D.

Rock Clusters

These features consisted of concentrations of rocks of various sizes, including FCR and other thermal debris, without visible pit outlines or other evidence of subsurface depth. They probably marked the locations of surface-level thermal-refuse deposits generated from one or multiple cleanout episodes of roasting pits or other thermal pits. Four features (Features 1582, 3579, 3672, and 3673) were classified as rock clusters during the Phase 2 investigations. One feature was fully excavated, one was partially excavated, and for the other two features, only a flotation sample was collected (Table 28).

Metric dimensions were recorded for only two of the four features (Features 1582 and 3579). Feature 3579 encompassed a relatively large area of roughly 1.8 by 1.5 m, but Feature 1582 was roughly half that size (0.9 by 0.8 m). Both features might have encompassed cleanout refuse from a larger thermal pit or from multiple cleanout episodes.

Each of the features was composed of cobbles, many of which were rocks with visible evidence of thermal alteration. Charcoal was evident in the fill from Features 1582 and 3579; the latter also included visible deposits of ash. A small amount of sherds and flaked stone debitage was present in feature matrices from all four features, and ground stone and faunal bone were present in two others. These materials may have been deposited as trash in the thermal pits before the cleanout episodes or may have been deposited within the surface debris after the cleanout. Feature 3579 was assigned to the Middle Formative B period (A.D. 950–1150), but the other three could be defined only vaguely as Formative period deposits (post–A.D. 1). Feature 3579 was immediately south of Feature 11,342, an activity surface (see below), and the two features may have been functionally related to each other.

Extramural Nonthermal Pits

In total, 117 extramural nonthermal pits were either partially excavated (n = 76) or completely excavated (n = 41) during Phases 1 and 2. These nonthermal pits (which exclude burials) were classified into one of four types: bell-shaped pits, borrow pits, caches, and a more general and broadly encompassing nonthermal-pit category. Nonthermal bell-shaped pits exhibited a narrow orifice grading into a wider area in the lower portions of the pit, creating a bell-shaped cross-sectional profile. The general nonthermal-pit category is inclusive and encompasses a broad range of pit sizes, shapes, and other attributes. We discuss these two nonthermal pit categories separately in the following sections.

Nonthermal Pits (General)

Eighty-five nonthermal pits were classified in this general category; they encompassed much variability in pit size, shape, and fill contents (Table 29). Two of these nonthermal pits were excavated in Locus D during Phase 1, and 83 were excavated during Phase 2. Thirty-one of these pits were fully excavated, and 54 were partially excavated. These pits may have been used for various functions but probably were used mainly for storage and trash containment.

Most of the nonthermal pits exhibited a circular shape (n = 45, or 53 percent) or ovate shape (n = 30, or 35 percent) in plan. One pit was subrectangular in plan, seven were irregular-shaped, and two were indeterminate. In cross section, two-thirds were basin shaped, with rounded bases (n = 58, or 68 percent). Other pits exhibited cylindrical profiles with roughly vertical side walls and flat bases (n = 13, or 15 percent), conical profiles with tapered side walls and rounded bases (n = 7, or 8 percent), or various irregular profiles (n = 5, or 6 percent); two others were indeterminate. Overall, most of these pits were either circular or ovate in plan, with basin-shaped profiles (n = 55, or 65 percent). Even so, the data underscore the variability in pit shapes, which probably reflects a lack of uniformity in nonthermal-pit designs and functions.

The maximum diameters of these pits ranged from 0.2 to 1.9 m, with a mean of 0.77 m. No modalities were

Table 28. Rock Clusters Excavated in Locus D

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Comments
1582	1537	not dated	all	excavated whole, 1 level, 1/4-inch screened	0.90 × 0.78	irregular	irregular	Cluster of rocks and ground stone (possibly thermal-pit refuse); charcoal in fill.
3579	1869	A.D. 950–1150	part	upper fill excavated as part of SU 1869, unscreened, but artifacts and flotation collected	1.80 × 1.45	ovate	unknown	Possibly thermal-pit refuse; charcoal and ash in fill; FCR cluster present.
3672	3006	not dated	part	flotation sample collected, no other excavation	unknown	unknown	unknown	Possibly thermal-pit refuse.
3673	1869	A.D. 1–1450	part	flotation sample collected, no other excavation	unknown	circular	unknown	Concentration of FCR and ash; possibly thermal-pit refuse.

Key: FCR = fire-cracked rock; PD = Provenience Designation; SU = Stripping Unit.
[a] Length × width.

Table 29. Nonthermal Pits (General) Excavated in Locus D

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
578	2493	A.D. 500–1450	all	excavated whole, 1 level, 1/4-inch screened	0.64 × 0.56 × 0.25	ovate	basin	0.047	0.047			None.
723	2493	A.D. 500–1450	part	excavated southern 1/2, 1 level, 1/4-inch screened	0.57 × 0.20 × 0.35	circular	cylindrical	nc[b]	nc[b]	817		1 shell bracelet fragment and 1 awl tip recovered.
1553	1543	A.D. 1–1450	part	excavated southern 1/2, 1 level, 1/4-inch screened	1.00 × 1.00 × 0.15	circular	basin	0.032	0.016			Charcoal flecks and ash staining present.
1808	1592	A.D. 1–1450	part	excavated southern 1/2, 1 level, 1/4-inch screened	0.80 × 0.68 × 0.17	ovate	basin	0.048	0.024			Trash filled.

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
2670	1869	A.D. 700–1450	part	excavated western 1/2, 1 level, no sample; eastern 1/2, flotation	0.70 × 0.70 × 0.39	circular	conical	0.050	0.025			None.
3203	1759	2000 B.C.–A.D. 865	part	excavated eastern 1/2, 1 level, 1/4-inch screened	0.50 × 0.40 × 0.32	ovate	basin	0.033	0.017			None.
3433	3006	A.D. 700–1450	all	excavated whole, 1 level, 1/4-inch screened	0.62 × 0.50 × 0.35	irregular	irregular	nc[b]	nc[b]			None.
3558	1759	A.D. 1–1450	part	probed north 1/2, unscreened, artifacts collected	0.77 × 0.75 × 0.32	circular	basin	0.097	nc[b]			None.
3624	3008	not dated	all	excavated whole, 1 level, 1/4-inch screened	0.30 × 0.30 × 0.18	circular	basin	0.009	0.009			Possible posthole for Feature 3569.
3631	1883	A.D. 1300–1450	all	excavated whole, 1 level, 1/8-inch screened	0.50 × 0.40 × 0.12	ovate	basin	0.013	0.013			Partial reconstructible vessel recovered.
3692	3035	A.D. 1–1450	part	grab-sampled for flotation and pollen sample	0.83 × .0.76 × 0.09	circular	basin	0.030	0.015			None.
3693	3035	not dated	all	excavated whole, 1 level, all fill collected for flotation	0.34 × 0.34 × 0.09	circular	basin	0.004	0.004			None.
3698	3035	not dated	all	excavated whole, 1 level, artifacts collected and all fill collected for flotation	0.38 × 0.38 × 0.26	circular	conical	0.010	0.010			2 hammerstones recovered.
3727	1759	not dated	part	excavated western 1/2, 1 level, 1/4-inch screened	0.50 × 0.40 × 0.14	ovate	basin	0.008	0.004			None.
3728	1759	not dated	part	excavated eastern 1/2, 1 level, collected for flotation	0.56 × 0.43 × 0.07	ovate	basin	0.009	0.004			None.

continued on next page

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
3792	1759	A.D. 500–865	all	excavated whole, 1 level, 1/4-inch screened	0.92 × 0.40 × 0.13	irregular	basin	nc[b]	nc[b]			None.
3871	3006	A.D. 700–1450	all	excavated whole, 1 level, 1/2-inch screened	0.48 × 0.48 × 0.27	irregular	irregular	nd[b]	nd[b]			None.
3872	3006	A.D. 700–1450	all	excavated whole, 1 level, 1/4-inch screened	0.67 × 0.60 × 0.11	ovate	basin	0.023	0.023			None.
3876	3006	not dated	part	excavated southern 1/2, 1 level, 1/4-inch screened	1.90 × 1.28 × 0.43	ovate	basin	0.547	0.274		8006	Possibly Archaic; flaked stone and ground stone present.
3895	3006	A.D. 700–950	all	excavated whole, 1 level, 1/8-inch screened	1.03 × 1.00 × 0.40	irregular	basin	0.216	0.216			None.
3897	3006	not dated	all	excavated whole, 1 level, all collected for flotation	0.30 × 0.25 × 0.10	ovate	basin	0.004	0.004			Mano recovered in fill.
3942	3035	not dated	all	excavated whole, 1 level, unscreened	0.39 × 0.38 × 0.10	circular	basin	0.008	0.008			FCR and charcoal flecks present.
3953	3035	not dated	all	excavated whole, 1 level, grab-sampled	0.40 × 0.36 × 0.12	circular	basin	nc[b]	nc[b]			FCR and charcoal flecks present.
3954	3035	not dated	all	excavated whole feature, 1 level, unscreened	0.70 × 0.45 × 0.23	ovate	basin	0.038	nc[b]			Charcoal present.
3960	3035	A.D. 1–1450	part	excavated western 1/2, 1 level, unscreened, artifacts collected	1.32 × 1.12 × 0.16	ovate	basin	0.124	0.620			Charcoal present.
3964	3035	not dated	all	excavated whole, 1 level, unscreened	0.19 × 0.19 × 0.12	circular	basin	0.002	0.002			None.
3965	2493	not dated	all	excavated whole feature, 1 level, unscreened	0.43 × 0.42 × 0.25	circular	basin	0.024	0.024			None.
3966	2493	not dated	all	excavated whole, 1 level, unscreened	0.38 × 0.36 × 0.24	circular	basin	0.017	0.017			None.
3967	2493	not dated	all	excavated western 1/2 and eastern 1/2, 1 level, 1/4-inch screened	0.72 × 0.70 × 0.20	circular	cylindrical	0.079	0.079			Flaked stone and faunal bone present; possibly Archaic.

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
3968	2493	A.D. 700–950	part	excavated eastern 1/2, 1 level, unscreened, artifacts collected	0.34 × 0.21 × 0.18	ovate	basin	0.007	0.003			None.
4044	2493	not dated	part	excavated eastern 1/2, 1 level, unscreened, artifacts collected	0.77 × 0.76 × 0.38	circular	cylindrical	0.175	0.087			None.
4045	2493	not dated	all	excavated whole, 1 level, unscreened, artifacts collected	0.56 × 0.46 × 0.25	ovate	cylindrical	0.051	0.051			1 hammerstone recovered.
4046	2493	not dated	part	excavated southwestern 1/2, 1 level, unscreened, artifacts collected	0.54 × 0.42 × 0.22	ovate	irregular	nc[b]	nc[b]			None.
4047	2493	not dated	all	excavated whole, 1 level, unscreened, artifacts collected	0.60x 0.50 × 0.46	irregular	cylindrical	0.108	0.108			None.
4048	2493	not dated	all	excavated whole, 1 level, unscreened	0.44 × 0.42 × 0.35	circular	basin	0.034	0.034			None.
4049	3035	A.D. 1–1450	part	excavated northwestern 1/2, 1 level, unscreened, artifacts collected	0.57 × 0.55 × 0.25	circular	basin	0.041	0.021			None.
4051	3035	not dated	all	excavated southern 1/2, 1 level, unscreened, artifacts collected; northern 1/2 collected as flotation	0.49 × 0.47 × 0.15	circular	basin	0.018	0.018			None.
4054	3035	not dated	all	excavated southern 1/2, 1 level, unscreened, artifacts collected; northern 1/2 collected as flotation	0.40 × 0.39 × 0.04	circular	basin	0.003	0.003			None.
4058	3035	not dated	all	excavated whole, 1 level, unscreened, artifacts collected	0.56 × 0.46 × 0.11	ovate	basin	0.015	0.007			None.

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Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
4059	3035	not dated	part	excavated southern 1/2, 1 level, collected for flotation	0.43 × 0.43 × 0.17	circular	basin	0.014	0.007			None.
4149	2495	A.D. 1–1450	all	excavated whole, 1 level, 1/4-inch screened	0.62 × 0.52 × 0.21	ovate	basin	0.033	nc[b]			Trash filled.
4310	3033	not dated	part	excavated southern 1/2, 1 level, unscreened, artifacts collected	0.62 × 0.6 × 0.27	circular	basin	0.053	0.026	6238		No ceramics present; possibly Archaic.
4326	2495	A.D. 1–300	part	excavated northern 1/2, 1 level, 1/4-inch screened, artifacts collected	1.10 × 1.05 × 0.59	circular	conical	0.178	0.089	5854		Possibly Archaic; San Pedro point recovered.
4369	6791	not dated	all	excavated whole, 1 level, 1/8-inch screened	0.40 × 0.35 × 0.22	circular	basin	0.016	0.016			None.
4571	8665	A.D. 500–1450	part	excavated western 1/2, 1 level, collected as flotation	0.46 × 0.41 × 0.04	circular	basin	0.004	0.002			None.
4631	6795	A.D. 1–1450	part	excavated eastern 1/2, 1 level, unscreened, artifacts collected	0.66 × 0.48 × 0.20	ovate	conical	0.017	0.008			None.
4716	3006	A.D. 700–1450	all	excavated whole, 1 level, 1/4-inch screened	0.50 × 0.40 × 0.12	ovate	basin	0.013	0.013			None.
4728	5042	A.D. 1–1450	part	excavated western 1/2, 1 level, unscreened, artifacts collected	0.60 × 0.55 × 0.30	circular	cylindrical	0.078	0.004	5835		None.
4730	5042	not dated	part	excavated western 1/2, 1 level, unscreened, artifacts collected	1.10 × 1.10 × 0.13	circular	basin	0.027	0.013			None.
4731	5042	not dated	part	excavated western 1/2, 1 level, all fill collected for flotation, artifact collected	0.38 × 0.38 × 0.08	circular	basin	0.003	0.002			None.

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
4732	5042	not dated	part	excavated western ½, 1 level, all fill collected for flotation	0.43 × 0.40 × 0.08	circular	basin	0.007	0.004			None.
4735	8665	A.D. 500–1450	part	excavated western ½, 1 level, unscreened, artifacts collected	1.50 × 1.50 × 0.52	circular	cylindrical	0.918	0.459	5845		None.
4750	8656	A.D. 1–1450	part	excavated western ½, 1 level, unscreened, artifacts collected	0.60 × 0.50 × 0.25	ovate	cylindrical	0.059	0.029			None.
4753	8656	A.D. 1–1450	part	excavated western ½, 1 level, unscreened, artifacts collected	0.70 × 0.70 × 0.20	circular	basin	0.036	0.018			None.
4757	8656	A.D. 1–1450	part	excavated southern ½, 1 level, all fill collected for flotation, artifacts collected	0.50 × 0.47 × 0.11	circular	basin	0.014	0.007			None.
4759	8656	A.D. 1–1450	part	excavated eastern ½, 1 level, all collected for flotation, artifacts collected	0.33 × 0.29 × 0.12	circular	basin	0.006	0.003			None.
4780	6795	not dated	part	excavated northern ½, 1 level, unscreened	0.56 × 0.48 × 0.30	ovate	basin	0.042	0.021	6237		None.
4793	6795	not dated	part	excavated southern ½, 1 level, unscreened, artifacts collected	0.70 × 0.50 × 0.14	ovate	irregular	nc[b]	nc[b]			None.
4857	6795	not dated	part	excavated western ½, 1 level, unscreened	0.74 × 0.74 × 0.29	circular	conical	0.042	0.021			None.
4882	6801	A.D. 1–1450	part	excavated northern ½, 1 level, all fill collected for flotation	0.32 × 0.28 × 0.09	circular	basin	0.004	0.002			None.

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Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
4887	3035	A.D. 1–1450	all	excavated whole, 1 level, 1/8-inch screened	0.34 × 0.34 × 0.26	irregular	cylindrical	0.024	0.024			None.
4888	3035	not dated	all	excavated whole, 1 level, 1/8-inch screened	0.39 × 0.39 × 0.22	irregular	conical	1.265	0.633			None.
4896	8661	A.D. 1–1450	part	excavated western 1/2, 1 level, unscreened, artifacts collected	0.41 × 0.36 × 0.12	circular	basin	0.009	0.005			None.
4909	8661	not dated	part	excavated southern 1/2, 1 level, unscreened	0.90 × 0.45 × 0.07	ovate	cylindrical	0.022	0.011			None.
4932	8661	not dated	part	excavated northern 1/2, 1 level, unscreened	0.72 × 0.33 × 0.19	ovate	basin	0.024	0.012			None.
4939	6801	A.D. 1–1450	part	excavated western 1/2, 1 level, unscreened, artifacts collected	1.20 × 0.90 × 0.30	ovate	cylindrical	0.254	0.127			None.
4943	6801	not dated	part	excavated eastern 1/2, 1 level, unscreened	0.80 × 0.41 × 0.05	subrectangular	basin	nc[b]	nc[b]			None.
4945	6801	not dated	part	excavated western 1/2, 1 level, all fill collected for flotation	0.46 × 0.46 × 0.10	circular	basin	0.006	0.003			None.
4966	8661	not dated	part	excavated northern 1/2, 1 level, all fill collected for flotation	0.52 × 0.50 × 0.08	circular	basin	0.011	0.005			None.
4976	8656	not dated	part	excavated northern 1/2, 1 level, unscreened, artifacts collected	0.48 × 0.41 × 0.18	ovate	basin	0.019	0.009			None.
4984	6801	A.D. 1–1450	part	excavated western 1/2, 1 level, unscreened, artifacts collected	1.00 × 0.95 × 0.50	circular	basin	0.249	0.124			Shell-bracelet fragment recovered.
4985	6801	A.D. 1–1450	part	excavated western 1/2, 1 level, unscreened, artifacts collected	0.75 × 0.70 × 0.14	circular	basin	0.038	0.019			None.

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
4996	5864	not dated	part	excavated southern 1/2, 1 level, 1/4-inch screened	0.80 × 0.70 × 0.22	ovate	basin	0.064	0.032	11331		Flaked stone and FCR recovered.
5504	5864	not dated	part	excavated western 1/2, 1 level, 1/4-inch screened	0.92 × 0.82 × 0.25	ovate	basin	0.009	nc[b]			None.
5619	6795	A.D. 1–1450	part	excavated southern 1/2, 1 level, unscreened, artifacts collected	0.56 × 0.51 × 0.24	circular	cylindrical	0.054	0.027			None.
5624	6795	not dated	part	excavated southern 1/2, 1 level, all collected for flotation	0.51 × 0.51 × 0.12	circular	basin	0.010	0.005	6230		None.
5647	3006	A.D. 700–1450	all	completely excavated with Feature 3817, Subfeature 41; fill from both 1/4-inch screened and artifacts attributed to Subfeature 41	1.00 × 1.00 × 0.23	circular	basin	0.070	0.070			None.
5766	1759	A.D. 935–1450	part	portion of the upper fill removed to define pit walls; unscreened, artifacts collected	1.89 × 1.89 × ?	ovate	unknown	nc[b]	nc[b]			None.
5982	7676	not dated	part	exposed in profile; pollen samples and artifacts collected from profile	0.90 × ? × 0.58[c]	unknown	conical	nc[b]	nc[b]			None.
5983	2495	not dated	part	exposed in profile; pollen and flotation samples collected from profile	0.75 × ? × 0.66[c]	unknown	irregular	nc[b]	nc[b]			None.
7742	6801	A.D. 735–1450	part	excavated western portion as part of Feature 784, Level 1	0.74 × 0.74 × 0.39	circular	basin	0.115	0.057			None.

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Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
7940	5042	A.D. 950–1450	part	upper fill removed to expose edges; unscreened, no samples or artifacts collected	0.50 × 0.50 × 0.19	circular	cylindrical	0.037	0.019			None.
8887	6795	A.D. 685–1450	part	excavated southern 1/2, 1 level, 1/4-inch screened	0.63 × 0.53 × 0.15	ovate	basin	0.026	0.013			None.
10,587	7676	not dated	part	exposed in profile; flotation and pollen samples collected	0.85 × ? × 0.20[c]	circular	basin	nc[b]	nc[b]			None.
10,720	3035	not dated	all	excavated whole, 1 level, 1/8-inch screened	0.32 × 0.27 × 0.34	ovate	conical	0.032	0.032			None.

Note: For a definition of the "general" category of nonthermal pits, see text.

Key: FCR = fire-cracked rock; nc = not calculated; nd = no data; PD = Provenience Designation; RV = reconstructible vessel; SU = Stripping Unit.

[a] Length × width × depth.

[b] Volume not calculated because of irregular pit cross section or lack of data.

[c] Feature identified in trench profile. Measurements and attributes of pit are based on the remaining portion of the pit.

obvious below about 1.2 m, suggesting a roughly continuous range of variability in pit diameters. Six pits exhibited diameters of 1.2 m or greater (Features 3027, 3876, 3960, 4735, 4939, and 5766), suggesting a possible larger size class that may be functionally distinguishable from a continuum of smaller and medium-sized pits. Depths ranged from 0.04 to 0.66 m, with a mean of 0.22 m, suggesting generally shallow pits. As was true for the diameters, the pit depths were generally continuous up to about 0.5 m, and only four pits (Features 4326, 4735, 4984, and 5983) were deeper than 0.5 m. Pit volumes range from 0.002 to 0.92 m^3, with a mean of 0.06 m^3. Again, these data suggest generally small volumetric capacities probably intended for short-term storage and use. Widely used bulk goods, such as surplus food and grains, presumably were stored in intramural locations or in nonpit containers (e.g., pottery).

Artifacts or thermal debris were present in all but 5 of these pits. Some of these pits might have been deliberately constructed as trash receptacles, but most probably were originally created as storage loci or for other nonthermal activities. In these latter cases, fill materials probably consisted of domestic trash deposited in the pits after they were no longer used for their original intended purpose. Fill contents were variable among the pits. Thermal debris was present in 81 percent of these pits. Nearly one-third contained charcoal (n = 26, or 31 percent), about one-quarter contained FCR (n = 19, or 23 percent), and more than one-third contained ash (n = 33, or 39 percent). Thermal debris was absent in only 16 pits (19 percent). Artifacts densities, which were inferable for 50 features, ranged from 20 to 4,655 artifacts per m^3, with a mean of 962 artifacts per m^3. Artifacts typically included some combination of mostly ceramics and flaked stone, with small amounts of ground stone, faunal bone, and shell. Notably, 5 pits (Features 3942, 4780, 4857, 4943, and 7940) contained no fill materials, suggesting probable storage pits that had not been reused as trash receptacles.

None of the extramural pits was subjected to chronometric analysis. Chronological assessment therefore was not feasible for 50 of these features. However, 41 pits were assigned to approximate date ranges based on associations with dated features, stratigraphic relationships, or the presence of temporally diagnostic painted ceramics. Most of these assessments consisted of the general Formative period, and only 4 pits were assigned to relatively narrow date ranges. Features 3792, 3895, and 3968 all probably can be assigned to an age range of A.D. 500–950; all of them probably were associated with the Middle Formative A period occupation (ca. A.D. 750–950), the dominant occupation component in Locus D. Probably, most of the undated or vaguely dated pits also were used during that time span. One other pit (Feature 3631) was assigned to the Late Formative B period (A.D. 1300–1450) on the basis of the presence of temporally diagnostic painted ceramics.

Nonthermal Bell-Shaped Pits

We created a separate type category for nonthermal bell-shaped pits because they were widely used during the Late Archaic and Early Formative periods and thus might help identify this temporal component at Mescal Wash. These features, which probably functioned as storage loci, were mainly recorded in the western portion of Locus D (see below). Twenty-two nonthermal bell-shaped pits were investigated in Mescal Wash, including 2 during Phase 1 and 20 during Phase 2 (Table 30). Most of the features (n = 16) were partially excavated (generally bisected); only 6 were fully excavated.

Excluding one indeterminate pit, all but four of the bell-shaped pits were circular in plan; three of these four exhibited an ovate shape, and one had an irregular shape. The pit apertures ranged from 0.30 to 1.10 m, and 20 of the measurable pits ranged in maximum bell diameter from 0.47 to 1.5 m, with a mean of 0.92 m. Cross sections varied in that some of the pits had short (10 cm or less) necks (Figure 116), whereas others had relatively long (>11 cm) necks (Figure 117). The shape of the pits also varied from a perfect bell shape (Figure 118) to bulbous (Figure 119) to triangular (Figure 120).

Pit depths ranged widely from 0.25 to 0.96 m, with a mean of 0.50 m. Pit volumes were estimated for 12 bell-shaped pits; these ranged from 0.001 to 0.88 m^3, with a mean of 0.24 m^3. Nine of the 13 pits, however, possessed volumetric capacities of 0.57 m^3 or less; we can broadly classify these as small storage pits. Two larger pits possessed capacities of 0.88 and 1.27 m^3 (Features 3097 and 5505, respectively). These differences suggest two possible size classes of nonthermal bell-shaped pits, which might have been used for different storage purposes (e.g., short-term versus long-term storage).

These pits generally included relatively few ceramics but more-substantial amounts of flaked stone, which is consistent with the expectations for primarily Late Archaic and Early Formative period deposits. In 11 pits with calculable artifact densities, the mean ceramic density was 39.1 artifacts per m^3, compared to 769.2 artifacts per m^3 for flaked stone—nearly 20 times more. Ground stone artifacts were generally sparse or absent in these features, with the exceptions of 2 features with high densities: only 4 features contained more than 4 ground stone artifacts; Features 3976, 3557, 1812, and 3970 contained between 6 and 12 artifacts. Faunal-bone frequencies were also variable, but only 3 features contained more than 20 bones (Features 3983, 4295, and 5809 contained between 34 and 91 faunal bones). Feature 3983, a Late Archaic pit found capped by a metate, contained several deer/bighorn sheep (*Ovis canadensis*) teeth and deer foot bones (Figure 121). Overall, the artifacts densities ranged from 86 to 3,402 artifacts per m^3, with a mean of 867 artifacts per m^3.

Table 30. Nonthermal Bell-Shaped Pits Excavated in Locus D

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Aperture and Depth[a] (m)	Plan	Maximum Diameter	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
411	outside	1100–900 B.C.	part	excavated southern 1/2, 1 level, 1/4-inch screened	unknown	circular	unknown	unknown	unknown	925		Upper portion of feature and maximum diameter destroyed by trench; melon seed produced ^{14}C date: Late Archaic.
724	2495	A.D. 500–1450	part	excavated southern 1/2, 1 level, 1/4-inch screened	? × ? × 0.63	unknown	unknown	unknown	unknown	781, 818		Trench destroyed part of feature aperture and maximum diameter; Formative.
1812	1712	not dated	part	excavated eastern 1/2, 1 level, 1/4-inch screened	0.82 × 0.72 × 0.49	circular	0.88	0.269	0.134	11,296	11,297	Intentional fill; soil development indicates Archaic/ Early Formative age.
2650	1869	2000 B.C.–A.D. 1050	all	excavated whole, 1 level, 1/4-inch screened	0.80 × 0.50 × 0.25	ovate	0.62	nd	nd			Capped by floor of Feature 3544; part of the feature was belled, but overall was irregular in cross section.
3097	1759	2000 B.C.–A.D. 865	all	excavated western and eastern 1/2, 1 level, 1/4-inch screened	0.80 × 0.60 × 0.35	ovate	0.90	0.882	0.441			Beneath floor of Features 3679/3868; no thermal debris in fill.
3437	1759	A.D. 835–1450	all	excavated northern and southern 1/2, 1 level, 1/4-inch screened	0.45 × 0.45 × 0.38	circular	0.50	0.132	0.132			Trash filled; intrusive to Feature 3679/3868.
3557	1759	1060–880 B.C.	part	excavated northern 1/2, 1 level, 1/4-inch screened	0.75 × 0.78 × 0.50	circular	1.11	0.139	0.139	7694	7695	Maize produced ^{14}C date: Late Archaic; FCR in upper 15 cm of fill.
3711	3033	A.D. 1–1450	part	excavated southern 1/2, 2 levels, 1/4-inch screened	1.0 × 0.65 × 0.46	irregular	0.47	nd	nd	5131		Trash filled; part of the feature was belled, but overall was irregular in plan and cross section.
3790	1759	A.D. 500–865	part	excavated northern 1/2, 1 level, 1/4-inch screened	0.90 × 0.90 × 0.41	circular	unknown	unknown	unknown			Intrusive to Feature 3679/3868.
3976	2493	1280–1010 B.C.	part	excavated eastern 1/2, 2 levels, 1/4-inch screened	0.58 × 0.58 × 0.52	circular	0.90	nc[b]	nc[b]	5778	5885	Maize produced ^{14}C date: Late Archaic; upper fill trash, lower fill intentional redeposit.

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Aperture and Depth[a] (m)	Plan	Maximum Diameter	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
3977	2493	A.D. 1–1450	part	excavated western 1/2, 1 level, unscreened, artifacts collected	0.60 × 0.60 × 0.92	circular	0.98	0.046	0.023			Possibly Early Formative; discrete layers of intentional backfill and trash fill; FCR present throughout fill.
3983	2493	1070–900 B.C.	all	excavated whole, 1 level, 1/4-inch screened	0.60 × 0.60 × 0.30	circular	0.71	0.413	0.413	2589	2627	Maize produced ^{14}C date: Late Archaic; capped by upside-down basin metate; mano and Archaic point recovered in fill.
4105	1759	200 B.C.–A.D. 840	all	excavated whole, 1 level, 1/4-inch screened	0.87 × 0.87 × 0.51	circular	1.10	0.572	0.286			Possibly Archaic; capped by floor of Feature 7559.
4295	3001	not dated	part	excavated southern 1/2, 5 levels, 1/4-inch screened	0.83 × 0.85 × 0.81	circular	1.40	0.273	0.137	2899	5112	Soil development and lack of sherds indicates Archaic age.
4312	3033	1500 B.C.–A.D. 300	part	excavated western 1/2, 1 level, 1/4-inch screened	0.73 × 0.73 × 0.43	circular	0.81	0.357	0.178	5861	5862	Late Archaic/Early Formative; San Pedro point base recovered.
4660	6795	A.D. 1–1450	part	excavated southern 1/2, 2 unscreened levels, artifacts collected	0.66 × 0.57 × 0.46	circular	0.60	nd	nd			Soil development in lower fill indicates Late Archaic age; part of the feature was belled, but overall it was irregular in cross section.
4849	6795	820–590 B.C.	part	excavated western 1/2, 1 unscreened level, artifacts collected	0.87 × 0.80 × 0.62	circular	0.92	0.415	0.208	5852		Maize produced ^{14}C date: Late Archaic.
4973	8661	A.D. 1–1450	part	excavated southern 1/2, 1 unscreened level, artifacts collected	0.48 × 0.48 × 0.40	circular	0.65	nc[b]	nc[b]			Brown silty loam with charcoal.
5505	5864	1110–900 B.C.	part	excavated east 1/2, 1 level, 1/4-inch screened	1.10 × 1.00 × 0.96	ovate	1.48	1.27	0.663	11,339	11,340	Late Archaic; San Pedro point recovered.
5809	3035	200 B.C.–A.D. 300	all	excavated whole, 1 level, 1/4-inch screened	1.07 × 1.03 × 0.35	circular	1.18	nc[b]	nc[b]	5869		Probably Late Archaic; no thermal debris in fill; high artifact density.

continued on next page

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Aperture and Depth[a] (m)	Plan	Maximum Diameter	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Analyzed Pollen Sample (PD)	Comments
5980	7676	A.D. 1–1450	part	exposed in profile, unscreened, artifacts collected	0.82 × 0.82 × 0.85	circular	1.00	nc[b]	nc[b]	10,775		Filled with roasting-pit refuse; one of several features intrusive to Feature 4299.
10,612	2495	not dated	part	exposed in SU 7676, sectioned by backhoe, northwestern 1/4 removed, 1 unscreened level	0.30 × 0.30 × 0.43	circular	1.30	0.001	0.001	10,636		Lower fill contained roasting-pit refuse.

Key: FCR = fire-cracked rock; nc = not calculated; nd = no data; PD = Provenience Designation; SU = Stripping Unit.

[a] Length × width × depth.

[b] Volume not calculated because of irregular pit cross section or lack of data.

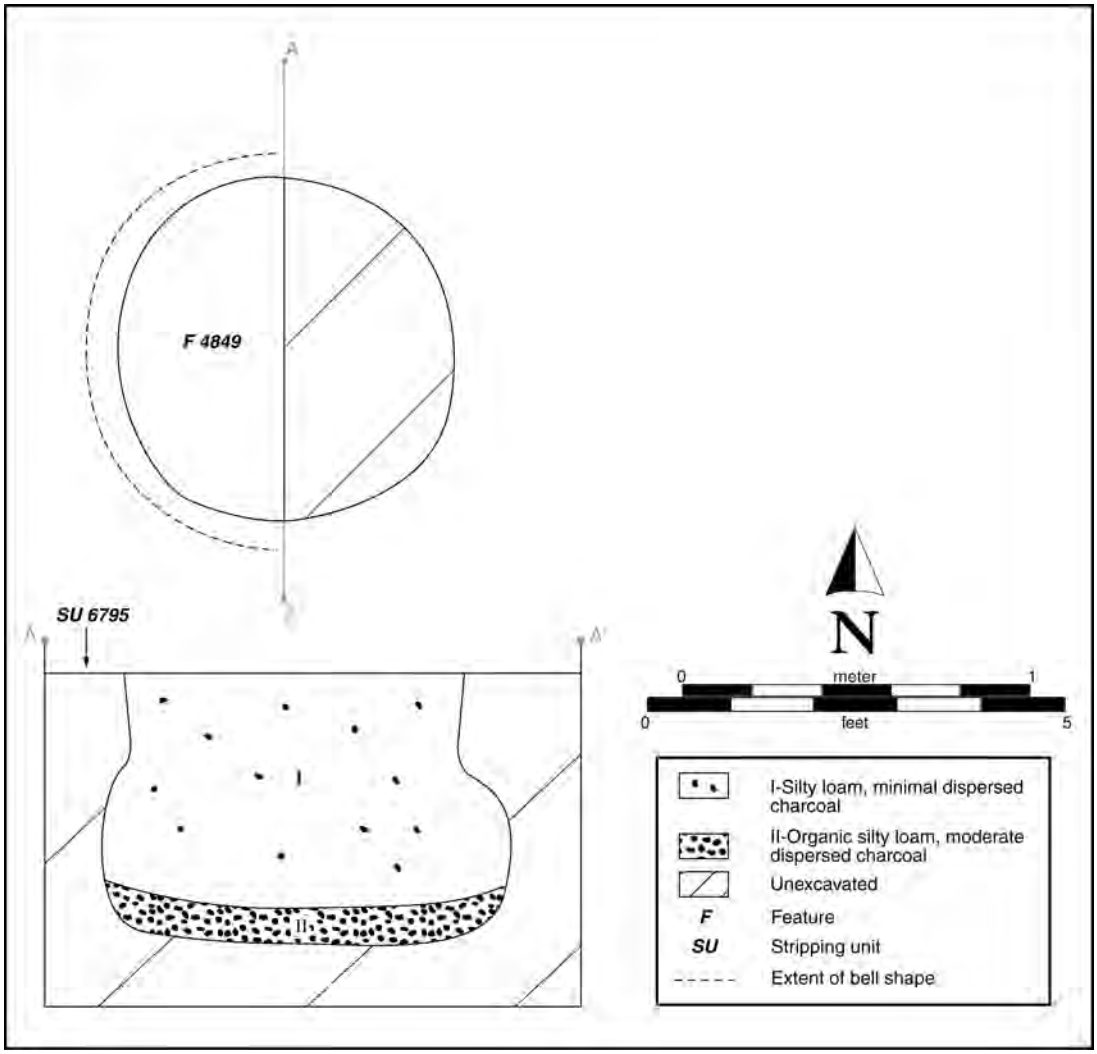

Figure 116. Plan map and profile of Feature 4849, a bell-shaped pit that exhibited a relatively short neck.

Five bell-shaped nonthermal pits were subjected to radiocarbon dating (Features 411, 3557, 3976, 3983, and 4849), which provided detailed calibrated sigma ranges. Most of the others could be assigned to relatively discrete date ranges based on associations with dated features, stratigraphic position, and inspection of AM assays (see Chapter 2, Volume 2). All of the five radiocarbon-dated pits produced calibrated date ranges during the Late Archaic period, with an inclusive calibrated range of 1280–590 B.C. In all, these and six others could be either firmly or tentatively assigned to the Late Archaic or Early Formative period. Eight others probably postdated the Late Archaic period; age was not inferable for three. Overall, these results underscore the association of these features with the Late Archaic and, to a lesser extent, the early centuries of the Early Formative period. The pits were found throughout the locus, however, without any clear spatial association with the early pole-and-brush structures.

Most of the 22 bell-shaped pits also contained thermal materials—charcoal, ash, and FCR—within their fill. A few also contained cobbles or daub. These materials probably were deposited as trash after the final use of the pit as a storage location. All of these pits also contained nonthermal debris, suggesting that the pit was reused as a generalized trash deposit.

Fourteen extramural bell-shaped pits were subjected to macrobotanical analysis, and seven were subjected to pollen analysis (see Chapters 9 and 10, Volume 2). The pollen analysis focused exclusively on features assigned to the Late Archaic period, and thus it is surprising that the collective ubiquity of maize pollen was 43 percent, although cheno-am and sunflower (Asteraceae) pollen was far more prevalent. The bell-shaped nonthermal pits have yielded the best evidence for Late Archaic agriculture at Mescal Wash. Accelerator mass spectrometry (AMS) radiocarbon dates obtained from maize fragments collected from three of these features are unequivocally Late Archaic, with calibrated dates of 1060–880 B.C. (Feature 3357), 1280–1010 B.C. (Feature 3976), and 620–590 B.C. (Feature 4849).

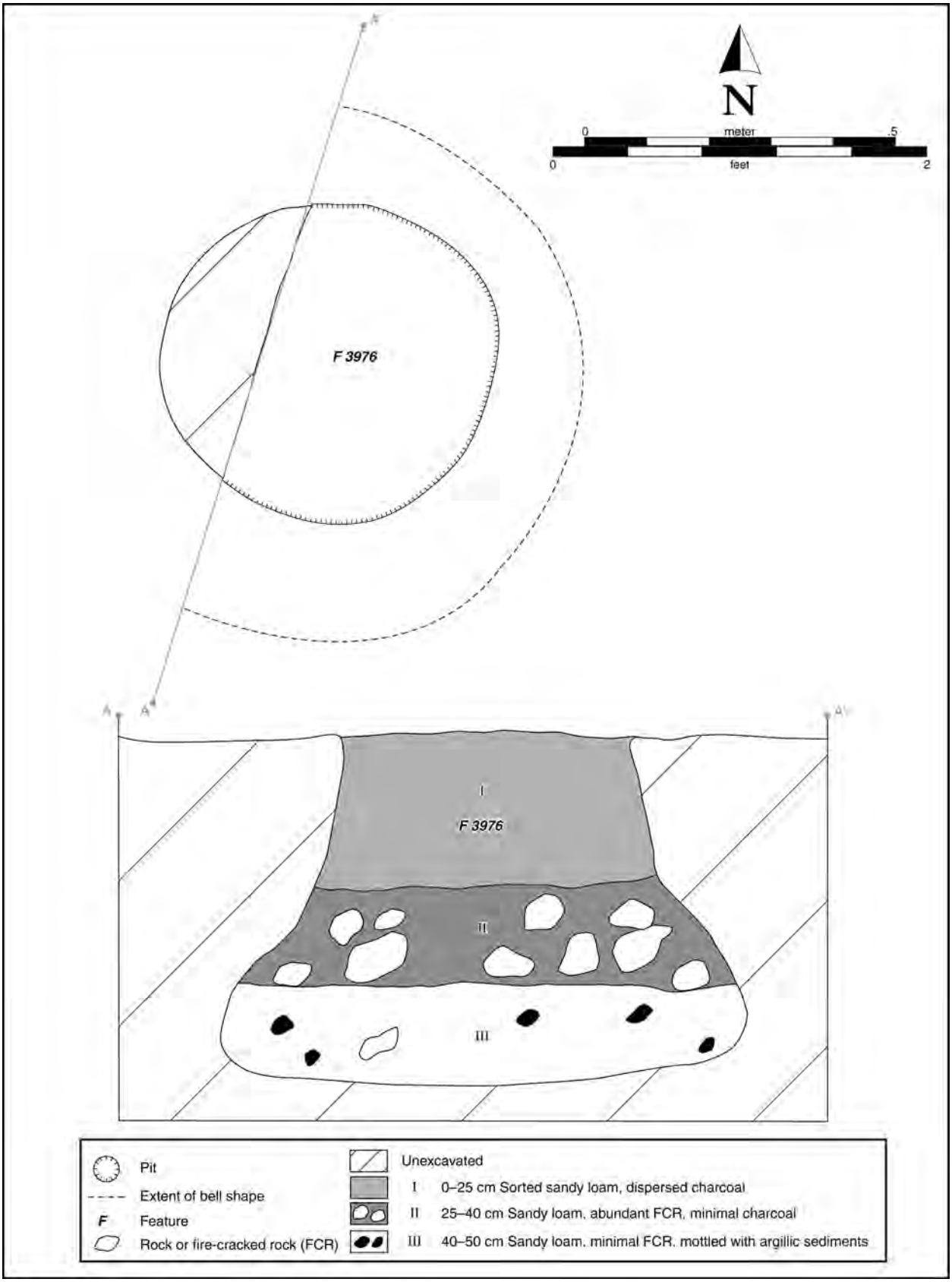

Figure 117. Plan map and profile of Feature 3976, a bell-shaped pit that exhibited a relatively long neck.

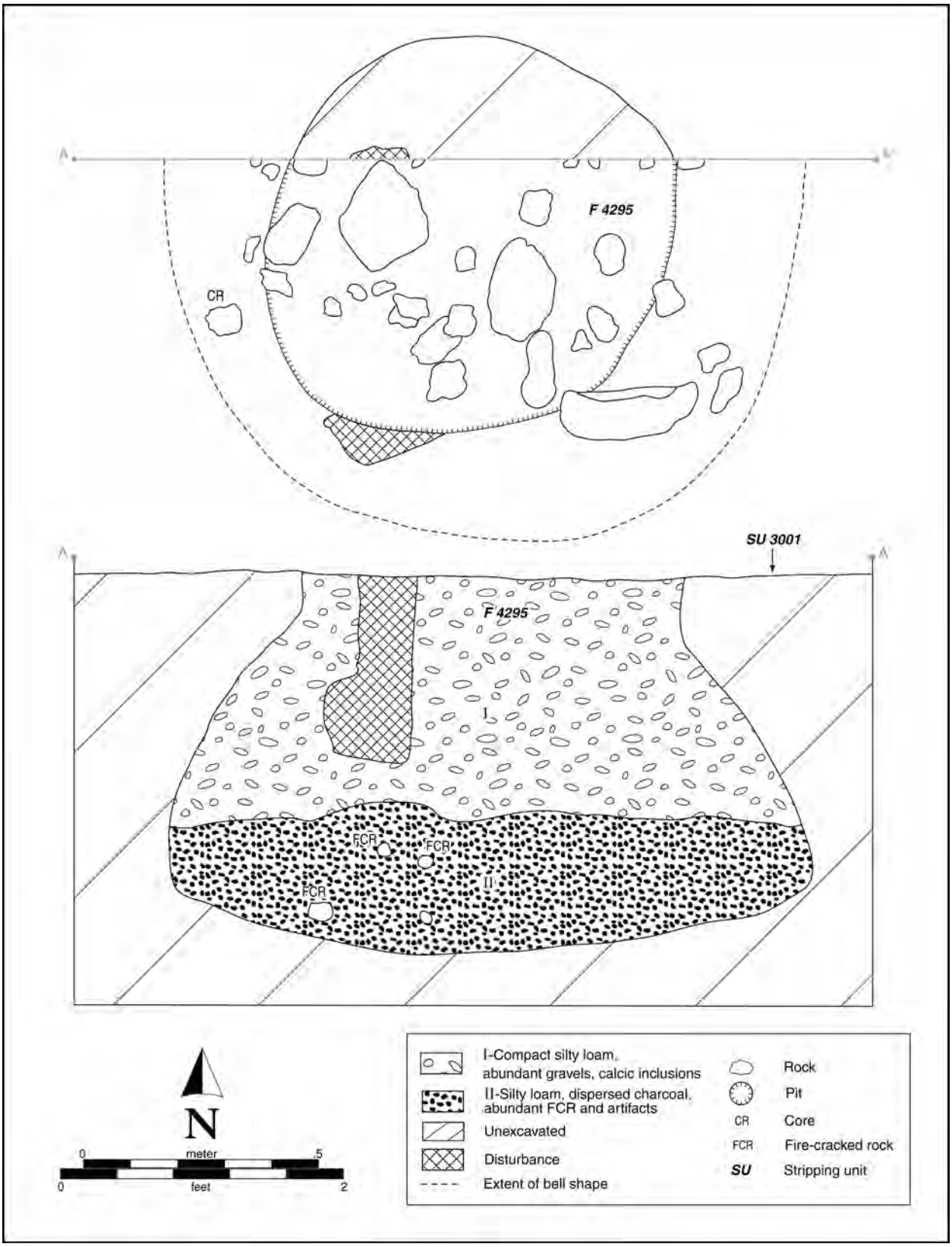

Figure 118. Plan map and profile of Feature 4295, a typical bell-shaped pit.

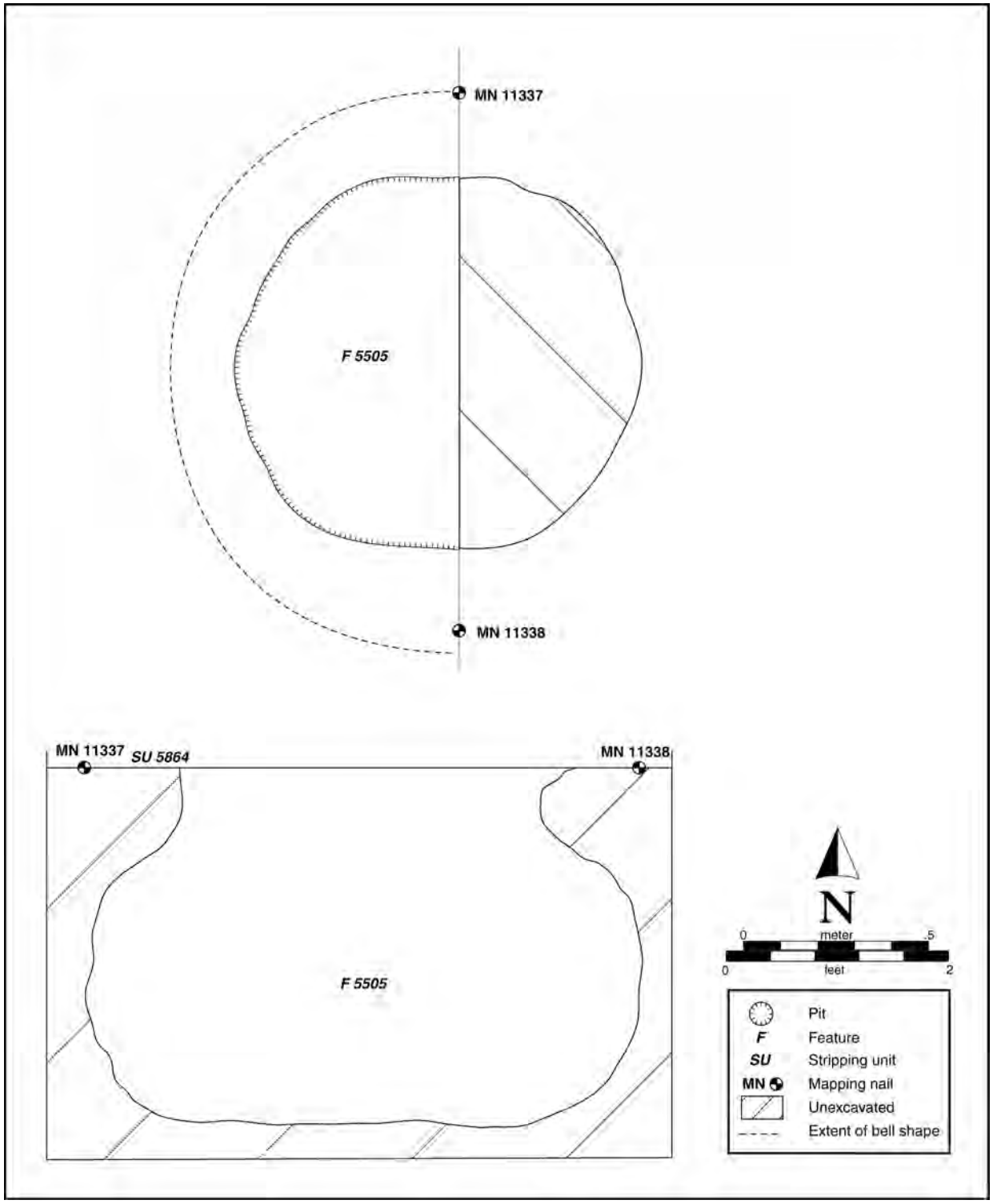

Figure 119. Plan map and cross section of Feature 5505, a bell-shaped pit that appeared bulbous in cross section.

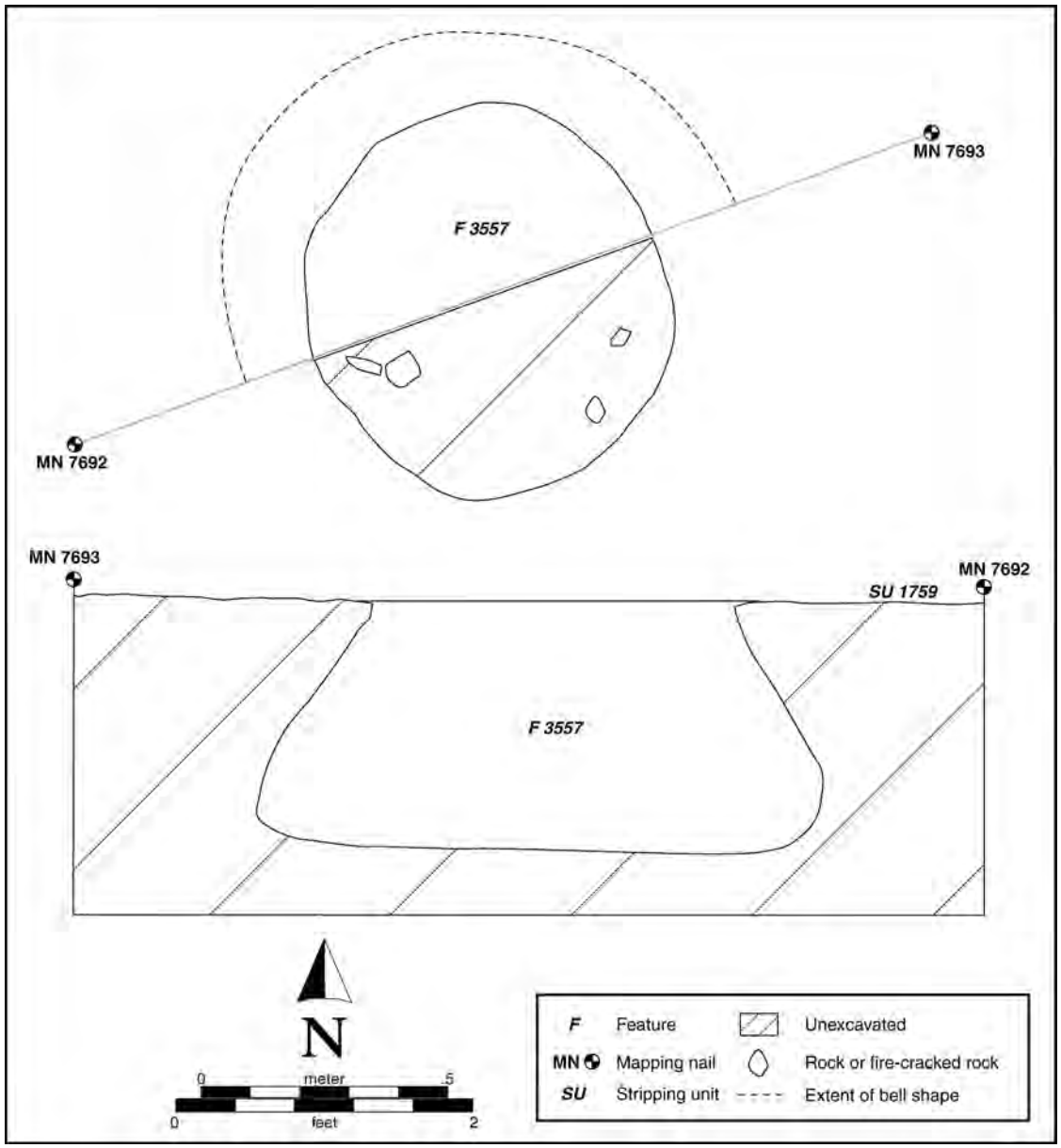

Figure 120. Plan map and cross section of Feature 3557, a bell-shaped pit that appeared triangular in cross section.

In addition, an AMS date of 1100–900 B.C. was recovered from melon-loco-type seed coats from Feature 411. It is interesting to note that bell-shaped nonthermal pits had the highest grass-grain ubiquity of all feature types, mirroring the fact that grass-grain ubiquity was highest for the Late Archaic period.

Borrow Pits

Borrow pits are generally large-diameter quarrying pits of varying shapes probably used for obtaining clay or mud for construction purposes (e.g., making adobe walls). Seven nonthermal extramural pit features were classified as borrow pits in Locus D (Table 31). Given their larger sizes, these features were initially excavated to determine whether they were structures, after they had been exposed in plan during stripping. Six of these pits were partially excavated, and one was fully excavated. Of the partially excavated features, three were bisected. In the case of Feature 5793, only a portion of the lower fill was excavated; it was not screened. In Feature 7664, a small linear trench was hand-excavated to define the feature boundaries.

The seven borrow pits varied in size and shape. In plan, five pits were classified as having irregular shapes, one was subrectangular, and one was classified as circular. Five also were classified as having irregular cross-sectional shapes, and two others were classified as cylindrical

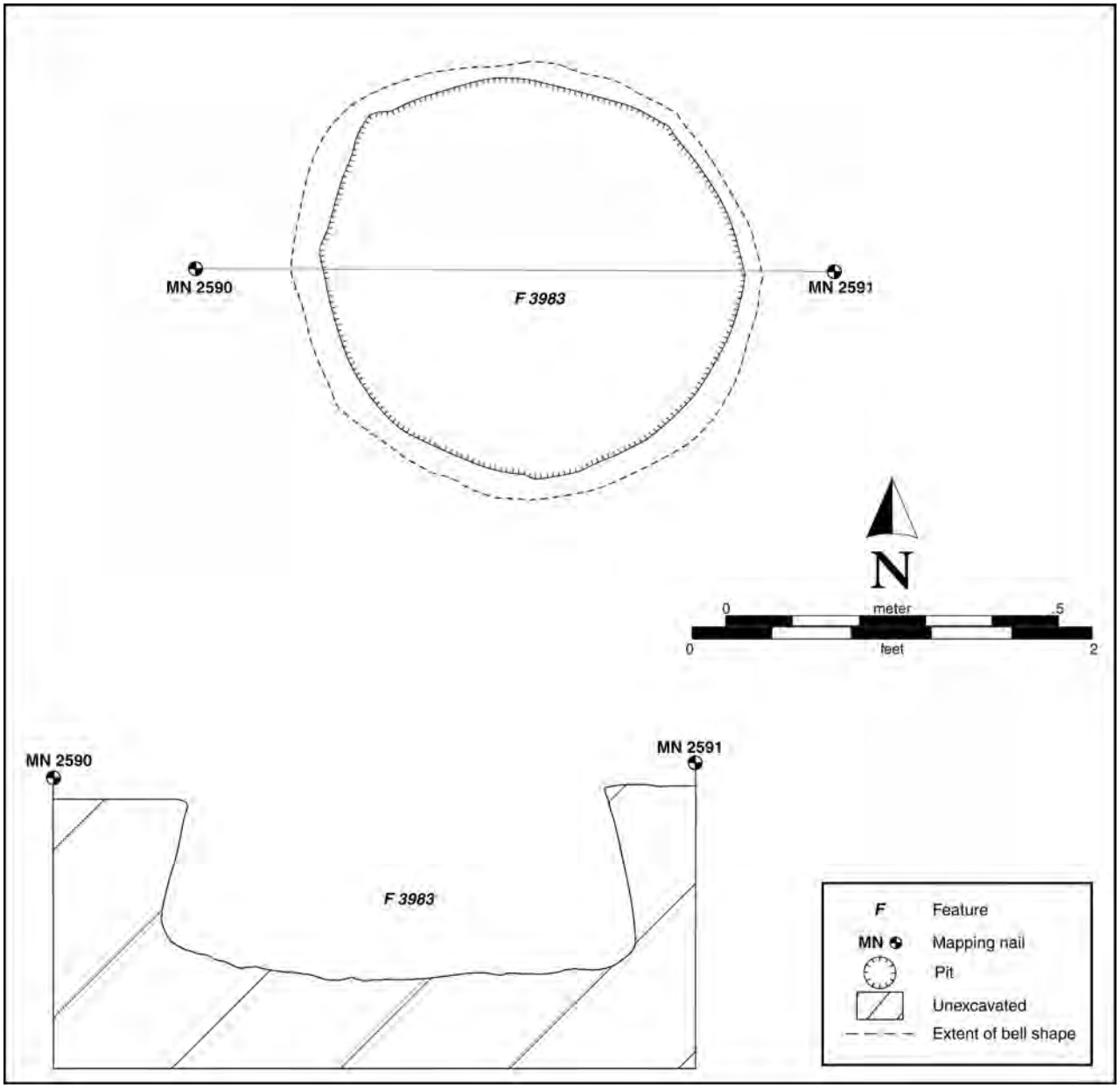

Figure 121. Plan map and cross section of Feature 3983, a Late Archaic period nonthermal bell-shaped pit.

or basin shaped in profile. The high frequency of irregular shapes among these features probably attests to their informal and ad hoc construction. Of the known pit diameters, six ranged from 1.5 to 3.5 m, with a mean of 2.4 m, which underscores the relatively large areal sizes of these features. Depths varied considerably, from 0.09 to 0.71 m, with a mean of 0.36 m. Because of the irregular pit shapes, pit volumes were estimated for only two pits (Features 3870 and 4097); these volumes were 4.69 and 0.16 m^3, respectively. The latter pit is the smallest of the five features in maximum diameter, and its relatively small volume is probably not typical for the other borrow pits.

All seven of these features contained a mix of thermal debris and artifacts in their fill, suggesting reuse as trash receptacles after they were no longer used as borrow pits. Thermal debris included charcoal, ash, daub fragments, and FCR. Most of the artifacts were ceramic sherds; flaked stone debitage, ground stone, faunal bone, and shell were present in smaller amounts. Features 3870 and 4097 contained 1,032.6 and 465.5 artifacts per m^3, respectively, suggesting moderately dense trash deposition in these features.

None of these features was subjected to chronometric analysis, but all were roughly datable on the basis of feature association, stratigraphy, and the presence of

Table 31. Borrow Pits Excavated in Locus D

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Comments
2697	1759	A.D. 685–1450	all	excavated in, 1 level, 1/4-inch screened	1.70 × 1.55 × 0.20	irregular	irregular	nc[b]	1.93	None.
3027	1759	A.D. 1–865	part	excavated northern 1/2, 2 levels, 1/4-inch screened	1.50 × 1.00 × 0.30	irregular	irregular	nc[b]	0.401	None.
3748	1759	A.D. 785–950	part	excavated 1/4 of feature, 1 level, 1/4-inch screened; 1/4 of feature, 1 level, grab-sampled	4.30 × 4.90 × 0.25	irregular	irregular	nc[b]	nc[b]	Possibly reused as a house pit.
3870	1869	A.D. 700–1050	part	excavated western 1/2, 5 levels, 1/4-inch screened	2.90 × 2.90 × 0.71	circular	cylindrical	4.687	2.334	None.
4097	2493	A.D. 500–1450	part	excavated western 1/2, 1 level, 1/4-inch screened	1.5 0 × 0.80 × 0.26	irregular	basin	0.163	0.082	Generally smaller than others.
5793	3006	A.D. 660–1450	part	upper fill removed by the backhoe; part of the lower fill excavated during hand-trenching to locate the feature's outline; unscreened, artifacts collected	3.50 × ? × 0.53	irregular	irregular	unknown	unknown	Several excavation methods and levels of recording.
7664	5042	A.D. 1–1390	part	excavated 2-by-0.25-m hand trench (Trench 10,541) to find boundaries, 1/4-inch screened	2.40 × 2.30 × 0.09	subrectangular	irregular	nc[b]	nc[b]	Small portion of feature excavated.

Key: FCR = fire-cracked rock; nc = not calculated; nd = no data; PD = Provenience Designation; SU = Stripping Unit.

[a] Length × width × depth.

[b] Volume not calculated because of irregular pit cross section or lack of data.

temporally diagnostic ceramics. All seven probably were Formative period in age, but two could be confidently assigned to a specific period: Feature 3748 dated to A.D. 785–950, placing it in Middle Formative A; Feature 3870 was assigned to the general Middle Formative period (ca. A.D. 700–1050). Some, and possibly all, of these features were used during the Middle Formative A period, the peak era of occupation in Locus D.

Caches

Three caches (Features 1545, 7501, and 11,442) in Locus D were fully excavated during Phase 2 (Table 32). All three contained censers or censer fragments that were deliberately interred. The presence of censers suggests that these features were used in connection with ritual activities.

Feature 1545 contained three complete stone censers clustered together within an irregular-shaped pit measuring roughly 0.6 m in diameter, with a depth of 0.18 m. The feature was found in Test Pit 1540, excavated in the natural depression, filled with cultural sediments, initially (in Phase 1) thought to represent a ball court (see Figure 85). The three censers were decorated with various incised patterns (see Chapter 5:Figure 5.17a–c, Volume 2).

Feature 7501 was found in Stripping Unit 8665 in the western end of the locus (see Figure 81), during the exposure of a possible structure (Feature 762) identified in Trench 645 in Phase 1. Feature 762 proved to be a natural depression and was voided as a feature. The cache consisted of a circular, basin-shaped pit containing 4 reconstructible plain ware vessels, 15 stone fragments together forming a partial sandstone censer decorated with deeply incised crosshatching (see Chapter 5:Figure 5.20b, Volume 2), and a fragment of a three-quarter-grooved ax. Roughly two dozen small sherd fragments also were recovered. The censer fragments and the ax both appeared to have been fire altered. A flotation sample from Feature 7501 included *Opuntia* and goosefoot (*Chenopodium*), four small pieces of mesquite wood, unidentified seeds, and an unknown black substance.

Feature 11,442 was found in the fill of Feature 438, a structure excavated in Stripping Units 3031 and 6789 in the north-central part of the locus (see Figure 82). No pit outline was defined. The feature consisted of two whole stone censers: a cylindrical, incised censer with a diamond and triangle chevron pattern (see Chapter 5:Figure 5.16b, Volume 2) and a miniature, dish-shaped censer with incised diagonal lines forming a row of "V" shapes around the exterior (see Chapter 5:Figure 5.16a, Volume 2).

None of the caches was subjected to chronometric analysis. However, indirect evidence provides some broad chronological information. The presence of plain ware ceramics in Feature 7501 suggests a period of deposition sometime after about A.D. 1. In addition, Feature 11,442 breached the fill of—and thus postdates—structure Feature 438, which was assigned to a date range of A.D. 735–865 based on AM evidence. No chronological evidence is available for Feature 1545.

Activity Surface

One feature in Locus D was interpreted as an activity surface (Feature 11,342). The feature was partially excavated during Phase 2 after it was exposed in Stripping Units 1869 and 3008 along the southeast corner of conglomerate Feature 437 in the eastern end of the locus (see Figure 84). It consisted of a dense scatter of artifacts covering a fairly level area of 4.2 by 6.2 m at about 10 cm below the modern site surface. The surface was compacted and contained areas of oxidized soil, indicative of burning and initially suggesting that it represented the floor of a structure. The feature was immediately north of Feature 3579, a thermal rock cluster also excavated during Phase 2. The two features may be functionally associated with each other. The most frequent artifacts were ceramic sherds (n = 805) and flaked stone debitage and tools (more than 700 artifacts). Lower-frequency artifacts included ground stone, a mineral fragment, and a portion of a shell bracelet. Roughly 20 faunal bones also were recovered, mostly bones from small and medium-sized mammals. One AM date from a sample collected from an oxidized area produced an inferred date range of A.D. 760–840, suggesting occupation during the Middle Formative A period. The presence of temporally diagnostic painted brown ware and buff ware sherds supports a Middle Formative period age assignment.

Midden

A large sheet midden area (Feature 11,352) covered much of the investigated portion of Locus D, primarily on the north side of the railroad. It was first identified in Phase 1 and then formally recorded and sampled in Phase 2. The midden area, exposed as an artifact-laden area with dark soil, measured 195 m east–west by 45 m north–south. The excavation crew sampled the midden contents with two 2-by-2-m test pits (Test Pits 1166 and 1534) in Phase 2. The depth of the midden varied from 0.14 to 0.27 m within the two test pits. The midden contained a very high density of ceramic and flaked stone artifacts and faunal bone, along with a small number of ground stone and shell artifacts and a mineral fragment. Thermal debris included charcoal and FCR. A particularly high density of bifacial-thinning flakes was observed in one of the test pits, along with a biface and a biface tip (possibly from an Archaic period point). The recovered faunal remains mostly consisted of cottontail (*Sylvilagus*), deer, coyote, squirrel (Sciuridae), and rabbit-sized mammals; bones from a medium-sized artiodactyl also were present.

Table 32. Caches Excavated in Locus D

Feature No.	Location (SU)	Date Range	Level of Effort	Excavation Methods	Dimensions[a] (m)	Plan	Cross Section	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Analyzed Flotation Sample (PD)	Comments
1545	1537	not dated	all	excavated whole, 1 level, 1/4-inch screened	0.60 × 0.50 × 0.18	irregular	unknown	unknown	unknown		Three censers recovered.
7501	unknown	A.D. 1–1450	all	excavated whole, 1 level, all fill collected	0.32 × 0.30 × 0.09	circular	basin	0.005	0.005	7502	Sherd cluster, broken censer, and ax fragment recovered.
11,442	1759	post–A.D. 735	all	grab-sampled from Feature 438 floor fill	unknown	unknown	unknown	unknown	unknown		Two censers recovered.

Key: FCR = fire-cracked rock; PD = Provenience Designation; SU = Stripping Unit.

[a] Length × width × depth.

This feature was not subjected to chronometric dating, but the presence of Gila Butte Red-on-buff sherds, San Simon brown ware sherds, and other painted brown ware sherds suggests a Middle Formative period occupation. In all likelihood, this midden was used during the Middle Formative A period, the peak period of occupation in Locus D.

Human Burials

Twenty-seven human burials were excavated in Locus D during the Phase 1 (n = 4) and Phase 2 (n = 23) investigations (see Appendix C:Table 1). The burials consisted of 13 secondary cremations, 10 inhumations, and 4 primary cremations. The 13 secondary cremations can be classified further as 11 secondary pit cremations (cremated remains interred in a pit) and 2 secondary urn cremations (cremated remains placed in a ceramic urn [generally a large jar] before interment). One of the 11 secondary pit cremations was characterized by the presence of a capping vessel, i.e., an overturned pottery vessel placed at the opening of the burial pit. Both urn cremations consisted of a ceramic vessel placed in an inverted position over the cremated remains. The burials were recovered in both intramural and extramural contexts. For detailed descriptions of all burials, the reader is referred to Appendix C.

The secondary cremations were mostly circular or ovate in plan and basin shaped or cylindrical in cross section. Excluding indeterminate cases, the burial pit depths ranged from 0.04 to 0.24 m, with a mean of 0.14 m (n = 13). Generally, this evidence suggests that most of the pits were deep enough to cover the interred remains. The four primary cremations were shallow, rectangular or subrectangular in plan, and oriented east–west, with straight or slightly sloping side walls and flat bases. All four of the primary cremations contained one or more postholes or possible postholes in the bases of the pits, which probably supported wooden pyres. Two of the four subrectangular primary-cremation features (Features 4069 and 4798 in Locus D) included subfloor pits containing denser and more-abundant cremated remains.

Inhumation pits were rectangular, subrectangular, or irregular-shaped in plan and cylindrical in cross section. As determined from dimensional measurements on 7 inhumations with clear pit outline (see Chapter 11, Volume 2), maximum lengths ranged from 0.5 to 1.8 m, with a mean of 1.16 m; maximum widths ranged from 0.4 to 0.6 m, with a mean of 0.53 m. Pit depths ranged from 0.15 to 0.57 m, with a mean of 0.34. This dimensional variability reflects differences in the sizes of the interred individuals (based largely on age and sex) and the body position (e.g., flexed, supine). Head orientations were variable, although most of the burials were oriented to the east; only 1 inhumation in Locus D exhibited a northwestern orientation. Twelve of the 27 human burials in Locus D (44 percent) included definite burial goods (probably mortuary offerings), including pottery vessels, shell jewelry, bone awls, and ground stone artifacts (including a carved stone censer in Feature 4069).

As was true in other loci, the demography of individuals recovered from Locus D offers little substantive information. Of the 27 individuals recovered from the locus, sex could be determined for just 8 (5 males and 3 females). The remaining 19 individuals proved dimorphically indeterminate. Slightly more individuals could be assigned to a broad age designation. Five individuals were skeletally juvenile, including 2 infants (age birth to 2 years) and 3 children (age 2–12 years). Thirteen individuals were adult, and the remaining 10 (all from cremation contexts) did not exhibit diagnostic attributes adequate for estimating age.

In Chapter 11 of Volume 2, Garraty and colleagues defined three concentrations of burial features within Locus D, which they refer to as Burial Areas 1–3. Burial Area 1 was located in the eastern half of Locus D, mainly in Stripping Unit 6795, and consisted of a concentration of five burial features and three additional features within the broader vicinity (Features 464, 4635, 4794, 4798, 5512, 7847, 10,674, and 10,711). Burial Area 2 was situated in the eastern half of Locus D and consisted of nine burial features in contiguous Stripping Units 3033 and 3035 (Features 336, 561, 562, 3704, 4057, 4069, 4221, 4850, and 4886). Burial Area 3 was located in the far-eastern portion of Locus D and included four burials in Stripping Units 1759, 1881, and 1883 (Features 3528, 3604, 3875, and 4740). Generally, Burial Areas 1 and 2 marked the locations of discrete extramural burial areas; in contrast, the burials in the Burial Area 3 were spatially interspersed with residential features.

Only one burial in Locus D was directly subjected to chronometric analysis: Feature 4221, a primary cremation was assigned to a date range of A.D. 585–1015 based on AM analysis. On the basis of indirect evidence, however, Garraty et al. (see Chapter 11, Volume 2) argued that probably all human remains found in Locus D were interred during the Middle Formative period, mainly the Middle Formative A period, with the exception of Feature 10,645, which appears to have been interred during the Late Archaic or Early Formative period.

Summary

The numerous complexes of stratigraphically superimposed structures and extramural features encountered in Locus D attest to the level of land use and occupation intensity in this area. The total dated assemblage recovered

from this locus indicates that activities occurred here between roughly 1500 B.C. and sometime before A.D. 1450, but most of the domestic features were assigned to the Middle Formative A period (ca. A.D. 750–950).

Radiocarbon-dated annuals recovered from six bell-shaped nonthermal pits (Features 411, 3557, 3976, 3983, 4849, and 5505) indicate a substantial Late Archaic period component. The assays indicate a primary occupation between 1290 and 590 cal B.C., with a relatively intense occupational episode between 1010 and 920 cal B.C. It is likely that two of the shallow, round pole-and-brush structures (Features 1815 and 1816) were related to this occupation component, but no definite temporal data were recovered from these features. Four other pole-and-brush structures (Features 4912, 4935, 7559, and 11,251) were interpreted as probable Early Formative period structures on the basis of the recovery of plain ware ceramics from structure fill.

Chronometric and archaeological data indicate that occupational intensity increased during the Middle Formative period, but unlike other areas of the site, Locus D was occupied most intensively during the Middle Formative A period. More than half (65 percent) of the painted ceramics collected in this locus has a combined production date range of A.D. 650–950, and less than a quarter of the collection (24 percent) has production date ranges that extend into the latter half of the Middle Formative. This evidence agrees with the AM data, which indicate that most of the structures dated through this technique were abandoned between A.D. 700 and 900. Furthermore, these data identify at least seven different abandonment episodes during the Middle Formative period (again, as in Locus C), with no temporal distinction between the recessed-hearth and more-traditional styles of pit structure.

Finally, the presence of four adobe surface structures, combined with a low frequency of Roosevelt Red Ware ceramics, indicates that Locus D continued to be used during the Late Formative period. A hiatus in the dated ceramic assemblage between A.D. 1300 and 1320 coupled with the paucity of features dated between A.D. 1150 and 1320 suggests that this late occupation occurred during the second half of the Late Formative period. This pattern is supported by the AM and radiocarbon data, which indicate that the four adobe surface structures represent a discrete occupation during the mid–A.D. 1300s.

CHAPTER 8

Locus E

Rein Vanderpot, Heather J. Miljour, and Cannon Daughtrey

Locus E was located immediately east of Locus D and formed the south-central portion of the site (see Figures 2 and 3). The Marsh Station access ramp separated the locus from Locus C to the north, and the UPRR line traversed the southern portion of the locus along a northwest–southeast axis. As determined from surface artifacts, the locus measured 127 m east–west by 107 m north–south, with a total area of 10,243 m^2. More than half of the locus (an area of about 7,555 m^2) was contained within the Phase 1 ADI (see Figure 2). Elevations ranged between 3,602 and 3,615 feet (1,098 and 1,102 m) AMSL. All SRI's work in Locus E was completed in Phase 1. No Phase 2 data recovery was conducted because the redrawn, Phase 2 ADI avoided nearly the entire locus. All excavations were conducted on the north side of the railroad tracks. SRI's trenching and stripping efforts exposed 7 pit structures and 18 extramural features. Two cremations were the only features that were excavated. The limited investigations revealed the remains of a residential area occupied during the Middle and Late Formative periods.

Setting and Disturbances

Locus E was located on a level terrace surface, sloping slightly southward to Cienega Creek (Figure 122). Vegetation consisted mostly of grasses, desertscrub, soaptree yucca, and mesquite trees. Disturbance within the locus included two dirt roads, two fences, several small drainages or culverts, and the railroad. Disturbance was particularly substantial in the southern portion of the locus, which was traversed by the railroad and a dirt road along the north side of it. A large borrow pit associated with ADOT's construction of I-10 was located immediately west of the locus in Locus D (see Figure 19).

Locus Definition

The Locus E boundary was based solely on the presence of surface artifacts, not on adjacent roads or other topographic features (Figure 123). The surface artifact distributions revealed a very low density of ceramic sherds and lithic artifacts scattered across the locus without forming distinct concentrations. No features or midden areas were identified on the modern ground surface.

Surface Collections

All surface artifacts (n = 33) were collected from the part of the locus contained within the ADI. Only the area to the north of the railroad ROW fence was collected (see Figure 123); the area south of the fence was too disturbed to warrant collection. Tools and temporally diagnostic artifacts (n = 12) were point-located and numbered individually; all other collected surface artifacts (n = 20) were assigned to Collection Unit 546. This collection unit measured 58 m north–south by 108 m east–west, covering 4,112 m^2. This area encompassed the entire northwestern portion of the locus contained within the two fences. Point-located artifacts included a metate fragment, an indeterminate ground stone fragment, a core, and 10 flaked stone tools. Artifacts recovered from Collection Unit 546

Figure 122. South view of the Mescal Wash site, showing location of Locus E.

consisted of 11 ceramic sherds (1 of which was identified as Dragoon Elaborated Red-on-brown) and 9 flaked stone artifacts.

Excavations

Backhoe Trenches

Testing began with the excavation of six backhoe trenches (Trenches 274, 346, 374, 375, 540, and 647) totaling 215 m in length (Figure 124). With the exception of Trench 540, the trenches were laid out southeast-to-northwest across the undisturbed portion of the project area. Trench 540 was excavated southwest-to-northeast paralleling the eastern project boundary over a length of 68 m. It was excavated 30 m beyond the northern locus boundary to ensure that subsurface deposits were not present in the area. Trenches were not excavated south of Trench 647 because this area was too disturbed.

The backhoe trenches exposed 7 pit structures, 16 extramural pits, 2 cremations, and 1 segment of a possible adobe compound wall (later found to be a modern disturbance and omitted as a feature). Features were found in each of the six trenches. Midden deposits were identified in all trenches, with the exception of Trench 374. No feature numbers were assigned to the deposits, which appeared to be part of a single sheet midden extending through much of the tested area.

Test Pits and Stripping Units

Next, four test pits (Test Pits 396, 662, 938, and 972) and three stripping units (Stripping Units 637, 638, and 639) were excavated (see Figure 124). The stripping units, which totaled 40 m^2 in area, were excavated using the backhoe as well as shovels. Test Pit 396 was placed along the south side of Trench 375 to guide the excavation of the two cremations (Features 380 and 381), Test Pits 938 and 972 were excavated to explore midden deposits visible in the trench walls, and Test Pit 662 and the stripping units were excavated to investigate a feature exposed in Trench 374 and thought to be segments of an adobe compound wall. Each of these features and units is described in the discussion that follows.

Four strata (I–IV) were used to describe deposits while recording the context of the features and possible features in Locus E. Stratum I consisted of colluvial deposits; Stratum II was an ashy, artifact-dense midden horizon; Stratum III was the argillic horizon; and Stratum IV consisted of a dense calcium carbonate horizon.

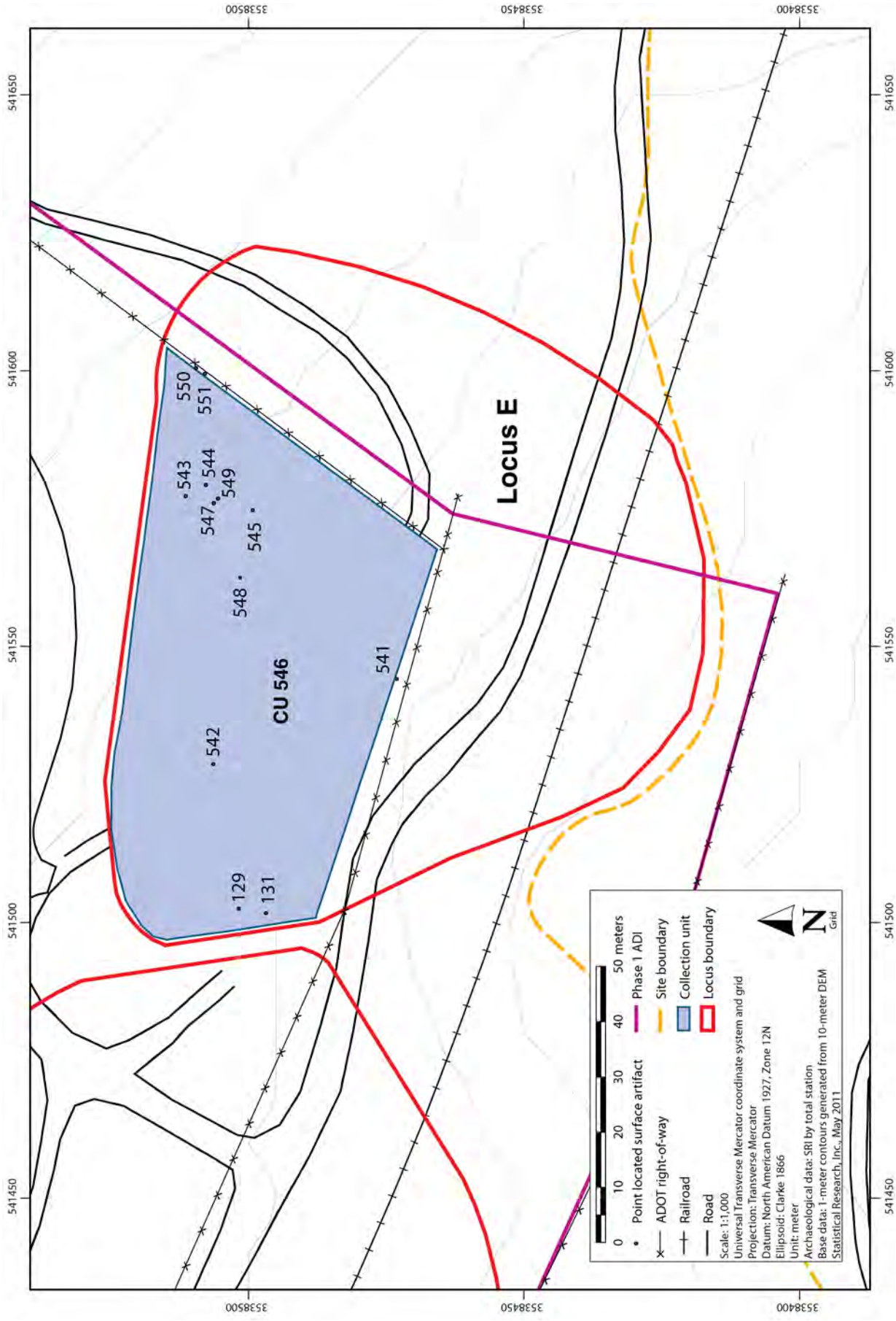

Figure 123. Map of Locus E, showing point-located artifacts and Collection Unit 546.

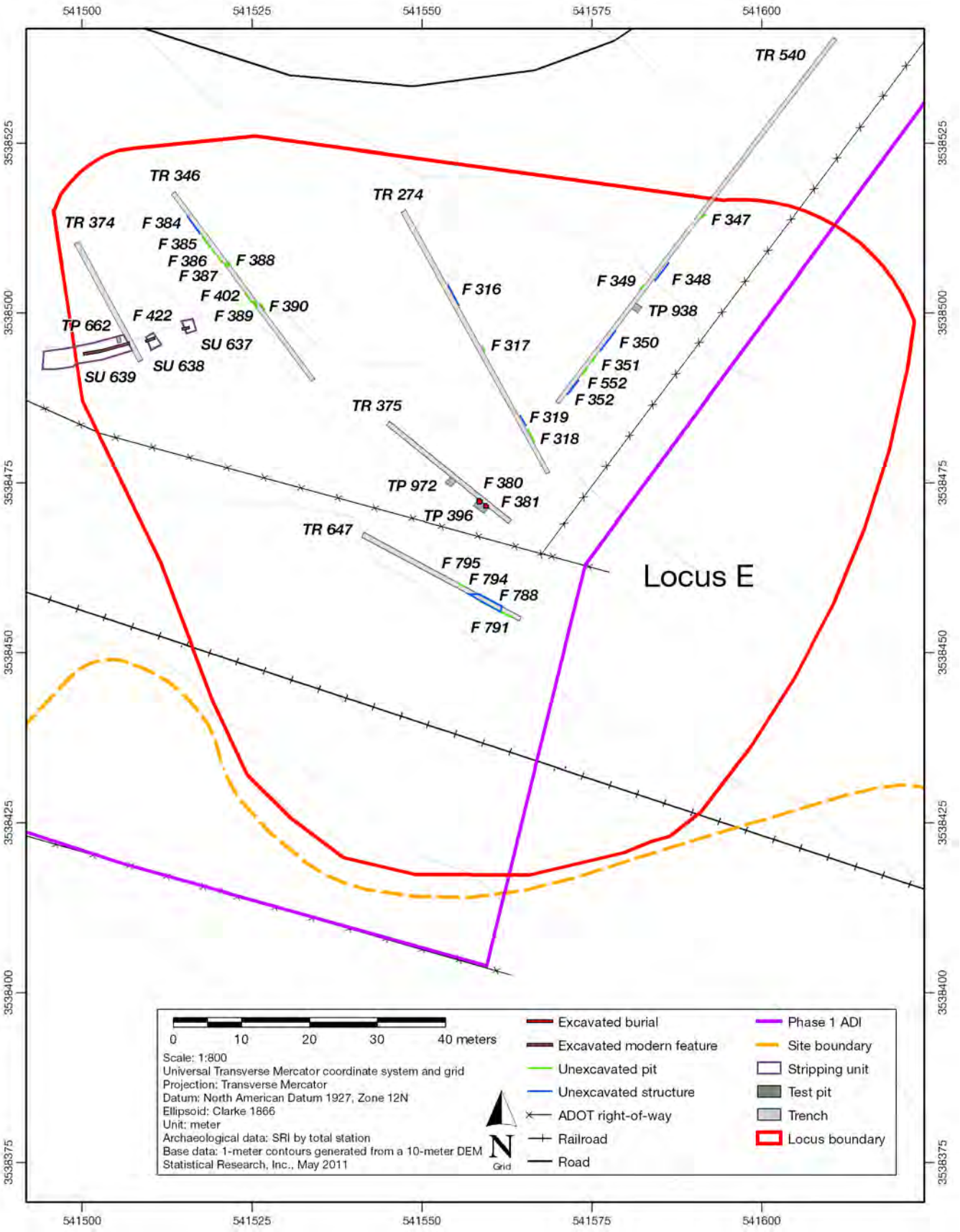

Figure 124. Map of Locus E, showing excavation units and exposed features.

Midden Deposits

The midden deposits were investigated with two 1-by-1-m units (Test Pits 938 and 972) excavated along Trenches 540 (east wall) and 375 (south wall), respectively. Test Pit 938 was excavated in four levels to a maximum depth of 33 cm, and the midden was about 20 cm thick in the unit. Level 1 corresponded to Stratum I, which extended to 7 cm below the modern ground surface. It included grasses, roots, fine-to-small gravels, and wind-borne silty sands. This level was not screened, but more than 100 sherds and 80 flaked stone artifacts were grab-sampled. Levels 2 and 3 were 10-cm, 1/4-inch-screened levels within Stratum II (the midden deposits). The sediments consisted of dark gray ashy silt containing fine gravel inclusions and abundant artifacts, including biface-thinning flakes and a clay pipe or handle. Level 4 (also screened) was started upon encountering Stratum IV, which originated at 27 cm below the modern ground surface (Stratum III was not present in this location). Aside from the artifacts recovered in rodent runs, the level was sterile, and the excavation of Test Pit 938 was terminated.

Midden deposits were thicker (40 cm) in Trench 375; therefore, Test Pit 972 was excavated in five levels to a maximum depth of 53 cm. Level 1 corresponded to Stratum I and was identical to Level 1 of Test Pit 938. The level was not screened and no artifacts were recovered. Stratum II, the midden deposit, was excavated in four 10-cm, 1/4-inch-screened levels (Levels 2–5) down to Stratum IV (Stratum III was not present in this location). Nearly 70 sherds were recovered from Level 2, along with approximately 50 flaked stone artifacts, a vesicular basalt mano, squirrel-to-cottontail-sized faunal bone, charcoal, and FCR. Flaked stone included small biface-thinning flakes and the base of an obsidian Pinto dart point (PD 974). Level 3 contained sediments similar to those of Level 2; however, more ash and charcoal were dispersed throughout the level. Artifact variety was similar to that of the previous level, but density was lower. The fill of Level 4 was moister and softer and included fewer artifacts but much charcoal and FCR. Level 5 contained more carbonates than the previous levels and many fewer artifacts.

Adobe-Like Disturbance

Broad chunks of hard daub (designated Feature 422) were identified at about 30 cm below the modern ground surface in both faces of Trench 374 (see Figure 124). Because the feature was somewhat similar to excavated examples of adobe compound walls, it was explored with three stripping units (Stripping Units 637, 638, and 639) and one test pit (Test Pit 662). Each unit was of a different size and shape, and all were excavated in one unscreened level. Both hand shovels and the backhoe were used to excavate them. The stripping units exposed a linear area of compacted sediments extending east and west of the place where Feature 422 was found in Trench 374. Upon careful examination, it was determined that the adobe-wall-like feature probably had been caused by the tires of a heavy vehicle (or vehicles) driven across the locus during a period of significant moisture. It is believed that the tires compacted the soils, which subsequently dried out, looking like adobe.

Features

Features exposed in the backhoe trenches consisted of 7 pit structures, 16 extramural pits, and 2 cremations (see Figure 124). Of these features, only the 2 cremations were excavated.

Structures

The structures were found in Trenches 274, 346, 647, and 938. Where midden deposits (Stratum II) existed, structures originated within them, generally between 24 and 32 cm below the modern ground surface (Features 384 and 788). Where midden deposits did not exist, structures originated at about the same depth as above, but at the interface between Stratum I and the underlying Stratum III or IV horizons (Features 316, 318, 348, 350, and 352).

Feature 788, exposed over a length of 5.5 m in both faces of Trench 647, was the most noteworthy of the seven structures. It was an adobe-walled pit structure, similar to the four Late Formative B period structures excavated in Locus D. None of the other pit structures contained adobe in its profile. As shown in the trench profile, Feature 788 had thick, adobe-plastered walls and floor and an adobe-lined, east-facing entryway (Figure 125). A layer of charcoal and ash covered the floor, which was at a depth of 50 cm below the modern ground surface. Also on the floor was a Gila Polychrome sherd, which had a date range of A.D. 1320–1450 and confirms the Late Formative B period age of the structure. Feature 788 was intrusive into a large borrow pit (Feature 791).

Extramural Pits

Sixteen extramural pits were identified. The pits originated at multiple depths and in multiple strata (Stratum I and II), suggesting that they represented multiple temporal components. None of the pits appeared to have an oxidized base or walls; however, several (Features 349, 385, 389, 402,

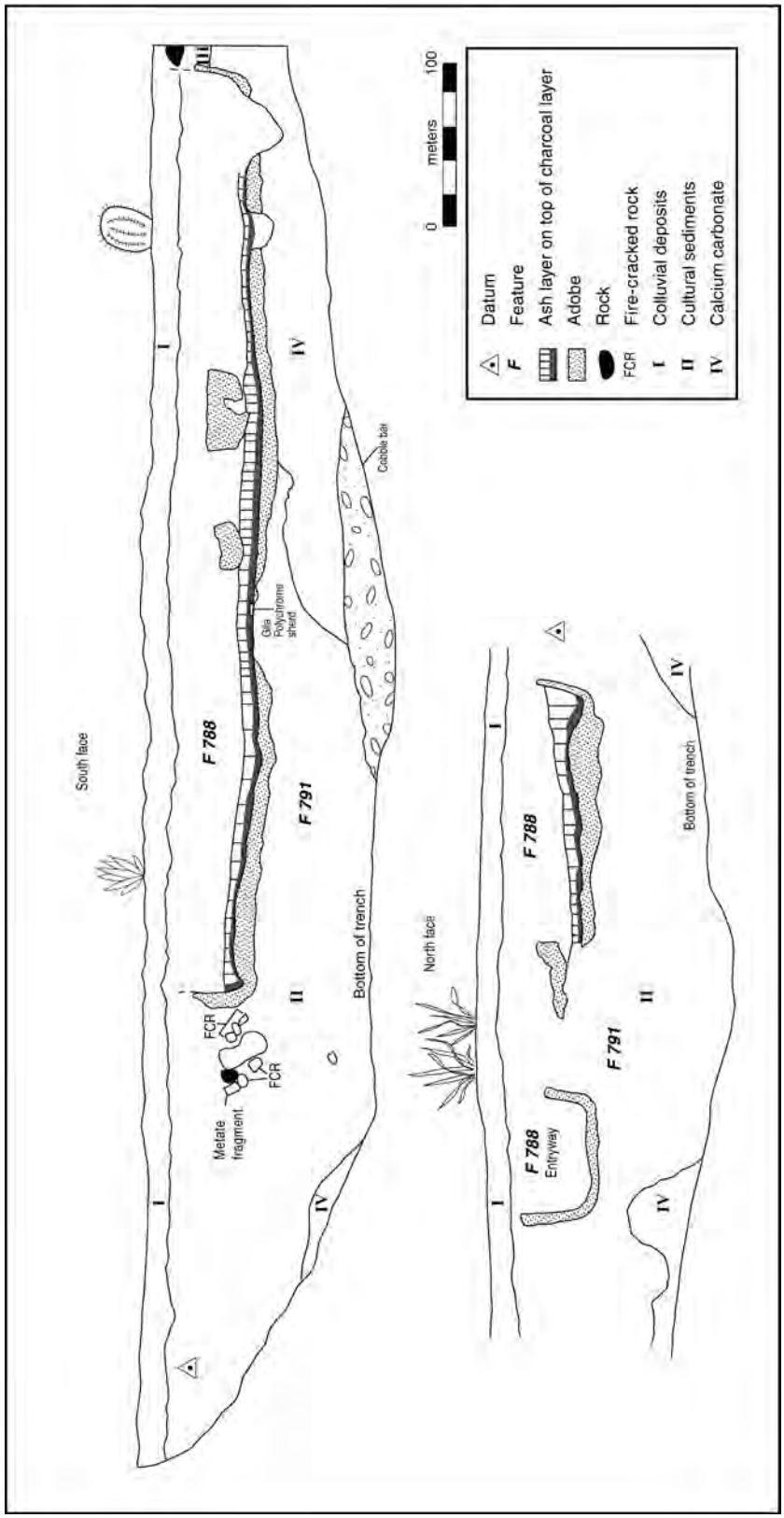

Figure 125. Features 788 (adobe-walled pit structure) and 791 (borrow pit) as seen in north and south profiles of Trench 647.

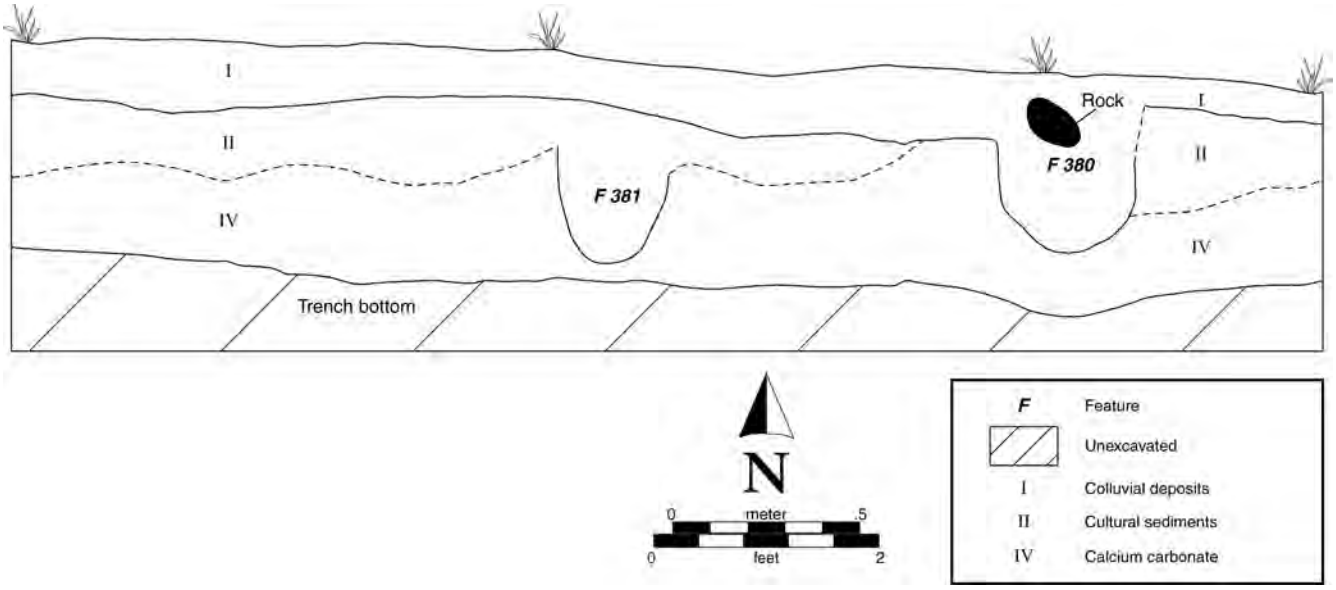

Figure 126. Features 380 and 381 (secondary pit cremations) as seen in west profile of Trench 375.

and 795) contained charcoal and FCR within redeposited fill. Charcoal, or charcoal and ash, were the only cultural material noted within three of the pits (Features 347, 386, and 791), and FCR was the only cultural material noted in two (Features 351 and 390). No functional interpretations were made except for Feature 791, which was a borrow pit underlying the adobe structure (Feature 788).

Burials

The two cremations (Features 380 and 381) were found 92 cm apart in the south end of Trench 375 (Figure 126). They originated in Stratum II between 16 and 24 cm below the modern ground surface. A 1-by-2-m test unit (Test Pit 396) was excavated along the west side of the trench to uncover both features (see Figure 124). Both burials were secondary pit cremations without a burial urn or vessel, and the pit walls displayed no evidence of burning. The pits were of similar shape and size: circular and approximately 22 cm deep. No artifacts were encountered, and neither burial included sufficient skeletal materials to determine sex. Analysts were able to conclude that the individual in Feature 380 was an adult, whereas the individual in Feature 381 was a child. The ages of the individuals are the only substantial differences between the two features.

Artifacts

In total, 347 sherds were recovered from Locus E, including 273 unpainted sherds (79 percent), 66 painted sherds (19 percent), and 6 indeterminate sherds (2 percent). Unpainted ceramics include 266 plain ware sherds and 7 red ware sherds. Among the plain wares, mica-schist-tempered Type III sherds (143 sherds, or 54 percent) were slightly more prevalent than sand-tempered Type II sherds (121 sherds, or 45 percent). Two phyllite-tempered Type IV sherds (1 percent) also were recovered. This trend contrasts with that at most of the other loci (except Locus F), in which sherds of Types II and III generally were equally frequent and Type IV sherds were absent. All 7 red ware sherds were classified as Type II.

Only 27 painted sherds could be identified by regional tradition, including 9 Phoenix Basin (Hohokam) Red-on-buff, 3 Dragoon or San Simon Red-on-brown, 2 Dragoon Elaborated Red-on-brown, 1 Dragoon Fine Red-on-brown, 4 Dragoon Fine Red-on-brown or Tucson Basin Red-on-brown, and 8 Gila Polychrome sherds. No Tucson Basin Brown Ware ceramics were identified, but these may be present among the 39 indeterminate red-on-brown sherds. None of the Hohokam Buff Ware sherds was temporally diagnostic. However, the 3 Dragoon brown ware ceramics

included 2 sherds from vessels (Elaborated Red-on-brown) that probably were made after A.D. 950 and 1 (Fine Red-on-brown) probably made before A.D. 950. The presence of Gila Polychrome indicates a Late Formative B period component, which is consistent with the presence of adobe architecture within the locus. Overall, the small number of temporally diagnostic painted sherds suggests a multicomponent occupation spanning the Middle and Late Formative periods. This multicomponent assemblage might explain the variable proportions of plain ware types relative to those of the other loci.

In total, 360 flaked stone artifacts were collected during the investigations. These artifacts included a hammerstone (point-located on the surface as PD 551), a dart point blank, a dart point of possible Pinto style, and miscellaneous flaked stone that was not analyzed.

Twelve ground stone artifacts were recovered, including six pieces of three manos, one netherstone fragment, two pieces of a shaft straightener, one handstone fragment, and two indeterminate pieces. All were made of sandstone, with the exception of one indeterminate fragment. The shaft straightener (PD 796) was made out of a circular mano, with a U-shaped groove abraded into one of the ground surfaces (see Chapter 5:Figure 5.27, Volume 2).

Twelve pieces of faunal bone were found, including five from squirrel-to-rabbit-sized mammals; four from rabbit-sized mammals; one from a cottontail, jackrabbit (*Lepus*), or pika (*Ochotona*); one from a deer-sized mammal; and one from a mule (*Odocoileus hemionus*) or white-tailed (*O. virginianus*) deer. No shell was identified. No botanical, pollen, or radiocarbon samples were analyzed, and no archaeomagnetic samples were taken.

Summary and Interpretation

As determined from the recovered ceramics, Locus E was used during the Middle and Late Formative periods. The adobe-walled structure (Feature 788) was similar to the four Late Formative B period structures excavated nearby in Locus D and appears to be part of the same dispersed settlement at the site during this period. Locus E connects with Locus D to the west, separated from it by a deep ADOT borrow pit. Therefore, it is likely that, rather than forming a discrete settlement, Locus E formed the eastern end of Locus D. Certainly, the exposure of so many features in only a few trenches, with several cases of superimposition noted, is reminiscent of the dense clustering of features in Locus D.

CHAPTER 9

Locus F

Rein Vanderpot and Heather J. Miljour

Locus F was located in the far northeastern corner of the site, immediately north of I-10 and west of the UPRR and Locus G (see Figure 3). Locus F probably formed a single archaeological locality together with Locus G, located on the opposite side of the railroad. As determined from surface artifacts, the locus measured 168 m north–south by 142 m east–west, with a total area of 11,970 m^2. Elevations in the locus ranged between 3,593 and 3,601 feet (1,095 and 1,098 m) AMSL. The southern one-third of the locus and a narrow strip along the railroad (together, about 4,782 m^2) were located within the Phase 1 ADI. All excavations were done by hand because there was no access for a backhoe. Trenching and stripping exposed 2 pit structures and 13 extramural features. SRI's work in Locus F was limited to Phase 1, and the only features that were excavated were 1 of the structures and a trash mound found on the site surface. Our limited investigations revealed the remains of a residential area occupied during the Middle Formative period.

Setting and Disturbances

The locus was perched on a terrace edge overlooking the confluence of Cienega Creek and Mescal Wash (Figure 127). The surface was level, but below the locus the terrain dropped down steeply toward the drainages. Vegetation was, as elsewhere on the site, a mix of grasses and desertscrub, whereas the slopes below had a dense mesquite cover. Disturbance consisted primarily of the railroad and ADOT ROW fences.

Locus Definition and Surface Features

On the surface, Locus F consisted of a light artifact scatter, within which a trash mound (Feature 672), an undefined rock alignment (Feature 741), and two artifact concentrations (ACs 11 and 12) were identified (Figure 128). AC 11 covered the south half of the locus, measuring 90 m north–south by 128 m east–west, with an area of 6,586 m^2. Most of this area was within the Phase 1 ADI. AC 12 was located entirely outside the ADI on a high, flat knoll in the extreme northern portion of the locus. It measured 59 m east–west by 49 m north–south, with an area of 2,084 m^2. AC 12 consisted primarily of flaked stone, which exhibited the widest variety of stone types noted at the site. This is not surprising, because the slope toward the confluence below the knoll contained cobble outcrops with a varied assortment of raw materials.

The trash mound and the rock alignment were within the project area in the center of AC 11. On the surface, Feature 672 appeared as a low earthen mound measuring 4.6 m east-to-west by 4.8 m north-to-south (20 m^2). Most artifacts in AC 11 were found near Feature 672. The rock alignment (Feature 741) consisted of a 7.1-m-long, east–west alignment of waterworn cobbles and small boulders. Scattered rock found over an area of 21 m^2 to the north suggested that the feature was a collapsed wall, although no corresponding alignments were identified. The feature was not excavated.

Figure 127. South view of the Mescal Wash site, showing the location of Locus F.

Surface Collections

Surface collection was restricted to the Phase 1 ADI in the southern portion of the locus (see Figure 128). This area conformed to Collection Unit 685, which measured 4,510 m^2. No artifacts were collected from the narrow strip of the ADI farther north within the railroad ROW because of the disturbed nature of this area. Lithic tools and temporally diagnostic artifacts (n = 14) were point-located individually, and all other collected surface artifacts (n = 19) were assigned to Collection Unit 685. Point-located artifacts included the base of a chert San Pedro dart point (PD 156), a sandstone trough-metate fragment (PD 687), 3 hammerstones (PDs 691, 692, and 694), and 9 other flaked stone artifacts (PDs 688, 689, 690, 695, 696, 697, 703, 704, and 706). Artifacts recovered from Collection Unit 685 included 4 ceramic sherds (1 Type II red ware, 3 Type II plain ware) and 15 flaked stone artifacts.

Excavations

SRI's excavations were all conducted in the southern portion of the locus, corresponding to Collection Unit 685 (Figure 129). The narrow strip within the railroad ROW and the western portion of Collection Unit 685 were avoided because of disturbances and sloping terrain, respectively. The excavation units consisted of five trenches, one small stripping unit, and five test pits, all excavated by hand.

Hand Trenches

Trenches in Locus F were excavated by hand because we were unable to bring a backhoe across the railroad tracks or up from Cienega Creek. Five trenches (Trenches 604, 615, 619, 623, and 673) totaling 49 m in length were excavated. The trenches were laid out roughly east–west across the terrace top, in particular where surface artifacts were most numerous (see Figure 129). Trench 615 was excavated through the trash mound (Feature 672) and Trench 604 was placed just south of the rock alignment (Feature 741). The trenches ranged from 6.0 to 11.0 m in length and were 0.50 m wide; a 1.0-m-long segment of each trench remained unexcavated to allow these segments to be excavated as controlled test units.

Exposed Features

Features were identified in all five trenches. They included 2 pit structures (Features 614 and 652), 1 roasting pit (Feature 700), and 10 extramural pits of uncertain function (Features 653, 655, 666, 680, 681, 698, 699, 701, 745, and 746) (see Figure 129).

Four strata (I–IV) were used while recording the context of these features. Stratum I consisted of colluvial deposits; Stratum II was an ashy, artifact-dense midden horizon; Stratum III was the argillic horizon; and Stratum IV consisted of a dense calcium carbonate horizon. Each trench was excavated in one level to just below the culturally sterile argillic or calcic horizon (Stratum III or IV), which varied between 0.45 and 0.55 m below the modern ground surface.

Features 614 and 652, the two pit structures, were found in Trenches 604 and 623, respectively. Feature 614 originated at 0.62 m below the modern ground surface within Stratum II and was dug into the argillic horizon (Stratum IV). The structure was visible in both trench walls and extended below the bottom of the trench. As mapped in the bottom of the trench, it appeared as a 2.15-m-wide pit filled with ash-laden sandy silt similar to Stratum II. A cluster of rocks, a hammerstone, and a sherd were mapped in the profile but were not collected. Test Pit 605 was subsequently excavated immediately to the east (see below),

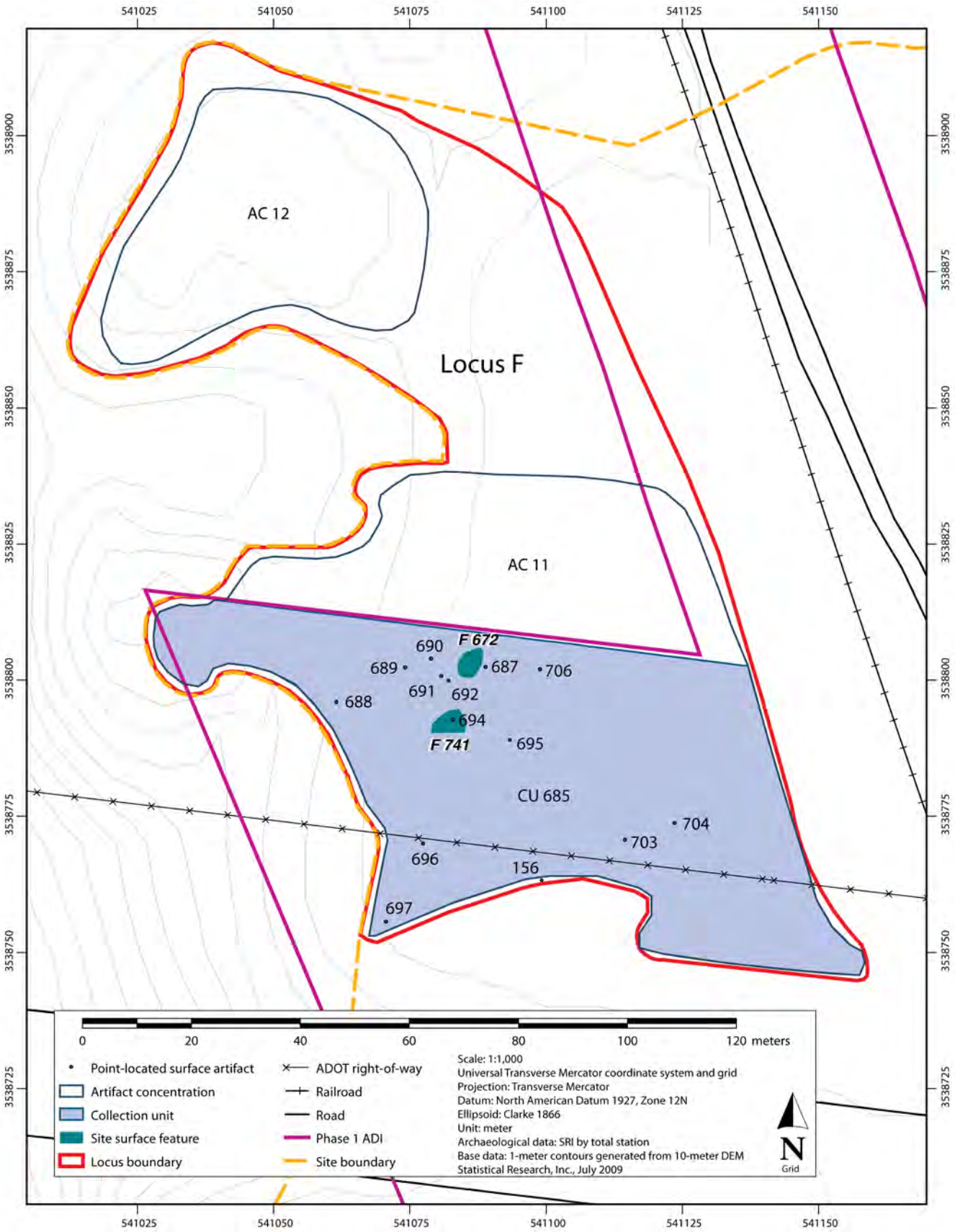

Figure 128. Map of Locus F, showing features recorded on the modern surface, artifact concentrations, point-located artifacts, and Collection Unit 685.

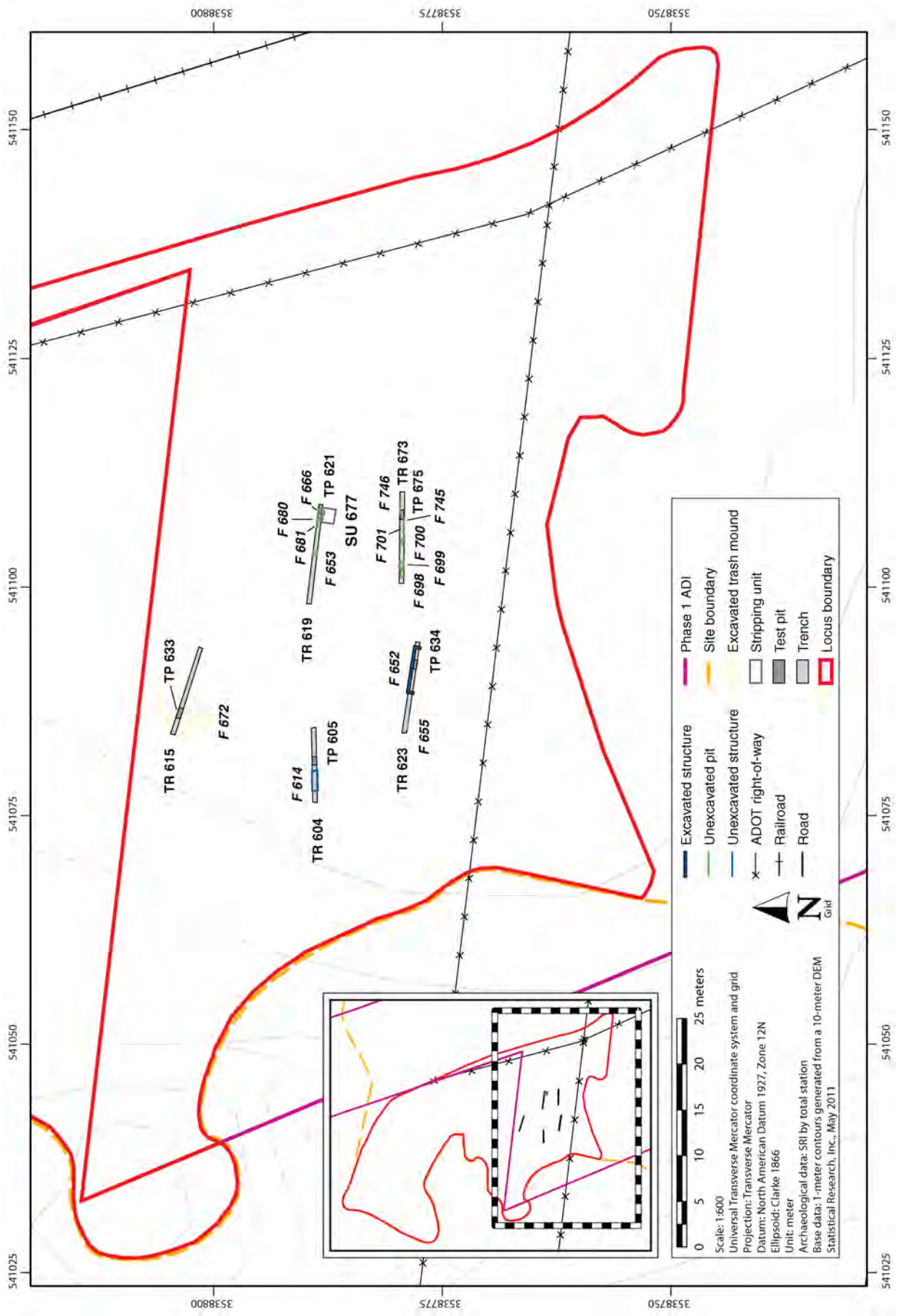

Figure 129. Map of Locus F, showing excavation units and exposed features.

but the structure itself remained unexcavated. Feature 652, the second pit structure, was exposed over a length of 5 m in the walls and bottom of Trench 623. Feature fill was visible at about 5 cm below the ground surface and extended to below the trench bottom. The structure was partially excavated with Test Pit 634 (see below). Neither structure appeared to have a prepared floor.

Feature 700, the roasting pit, was the only identified thermal feature. It was discovered in the base of Trench 673, originating in Stratum II, 0.52 m below the modern ground surface. The pit was not exposed in profile. The visible portion of the feature measured 0.80 m diameter in plan view and had an oxidized edge. It contained dark gray ashy soil mixed with many small FCR fragments. No associated artifacts were identified.

Ten extramural, nonthermal pits were identified in the walls and bottoms of the trenches. Many of these pits probably functioned initially as storage features and were later used as trash receptacles. All originated in Stratum II, and with the exception of two pits (Features 666 and 680, which originated at 0.30 m), all originated at about 0.50 m below the modern ground surface. None of the pits appeared to have an oxidized base or walls; however, one (Feature 680) contained charcoal and FCR within redeposited fill. Charcoal, ash, artifacts, and unheated rocks were noted within two of the pits (Features 680 and 699), whereas unheated rock was the only cultural material noted in two others (Features 653 and 701). In Feature 681, relatively large quantities of flaked stone were the only artifacts. Features 745 and 746 contained only ash-laden fill and unburned rocks. Two pits (Features 666 and 698) contained material that appeared to be adobe.

Test Pits

Following trench excavation and feature recording, five test pits (Test Pits 605, 621, 633, 634, and 675) and one stripping unit (Stripping Unit 677) were excavated to explore and document features and site stratigraphy. Each test pit was placed within the 1-m-long unexcavated trench segment retained specifically for the control unit. Two of these units (Test Pits 633 and 634) were located within features: the trash mound (Feature 615) and one of the pit structures (Feature 652). Test Pits 605, 621, and 675 were simply exploratory and were located along Trenches 604, 619, and 673, respectively. All sediments were screened through 1/8-inch mesh. The size of each test pit was 1.0 by 0.50 m.

Test Pits 605, 621, and 675 were used to investigate local stratigraphy. Each was excavated in arbitrary 10-cm-deep levels unless a change in strata was encountered: Test Pit 605 included three strata (I, II, and III) and was four levels, or 42 cm, deep; Test Pit 621 included three strata (I, II, and IV) and was five levels, or 47 cm, deep; Test Pit 675 included three strata (I, II, and IV) and was six levels, or 76 cm, deep. The units were terminated upon excavation of one level of Stratum III or IV. Stratum I in Test Pits 605 and 621 contained the greatest artifact density when comparing all strata from each of the three test units. This may be due in part to degradation of the site surface. Each of the three units contained artifacts within Strata III and IV, which is not surprising given the severe bioturbation noted during excavation.

Stripping Unit

Stripping Unit 677 was excavated to uncover Features 666 and 680, two adjacent rock-filled pit features exposed in the east end of Trench 619. The stripping unit measured 2.3 m^2 in area and was excavated in one 32-cm-deep, grab-sampled level to the top of the features. The level was excavated through the colluvium (Stratum I) and into Stratum II, the horizon of dark sediments bearing cultural material, which was exposed across the southern portion of Locus F. Both features originated in Stratum II, 32 cm below the modern ground surface. Feature 666 was a 36-cm-deep, cylindrical pit containing dense rock ranging from 5 to 20 cm in diameter. Hard, adobe-like sediments could be seen in profile below the pit. In plan view, the feature was circular.

The pit associated with Feature 680 was never obvious because of severe bioturbation. In profile, the feature was visible as a cluster of 12 FCR, 1 hammerstone, and 1 flaked stone artifact. Very little charcoal was seen, and the texture of the sediments surrounding the rocks was similar to the grayish brown ashy, silty sand (Stratum II) horizon witnessed throughout the southern portion of the locus. The feature was irregular shaped in both plan view and profile. Features 680 and 666 remained unexcavated.

Feature Excavations

Pit Structure

Feature 652, the pit structure identified in Trench 623, was explored and sampled with Test Pit 634 (see Figure 129). In the trench, the structure was visible over a 5-m length, appearing as a pit filled with dark-stained sediments containing cultural materials (Stratum II). The test unit was excavated in 10-cm-deep levels until a change in strata was encountered and a new level was initiated. A flotation sample and a pollen sample were taken from each level, and all remaining excavated sediment was screened through 1/8-inch mesh. In total, five levels were excavated. Level 1 was 3–6 cm deep and corresponded to natural colluvial deposits (Stratum I) overlying the feature. Levels 2–5 encompassed a 53-cm-deep stratum of structure fill, consisting of light gray ash-laden, silty sand. Artifacts included 61 plain ware ceramic sherds, 2 indeterminate red-on-brown

ceramic sherds, 143 flaked stone artifacts (some exhibiting biface-thinning morphology), 1 black-tailed jackrabbit (*Lepus californicus*) bone, and 7 other leporid or rabbit-sized bones (1 burned). One of the plain ware ceramics was recovered from the floor fill, as well as 3 large cobbles of indeterminate function. The floor of the structure consisted of the natural, reddish brown argillic horizon (Stratum III). The size and shape of the structure remained unknown, because not enough of the structure floor was exposed. No postholes or other floor features were identified.

Trash Mound

Test Pit 633 was used to investigate Feature 672, the trash mound identified on the surface (see Figure 129). The unit was placed near the center of the trash mound and was excavated in 10-cm-deep levels until a change in strata was encountered and a new level was initiated. With the exception of sediment collected for a flotation sample in Level 4, all excavated sediment was screened through 1/8-inch mesh. In total, four levels were excavated. Level 1 was 3–6 cm deep and corresponded to natural colluvial deposits (Stratum I). Feature fill was encountered in Levels 2–4 and was about 30 cm deep. Numerous stratified lenses of charcoal, ash, and artifacts were witnessed within the midden, although these were not excavated individually. The sediment consisted of grayish brown fine sandy silt with gravel inclusions. Eighteen plain ware sherds, 4 pieces of 2 sandstone manos, a dart point fragment, a dart point blank, and 34 other flaked stone artifacts were recovered. A fair amount of FCR was encountered as well. Test-pit excavation was stopped after the naturally deposited argillic horizon (Stratum III) was identified at the bottom of Level 4.

Artifacts

In total, 335 sherds were recovered from Locus F, consisting of 321 unpainted sherds (96 percent) and 14 painted sherds (4 percent). The very low percentage of painted sherds in Locus F is an aberration with respect to the other site loci, in which painted sherds constituted 17–35 percent of the total collections. The predominance of unpainted sherds suggests a certain temporal association or function that was unique among the loci. The Locus F residents may have conducted only a limited array of activities—such as storage or cooking—that required few painted pottery vessels.

Unpainted ceramics included 316 plain ware sherds and 5 red ware sherds. Among the plain ware ceramics, sand-tempered Type II sherds (174 sherds, or 55 percent) were slightly more prevalent than mica-schist-tempered Type III (138 sherds, or 44 percent). Four Type IV phyllite-tempered sherds were recovered. This trend contrasts with that of most of the other loci (except Locus E), in which sherds of Types II and III were generally equally frequent and Type IV sherds were absent. The red ware sherds were classified as Type II.

Painted sherds include five Rillito Red-on-brown (A.D. 850–950), one Dragoon Fine Red-on-brown (A.D. 700–950), two Tucson Basin or Dragoon Fine Red-on-brown, and six indeterminate red-on-brown sherds. The Rillito and Dragoon Red-on-brown sherds suggest occupation during the Middle Formative A period. The sample of painted sherds is far too small for making a robust inference about temporal association, however.

In total, 764 flaked stone artifacts were collected from Locus F. None of these was analyzed, although 4 dart points and 3 hammerstones were documented in the collection. Two of the dart points were blanks. Too little remained of the other points to confidently identify them; however, they displayed some characteristics similar to those of the San Pedro type.

Fifteen ground stone artifacts were recovered, including one trough-metate fragment, six pieces of three manos, one handstone, and two polishing stones. Five of the pieces of ground stone were too small for their function to be determined. All ground stone artifacts were made of sandstone, with the exception of the two polishing stones, which were of an unknown material. Two of the manos were recovered from the midden (Feature 672). Although broken, both were nearly complete and had bidirectional striations and pecking across the ground surface. With the exception of the manos recovered from Feature 672 and the metate fragment from the modern ground surface, all other ground stone was identified in the trenches.

The faunal collection consisted of 19 specimens, including 1 from a coyote-to-deer-sized mammal, 6 from deer-sized mammals, 1 from a black-tailed jackrabbit, 2 from leporids (cottontail, jackrabbit, or pika), and 6 from rabbit-sized mammals.

Two shell artifacts (both bracelets) were recovered from Locus F. One was a reworked *Glycymeris gigantea* bracelet with one end ground to a taper and an incomplete perforation. The fragment may have been intended for the manufacture of a needle pendant. The other was a *Glycymeris gigantea* bracelet fragment. Though limited, shell-artifact production probably took place at this locus, as evidenced by the reworked shell-bracelet fragment.

No botanical, pollen, or radiocarbon samples were analyzed, and no archaeomagnetic samples were taken.

Summary and Interpretation

Locus F was a small residential area occupied during the Middle Formative period. Because no data recovery was conducted and no large areas were stripped, our knowledge

of the locus remains spotty. As determined from SRI's investigations, the area encompassed by AC 11 contained a few pit structures and probably functioned as a farmstead occupied by perhaps one or two households at a given time. The high ratio of plain ware ceramics to painted ceramics is suggestive of cooking and storage by individual household groups rather than community-level activities such as feasting. Adjacent Locus G, separated only by the railroad from Locus F, occupied the same landform and consisted of small numbers of Middle Formative period structures associated with similar trash mounds (Buckles et al. 2010). Both loci were optimally placed to access any arable land that may have been available in the Cienega Creek and Mescal Wash confluence area. This scattering of small Middle Formative period habitation loci in the northern part of the site is in sharp contrast with the intensive, large-scale occupation during the same period in Locus D, in the southern part of the site.

CHAPTER 10

Locus G

Rein Vanderpot

Locus G was located in the northwest corner of the Mescal Wash site, wedged between the existing UPRR line to the west, I-10 to the south, and Marsh Station Road to the north and east (Figure 130; see Figure 3). Locus F, located immediately to the west on the other side of the railroad, appeared to connect with Locus G, and together these loci may have formed a discrete locality. As evident from surface artifact distributions, the locus measured 146 m east–west by 176 m north–south for a total area of 17,371 m^2 (1.7 ha or 4.3 acres) (Figure 131). Only two narrow segments along the southern and western locus periphery were contained within the Phase 1 ADI. Heavy disturbance and the presence of underground utilities argued against subsurface excavation in these two small areas. The areas were outside the main artifact concentrations, and the few artifacts noted within the ADI were not collected. All of SRI's work at the locus was completed in Phase 1, and no excavations were conducted. SRI's efforts consisted solely of a survey of the area to identify, characterize, and map surface features and artifact distributions. In 2008, WestLand investigated a substantial area along the northern edge of Locus G as part of the UPRR Pantano Realignment (Deaver 2010:Figure 1.12). WestLand excavated 29 prehistoric features, including 3 pit structures, 2 burials, 3 activity areas, 2 middens, and various extramural pits (Buckles et al. 2010). Also in 2008, SRI was contracted by HDR, Inc., to monitor construction activities related to the removal and replacement of a Sprint fiber-optic line within the boundaries of the Mescal Wash site (Blake and Graves 2008). Two features (a thermal pit and a midden) were found and recorded in the southern part of Locus G in the existing trench reexcavated to remove the fiber-optic line (Blake and Graves 2009:Figure 2).

Setting and Disturbances

The locus was located on a mostly flat Pleistocene surface that sloped down slightly to the west. Vegetation consisted primarily of a sparse cover of grasses and low scrub, without trees or the mix of succulents noted in most other areas of the site (see Figure 130). Although edges of the locus had been impacted by roads, erosion-control berms, and the Sprint fiber-optic line, the main part of the locus containing surface artifacts and features was relatively undisturbed, in particular compared to Loci A, C, and D, where much of the top surface had been removed by road-construction activities.

Locus Definition and Surface Features

On the basis of SRI's surface inspections, Locus G was characterized as a broad artifact concentration (AC 11) containing two rock clusters of unknown function (Features 927 and 930) and four trash mounds (Features 928, 929, 931, and 932). The rock clusters consisted of moderately deep embedded cobbles and smaller stones, a few of which may have been thermally altered. Feature 927 was located at the northern end of the artifact concentration. It measured 5 m east–west by 4 m north–south. Feature 930, found just east of the largest trash mound (Feature 931), was much smaller, measuring 1 by 1 m.

Figure 130. South view of the Mescal Wash site, showing the location of Locus G.

The trash mounds were visible as slightly raised areas of dark-colored soil containing large numbers of artifacts. Together, they formed a rough arch across the artifact concentration. The mounds ranged between 12 and 35 m in diameter, and their total area was 1,045 m². As determined from this areal extent, a substantial number of pit houses probably were associated with the trash mounds. Observed ceramics belonged to a relatively high number of buff wares and Tucson Basin brown wares; in addition, sherds belonging to the Dragoon and San Simon series were found. The main occupation appears to have occurred during the Middle Formative period.

Although the entire locus is relatively large, much of it appears to be an unaltered Pleistocene surface sprinkled with artifacts but without actual cultural deposits. Substantial buried deposits would be expected only within and around the trash mounds.

Summary and Interpretation

Based on SRI's investigations in Locus G, no more could be ascertained than that the locus served as a habitation area used sometime during the Middle Formative period. WestLand's data confirmed this assessment, indicating that the northern part of Locus G (like the northern portion of Locus A) was occupied toward the end of Middle Formative B (A.D. 950–1150) (Deaver 2010). These small settlements appear to have formed the last occupation of the site before an occupational hiatus lasting through Late Formative A (A.D. 1150–1300) and a brief reoccupation (in Loci D and E) during Late Formative B (A.D. 1300–1450).

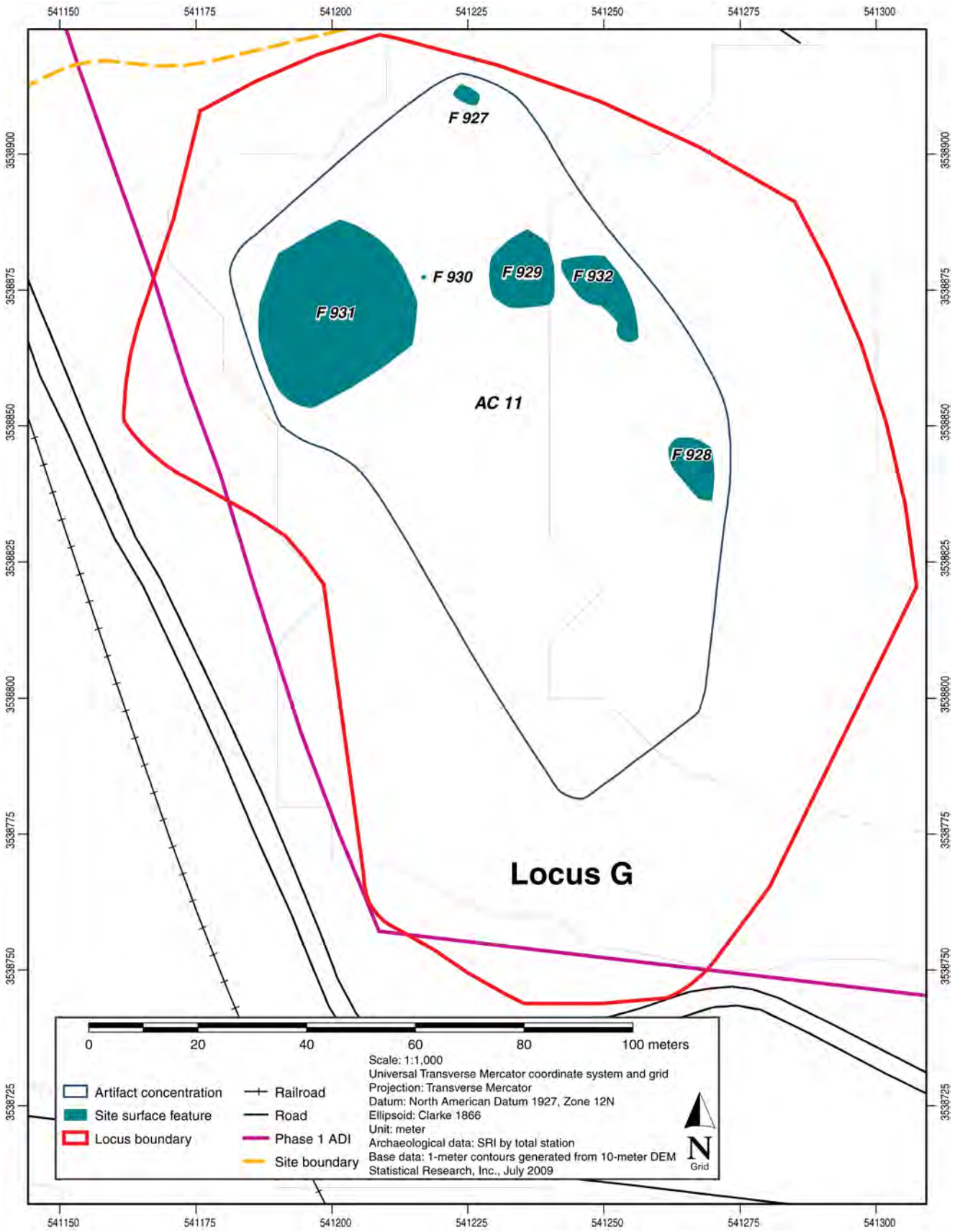

Figure 131. Map of Locus G, showing features and artifact concentration recorded on the surface.

CHAPTER 11

Locus H

Rein Vanderpot

Locus H was located entirely outside the Phase 1 ADI on ASLD lands to the southeast of the Marsh Station traffic interchange and north of the UPRR line (Figure 132; see Figure 2). The locus measured 228 m east–west by 182 m north–south, with a total area of 33,502 m^2. Elevation ranged between 3,615 and 3,642 feet (1,102 and 1,110 m) AMSL. SRI's 2000 investigations at the locus were limited to surface inspections and mapping. No artifacts were collected and no excavations were conducted. Two backhoe trenches excavated in Phase 1 just outside the north boundary of the locus exposed no cultural materials. The Phase 2 ADI included a narrow segment of Locus H along its north boundary, but this area was too small to warrant additional investigations in Phase 2. In 2002, under contract with WCRM, SRI conducted limited testing in Locus H as part of the AT&T NexGen/Core Project (Vanderpot and Heckman 2002). Trenching uncovered no subsurface deposits, but a discrete 25-by-50-m lithic scatter was documented and collected on a small, cobble-covered knoll in the western part of the locus (Vanderpot and Heckman 2002:19).

Setting and Disturbances

The locus occupied a mostly flat terrace surface, sloping slightly to the southwest (see Figure 132). Cienega Creek was about 350 m to the south and Mescal Wash the same distance to the north. Vegetation consisted primarily of bunchgrass and desertscrub, with small mesquite and acacia trees growing in several gullies cutting through the locus toward Cienega Creek. One such gully formed the natural boundary between Loci E and H. Besides the erosion caused by these small drainages, disturbance consisted of two dirt roads traversing the locus east–west, the El Paso Natural Gas pipeline, and an AT&T cable easement (see Figure 19).

Locus Definition and Surface Features

On the surface, Locus H was visible as a broad, light artifact scatter (Figure 133). In the eastern half, an artifact concentration (AC 15) containing a trash mound (Feature 1005) and a rock feature (Feature 1006) were recorded. AC 15 measured 118 m north–south by 78 m east–west, covering 7,322 m^2. The artifact concentration occupied the most level part of the locus. The trash mound measured 12.2 m north–south by 10.3 m east–west, with an area of 93 m^2. The rock feature measured 3.1 m north–south by 3.1 m east–west and had an area of 7.4 m^2. No function was determined for this rock feature. The few diagnostic ceramics (primarily of Dragoon Red-on-brown wares) observed within the artifact scatter suggest that the main occupation of the locus occurred during the Middle Formative period.

Summary and Interpretation

The area encompassed by AC 15 probably represented a small habitation area dating to the Middle Formative

Figure 132. Northeast view of the Mescal Wash site, showing the location of Locus H.

period. Several pit structures probably were buried within the artifact concentration, in particular near the trash mound.

The lithic scatter investigated by SRI in 2002 was interpreted as a resource-procurement and resource-processing camp, probably used by hunter-gatherers targeting the plants and animals of the nearby floodplain of Cienega Creek (Vanderpot and Heckman 2002:20). Although no temporally diagnostic artifacts were recovered, the high proportion of retouched flakes and the presence of a steep-edged scraper suggest that the camp dated to the Archaic period.

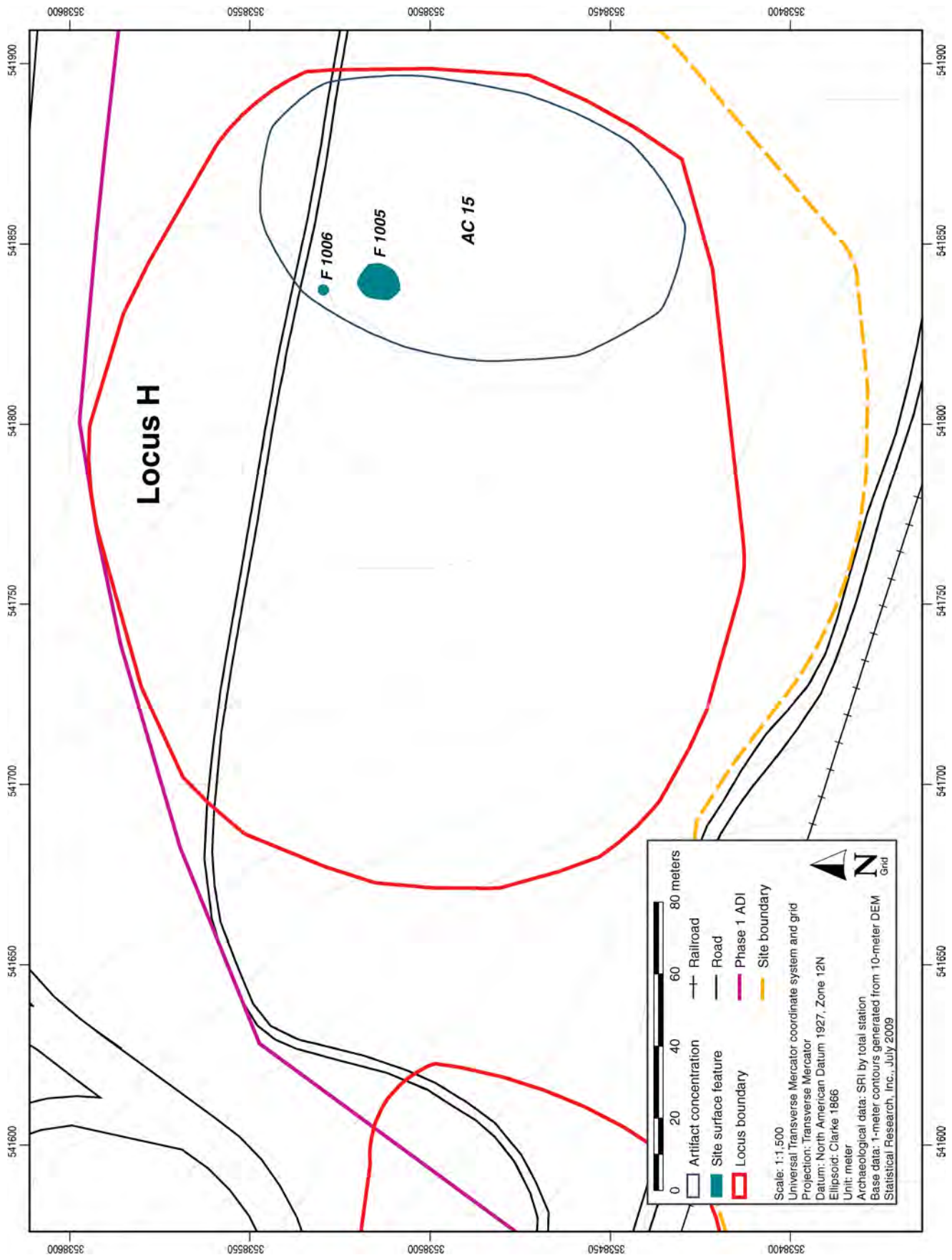

Figure 133. Map of Locus H, showing AC 15 and features recorded on the modern surface.

APPENDIX A

Feature Summary Data

Heather A. Miljour, Amelia Natoli, and Mitchell A. Keur

Table A.1. Summary of All Excavated Features

Feature No.	General Feature Type	Specific Feature Type	Level of Effort	Discovery Phase	Excavation Phase	Date Range	Period
			Locus A				
200	structure	recessed hearth	all	1	2	A.D. 935–1040	MF
207	structure	house-in-pit	all	1	2	A.D. 935–1150	MF
220	burial	secondary pit cremation	all	1	1	not dated	
288	nonthermal pit	nonthermal pit, general	part	1	2	A.D. 950–1150	MF-B
290	structure	house-in-pit	all	1	2	A.D. 1010–1150	MF-B
522	trash mound	trash mound	part	1	2	not dated	
1143	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
1144	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
1146	thermal feature	roasting pit, basic	part	2	2	not dated	
1149	thermal feature	*horno*	part	2	2	not dated	
1150	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
1179	nonthermal pit	nonthermal pit, general	part	1	2	A.D. 700–950	MF-A
1180	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 950–1150	MF-B
1182	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
1184	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
1185	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 950–1150	MF-B
1186	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
1187	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
1188	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 950–1150	MF-B
1189	structure	house-in-pit	part	2	2	A.D. 935–1040	MF
1195	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 950–1150	MF-B
1196	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
2143	midden	midden	part	2	2	A.D. 950–1150	MF-B
2153	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 950–1150	MF-B
2157	structure	house-in-pit	all	2	2	A.D. 935–1040	MF
2160	structure	recessed hearth	all	2	2	A.D. 935–1040	MF
2161	thermal feature	roasting pit, basic	all	2	2	not dated	
2162	thermal feature	roasting pit, basic	all	2	2	not dated	
2163	nonthermal pit	nonthermal pit, general	part	2	2	not dated	

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Feature No.	General Feature Type	Specific Feature Type	Level of Effort	Discovery Phase	Excavation Phase	Date Range	Period
2165	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
2166	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
2168	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 950–1150	MF-B
2169	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 950–1150	MF-B
2171	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
2172	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
2174	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
2177	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
2180	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
2183	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
2184	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 950–1150	MF-B
2185	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
2186	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 950–1150	MF-B
2188	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
2190	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
2192	structure	recessed hearth	all	2	2	A.D. 700–1150	EF/MF
2195	structure	house-in-pit	part	1	2	A.D. 860–990	MF
2197	thermal feature	roasting pit, basic	part	2	2	A.D. 950–1150	MF-B
6463	thermal feature	roasting pit, basic	part	2	2	A.D. 950–1150	MF-B
8411	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
			Locus B				
364	structure	unknown structure	part	1	1	not dated	
1018	midden	midden	part	1	2	not dated	
			Locus C				
235	structure	adobe walled	all	1	2	A.D. 1160–1450	LF
276	structure	house-in-pit	all	1	2	A.D. 650–1150	EF/MF
278	thermal feature	roasting pit, basic	part	1	2	A.D. 500–1450	F
320	burial	secondary pit cremation	all	1	1	not dated	
333	burial	secondary urn cremation	all	1	2	not dated	
376	structure	house-in-pit	part	1	2	A.D. 835–1015	MF
379	structure	recessed hearth	all	1	2	A.D. 1010–1140	MF-B

Feature No.	General Feature Type	Specific Feature Type	Level of Effort	Discovery Phase	Excavation Phase	Date Range	Period
896	nonthermal pit	nonthermal pit, general	part	1	1	not dated	
917	thermal feature	roasting pit, basic	part	1	2	not dated	
922	thermal feature	roasting pit, basic	part	1	2	not dated	
995	structure	recessed hearth	all	1	2	A.D. 935–1100	MF
999	midden	midden	part	1	2	not dated	
1141	thermal feature	firepit	part	2	2	A.D. 950–1150	MF-B
6007	burial	inhumation	all	2	2	not dated	
6010	structure	house-in-pit	part	2	2	A.D. 700–950	MF
6020	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6021	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6026	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	not dated	
6027	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6028	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6040	thermal feature	roasting pit, basic	part	2	2	not dated	
6045	burial	secondary pit cremation	all	2	2	not dated	
6074	burial	secondary pit cremation	all	2	2	not dated	
6081	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6085	thermal feature	roasting pit, basic	part	2	2	not dated	
6086	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6087	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	not dated	
6088	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6090	burial	secondary urn cremation	all	2	2	not dated	
6095	structure	house-in-pit	part	2	2	A.D. 935–1040	MF
6098	structure	recessed hearth	all	2	2	A.D. 935–1015	MF
6099	thermal feature	roasting pit, basic	part	2	2	not dated	
6101	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
6107	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
6108	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
6109	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6114	thermal feature	roasting pit, basic	all	2	2	A.D. 950–1150	MF-B
6123	burial	inhumation	all	2	2	not dated	

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Feature No.	General Feature Type	Specific Feature Type	Level of Effort	Discovery Phase	Excavation Phase	Date Range	Period
6129	structure	house-in-pit	all	2	2	A.D. 935–1015	MF
6134	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6135	thermal feature	roasting pit, basic	part	2	2	A.D. 950–1150	MF-B
6136	thermal feature	roasting pit, basic	part	2	2	2000 B.C.–A.D. 1150	MA/MF
6138	structure	house-in-pit	part	2	2	A.D. 935–1315	MF/LF
6139	structure	house-in-pit	part	2	2	A.D. 700–1040	EF/MF
6140	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6141	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6142	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6143	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6144	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6145	thermal feature	firepit	part	2	2	not dated	
6146	thermal feature	firepit	part	2	2	A.D. 950–1150	MF-B
6147	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6148	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 950–1150	MF-B
6149	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 950–1450	MF-B/LF
6150	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6151	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6152	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6153	structure	house-in-pit	part	2	2	A.D. 1010–1040	MF-B
6154	structure	house-in-pit	all	2	2	A.D. 935–1015	MF
6162	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 950–1150	MF-B
6171	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	A.D. 700–1450	EF/LF
6182	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
6187	thermal feature	roasting pit, rock-lined	part	2	2	not dated	
6191	burial	inhumation	all	2	2	A.D. 700–1450	EF/LF
7145	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
7153	thermal feature	*horno*	part	2	2	A.D. 985–1040	MF-B
7163	thermal feature	roasting pit, basic	part	2	2	not dated	
7168	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
7170	burial	inhumation	all	2	2	A.D. 950–1150	MF-B

Feature No.	General Feature Type	Specific Feature Type	Level of Effort	Discovery Phase	Excavation Phase	Date Range	Period
7171	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
7174	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
7180	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
7182	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
7187	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
7193	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
7194	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 950–1150	MF-B
7195	thermal feature	hearth	all	2	2	not dated	
7196	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	A.D. 950–1150	MF-B
7201	structure	house-in-pit	part	2	2	A.D. 935–1015	MF
7205	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	not dated	
7330	animal burial (nonhuman)	animal burial (nonhuman)	all	2	2	A.D. 935–1450	MF/LF
7335	burial	secondary pit cremation	all	2	2	not dated	
7456	burial	secondary pit cremation	all	2	2	not dated	
7457	burial	inhumation	all	2	2	A.D. 950–1150	MF-B
7458	burial	inhumation	all	2	2	A.D. 950–1150	MF-B
7461	structure	house-in-pit	all	2	2	A.D. 935–1040	MF
7472	burial	secondary urn cremation	all	2	2	not dated	
9327	nonthermal pit	nonthermal pit, bell-shaped	all	2	2	A.D. 950–1150	MF-B
9328	nonthermal pit	nonthermal pit, bell-shaped	all	2	2	A.D. 950–1150	MF-B
9409	thermal feature	roasting pit, rock-lined	all	2	2	A.D. 935–1450	MF/LF
9410	burial	inhumation	all	2	2	A.D. 935–1450	MF/LF
9487	thermal feature	roasting pit, basic	all	2	2	A.D. 935–1450	MF/LF
10,133	nonthermal pit	nonthermal pit, bell-shaped	all	2	2	A.D. 935–1450	MF/LF
10,138	burial	secondary pit cremation	all	2	2	A.D. 935–1450	MF/LF
10,343	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 650–1450	EF/LF
10,367	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 650–1450	EF/LF
10,380	thermal feature	firepit	part	2	2	2000 B.C.–A.D. 1015	MA/MF
10,698	burial	inhumation	all	2	2	A.D. 935–1450	MF/LF

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Feature No.	General Feature Type	Specific Feature Type	Level of Effort	Discovery Phase	Excavation Phase	Date Range	Period
10,707	burial	secondary pit cremation	all	2	2	not dated	
			Locus D				
336	burial	inhumation	all	1	1	A.D. 1–1450	F
411	nonthermal pit	nonthermal pit, bell-shaped	part	1	1	1100–900 B.C.	LA
415	thermal feature	roasting pit, basic	all	1	1	not dated	
432	thermal feature	roasting pit, rock-lined	all	1	1	not dated	
437	multiple features	multiple features	all	1	2	mixed	
438	structure	house-in-pit	all	1	2	A.D. 735–865	EF/MF-A
446	thermal feature	roasting pit, basic	all	1	1	not dated	
448	structure	house-in-pit	part	1	2	not dated	
457	thermal feature	roasting pit, basic	all	1	1	A.D. 500–1450	F
464	burial	secondary pit cremation	all	1	1	A.D. 1–1450	F
472	multiple features	multiple features	all	1	2	A.D. 825–1090	MF
491	thermal feature	roasting pit, basic	all	1	1	A.D. 500–1450	F
492	structure	house-in-pit	part	1	2	A.D. 735–840	EF/MF-A
493	thermal feature	roasting pit, basic	all	1	1	not dated	
494	thermal feature	roasting pit, basic	all	1	1	not dated	
561	burial	secondary pit cremation	all	1	1	A.D. 1–1450	F
562	burial	secondary pit cremation	all	1	1	not dated	
565	structure	house-in-pit	part	1	2	A.D. 735–840	EF/MF-A
572	thermal feature	roasting pit, basic	all	1	1	not dated	
575	structure	house-in-pit	part	1	2	A.D. 700–1150	EF/MF
578	nonthermal pit	nonthermal pit, general	all	1	1	A.D. 500–1450	F
714	thermal feature	roasting pit, bell-shaped	part	1	1	A.D. 500–1450	F
723	nonthermal pit	nonthermal pit, general	part	1	1	A.D. 500–1450	F
724	nonthermal pit	nonthermal pit, bell-shaped	part	1	1	A.D. 500–1450	F
726	structure	house-in-pit	part	1	2	A.D. 1–1450	F
771	thermal feature	roasting pit, bell-shaped	all	1	1	not dated	
784	multiple features	multiple features	all	1	2	A.D. 700–1150	EF/MF-B
825	multiple features	multiple features	part	1	2	A.D. 735–865	EF/MF-A
833	multiple features	multiple features	part	1	2	A.D. 700–1150	EF/MF-B
834	structure	house-in-pit	part	1	2	A.D. 685–915	EF/MF-A
1545	nonthermal pit	cache	all	2	2	not dated	
1553	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
1555	thermal feature	firepit	part	2	2	A.D. 1–1450	F
1556	thermal feature	hearth	part	2	2	not dated	

Feature No.	General Feature Type	Specific Feature Type	Level of Effort	Discovery Phase	Excavation Phase	Date Range	Period
1571	structure	house-in-pit	all	2	2	A.D. 1–1150	EF/MF
1575	structure	adobe walled	all	2	2	A.D. 1385–1450	LF-B
1582	thermal feature	rock pile	all	2	2	not dated	
1597	thermal feature	roasting pit, basic	part	2	2	not dated	
1794	thermal feature	firepit	part	2	2	A.D. 1–1450	F
1802	thermal feature	roasting pit, basic	part	2	2	not dated	
1808	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
1812	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	not dated	
1815	structure	pole and brush	all	2	2	1500 B.C.–A.D. 700	LA/EF
1816	structure	pole and brush	all	2	2	1500 B.C.–A.D. 700	LA/EF
2650	nonthermal pit	nonthermal pit, bell-shaped	all	2	2	2000 B.C.–A.D. 1050	A/MF-A
2670	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 700–1450	F
2679	burial	inhumation	all	2	2	A.D. 700–1450	F
2697	nonthermal pit	borrow pit	all	2	2	A.D. 685–1450	F
3027	nonthermal pit	borrow pit	part	2	2	A.D. 1–865	EF/MF-A
3067	thermal feature	roasting pit, basic	all	2	2	A.D. 835–1450	MF/LF
3097	nonthermal pit	nonthermal pit, bell-shaped	all	2	2	2000 B.C.–A.D. 865	A/MF-A
3203	nonthermal pit	nonthermal pit, general	part	2	2	2000 B.C.–A.D. 865	A/MF-A
3366	thermal feature	roasting pit, rock-lined	all	2	2	A.D. 700–1450	F
3426	thermal feature	roasting pit, basic	part	2	2	A.D. 500–1450	F
3433	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 700–1450	F
3437	nonthermal pit	nonthermal pit, bell-shaped	all	2	2	A.D. 835–1450	MF/LF
3501	multiple features	multiple features	all	2	2	mixed	
3528	burial	inhumation	all	2	2	2000 B.C.–A.D. 865	A/MF-A
3544	multiple features	multiple features	all	2	2	not dated	
3545	structure	house-in-pit	all	2	2	A.D. 860–1015	MF
3557	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	1060–880 B.C.	LA
3558	indeterminate pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
3564	burial	inhumation	all	2	2	not dated	
3569	structure	house-in-pit	all	2	2	A.D. 935–1015	MF
3579	thermal feature	rock pile	part	2	2	A.D. 950–1150	MF-B
3582	structure	house-in-pit	all	2	2	A.D. 700–950	EF/MF-A
3595	multiple features	multiple features	part	2	2	A.D. 700–950	EF/MF-A
3596	structure	house-in-pit	part	2	2	A.D. 500–1450	F
3604	burial	secondary pit cremation	all	2	2	not dated	

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Feature No.	General Feature Type	Specific Feature Type	Level of Effort	Discovery Phase	Excavation Phase	Date Range	Period
3617	structure	house-in-pit	all	2	2	A.D. 700–950	EF/MF-A
3624	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
3631	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 1300–1450	LF-B
3641	structure	house-in-pit	part	2	2	A.D. 1–690	EF
3642	thermal feature	roasting pit, basic	part	2	2	A.D. 1–1450	F
3663	structure	house-in-pit	part	2	2	A.D. 935–1040	MF
3668	thermal feature	roasting pit, rock-lined	all	2	2	A.D. 835–915	MF-A
3669	thermal feature	roasting pit, basic	all	2	2	A.D. 685–1450	F
3670	structure	house-in-pit	all	2	2	A.D. 685–990	EF/MF
3672	thermal feature	rock pile	part	2	2	not dated	
3673	thermal feature	rock pile	part	2	2	A.D. 1–1450	F
3677	structure	house-in-pit	part	2	2	A.D. 1–1450	F
3679	structure	house-in-pit	all	2	2	A.D. 835–865	MF-A
3680	structure	house-in-pit	all	2	2	2000 B.C.–A.D. 950	A/MF-A
3681	structure	house-in-pit	all	2	2	A.D. 700–950	EF/MF-A
3691	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3692	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
3693	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
3696	thermal feature	roasting pit, basic	part	2	2	A.D. 835–915	MF-A
3698	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
3699	thermal feature	roasting pit, basic	part	2	2	not dated	
3703	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3704	burial	primary cremation	all	2	2	not dated	
3710	structure	house-in-pit	all	2	2	A.D. 685–915	EF/MF-A
3711	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	A.D. 1–1450	F
3723	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3724	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3727	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
3728	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
3737	multiple features	multiple features	part	2	2	mixed	
3748	nonthermal pit	borrow pit	part	2	2	A.D. 785–950	MF-A
3756	thermal feature	roasting pit, bell-shaped	all	2	2	A.D. 685–740	EF
3790	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	A.D. 500–865	EF/MF-A
3792	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 500–865	EF/MF-A
3817	structure	house-in-pit	all	2	2	A.D. 700–1015	EF/MF
3818	thermal feature	*horno*	part	2	2	A.D. 935–1015	MF-A

Feature No.	General Feature Type	Specific Feature Type	Level of Effort	Discovery Phase	Excavation Phase	Date Range	Period
3868	structure	house-in-pit	all	2	2	A.D. 600–865	EF/MF-A
3869	structure	recessed hearth	all	2	2	A.D. 700–1050	EF/MF
3870	nonthermal pit	borrow pit	part	2	2	A.D. 700–1050	EF/MF
3871	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 700–1450	F
3872	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 700–1450	F
3875	burial	secondary pit cremation	all	2	2	A.D. 835–1450	MF/LF
3876	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
3878	thermal feature	roasting pit, rock-lined	all	2	2	A.D. 860–1450	MF/LF
3879	structure	house-in-pit	all	2	2	A.D. 700–950	EF/MF-A
3895	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 700–950	EF/MF-A
3897	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
3921	structure	house-in-pit	part	2	2	not dated	
3926	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3938	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3939	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3942	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
3943	burial	inhumation	all	2	2	not dated	
3945	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3946	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3947	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3949	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3950	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3951	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3952	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3953	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
3954	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
3956	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3957	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3958	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3959	indeterminate pit	indeterminate pit	probed	2	2	not dated	
3960	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
3963	thermal feature	roasting pit, basic	part	2	2	A.D. 1–1450	F
3964	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
3965	nonthermal pit	nonthermal pit, general	all	2	2	not dated	

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Feature No.	General Feature Type	Specific Feature Type	Level of Effort	Discovery Phase	Excavation Phase	Date Range	Period
3966	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
3967	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
3968	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 700–950	EF/MF-A
3976	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	1280–1010 B.C.	LA
3977	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	A.D. 1–1450	F
3983	nonthermal pit	nonthermal pit, bell-shaped	all	2	2	1070–900 B.C.	LA
4003	structure	house-in-pit	part	2	2	A.D. 1–1445	F
4033	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4035	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4043	multiple features	multiple features	part	2	2	mixed	
4044	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4045	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
4046	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4047	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
4048	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
4049	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
4050	thermal feature	roasting pit, basic	part	2	2	A.D. 1–1450	F
4051	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
4053	thermal feature	roasting pit, basic	part	2	2	A.D. 1–1450	F
4054	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
4055	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4057	burial	secondary urn cremation	all	2	2	not dated	
4058	indeterminate pit	nonthermal pit, general	all	2	2	not dated	
4059	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4063	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4069	burial	primary cremation	all	2	2	A.D. 1–1450	F
4076	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4091	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4097	nonthermal pit	borrow pit	part	2	2	A.D. 500–1450	F
4105	nonthermal pit	nonthermal pit, bell-shaped	all	2	2	200 B.C.–A.D. 840	LA/MF-A
4108	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4119	indeterminate pit	indeterminate pit	probed	2	2	not dated	

Feature No.	General Feature Type	Specific Feature Type	Level of Effort	Discovery Phase	Excavation Phase	Date Range	Period
4120	thermal feature	roasting pit, rock-lined	all	2	2	A.D. 500–1450	F
4121	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4128	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4143	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4149	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 1–1450	F
4164	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4193	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4196	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4220	thermal feature	*horno*	part	2	2	A.D. 500–1450	F
4221	burial	primary cremation	all	2	2	A.D. 585–1015	EF/MF-A
4229	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4230	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4295	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	not dated	
4299	multiple features	multiple features	part	2	2	mixed	
4310	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4312	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	1500 B.C.–A.D. 300	LA/EF
4326	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–300	EF
4333	structure	house-in-pit	part	2	2	A.D. 685–1015	EF/MF
4369	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
4441	structure	house-in-pit	part	1	2	not dated	
4462	structure	house-in-pit	part	2	2	A.D. 1–1450	F
4516	structure	pole and brush	all	2	2	A.D. 700–950	EF/MF-A
4556	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4560	indeterminate pit	indeterminate pit	probed	2	2	not dated	
4561	indeterminate pit	indeterminate pit	probed	2	2	A.D. 500–1450	F
4571	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 500–1450	F
4631	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
4635	thermal feature	roasting pit, basic	all	2	2	A.D. 1–1450	F
4642	structure	house-in-pit	part	2	2	A.D. 500–915	EF/MF-A
4649	thermal feature	firepit	all	2	2	A.D. 500–1450	F
4660	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	A.D. 1–1450	F
4682	structure	house-in-pit	all	2	2	A.D. 825–1015	MF
4683	structure	adobe walled	all	2	2	A.D. 1385–1450	LF-B
4684	structure	adobe walled	all	2	2	A.D. 1310–1690	LF-B
4702	thermal feature	roasting pit, rock-lined	part	2	2	A.D. 600–865	EF/MF-A

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Feature No.	General Feature Type	Specific Feature Type	Level of Effort	Discovery Phase	Excavation Phase	Date Range	Period
4716	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 700–1450	F
4725	multiple features	multiple features	all	2	2	mixed	
4728	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
4729	structure	adobe walled	all	2	2	A.D. 1340–1390	LF-B
4730	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4731	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4732	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4733	structure	pole and brush	all	2	2	A.D. 500–1450	F
4735	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 500–1450	F
4739	burial	secondary pit cremation	all	2	2	not dated	
4740	burial	inhumation	all	2	2	2000 B.C.–A.D. 1015	A/MF
4750	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
4753	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
4757	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
4759	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
4768	structure	house-in-pit	all	2	2	A.D. 1010–1090	MF-B
4780	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4793	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4794	burial	secondary pit cremation	all	2	2	not dated	
4798	burial	primary cremation	all	2	2	not dated	
4849	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	820–590 B.C.	LA
4850	burial	secondary urn cremation	all	2	2	not dated	
4857	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4871	thermal feature	roasting pit, bell-shaped	part	2	2	A.D. 990–1160	MF-B
4882	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
4886	burial	inhumation	all	2	2	not dated	
4887	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 1–1450	F
4888	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
4895	multiple features	multiple features	part	2	2	mixed	

Feature No.	General Feature Type	Specific Feature Type	Level of Effort	Discovery Phase	Excavation Phase	Date Range	Period
4896	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
4902	thermal feature	roasting pit, basic	part	2	2	A.D. 1–1450	F
4909	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4912	structure	pole and brush	all	2	2	200 B.C.–A.D. 700	LA/EF
4931	thermal feature	roasting pit, basic	part	2	2	A.D. 985–1315	MF/LF
4932	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4935	structure	pole and brush	all	2	2	200 B.C.–A.D. 1450	LA/F
4939	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
4943	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4945	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4954	thermal feature	roasting pit, basic	part	2	2	not dated	
4966	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4973	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	A.D. 1–1450	F
4976	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
4984	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
4985	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
4996	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
5504	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
5505	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	1110–900 B.C.	LA
5512	burial	inhumation	all	2	2	A.D. 735–1450	F
5513	structure	house-in-pit	all	2	2	A.D. 500–1390	F
5518	structure	house-in-pit	part	2	2	A.D. 700–1015	EF/MF
5520	thermal feature	firepit	all	2	2	A.D. 735–1450	F
5568	thermal feature	roasting pit, basic	part	2	2	A.D. 1–1450	F
5612	thermal feature	roasting pit, bell-shaped	all	2	2	A.D. 650–950	EF/MF-A
5616	structure	house-in-pit	part	2	2	A.D. 500–1310	F
5619	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 1–1450	F
5624	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
5647	nonthermal pit	nonthermal pit, general	all	2	2	A.D. 700–1450	F
5766	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 935–1450	MF/LF

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Feature No.	General Feature Type	Specific Feature Type	Level of Effort	Discovery Phase	Excavation Phase	Date Range	Period
5781	structure	house-in-pit	all	2	2	A.D. 660–940	EF/MF-A
5793	nonthermal pit	borrow pit	part	2	2	A.D. 660–1450	F
5794	structure	house-in-pit	part	2	2	A.D. 910–1015	MF
5795	structure	house-in-pit	part	1	2	A.D. 910–1150	MF
5809	nonthermal pit	nonthermal pit, bell-shaped	all	2	2	A.D. 1–300	LA/EF
5980	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	A.D. 1–1450	F
5982	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
5983	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
5986	structure	house-in-pit	all	2	2	A.D. 700–865	EF/MF-A
5992	burial	secondary pit cremation	all	2	2	not dated	
5994	structure	house-in-pit	part	2	2	A.D. 650–950	EF/MF-A
7501	cache	cache	all	2	2	A.D. 1–1450	F
7558	structure	pole and brush	all	2	2	A.D. 710–740	EF
7559	structure	pole and brush	all	2	2	A.D. 785–840	MF-A
7560	thermal feature	roasting pit, basic	all	2	2	A.D. 500–1450	F
7664	nonthermal pit	borrow pit	part	2	2	A.D. 1–1390	F
7697	multiple features	multiple features	all	2	2	mixed	
7742	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 735–1450	F
7827	thermal feature	roasting pit, bell-shaped	part	2	2	A.D. 660–790	EF/MF-A
7833	burial	inhumation	all	2	2	A.D. 500–1450	F
7847	burial	secondary pit cremation	all	2	2	not dated	
7879	structure	house-in-pit	all	2	2	2000 B.C.–A.D. 865	A/MF-A
7880	structure	house-in-pit	all	2	2	A.D. 735–865	EF/MF-A
7940	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 950–1450	MF/LF
7942	structure	house-in-pit	all	2	2	A.D. 700–925	EF/MF-A
7943	structure	house-in-pit	all	2	2	A.D. 700–925	EF/MF-A
7978	structure	house-in-pit	all	2	2	A.D. 700–865	EF/MF-A
8607	structure	unknown structure	all	2	2	not dated	
8643	structure	house-in-pit	part	2	2	A.D. 700–915	EF/MF-A
8644	structure	house-in-pit	part	2	2	A.D. 685–915	EF/MF-A
8655	structure	house-in-pit	all	2	2	A.D. 825–1090	MF
8798	thermal feature	roasting pit, bell-shaped	part	2	2	A.D. 1–865	EF/MF-A
8841	structure	house-in-pit	part	2	2	A.D. 835–865	MF-A
8842	structure	house-in-pit	part	2	2	A.D. 735–840	EF/MF-A
8887	nonthermal pit	nonthermal pit, general	part	2	2	A.D. 685–1450	F
9729	structure	house-in-pit	part	2	2	A.D. 500–840	EF/MF-A
9867	structure	house-in-pit	part	2	2	A.D. 760–840	MF-A

Feature No.	General Feature Type	Specific Feature Type	Level of Effort	Discovery Phase	Excavation Phase	Date Range	Period
10,507	thermal feature	roasting pit, bell-shaped	all	2	2	A.D. 600–1000	EF/MF
10,560	structure	house-in-pit	part	2	2	A.D. 735–840	EF/MF-A
10,561	structure	house-in-pit	part	2	2	A.D. 835–990	MF
10,587	nonthermal pit	nonthermal pit, general	part	2	2	not dated	
10,612	nonthermal pit	nonthermal pit, bell-shaped	part	2	2	not dated	
10,645	burial	inhumation	all	2	2	1200 B.C.–A.D. 600	LA/EF
10,674	burial	secondary pit cremation	all	2	2	not dated	
10,692	thermal feature	firepit	all	2	2	2000 B.C.–A.D. 600	LA/EF
10,711	burial	secondary pit cremation	all	2	2	not dated	
10,720	nonthermal pit	nonthermal pit, general	all	2	2	not dated	
10,729	structure	house-in-pit	part	2	2	A.D. 935–1015	MF
10,781	structure	recessed hearth	part	2	2	A.D. 935–1015	MF
10,782	structure	house-in-pit	part	2	2	A.D. 935–1015	MF
11,251	structure	pole and brush	all	2	2	200 B.C.–A.D. 700	LA/EF
11,342	activity surface	activity surface	part	2	2	A.D. 760–840	MF-A
11,352	midden	midden	part	2	2	A.D. 750–850	MF-A
11,390	structure	house-in-pit	part	2	2	A.D. 760–1450	MF/LF
11,442	cache	cache	all	2	2	A.D. 865–1450	MF/F
380	burial	secondary pit cremation	all	1	1	not dated	
381	burial	secondary pit cremation	all	1	1	not dated	
652	structure	unknown structure	part	1	1	not dated	
672	trash mound	trash mound	part	1	1	not dated	

Key: A = Archaic period; all = completely excavated; EF = Early Formative period; F = Formative period; LA = Late Archaic period; LF = Late Formative period; LF-B = Late Formative B period; MA = Middle Archaic period; MF = Middle Formative period; MF-A = Middle Formative A period; MF-B = Middle Formative B period; part = partially excavated; probed = probed only.

Table A.2. Completely Excavated Structures

Feature No.	Conglomerate Feature No.	Location (Phase 2 SU)	House Type	House Shape	Date Range	Archmag Sample No. (SRI-)	Feature Length (m)	Feature Width (m)	Pit Depth (m)	Total Floor Area (m²)	Estimated Total Usable Floor Area (m²)	Entry Type	Entry Orientation	Analyzed Flotation Sample No. (PD)	Analyzed Pollen Sample No. (PD)	Comments	Figure No. (This Volume)	Map Grid
Locus A																		
200			house-in-pit; recessed hearth	subrectangular	A.D. 935–1040		6.20	3.84	0.22	24.5	15.6	rectangular, ramped and stepped	south	1259, 1363, 11359	1158, 1200	Remodeled; burned; floor assemblage present.	4.6	
207			house-in-pit	subrectangular	A.D. 935–1150		5.08	3.34	0.29	15.2	11.9	protruding	north	1235, 1366,			4.6	
290			house-in-pit	ovate to subrectangular	A.D. 1010–1150		4.62	3.73	0.13	17.0	12.1	bulbous	south	1177, 1265	1164	Burned.	4.6	
2157			house-in-pit	subrectangular	A.D. 935–1040		4.96	3.54	0.16	19.5	10.8	unknown	north?	6384		Burned.	4.6	
2160			house-in-pit; recessed hearth	subrectangular	A.D. 935–1040		6.20	3.84	0.27	33.4	15.6	square	north	6448	6380, 7064	Burned; floor assemblage present.	4.6	
2192			house-in-pit; recessed hearth	subrectangular	A.D. 700–1150		6.01	3.56	0.34	21.7	15.7	rectangular	north	8239, 8249		Burned.	4.6	
Locus C																		
6098		5190	house-in-pit; recessed hearth	subrectangular	A.D. 935–1015	2429	8.10	4.83	0.13	34.4	26.2	protruding?	north		7449, 9301, 9363, 9356	Burned; floor assemblage; intruded by Feature 7461.	6.4	
6129		5195	house-in-pit	subrectangular	A.D. 935–1015	3965	5.54	2.79	0.25	16.7	8.6	protruding, rectangular, ramped	north		8448, 10128	Burned; intruded by Feature 995.	6.4	
6154		5195	house-in-pit	subrectangular	A.D. 935–1015	2427	5.80	4.23	0.18	22.6	15.9	protruding, rectangular, ramped	north		9128	No burning or floor assemblage.	6.4	
7461		5190	house-in-pit	subrectangular	A.D. 935–1040	2430	5.86	3.92	0.19	21.7	14.3	protruding, ramped	north		10,061, 10125	Burned; floor assemblage; intruded by Feature 6098.	6.4	
235		5190	adobe-walled house-in-pit	ovate or subrectangular	A.D. 1160–1450	2370	4.05	2.68	0.03	10.8	unknown	unknown	unknown			No burning or floor assemblage; intruded by Feature 379.	6.4	
276		5188	house-in-pit	subrectangular	A.D. 650–1150	2441	5.24	3.87	0.22	19.8	9.7	protruding, ramped	southwest	10,252		No burning or floor assemblage.	6.5	
379		5190	house-in-pit, recessed hearth	subrectangular	A.D. 1010–1140	2424	9.80	5.78	0.42	54.7	34.7	protruding, ramped and stepped	east	7378, 7397, 7399	7400, 7420	Burned; no floor assemblage; intruded by Feature 235.	6.4	
995		5195	house-in-pit; recessed hearth	subrectangular	A.D. 935–1100	2432	6.01	3.33	0.26	20.0	12.8	protruding, bulbous, ramped	north	8459	9336, 8463, 9374, 9406	Burned; no floor assemblage; intruded by Feature 6129.	6.4	
Locus D																		
438	7697	3031	house-in-pit	subrectangular	A.D. 735–865	3989	7.61	4.35	0.45	34.6	31.5	protruding, stepped	north		2901	Burned; floor assemblage; superimposed Features 5986 and 7978.	7.10	6M
1571		1543	house-in-pit	subrectangular	A.D. 1–1150	2406	3.37	2.13	0.13	7.1	7.1	informal?	south?			No evidence of burning; floor assemblage present.	7.13	6B
1575		1543	adobe-walled house-in-pit	rectangular	A.D. 1385–1450	3990	6.70	3.26	0.37	22.5	22.1	protruding, rectangular, ramped	northwest	1880	1858, 7731	Structure had burned; floor assemblage present.	7.13	7D
1815		1712	pole-and-brush surface structure	circular	1500 B.C–A.D. 700		2.28	2.20	0.02	3.9	3.0	unknown	unknown		7821, 7868	No evidence of burning; no floor assemblage.	7.13	9E

Feature No.	Conglomerate Feature No.	Location (Phase 2 SU)	House Type	House Shape	Date Range	Archmag Sample No. (SRI-)	Feature Length (m)	Feature Width (m)	Pit Depth (m)	Total Floor Area (m^2)	Estimated Total Usable Floor Area (m^2)	Entry Type	Entry Orientation	Analyzed Flotation Sample No. (PD)	Analyzed Pollen Sample No. (PD)	Comments	Figure No. (This Volume)	Map Grid
1816		1712	pole-and-brush surface structure	circular	1500 B.C.–A.D. 700		2.43	2.23	0.01	3.4	3.4	informal	north?		7874	No evidence of burning; no floor assemblage.	7.13	9E
3545		1759	house-in-pit	subrectangular	A.D. 860–1015	2377	5.78	3.70	0.17	23.2	20.2	protruding, bulbous, ramped	north	2397, 2524		Structure had burned with a floor assemblage present; superimposed on Feature 5518	7.12	11T
3569	3544	1869	house-in-pit	subrectangular?	A.D. 935–1015	2445	3.67	1.98	unknown	6.8	unknown	unknown	south?	1886		Unknown if burning or floor assemblage present; intruded Feature 386; mechanical stripping truncated the house pit and part of the floor.	7.12	11T
3582	437	3006	house-in-pit	subrectangular	A.D. 700–950		4.52	2.41	0.17	11.9	7.2	protruding, ramped and stepped	north			No evidence of burning; floor assemblage present; portions of floor removed from superimposed structures.	7.12	10S
3617	437	3006	house-in-pit	subrectangular	A.D. 700–950		5.02	3.30	0.17	14.5	8.5	protruding	north	3135		No evidence of burning; unknown floor assemblage; possibly overexcavated through floor into trash fill.	7.12	11S
3670	3544	1759	house-in-pit	subrectangular	A.D. 685–990	2463	4.08	2.16	0.17	8.1	unknown	protruding, ramped	north			Possibly burned; no floor assemblage.	7.12	11T
3679	3544	1759	house-in-pit	subrectangular	A.D. 835–865	3991	7.24	3.78	0.08	17.8	11.9	unknown	north	1945, 1949		Evidence of burning; no floor assemblage; superimposed on Feature 3868.	7.12	10T
3680	437	3008	house-in-pit	subrectangular	2000 B.C.–A.D.950		unknown	unknown	0.12	unknown	unknown	unknown	unknown			No evidence of burning or floor assemblage; intruded by Feature 3681; not much of feature remained.	7.12	11R
3681	437	3006	house-in-pit	subrectangular	A.D. 700–950	2459	4.72	3.82	0.18	19.9	11.4	unknown	north			No evidence of burning; floor assemblage present; intruded by Feature 3871; intruded Feature 3680; unknown relationship to Feature 8607.	7.12	11R
3710		3033	house-in-pit	subrectangular	A.D. 685–915	2390	4.47	2.69	0.13	11.9	8.1	protruding, bulbous	south	2703		No evidence of burning or floor assemblage.	7.10	7N
3817		3006	house-in-pit	ovate	A.D. 700–1015	2382	3.75	2.11	0.09	6.8	5.4	unknown	north?		2504	No evidence of burning or floor assemblage.	7.12	10R

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Feature No.	Conglomerate Feature No.	Location (Phase 2 SU)	House Type	House Shape	Date Range	Archmag Sample No. (SRI-)	Feature Length (m)	Feature Width (m)	Pit Depth (m)	Total Floor Area (m²)	Estimated Total Usable Floor Area (m²)	Entry Type	Entry Orientation	Analyzed Flotation Sample No. (PD)	Analyzed Pollen Sample No. (PD)	Comments	Figure No. (This Volume)	Map Grid
3869	3544	1759	house-in-pit; recessed hearth	subrectangular	A.D. 700–1050	2464	4.54	2.87	0.15	9.6	10.2	protruding, ramped	north		2363	Structure had burned; floor assemblage unknown because of disturbance; intruded by Feature 3569.	7.12	11T
3879	437	3006	house-in-pit	subrectangular	A.D. 700–950	2378	4.82	3.30	0.12	13.0	8.5	protruding, ramped	north	2473		No evidence of burning; unknown floor assemblage; Feature 4516 utilized the floor of Feature 3879.	7.12	11S
4516	437	1759	pole-and-brush house-in-pit	circular	A.D. 700–950	2379	2.05	2.01	unknown	4.1	2.6	informal?	northwest			No evidence of burning; floor assemblage unknown; within remodeled Feature 3879; not identified until subfeatures were exposed.	7.12	11S
4682		6791	house-in-pit	subrectangular	A.D. 825–1015	3992	4.27	2.65	0.17	11.1	9.1	protruding, ramped	northeast			Structure had burned; no floor assemblage; intruded by Feature 5616.	7.9	8L
4683		6793	adobe-walled pit structure	rectangular	A.D. 1385–1450	2383	5.45	3.65	0.57	20.6	13.6	protruding, ramped	southwest		5034, 6651	Structure had burned with a floor assemblage.	7.9	9L
4684		6795	adobe-walled pit structure	rectangular	A.D. 1310–1690	2384	5.87	4.31	0.39	25.6	25.1	protruding, ramped	south	5326		Structure had burned with a floor assemblage.	7.13	8K
4729		5042	adobe-walled pit structure	rectangular	A.D. 1340–1390	2385	6.27	4.02	0.42	25.0	22.0	protruding, rectangular, ramped and stepped	southwest	6728	5299, 5455, 6731	Structure had burned with a floor assemblage present; intruded Features 5513 and 7943.	7.9	3E
4733		8665	pole-and-brush house-in-pit	ovate	A.D. 500–1450		2.29	1.82	0.09	3.8	2.5	unknown	south?			Evidence of burning; no floor assemblage.	7.9	5F
4768	472	8656	house-in-pit	subrectangular	A.D. 1010–1090	3993	5.37	3.42	0.48	19.6	15.3	protruding, bulbous, ramped and stepped	north		8932, 8982	Burned with a floor assemblage present; intruded on Feature 8655.	7.9	2G
4912		8661	pole-and-brush house-in-pit	circular	A.D.1–700		2.04	1.96	0.25	3.5	2.4	informal	unknown			Evidence of burning; no floor assemblage.	7.9	4G
4935		6801	pole-and-brush surface structure	circular	A.D. 1–1450		2.53	2.42	0.01	5.2	4.2	informal	southeast?			Unknown if structure burned or had floor assemblage; fill and floor truncated by mechanical stripping.	7.9	5I
5513		5042	house-in-pit	subrectangular	A.D. 500–1390		4.74	~2.7	0.14	~12.8	unknown	unknown	east			No evidence of burning; floor assemblage present; intruded by Feature 4729.	7.9	3E
5781	437	3006	house-in-pit	subrectangular to oval	A.D. 660–940	2414	5.61	3.31	0.59	16.8	unknown	unknown	unknown			No evidence of burning or floor assemblage; intruded by Features 5794 and 5795.	7.12	10R

Feature No.	Conglomerate Feature No.	Location (Phase 2 SU)	House Type	House Shape	Date Range	Archmag Sample No. (SRI-)	Feature Length (m)	Feature Width (m)	Pit Depth (m)	Total Floor Area (m^2)	Estimated Total Usable Floor Area (m^2)	Entry Type	Entry Orientation	Analyzed Flotation Sample No. (PD)	Analyzed Pollen Sample No. (PD)	Comments	Figure No. (This Volume)	Map Grid
5986	7697	3031	house-in-pit	subrectangular	A.D. 700–865		5.50	3.15	unknown	18.0	16.8	informal?	north			No evidence of burning; unknown floor assemblage; superimposed by Feature 438, unknown relationship to Feature 7978.	7.9	6M
7558	3501	1759	pole-and-brush house-in-pit	subrectangular?	A.D. 710–740	2371	2.32	2.11	0.02	4.0	3.1	unknown	unknown	3190	3190	Unknown whether structure had burned or whether it had floor assemblage; shared floor and pit with younger Feature 7559.	7.12	9T
7559	3501	1759	pole-and-brush house-in-pit	circular	A.D. 785–840	2372	2.28	1.93	0.02	3.8	2.8	informal	east?			No evidence of burning; unknown floor assemblage; unknown association between the floor of Feature 7558 and Feature 7559.	7.12	9T
7879	784	6801	house-in-pit	subrectangular	2000 B.C.–A.D. 865		4.98	3.49	0.49	18.4	10.4	ramped, protruding	north			Unknown whether structure had burned or whether it had floor assemblage; intruded by Feature 7880, which shared a common floor and pit.	7.9	6H
7880	784	6801	house-in-pit	subrectangular	A.D. 735–865	2407	4.98	3.49	0.49	18.4	10.9	ramped, protruding	north		6856	Structure had burned with a floor assemblage; superimposes Feature 7879.	7.9	6H
7942	4725	5042	house-in-pit	subrectangular	A.D. 700–925	2449	3.73	2.60	0.33	8.7	7.3	protruding	south		8851	Evidence of burning; no floor assemblage.	7.9	4E
7943	4725	5042	house-in-pit	rectangular	A.D. 700–925		5.41	3.04	0.33	17.0	15.9	protruding, stepped	south			Evidence of burning; unknown floor assemblage; intruded by Feature 4729 and superimposed by Feature 438; unknown relationship to Feature 5986.	7.9	4E
7978	7697	3031	house-in-pit	subrectangular	A.D. 700–865		5.95	3.65	0.11	21.6	21.2	informal?	north			No evidence of burning; unknown floor assemblage; superimposed by Feature 438; unknown relationship with Feature 5986.	7.9	6M
8607	437	3006	unknown	unknown	not dated	2417	unknown	unknown	0.17	unknown	unknown	unknown	unknown			Represented only by a hearth; unknown whether structure had burned or whether it had floor assemblage.	not on map	no map

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Feature No.	Conglomerate Feature No.	Location (Phase 2 SU)	House Type	House Shape	Date Range	Archmag Sample No. (SRI-)	Feature Length (m)	Feature Width (m)	Pit Depth (m)	Total Floor Area (m²)	Estimated Total Usable Floor Area (m²)	Entry Type	Entry Orientation	Analyzed Flotation Sample No. (PD)	Analyzed Pollen Sample No. (PD)	Comments	Figure No. (This Volume)	Map Grid
8655	472	8656	house-in-pit	subrectangular	A.D. 825–1090	2452	5.38	3.68	0.36	19.5	16.5	informal	southeast?	8976, 9643		Evidence of burning; no floor assemblage; intruded by Feature 4768.	7.9	2G
11,251		2495	pole-and-brush surface structure	circular	A.D. 1–700		2.11	2.07	0.00	3.6	3.6	informal	northeast?		11,257	Unknown whether structure had burned or whether it had floor assemblage; structure fill and floor removed during mechanical stripping.	7.10	9O

Key: Archmag = archaeomagnetic; PD = Provenience Designation; SRI = Statistical Research, Inc.; SU = stripping unit.

Table A.3. Partially Excavated Structures

Feature No.	Conglomerate Feature No.	Location (Phase 2 SU)	House Type	House Shape	Date Range	Archmag Sample No. (SRI-)	Feature Length (m)	Feature Width (m)	Pit Depth (m)	Total Floor Area (m²)	Estimated Total Usable Floor Area (m²)	Entry Type	Entry Orientation	Analyzed Flotation Sample No. (PD)	Analyzed Pollen Sample No. (PD)	Comments	Figure No. (This Volume)	Map Grid
Locus A																		
1189			house-in-pit	subrectangular	A.D. 935–1040		5.34	3.82	0.37	~20	unknown	unknown	southeast				4.6	
2195			house-in-pit	subrectangular	A.D. 860–990		5.24	3.87	0.22	~20	unknown	unknown	unknown	2201			4.6	
Locus B																		
364			unknown structure		not dated												5.4	
Locus C																		
376		5190	house-in-pit	subrectangular	A.D. 835–1015	2425	5.35	2.64	0.43	~14	unknown	unknown	north			Not in Appendix B.	6.4	
6010		5188	house-in-pit	subrectangular?	A.D. 700–950		6.44	2.99	unknown	~19	unknown	unknown	unknown			Not in Appendix B.	6.5	
6095		5190	house-in-pit	subrectangular?	A.D. 935–1040	2426	4.89	3.59	0.22	~17	unknown	unknown	north			Not in Appendix B.	6.4	
6138		5195	house-in-pit	ovate or subrectangular	A.D. 935–1315	2395	3.93	2.61	0.21	~10	unknown	unknown	unknown			Not in Appendix B.	6.4	
6139		5190	house-in-pit	ovate or subrectangular	A.D. 700–1040		5.02	3.33	0.24	~16	unknown	unknown	south			Not in Appendix B.	6.4	
6153		5195	house-in-pit	subrectangular	A.D. 1010–1040	2398, 2399	5.07	3.71	0.26	~18	unknown	unknown	north			Not in Appendix B.	6.4	
7201		5190	house-in-pit	subrectangular	A.D. 935–1015	2402	4.83	4.15	0.13	~20	unknown	unknown	north			Not in Appendix B.	6.4	
Locus D																		
448		2493	house-in-pit	subrectangular	not dated		5.80	4.24	0.68	~24	unknown	unknown	unknown			Not in Appendix B.	7.11	10O
492		6789	house-in-pit	ovate	A.D. 735–840	2454	5.63	4.97	0.42	~27	unknown	protruding	south			Not in Appendix B.	7.9	6L
565		2493	house-in-pit	ovate	A.D. 735–840	2442	4.00	3.01	0.10	~12	~9.84	unknown	north			Structure had burned.	7.12	10Q
575		3006	house-in-pit	subrectangular?	A.D. 700–1150		8.45	4.17	0.37	~34	unknown	protruding	north				7.12	11Q
726		2495	house-in-pit	unknown	A.D. 1–1450		6.28	4.86	0.25	~30	unknown	protruding	north			Not in Appendix B.	7.11	11N
834		6795	house-in-pit	subsquare	A.D. 685–915	2437	5.09	3.87	0.37	~19	unknown	protruding	north			No evidence of burning; floor assemblage present.	7.14	8K
3596		1881	house-in-pit	ovate to subrectangular	A.D. 500–1450	2445	4.95	3.33	0.33	~16	unknown	protruding	north			Not in Appendix B.	7.12	10U
3641		1883	house-in-pit	ovate to subrectangular	A.D. 1–690	2446	4.40	3.63	0.26	~15	unknown	protruding	north			Not in Appendix B.	7.12	11U
3663		1869	house-in-pit	ovate	A.D. 935–1040	2447	4.76	2.62	0.10	~12	unknown	protruding	north			No evidence of burning; unknown floor assemblage.	7.12	12T
3677		1869	house-in-pit	ovate to subrectangular	A.D. 1–1450	2448	4.61	2.92	0.38	~13	unknown	protruding	north			Not in Appendix B.	7.12	12T
3921		3006	house-in-pit	ovate to subrectangular	not dated		4.36	2.77	0.24	~12	unknown	unknown	unknown			Not in Appendix B.	7.12	9Q

Feature No.	Conglomerate Feature No.	Location (Phase 2 SU)	House Type	House Shape	Date Range	Archmag Sample No. (SRI-)	Feature Length (m)	Feature Width (m)	Pit Depth (m)	Total Floor Area (m^2)	Estimated Total Usable Floor Area (m^2)	Entry Type	Entry Orientation	Analyzed Flotation Sample No. (PD)	Analyzed Pollen Sample No. (PD)	Comments	Figure No. (This Volume)	Map Grid
4003		6787	house-in-pit	ovate to subrectangular	A.D. 1–1445		5.76	3.89	0.43	~22	unknown	protruding	unknown			Not in Appendix B.	7.11	11P
4333		6791	house-in-pit	ovate to subrectangular	A.D. 685–1015	2391	6.89	3.05	0.21	~21	unknown	unknown	unknown			Not in Appendix B.	7.9	8M
4441		2495	house-in-pit	ovate to subrectangular	not dated		5.29	4.19	0.37	~22	unknown	protruding	north			Not in Appendix B.	7.11	10N
4462		6793	house-in-pit	ovate to subrectangular	A.D. 1–1450		4.36	3.01	0.44	~13	unknown	protruding	north			Not in Appendix B.	7.9	10M
4642		6795	house-in-pit	ovate to subrectangular	A.D. 500–915	2453	5.80	3.20	0.59	~18	unknown	unknown	unknown			Not in Appendix B.	7.9	6K
5518		1759	house-in-pit	subrectangular	A.D. 700–1015		5.78	3.70	0.17	~21	~20.2	protruding	south			Shared floor and pit with more recent Feature 3545.	7.12	11T
5616		6791	house-in-pit	round to ovate	A.D. 500–1310		unknown	unknown	0.20	unknown	unknown	unknown	unknown			Unknown whether structure had burned or whether it had floor assemblage.	7.14	8K
5794	437	3006	house-in-pit	unknown	A.D. 910–1015	2415	unknown	unknown	0.19	unknown	unknown	unknown	unknown			No evidence of burning; unknown floor assemblage; portion of floor truncated by Feature 5795.	7.12	11R
5795	437	3006	house-in-pit	subrectangular to ovate	A.D. 910–1150	2416	6.04	2.71	0.16	~16	unknown	unknown	unknown			No evidence of burning or floor assemblage.	7.12	11R
5994		6799	house-in-pit	subrectangular	A.D. 650–950	2409	6.34	4.04	0.50	~25	unknown	protruding, stepped	east			Structure had burned.	7.14	8I
8643	833	6795	house-in-pit	subrectangular	A.D. 700–915	2412	5.95	3.41	0.44	~20	unknown	protruding, stepped	south			Unknown whether structure had burned or whether it had floor assemblage; shared floor and pit with more recent Feature 8644.	7.9	7J
8644		6795	house-in-pit	subrectangular	A.D. 685–915	2413	5.95	3.41	0.44	~20	unknown	protruding	north			Evidence of burning; unknown floor assemblage.	7.9	7J
8841	825	6795	house-in-pit	subrectangular	A.D. 835–865	2422	5.75	4.39	0.55	~25	unknown	protruding, ramped	north			Structure had burned with a floor assemblage.	7.9	7J
8842	825	6795	house-in-pit	subrectangular	A.D. 735–840	2435	5.72	4.27	0.55	~24	unknown	protruding, ramped	north			Unknown whether structure had burned or whether it had floor assemblage; floor reused in Feature 8841.	7.9	7J
9729	4895	8661	house-in-pit	subrectangular?	A.D. 500–840		unknown	unknown	0.36	unknown	unknown	unknown	south?			Structure had burned; unknown floor assemblage.	not on map	no map
9867	4895	8661	house-in-pit	subrectangular	A.D. 760–840		unknown	unknown	0.48	unknown	unknown	protruding	south			Structure had burned; unknown floor assemblage.	7.8	3F
10,560	4043	2493	house-in-pit	ovate to subrectangular	A.D. 735–840	2443	5.65	2.72	0.27	~15	unknown	unknown	probably south, but removed by Feature 10,561			Not in Appendix B.	7.11	9P
10,561	4043	2493	house-in-pit	ovate to subrectangular	A.D. 835–990	2467	5.97	3.92	0.47	~23	unknown	protruding	south			Not in Appendix B.	7.11	10P
10,729	3737	1759	house-in-pit	subrectangular	A.D. 935–1015	2466	3.67	3.21	0.46	~11	unknown	protruding	north				7.12	9S
10,781	3595	1881	house-in-pit, recessed hearth	subrectangular	A.D. 935–1015	2465	~3.8	~2.8	0.11	~10	unknown	protruding	north	10,606		Structure had burned; unknown floor assemblage; superimposed by Feature 10,782.	7.12	11U
10,782	3595	1883	house-in-pit	ovate	A.D. 935–1015	2444	~3.3	~2.7	0.11	~9	unknown	protruding	north			Intrusive to Feature 10,781.	7.12	11U
11,390	4895	8661	house-in-pit	unknown	A.D. 760–1450		unknown	unknown	0.48	unknown	unknown	unknown	south?				not on map	no map
652					not dated												9.3	

Key: Archmag = archaeomagnetic; PD = Provenience Designation; SRI = Statistical Research, Inc.; SU = stripping unit.

Table A.4. Extramural Features (except Burials)

Feature No.	General Feature Type	Specific Feature Type	Date Range	Level of Effort	Plan-View Shape	Cross-Sectional Shape	Length (m)	Width (m)	Depth (m)	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Oxidation (walls)	Charcoal	Ash	Cobbles	FCR	Ceramics (n)	Ceramic Density (per m^3)	Flaked Stone (n)	Flaked Stone Density (per m^3)	Ground Stone (n)	Ground Stone Density (per m^3)	Faunal Remains (NISP)	Fauna Density (NISP per m^3)	Shell	Analyzed Macrobotanical	Analyzed Pollen	Total Artifacts (n + NISP)	Total Artifact Density (per m^3)
Locus A																													
288	nonthermal pit	nonthermal pit, general	A.D. 950–1150	part	ovate	basin	1.36	1.16	0.39	0.322	0.161	no	yes	yes	no	no	85	527.97	36	223.61	—		1	6.21	—	no	no	122	757.79
522	trash mound	trash mound	not dated	part	irreg	irreg	unk	unk	unk			unk	unk	unk	unk	unk	—		—		—		—		—	no	no		
1143	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.64	0.60	0.18	0.036	0.018	no	no	yes	no	no	—		1	55.29	—		—		—	no	no	1	55.29
1144	nonthermal pit	nonthermal pit, general	not dated	part	circu	irreg	0.62	0.62	0.17	nc[a]	nc[a]	no	no	no	no	no	—		—		—		—		—	no	no		
1146	thermal feature	roasting pit, basic	not dated	part	irreg	basin	0.97	0.84	0.33	nc[a]	nc[a]	yes	yes	yes	no	yes	7		28		—		—		—	yes	no	35	
1149	thermal feature	*horno*	not dated	part	ovate	conic	1.24	0.67	0.59	0.128	0.064	yes	yes	yes	no	yes	8	124.74	6	93.56	3	46.78	—		—	yes	no	17	265.08
1150	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	1.17	1.08	0.24	0.159	0.079	no	yes	no	no	no	7	88.21	10	126.02	—		—		—	no	no	17	214.23
1179	nonthermal pit	nonthermal pit, general	A.D. 700–950	part	ovate	cylin	0.44	0.35	0.22	0.027	0.013	no	yes	yes	no	no	6	451.20	9	676.80	—		—		—	no	no	15	1,128.00
1180	nonthermal pit	nonthermal pit, general	A.D. 950–1150	all	ovate	basin	1.62	1.22	0.12	0.124	0.124	no	yes	yes	no	no	140	1,127.96	8	64.45	—		—		—	yes	no	148	1,192.41
1182	nonthermal pit	nonthermal pit, general	not dated	part	ovate	cylin	0.32	0.26	0.23	0.015	0.008	no	yes	yes	no	no	—		1	133.14	—		—		—	no	no	1	133.14
1184	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.74	0.63	0.25	0.061	0.030	no	yes	yes	no	yes	—		3	98.37	2	65.58	—		—	no	no	5	163.95
1185	nonthermal pit	nonthermal pit, general	A.D. 950–1150	part	ovate	basin	0.74	0.68	0.21	0.055	0.028	no	yes	yes	no	no	3	108.50	1	36.17	—		—		—	no	no	4	144.66
1186	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.80	0.79	0.25	0.083	0.041	no	yes	yes	yes	no	3	72.56	3		—		—		—	no	no	6	145.13
1187	nonthermal pit	nonthermal pit, general	not dated	part	ovate	irreg (basin)	0.98	0.84	0.22	0.095	0.047	no	yes	yes	no	no	4	84.41	8	168.82	—		—		—	no	no	12	253.22
1188	nonthermal pit	nonthermal pit, general	A.D. 950–1150	part	ovate	basin	1.03	0.88	0.30	0.142	0.071	no	yes	yes	no	yes	8	112.43	12	168.65	—		—		—	no	no	20	281.09
1195	nonthermal pit	nonthermal pit, general	A.D. 950–1150	part	circu	cylin	1.20	1.18	0.38	0.422	0.211	no	yes	yes	yes	yes	97	459.29	26	123.11	3	14.20	—		—	no	no	126	596.60
1196	nonthermal pit	nonthermal pit, general	not dated	part	circu	cylin	0.30	0.24	0.34	0.019	0.010	no	yes	yes	no	no	—		—		—		—		—	no	no		
2143	midden	midden	A.D. 950–1150	part	irreg	irreg	unk	unk	unk			unk	unk	unk	unk	unk	—		—		—		—		—	no	no		
2153	nonthermal pit	nonthermal pit, general	A.D. 950–1150	part	irreg ovate	irreg (basin)	0.90	0.78	0.17	0.062	0.031	no	no	no	yes	yes	6	192.14	—		—		—		—	no	no	6	192.14
2161	thermal feature	roasting pit, basic	not dated	all	subrc	basin	0.76	0.54	0.26	0.800	0.800	yes	yes	yes	yes	yes	1	1.25	2	2.50	—		—		—	no	no	3	3.75
2162	thermal feature	roasting pit, basic	not dated	all	ovate	basin	0.66	0.58	0.11	0.022	0.022	yes	yes	yes	yes	yes	34	1,542.89	—		1	45.38	—		—	no	no	35	1,588.27
2163	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.35	0.31	0.14	0.008	0.004	no	yes	yes	no	yes	12	3,019.08	—		—		—		—	no	no	12	3,019.08
2166	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.62	0.57	0.15	0.028	0.014	no	yes	yes	no	no	1	72.09	1	72.09	—		—		—	no	no	2	144.19

Feature No.	General Feature Type	Specific Feature Type	Date Range	Level of Effort	Plan-View Shape	Cross-Sectional Shape	Length (m)	Width (m)	Depth (m)	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Oxidation (walls)	Charcoal	Ash	Cobbles	FCR	Ceramics (n)	Ceramic Density (per m^3)	Flaked Stone (n)	Flaked Stone Density (per m^3)	Ground Stone (n)	Ground Stone Density (per m^3)	Faunal Remains (NISP)	Fauna Density (NISP per m^3)	Shell	Analyzed Macrobotanical	Analyzed Pollen	Total Artifacts (n + NISP)	Total Artifact Density (per m^3)
2168	nonthermal pit	nonthermal pit, general	A.D. 950–1150	all	circu	basin	0.56	0.54	0.17	0.027	0.027	no	yes	yes	no	yes	4	148.68	—		—		—		—	no	no	4	148.68
2169	nonthermal pit	nonthermal pit, general	A.D. 950–1150	part	ovate	cylin	0.52	0.46	0.22	0.041	0.021	no	no	yes	no	no	6	290.49	—		—		—		—	no	no	6	290.49
2171	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.44	0.40	0.09	0.008	0.004	no	yes	yes	no	no	2	482.53	—		—		—		—	no	no	2	482.53
2172	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.66	0.57	0.10	0.020	0.010	no	yes	yes	yes	no	1	101.59	7	711.10	—		—		—	no	no	8	812.69
2174	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	1.08	0.88	0.17	0.085	0.042	no	yes	yes	yes	yes	2	47.31	3	70.96	—		—		—	no	no	5	118.27
2177	nonthermal pit	nonthermal pit, general	not dated	part	irreg (ovate)	irreg (basin)	0.87	0.83	0.17	0.064	0.032	no	yes	yes	no	yes	8	249.06	5	155.66	—		—		—	no	no	13	404.71
2180	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.62	0.58	0.22	0.041	0.021	no	yes	yes	no	no	4	193.23	—		—		26	1,255.98	—	no	no	30	1,449.21
2183	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.43	0.21	0.12	0.006	0.003	no	no	yes	no	no	—		—		—		—		—	no	no		
2184	nonthermal pit	nonthermal pit, general	A.D. 950–1150	part	circu	irreg (cylin)	0.54	0.52	0.30	0.066	0.033	no	yes	yes	yes	no	13	393.17	2	60.49	1	30.24	—		—	yes	no	16	483.91
2185	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.25	0.24	0.11	0.003	0.002	no	no	yes	no	no	—		—		—		—		—	no	no		
2186	nonthermal pit	nonthermal pit, general	A.D. 950–1150	part	ovate	cylin	0.54	0.40	0.14	0.024	0.012	no	yes	yes	no	no	6	505.51	3	252.76	—		—		—	no	no	9	758.27
2188	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.44	0.44	0.20	0.019	0.010	no	no	yes	no	no	1	103.85	1	103.85	—		—		—	no	no	2	207.70
2190	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.56	0.50	0.19	0.028	0.014	no	no	yes	no	yes	1	71.84	1	71.84	3	215.51	—		—	no	no	5	359.18
2197	thermal feature	roasting pit, basic	A.D. 950–1150	part	ovate	basin	0.58	0.55	0.21	0.035	0.018	yes	yes	yes	yes	yes	10	570.48	3	171.14	—		—		—	no	no	13	741.63
6463	thermal feature	roasting pit, basic	A.D. 950–1150	part	ovate	irreg (basin)	0.75	0.68	0.23	0.061	0.031	yes	yes	yes	no	yes	24	781.92	23	749.34	—		1	32.58	—	no	no	48	1,563.85
8411	nonthermal pit	nonthermal pit, general	not dated	all	circu	cylin	0.12	0.11	0.20	0.002	0.002	no	yes	yes	no	no	—		—		—		—		—	no	no		
Locus B																													
1018	midden	midden	not dated	part	irreg	irreg	unk	unk	unk			unk	unk	unk	unk	unk	—		—		—		—		—	no	no		
Locus C																													
278	thermal feature	roasting pit, basic	A.D. 500–1450	part	circu	basin	1.50	1.30	0.17	0.173	0.087	yes	yes	yes	no	yes	13	149.87	1	11.53	3	34.59	—		—	yes	no	17	195.98
896	nonthermal pit	nonthermal pit, general	not dated	part	ovate	conic	0.57	0.30	0.12	0.005	0.003	no	no	no	no	no	2	744.96	8	2,979.85	—		—		—	no	no	10	3,724.81
917	thermal feature	roasting pit, basic	not dated	part	circu	basin	1.70	1.30	0.32	0.370	0.185	yes	yes	no	no	yes	45	243.18	18	97.27	4	21.62	—		1	yes	no	68	367.47
922	thermal feature	roasting pit, basic	not dated	part	ovate	conic	1.12	0.75	0.67	0.147	0.074	yes	yes	yes	yes	yes	13	176.55	14	190.13	2	27.16	—		—	yes	no	29	393.85
999	midden	midden	not dated	part	irreg	irreg	unk	unk	unk			unk	unk	unk	unk	unk	—		—		—		—		—	no	no		

continued on next page

Feature No.	General Feature Type	Specific Feature Type	Date Range	Level of Effort	Plan-View Shape	Cross-Sectional Shape	Length (m)	Width (m)	Depth (m)	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Oxidation (walls)	Charcoal	Ash	Cobbles	FCR	Ceramics (n)	Ceramic Density (per m^3)	Flaked Stone (n)	Flaked Stone Density (per m^3)	Ground Stone (n)	Ground Stone Density (per m^3)	Faunal Remains (NISP)	Fauna Density (NISP per m^3)	Shell	Analyzed Macrobotanical	Analyzed Pollen	Total Artifacts (n + NISP)	Total Artifact Density (per m^3)
6020	nonthermal pit	nonthermal pit, general	not dated	part	irreg/ ovate	cylin	0.70	0.46	0.44	0.111	0.056	no	no	yes	no	no	—		—		—		—		—	no	no		
6021	nonthermal pit	nonthermal pit, general	not dated	all	ovate	cylin	0.45	0.27	0.37	0.185	0.093	no	yes	yes	no	no	2	21.62	1	10.81	—		—		1	no	no	4	43.24
6026	nonthermal pit	nonther-mal pit, bell-shaped	not dated	part	circu	bell	0.96	0.43	0.54	nc[a]	nc[a]	no	yes	yes	yes	yes	37		14.00		—		2		—	yes	no	53	
6027	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.54	0.46	0.08	0.010	0.005	no	no	no	no	no	—		—		—		—		—	no	no		
6028	nonthermal pit	nonthermal pit, general	not dated	part	ovate	cylin	0.36	0.22	0.22	0.014	0.007	no	no	yes	no	no	4	584.89	—		—		—		—	no	no	4	584.89
6040	thermal feature	roasting pit, basic	not dated	part	ovate	basin	0.84	0.70	0.35	0.108	0.054	yes	yes	yes	yes	yes	1	18.57	1	18.57	—		1	18.57	—	yes	no	3	55.71
6081	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.94	0.82	0.25	0.101	0.050	no	no	no	no	no	—		4	79.33	—		10	198.32	—	no	no	14	277.65
6085	thermal feature	roasting pit, basic	not dated	part	ovate	basin	0.85	0.60	0.24	0.064	0.032	yes	yes	yes	yes	yes	7	218.56	7	218.56	—		—		—	yes	no	14	437.12
6086	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.65	0.63	0.17	0.036	0.018	no	no	yes	no	no	—		1	54.90	—		—		—	no	no	1	54.90
6087	nonthermal pit	nonther-mal pit, bell-shaped	not dated	part	ovate	bell	0.80	0.76	0.40	0.193	0.097	no	no	yes	yes	no	40	412.37	16	164.95	—		1	10.31	—	no	no	57	587.63
6088	nonthermal pit	nonthermal pit, general	not dated	part	ovate	irreg (basin)	0.75	0.48	0.24	0.045	0.023	no	no	no	no	no	6	265.39	5	221.16	—		—		—	no	no	11	486.55
6099	thermal feature	roasting pit, basic	not dated	part	circu	basin	0.46	0.46	0.23	0.025	0.013	yes	yes	yes	yes	yes	—		1	78.53	—		—		—	yes	no	1	78.53
6101	nonthermal pit	nonthermal pit, general	not dated	all	circu	basin	0.37	0.34	0.14	0.009	0.009	no	yes	yes	no	no	9	976.46	—		1	108.50	—		—	no	no	10	1,084.96
6107	nonthermal pit	nonthermal pit, general	not dated	all	circu	basin	0.18	0.16	0.11	0.002	0.002	no	no	yes	no	no	—		—		—		—		—	no	no		
6108	nonthermal pit	nonthermal pit, general	not dated	all	circu	cylin	0.20	0.19	0.19	0.006	0.006	no	yes	yes	no	no	1	176.44	1	176.44	—		1	176.44	—	no	no	3	529.32
6109	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.54	0.48	0.08	0.011	0.005	no	yes	yes	no	no	—		—		—		—		—	no	no		
6114	thermal feature	roasting pit, basic	A.D. 950–1150	all	circu	basin	0.49	0.46	0.15	0.018	0.018	yes	no	yes	no	no	14	791.23	—		1	56.52	—		—	no	no	15	847.75
6134	nonthermal pit	nonthermal pit, general	not dated	part	ovate	cylin	0.60	0.55	0.31	0.080	0.040	no	yes	yes	no	no	18	448.29	4	99.62	—		—		—	no	no	22	547.91
6135	thermal feature	roasting pit, basic	A.D. 950–1150	part	ovate	basin	0.90	0.80	0.16	0.060	0.030	yes	yes	yes	yes	yes	17	563.96	13	431.26	10	331.74	—		—	yes	no	40	1,326.96
6136	thermal feature	roasting pit, basic	2000 B.C.–A.D. 1150	part	ovate	basin	0.61	0.56	0.13	0.023	0.012	yes	yes	yes	no	yes	1	86.06	—		—		—		—	yes	no	1	86.06
6140	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.38	0.34	0.09	0.006	0.003	no	no	yes	no	no	—		—		—		—		—	no	no		
6142	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.37	0.34	0.24	0.016	0.008	no	no	yes	no	no	5	632.89	1	126.58	—		—		—	no	no	6	759.47

Feature No.	General Feature Type	Specific Feature Type	Date Range	Level of Effort	Plan-View Shape	Cross-Sectional Shape	Length (m)	Width (m)	Depth (m)	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Oxidation (walls)	Charcoal	Ash	Cobbles	FCR	Ceramics (n)	Ceramic Density (per m^3)	Flaked Stone (n)	Flaked Stone Density (per m^3)	Ground Stone (n)	Ground Stone Density (per m^3)	Faunal Remains (NISP)	Fauna Density (NISP per m^3)	Shell	Analyzed Macrobotanical	Analyzed Pollen	Total Artifacts (n + NISP)	Total Artifact Density (per m^3)
6143	nonthermal pit	nonthermal pit, general	not dated	all	circu	cylin	0.46	0.42	0.19	0.095	0.048	no	yes	yes	yes	no	5	105.26	3	63.16	1	21.05	—		—	no	yes	9	189.47
6144	nonthermal pit	nonthermal pit, general	not dated	part	circu	conic	0.45	0.38	0.29	0.013	0.006	no	yes	yes	no	no	—		—		—		1	154.13	—	no	no	1	154.13
6145	thermal feature	firepit	not dated	part	circu	basin	0.84	0.84	0.10	0.012	0.006	yes	no	yes	no	no	—		—		—		—		—	no	no		
6146	thermal feature	firepit	A.D. 950–1150	part	circu	basin	0.90	0.90	0.25	0.072	0.036	yes	yes	yes	yes	yes	50	1,389.69	31	861.61	—		5	138.97	1	no	no	87	2,418.07
6147	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.87	0.85	0.07	0.027	0.014	no	yes	yes	no	no	17	1,255.06	10	738.27	—		—		—	no	no	27	1,993.33
6148	nonthermal pit	nonthermal pit, general	A.D. 950–1150	all	ovate	basin	0.46	0.40	0.09	0.045	0.023	no	yes	yes	no	no	8	355.56	2	88.89	—		—		—	no	no	10	444.44
6149	nonthermal pit	nonthermal pit, general	A.D. 950–1450	part	circu	basin	0.86	0.86	0.07	0.006	0.003	no	yes	yes	no	no	2	639.29	5	1,598.22	—		1	319.64	—	no	no	8	2,557.15
6150	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.29	0.25	0.04	0.002	0.001	no	no	yes	no	no	1	1,317.81	—		—		—		—	no	no	1	1,317.81
6151	nonthermal pit	nonthermal pit, general	not dated	part	circu	cylin	0.58	0.56	0.21	0.054	0.027	no	no	no	no	no	2	74.71	—		—		1	37.35	—	no	no	3	112.06
6152	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.80	0.80	0.28	0.075	0.038	no	yes	yes	no	no	9	238.43	4	105.97	—		—		—	no	no	13	344.40
6162	nonthermal pit	nonthermal pit, general	A.D. 950–1150	all	subrc	basin	0.68	0.60	0.10	0.101	0.101	no	yes	yes	no	no	32	316.83	1	9.90	—		—		—	no	no	33	326.73
6171	nonthermal pit	nonthermal pit, bell-shaped	A.D. 700–1450	part	circu	bell	1.00	0.93	0.66	0.330	0.240	no	yes	yes	yes	no	136	566.67	69		1		10	41.67	1	yes	no	217	904.17
6182	nonthermal pit	nonthermal pit, general	not dated	part	ovate	irreg (basin)	1.80	0.72	0.29	0.197	0.098	no	no	yes	no	no	4	40.67	—		—		—		—	no	no	4	40.67
6187	thermal feature	roasting pit, rock-lined	not dated	part	circu	basin	1.16	1.10	0.50	0.334	0.167	yes	yes	yes	yes	yes	20	119.80	6	35.94	18	107.82	—		—	yes	no	44	263.56
7145	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.80	0.77	0.13	0.042	0.021	no	yes	yes	no	no	14	668.12	4	190.89	—		2	95.45	—	no	no	20	954.46
7153	thermal feature	*horno*	A.D. 985–1040	part	ovate	cylin	1.66	1.25	1.00	1.629	0.814	yes	yes	yes	yes	yes	138	169.44	26	31.92	3	3.68	4	4.91	1	yes	no	172	211.19
7163	thermal feature	roasting pit, basic	not dated	part	ovate	basin	0.58	0.48	0.17	0.025	0.012	yes	yes	yes	yes	yes	19	1,534.22	5	403.74	—		—		—	yes	no	24	1,937.96
7168	nonthermal pit	nonthermal pit, general	not dated	part	circu	conic	0.44	0.40	0.20	0.009	0.005	no	yes	yes	no	no	6	1,302.84	3	651.42	—		1	217.14	—	no	no	10	2,171.40
7171	nonthermal pit	nonthermal pit, general	not dated	part	ovate	unk	0.72	unk	unk	unk	unk	no	yes	yes	no	no	—		—		—		—		—	no	no		
7174	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.58	0.46	0.27	0.038	0.019	no	yes	yes	no	no	32	1,697.66	7,174	380,595.27	—		—		—	no	no	7,206	382,292.93
7180	nonthermal pit	nonthermal pit, general	not dated	part	circu	cylin	0.87	0.85	0.34	0.197	0.099	no	no	yes	yes	no	110	1,114.64	10	101.33	10	101.33	—		—	yes	no	130	1,317.31
7182	nonthermal pit	nonthermal pit, general	not dated	part	circu	conic	0.76	0.76	0.29	0.044	0.022	no	yes	yes	no	no	5	228.15	2	91.26	—		—		—	yes	no	7	319.41

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Feature No.	General Feature Type	Specific Feature Type	Date Range	Level of Effort	Plan-View Shape	Cross-Sectional Shape	Length (m)	Width (m)	Depth (m)	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Oxidation (walls)	Charcoal	Ash	Cobbles	FCR	Ceramics (n)	Ceramic Density (per m^3)	Flaked Stone (n)	Flaked Stone Density (per m^3)	Ground Stone (n)	Ground Stone Density (per m^3)	Faunal Remains (NISP)	Fauna Density (NISP per m^3)	Shell	Analyzed Macrobotanical	Analyzed Pollen	Total Artifacts (n + NISP)	Total Artifact Density (per m^3)
7193	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.87	0.84	0.21	0.080	0.040	no	yes	yes	no	yes	11	273.92	3	74.71	—		—		—	no	no	14	348.63
7194	nonthermal pit	nonthermal pit, general	A.D. 950–1150	part	ovate	basin	0.70	0.58	0.28	0.059	0.030	no	yes	yes	no	yes	32	1,075.77	6	201.71	—		4	134.47	—	no	no	42	1,411.94
7195	thermal feature	hearth	not dated	all	circu	basin	0.18	0.18	0.10	0.002	0.002	yes	yes	yes	no	no	—		—		3	1,686.02	—		—	yes	no	3	1,686.02
7196	nonthermal pit	nonthermal pit, bell-shaped	A.D. 950–1150	part	circu	bell	0.82	0.75	0.27	0.111	0.055	no	yes	yes	no	no	92	1,672.73	21	381.82	—		4	72.73	1	no	no	118	2,145.45
7205	nonthermal pit	nonthermal pit, bell-shaped	not dated	part	ovate	bell	0.73	0.68	0.42	0.310	0.150	no	yes	yes	no	no	—		1		—		5	33.33	—	no	no	6	40.00
7330	animal burial (nonhuman)	animal burial (nonhuman)	A.D. 935–1450	all	ovate	basin	unk	unk	unk	unk	unk	unk	unk	unk	unk	unk	—		—		—		—		—	no	no		
9327	nonthermal pit	nonthermal pit, bell-shaped	A.D. 950–1150	all	circu	bell	0.35	0.34	0.31	0.020	0.020	no	yes	yes	no	no	35	1,750.00	32	1,600.00	2	100.00	10	500.00	—	no	no	79	3,950.00
9328	nonthermal pit	nonthermal pit, bell-shaped	A.D. 950–1150	all	circu	bell	0.61	0.61	0.21	0.250	0.250	no	yes	yes	no	no	25		8		—		13		—	no	no	46	
9409	thermal feature	roasting pit, rock-lined	A.D. 935–1450	all	circu	basin	0.72	0.71	0.23	0.062	0.062	yes	yes	yes	yes	yes	9	146.27	3	48.76	—		1	16.25	—	no	no	13	211.27
9487	thermal feature	roasting pit, basic	A.D. 935–1450	all	circu	basin	0.36	0.36	0.32	0.024	0.024	yes	yes	yes	yes	yes	3	127.23	2	84.82	2	84.82	2	84.82	—	no	no	9	381.69
10,133	nonthermal pit	nonthermal pit, bell-shaped	A.D. 935–1450	all	irreg	bell	0.63	0.35	0.20	0.180	0.180	no	no	no	yes	no	5		7		—		—		—	no	no	12	
10,343	nonthermal pit	nonthermal pit, general	A.D. 650–1450	all	circu	basin	0.81	0.81	0.12	0.017	0.017	no	no	yes	no	no	4	242.37	8	484.74	7	424.14	6	363.55	—	no	no	25	1,514.80
10,367	nonthermal pit	nonthermal pit, general	A.D. 650–1450	all	ovate	basin	0.90	0.80	0.26	0.098	0.098	no	no	yes	no	no	7	71.45	7	71.45	4	40.83	6	61.24	—	no	no	24	244.98
10,380	thermal feature	firepit	2000 B.C.–A.D. 1015	part	circu	basin	0.78	0.76	0.25	0.078	0.039	yes	no	yes	no	no	—		11	283.66	2	51.57	—		—	no	no	13	335.23
Locus D																													
411	nonthermal pit	nonthermal pit, bell-shaped	1100–900 B.C.	part	circu	bell	unk	unk	unk	nc[a]	nc[a]	no	unk	unk	unk	unk	—		11		—		—		—	no	no	11	
415	thermal feature	roasting pit, basic	not dated	all	circu	basin	0.52	0.51	0.09	0.012	0.012	yes	yes	yes	no	yes	—		10	800.58	—		5	400.29	—	yes	no	15	1,200.87
432	thermal feature	roasting pit, rock-lined	not dated	all	circu	cylin	0.46	0.46	0.33	0.055	0.055	yes	yes	no	yes	yes	10	182.43	15	273.65	—		1	18.24	—	yes	no	26	474.32
446	thermal feature	roasting pit, basic	not dated	all	irreg	irreg	0.70	0.70	0.33	nc[a]	nc[a]	yes	yes	yes	no	yes	9		22		2		—		—	yes	no	33	
457	thermal feature	roasting pit, basic	A.D. 500–1450	all	circu	conic	0.75	0.75	0.50	0.074	0.124	yes	yes	yes	yes	yes	112	905.87	40	323.53	23	186.03	5	40.44	—	yes	no	180	1,455.87
493	thermal feature	roasting pit, basic	not dated	all	circu	basin	0.50	0.50	0.12	0.010	0.010	unk	unk	unk	unk	unk	—		—		—		—		—	no	no		

Feature No.	General Feature Type	Specific Feature Type	Date Range	Level of Effort	Plan-View Shape	Cross-Sectional Shape	Length (m)	Width (m)	Depth (m)	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Oxidation (walls)	Charcoal	Ash	Cobbles	FCR	Ceramics (n)	Ceramic Density (per m^3)	Flaked Stone (n)	Flaked Stone Density (per m^3)	Ground Stone (n)	Ground Stone Density (per m^3)	Faunal Remains (NISP)	Fauna Density (NISP per m^3)	Shell	Analyzed Macrobotanical	Analyzed Pollen	Total Artifacts (n + NISP)	Total Artifact Density (per m^3)
494	thermal feature	roasting pit, basic	not dated	all	circu	basin	0.50	0.46	0.07	0.008	0.008	yes	yes	yes	yes	no	4	474.74	15	1,780.27	—		3	356.05	—	yes	no	22	2,611.07
572	thermal feature	roasting pit, basic	not dated	all	circu	basin	0.50	0.50	0.30	0.042	0.042	yes	yes	yes	no	yes	2	47.18	17	401.04	3	70.77	—		—	yes	no	22	518.99
578	nonthermal pit	nonthermal pit, general	A.D. 500–1450	all	ovate	basin	0.64	0.56	0.25	0.047	0.047	no	no	no	no	yes	40	853.05	29	618.46	3	63.98	3	63.98	—	no	no	75	1,599.47
714	thermal feature	roasting pit, bell-shaped	A.D. 500–1450	part	circu	bell	1.00	1.00	unk	unk	unk	yes	no	no	yes	yes	2		2		—		—		—	no	no	4	
723	nonthermal pit	nonthermal pit, general	A.D. 500–1450	part	unk	unk	0.57	0.20	0.35	nc[a]	nc[a]	no	yes	yes	yes	no	18		11		—		1		1	yes	no	30	
724	nonthermal pit	nonther-mal pit, bell-shaped	A.D. 500–1450	part	unk	bell	unk	unk	0.63	unk	unk	no	yes	yes	yes	no	31		31		4		19		—	yes	no	85	
771	thermal feature	roasting pit, bell-shaped	not dated	all	ovate	bell	0.70	0.55	0.50	nc[a]	nc[a]	yes	no	no	no	yes	—		—		—		—		—	no	no		
1545	nonthermal pit	cache	not dated	all	irreg	unk	0.60	0.50	0.18	nc[a]	nc[a]	no	no	no	no	no	—		—		1		—		—	no	no	1	
1553	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	circu	basin	1.00	1.00	0.15	0.032	0.016	no	yes	yes	no	no	4	251.63	5	314.54	—		—		—	no	no	9	566.17
1555	thermal feature	firepit	A.D. 1–1450	part	circu	basin	0.99	0.90	0.14	0.065	0.033	yes	yes	yes	no	no	7	214.46	3	91.91	—		—		—	yes	no	10	306.37
1556	thermal feature	hearth	not dated	part	ovate	basin	0.46	0.36	0.11	0.010	0.005	yes	yes	yes	no	no	2	419.59	—		—		—		—	no	no	2	419.59
1582	thermal feature	rock pile	not dated	all	irreg	irreg	0.90	0.78				unk	yes	unk	yes	unk	—		—		—		—		—	no	no		
1597	thermal feature	roasting pit, basic	not dated	part	ovate	basin	0.48	0.30	0.07	0.005	0.003	yes	yes	yes	yes	yes	1	379.13	4	1,516.53	—		—		—	no	no	5	1,895.66
1794	thermal feature	firepit	A.D. 1–1450	part	ovate	basin	1.20	0.95	0.10	0.060	0.030	yes	yes	yes	no	yes	53	1,776.73	11	368.76	—		2	67.05	—	yes	no	66	2,212.54
1802	thermal feature	roasting pit, basic	not dated	part	circu	basin	0.50	0.50	0.11	0.008	0.004	yes	yes	yes	no	yes	2	493.50	9	2,220.75	—		—		—	no	no	11	2,714.24
1808	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	ovate	basin	0.80	0.68	0.17	0.048	0.024	no	yes	no	yes	yes	30	1,239.72	42	1,735.61	—		—		—	no	no	72	2,975.34
1812	nonthermal pit	nonther-mal pit, bell-shaped	not dated	part	circu	bell	0.82	0.72	0.49	0.269	0.134	no	yes	no	yes	no	2	7.43	21	78.07	7	26.02	—		—	yes	yes	30	111.52
2650	nonthermal pit	nonther-mal pit, bell-shaped	2000 B.C.–A.D. 1050	all	ovate	bell	0.80	0.50	0.25	nc[a]	nc[a]	no	yes	no	yes	yes	—		—		—		—		—	no	no		
2670	nonthermal pit	nonthermal pit, general	A.D. 700–1450	part	circu	conic	0.70	0.70	0.39	0.050	0.025	no	no	no	no	no	5	199.98	8	319.97	—		1	40.00	—	no	no	14	559.95
2697	nonthermal pit	borrow pit	A.D. 685–1450	all	irreg	irreg	1.70	1.55	0.20	nc[a]	1.930	no	no	no	yes	yes	41	21.24	—		—		—		—	no	no	41	21.24
3027	nonthermal pit	borrow pit	A.D. 1–865	part	irreg	irreg	1.50	1.00	0.30	nc[a]	0.401	no	no	no	no	no	16		—		—		—		—	no	no	16	
3067	thermal feature	roasting pit, basic	A.D. 835–1450	all	circu	cylin	0.67	0.65	0.35	0.120	0.120	yes	yes	yes	yes	yes	312	2,607.53	67	559.95	2	16.71	3	25.07	—	yes	no	384	3,209.26
3203	nonthermal pit	nonthermal pit, general	2000 B.C.–A.D. 865	part	ovate	basin	0.50	0.40	0.32	0.033	0.017	no	no	no	no	no	4	238.85	23	1,373.41	1	59.71	1	59.71	—	no	no	29	1,731.69

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Feature No.	General Feature Type	Specific Feature Type	Date Range	Level of Effort	Plan-View Shape	Cross-Sectional Shape	Length (m)	Width (m)	Depth (m)	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Oxidation (walls)	Charcoal	Ash	Cobbles	FCR	Ceramics (n)	Ceramic Density (per m^3)	Flaked Stone (n)	Flaked Stone Density (per m^3)	Ground Stone (n)	Ground Stone Density (per m^3)	Faunal Remains (NISP)	Fauna Density (NISP per m^3)	Shell	Analyzed Macrobotanical	Analyzed Pollen	Total Artifacts (n + NISP)	Total Artifact Density (per m^3)
3426	thermal feature	roasting pit, basic	A.D. 500–1450	part	irreg	basin	1.00	0.80	0.14	0.059	0.029	yes	yes	yes	yes	yes	36	1,228.39	—		—		1	34.12	—	no	no	37	1,262.51
3433	nonthermal pit	nonthermal pit, general	A.D. 700–1450	all	irreg	irreg	0.62	0.50	0.35	nc[a]	nc[a]	no	yes	yes	no	no	14		43		—		10		3	no	no	70	
3437	nonthermal pit	nonther-mal pit, bell-shaped	A.D. 835–1450	all	circu	bell	0.49	0.45	0.38	0.132	0.132	no	no	yes	yes	yes	33		36		1		2		—	no	no	72	
3557	nonthermal pit	nonther-mal pit, bell-shaped	1060–880 B.C.	part	circu	bell	0.75	0.78	0.50	0.392	1.196	no	yes	yes	yes	yes	2	1.67	477	398.83	12	10.03	17	14.21	—	yes	yes	508	424.75
3558	indeterminate pit	nonthermal pit, general	A.D. 1–1450	part	circu	basin	0.77	0.75	0.32	0.097	0.047	no	yes	no	yes	no	6		1		—		—		—	no	no	7	
3579	thermal feature	rock pile	A.D. 950–1150	part	ovate	unk	1.80	1.45				no	yes	yes	yes	yes	22		16		—		1		—	no	no	39	
3624	nonthermal pit	nonthermal pit, general	not dated	all	circu	basin	0.30	0.30	0.18	0.009	0.009	no	no	no	no	no	1	109.22	1	109.22	—		—		—	no	no	2	218.43
3631	nonthermal pit	nonthermal pit, general	A.D. 1350–1450	all	ovate	basin	0.50	0.40	0.12	0.013	0.013	no	no	no	no	no	54	4,299.36	4	318.47	—		—		—	no	no	58	4,617.83
3642	thermal feature	roasting pit, basic	A.D. 1–1450	part	unk	unk	unk	unk	0.25	unk	unk	yes	yes	yes	yes	yes	2		7		1		—		—	no	no	10	
3668	thermal feature	roasting pit, rock-lined	A.D. 835–915	all	ovate	basin	1.40	1.20	1.00	0.879	0.879	yes	yes	no	yes	yes	122	138.76	204	232.03	17	19.34	317	360.56	—	yes	no	660	750.68
3669	thermal feature	roasting pit, basic	A.D. 685–1450	all	ovate	cylin	0.72	0.55	0.23	0.071	0.071	yes	yes	no	yes	yes	10	139.86	29	405.61	—		2	27.97	—	yes	no	41	573.44
3672	thermal feature	rock pile	not dated	part	unk	unk	unk	unk				unk	unk	unk	unk	unk	—		—		—		—		—	no	no		
3673	thermal feature	rock pile	A.D. 1–1450	part	circu	unk	unk	unk				unk	unk	unk	unk	unk	—		—		—		—		—	no	no		
3691	indeterminate pit	indeterminate pit	not dated	prob	notrec	notrec	0.84	0.84	unk			no	no	yes	yes	yes	—		—		—		—		—	no	no		
3692	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	circu	basin	0.83	0.76	0.09	0.030	0.015	no	no	no	no	yes	26	1,750.21	11	740.47	—		—		—	no	no	37	2,490.69
3693	nonthermal pit	nonthermal pit, general	not dated	all	circu	basin	0.34	0.34	0.09	0.004	0.004	no	yes	yes	yes	yes	2	561.68	4	1,123.36	—		—		—	no	no	6	1,685.03
3696	thermal feature	roasting pit, basic	A.D. 835–915	part	ovate	cylin	0.92	0.77	0.40	0.222	0.111	yes	yes	no	no	yes	228	2,050.01	137	1,231.81	—		5	44.96	—	no	no	370	3,326.78
3698	nonthermal pit	nonthermal pit, general	not dated	all	circu	conic	0.38	0.38	0.26	0.010	0.010	no	no	no	yes	no	5	508.96	6	610.75	—		—		—	no	no	11	1,119.71
3699	thermal feature	roasting pit, basic	not dated	part	circu	unk	0.70	0.70	0.10	unk	unk	yes	yes	no	yes	yes	—		2		—		—		—	no	no	2	
3703	indeterminate pit	indeterminate pit	not dated	prob	notrec	notrec	0.48	0.49	unk			no	no	no	no	no	—		—		—		—		—	no	no		
3711	nonthermal pit	nonther-mal pit, bell-shaped	A.D. 1–1450	part	irreg	bell	1.00	0.65	0.46	nc[a]	nc[a]	no	yes	no	no	yes	65		62		1		3		—	yes	no	131	
3723	indeterminate pit	indeterminate pit	not dated	prob	notrec	notrec	0.60	1.40	unk			no	yes	yes	no	no	—		—		—		—		—	no	no		

Feature No.	General Feature Type	Specific Feature Type	Date Range	Level of Effort	Plan-View Shape	Cross-Sectional Shape	Length (m)	Width (m)	Depth (m)	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Oxidation (walls)	Charcoal	Ash	Cobbles	FCR	Ceramics (n)	Ceramic Density (per m^3)	Flaked Stone (n)	Flaked Stone Density (per m^3)	Ground Stone (n)	Ground Stone Density (per m^3)	Faunal Remains (NISP)	Fauna Density (NISP per m^3)	Shell	Analyzed Macrobotanical	Analyzed Pollen	Total Artifacts (n + NISP)	Total Artifact Density (per m^3)
3724	indeterminate pit	indeterminate pit	not dated	prob	notrec	notrec	0.80	0.60	unk			no	yes	yes	no	no	—		—		—		—		—	no	no		
3727	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.50	0.21	0.14	0.008	0.004	no	yes	yes	no	no	2	519.95	1	259.98	—		—		—	no	no	3	779.93
3728	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.56	0.43	0.07	0.009	0.004	no	yes	yes	no	no	—		1		1	226.72	—		—	no	no	2	453.45
3748	nonthermal pit	borrow pit	A.D. 785–950	part	irreg	irreg	4.30	4.90	0.25	nc[a]	nc[a]	unk	unk	unk	unk	unk	—		—		—		—		—	no	no		
3756	thermal feature	roasting pit, bell-shaped	A.D. 685–740	all	ovate	bell	0.80	0.66	0.96	0.401	0.401	yes	yes	yes	yes	yes	78	194.51	194	483.79	13	32.42	6	14.96	—	no	no	291	725.69
3790	nonthermal pit	nonther-mal pit, bell-shaped	A.D. 500–865	part	circu	bell	0.90	0.90	0.41	unk	unk	no	yes	yes	yes	yes	13		96		6		17		—	yes	no	132	
3792	nonthermal pit	nonthermal pit, general	A.D. 500–865	all	irreg	basin	0.92	0.40	0.13	nc[a]	nc[a]	no	yes	yes	yes	yes	4		10		—		—		—	no	no	14	
3818	thermal feature	*horno*	A.D. 935–1015	part	circu	cylin	1.70	1.50	0.86	1.722	0.861	yes	yes	yes	yes	yes	183	212.60	212	246.30	4	4.65	—		—	no	no	399	463.55
3870	nonthermal pit	borrow pit	A.D. 700–1050	part	circu	cylin	2.90	2.90	0.71	4.687	2.344	no	yes	no	no	no	891	380.18	1,508	643.44	7	2.99	56	23.89	3	no	no	2,465	1,051.78
3871	nonthermal pit	nonthermal pit, general	A.D. 700–1450	all	irreg	irreg	0.48	0.48	0.27	nc[a]	nc[a]	no	yes	yes	yes	no	4		4		—		1		—	no	no	9	
3872	nonthermal pit	nonthermal pit, general	A.D. 700–1450	all	ovate	basin	0.67	0.60	0.11	0.023	0.023	no	yes	yes	no	no	18	777.81	10	432.12	—		1	43.21	—	no	no	29	1,253.14
3876	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	1.90	1.28	0.43	0.547	0.274	no	yes	no	no	no	36	131.56	32		3		—		—	yes	yes	71	259.46
3878	thermal feature	roasting pit, rock-lined	A.D. 860–1450	all	ovate	basin	0.80	0.72	0.40	0.121	0.121	yes	yes	yes	yes	yes	41	340.03	54	447.85	9	74.64	4	33.17	5	yes	no	113	937.17
3895	nonthermal pit	nonthermal pit, general	A.D. 700–950	all	irreg	basin	1.03	1.00	0.40	nc[a]	nc[a]	no	no	no	no	no	153		59		—		7		—	no	no	219	
3897	nonthermal pit	nonthermal pit, general	not dated	all	ovate	basin	0.30	0.25	0.10	0.004	0.004	no	no	no	no	no	—		—		—		—		—	no	no		
3926	indeterminate pit	indeterminate pit	not dated	prob	circu	unk	0.58	0.50	unk			no	no	no	no	no	—		—		—		—		—	no	no		
3938	indeterminate pit	indeterminate pit	not dated	prob	circu	notrec	0.66	0.66	unk			no	no	no	no	no	—		—		—		—		—	no	no		
3939	indeterminate pit	indeterminate pit	not dated	prob	ovate	notrec	0.40	0.35	unk			no	no	no	no	no	—		—		—		—		—	no	no		
3942	nonthermal pit	nonthermal pit, general	not dated	all	circu	basin	0.39	0.38	0.10	0.008	0.008	no	no	no	no	no	—		—		—		—		—	no	no		
3945	indeterminate pit	indeterminate pit	not dated	prob	circu	notrec	0.41	0.40	unk			no	no	no	no	no	—		—		—		—		—	no	no		
3946	indeterminate pit	indeterminate pit	not dated	prob	ovate	notrec	0.70	0.50	unk			no	no	no	no	no	—		—		—		—		—	no	no		
3947	indeterminate pit	indeterminate pit	not dated	prob	ovate	notrec	0.70	0.50	unk			no	no	no	no	no	—		—		—		—		—	no	no		

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Feature No.	General Feature Type	Specific Feature Type	Date Range	Level of Effort	Plan-View Shape	Cross-Sectional Shape	Length (m)	Width (m)	Depth (m)	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Oxidation (walls)	Charcoal	Ash	Cobbles	FCR	Ceramics (n)	Ceramic Density (per m^3)	Flaked Stone (n)	Flaked Stone Density (per m^3)	Ground Stone (n)	Ground Stone Density (per m^3)	Faunal Remains (NISP)	Fauna Density (NISP per m^3)	Shell	Analyzed Macrobotanical	Analyzed Pollen	Total Artifacts (n + NISP)	Total Artifact Density (per m^3)
3950	indeterminate pit	indeterminate pit	not dated	prob	circu	notrec	0.42	0.42	unk			no	no	no	no	no	—		—		—		—		—	no	no		
3951	indeterminate pit	indeterminate pit	not dated	prob	circu	notrec	0.57	0.57	unk			no	no	no	no	no	—		—		—		—		—	no	no		
3952	indeterminate pit	indeterminate pit	not dated	prob	ovate	notrec	0.45	0.33	unk			no	no	no	no	no	—		—		—		—		—	no	no		
3953	nonthermal pit	nonthermal pit, general	not dated	all	circu	basin	0.40	0.36	0.12	nc[a]	nc[a]	no	yes	no	no	no	—		—		—		—		—	no	no		
3954	nonthermal pit	nonthermal pit, general	not dated	all	ovate	basin	0.70	0.45	0.23	0.038	nc[a]	no	no	no	no	no	—		—		—		—		—	no	no		
3956	indeterminate pit	indeterminate pit	not dated	prob	notrec	notrec	0.42	0.33	unk			no	no	no	yes	no	—		—		—		—		—	no	no		
3957	indeterminate pit	indeterminate pit	not dated	prob	circu	notrec	0.60	0.55	unk			no	no	no	no	no	—		—		—		—		—	no	no		
3958	indeterminate pit	indeterminate pit	not dated	prob	ovate	notrec	0.47	0.30	unk			no	no	no	no	no	—		—		—		—		—	no	no		
3959	indeterminate pit	indeterminate pit	not dated	prob	circu	notrec	0.56	0.50	unk			no	no	no	no	no	—		—		—		—		—	no	no		
3960	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	ovate	basin	1.32	1.12	0.16	0.124	0.062	no	yes	yes	no	no	22	355.44	4	64.62	—		2	32.31	—	yes	no	28	452.37
3963	thermal feature	roasting pit, basic	A.D. 1–1450	part	ovate	basin	0.74	0.60	0.21	0.049	0.024	yes	yes	no	no	yes	11	450.86	4	163.95	2	81.97	—		—	no	no	17	696.78
3964	nonthermal pit	nonthermal pit, general	not dated	all	circu	basin	0.19	0.19	0.12	0.002	0.002	no	yes	no	no	no	—		—		—		—		—	no	no		
3965	nonthermal pit	nonthermal pit, general	not dated	all	circu	basin	0.43	0.42	0.25	0.024	0.024	no	yes	no	no	no	—		—		—		—		—	no	no		
3966	nonthermal pit	nonthermal pit, general	not dated	all	circu	basin	0.38	0.36	0.24	0.017	0.017	no	yes	no	no	no	—		—		—		—		—	no	no		
3967	nonthermal pit	nonthermal pit, general	not dated	all	circu	cylin	0.72	0.70	0.20	0.079	0.079	no	yes	no	no	no	1	12.64	151	1,908.30	—		10	126.38	—	no	no	162	2,047.32
3968	nonthermal pit	nonthermal pit, general	A.D. 700–950	part	ovate	basin	0.34	0.21	0.18	0.007	0.003	no	yes	no	no	no	7	2,081.51	—		—		—		—	no	no	7	2,081.51
3976	nonthermal pit	nonthermal pit, bell-shaped	1280–1010 B.C.	part	circu	bell	0.58	0.58	0.52	nc[a]	nc[a]	no	yes	no	no	yes	—		451		13		6		—	yes	yes	470	
3977	nonthermal pit	nonthermal pit, bell-shaped	A.D. 1–1450	part	circu	bell	0.60	0.60	0.92	0.046	0.023	no	yes	yes	no	yes	1	43.48	29	1,260.87	4	173.91	7	304.35	—	no	no	41	1,782.61
3983	nonthermal pit	nonthermal pit, bell-shaped	1070–900 B.C.	all	circu	bell	0.60	0.60	0.30	0.413	0.413	no	yes	yes	no	yes	6	14.53	350	847.46	3	7.26	91	220.34	—	yes	yes	450	1,089.59
4033	indeterminate pit	indeterminate pit	not dated	prob	circu	notrec	0.40	0.46	unk			no	no	no	no	no	—		—		—		—		—	no	no		
4035	indeterminate pit	indeterminate pit	not dated	prob	ovate	notrec	0.80	0.46	unk			no	no	no	yes	no	—		—		—		—		—	no	no		

Feature No.	General Feature Type	Specific Feature Type	Date Range	Level of Effort	Plan-View Shape	Cross-Sectional Shape	Length (m)	Width (m)	Depth (m)	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Oxidation (walls)	Charcoal	Ash	Cobbles	FCR	Ceramics (n)	Ceramic Density (per m^3)	Flaked Stone (n)	Flaked Stone Density (per m^3)	Ground Stone (n)	Ground Stone Density (per m^3)	Faunal Remains (NISP)	Fauna Density (NISP per m^3)	Shell	Analyzed Macrobotanical	Analyzed Pollen	Total Artifacts (n + NISP)	Total Artifact Density (per m^3)
4044	nonthermal pit	nonthermal pit, general	not dated	part	circu	cylin	0.77	0.76	0.38	0.175	0.087	no	yes	no	no	yes	—		7	80.20	—		—		—	no	no	7	80.20
4045	nonthermal pit	nonthermal pit, general	not dated	all	ovate	cylin	0.56	0.46	0.25	0.051	0.051	no	yes	no	no	no	—		1	19.78	—		—		—	no	no	1	19.78
4046	nonthermal pit	nonthermal pit, general	not dated	part	ovate	irreg	0.54	0.42	0.22	nc[a]	nc[a]	no	no	no	no	no	4		2		—		—		—	no	no	6	
4047	nonthermal pit	nonthermal pit, general	not dated	all	irreg	cylin	0.60	0.50	0.46	0.108	0.108	no	no	no	yes	no	5	46.16	4	36.92	—		—		—	no	no	9	83.08
4048	nonthermal pit	nonthermal pit, general	not dated	all	circu	basin	0.44	0.42	0.35	0.034	0.034	no	yes	no	no	no	—		—		—		—		—	no	no		
4049	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	circu	basin	0.57	0.55	0.25	0.041	0.021	no	yes	no	no	no	41	1,999.21	5	243.81	—		—		—	no	no	46	2,243.01
4050	thermal feature	roasting pit, basic	A.D. 1–1450	part	circu	basin	0.85	0.80	0.42	0.149	0.075	yes	yes	no	yes	yes	20	267.62	13	173.95	5	66.91	2	26.76	1	no	no	41	548.63
4051	nonthermal pit	nonthermal pit, general	not dated	all	circu	basin	0.49	0.47	0.15	0.018	0.018	no	no	no	no	yes	—		—		—		1	55.31	—	no	no	1	55.31
4053	thermal feature	roasting pit, basic	A.D. 1–1450	part	ovate	basin	0.80	0.75	0.20	0.063	0.031	yes	yes	yes	yes	yes	4	127.39	10	318.47	1	31.85	—		—	yes	no	15	477.71
4054	nonthermal pit	nonthermal pit, general	not dated	all	circu	basin	0.40	0.39	0.04	0.003	0.003	no	yes	no	no	no	—		—		—		—		—	no	no		
4055	indeterminate pit	indeterminate pit	not dated	prob	notrec	notrec	0.42	unk	unk			no	no	no	no	no	—		—		—		—		—	no	no		
4058	indeterminate pit	nonthermal pit, general	not dated	all	ovate	basin	0.56	0.46	0.11	0.055	0.028	no	no	no	no	no	—		—		—		—		—	no	no		
4059	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.43	0.43	0.17	0.014	0.007	no	yes	no	no	no	—		—		—		—		—	no	no		
4063	indeterminate pit	indeterminate pit	not dated	prob	ovate	notrec	0.42	0.34	unk			no	no	no	yes	no	—		—		—		—		—	no	no		
4076	indeterminate pit	indeterminate pit	not dated	prob	circu	notrec	0.40	0.42	unk			no	no	no	yes	no	—		—		—		24		—	no	no	24	
4091	indeterminate pit	indeterminate pit	not dated	prob	circu	notrec	0.60	0.57	unk			no	no	no	no	no	—		—		—		—		—	no	no		
4097	nonthermal pit	borrow pit	A.D. 500–1450	part	irreg	basin	1.50	0.80	0.26	0.163	0.082	no	yes	yes	no	no	20	244.98	15	183.73	—		3	36.75	—	no	no	38	465.46
4105	nonthermal pit	nonthermal pit, bell-shaped	200 B.C.–A.D. 840	all	circu	bell	0.87	0.87	0.51	0.413	0.413	no	yes	no	yes	yes	9	21.79	166	401.94	4	9.69	3	7.26	1	no	no	183	443.10
4108	indeterminate pit	indeterminate pit	not dated	prob	ovate	notrec	0.50	0.42	unk			no	no	no	no	no	—		—		—		—		—	no	no		
4119	indeterminate pit	indeterminate pit	not dated	prob	circu	notrec	0.50	0.50	unk			no	yes	yes	no	no	—		—		—		—		—	no	no		
4120	thermal feature	roasting pit, rock-lined	A.D. 500–1450	all	circu	basin	0.80	0.80	0.66	0.246	0.246	yes	yes	yes	yes	yes	39	158.41	33	134.04	15	60.93	—		—	yes	no	87	353.37
4121	indeterminate pit	indeterminate pit	not dated	prob	circu	notrec	0.70	0.65	unk			no	yes	yes	yes	yes	—		—		—		—		—	no	no		

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Feature No.	General Feature Type	Specific Feature Type	Date Range	Level of Effort	Plan-View Shape	Cross-Sectional Shape	Length (m)	Width (m)	Depth (m)	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Oxidation (walls)	Charcoal	Ash	Cobbles	FCR	Ceramics (n)	Ceramic Density (per m^3)	Flaked Stone (n)	Flaked Stone Density (per m^3)	Ground Stone (n)	Ground Stone Density (per m^3)	Faunal Remains (NISP)	Fauna Density (NISP per m^3)	Shell	Analyzed Macrobotanical	Analyzed Pollen	Total Artifacts (n + NISP)	Total Artifact Density (per m^3)
4164	indeterminate pit	indeterminate pit	not dated	prob	circu	notrec	0.43	0.43	unk			no	no	yes	no	no	—		—		—		—		—	no	no		
4193	indeterminate pit	indeterminate pit	not dated	prob	ovate	notrec	1.08	0.70	unk			no	yes	yes	no	no	—		—		—		—		—	no	no		
4196	indeterminate pit	indeterminate pit	not dated	prob	ovate	notrec	0.70	0.60	unk			no	no	no	yes	yes	—		—		—		—		—	no	no		
4220	thermal feature	*horno*	A.D. 500–1450	part	circu	conic	2.05	2.05	0.92	3.035	1.518	yes	yes	yes	yes	yes	102	67.21	179	117.96	47	30.97	—		—	yes	no	328	216.14
4229	indeterminate pit	indeterminate pit	not dated	prob	ovate	notrec	0.70	0.60	unk			no	yes	yes	no	no	—		—		—		—		—	no	no		
4230	indeterminate pit	indeterminate pit	not dated	prob	circu	notrec	0.76	0.73	unk			no	yes	no	no	yes	—		—		—		—		—	no	no		
4295	nonthermal pit	nonthermal pit, bell-shaped	not dated	part	circu	bell	0.83	0.85	0.81	0.273	0.137	no	yes	yes	no	yes	1	7.30	4	29.20	—		34	248.18	—	yes	yes	39	284.67
4310	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.62	0.60	0.27	0.053	0.026	no	yes	no	no	yes	—		55	2,092.70	2	76.10	2	76.10	—	yes	no	59	2,244.90
4312	nonthermal pit	nonthermal pit, bell-shaped	1500 B.C.–A.D. 300	part	circu	bell	0.73	0.73	0.43	0.357	0.178	no	yes	no	no	yes	—		126	707.87	—		6	33.71	—	yes	yes	132	741.57
4326	nonthermal pit	nonthermal pit, general	A.D. 1–300	part	circu	conic	1.10	1.05	0.59	0.178	0.089	no	yes	no	no	yes	10	112.16	154	1,727.30	—		5	56.08	—	yes	no	169	1,895.55
4369	nonthermal pit	nonthermal pit, general	not dated	all	circu	basin	0.40	0.35	0.22	0.016	0.016	no	yes	no	no	no	—		1	62.04	—		25	1,551.00	—	no	no	26	1,613.04
4556	indeterminate pit	indeterminate pit	not dated	prob	ovate	notrec	0.45	0.38	unk			no	no	no	no	no	—		—		—		—		—	no	no		
4560	indeterminate pit	indeterminate pit	not dated	prob	circu	notrec	0.29	0.25	unk			no	no	no	no	yes	—		—		—		—		—	no	no		
4561	indeterminate pit	indeterminate pit	A.D. 500–1450	prob	ovate	notrec	0.74	0.42	unk			no	yes	yes	no	no	1		—		—		—		—	no	no	1	
4571	nonthermal pit	nonthermal pit, general	A.D. 500–1450	part	circu	basin	0.46	0.41	0.04	0.004	0.002	no	no	no	no	no	26		1	506.58	—		—		—	no	no	27	13,677.72
4631	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	ovate	conic	0.66	0.48	0.20	0.017	0.008	no	yes	yes	no	yes	9	1,085.70	5	603.17	—		2	241.27	—	no	no	16	1,930.13
4635	thermal feature	roasting pit, basic	A.D. 1–1450	all	circu	basin	0.33	0.33	0.12	0.007	0.007	yes	yes	yes	no	no	9	1,316.00	5	731.11	—		—		—	yes	no	14	2,047.11
4649	thermal feature	firepit	A.D. 500–1450	all	ovate	conic	0.36	0.29	0.25	0.007	0.007	yes	no	yes	no	no	6	878.54	5	732.12	—		—		—	no	no	11	1,610.66
4660	nonthermal pit	nonthermal pit, bell-shaped	A.D. 1–1450	part	circu	bell	0.66	0.57	0.46	nc[a]	nc[a]	no	yes	yes	no	no	4		19		—		—		—	yes	no	23	
4702	thermal feature	roasting pit, rock-lined	A.D. 600–865	part	circu	cylin	1.45	1.45	0.92	1.518	0.759	yes	yes	yes	yes	yes	80	105.37	165	217.33	8	10.54	14	18.44	—	yes	no	267	351.68

Feature No.	General Feature Type	Specific Feature Type	Date Range	Level of Effort	Plan-View Shape	Cross-Sectional Shape	Length (m)	Width (m)	Depth (m)	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Oxidation (walls)	Charcoal	Ash	Cobbles	FCR	Ceramics (n)	Ceramic Density (per m^3)	Flaked Stone (n)	Flaked Stone Density (per m^3)	Ground Stone (n)	Ground Stone Density (per m^3)	Faunal Remains (NISP)	Fauna Density (NISP per m^3)	Shell	Analyzed Macrobotanical	Analyzed Pollen	Total Artifacts (n + NISP)	Total Artifact Density (per m^3)
4716	nonthermal pit	nonthermal pit, general	A.D. 700–1450	all	ovate	basin	0.50	0.40	0.12	0.013	0.013	no	yes	yes	no	no	—		—		—		—		—	no	no		
4728	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	circu	cylin	0.60	0.55	0.30	0.078	0.039	no	yes	yes	no	yes	11	283.09	3	77.21	—		—		—	yes	no	14	360.29
4730	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	1.10	1.10	0.13	0.027	0.013	no	yes	no	no	no	—		—		—		—		—	no	no		
4731	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.38	0.38	0.08	0.003	0.002	no	no	yes	no	no	1	609.32	—		—		—		—	no	no	1	609.32
4732	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.43	0.40	0.08	0.007	0.004	no	no	yes	no	no	—		—		—		—		—	no	no		
4735	nonthermal pit	nonthermal pit, general	A.D. 500–1450	part	circu	cylin	1.50	1.50	0.52	0.918	0.459	no	yes	yes	yes	yes	106	230.82	75	163.32	14	30.49	5	10.89	—	yes	no	200	435.52
4750	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	ovate	cylin	0.60	0.50	0.25	0.059	0.029	no	yes	yes	no	no	5	169.85	—		—		—		—	no	no	5	169.85
4753	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	circu	basin	0.70	0.70	0.20	0.036	0.018	no	yes	yes	no	no	13	730.61	—		—		—		—	no	no	13	730.61
4757	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	circu	basin	0.50	0.47	0.11	0.014	0.007	no	yes	yes	no	no	2	295.68	—		—		—		—	no	no	2	295.68
4759	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	circu	basin	0.33	0.29	0.12	0.006	0.003	no	yes	yes	no	no	9	2,995.03	—		—		—		—	no	no	9	2,995.03
4780	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.56	0.48	0.30	0.042	0.021	no	no	no	no	no	—		—		—		—		—	yes	no		
4793	nonthermal pit	nonthermal pit, general	not dated	part	ovate	irreg	0.70	0.50	0.14	nc[a]	nc[a]	no	yes	no	no	no	2		1		—		—		—	no	no	3	
4849	nonthermal pit	nonthermal pit, bell-shaped	820–590 B.C.	part	circu	bell	0.87	0.80	0.62	0.415	0.208	no	yes	yes	no	no	—		38	182.69	—		6	28.85	—	yes	no	44	211.54
4857	nonthermal pit	nonthermal pit, general	not dated	part	circu	conic	0.74	0.74	0.29	0.042	0.021	no	no	no	no	no	—		—		—		—		—	no	no		
4871	thermal feature	roasting pit, bell-shaped	A.D. 990–1160	part	circu	bell	0.72	0.72	0.78	0.415	0.208	yes	yes	yes	yes	yes	63	302.88	18	86.54	8	38.46	9	43.27	—	yes	no	98	471.15
4882	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	circu	basin	0.32	0.28	0.09	0.004	0.002	no	yes	yes	no	no	7	3,317.41	—		—		—		—	no	no	7	3,317.41
4887	nonthermal pit	nonthermal pit, general	A.D. 1–1450	all	circu	cylin	0.34	0.34	0.26	0.024	0.024	no	yes	yes	no	no	8	339.07	6	254.30	—		—		—	no	no	14	593.37
4888	nonthermal pit	nonthermal pit, general	not dated	all	irreg	conic	0.39	0.39	0.22	1.265	0.633	no	yes	yes	no	no	1	1.58	2	3.16	—		—		—	no	no	3	4.74
4896	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	circu	basin	0.41	0.36	0.12	0.009	0.005	no	yes	yes	no	yes	3	647.30	—		—		—		—	no	no	3	647.30
4902	thermal feature	roasting pit, basic	A.D. 1–1450	part	ovate	cylin	1.10	0.77	0.70	0.465	0.233	yes	yes	yes	yes	yes	7	30.08	4	17.19	2	8.59	1	4.30	—	yes	no	14	60.16
4909	nonthermal pit	nonthermal pit, general	not dated	part	ovate	cylin	0.90	0.45	0.07	0.022	0.011	no	no	yes	no	no	—		1	89.87	—		—		—	no	no	1	89.87
4931	thermal feature	roasting pit, basic	A.D. 985–1315	part	ovate	basin	1.12	0.96	0.56	0.315	0.158	yes	yes	yes	no	yes	7	44.43	6	38.08	—		—		—	no	no	13	82.51

continued on next page

Feature No.	General Feature Type	Specific Feature Type	Date Range	Level of Effort	Plan-View Shape	Cross-Sectional Shape	Length (m)	Width (m)	Depth (m)	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Oxidation (walls)	Charcoal	Ash	Cobbles	FCR	Ceramics (n)	Ceramic Density (per m^3)	Flaked Stone (n)	Flaked Stone Density (per m^3)	Ground Stone (n)	Ground Stone Density (per m^3)	Faunal Remains (NISP)	Fauna Density (NISP per m^3)	Shell	Analyzed Macrobotanical	Analyzed Pollen	Total Artifacts (n + NISP)	Total Artifact Density (per m^3)
4939	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	ovate	cylin	1.20	0.90	0.30	0.254	0.127	no	yes	no	no	yes	2	15.73	—		—		—		—	no	no	2	15.73
4943	nonthermal pit	nonthermal pit, general	not dated	part	subrc	basin	0.80	0.41	0.05	nc[a]	nc[a]	no	no	no	no	no	—		—		—		—		—	no	no		
4945	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.46	0.46	0.10	0.006	0.003	no	yes	no	no	yes	—		—		—		—		—	no	no		
4954	thermal feature	roasting pit, basic	not dated	part	ovate	basin	0.47	0.30	0.30	0.022	0.011	yes	yes	yes	yes	yes	—		—		—		—		—	no	no		
4966	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.52	0.50	0.08	0.011	0.005	no	yes	no	no	no	1	183.73	—		—		—		—	no	no	1	183.73
4973	nonthermal pit	nonther-mal pit, bell-shaped	A.D. 1–1450	part	circu	bell	0.48	0.48	0.40	nc[a]	nc[a]	no	yes	yes	no	no	5		3		—		—		—	no	no	8	
4976	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.48	0.41	0.18	0.019	0.009	no	yes	no	no	no	4	431.53	1	107.88	—		—		—	no	no	5	539.42
4984	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	circu	basin	1.00	0.95	0.50	0.249	0.124	no	yes	no	no	no	14	112.64	2	16.09	—		—		1	no	no	17	136.78
4985	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	circu	basin	0.75	0.70	0.14	0.038	0.019	no	yes	yes	no	no	17	883.92	—		—		1	52.00	—	no	no	18	935.92
4996	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.80	0.70	0.22	0.064	0.032	no	yes	yes	yes	yes	—		19	589.38	—		—		—	yes	no	19	589.38
5504	nonthermal pit	nonthermal pit, general	not dated	part	ovate	basin	0.92	0.82	0.25	0.099	nc[a]	no	yes	yes	no	no	—		15		—		—		—	no	no	15	
5505	nonthermal pit	nonther-mal pit, bell-shaped	1110–900 B.C.	part	ovate	bell	1.10	1.00	0.96	1.270	0.633	no	yes	yes	yes	yes	—		514	812.01	3	4.74	18	28.44	—	yes	yes	535	845.18
5520	thermal feature	firepit	A.D. 700–1450	all	circu	basin	0.17	0.17	0.06	nc[a]	nc[a]	yes	yes	yes	no	no	—		—		—		—		—	no	no		
5568	thermal feature	roasting pit, basic	A.D. 1–1450	part	ovate	basin	1.10	1.00	0.70	0.403	0.201	yes	yes	yes	yes	yes	5	24.82	5	24.82	5	24.82	—		—	no	no	15	74.45
5612	thermal feature	roasting pit, bell-shaped	A.D. 650–950	all	ovate	bell	0.75	0.65	1.00	nc[a]	nc[a]	yes	yes	yes	yes	yes	1,038		797		27		1,251		2	no	no	3,115	
5619	nonthermal pit	nonthermal pit, general	A.D. 1–1450	part	circu	cylin	0.56	0.51	0.24	0.054	0.027	no	yes	no	no	no	8	297.36	4	148.68	—		—		—	no	no	12	446.04
5624	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.51	0.51	0.12	0.010	0.005	no	no	yes	yes	no	2	411.46	—		—		—		—	yes	no	2	411.46
5647	nonthermal pit	nonthermal pit, general	A.D. 700–1450	all	circu	basin	1.00	1.00	0.23	0.070	0.070	no	yes	no	no	no	—		—		—		—		—	no	no		
5766	nonthermal pit	nonthermal pit, general	A.D. 935–1450	part	ovate	unk	1.89	1.89	unk	unk	unk	no	yes	no	yes	yes	121		5		—		—		—	no	no	126	
5793	nonthermal pit	borrow pit	A.D. 660–1450	part	irreg	irreg	3.50	unk	0.53	unk	unk	no	yes	no	no	yes	1		—		—		4		—	no	no	5	
5809	nonthermal pit	nonther-mal pit, bell-shaped	200 B.C.–A.D. 300	all	circu	bell	1.07	1.03	0.35	nc[a]	nc[a]	no	no	no	no	no	67		896		6		71		—	yes	no	1,040	

Feature No.	General Feature Type	Specific Feature Type	Date Range	Level of Effort	Plan-View Shape	Cross-Sectional Shape	Length (m)	Width (m)	Depth (m)	Approximate Pit Volume (m^3)	Approximate Excavated Volume (m^3)	Oxidation (walls)	Charcoal	Ash	Cobbles	FCR	Ceramics (n)	Ceramic Density (per m^3)	Flaked Stone (n)	Flaked Stone Density (per m^3)	Ground Stone (n)	Ground Stone Density (per m^3)	Faunal Remains (NISP)	Fauna Density (NISP per m^3)	Shell	Analyzed Macrobotanical	Analyzed Pollen	Total Artifacts (n + NISP)	Total Artifact Density (per m^3)
5980	nonthermal pit	nonthermal pit, bell-shaped	A.D. 1–1450	part	circu	bell	0.82	0.82	0.85	nc[a]	nc[a]	no	yes	yes	yes	yes	20		12		—		1		—	yes	no	33	
5982	nonthermal pit	nonthermal pit, general	not dated	part	unk	conic	0.90	unk	0.58	unk	unk	no	no	no	no	no	—		3		—		—		—	no	no	3	
5983	nonthermal pit	nonthermal pit, general	not dated	part	unk	irreg	0.75	unk	0.66	unk	unk	no	yes	no	no	no	5		7		—		2		—	no	no	14	
7501	cache	cache	A.D. 1–1450	all	circu	basin	0.32	0.30	0.09	0.005	0.005	no	yes	no	no	no	311		—		—		—		—	yes	no	311	68,780.96
7560	thermal feature	roasting pit, basic	A.D. 500–1450	all	ovate	basin	0.83	0.56	0.41	0.100	0.100	yes	no	no	no	no	—		—		—		—		—	no	no		
7664	nonthermal pit	borrow pit	A.D. 1–1390	part	subrc	irreg	2.40	2.30	0.09	nc[a]	nc[a]	no	yes	no	no	no	17		4		—		—		—	no	no	21	
7742	nonthermal pit	nonthermal pit, general	A.D. 735–1450	part	circu	basin	0.74	0.74	0.39	0.115	0.057	no	yes	no	no	yes	6	104.69	—		—		—		—	no	no	6	104.69
7827	thermal feature	roasting pit, bell-shaped	A.D. 660–790	part	circu	bell	0.83	0.80	0.53	0.305	0.153	yes	yes	yes	yes	yes	—		4		1	6.54	—		—	yes	no	5	32.68
7940	nonthermal pit	nonthermal pit, general	A.D. 950–1450	part	circu	cylin	0.50	0.50	0.19	0.037	0.019	no	no	no	no	no	—		—		—		—		—	no	no		
8798	thermal feature	roasting pit, bell-shaped	A.D. 1–865	part	circu	bell	unk	unk	unk	unk	unk	yes	yes	yes	no	no	10		3		—		—		—	yes	no	13	
8887	nonthermal pit	nonthermal pit, general	A.D. 685–1450	part	ovate	basin	0.63	0.53	0.15	0.026	0.013	no	yes	yes	no	no	20	1,526.07	12	915.64	7	534.12	23	1,754.98	—	no	no	62	4,730.81
10,507	thermal feature	roasting pit, bell-shaped	A.D. 600–1000	all	circu	bell	0.60	0.60	0.50	0.183	0.183	yes	yes	yes	yes	no	295	1,612.02	195	1,065.57	12	65.57	972	5,311.48	—	yes	no	1474	
10,587	nonthermal pit	nonthermal pit, general	not dated	part	circu	basin	0.85	unk	0.20	nc[a]	nc[a]	no	yes	no	yes	yes	—		32		—		3		—	yes	no	35	
10,612	nonthermal pit	nonthermal pit, bell-shaped	not dated	part	circu	bell	0.30	0.30	0.43	0.001	0.001	yes	no	yes	no	no	2	1,447.60	—		—		1	723.80	—	yes	no	3	2,171.40
10,692	thermal feature	firepit	2000 B.C.–A.D. 600	all	ovate	basin	0.30	0.22	0.04	0.008	0.008	no	no	yes	no	no	—		3	390.28	—		1	130.09	—	no	no	4	520.38
10,720	nonthermal pit	nonthermal pit, general	not dated	all	ovate	conic	0.32	0.27	0.34	0.032	0.032	no	no	yes	no	no	—		3	93.75	—		1	31.25	—	no	no	4	125.00
11,342	activity surface	activity surface	A.D. 760–840	part	irreg	irreg	unk	unk	unk			unk	unk	unk	unk	unk	—		—		—		—		—	no	no		
11,352	midden	midden	not dated	part	irreg	irreg	unk	unk	unk			unk	unk	unk	unk	unk	—		—		—		—		—	no	no		
11,442	cache	cache	A.D. 865–1450	all	unk	unk	unk	unk	unk	unk	unk	unk	unk	unk	unk	unk	—		—		—		—		—	no	no		
																	Locus F												
672	trash mound	trash mound	not dated	part													—		—		—		—		—		no		

Key: all = complete excavation; circu = circular; conic = conical; cylin = cylindrical; FCR = fire-cracked rock; irreg = irregular; nc = not calculated; NISP = number of identified specimens; notrec = not recorded; part = partial excavation; prob = probed; subrc = subrectangular; unk = unk.
[a] Volume not calculated because of irregular pit shape or lack of data.

APPENDIX B

Structure Descriptions

Stacey Lengyel, Heather J. Miljour, Robert M. Wegener, Kristen A. Hagenbuckle, Holly Moyes, and Marcy Rockman

Locus A, Feature 200

Center of feature UTMs: N 3538715.11, E 541887.03
Architectural type; recessed hearth style; house-in-a-pit
Date range: A.D. 935–1040
House dimensions: 6.20 by 3.84 m; pit depth 0.22 m; floor area 15.59 m^2
Entryway dimensions: 2.13 by 1.56 m; floor area 2.17 m^2
Shape: subrectangular
Orientation: south
Internal features: 2 hearths, 1 recessed hearth area, 1 floor groove, 2 central-support postholes, 93 interior and perimeter postholes, and 1 intramural pit
Chronometric techniques: archaeomagnetism, and dendrochronology
Analyzed botanical samples: PDs 1158, 1200, 1259, 2024–2026, 2030, 2031, 2036, and 2067
Related features: none

Feature 200 was a subrectangular house-in-a-pit that opened to the south (Figure B.1). The structure had been remodeled as indicated by the presence of a recessed hearth area (Subfeature 85) that had been filled in and covered by a plastered floor. Regularly spaced postholes (Subfeature 87–101) circled the interior of this recessed hearth area, and an earlier hearth (Subfeature 86) was located in the center of it. The remodeled structure (Figure B.2) contained a number of floor features, including a hearth (Subfeature 1), an intramural pit (Subfeature 81), a floor groove (Subfeature 3), and 81 postholes (Subfeatures 4–80 and 82–84). Numerous artifacts were recovered from the structure's floor surface (Table B.1), including two partially reconstructible Rincon Red-on-brown vessels (PDs 1244 and 1249) and a partially reconstructible plain ware (PD 1199) vessel. The discovery of numerous charred posts (PDs 1201, 1351, 2024–2032, 2034–2037, and 2048–2051) and burnt structural debris directly overlying the floor assemblage indicates that the structure had burned catastrophically.

Excavation Methods

The structure was identified in Trench 12 during Phase 1 testing, and the northern half was exposed during mechanical stripping of Stripping Unit 294. In Phase 2, two control units (Test Pits 1155 and 1212) were excavated within the structure. Test Pit 1155 was a 2-by-2-m unit placed in the south-central portion of the house near the entry juncture. It was excavated manually to the floor in two 10-cm and one 1–7-cm levels. The fill was screened through 1/4-inch mesh, and a flotation sample was collected from each level (PDs 1158, 1178, and 1202). A botanical sample (PD 1202) was collected from the charred structural debris encountered on the exposed floor surface.

Test Pit 1212 was a 2-by-1-m unit placed directly north of Test Pit 1155. It was excavated manually to the floor in two levels. The upper 15–18-cm level was not screened, but observed artifacts were collected. The lower 4–8-cm level was screened through 1/4-inch mesh, and a flotation sample (PD 1214) was collected.

The remaining fill in the house was removed in two units (Halves 1 and 2). Each unit was excavated to the floor in two stratigraphic levels. The upper 10–15 cm in each unit were not screened, but observed artifacts were collected. A flotation sample (PDs 1233 and 1258) was collected from the upper level in each unit. A modeled ceramic artifact (PD 1348) was point located in the upper fill of Half 2. The lower 5–10 cm of fill was screened through 1/4-inch mesh, and a flotation sample was collected from each unit (PDs 1234 and 1259). Likewise, botanical samples (PDs 1234 and 1259) were collected from the charred structural debris encountered on the floor in each unit.

The entryway was excavated in two 10-cm levels of a separate unit (Subfeature 2). The upper level was not screened, but observed artifacts were collected. The lower level was screened through 1/4-inch mesh. A sherd cluster (PD 1152) point located in the entry fill consisted of two reconstructible plain ware vessels (Vessel Nos. 32 and 48), one reconstructible Rincon Red-on-brown vessel (Vessel No. 52), and 19 plain and painted sherds. A composite flotation sample (PD 1363) was collected from beneath this cluster. A piece of ground stone (PD 1264) was point located in the entry fill, and a charred sill plank (PD 2067) was collected from the floor for macrobotanical analysis.

Exposure of the structure's floor revealed a number of subfeatures, including a hearth (Subfeature 1), an intramural pit, a floor groove, and 80 interior and perimeter postholes. The floor groove and individual postholes were excavated separately in single levels, and the fill from each was screened through 1/4-inch mesh. Macrobotanical samples (PDs 1384 and 2110) were collected from two of the postholes (Subfeatures 4 and 73, respectively), and a flotation sample (PD 2112) was collected from a third posthole (Subfeature 74). The entire fill of the hearth was collected for flotation (PD 2120), a pollen sample was scraped from the base (PD 2120), and an archaeomagnetic sample (SRI 2362) was collected from the plastered walls. A second archaeomagnetic sample (SRI 2361) was collected from the structure's plastered-floor surface. The intramural pit was excavated in a single 1/4-inch-screened level, a flotation sample (PD 2134) was collected from the fill, and a pollen sample (PD 2134) was scraped from its base.

After the subfeatures were excavated, a circular plug of argillic soil surrounding the Subfeature 1 hearth was identified. This area was manually and mechanically excavated in a single, unscreened level to reveal a shallow recessed hearth area. Fifteen postholes (Subfeatures 87–101) and

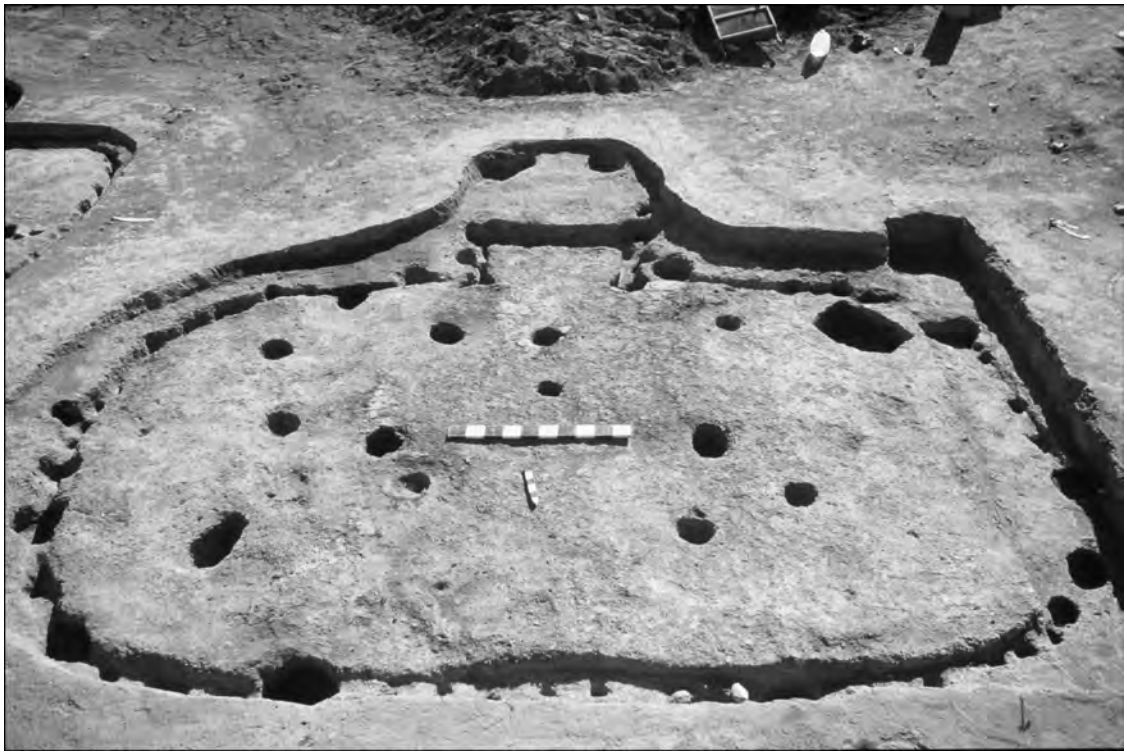

Figure B.1. Plan view of Feature 200, looking south.

a second hearth (Subfeature 86) were discovered within this area. Each of the postholes was partially excavated, and the fill was not screened. The entire fill of this hearth was collected as a flotation sample (PD 11,359), and an archaeomagnetic sample (SRI 2362) was collected from the plastered collar. A pollen sample (PD 11,357) was scraped from the floor surrounding this lower hearth.

Sixteen artifacts and artifact clusters (PDs 1198, 1199, 1244–1246, 1249, 1349, 1358, 2033, 2038, 2039, 2041, 2043, 2044, 2098, and 2100) were point located on the floor surface. Pollen samples (PDs 1200, 1247, 1248, 2040, and 2042) were recovered from beneath five of them (PDs 1199, 1245, 1198, 2039, and 2041, respectively). In addition, 20 charred posts and structural beams encountered on the floor surface were collected for macrobotanical analysis (PDs 1201, 1350, 1351, 2024–2032, 2034–2037, and 2048–2051). Two of these (PDs 2037 and 2050) were submitted for dendrochronological analysis.

Stratigraphy

Feature 200 originally was dug into a carbonate-laden argillic horizon, light reddish brown to pale pink in color, that contrasted sharply with the ash-laden fill of the house. The structure's upper fill consisted of a loose, dark grayish brown silty loam with fine sands and gravels. It contained a moderate to high amount of charcoal and oxidized sediments and a moderate amount of artifacts. The lower 10 cm of fill also consisted of a loose, dark grayish brown silty loam. It contained a high density of structural debris, including charred post segments, oxidized daub, dispersed charcoal fragments, and ash pockets. Overall artifact density decreased with depth.

Disturbances

Trench 12 removed the overburden along the west side of the structure and destroyed much of the floor groove (Subfeature 3) along the west wall of the structure. In addition, a modern trench truncated the house fill along the northern wall of the structure but did not extend to the floor. Sediments filling this trench consisted of loose, poorly sorted, medium to coarse sands and contained few prehistoric artifacts. Other disturbances to Feature 200 were limited to rodent, insect, and root tunneling.

Construction Details

Structure 200 was subrectangular in plan view and opened to the south (see Figure B.2). The house pit measured 6.20 m east–west by 3.84 m north–south and had a remaining pit depth of 22 cm. The structure had a floor area

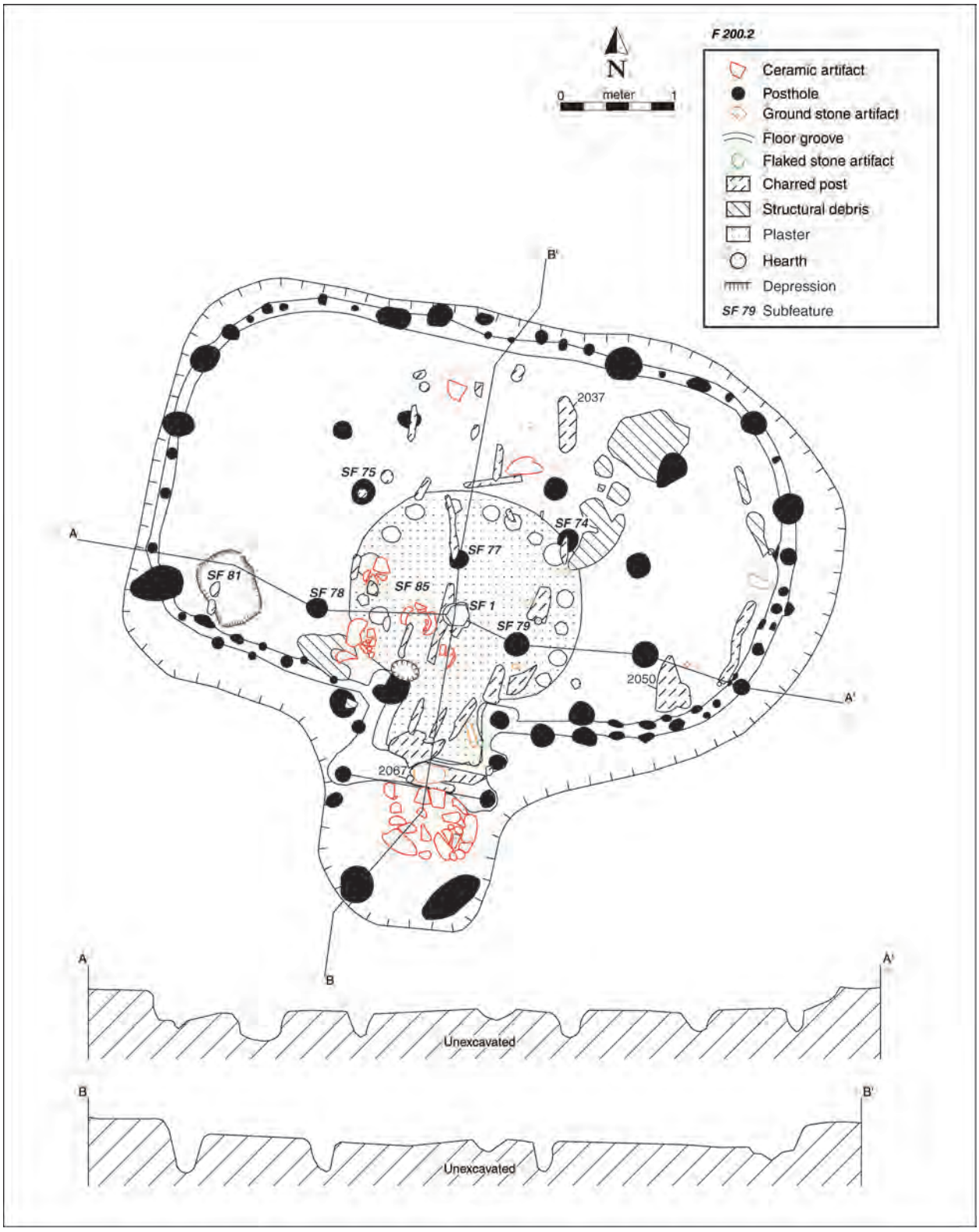

Figure B.2. Plan map of Feature 200 showing the location of floor features and point-located artifacts in the remodeled structure.

Table B.1. Feature 200 Point-Located Floor Artifacts

PD No.	Artifact Description
1198	One red ware sherd.
1199	Sherd cluster consisting of one plain ware partially reconstructible vessel (Vessel No. 53), one plain ware sherd, and one small, indeterminate sherd.
1244	Rincon Red-on-brown partially reconstructible vessel (Vessel No. 40).
1245	Six plain ware sherds.
1246	Polishing stone.
1249	Sherd cluster consisting of one Rincon Red-on-brown partially reconstructible vessel (Vessel No. 46), one indeterminate red-on-brown sherd, one red ware sherd, one plain ware sherd.
1349	Ceramic sherds.
1358	Sherd cluster consisting of one Dragoon indeterminate red-on-brown sherd; two Tucson Basin or Dragoon indeterminate red-on-brown sherds; one indeterminate red-on-brown sherd; seven plain ware sherds; four small, indeterminate sherds.
2033	Possible polishing stone.
2038	Possible polishing stone.
2039	Mano.
2041	Possible pestle.
2043	One piece of lithic debris.
2044	One piece of lithic debris.
2098	Pecking stone (Catalog No. 438).
2100	Indeterminate ground stone fragment.

Key: PD = provenience designation.

of 15.59 m^2 as delimited by the interior edge of the floor groove. The north and south walls were straight and parallel, whereas the east and west walls were rounded.

Walls and Roof

The house-pit walls consisted of the native calcic subsoil and sloped down to meet the outside edge of the perimeter floor groove (Subfeature 3). The U-shaped groove encircled the structure's floor and measured less than 15 cm in depth. It contained loose, grayish brown silty loam and few artifacts.

Sixty perimeter postholes (Subfeatures 5–59, 61–63, 70, and 84) were located within or along the edges of the floor groove (see Figure B.2). They ranged in size from 5 to 44 cm in diameter and 3 to 31 cm in depth (Table B.2). Two central-support postholes were located along the structure's midline to the east (Subfeature 74) and west (Subfeature 75) of the hearth. They measured 21 and 23 cm in diameter and were 62 and 59 cm deep, respectively. An additional 9 postholes (Subfeatures 71–73, 76–80, and 82) were scattered throughout the structure's interior. They ranged in size from 14 to 38 cm in diameter and were 6–24 cm deep (see Table B.2). Three of these (Subfeatures 77–79) were located to the north, west and east of the upper hearth, respectively, in a pattern found in other recessed hearth houses at the site. The rest of the interior postholes may have provided supplemental roof support.

Entry

A rectangular, ramped-and-stepped entryway (Subfeature 2) protruded from the center of the structure's south wall. The sides of this entryway were delimited by nine postholes (Subfeatures 4, 60, 64–69, and 83), including two located on the east (Subfeature 60) and west (Subfeature 4) side of the entry juncture. These postholes ranged in size from 10 to 35 cm in diameter and 17 to 44 cm in depth (see Table B.2). The structure's floor groove extended into the entry, and an entry sill was present. A large, well-preserved, partially burnt sill plank (PD 2067) rested in the sill and likely represented the edge of a low step (see Figure B.2). South of the sill, the entry floor ramped up and out of the structure.

Recessed Hearth Area

The recessed hearth area (Subfeature 85) was a circular pit in front of the entryway that measured about 2 m in diameter and extended 18 cm below the surrounding house floor (Figure B.3). This area had been part of the structure's original design, but it was filled with an argillic dusky red soil and covered with plaster during a remodeling episode (see Figure B.2). It was dug into the native calcic paleosol, and the walls and floor were unlined and unburnt. A plaster-lined hearth (Subfeature 86) situated in the center

Table B.2. Feature 200 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
4	1384	35	30	32	E
5	1386	12	10	15	P
6	1388	9	9	7	P
7	1390	12	11	20	P
8	1392	11	10	12	P
9	1394	8	8	9	P
10	1396	7	7	7	P
11	1398	10	11	13	P
12	1400	20	13	7	P
13	1402	11	11	8	P
14	1404	44	33	16	P
15	1406	11	9	10	P
16	1408	11	10	16	P
17	1410	12	10	20	P
18	1412	27	22	12	P
19	1414	25	22	14	P
20	1416	16	15	12	P
21	1418	10	9	12	P
22	1420	10	9	5	P
23	1422	8	8	3	P
24	1424	11	7	5	P
25	1426	7	8	4	P
26	1428	23	17	29	P
27	1430	22	20	31	P
28	1432	7	7	7	P
29	1434	7	7	5	P
30	1436	12	9	14	P
31	1438	11	8	9	P
32	1440	13	9	10	P
33	1442	30	34	23	P
34	1444	9	9	15	P
35	1446	20	12	13	P
36	1448	9	9	10	P
37	1450	24	23	17	P
38	1452	9	9	10	P
39	1454	30	24	17	P
40	1456	13	10	10	P
41	1458	15	13	12	P
42	1460	9	9	12	P
43	1462	12	13	11	P
44	1464	9	10	5	P
45	1466	8	8	14	P
46	1468	7	9	12	P
47	1470	9	10	12	P
48	1472	13	12	12	P
49	1474	7	7	12	P
50	1476	7	7	6	P

continued on next page

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
51	1478	7	6	9	P
52	1480	9	10	11	P
53	1482	13	14	8	P
54	1484	10	9	8	P
55	1486	10	9	8	P
56	1488	11	7	5	P
57	1490	7	5	5	P
58	1492	18	15	16	P
59	1494	21	21	26	P
60	1496	17	14	30	E
61	1498	5	5	10	P
62	1500	6	6	10	P
63	2046	21	15	17	P
64	2053	20	17	20	E
65	2055	16	12	25	E
66	2057	21	23	36	E
67	2059	23	34	44	E
68	2061	13	13	25	E
69	2063	22	10	28	E
70	2065	30	22	25	P
71	2106	38	24	23	I
72	2108	22	22	12	I
73	2110	22	22	22	I
74	2112	22	21	62	C
75	2114	26	20	59	C
76	2124	18	19	20	I
77	2126	15	14	23	I
78	2128	17	17	21	I
79	2130	23	20	24	I
80	2132	17	17	20	I
82	2136	19	18	6	I
83	2139	13	14	17	E
84	2152	15	11	10	P
87	11,361	16	16	10	R
88	11,363	18	16	12	R
89	11,365	14	14	10	R
90	11,367	16	16	10	R
91	11,369	12	12	10	R
92	11,371	16	16	10	R
93	11,373	20	18	14	R
94	11,375	18	18	16	R
95	11,377	14	14	10	R
96	11,379	16	16	10	R
97	11,381	16	16	10	R
98	11,383	15	15	15	R
99	11,385	14	14	10	R
100	11,387	24	24	10	R
101	11,389	24	16	15	R

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation; R = recessed-hearth-area posthole.

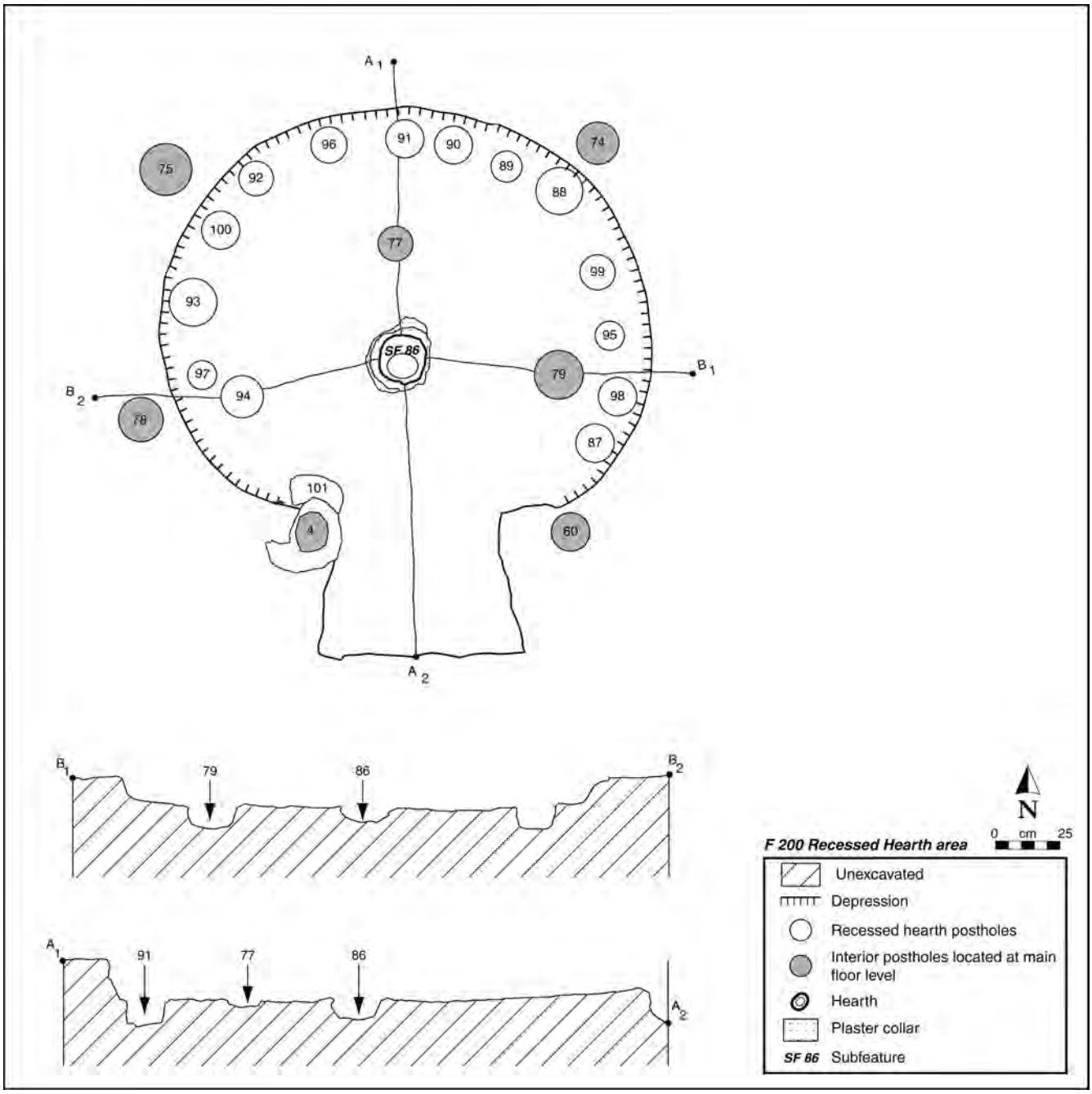

Figure B.3. Plan map of the recessed hearth area (Subfeature 85) and associated subfeatures in the original structure, Feature 200.

of the depression was the structure's original hearth (see Figure B.3). Fifteen regularly spaced postholes lined the perimeter of the area on the west, east, and north sides (Subfeatures 87–101). These measured 12–24 cm in diameter and were 10–16 cm deep (see Table B.2).

Floor

For the most part, the structure's floor surface consisted of the native, pinkish gray calcic soil. A 2-m area surrounding the later hearth (Subfeature 1) consisted of a dusky red argillic soil that contrasted sharply with the rest of the floor (see Figure B.2). A 2–5-cm-thick patchily preserved layer of caliche plaster encircled the hearth and covered portions of the argillic soil in the south-central portion of the structure. The plaster was applied directly to the underlying soil, and it appeared to be oxidized in places.

Floor Features

Hearths

Two hearths were encountered within this structure. The later hearth (Subfeature 1) was shallow, basin-shaped, and plaster-lined, and it was located in the south-central portion of the structure's main floor surface (see Figure B.2). It measured approximately 24 cm in diameter and was 6 cm deep. It was lined with dark grayish brown caliche plaster and had been replastered at least once. The hearth pit was filled with ashy sands and silts.

The earlier basin-shaped hearth (Subfeature 86) was discovered within the recessed hearth area (Subfeature 85) directly beneath the later hearth (see Figure B.3). It measured 16 cm in diameter and was 12 cm deep. The hearth was lined with a 2–3-cm-thick layer of caliche plaster, and a plastered apron protruded 5–15 cm beyond the lip. The hearth basin was filled with grayish brown, ash-stained sands and silts.

Pits

An intramural pit (Subfeature 81) was exposed in the southwestern corner of the structure (see Figure B.2). This pit was subrectangular in plan view with almost vertical walls and a slightly concave base. It measured 56 cm long, 40 cm wide, and 24 cm deep. The pit walls were unlined, and there was no evidence of burning. The fill consisted of fine sandy loam with gravels and artifacts.

Artifacts

A number of artifacts and artifact scatters were recovered from the floor of Feature 200 (see Table B.1). Artifacts included 1 partially reconstructible Rincon Red-on-brown vessel (PD 1244), 6 ceramic scatters (PDs 1198, 1199, 1249, 1349, and 1358), 1 pecking stone (PD 2098), 2 pieces of lithic debris (PDs 2043 and 2044), 3 possible polishing stones (PDs 1246, 2033, and 2038), and 3 ground stone fragments (PDs 2039, 2041, and 2100). A sherd cluster (PD 1152) point located in the structural debris resting on the entry floor consisted of 2 partially reconstructible plain ware vessels (Vessel Nos. 32 and 48), 1 partially reconstructible Rincon Red-on-brown vessel (Vessel No. 52), and 19 plain and painted sherds. In addition, 1 indeterminate red-on-brown sherd and 1 small plain ware sherd were recovered from the general-floor provenience (PD 2066).

Evidence for Remodeling

Originally, Feature 200 possessed a recessed hearth area (Subfeature 85) that contained 15 postholes (Subfeatures 87–101) and 1 plaster-lined hearth (Subfeature 86). At some point during the occupation of this structure, the recessed area was filled in with dusky red argillic soil and capped with floor plaster. A new plaster-lined hearth (Subfeature 1) was constructed directly above the earlier hearth, and 2 interior postholes (Subfeatures 77 and 79) were excavated into the soil filling the recessed area.

Abandonment Processes

Numerous charred post segments, oxidized masses of daub, and the oxidized floor plaster indicate that the structure had burned catastrophically. Several ceramic vessels rested on the floor at the time the house burned and were broken by the collapsing roof and walls. A shallow depression likely existed after the structure collapsed. Subsequently, alluvial and airborne sediments filled this depression. The numerous artifacts encountered in the upper 10 cm of the fill suggest that later occupants of Locus A deposited trash in this depression.

Associated, Intrusive, or Superimposed Features

No other features were associated directly with Feature 200.

Chronology

Archaeomagnetic samples were collected from the upper (Subfeature 1) and lower (Subfeature 86) hearths, as well as from the plastered floor. The sample collected from the upper hearth (SRI 2361) returned date range options of A.D. 935–1040 and A.D. 1160–1365. The sample from the lower hearth (SRI 2362) returned similar date range options of A.D. 935–1040 and A.D. 1160–1315. The sample collected from the oxidized floor plaster (SRI 2362) returned the date range of A.D. 935–1240. The composite of the data from the two hearths yielded the date range options of A.D. 935–1040 and A.D. 1185–1315.

Two partially reconstructible Rincon Red-on-brown vessels were recovered from the floor surface. These vessels have a production date range of A.D. 950–1150, which agrees with the earlier archaeomagnetic date range option from each hearth and from the composite data. Therefore, the best age estimate for the abandonment of Feature 200 is A.D. 935–1040.

Locus A, Feature 207

Center of feature UTMs: N 3538704.83, E 541919.15
Architectural type: house-in-a-pit
Date range: A.D. 935–1150
House dimensions: 5.08 by 3.34 m; pit depth 0.29 m; upper floor area 11.90 m^2
Entryway dimensions: unknown
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 1 floor groove, 2 central-support postholes, and 24 perimeter postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PDs 1235 and 1366
Related features: none

Feature 207 was a house-in-a-pit that opened to the north (Figure B.4). It had two different floor levels, indicating that it had been remodeled at some point during its use life. The floor of the remodeled house was smaller than that of the original house and had been excavated into the earlier floor (Figure B.5). Floor features associated with the remodeled structure included 1 hearth (Subfeature 1), 2 central-support postholes (Subfeatures 3 and 4), 2 entryway postholes (Subfeatures 5 and 19), and 1 perimeter posthole (Subfeature 18). Additional floor features included 1 floor groove (Subfeature 2) and 21 perimeter postholes (Subfeatures 8–17, 20–30) that were associated with the original structure and most likely were reused with the remodeled structure. The original and remodeled structure appeared to use the same north-facing entryway (Subfeature 6), which was truncated by a modern road trench. The lack of a floor assemblage indicates that the structure was cleaned out before abandonment, and no evidence of burning was noted.

Excavation Methods

Structure 207 was initially exposed in Trench 11 and Stripping Unit 283 during Phase 1 testing. It was exposed in plan view during Phase 2 mechanical stripping of Stripping Unit 1137. A 2-by-2-m control unit (Test Pit 1224) was placed in the south-central portion of the structure. It was manually excavated to the floor in two 1/4-inch-screened levels. The upper level was 10–19 cm deep and the lower level reached the floor within 5–9 cm. A flotation sample was collected from each level (PDs 1127 and 1235).

The remaining fill in the house was removed in two units (Halves 1 and 2). Each unit was manually excavated to the floor in two stratigraphic levels. The upper level in each unit was not screened, but observed artifacts were collected. The lower level in each unit was screened through 1/4-inch mesh. A flotation sample was collected from each level in Half 1 (PDs 1253 and 1254) and Half 2 (PDs 1361 and 1362).

A 1.4-by-1.15-m unit (Subfeature 6) was excavated to locate and define the entryway. The upper 15–20 cm of this unit was removed in a single, unscreened level. Most of this level intersected the fill of a modern trench that cut along the north edge of the structure. Only a small sliver of the entryway remained along the south edge of the unit. The second level was restricted to the remaining entryway fill, and it was only 3–6 cm deep. The fill from this lower level was screened though 1/4-inch mesh.

Once the floor surface was cleared off it became apparent that two different floor levels were present within the structure. The upper floor was the earlier of the two, and it was present only along the edges of the house pit. The lower and later floor had been excavated into the center of the house and extended to within 20–80 cm of the house-pit walls. Floor features were identified in each floor, including a floor groove and 21 postholes in the earlier floor and 1 hearth and 5 postholes in the later floor (see Figure B.5). The floor groove and individual postholes were excavated separately in single levels, and the fill was screened through 1/4-inch mesh. Flotation samples (PDs 1370 and 1372) were collected from the two central-support postholes (Subfeatures 3 and 4, respectively). The entire fill of the hearth was collected as a flotation sample (PD 1366), and an archaeomagnetic sample (SRI 2366) was collected. Finally, a rodent burrow was excavated as a possible floor pit (Subfeature 7), and the fill was screened through 1/4-inch mesh. Two cobbles (PDs 2101 and 2103) located along the eastern edge of the house pit were point located but not collected (see Figure B.5). A pollen sample was collected from beneath each of them (PDs 2102 and 2104, respectively).

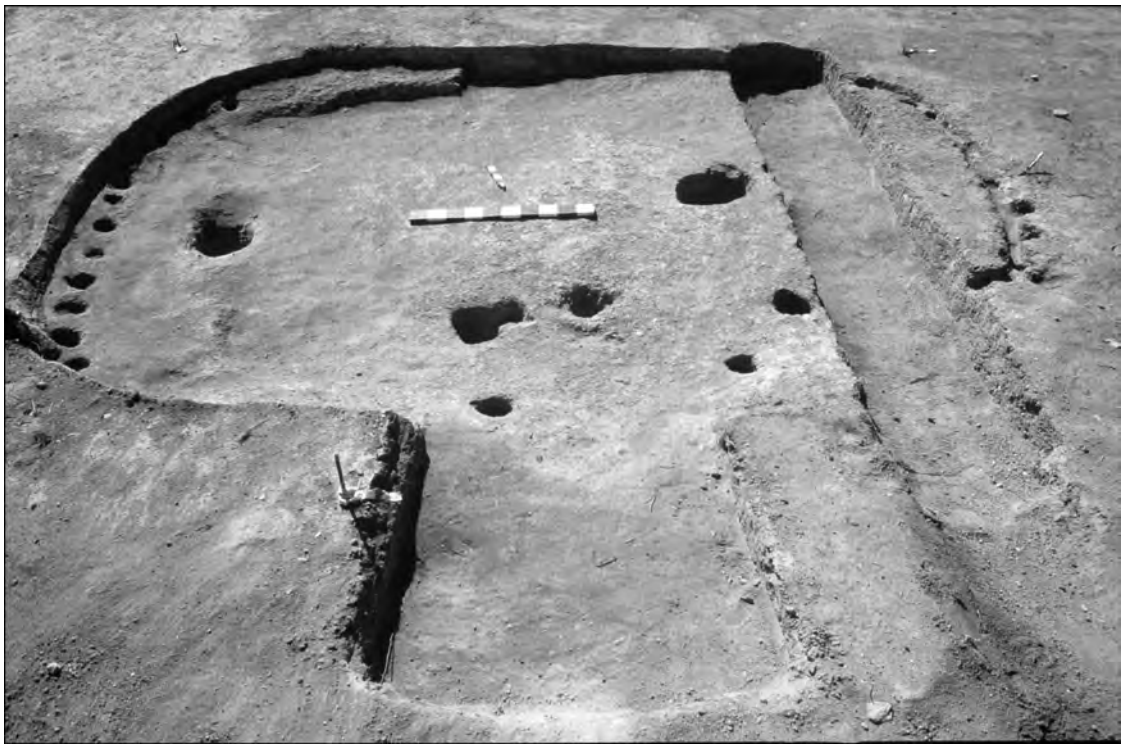

Figure B.4. Plan view of Feature 207, looking south.

Stratigraphy

Feature 207 originally was dug into a carbonate-laden argillic horizon, light reddish brown to pale pink in color, that contrasted sharply with the ash-laden fill of the house. Two stratigraphic deposits were identified within the house pit. The upper deposit consisted of weakly indurated brownish gray silts and sands with a moderate density of artifacts. Charcoal flecks and small ash pockets were common throughout this upper deposit. The lower 5–10 cm of sediment covering the structure floor consisted of loose, yellowish brown silts and sands with few artifacts.

Disturbances

A modern trench was cut along the north edge of the house, removing most of the entryway. This trench apparently extended below the entryway floor, and no entryway postholes could be identified. Additional disturbances included rodent tunnels, small roots, and insect castes.

Construction Details

The structure was subrectangular to ovate in plan view and opened to the north (see Figure B.5). The house pit measured 5.08 m east–west by 3.34 m north–south and was 29 cm deep. The upper, earlier floor was approximately 11.90 m^2, as delimited by the postholes encircling the structure. The north and south walls were straight and parallel, whereas the east and west walls were rounded.

Walls and Roof

The pit walls consisted of the native calcic subsoil. A shallow (less than 15 cm deep) floor groove was located on the east side of the structure but was missing in other areas (see Figure B.5). Ten postholes (Subfeatures 8–17) measuring between 8 and 16 cm in diameter and 7–13 cm deep were associated with the floor groove (Table B.3). Of these, 7 (Subfeatures 8–13 and 17) were placed within the groove and 3 (Subfeatures 14–16) were located on the exterior edge. An additional 11 postholes (Subfeatures 20–30), measuring 8–15 cm in diameter and 2–13 cm deep, were found at the periphery of the west side of the structure, but there was no associated floor groove.

Two central-support postholes, one located on the east side (Subfeature 3) and one on the west side (Subfeature 4) of the hearth, were exposed along the structure's midline. Subfeature 3 was 33 cm in diameter and 48 cm deep, and Subfeature 4 was approximately 36 cm in diameter and 46 cm deep. Subfeature 4 was large and ovate in plan view and conical in profile, and

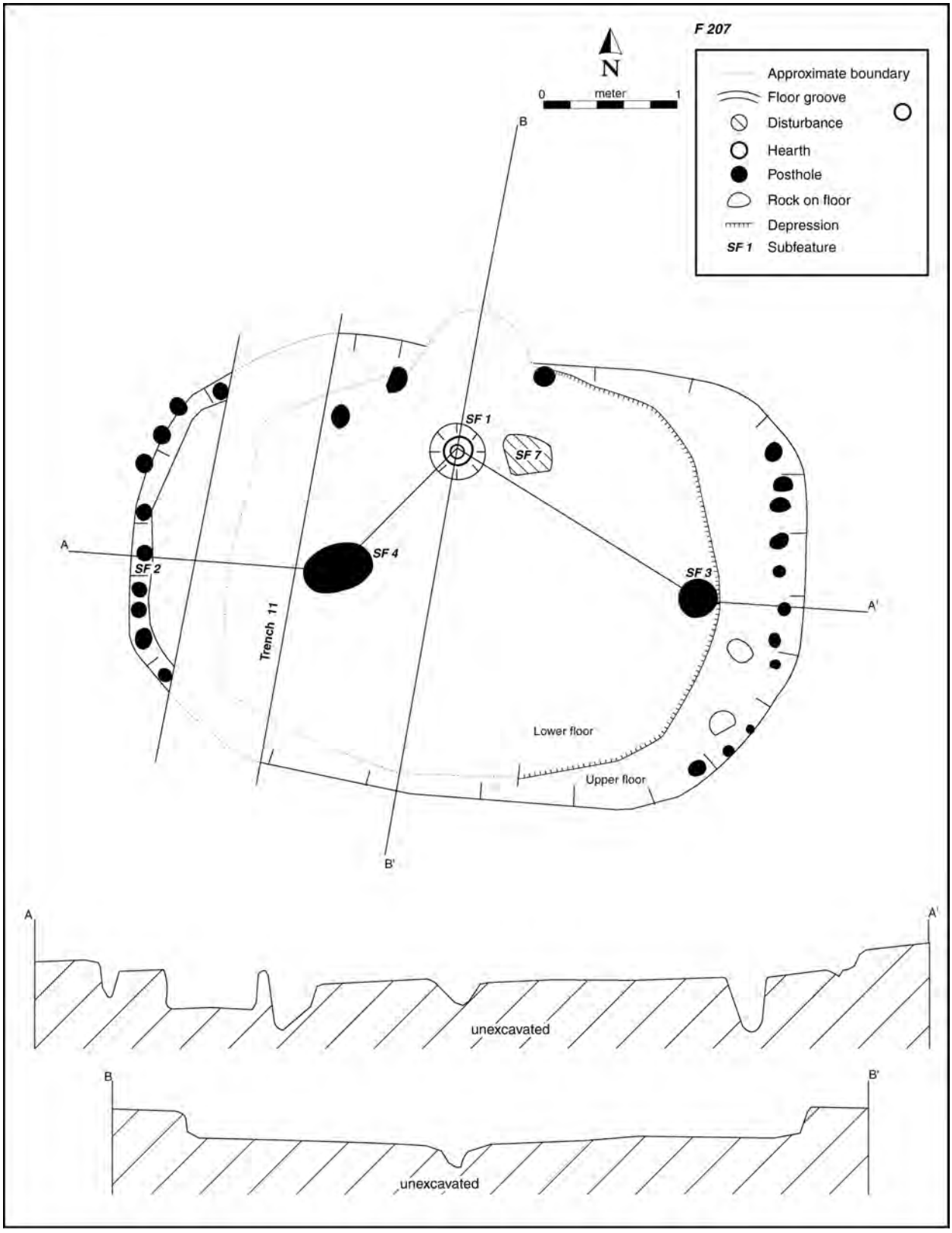

Figure B.5. Plan map of Feature 207 showing the location of floor features.

Table B.3. Feature 207 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
3	1370	34	33	48	C
4	1372	40	32	46	C
5	1374	15	15	14	E
8	2002	15	12	13	P
9	2004	15	16	12	P
10	2006	11	12	10	P
11	2008	10	10	8	P
12	2010	13	14	8	P
13	2012	8	8	8	P
14	2014	11	11	7	P
15	2016	11	11	9	P
16	2018	8	9	10	P
17	2020	11	10	12	P
18	2069	17	19	27	P
19	2071	16	13	24	E
20	2073	10	12	7	P
21	2075	13	14	7	P
22	2077	9	15	3	P
23	2079	14	12	4	P
24	2081	10	8	2	P
25	2083	10	11	6	P
26	2085	12	11	2	P
27	2087	8	8	4	P
28	2089	9	8	6	P
29	2091	10	10	5	P
30	2093	11	11	13	P

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation; R = recessed-hearth-area posthole.

its walls were uniformly oxidized and fire-hardened. Small stones were encountered near the base of the posthole that may have been used to support the post. No evidence of burning was encountered elsewhere in the structure, and the fill of the posthole consisted of a fine sandy loam with some charcoal flecks, indicating that the oxidation occurred prior to abandonment. It is possible that the posthole was intentionally fire-hardened at some point. It is also possible that this subfeature originally functioned as an intramural pit, prior to the remodeling episode, or that it was remodeled from a preexisting intermural pit.

An additional three postholes were found in the structure's interior (Subfeatures 5, 18, and 19). They measured 13–19 cm in diameter and were 14–27 cm deep (see Table B.3). Two of these (Subfeatures 5 and 19) may have flanked the east and west sides of the entryway. It is likely that all three were associated with the remodeled structure.

Entry

Although a modern trench had removed most of the entryway (Subfeature 6), excavations indicated that the subfeature protruded from the center of the north wall (see Figure B.5). Nothing more could be discerned about the nature of this subfeature.

Floor

Feature 207 contained two separate floors, both of which consisted of the compacted native calcic subsoil. The upper and earlier floor existed only along the inner edge of the walls. The lower and later floor had been cut through this level to form a smaller surface in the center of the house (see Figure B.5). The later floor was located approximately 20 cm below the original floor.

Floor Features

Hearths

A shallow, basin-shaped, plaster-lined hearth (Subfeature 1) was exposed in the north-central portion of the floor (see Figure B.5). It measured 31 cm in diameter and 20 cm in depth, and it was filled with ashy sands and silts. The hearth basin was lined with a dark grayish brown caliche plaster. Two separate layers of plaster were observed, indicating that the base of the hearth had been replastered at least once.

Artifacts

No point-located artifacts were recovered from either floor surface in Feature 207. However, 1 flake, 2 Rincon Red-on-brown sherds, 10 plain ware sherds, and 1 possible figurine fragment were recovered from the general-floor proveniences (PDs 1243 and 1376).

Evidence for Remodeling

The presence of two different floor levels within the Feature 207 house pit suggests that the structure had been remodeled at some point during its use life. The later floor of the remodeled house was smaller than that of the original structure, and it had been excavated into the original floor surface. Two central-support postholes and three perimeter postholes were located in this floor surface, although it is likely that they were constructed as part of the original structure. The western central-support posthole (Subfeature 4) may have functioned originally as a pit that was later remodeled for use as a posthole. Only one hearth was located within this structure, suggesting that the original hearth was removed during the remodeling episode.

Abandonment Processes

The absence of burnt structural debris in the house fill and the lack of a floor assemblage suggest that the structure had a simple, planned abandonment. Subsequently, the structure collapsed or was scavenged for building materials, and the resulting depression filled with colluvial sediment and domestic refuse. The higher artifact density in the upper fill suggests that later inhabitants of Locus A intermittently deposited trash into the collapsed structure.

Associated, Intrusive, or Superimposed Features

No other features were associated directly with Feature 207.

Chronology

An archaeomagnetic sample (SRI 2366) was collected from the structure's hearth (Subfeature 1), and it returned a date range of A.D. 935–1390. Two Rincon Red-on-brown sherds (A.D. 950–1150) were recovered from the general-floor provenience, but it is probable that these sherds represent postoccupational trash deposits. Finally, the architectural style suggests that this structure was occupied and abandoned during the Middle Formative period (ca. A.D. 750–1150). Therefore, it is likely that this structure was abandoned sometime between A.D. 935 and 1150.

Locus A, Feature 290

Center of feature UTMs: N 3538711.53, E 541892.41
Architectural type: house-in-a-pit
Date range: A.D. 1010–1150
House dimensions: 4.62 by 3.73 m; pit depth 0.13 m; floor area 12.08 m^2
Entryway dimensions: 1.54 by 1.40 m; floor area 0.66 m^2
Shape: subrectangular to oval
Orientation: south
Internal features: 1 hearth, 1 floor groove, 2 central-support postholes, and 44 perimeter postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PDs 1164 and 1265
Related features: none

Feature 290 was a subrectangular-to-oval-shaped house-in-a-pit (Figure B.6). The structure had a bulbous entryway (Subfeature 2) that opened to the south and a number of floor features, including 1 hearth (Subfeature 1), 1 floor groove (Subfeature 3), and 46 postholes (Subfeatures 4–49). The floor of the house was plastered and oxidized. The presence of burnt structural debris in the house fill and an oxidized floor indicates that the structure had burned during or after abandonment. A pecking stone (PD 1162), a partially reconstructible plain ware vessel (PD 1159), and a Rincon Red-on-brown sherd (PD 1160) were recovered from the structure's floor surface (Table B.4).

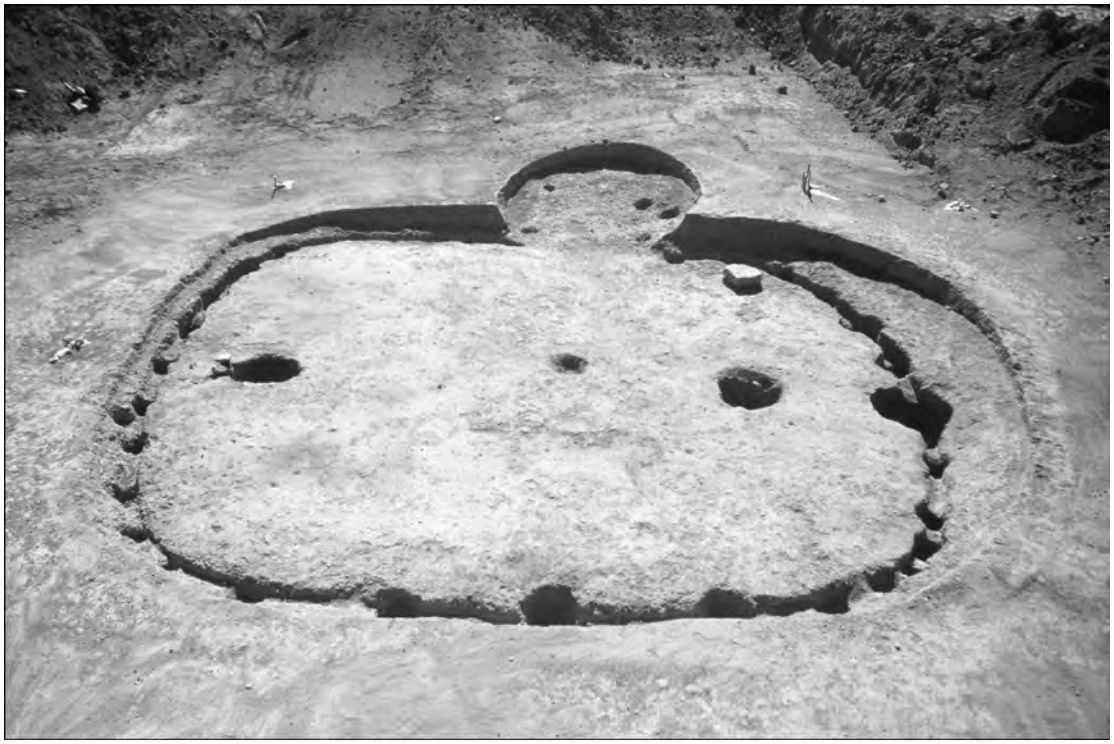

Figure B.6. Plan view of Feature 290, looking south.

Table B.4. Feature 290 Point-Located Floor Artifacts

PD No.	Artifact Description
1159	One partially reconstructible plain ware vessel (Vessel No. 43).
1160	One Rincon Red-on-brown sherd.
1162	Pecking stone (Catalog No. 439).

Excavation Methods

Feature 290 was discovered during Phase 1 mechanical stripping of Stripping Unit 1151 and was exposed in its entirety during Phase 2. A 2-by-2-m control unit (Test Pit 1153) was placed along the northern wall of the structure. The unit was manually excavated to the floor in a single 5–15-cm level. The fill was screened through 1/4-inch mesh, and a flotation sample was collected (PD 1153).

A 2-by-1-m test pit (Test Pit 1176) was placed to the south of Test Pit 1153. It was manually excavated to the floor in two 1/4-inch-screened levels. The upper level was 5–14 cm thick, and the lower level was 3–5 cm thick. A flotation sample was collected from each (PDs 1177 and 1183, respectively).

The remaining fill in the structure was removed in two units (Halves 1 and 2), each of which was manually excavated to the floor in two levels. The upper level in each unit was 1–14 cm thick; the fill was not screened, but observed artifacts were collected. A flotation sample (PD 1207) was collected from the upper level of Half 2, and a partially reconstructible plain ware vessel (PD 1215, Vessel No. 41) was point located in the fill of this unit. The lower level in each unit was 1–13 cm thick, and the fill was screened through 1/4-inch mesh. A flotation sample was collected from the lower level in each unit (PDs 1193 and 1219, respectively). A third flotation sample (PD 1220) was collected from the fill immediately covering the floor surface in both units. The entryway was excavated as a separate unit (Subfeature 2). The fill was manually excavated to the floor in a single 13–23-cm, 1/4-inch-screened level.

The exposure of the floor revealed a number of subfeatures, including 1 hearth, 1 floor groove, and 46 postholes. The floor groove and postholes were excavated individually. The fill was not screened, but observed artifacts were collected. Flotation samples (PDs 1238 and 1260) were collected from 2 of the postholes

(Subfeatures 4 and 5). The entire fill from the hearth was collected as a flotation sample (PD 1265), and an archaeomagnetic sample (SRI 2364) was collected. One pecking stone (PD 1162), 1 partially reconstructible plain ware vessel (PD 1159), and 1 Rincon Red-on-brown sherd (PD 1160) were point located on the structure's floor surface (see Table B.4). A large rock sitting on the structure's floor was point located (PD 1163) and mapped but not collected, and 1 pollen sample (PD 1164) was recovered from beneath it.

Stratigraphy

Feature 290 originally was dug into a carbonate-laden argillic horizon, light reddish brown to pale pink in color, that contrasted sharply with the ash-laden fill of the house. Two strata were identified within the house pit (Figure B.7). The upper stratum was 1–14 cm thick, and it consisted of loose, well-sorted fine sands and coarse silts. It contained a moderate amount of ash and charcoal flecks and a moderate to high density of artifacts. The lower stratum was 1–7 cm thick. It was similar to the upper stratum but contained a greater amount of burnt structural debris, including charcoal, daub, and ash. Overall, artifact density decreased noticeably with depth.

Disturbances

The structure's walls and floor were fairly well preserved. However, the floor and floor features did exhibit a moderate degree of root, rodent, and insect disturbance.

Construction Details

Feature 290 was subrectangular to oval shaped and opened to the south. The house pit measured 4.62 m east–west by 3.73 m north–south and had a remaining depth of 13 cm. The floor, as defined by the floor groove, measured 12.08 m^2.

Walls and Roof

The remnant pit walls were 13 cm high and sloped down to meet the outer edge of the perimeter floor groove (Subfeature 3). The floor groove was 5–10 cm wide and 5 cm deep, and it encircled the structure's floor.

Thirty-eight perimeter postholes (Subfeatures 6–42 and 49) were located within or on the exterior edge of the floor groove (Figure B.8). They ranged in size from 6 to 30 cm in diameter and 7 to 26 cm deep (Table B.5). Two central-support postholes, located to the east (Subfeature 4) and west (Subfeature 5) of the hearth, were located along the structure's midline. They measured 33–35 cm in diameter and 33–35 cm deep.

Entry

A bulbous, jacal entryway (Subfeature 2) protruded from the center of the south wall. It was 1.54 m long and 1.40 m wide, and the floor ramped up slightly to the south. Six postholes (Subfeatures 43–48) were located along the edges of the entry pit and most likely formed the entry walls. They ranged in size from 12 to 18 cm in diameter and 10 to 17 cm in depth (see Table B.5).

Floor

The structure's floor consisted of a poorly preserved layer of caliche plaster applied directly to the native calcic subsoil. Both the preserved plaster and the exposed subsoil were oxidized. The floor surface, as defined by the perimeter floor groove, had an area of 12.08 m^2.

Floor Features

Hearths

A small, plastered, basin-shaped hearth (Subfeature 1) was located in the center of the structure, approximately 1.2 m north of the entry (see Figure B.8). It was 22 cm in diameter and 7 cm deep, and it was filled with ash-laden silts and sands.

Artifacts

Three artifacts were point located on the structure's floor (see Table B.4), including a partially reconstructible plain ware vessel (PD 1159), a Rincon Red-on-brown sherd (PD 1160), and a pecking stone (PD 1162). In addition, four rocks were found on the house floor (see Figure B.8), none of which was collected. One of these rocks was located immediately to the west of the west-central-support posthole (Subfeature 5) and may have acted as a shim for the post. Finally, one indeterminate Tucson Basin red-on-brown sherd, one plain ware sherd, and three small, indeterminate sherds were recovered from the general-floor provenience (PD 1220).

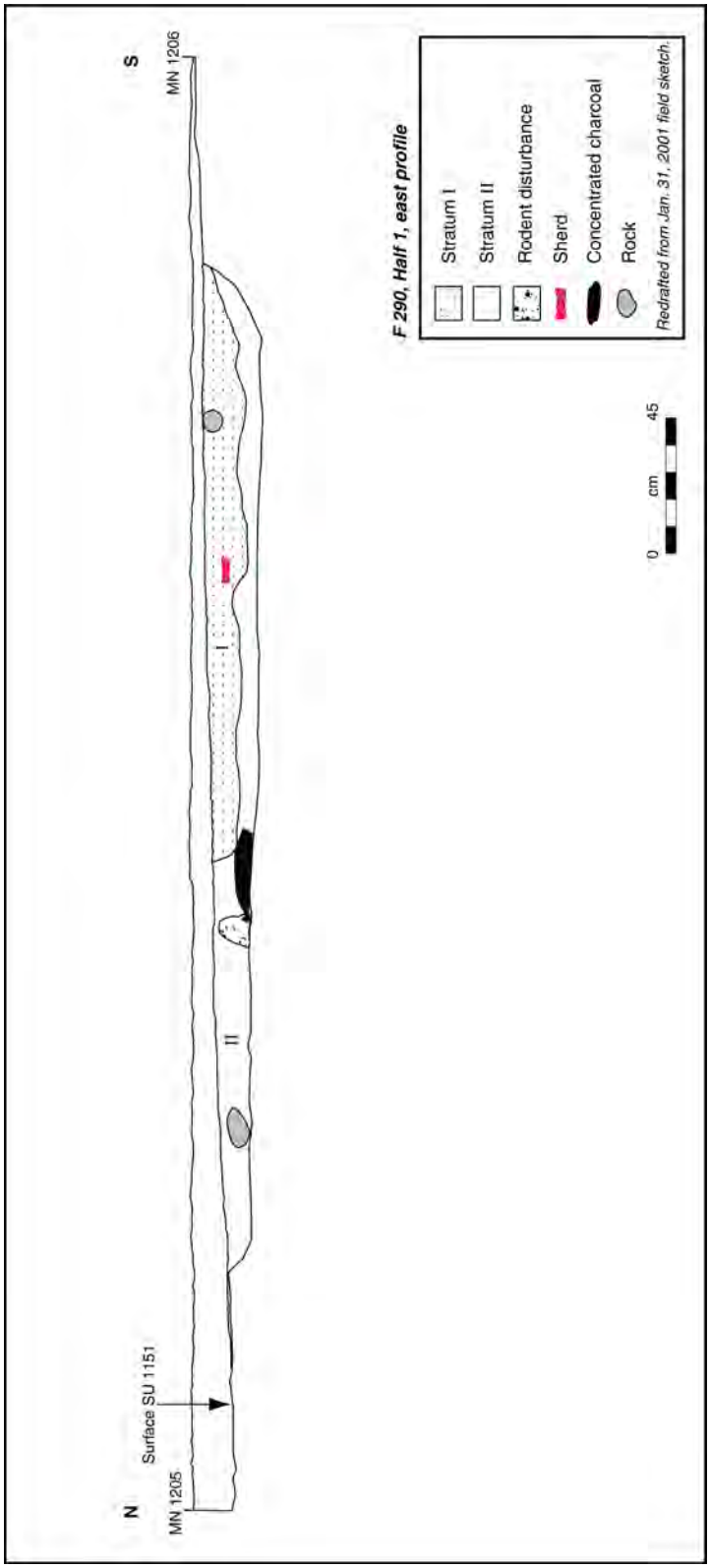

Figure B.7. Stratigraphic profile of the fill in Feature 290.

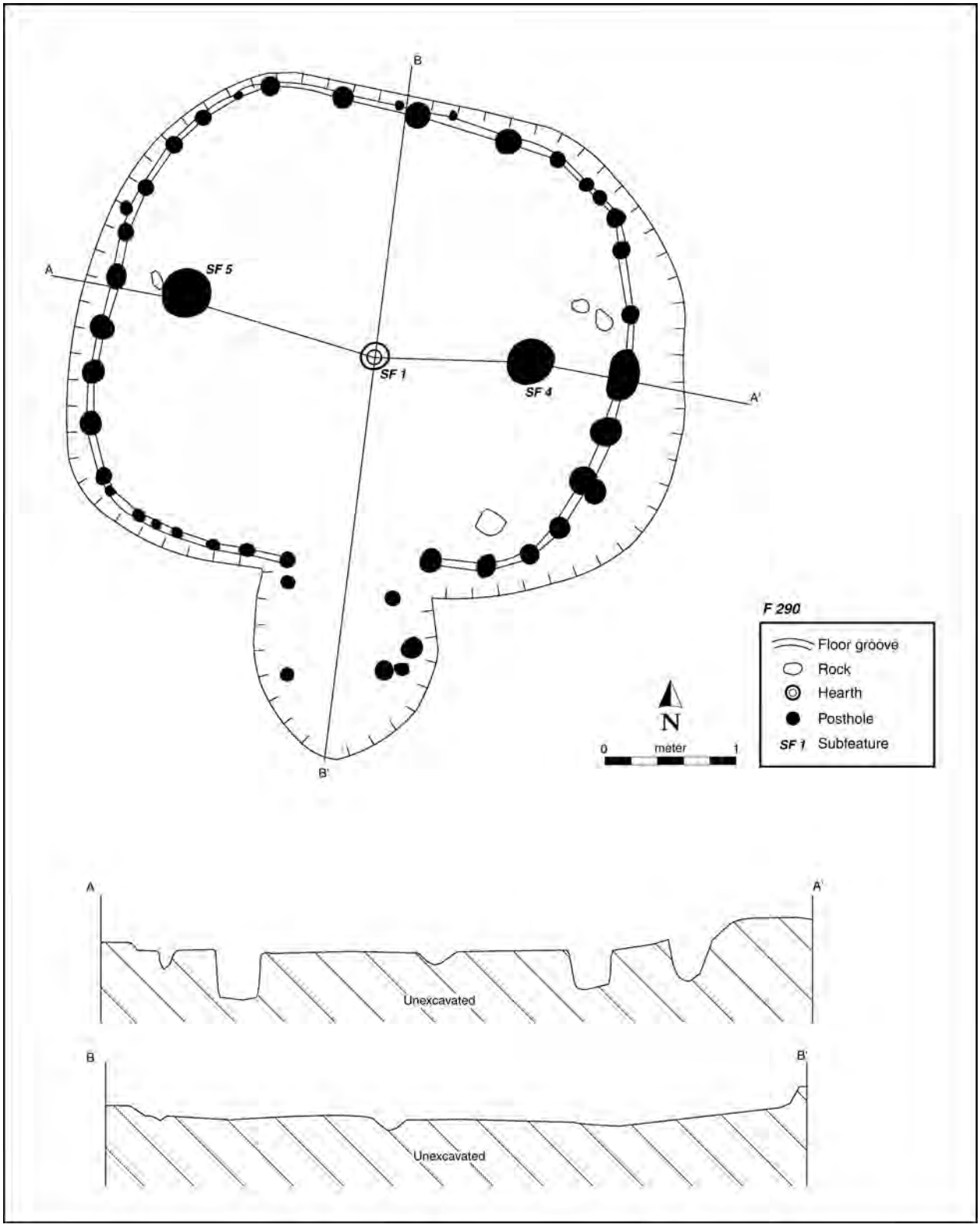

Figure B.8. Plan map of Feature 290 showing the location of floor features.

Table B.5. Feature 290 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
4	1238	34	33	33	C
5	1260	35	35	35	C
6	1267	15	10	15	P
7	1269	10	11	11	P
8	1271	8	8	12	P
9	1273	15	11	14	P
10	1275	18	18	20	P
11	1277	8	10	12	P
12	1279	24	20	25	P
13	1281	9	9	7	P
14	1283	20	20	21	P
15	1285	15	13	15	P
16	1287	10	11	14	P
17	1289	14	13	15	P
18	1290	14	13	16	P
19	1293	14	14	19	P
20	1295	37	30	26	P
21	1297	22	15	17	P
22	1299	13	18	21	P
23	1301	20	30	17	P
24	1303	14	13	20	P
25	1305	14	14	18	P
26	1307	13	15	18	P
27	1309	16	17	13	P
28	1311	15	13	12	P
29	1313	12	13	7	P
30	1315	12	12	7	P
31	1317	6	6	10	P
32	1319	7	7	12	P
33	1321	8	9	12	P
34	1323	7	9	11	P
35	1325	11	14	20	P
36	1327	15	15	15	P
37	1329	18	15	20	P
38	1331	19	17	20	P
39	1333	19	13	18	P
40	1335	12	13	17	P
41	1337	10	7	7	P
42	1339	11	11	16	P
43	1341	12	18	12	E
44	1343	15	12	13	E
45	1345	11	11	13	E
46	1347	16	12	10	E
47	1353	17	16	17	E
48	1355	15	12	12	E
49	1357	11	8	10	P

Key: C = central-support posthole; E = entryway posthole; P = perimeter posthole; PD = provenience designation.

Evidence for Remodeling

There was no evidence that Feature 290 was remodeled.

Abandonment Processes

The presence of burnt structural debris and an oxidized floor indicates that the house had burned. A shallow depression likely existed after the structure collapsed. Subsequently, alluvial and airborne sediments filled this depression. The numerous artifacts encountered in the upper stratum suggest that later occupants of Locus A deposited trash in this depression.

Associated, Intrusive, or Superimposed Features

No other features were associated directly with Feature 290.

Chronology

One archaeomagnetic sample (SRI 2364) was collected from the structure's hearth, and it returned a date range of A.D. 1010–1290. A Rincon Red-on-brown ceramic sherd (A.D. 950–1150) was recovered from the floor surface that may or may not be related to the abandonment of this structure. Finally, the architectural style suggests that this structure was occupied sometime during the Middle Formative period (A.D. 750–1150). Therefore, it is likely that Feature 290 was abandoned sometime between A.D. 1010 and 1150.

Locus A, Feature 2157

Center of feature UTMs: N 3538699.20, E 541905.36
Architectural type: house-in-a-pit
Date range: A.D. 935–1040
House dimensions: 4.96 by 3.54 m; pit depth 0.16 m; floor area 10.77 m^2
Entryway dimensions: unknown
Shape: subrectangular
Orientation: north?
Internal features: 1 hearth, 1 floor groove, 2 central-support postholes, and 20 perimeter postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PD 6384
Related features: intruded by Feature 2173

Feature 2157 was a subrectangular house-in-a-pit that most likely opened to the north (Figure B.9). No entryway was found; however, it most likely was located on the structure's north wall, which had been removed by a modern ADOT trench (Figure B.10). The structure had a poorly preserved plastered floor and contained a number of floor features, including 1 informal hearth (Subfeature 1), 1 floor groove (Subfeature 2), 2 central-support postholes (Subfeatures 3 and 4), and 20 perimeter postholes (Subfeatures 5–24). A cluster of tabular schist fragments (PD 6444) was found on the floor surface. The discovery of charred posts and burnt daub near the oxidized floor surface suggests that the structure had burned during or after abandonment. An unexcavated pit (Feature 2173) intruded part of the south house-pit wall.

Excavation Methods

Feature 2157 was exposed during Phase 2 mechanical stripping of Stripping Unit 1151. A 2-by-1-m control unit (Test Pit 6382) was placed in the north-central portion of the structure. The test pit was manually excavated to the floor in two 1/4-inch-screened levels. The upper level was 2–4 cm thick, and the lower level was 11–14 cm thick. A flotation sample was collected from each level (PDs 6383 and 6384).

The remaining fill in the house was removed in two units (Halves 1 and 2). Each unit was manually excavated to the floor in two stratigraphic levels. The upper 10-cm level in each unit was not screened, but observed artifacts were collected. The lower 5-cm level in each unit was screened through 1/4-inch mesh, and a flotation sample was collected from each (PDs 6387 and 6389, respectively).

The exposure of the floor revealed a number of subfeatures, including 1 informal hearth, 1 floor groove, and 22 postholes. The floor groove and individual postholes were excavated separately in single levels, and the fill from each was screened through 1/4-inch mesh. A macrobotanical sample (PD 6396) was collected from one of the postholes (Subfeature 3). The fill from the informal hearth area was removed with the floor fill of the structure, and no artifacts were collected from this subfeature. An archaeomagnetic sample (SRI 2404) was collected from the hearth area, and a second sample (SRI 2369) was collected from the remnant floor plaster located to the southeast of the hearth area (see Figure B.10).

A cluster of schist fragments (PD 6444) was point located on the floor in the northwest corner of the structure. A pollen sample (PD 6445) was collected from beneath them. A second pollen sample (PD 6443) was collected from the general-floor area.

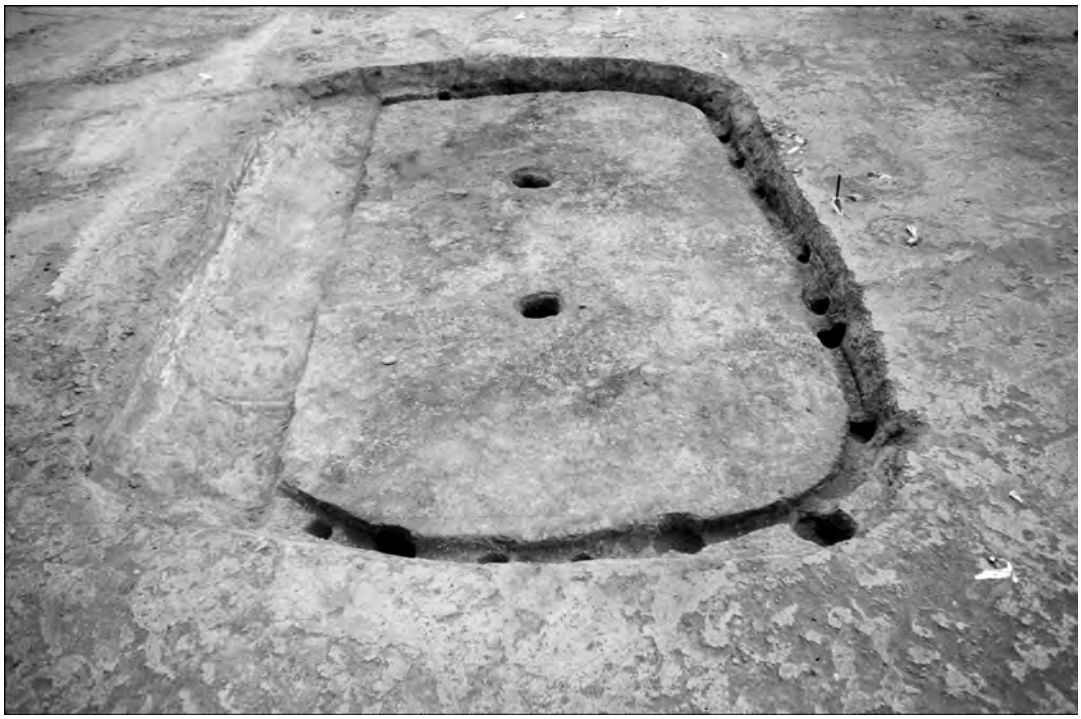

Figure B.9. Plan view of Feature 2157, looking east.

Stratigraphy

Feature 2157 originally was dug into a carbonate-laden argillic horizon, light reddish brown to pale pink in color, that contrasted sharply with the ash-laden fill of the house. Two strata were recognized within the house fill. The upper stratum was roughly 10–12 cm thick and consisted of compacted, gray brown silts and sands with small gravels, charcoal flecks, ash pockets, and a moderate density of artifacts. The lower stratum was 4–5 cm thick and contained a large amount of burnt structural debris, including burnt daub and charred post segments. Artifact density within this stratum was similar to the overlying fill.

Disturbances

A modern, 90-cm-wide, east-west-traversing ADOT trench cut through the northern part of the structure, removing the north pit wall and the floor and subfeatures in this area (see Figure B.10). It is likely that this trench removed the structure's entryway as well. An unexcavated pit (Feature 2173) intruded the upper part of the center of the south house-pit wall. This pit did not impact the floor or floor features and removed only a small amount of house fill. Other observed disturbances included rodent tunnels, small roots, and insect castes.

Construction Details

Feature 2157 was subrectangular in plan view and probably opened to the north (see Figure B.10). The house pit measured 4.96 m east–west by 3.54 m north–south and had a remaining depth of approximately 16 cm. The feature had a floor area of 10.77 m^2, as delimited by the floor groove.

Walls and Roof

The pit walls were composed of the native argillic subsoil and met the floor at the outside edge of the floor groove (Subfeature 2). The floor groove was 10–15 cm wide and 5–10 cm deep, with parallel walls and a flat base. It was filled with loose, brown gray silts and sands interspersed with subrounded gravels and charcoal and few artifacts.

Twenty perimeter postholes (Subfeatures 5–24) were evenly spaced within the groove (see Figure B.10). They ranged in size from 6 to 26 cm in diameter and 4 to 16 cm in depth (Table B.6). It is likely that additional postholes were located along the north section of the structure; however, this area was removed by the ADOT trench.

Two central-support postholes, located to the west (Subfeature 3) and east (Subfeature 4) of the central hearth area, were discovered along the structure's midline (see Figure B.10). They extended 48 and 40 cm below the house floor, respectively, and both were 24 cm in diameter (see Table B.6).

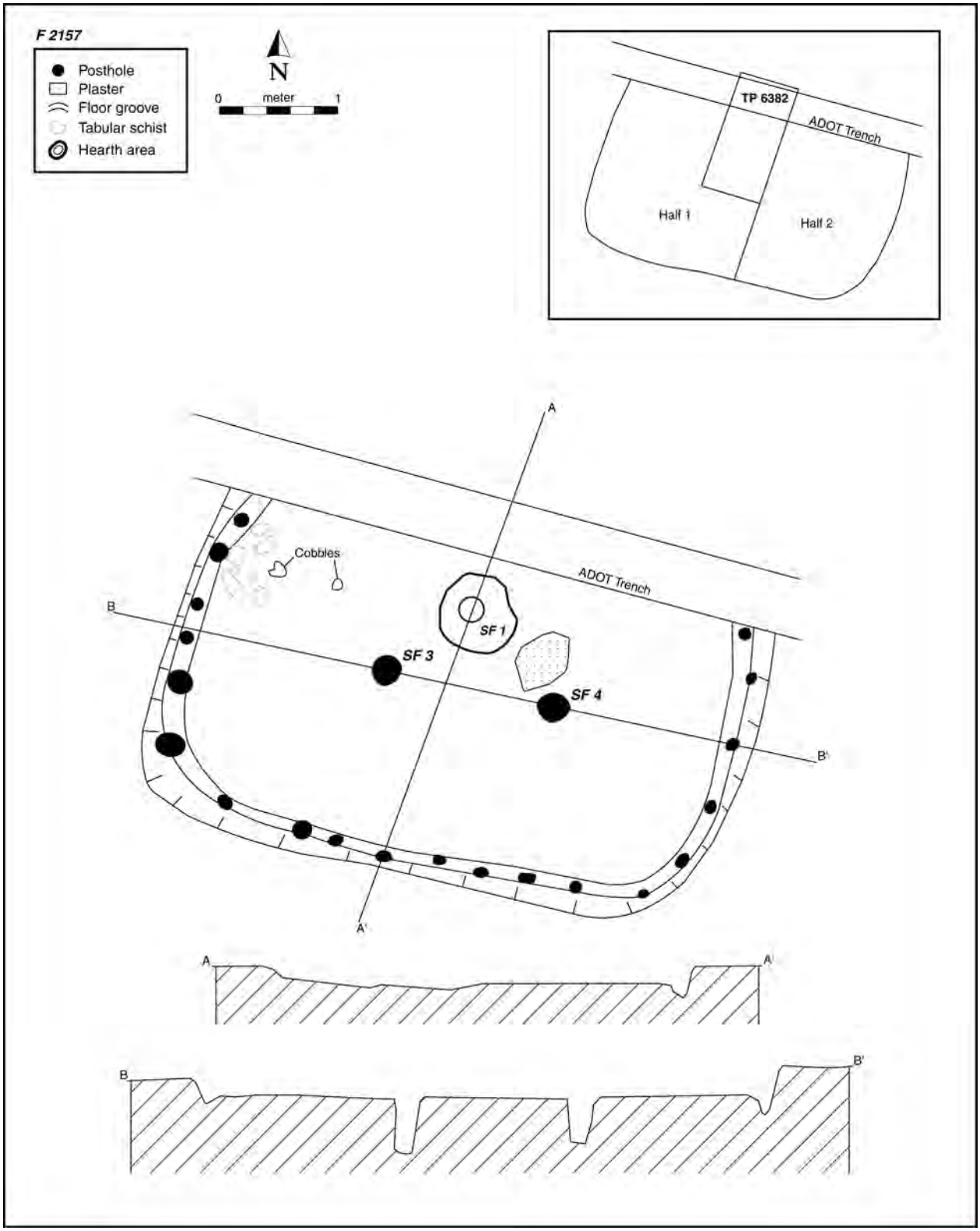

Figure B.10. Plan map of Feature 2157 showing the location of floor features.

Table B.6. Feature 2157 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
3	6396	24	24	48	C
4	6398	26	24	40	C
5	6400	9	9	9	P
6	6402	12	8	14	P
7	6404	10	10	16	P
8	6406	12	8	8	P
9	6408	19	9	12	P
10	6410	9	6	8	P
11	6412	10	10	13	P
12	6414	13	9	8	P
13	6416	9	7	8	P
14	6418	10	7	4	P
15	6420	13	7	6	P
16	6422	12	9	12	P
17	6424	17	14	13	P
18	6426	13	11	8	P
19	6428	26	23	13	P
20	6430	20	20	12	P
21	6432	10	10	8	P
22	6434	10	10	8	P
23	6436	16	15	10	P
24	6438	12	12	6	P

Key: C = central-support posthole; P = perimeter posthole; PD = provenience designation.

Entry

The entryway to Feature 2157 was not located. It most likely had been removed by the modern trench that cut through the northern portion of the structure (see Figure B.10).

Floor

The structure's floor consisted of a layer of gray plaster applied to the native, sterile subsoil. The plaster was poorly preserved except for a large, oxidized patch located southeast of the hearth area (see Figure B.10). Both the plaster and the exposed subsoil showed signs of oxidation. The floor, as defined by the area within the floor groove, measured 10.77 m^2.

Floor Features

Hearths

A shallow, undulating, ashy depression (Subfeature 1) was located in the north-central part of the house and most likely functioned as an informal hearth area. It measured approximately 60 cm in diameter and was 1–3 cm deep. The distinction between the hearth area and the surrounding floor was subtle, although the surface of the hearth area was somewhat more pitted and oxidized than the floor surface.

Artifacts

A cluster of tabular schist fragments (PD 6544) was discovered on the floor in the northwest corner of the structure

(see Figure B.10). These fragments likely functioned as tabular knives or knife blanks. One flake, two ceramic sherds, and a shell bracelet fragment were recovered from the general floor provenience (PD 6396). No other artifacts were recovered from the floor or from any other sealed or primary context.

Evidence for Remodeling

There was no evidence that Feature 2157 was remodeled.

Abandonment Processes

Charred post segments, burnt daub, and an oxidized floor indicate that the structure had burned. Few artifacts were in direct contact with the floor, suggesting that the structure was cleaned out before it was burned. A shallow depression likely existed after the structure collapsed, and, subsequently, alluvial and airborne sediments filled this depression. The artifacts encountered in the fill suggest that later occupants of Locus A deposited trash in this depression.

Associated, Intrusive, or Superimposed Features

Feature 2157 was intruded by an unexcavated pit (Feature 2173). No other features were directly associated with this structure.

Chronology

An archaeomagnetic sample (SRI 2404) was collected from the structure's informal hearth area, and it returned the date range options of A.D. 1010–1040 and 1235–1290. A second sample (SRI 2369) was collected from the plastered floor surface and returned the date range options of A.D. 635–665, 935–1040, and 1185–1690. The combined data from these two features produced the composite date range options of A.D. 935–1040, 1185–1215, and 1235–1315.

No ceramics were recovered from the floor or from other primary contexts, but two temporally sensitive ceramics were recovered from the lower house fill. Both are Rincon Red-on-brown sherds, which have a production date range of A.D. 950–1150. Although the deposition of these sherds postdated the abandonment of the structure, they provide some constraints on when the structure could have fallen out of use. The production range of these sherds agrees with the earliest composite date range option, suggesting that the best estimate for the abandonment of Feature 2157 is A.D. 935–1040.

Locus A, Feature 2160

Center of feature UTMs: N 3538715.11, E 541887.03
Architectural type: recessed-hearth style
Date range: A.D. 935–1040
House dimensions: 6.20 by 3.84 m; pit depth 0.27 m; floor area 15.59 m^2
Entryway dimensions: 1.57 by 4.49 m; floor area 2.17 m^2
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 1 recessed hearth area, 1 entry sill groove, 1 floor groove, 3 central-support postholes, and 76 perimeter postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PDs 6380, 6448, and 7064
Related features: none

Feature 2160 was a subrectangular house-in-a-pit that opened to the north (Figure B.11). It was one of three structures in Locus A that possessed a distinctive recessed hearth area (Subfeature 66). Other floor features discovered in this structure included 1 hearth (Subfeature 1), 1 perimeter floor groove (Subfeature 4), 3 central-support postholes (Subfeatures 5, 60, and 61), and 76 entry and perimeter postholes (Subfeatures 6–59, 62–65, and 67–84). In addition, the well-preserved remains of a wooden plank were recovered from an entry sill groove (Subfeature 3). A number of artifacts were recovered from the floor (Table B.7), including 3 partially reconstructible Rincon Red-on-brown vessels (PDs 7060, 7061, and 7088) and 1 small, intact, Santa Cruz or Sacaton Red-on-buff jar (PD 7059). The vessels, combined with the presence of charred construction material in the house fill and an oxidized floor surface, suggest that the structure had burned catastrophically.

Excavation Methods

Feature 2160 was exposed during Phase 2 mechanical stripping of Stripping Unit 1151. A 1-by-2-m control unit (Test Pit 7047) was placed in front of the entryway and over the recessed hearth area. The test pit was manually excavated in five 10-cm levels. A portion of the entryway floor was encountered at the base of the third level in the northern third of the control unit. The fourth and fifth levels were excavated solely within the recessed hearth area, and the floor of this subfeature was encountered at the base of the fifth level. The fill from all five levels was screened through 1/4-inch mesh, and a flotation sample and

Figure B.11. Plan view of Feature 2160, looking south.

Table B.7. Feature 2160 Point-Located Floor Artifacts

PD No.	Artifact Description
6377	Sherd cluster consisting of 1 Rincon Red-on-brown sherd, 1 indeterminate red-on-brown sherd, 5 red ware sherds, 15 plain ware sherds, and 2 small, indeterminate sherds.
6378	Unifacial utilized flake (Catalog No. 227).
7059	Intact Santa Cruz or Sacaton Red-on-buff jar (Vessel No. 68).
7060	Sherd cluster consisting of 1 partially reconstructible Rincon Red-on-brown vessel (Vessel No. 63), 2 Rincon Red-on-brown sherds, and 1 plain ware sherd.
7061	Partially reconstructible Rincon Red-on-brown vessel (Vessel No. 61).
7062	Mano.
7063	Grinding slab.
7088	Sherd cluster consisting of 1 partially reconstructible Rincon Red-on-brown vessel (Vessel No. 35) and 3 indeterminate red-on-brown sherds.

Key: PD = provenience designation.

pollen sample were collected from each (PDs 7048–7050, 7056, and 7057). A composite pollen sample (PD 7064) was scraped from the section of the floor in the recessed hearth area that was exposed at the base of the control unit.

Following excavation of the test pit, the remaining house fill was removed in two levels of a single unit. The first level was mechanically excavated such that the floor was exposed in the western half of the structure and 10 cm of fill remained in the eastern half. This level was not screened, but observed artifacts were collected. The second level was manually excavated to remove the remaining house fill. It was screened through 1/4-inch mesh, and a flotation sample (PD 6194) was collected.

The entryway was manually excavated in two levels of a separate unit (Subfeature 2). The upper level was not screened, but observed artifacts were collected. The lower level was screened through 1/4-inch mesh, and a flotation sample collected (PD 6243). An entry sill groove (Subfeature 3) containing fragments of an unburnt sill plank was discovered at the base of the level. The entire fill of the sill groove, including the plank fragments, was collected as a flotation sample (PD 6246).

The portions of the recessed hearth area that were outside of the control unit were excavated in a single level of a separate unit (Subfeature 66). The fill was screened through 1/4-inch mesh, and a botanical sample and flotation sample (PD 8204) were collected. A pollen sample (PD 8209) was scraped from the floor surface exposed at the base of this area.

The exposure of the structure's floor revealed a number of subfeatures, including a hearth, a perimeter floor groove, and 79 postholes. The floor groove and individual postholes were excavated separately in single levels, and the fill from each was screened through 1/4-inch mesh. Macrobotanical samples (PDs 6250, 6286, 6292, and 6348) were collected from four of them (Subfeatures 5, 23, 26, and 52, respectively), and an archaeomagnetic sample (SRI 2368) was collected from an oxidized posthole collar (Subfeature 5). The entire fill from the hearth was collected as a flotation sample (PD 6448), and an archaeomagnetic sample (SRI 2405) was collected from the plastered walls and base.

Eight artifacts and artifact clusters (PDs 6377, 6378, 7059–7063, and 7088) were point located on the floor surface (see Table B.7). A pollen sample (PD 7066) was collected from beneath one of them (PD 7063), and two additional pollen samples (PDs 6379 and 7065) were collected from beneath rocks resting on the floor. A composite pollen sample (PD 6380) was collected from the structure's main floor surface.

Stratigraphy

Feature 2160 was dug into a carbonate-laden argillic horizon, light reddish brown to pale pink in color, that contrasted sharply with the ash-laden fill of the house. Discrete strata were absent from the house fill. Sediments consisted of weakly indurated sands and silts that surrounded numerous ash pockets, charcoal fragments, pieces of oxidized daub, calcium carbonate root casts, and artifacts. The artifact density was moderate to high throughout. The structure's sediments had been compacted by an overlying road bed that was removed during mechanical stripping.

Disturbances

An east-west-oriented, sand-filled ADOT trench associated with a historic road had removed an undetermined portion of the upper house fill and a small strip of the floor (Figure B.12). The trench was 60 cm wide at the surface of the stripping unit and tapered to 12 cm at the house floor. Other disturbances included roots, insects, and rodent activity.

Construction Details

Feature 2160 was subrectangular in plan view and opened to the north (see Figure B.12). The house pit measured 6.20 m east–west by 3.84 m north–south and had a remaining pit depth of 27 cm. The structure floor, as delimited by the floor groove, had an area of 15.59 m².

Walls and Roof

The unprepared pit walls sloped down to meet the outside edge of the perimeter floor groove (Subfeature 4). The groove was 10–20 cm wide and encircled the inside perimeter of the house. It was 10 cm deep and had sloping walls and a flat base. The fill consisted of gray brown ashy silts and sands with charcoal flecks and a moderate amount of artifacts.

Fifty perimeter postholes (Subfeatures 8–53 and 62–65) were located within and along the edges of the floor groove (see Figure B.12). They ranged in size from 6 to 38 cm in diameter and were 3–45 cm deep (Table B.8). Together, they were used to form and support the structure's walls.

Two central-support postholes located to the east (Subfeature 60) and west (Subfeature 5) of the hearth were located along the midline of the structure. They were roughly 50 and 23 cm in diameter, respectively, and extended approximately 60 cm below the house floor (see Table B.8). A third posthole (Subfeature 61) may have functioned as an additional primary roof support. It was roughly 32 cm in diameter and 26 cm deep.

Entry

The house had a square, protruding entryway that was located along the midline of the north wall. The entry pit was 1.57 m long and 4.49 m wide (see Figure B.12). The entry floor was ramped and contained a 15-cm-deep step. The step was reinforced by a formal sill (Subfeature 3), evidenced by the unburnt, friable remains of a wooden plank. Twelve postholes (Subfeatures 6, 7, 54–58, 67–70, and 84) were located along the edges of the entry pit and most likely formed the walls of the entryway. They ranged in diameter from 13 to 44 cm and were 12–38 cm deep (see Table B.8).

Recessed Hearth Area

The recessed hearth area (Subfeature 66) was a D-shaped pit located immediately in front of the entryway (see

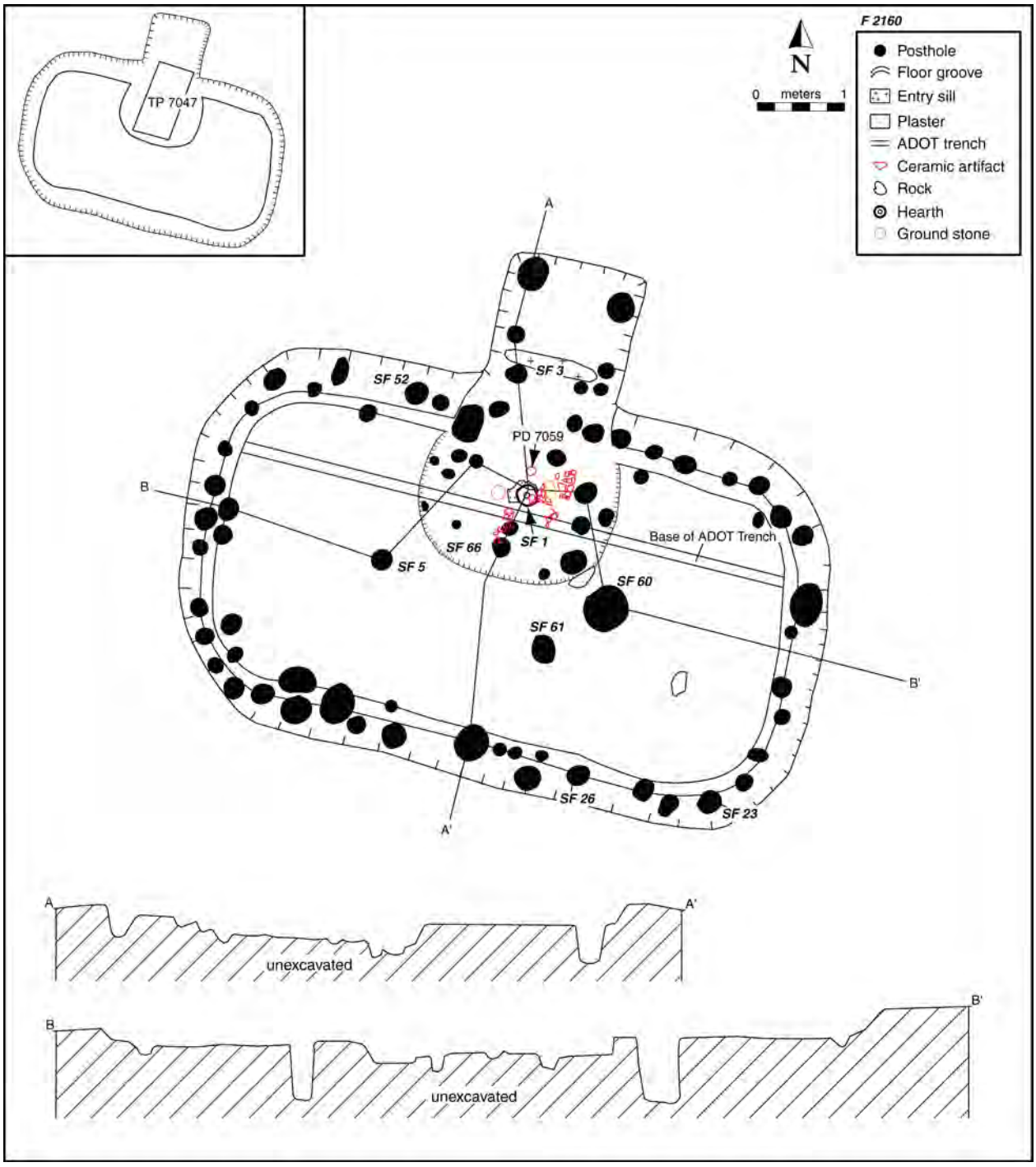

Figure B.12. Plan map of Feature 2160 showing the location of floor features and point-located artifacts.

Table B.8. Feature 2160 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
5	6250	22	24	63	C
6	6252	16	15	14	E
7	6254	13	13	17	E
8	6256	25	18	20	P
9	6258	18	13	23	P
10	6260	17	16	7	P
11	6262	30	22	24	P
12	6264	14	13	9	P
13	6266	27	23	20	P
14	6268	17	14	4	P
15	6270	28	20	20	P
16	6272	25	20	29	P
17	6274	48	24	21	P
18	6276	12	10	15	P
19	6278	23	19	27	P
20	6280	19	15	22	P
21	6282	17	15	20	P
22	6284	21	21	18	P
23	6286	29	25	26	P
24	6288	22	20	36	P
25	6290	24	21	20	P
26	6292	25	24	44	P
27	6294	26	26	33	P
28	6296	17	6	12	P
29	6298	14	12	16	P
30	6300	43	36	45	P
31	6302	28	25	23	P
32	6304	20	19	13	P
33	6306	50	38	35	P
34	6308	36	32	24	P
35	6310	25	23	18	P
36	6312	26	21	23	P
37	6314	16	15	10	P
38	6316	20	18	14	P
39	6318	19	12	10	P
40	6320	20	19	16	P
41	6322	21	21	12	P
42	6324	26	25	15	P
43	6326	25	21	15	P
44	6328	32	24	16	P
45	6330	29	24	20	P
46	6332	15	9	8	P
47	6334	15	13	10	P
48	6336	21	21	11	P
49	6338	17	10	3	P
50	6344	31	17	17	P
51	6346	22	20	22	P
52	6348	23	23	31	P

continued on next page

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
53	6350	19	17	20	P
54	6352	51	44	38	E
55	6354	23	19	12	E
56	6356	38	29	24	E
57	6358	32	28	24	E
58	6360	21	18	19	E
59	6362	49	39	28	R
60	6364	51	48	62	C
61	6366	36	27	26	C
62	6368	12	9	7	P
63	6370	15	14	13	P
64	6372	43	27	12	P
65	6374	23	22	20	P
67	8213	14	14	12	E
68	8215	25	19	12	E
69	8217	23	23	23	E
70	8219	20	23	10	R
71	8221	23	19	23	R
72	8223	22	20	8	R
73	8225	22	20	10	R
74	8227	23	27	8	R
75	8229	13	13	7	R
76	8231	17	20	18	R
77	8233	23	22	11	R
78	8235	9	9	9	R
79	8237	10	15	8	R
80	8257	11	11	20	R
81	8259	10	10	16	R
82	8261	15	16	23	R
83	8263	15	15	20	R
84	8265	18	17	24	E

Key: C = central-support posthole; E = entryway posthole; P = perimeter posthole; PD = provenience designation; R = recessed-hearth-area posthole.

Figure B.12). It measured approximately 2.2 m in diameter and extended 20 cm below the surrounding house floor. The structure's hearth (Subfeature 1; see below) was located in the center of the pit. Fourteen postholes (Subfeatures 69–83) were located along the edges of this pit (see Figure B.12), and they may have supported a bench around the hearth or a screen that separated the recessed area from the rest of the structure. These postholes ranged in size from 9 to 27 cm in diameter and 8 to 24 cm in depth (see Table B.8). The fill from the recessed hearth area was identical to the main house fill and consisted of gray brown silts and sands with abundant artifacts and structural debris, including burnt fragments of reed matting.

Floor

The floor of the structure, as defined by the interior edge of the floor groove, had an area of 15.59 m^2. It consisted of a poorly preserved layer of caliche plaster applied directly to the native calcic subsoil. Portions of the floor appeared oxidized and fire-blackened, particularly around the recessed hearth area.

Floor Features

Hearths

A slightly ovate, basin-shaped hearth (Subfeature 1) was located in the center of the recessed hearth area. It measured 24 cm east–west by 21 cm north–south and extended 8 cm below the floor. The hearth pit was plastered and well-oxidized, and a 10-cm-wide plaster apron surrounded it. The fill consisted of ash-laden silts devoid of artifacts.

Artifacts

A number of artifacts and artifact scatters were recovered from the floor of Feature 2160 (see Table B.7), five of which were located in the recessed hearth area (see Figure B.12). The latter included a small, intact Santa Cruz or Sacaton Red-on-buff jar (PD 7059), two partially reconstructible Rincon Red-on-brown vessels and associated ceramic scatters (PDs 7060 and 7061), a mano (PDs 7062) and a grinding slab (PD 7063). Point-located artifacts recovered from the main floor included a partially reconstructible Rincon Red-on-brown vessel and associated ceramic scatter (PD 7088), a second ceramic scatter (PD 6377), and a unifacial utilized flake (PD 6378).

Evidence for Remodeling

There is no evidence that Feature 2160 was remodeled.

Abandonment Processes

Charred structural debris, oxidized floor plaster, and intact floor artifacts indicate that the structure had burned catastrophically. A shallow depression likely existed after the structure collapsed. Subsequently, alluvial and airborne sediments filled this depression. The numerous artifacts encountered in the upper fill suggest that later occupants of Locus A deposited trash in this depression.

Associated, Intrusive, or Superimposed Features

No other features were associated directly with Feature 2160.

Chronology

An archaeomagnetic sample (SRI 2368) was collected from an oxidized posthole collar, and it returned the date range of A.D. 935–1690. A second sample (SRI 2405) was collected from the hearth and returned the date range options of A.D. 935–1040 and A.D. 1210–1365. In addition, a small, intact Santa Cruz or Sacaton Red-on-buff jar and three partially reconstructible Rincon Red-on-brown vessels were recovered from the structure's floor. These ceramic types have a combined production date range of A.D. 850–1150, which agrees with the earlier archaeomagnetic date range option obtained from the hearth. Therefore, the best age estimate for the abandonment of Feature 2160 is A.D. 935–1040.

Locus A, Feature 2192

Center of feature UTMs: N 3538701.10, E 541874.16
Architectural type: recessed hearth style
Date range: A.D. 700–1150
House dimensions: 6.01 by 3.56 m; pit depth 0.34 m; floor area 15.68 m^2
Entryway dimensions: 1.96 by 1.36 m; floor area 1.36 m^2
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 1 recessed hearth area, 1 floor groove, 2 central-support postholes, 34 interior and perimeter postholes, and 1 intramural pit
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PDs 8239 and 8249
Related features: intruded by Feature 6463

Feature 2192 was a subrectangular house-in-a-pit with a formal protruding entryway (Subfeature 2) that opened to the north (Figure B.13). It was one of three structures in Locus A that possessed a distinctive recessed hearth area (Subfeature 3). Other floor features included 1 hearth (Subfeature 1), 1 ash-filled pit (Subfeature 7) that was connected to the hearth by a channel, 1 perimeter floor groove (Subfeature 4), and 36 postholes (Subfeatures 5–6 and 9–41). The lack of a floor assemblage and evidence of burning suggests that this structure had a simple, planned abandonment. A roasting pit (Feature 6463) was encountered within the structure's trash fill.

Excavation Methods

This structure was exposed during Phase 2 mechanical stripping of Stripping Unit 1151 (Figure B.14). A 2-by-1-m control unit (Test Pit 6450) was placed along the west wall of the structure. It was manually excavated to the floor in a series of four 10-cm levels. The fill was screened through 1/4-inch mesh, and a flotation sample was collected from each level (PDs 6451–6454).

Figure B.13. Plan view of Feature 2192, looking north.

The remaining structure fill was excavated as a single unit to within 3 cm of the floor. The upper 19–32 cm of fill were removed mechanically in an unscreened level, and observed artifacts were collected. A macrobotanical sample (PD 6446) was recovered from this level. Below this, a 4–10-cm-thick level was excavated manually, and the fill was screened through 1/4-inch mesh. A flotation sample (PD 6459) was collected from this level.

The final 3 cm of fill was divided into 29 1-by-1-m units to collect data for microdebitage analysis. The entire fill in each unit was collected for wet-screening (PDs 6493, 6495, 6497, 6499, 8135, 8137, 8139, 8141, 8143, 8145, 8147, 8149, 8151, 8153, 8155, 8157, 8159, 8161, 8426, 8163, 8165, 8167, 8169, 8171, 8173, 8175, 8177, 8179, and 8181).

When the feature fill was removed completely, a recessed hearth area was discovered in front of the entryway. It was excavated as a separate unit (Subfeature 3) in two levels. The upper level was 8–14 cm thick, and the fill was screened through 1/4-inch mesh. A flotation sample (PD 8183) was recovered from this level. The lower level consisted of the 3–5 cm of fill covering the floor, all of which was collected for wet-screening (PD 8201).

The entryway was excavated as a separate unit (Subfeature 2) in two levels. The upper level was 12–26 cm thick, and the lower level was 10 cm thick. Neither level was screened, but observed artifacts were collected.

The full exposure of the structure's floor revealed a number of subfeatures, including 1 hearth, 1 ash-filled pit, 1 floor groove, and 36 postholes. The perimeter floor groove and individual postholes were excavated separately as single units, and the fill was screened through 1/4-inch mesh. Pollen samples (PDs 8241, 8243, 8245, 8247, 8267, 8269, 8271, and 8273) were collected from eight of these (Subfeatures 8–15). The entire fill from the hearth was collected as a flotation sample (PD 8249), a pollen sample (PD 8252) was recovered from its base, and an archaeomagnetic sample (SRI 2403) was collected from the plastered walls and base. The entire fill from the adjacent ash-filled pit was collected as a flotation sample (PD 8239), and a pollen sample was scraped from its base (PD 8253). A composite pollen sample (PD 8378) was collected from the structure's floor, a second one (PD 8379) was recovered from the floor exposed at the base of the recessed hearth area, and a third (PD 8380) was scraped from the area around the hearth.

Stratigraphy

Feature 2192 originally was dug into a carbonate-laden argillic horizon, light reddish brown to pale pink in color, that contrasted sharply with the ash-laden fill of the house. Two strata were identified within the fill. The upper 34 cm consisted of microlaminated dark brownish gray silts and sands interspersed with ash pockets, fragmentary charcoal, fire-cracked rock, and artifacts. The lower stratum

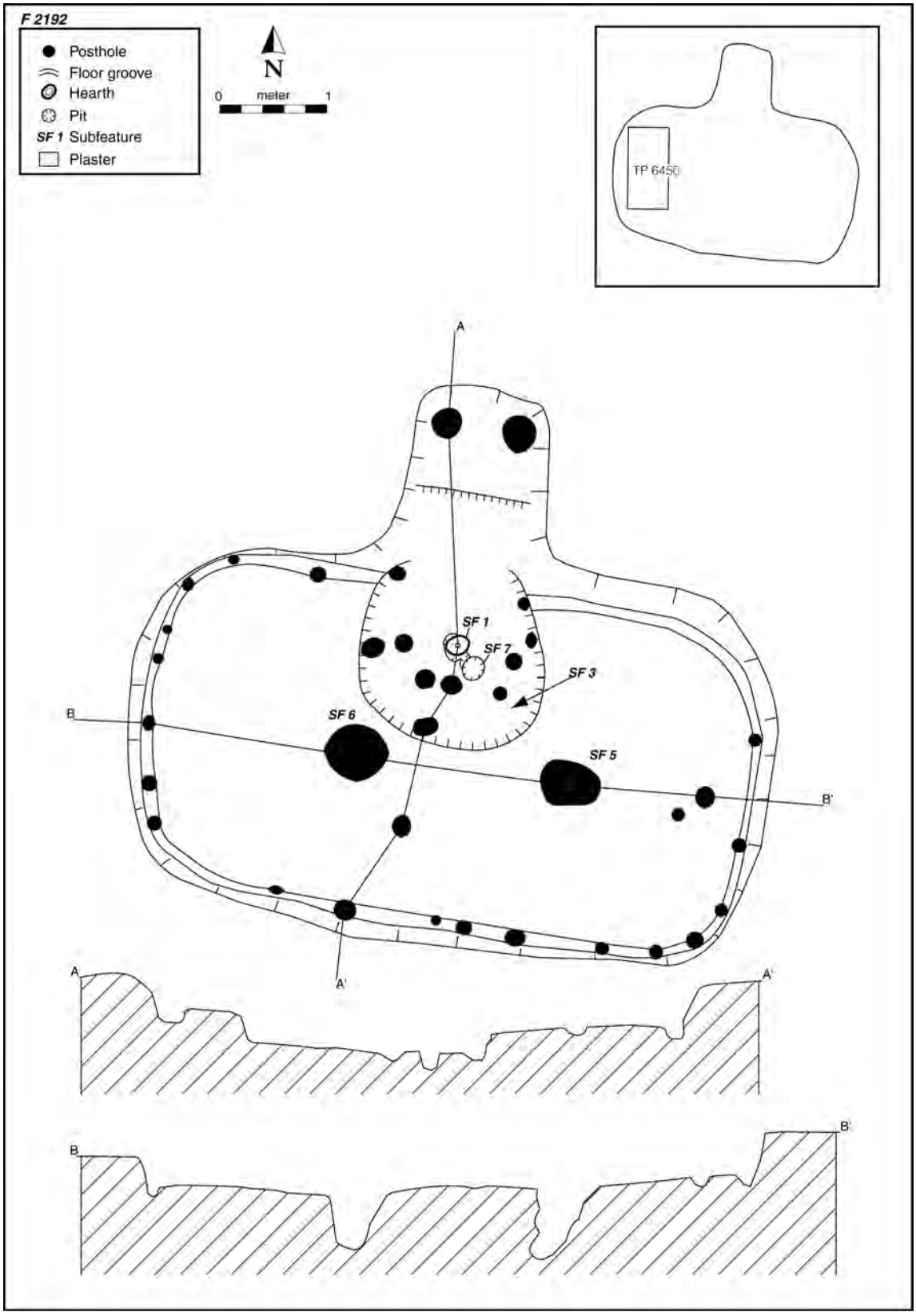

Figure B.14. Plan map of Feature 2192 showing the location of floor features.

consisted of thin layers of dark brownish gray silts and sands with abundant oxidized daub fragments, charred wood, reeds, and grasses. The amount of structural debris increased with depth, whereas artifact density decreased with depth.

Disturbances

The abandoned US 80 road bed was located directly above Feature 2192 and truncated its pit walls and fill. In addition, at least one (Feature 6463) and possibly three roasting pits had been constructed within the structure's fill. None of these features affected the structure's architecture or subfeatures. Other disturbances to Feature 2192 were limited to minor rodent, insect, and root-tunneling disturbance.

Construction Details

The structure was subrectangular in plan view and opened to the north (see Figure B.14). The house pit measured 6.01 m east–west and 3.56 m north–south and had a remaining pit depth of 34 cm. The structure's floor had an area of 15.68 m^2, as delimited by the inside edge of the floor groove.

Walls and Roof

The floor groove (Subfeature 4) was a 6-cm-deep trench encircling the structure's floor; it terminated at the edge of the recessed floor pit, in front of the entryway (see Figure B.14). The groove was widest at the top and had a flat base. The fill consisted of a single stratum of brownish gray silt and sands containing charcoal, ash, and a moderate density of artifacts.

Nineteen perimeter postholes (Subfeatures 16–34) were located within the floor groove. They ranged in size from 8 to 20 cm in diameter and 4 to 20 cm in depth (Table B.9). Together, they were used to form and support the structure's walls. The fill within the postholes was identical to that found within the floor groove.

Two postholes for central-support posts, located to the east (Subfeature 5) and west (Subfeature 6) of the recessed hearth area, were placed along the structure's midline. They were approximately 57 and 55 cm in diameter, respectively, and extended 62 cm below the surface. Three additional interior postholes (Subfeatures 39–41) may have provided additional roof support. They were between 12 and 21 cm in diameter and 3 and 10 cm in depth (see Table B.9).

Entry

A rectangular ramp-and-step entry (Subfeature 2) protruded from the north wall of the structure. The entry pit was 1.96 m long by 1.36 m wide, and it was constructed into the native subsoil. The unprepared floor of the entry pit sloped gently in toward the recessed hearth area, and it formed a 25-cm-high step approximately 65 cm in from the entry-house juncture (see Figure B.14). Two postholes (Subfeatures 36 and 37) were located at the mouth of the entryway and may have functioned as wall and roof supports. They each were approximately 32 cm in diameter and 9 and 19 cm deep, respectively (see Table B.9).

Recessed Hearth Area

The recessed hearth area (Subfeature 3) was a circular pit located immediately in front of the entryway (see Figure B.14). It measured approximately 1.6 m in diameter and extended 15 cm below the surrounding house floor. A hearth and a connecting ash-filled pit were located in the center of this area. The recessed floor was identical to that in the rest of the structure, exhibiting the same patchy plaster found on the upper floor surface. The northern part of the pit floor gradually sloped up into the entryway corridor. Heavy oxidation was noted on the pit walls encircling the recessed floor.

A series of 10 postholes (Subfeatures 8–15, 35, and 38) were located within the recessed hearth area. They ranged in size from 11 to 25 cm in diameter and 5 to 24 cm in depth (see Table B.9). Five of these postholes were found around the perimeter of the recessed floor, and five were more centrally positioned near the hearth (see Figure B.14). As noted in other structures with recessed hearth areas, three of the postholes surrounding the hearth were located to its west (Subfeature 8), south (Subfeature 9), and east (Subfeature 15). The other postholes in this area may have supported a screen that separated the recessed area from the rest of the structure.

Floor

The structure floor, as defined by the area within the floor groove, measured approximately 15.68 m^2. It consisted primarily of the natural pinkish gray calcic soil, and there was no evidence that it had been plastered. Patches of pink argillic sediment found on the floor may have served to level the surface. Both the floor and clay material were easily distinguished from the house fill owing to their coloration, compaction, and calcium carbonate development.

Table B.9. Feature 2192 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
5	8187	60	54	62	C
6	8189	59	51	62	C
8	8241	19	14	5	R
9	8243	25	20	8	R
10	8245	13	12	7	R
11	8247	11	11	7	R
12	8267	16	14	24	R
13	8269	18	16	8	R
14	8271	20	17	20	R
15	8273	14	14	15	R
16	8275	11	10	11	P
17	8277	13	13	11	P
18	8279	14	13	12	P
19	8281	18	16	13	P
20	8283	13	13	9	P
21	8285	15	15	9	P
22	8287	18	17	20	P
23	8289	16	15	10	P
24	8291	11	7	5	P
25	8293	20	20	11	P
26	8295	15	12	7	P
27	8297	13	13	10	P
28	8299	16	14	7	P
29	8301	16	13	7	P
30	8303	10	9	5	P
31	8305	9	8	4	P
32	8307	12	11	4	P
33	8309	11	11	5	P
34	8311	14	12	7	P
35	8313	18	18	8	R
36	8315	36	32	9	E
37	8317	36	31	19	E
38	8319	14	11	5	R
39	8321	21	16	6	I
40	8323	16	12	10	I
41	8329	16	15	3	I

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation; R = recessed-hearth-area posthole.

Floor Features

Hearths

An ovate, basin-shaped hearth (Subfeature 1) was located in the center of the recessed hearth area. It was 20 by 15 cm in plan and 8 cm deep. A poorly preserved layer of plaster lined the hearth pit, and remnant patches of plaster indicated the location of the collar and apron. It was filled with gray, ash-laden silty loam.

Pits

A small ash-filled pit (Subfeature 7) was found 10 cm southeast of the hearth; a channel connected them. The pit was oval and basin shaped and measured 24 by 20 cm in plan, with a maximum depth of 10 cm. The pit walls were unprepared and unoxidized, and they consisted of the highly compact native substrate. It was filled with loose, gray silts and ash; no charcoal or artifacts were observed. This feature most likely functioned as an ash pit for clearing the hearth.

Artifacts

No artifacts were recovered from the floor of Feature 2192 or from any other sealed or primary contexts.

Evidence for Remodeling

There is no evidence that Feature 2192 was remodeled.

Abandonment Processes

No floor assemblage was present, indicating that the structure had a planned abandonment. Abundant charred architectural debris in the feature fill indicated the structure had burned shortly thereafter. The structure subsequently collapsed, and the resulting depression filled with alluvial and airborne sediments. The high artifact concentration in the upper fill suggests that later occupants of Locus A deposited trash in this depression. At some point later, at least one roasting feature was constructed within this trash fill.

Associated, Intrusive, or Superimposed Features

A roasting pit (Feature 6463) was encountered within the trash fill of Feature 2192 and was partially excavated. Two other possible roasting pits were noted during mechanical excavation, but neither was formally recorded or excavated. No other features were directly associated with Feature 2192.

Chronology

An archaeomagnetic sample (SRI 2403) was collected from the structure's hearth, but it was too imprecise to be dated. No other chronometric data or temporally sensitive artifacts were recovered. Based on comparative architectural styles this structure most likely was constructed and occupied during the Middle Formative period (A.D. 750–1150).

Locus C, Feature 276

Center of feature UTMs: N 3538661.41, E 541430.34
Architectural type: house-in-a-pit
Date range: A.D. 650–1150
House dimensions: 5.24 by 3.87 m; pit depth 0.22 m; floor area 9.71 m^2
Entryway dimensions: 1.03 by 1.28 m; floor area 1.22 m^2
Shape: subrectangular
Orientation: southwest
Internal features: 1 hearth, 1 floor groove, 2 central-support postholes, 48 interior and perimeter postholes, and 1 ash pit
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PD 10,252
Related features: intruded by Features 6015, 6019, 10,343, 10,367, and 10,404

Feature 276 was a subrectangular house-in-a-pit with a protruding entryway oriented to the southwest (Figure B.15). Floor features included 1 hearth (Subfeature 1), 1 floor groove (Subfeature 3), 1 ash pit (Subfeature 47), 2 central-support postholes (Subfeatures 4 and 7), and 2 interior postholes (Subfeatures 16 and 28). Multiple series of perimeter postholes (Subfeatures 5, 6, 8–15, 17–27, 29–46, and 48–54) suggest that the house was remodeled at least once. Five extramural pits (Features 6015, 6019, 10,343, 10,367, and 10,404) intruded the house. This was the only fully excavated house in the western part of Locus C.

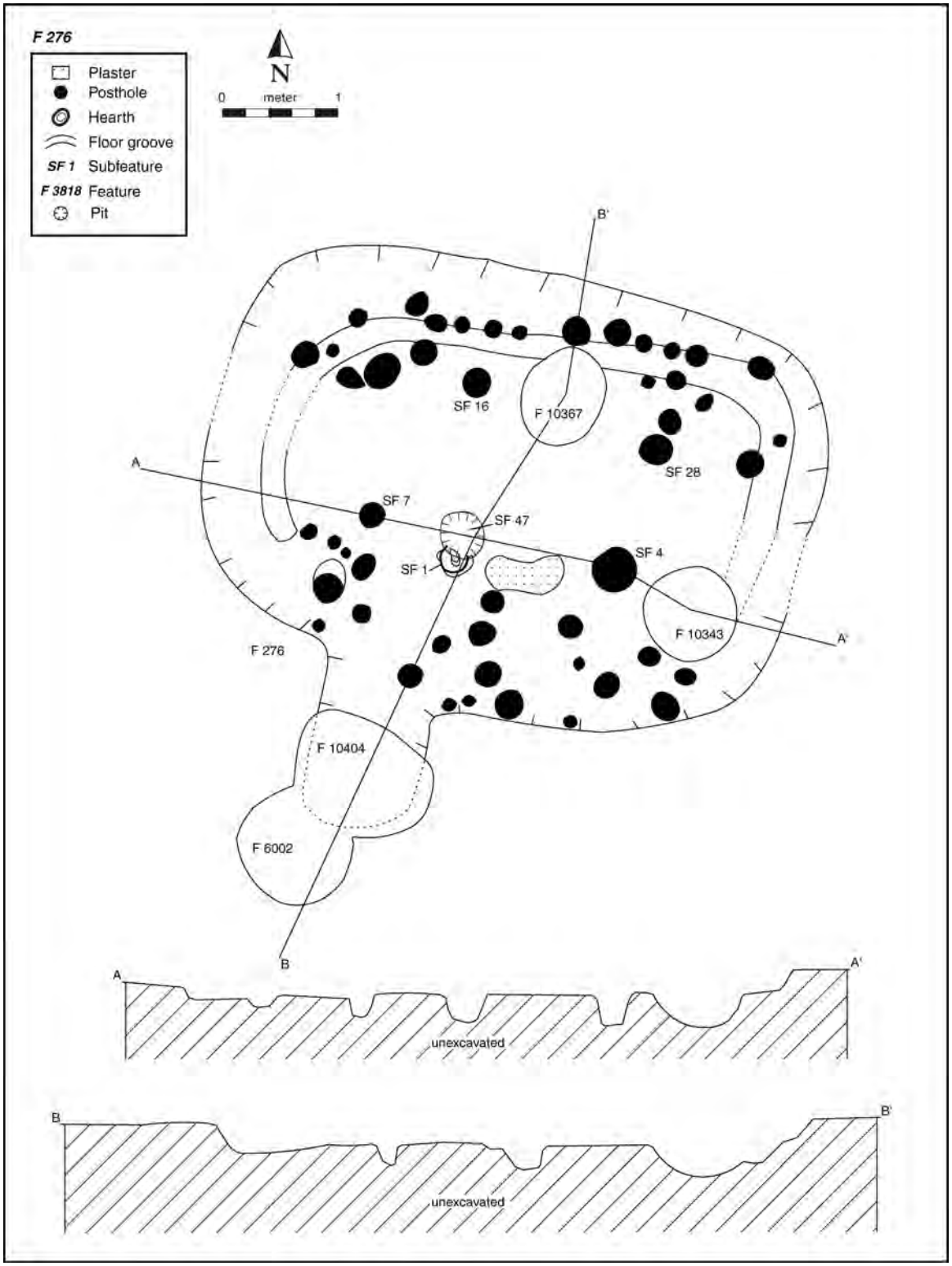

Figure B.15. Plan map of Feature 276 showing the location of floor features and intrusive features.

Excavation Methods

This structure was initially exposed in both walls of Trench 97 during Phase 1 testing (see Figure C.1). It was later completely exposed in plan view during Phase 2 excavation of Stripping Unit 5188. The upper 10–15 cm of fill throughout the structure was mechanically removed with a backhoe. Backhoe excavation ceased 5–10 cm above the floor, as observed in the Trench 97 profile. The fill was not screened, but observed artifacts were collected.

A 2-by-1-m control unit (Test Pit 10,130) was placed in the structure's west end. The fill was removed as a single 1/4-inch-screened, 8-cm level, and a flotation sample (PD 10,131) was collected. A severely disturbed earthen floor was exposed at the base of the test pit.

The remaining house fill was removed in two units. The eastern two-thirds of the structure (Half 1) was excavated with shovels and trowels in a single 10-cm level. Likewise, the remaining fill in the western third of the structure (Half 2) was manually removed with shovels and trowels in a single 8-cm level. The fill from these units was not screened, but observed artifacts were collected. The entryway was excavated separately in a single, 15-cm level, and the fill was screened through 1/4-inch mesh. Few artifacts were recovered, and no samples were taken.

Removal of the floor fill from the structure exposed 1 perimeter floor groove, 46 perimeter postholes, 4 central-support postholes, 1 ash pit, and 1 poorly preserved, plaster-lined hearth. The floor groove and individual postholes were excavated separately, and the fill was screened through 1/4-inch mesh. The fill of the ash pit was collected as a flotation sample (PD 10,377). Likewise, the fill from the hearth was collected as a flotation sample (PD 10,252), and a pollen sample (PD 10,375) was scraped from the floor surrounding the hearth basin. An archaeomagnetic sample (SRI 2441) was collected from the plastered hearth walls.

Stratigraphy

As much as 40 cm of weakly indurated silts, sands, and gravels covered the structure. Much of this sediment was deposited over the structure during ADOT staging activities associated with the construction of the Marsh Station Interchange. The house pit was dug into a moderately developed calcic paleosol (Stratum IV). This paleosol consisted of a soft, pale brown silt loam that exhibited fine to medium subangular blocky structure and Stage I–II $CaCO_3$ development (Birkeland 1999:Table A1.5). It was replete with insect castes and rodent tunnels, and it contained many fine to medium rootlets and small (less than 3 cm) subrounded gravels. Loose, light brownish gray silts and sands filled the house pit. Charcoal fragments and ash pockets were common, and several small (less than 5 cm) fragments of oxidized daub were encountered. The structure fill appeared homogeneous, and no natural or cultural levels were visible. Artifact density was low and appeared to decrease with depth.

Disturbances

Past ADOT staging activities had removed the upper part of the house-pit walls and fill. In Phase 1, Trench 97 removed much of the structure floor along the center line of the house. Several large roots were encountered in the northeast corner of the house pit, and numerous rodent tunnels and insect castes were observed in the walls and floor. Finally, five intrusive pits impacted sections of the pit walls and floor and truncated the entryway (Features 6015, 6019, 10,343, 10,367, and 10,404).

Construction Details

The structure was roughly subrectangular in plan view, and the entryway was oriented to the southwest (see Figure B.15). The house pit measured 5.24 m east–west by 3.87 m north–south and had a remaining pit depth of 22 cm. The floor, as delimited by the floor groove, had an area of 9.71 m^2. The north and south walls were straight and roughly parallel, whereas the east and west walls were slightly rounded.

Walls and Roof

A 10–15-cm-deep floor groove (Subfeature 3) and a series of 46 perimeter postholes (Subfeatures 5, 6, 8–15, 17–27, 29–46, and 48–54) were used to construct the walls. The floor groove was only identifiable along the back wall (i.e., north wall), northeast corner, and western end of the structure; it was truncated along the east and west walls by Trench 97. The floor groove was cut into the calcic paleosol and no evidence of a lining was observed. It was located 20–60 cm in from the pit walls. The fill consisted of light brownish gray silts and fine sands and was identical to the house fill. Few artifacts were encountered in the groove fill.

Many of the perimeter postholes were associated with the floor groove. The postholes located along the back wall of the structure appeared to form two different series: one located along the inside edge of the floor groove, and one following the exterior edge of the floor groove (see Figure B.15). The postholes along the front wall were staggered in two or three series, although no evidence of the floor groove was found in this area. It is likely that

the postholes continued around the east and west sides of the house; however, all evidence of their existence was removed by Trench 97. They ranged in size from 10 to 36 cm in diameter and 6 to 25 cm in depth (Table B.10).

Two possible central-support postholes (Subfeatures 4 and 7) were located along the midline of the structure, to the east and west of the hearth, respectively. They measured 38 and 19 cm in diameter and extended 30 and 17 cm below the floor (see Table B.10), respectively. Two interior postholes (Subfeatures 16 and 28) were situated near the back wall and may have provided added roof support. They were 23 and 31 cm in diameter and 17 and 21 cm in depth, respectively (see Table B.10).

Entry

The entryway (Subfeature 2) protruded from the center of the southern wall. It was truncated by two extramural pits (Features 6002 and 10,404), making it difficult to determine its full size and shape. The remaining section was 1.03 m long by 1.28 m wide. It is likely that this was a jacal entryway; however, only the entry juncture remained. No plaster was preserved on the entry floor, which consisted of the native subsoil and ramped slightly upward to the south. As with the house fill, the entry fill consisted of a single homogenous stratum of dark brown fine silts and sands. Charcoal flecks, ash, gravels and a few artifacts were encountered.

Floor

The poorly preserved floor consisted of patchy caliche plaster applied directly over the native subsoil. Where preserved, this plaster was 1–3 cm thick and did not appear to be burned. A large patch of this plaster was preserved immediately east of the hearth (see Figure B.15). The floor undulated moderately throughout the structure and was severely disturbed by larval insect castes. As measured from the innermost edge of the floor groove, it had an area of 9.71 m^2.

Floor Features

Hearths

A poorly preserved, basin-shaped and plaster-lined hearth (Subfeature 1) was located in the north-central portion of the floor, immediately in front of the entryway. The hearth was oblong in plan view and measured 30 cm long, 23 cm wide, and 7 cm deep. Light brownish gray caliche plaster lined the hearth, and ashy sands and silts filled the hearth basin.

Pits

An ash pit (Subfeature 47) was found immediately behind the hearth (see Figure B.115. This pit was circular in plan view and conical in cross section, and it measured 30–33 cm in diameter and 20 cm deep. Brownish gray ashy sands and silts filled the pit basin.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary contexts.

Evidence for Remodeling

Several series of perimeter postholes were identified along the front and back walls of the structure, suggesting that it had been remodeled at least once. Similarly, the two large interior postholes (Subfeatures 16 and 28) found near the back of the structure suggest that the roof had been reinforced at least once.

Abandonment Processes

Given the absence of artifacts on the floor and the fact that the structure had not burned, it appears that Feature 276 had a simple, planned abandonment. Subsequently the structure collapsed, and the resulting depression filled with colluvial sediments and cultural trash.

Associated, Intrusive, or Superimposed Features

After the structure was abandoned, five extramural pits (Features 6015, 6019, 10,343, 10,367, and 10,404) were built within the structure. Features 6015 and 6019 were two unexcavated pits that cut into the back wall of the structure. Feature 10,343 was discovered in the southeast corner of the structure and intruded the floor. Similarly, Feature 10,367 was discovered along the center of the north wall. The fill of both pits was clearly distinguishable from the sediments filling the structure. Feature 10,404 was built at the end of the entry but was not excavated. Feature 10,404 did, however, truncate the fill of an earlier pit (Feature 6,002) that was built immediately in front of the entryway.

Table B.10. Feature 276 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
4	10,258	40	36	30	C
5	10,260	17	17	10	P
6	10,262	13	12	13	P
7	10,264	19	19	17	C
8	10,266	15	14	15	P
9	10,268	27	36	25	P
10	10,270	24	18	12	P
11	10,272	17	16	8	P
12	10,274	30	26	13	P
13	10,276	23	20	10	P
14	10,278	22	21	10	P
15	10,280	14	15	12	P
16	10,282	23	23	17	I
17	10,284	18	16	10	P
18	10,286	13	13	13	P
19	10,288	23	24	14	P
20	10,290	19	22	9	P
21	10,292	13	15	11	P
22	10,294	12	12	16	P
23	10,296	13	13	14	P
24	10,298	18	14	20	P
25	10,300	22	17	15	P
26	10,302	13	18	14	P
27	10,304	20	21	20	P
28	10,306	35	28	20	I
29	10,308	24	25	22	P
30	10,310	13	14	9	P
31	10,312	25	22	14	P
32	10,314	14	17	10	P
33	10,316	28	30	18	P
34	10,318	21	20	16	P
35	10,320	21	19	14	P
36	10,322	15	13	9	P
37	10,324	17	18	12	P
38	10,326	20	26	11	P
39	10,328	18	19	12	P
40	10,330	21	22	17	P
41	10,332	22	20	17	P
42	10,334	17	10	10	P
43	10,336	20	20	20	P
44	10,338	17	22	10	P
45	10,340	12	12	12	P
46	10,342	10	12	10	P
48	10,393	11	10	15	P
49	10,395	13	10	12	P
50	10,397	14	15	17	P
51	10,399	14	11	17	P
52	10,401	13	14	7	P
53	10,403	22	17	6	P
54	10,407	30	20	15	P

Key: C = central-support posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.

Chronology

One archaeomagnetic sample (SRI 2441) was collected from the hearth; however, it was too imprecise to be dated. No artifacts were recovered from the floor, but most ceramics in the structure fill dated to the Middle Formative A period. The architectural style suggests that this structure was built and used sometime during the Middle Formative period (A.D. 750–1150).

Locus C, Features 379 and 235

Features 235 and 379 were a pair of superimposed structures in the north-central portion of Locus C. Feature 379, the earlier of the two houses, was unique in several ways. It was the largest house excavated at the site, and also one of the few structures with an east-facing entrance. A series of 12 parallel grooves in the floor outside the structure's recessed area suggested the presence of a raised floor. Given its size, we suspect that this house had a communal function. Feature 235 was built over the southwest corner of Feature 379. A partially preserved adobe wall forming the eastern edge of the structure was likely constructed to shore up the loose fill of Feature 379.

Locus C, Feature 379

Center of feature UTMs: N 3538648.96, E 541536.60
Architectural type: recessed-hearth style; house-in-a-pit
Date range: A.D. 1010–1140
House dimensions: 9.80 by 5.78 m; pit depth 0.42 m; floor area 34.69 m^2
Entryway dimensions: 2.18 by 2.09 m; floor area 2.32 m^2
Shape: subrectangular
Orientation: east
Internal features: 1 hearth, 1 recessed hearth area, 1 entry sill plank, 1 perimeter floor groove, 12 interior floor grooves, 2 central-support postholes, 152 perimeter and interior postholes, 1 intramural pit
Chronometric techniques: archaeomagnetism and dendrochronology
Analyzed botanical samples: PDs 7378, 7397, 7399, 7400, and 7420
Related features: intrusive to Feature 6084; intruded by Feature 235

Feature 379 was a subrectangular house-in-a-pit that had a distinctive recessed area (Subfeature 81) surrounding the hearth (Figure B.16). It opened to the east and contained a number of floor features, including 1 hearth (Subfeature 82), 1 perimeter floor groove (Subfeature 2), 12 interior floor grooves (Subfeatures 41–52), 1 intramural pit (Subfeature 75), and 154 postholes (Subfeatures 3–40, 53–74, 76–78, 80, and 83–170). A charred entry sill plank (Subfeature 79) made from split juniper was discovered in the protruding entryway. Feature 379 was the largest structure encountered at the Mescal Wash site and the only east-facing one in Locus C. A later pit structure (Feature 235) was built over the southwest corner of this structure.

Excavation Methods

This structure was initially discovered during Phase 1 testing in Stripping Unit 373 and in Trench 234. The entire structure was exposed in plan view during Phase 2 excavation of Stripping Unit 5190. A 2-by-1-m control unit (Test Pit 7028) was placed in the south-central portion of the structure in order to locate the structure's floor. It was excavated in three 10-cm arbitrary levels, and the lowest level was truncated by a patchily plastered section of floor. The fill was screened through 1/4-inch mesh, and a flotation sample and pollen sample were collected from each level (PDs 7029, 7030, and 7031).

A 1-by-1-m control unit (Test Pit 7044) was placed just west of an adobe wall discovered in the southern end of the structure. The adobe wall was thought to be part of the intrusive Feature 235 pit structure. Test Pit 7044 was placed in this area to determine the depth of the fill from Feature 235, and it was found that less than 3 cm remained. The rest of the fill from this unit was original to Feature 373. The unit was excavated in two 10-cm arbitrary levels, and the fill was screened through 1/4-inch mesh. A flotation sample and pollen sample were collected from each level (PDs 7045 and 7046).

A second 2-by-1-m control unit (Test Pit 7121) was placed at the entry juncture. Two 10-cm arbitrary levels were excavated, and the fill was screened through 1/4-inch mesh. A flotation sample and pollen sample were collected from each level (PDs 7122 and 7123).

The remaining house fill was excavated in two arbitrary levels in each of two units (Halves 1 and 2). The upper level of each unit was mechanically excavated with a backhoe to within 10 cm of the floor. This level was not screened, but observed artifacts were collected. The lower level of each unit was manually excavated to the floor, and the fill was screened through 1/4-inch mesh. A flotation sample was collected from the lower level of each unit (PDs 7069 and 7077), and a composite pollen sample was scraped from the floor exposed in Half 1 (PD 7069). A fragment of a deer pelvis (PD 7206) was point provenienced near the base of the lower level of Half 1. The fill remaining in the entryway after the excavation of Test Pit 7121 was removed as part of Half 1.

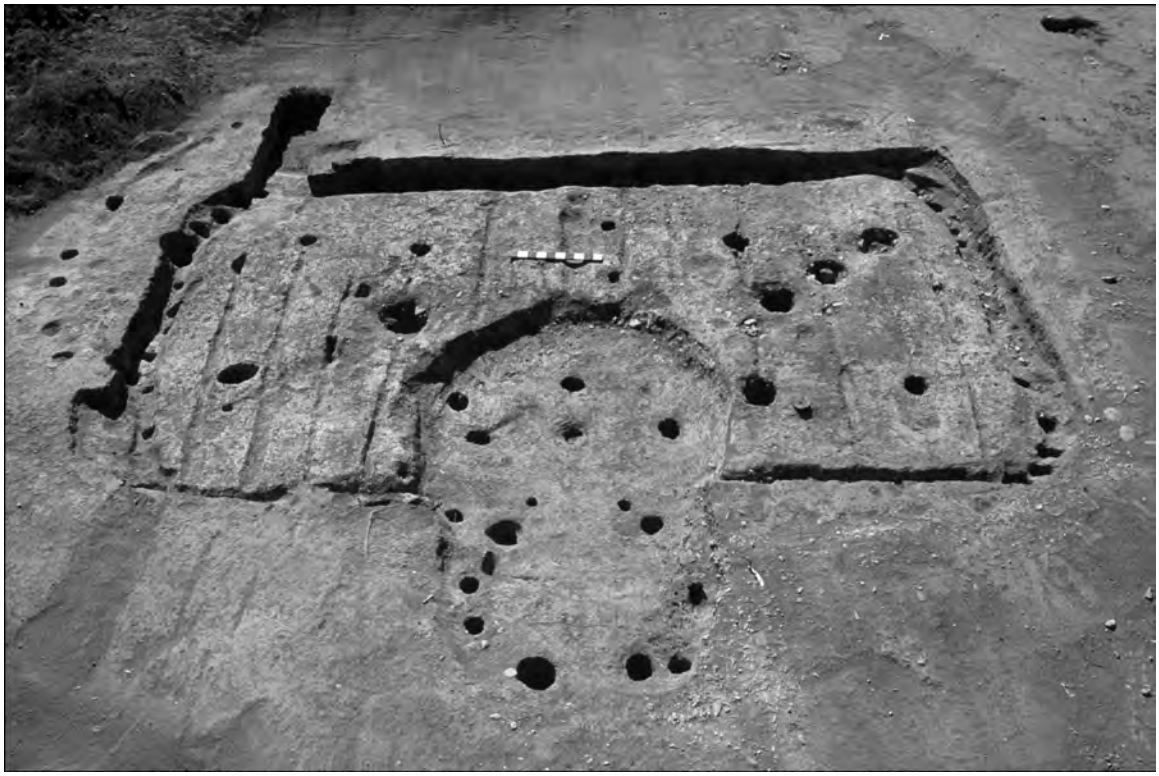

Figure B.16. Plan view of Feature 379, looking west.

The exposure of the floor revealed a number of floor features, including a hearth and recessed hearth area, 1 perimeter floor groove, 12 interior floor grooves, 1 intramural pit, 1 charred entry sill plank, 2 central-support posts, and 152 interior and perimeter postholes. The perimeter and interior floor grooves and the individual postholes were excavated separately, and the fill was screened through 1/4-inch mesh. A charred post was collected from 1 of the postholes (Subfeature 28) for botanical analysis (PD 7258). Point-provenienced pollen samples (PDs 7406 and 7409) were collected from the base of 2 postholes (Subfeatures 83 and 84), composite pollen samples (PDs 7406 and 7408) were recovered from the fill of these 2 postholes, and a flotation sample (PD 7408) was collected from 1 of them (Subfeature 84). The intramural pit was excavated in a single 1/4-inch-screened level. A flotation sample (PD 7378) was collected from the pit's fill, and a pollen sample (PD 7381) was scraped from its base. The entire fill from the hearth was collected as a flotation sample (PD 7399), a pollen sample (PD 7420) was recovered from its base, and an archaeomagnetic sample (SRI 2424) was collected from its plastered walls. The charred entry sill plank (PD 7389) was collected and submitted for dendrochronological analysis. One metate fragment (PD 7325) was recovered from the floor at the southern edge of the house, and a pollen sample (PD 7326) was collected from beneath it.

Finally, the recessed hearth area was excavated in a single 1/4-inch-screened level, exposing an unburnt, packed soil floor. A flotation sample (PD 7397) was collected from the fill of this subfeature. Two composite pollen samples were scraped from the exposed floor (PDs 7400 and 7401).

Stratigraphy

Between 20 and 35 cm of highly compacted gravelly silts and sands covered the structure. Many of these sediments were deposited over the structure during ADOT staging activities associated with the construction of the Marsh Station Interchange. The house pit was dug into a moderately developed calcic paleosol (Stratum IV). This paleosol consisted of a firm, pale brown silt loam that exhibited medium to coarse subangular blocky structure and Stage I–II $CaCO_3$ development (Birkeland 1999:Table A1.5). It contained numerous small (less than 3 cm) subrounded gravels, fine to medium rootlets, and insect castes.

A loose, light brownish gray, charcoal-laden and ash-stained silty sand filled the house pit and covered the remains of the collapsed structure. Charcoal fragments, ash pockets, and burnt sediments were common, and numerous fragments of oxidized daub were encountered. Structural debris, including large pieces of charcoal, was common in the last 5 cm of fill. Artifact density throughout the fill was moderate to high and decreased noticeably with depth.

Disturbances

Past ADOT staging activities had removed the upper part of the house-pit walls and fill. Trench 234 cut into the southwest corner of the structure, removing the floor groove in this area and possibly a few postholes as well. Several large roots extended beneath the floor, and rodent and insect burrows were present throughout the structure. Construction of a later pit structure (Feature 235) truncated the southwestern corner of Feature 379 and removed portions of the upper fill.

Construction Details

The structure was subrectangular in plan view, and the entry opened to the east (Figure B.17). The house pit measured 9.80 m north–south by 5.78 m east–west, had a floor area of 34.69 m^2, and had a remaining pit depth of 42 cm. Both pairs of walls were straight and parallel, and the corners were sharply curved. Feature 379 was the largest structure identified during the project and the only structure identified in Locus C that opened to the east (see Figure 57).

Walls and Roof

A perimeter floor groove (Subfeature 2) marked the extent of the structure's floor. The floor groove was 20–40 cm wide and 15–30 cm deep. It had parallel walls and a rounded base and was cut into the calcic subsoil. The fill consisted of brownish gray sands and silts and contained charcoal flecks, small gravels and several artifacts.

A series of 124 perimeter postholes (Subfeatures 3–27, 32–40, 59, 64–71, 78, 80, 87, 92–120, and 122–170) were located within or along the perimeter floor groove. They were staggered 2 or 3 deep in some places, particularly along the north and south walls. The outermost postholes in these areas were usually small and constructed at an angle, suggesting that they provided added wall support from the exterior of the structure. The postholes along the west wall, on the other hand, tended to be very large and were staggered along the inner and outer edge of the floor groove. At least 6 of the perimeter postholes were intruded by adjacent postholes, suggesting that they had been replaced at some point during the use of the structure. The majority of these pairs occurred along the south wall (see Figure B.17. Charred post segments remained in 14 of the postholes along the north, east, and west walls (Table B.11). The perimeter postholes ranged in size from 7 to 46 cm in diameter and 8 to 52 cm in depth (see Table B.11).

A pair of central-support postholes (Subfeatures 55 and 58) were located along the midline of the structure on either side of the recessed hearth area (see Figure B.17. Charred post segments remained in both of these postholes, and they extended over 65 cm below the floor. Twelve additional postholes (Subfeatures 53, 54, 56, 57, 60, 61, 63, 72, 73, 76, 77, and 121) were scattered throughout the interior of the structure and may have provided added roof support. They ranged in size from 10 to 45 cm in diameter and 15 to 45 cm in depth (see Table B.11). Most of these interior postholes were constructed next to or through an interior floor groove.

Entry

This structure had a protruding jacal entryway (Subfeature 1) with roughly parallel sides. It measured 2.18 m long and 2.09 m wide and was located at the midline of the east wall. An earthen step supported by a split juniper plank sill (Subfeature 79) was located at the entry juncture (Figure B.18). Beyond the step, the entry floor ramped upwards to the east and showed no evidence of burning or of having been lined. Ten postholes (Subfeatures 28–31, 62, 74, 85, 86, 90, and 91) were encountered in the entrance pit and likely supported the walls of an entry corridor. They ranged in size from 9 to 33 cm in diameter and 12 to 50 cm in depth (see Table B.11). A charred post segment remained in one of these postholes (Subfeature 28). The fill consisted of light brownish gray sands and silts with large chunks of charcoal and several artifacts.

Recessed Hearth Area

The recessed hearth area (Subfeature 81) was a circular pit in front of the entryway that measured about 2.5 m in diameter and extended 27 cm below the surrounding house floor. As with the main house pit, this area was dug into the native calcic paleosol. The structure's hearth (Subfeature 82; see below) was located in the center of this feature. The walls and floor of the recessed hearth area were unlined, and no evidence of blackening or oxidation was observed. The fill from the recessed hearth area was a darker grayish brown than that of the general structure, and it was replete with small charcoal and oxidized daub fragments.

Three postholes (Subfeatures 83, 84, and 88) surrounded the hearth to its west, north, and south, respectively (see Figure B.17). This same posthole arrangement appears to be a common trait in recessed-hearth-style houses at the site. A fourth posthole (Subfeature 89) was located to the west of the southern posthole and may have served as a replacement or as added roof support. These four postholes ranged in size from 18 to 24 cm in diameter and 24 to 31 cm in depth (see Table B.11).

Floor

Originally, Feature 379 may have had an elevated floor. This is suggested by the discovery of a series of 12 latitudinal floor grooves (Subfeatures 41–52) evenly distributed across the base of the house pit (see Figure B.17). The

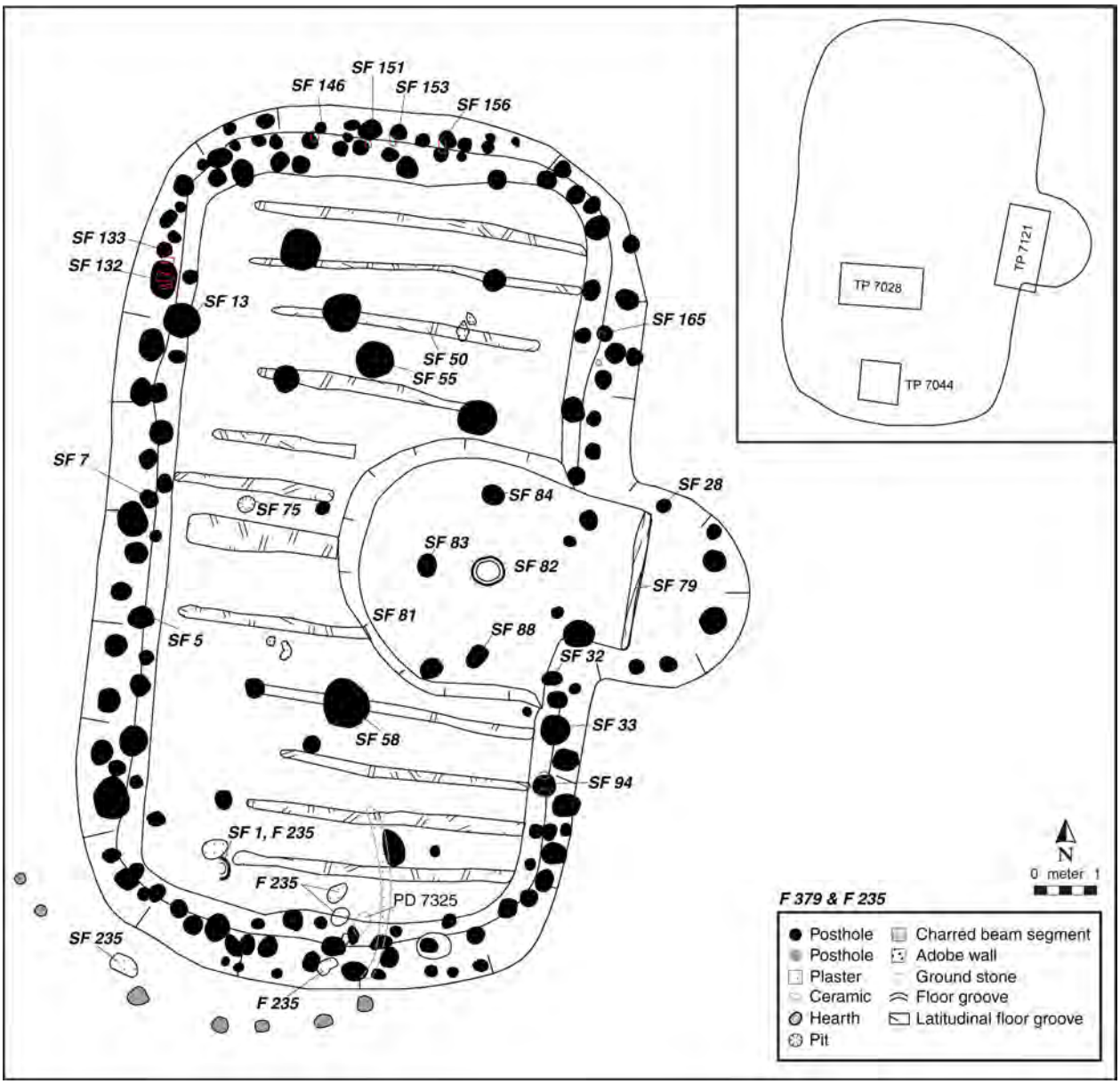

Figure B.17. Plan map of Features 379 and 235 showing the location of floor features.

Table B.11. Feature 379 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Charred Post	Type
3	7208	25	24	33	no	P
4	7210	14	14	18	no	P
5	7212	25	20	32	yes	P
6	7214	10	12	11	no	P
7	7216	20	20	27	yes	P
8	7218	20	17	28	no	P
9	7220	20	24	26	no	P
10	7222	23	25	40	no	P
11	7224	20	23	23	no	P
12	7226	16	14	13	no	P

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Charred Post	Type
13	7228	39	39	52	yes	P
14	7230	14	15	22	no	P
15	7232	16	17	15	no	P
16	7234	25	21	15	no	P
17	7236	20	24	20	no	P
18	7238	14	18	14	no	P
19	7240	17	20	19	no	P
20	7242	10	23	20	no	P
21	7244	21	20	24	no	P
22	7246	23	15	24	no	P
23	7248	15	22	17	no	P
24	7250	24	26	30	no	P
25	7252	22	17	18	no	P
26	7254	26	26	30	no	P
27	7256	19	18	45	yes	P
28	7258	33	21	42	yes	E
29	7260	16	17	30	no	E
30	7262	18	20	30	no	E
31	7264	18	17	50	no	E
32	7266	18	17	23	yes	P
33	7268	28	28	40	yes	P
34	7270	17	12	20	no	P
35	7272	14	14	17	no	P
36	7274	25	23	17	no	P
37	7276	15	16	16	no	P
38	7278	11	12	10	no	P
39	7280	12	12	12	no	P
40	7282	20	22	29	no	P
53	7308	45	40	15	no	I
54	7310	45	40	35	no	I
55	7312	39	37	85	yes	C
56	7314	24	23	28	no	I
57	7316	35	35	45	no	I
58	7318	48	46	68	yes	C
59	7320	14	12	13	no	P
60	7322	21	20	31	no	I
61	7324	29	28	40	no	I
62	7343	29	28	30	no	E
63	7345	40	28	21	no	I
64	7347	16	10	9	no	P
65	7349	27	22	25	no	P
66	7351	20	19	27	no	P
67	7353	19	18	23	no	P
68	7355	24	20	13	no	P
69	7357	16	16	20	no	P
70	7359	12	12	10	no	P
71	7361	30	30	20	no	P
72	7363	18	16	31	no	I
73	7374	14	14	15	no	I

continued on next page

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Charred Post	Type
74	7376	23	21	25	no	E
76	7383	14	12	18	no	I
77	7385	10	10	17	no	I
78	7387	22	23	21	no	P
80	7391	15	15	10	no	P
83	7405	24	20	31	no	R
84	7408	22	21	30	no	R
85	7411	20	18	33	no	E
86	7413	33	32	28	no	E
87	7415	10	10	13	no	P
88	7417	24	18	27	no	R
89	7419	24	20	24	no	R
90	7451	10	9	12	no	E
91	7453	12	12	12	no	E
92	11,002	9	8	13	no	P
93	11,004	26	23	31	no	P
94	11,006	21	20	36	yes	P
95	11,008	31	26	45	no	P
96	11,010	17	15	17	no	P
97	11,012	13	9	11	no	P
98	11,014	24	24	41	no	P
99	11,016	23	17	22	no	P
100	11,018	16	16	16	no	P
101	11,020	20	16	20	no	P
102	11,022	9	9	14	no	P
103	11,024	11	7	12	no	P
104	11,026	13	13	21	no	P
105	11,028	37	29	33	no	P
106	11,030	16	13	23	no	P
107	11,032	25	16	17	no	P
108	11,034	17	17	17	no	P
109	11,036	29	18	31	no	P
110	11,038	26	16	28	no	P
111	11,040	22	18	27	no	P
112	11,042	9	7	18	no	P
113	11,044	23	21	25	no	P
114	11,046	19	14	27	no	P
115	11,048	10	7	11	no	P
116	11,050	10	9	8	no	P
117	11,052	30	22	20	no	P
118	11,054	21	20	21	no	P
119	11,056	11	11	23	no	P
120	11,058	22	12	14	no	P
121	11,060	19	17	20	no	I
122	11,062	37	34	28	no	P
123	11,064	18	18	15	no	P
124	11,066	27	22	42	no	P
125	11,068	23	22	26	no	P
126	11,070	24	21	29	no	P
127	11,072	19	19	18	no	P

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Charred Post	Type
128	11,074	27	22	28	no	P
129	11,076	32	24	30	no	P
130	11,078	46	30	39	no	P
131	11,080	24	36	39	no	P
132	11,082	40	27	48	yes	P
133	11,084	18	14	25	yes	P
134	11,086	14	14	15	no	P
135	11,088	20	14	25	no	P
136	11,090	11	8	9	no	P
137	11,092	21	19	26	no	P
138	11,094	12	9	10	no	P
139	11,096	28	27	26	no	P
140	11,098	14	13	14	no	P
141	11,100	16	13	18	no	P
142	11,102	17	18	19	no	P
143	11,104	16	10	11	no	P
144	11,106	21	20	25	no	P
145	11,108	24	18	17	no	P
146	11,110	12	11	9	yes	P
147	11,112	17	16	15	no	P
148	11,114	19	12	9	no	P
149	11,116	9	9	8	no	P
150	11,118	18	17	13	no	P
151	11,120	25	25	18	yes	P
152	11,122	21	13	10	no	P
153	11,124	16	13	8	yes	P
154	11,126	13	12	12	no	P
155	11,128	16	15	11	no	P
156	11,130	17	15	13	yes	P
157	11,132	10	9	11	no	P
158	11,134	14	11	12	no	P
159	11,136	13	13	10	no	P
160	11,138	11	8	10	no	P
161	11,140	10	9	9	no	P
162	11,142	16	14	13	no	P
163	11,144	20	13	15	no	P
164	11,146	24	23	36	no	P
165	11,148	15	15	24	yes	P
166	11,150	23	20	32	no	P
167	11,152	20	15	19	no	P
168	11,154	19	17	31	no	P
169	11,156	18	13	36	no	P
170	11,158	15	15	27	no	P

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation; R = recessed-hearth-area posthole.

Figure B.18. Photograph of Subfeature 79, a burnt, split, juniper plank entry sill in Feature 379.

floor grooves ran roughly east–west, were 7–25 cm wide and 2–11 cm deep, and had irregular and slightly concave bottoms (Table B.12). They likely supported wooden joists that were used to support a raised floor, but no portion of these joists was found.

At some point, the elevated floor was removed, and a plaster surface was applied to the packed soil subfloor. This is indicated by the spotty occurrence of floor plaster throughout the structure and, in particular, by a small patch of plaster that extended over one of the floor grooves (Subfeature 50; see Figure B.17). It is likely that the floor joists were removed and the exposed grooves were intentionally backfilled before plastering. The plastered floor had an area of 34.69 m^2, as defined by the interior edge of the floor groove. It showed no evidence of burning.

Floor Features

Hearths

A deep, basin-shaped hearth (Subfeature 82) was discovered in the center of the recessed area. It was 22 cm in diameter and 18 cm deep, and it was filled with dark brown ashy silts. Grayish brown caliche plaster lined the hearth and formed a thick collar around the opening.

Pits

A small bell-shaped pit (Subfeature 75) was situated near the midline of the west wall (see Figure B.17). The opening of this pit was 18 cm in diameter, and the pit was 32 cm deep. The pit was dug into the native calcic paleosol, and its walls were unlined and unburnt. Sediments filling the pit consisted of loose, dark brown ash-stained silts. Dispersed charcoal flecks and few ceramic sherds were present in the fill.

Artifacts

A metate fragment (PD 7325) was located on the floor along the south wall of the house. No other artifacts were recovered from sealed or primary contexts.

Evidence for Remodeling

The presence of superimposed perimeter postholes along the south, east, and west walls of the structure indicates that at least some remodeling of the walls occurred during the use of this structure. Additionally, the presence of plaster over one of the interior floor grooves suggests that the structure's floor was altered from an elevated wooden floor to plastered surface floor.

Table B.12. Feature 379 Interior Floor-Groove Data

Subfeature No.	PD No.	Length (m)	Maximum Width (cm)	Maximum Depth (cm)
41	7284	2.75	11	3
42	7286	3.00	12	4
43	7288	2.10	12	5
44	7290	1.70	25	11
45	7292	1.58	12	3
46	7294	3.15	20	5
47	7296	3.08	14	4
48	7298	1.75	12	3
49	7300	2.28	10	4
50	7302	2.97	12	5
51	7304	3.75	7	2
52	7306	3.70	12	3

Key: PD = provenience designation.

Abandonment Processes

Given that only one artifact was found in direct contact with the floor, the structure most likely was cleaned out before it was abandoned. It burned at some point during or after abandonment, as indicated by the charred entry sill and 17 charred post segments. The resulting depression then filled with a mixture of naturally deposited colluvial sediments and domestic trash.

Associated, Intrusive, or Superimposed Features

A later structure (Feature 235) was built over the southwest corner of Feature 379, truncating its walls and upper fill (see Figure B.17). An unexcavated pit (Feature 6084) was intruded by the northwest corner of Feature 379.

Chronology

One archaeomagnetic sample (SRI 2424) was collected from the structure's hearth (Subfeature 82). It produced date range options of A.D. 1010–1140 and A.D. 1160–1265. The earlier option is supported by painted ceramics recovered from the house fill, which included Rincon Red-on-brown and Rincon Black-on-brown sherds from the Tucson Basin, locally produced Dragoon Red-on-brown sherds, and Sacaton Red-on-buff from the Salt/Gila Basin. Although these ceramic sherds clearly postdate the occupation of Feature 379, they provide an estimated temporal range for when the structure may have fallen out of use. The combined production ranges for these recovered ceramic types indicate that this structure was abandoned at some point between A.D. 950 and 1150. Finally, four sections from the burnt juniper entry sill (Subfeature 79) were submitted for dendrochronological analysis; however, they could not be dated against existing tree-ring chronologies. Therefore, the best temporal estimate for the abandonment of this structure is provided by the earlier archaeomagnetic date option: A.D. 1010–1140.

Locus C, Feature 235

Center of feature UTMs: N 3538645.31, E 541534.88
Architectural type: pit structure (adobe-walled)
Date range: A.D. 1160–1450
House dimensions (minimum): 4.05 by 2.68 m; pit depth 0.03 m
Entryway dimensions: unknown
Shape: ovate or subrectangular
Orientation: unknown
Internal features: 1 hearth and 7 postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: intruded Feature 379

This ovate or subrectangular pit structure was built over the southwest corner of Feature 379, a house-in-a-pit (see Figure B.16). Feature 235 was very shallow, and it was difficult to distinguish it from the fill of the underlying pit structure. It was delineated by a partially preserved adobe wall that formed the eastern edge of the structure and a line of seven postholes (Subfeatures 2–8) that indicated the location of the southern wall. Sparse patches of caliche plaster indicated the location of the floor, and a shallow, plaster-lined hearth (Subfeature 1) was the only floor feature discovered. No evidence of the north or west wall or of the entryway was encountered.

Excavation Methods

This structure was discovered initially during Phase 1 testing when the hearth was exposed in Trench 234. It was re-exposed during Phase 2 mechanical excavation of Stripping Unit 5190 and initially identified by a partially preserved, 10–15-cm-thick adobe wall. The profile of Trench 234 indicated that only 2–3 cm of sediment remained in the structure. A 1-by-1-m control unit (Test Pit 7044) was placed along the western edge of the adobe wall during the excavation of Feature 379 in order to verify that very little fill remained from Feature 235. All artifacts recovered from this control unit were assigned to Feature 379.

The remaining fill in Feature 235 was manually excavated in a single 1/4-inch-screened level, and a flotation sample was collected (PD 7117). Excavation stopped with the exposure of several small patches of caliche plaster, which were interpreted as the remnants of the floor.

No artifacts were found in direct contact with the floor. Seven postholes were identified, and they formed the southern edge of the structure. Each posthole was excavated as a separate unit, and the fill was screened through 1/4-inch mesh. The remaining hearth fill was collected as a flotation sample (PD 7102), and an archaeomagnetic sample (SRI 2370) was collected from its walls and base. No other floor features were located.

Stratigraphy

Up to 30 cm of highly compacted gravelly silts and sands covered the structure. Many of these sediments were deposited over the structure during ADOT staging activities associated with the construction of the Marsh Station Interchange. The shallow house pit was dug into the dark brownish gray fill of a pit structure (Feature 379). Only 2–3 cm of fill remained from Feature 235, and it consisted of loose brown silts and sands. Artifact density was low, and these sediments contained few charcoal flecks. No cultural or natural strata were apparent.

Disturbances

ADOT staging activities or road construction had scraped off an unknown portion of the top of the house pit. Given the shallowness of the structure, mechanical stripping of Stripping Unit 5190 may have removed some of the remaining house fill as well. The western half of the hearth was removed by Trench 234. Other disturbances included several medium to large roots and numerous insect burrows.

Construction Details

It was unclear whether the structure was ovate or subrectangular in plan view (see Figure B.17). It was at least 4.05 m east–west by 2.68 m north–south. The south and east walls were slightly rounded; the west and north walls could not be defined.

Walls and Roof

No central-support postholes were discovered, but seven perimeter postholes (Subfeatures 2–8) formed the southern wall. They ranged in size from 13 to 20 cm in diameter and 4 to 13 cm in depth (Table B.13). A 10–15 cm thick adobe wall formed the eastern wall of the structure. This wall was likely constructed to shore up the loose fill of Feature 379.

Entry

No evidence of an entryway was preserved. The continuous series of postholes forming the south wall and the solid adobe wall on the east suggest that the entry opened to the north or west.

Floor

The floor consisted of a patchily preserved caliche plaster layer. In the parts of the structure that overlapped Feature 379, this plaster was applied directly over the trash-laden fill. It was applied over the native calcic subsoil in the rest of the house.

Table B.13. Feature 235 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)
2	7104	13	13	6
3	7106	13	13	4
4	7108	25	20	13
5	7110	18	18	13
6	7112	17	16	11
7	7114	20	17	11
8	7116	19	16	8

Key: PD = provenience designation.

Floor Features

Hearths

A shallow, basin-shaped, and plaster-lined hearth (Subfeature 1) was exposed in Trench 234. The western half of this hearth had been removed when the trench was excavated during Phase 1 testing. The partially preserved circular hearth basin was 20 cm in diameter and 4 cm deep, and it was filled with ashy sands and silts. A light brownish gray caliche plaster lined the hearth, and up to 15 cm of the sediments surrounding the hearth were oxidized red (see Figure B.17).

Artifacts

No artifacts were discovered in direct contact with the floor or from any other sealed or primary context in the structure.

Evidence for Remodeling

No evidence for remodeling was encountered.

Abandonment Processes

No evidence of burning was encountered, and no artifacts were discovered in direct contact with the floor. The structure most likely was cleaned out before it was abandoned. The remaining wall posts may have been salvaged for use in other parts of the site. The depression formed by the house pit filled with colluvium sediments, and the low artifact density suggests that it was not used as a trash dump by later occupants.

Associated, Intrusive, or Superimposed Features

This structure was constructed over the southwest corner of Feature 379, a house-in-a-pit. No features were intrusive to Feature 235.

Chronology

An archaeomagnetic sample (SRI 2370) was collected from the hearth and returned the date range options of A.D. 935–1090 and A.D. 1160–1690. Given that this structure must postdate Feature 379, which had a date range of A.D. 1010–1140, the second date option, A.D. 1160–1690, appears to be a better estimate of when Feature 235 was abandoned.

Locus C, Features 995 and 6129

The eastern end of Locus C was distinguished by a pair of abutting pit structures that opened to the north (Figure B.19; see Figure 57). Feature 995, the earlier of the two houses, was one of several structures at the Mescal Wash site with a distinctive recessed hearth area adjoining the entryway. The end of this structure's entryway was truncated by the back wall of Feature 6129, the later structure in the two-feature complex. Although Feature 6129 did not have a recessed hearth area, a few important similarities existed between the two houses. Both structures were oriented in the same direction, were about the same size and shape, and contained similar floor features, including a large, bell-shaped storage pit and a distinct arrangement of postholes surrounding the hearth. These similarities suggest that Feature 995 may have provided the architectural template for the construction of the later structure and that the houses were likely built and occupied within a short period of time, perhaps by the same group of people.

Locus C, Feature 995

Center of feature UTMs: N 3538653.14, E 541566.49
Architectural type: house-in-a-pit, recessed hearth
Date range: A.D. 935–1100
House dimensions: 6.01 by 3.33 m; pit depth 0.26 m; floor area 12.83 m^2
Entryway dimensions (minimum): 2.56 by 1.74 m
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 1 recessed hearth area, 1 floor groove, 2 central-support postholes, 36 interior and perimeter postholes, and 1 intramural pit
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PDs 8459, 8463, 9336, 9374, and 9406
Related features: intruded by Features 6129, 6119, 9409, and 9410

Feature 995 was a subrectangular house-in-a-pit that was completely excavated during Phase 2 (Figure B.20). The structure contained a number of floor features (Figure B.21), including 1 round, plaster-lined hearth (Subfeature 1) located in the center of a recessed hearth area (Subfeature 2), 1 perimeter floor groove (Subfeature 4), 2 central-support postholes (Subfeatures 5 and 6), and 36 interior and perimeter postholes (Subfeatures 8–43). The western end of the house was dominated by a large, deep, bell-shaped pit (Subfeature 7) that most likely was used for storage.

Figure B.19. Plan view of abutting Features 995 and 1629, looking south.

Figure B.20. Plan view of Feature 995, looking south.

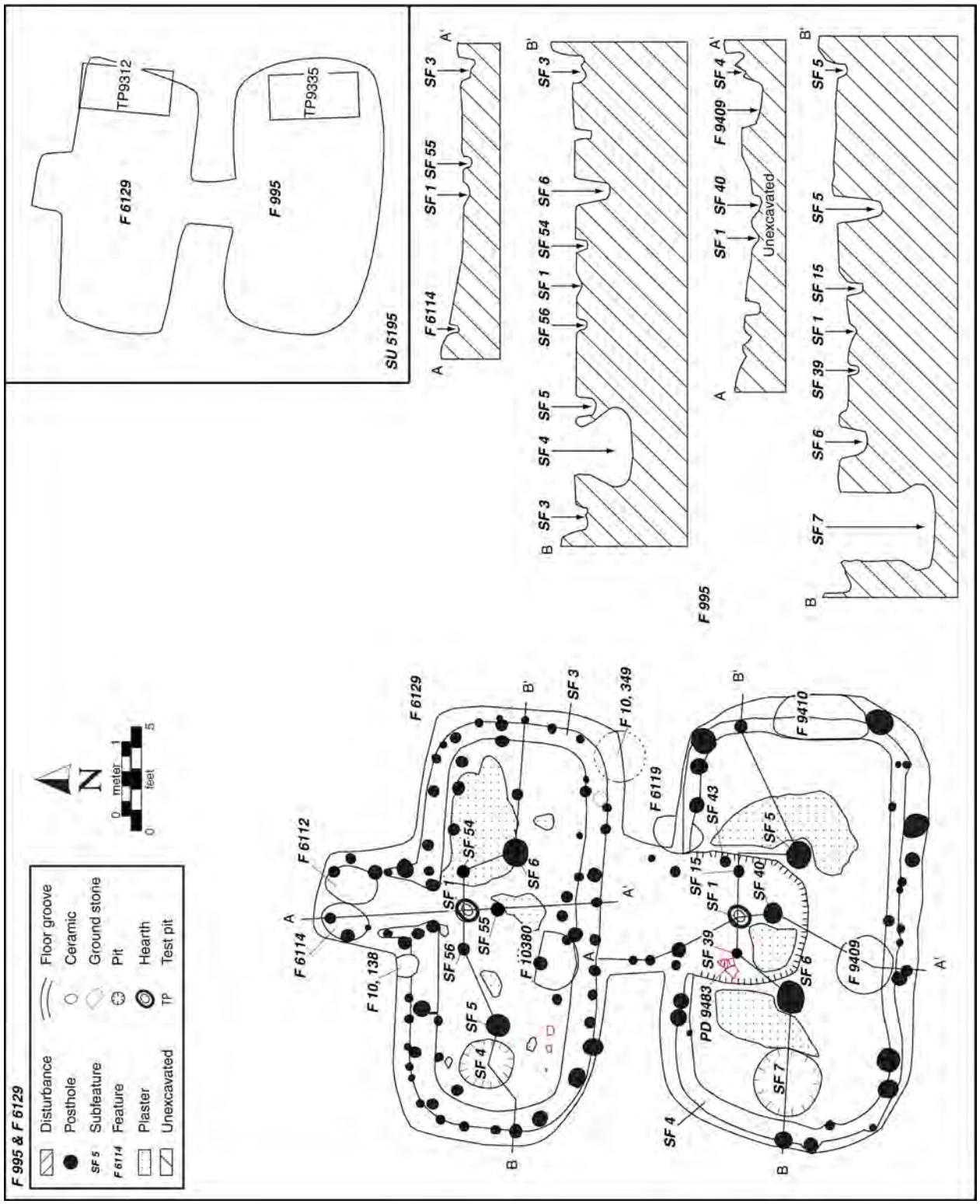

Figure B.21. Plan map of Features 995 and 6129 showing the location of floor features and intrusive features.

The floor of the house was covered with gray, caliche plaster that was fire-blackened in some areas. A partially reconstructible Dragoon Elaborated Red-on-brown vessel (PD 9483; Vessel No. 44) was found resting on the floor. Two roasting pits (Features 6119 and 9409) and a burial (Feature 9410) intruded the structure. A later structure (Feature 6129) truncated this structure's entryway. Feature 995 apparently had burned as evidenced by the blackened floor and the abundance of charred construction material found in the house fill.

Excavation Methods

Feature 995 was horizontally exposed during Phase 2 excavation of Stripping Unit 5195. The western three-fourths of the structure was mechanically excavated to within a few centimeters of the floor (Half 1). Artifacts observed during the mechanical excavation were collected, but the fill was not screened. Then a 2-by-1-m control unit (Test Pit 9335) was placed at the eastern end of the structure and hand-excavated to the floor in two 10-cm arbitrary levels. The fill was screened through 1/4-inch mesh, and a flotation sample was collected from each level (PDs 9336 and 9337). The rest of the fill in the eastern quarter of the house was excavated to within a few centimeters of the floor (Half 2). Observed artifacts from this unit were collected, but the fill was not screened.

The remaining 1–3 cm of fill in Halves 1 and 2 were excavated to the floor as a single, unscreened unit. Observed artifacts were collected during excavation, but no other samples were recovered. The sediment filling the entryway was excavated as a separate unit (Subfeature 3) and screened through 1/4-inch mesh. Few artifacts were recovered, and no other samples were taken.

Once the house floor was exposed, subfeatures were defined and excavated, including 1 hearth, 1 recessed hearth area, 1 intramural pit, 1 floor groove, and 38 postholes. The floor groove and individual postholes were excavated in separate units, and the fill was 1/4-inch screened. A botanical sample (PD 9444) was collected from one of the postholes (Subfeature 24). The intramural pit was excavated in two 1/4-inch-screened levels, and a flotation sample was collected from each level (PDs 9385 and 9403). A pollen sample was scraped from its base (PD 9406). The entire fill of the hearth was removed as a flotation sample (PD 8459), a pollen sample was scraped from its base (PD 8463), and an archaeomagnetic sample was collected from its walls (SRI 2432).

Finally, the recessed hearth area was excavated in a single 1/4-inch-screened level. A flotation sample (PD 9372) was collected from the fill, and a composite pollen sample (PD 8462) was scraped from the floor around the hearth. A partially reconstructible Dragoon Elaborated Red-on-brown vessel (PD 9483; Vessel No. 44) was found in contact with the floor, and a pollen sample (PD 9374) was collected from beneath it.

Stratigraphy

The house pit originally was dug into the native calcic paleosol (Stratum IV). This paleosol consisted of a soft, pale brown silt loam that exhibited a fine to medium subangular blocky structure and Stage I–II $CaCO_3$ development (Birkeland 1999:Table A1.5). The fill from the house pit was massive and consisted of light grayish brown sands and silts. This deposit included numerous oxidized adobe fragments, dispersed charcoal flecks and ash pockets; however, few artifacts were noted. The fill appeared homogeneous, and no natural or cultural levels were visible. Artifact density was low to moderate and decreased with depth. No differences were observed between the sediments filling the general structure and those filling the subfeatures of the house.

Disturbances

The front edge of the entryway was removed by the back wall of pit structure Feature 6129. Additionally, portions of the structure's walls and fill were removed by the construction of two intrusive roasting pits (Features 6119 and 9409) and an inhumation (Feature 9410). The walls, floor. and subfeatures displayed only minor damage from root, rodent, and insect activity.

Construction Details

Feature 995 was a subrectangular house-in-a-pit that opened to the north (see Figure B.21). The house pit measured 6.01 m east–west by 3.33 m north–south and had a remaining pit depth of 26 cm. The floor, as measured by the interior edge of the floor groove, had an area of 12.83 m^2. This structure was characterized by a circular, recessed hearth area adjoining the entryway.

Walls and Roof

The pit walls consisted of the native, sterile subsoil into which the house pit was originally excavated. A perimeter floor groove (Subfeature 4) delimited the house floor and was 10–20 cm wide and less than 10 cm deep. It had nearly vertical walls and a flat base.

Twenty-six perimeter postholes (Subfeatures 8–14 and 16–34) were spaced at variable intervals within and along the interior and exterior of the floor groove, but they were notably absent from the northwest corner of the house.

They ranged in size from 7 to 35 cm in diameter and were 6–33 cm deep (Table B.14). A pair of central-support postholes (Subfeatures 5 and 6) were located along the midline of the structure and extended at least 40 cm below the house floor.

Entry

A slightly ramped, bulbous entryway (Subfeature 3) protruded from the north wall of the structure. The northern portion of this subfeature had been truncated by the back wall of Feature 6129. As preserved, the entryway measured 1.74 m wide and 2.56 m long, with a gently ramped floor and nearly vertical walls. The entry floor and walls showed no evidence of burning or of a plaster lining. Six postholes (Subfeatures 35–38, 41, and 42) were encountered in the entrance pit and likely supported the walls of an entry corridor. They ranged in size from 8 to 14 cm in diameter and 4 to 20 cm in depth (see Table B.14).

Recessed Hearth Area

The recessed hearth area (Subfeature 2) was a circular pit in front of the entryway that measured about 1.7 m in diameter and extended 16 cm below the surrounding house floor. As with the main house pit, this area was dug into the native calcic paleosol. The structure's hearth (Subfeature 1; see below) was located in the center of this feature. The walls and floor of the recessed area were unlined and blackened from fire. Three postholes (Subfeatures 15, 39, and 40) surrounded the hearth to the east, south, and west (see Figure B.21). They were 11–23 cm in diameter and 11–19 cm in depth (see Table B.14). This same hearth-posthole pattern was found in the other recessed hearth-style houses at the site and in Feature 6129, the overlapping structure immediately to the north. A fourth posthole (Subfeature 43) was located just to the north of the eastern posthole and may have served as a reinforcement post.

Floor

The floor of the structure, as defined by the interior edge of the floor groove, had an area of 12.83 m^2. It consisted of a poorly preserved layer of caliche plaster applied directly to the native calcic subsoil. Portions of the floor appeared oxidized and fire-blackened, particularly around the recessed hearth area.

Floor Features

Hearths

An ovate, basin-shaped hearth (Subfeature 1) occupied the center of the recessed hearth area. It was 25 cm long, 17 cm wide, and 9 cm deep. The hearth had been plastered, but its walls were friable and the plaster was poorly preserved. The pit walls showed heavy oxidation where plaster was not present. A 6–10-cm-wide apron of oxidized sediment surrounded the hearth pit on the floor of the house. The hearth fill consisted of homogenous dark brown sands and silts with a high density of ash and charcoal flecks and some subrounded gravels.

Pits

One extremely large, bell-shaped pit (Subfeature 7) was located along the western wall of the structure (Figure B.22). It measured 0.90 m in diameter at the opening and was 1.30 m deep. The shape of the pit was akin to a beaker: the upper walls were cylindrical, whereas the lower walls flared or bell-shaped slightly outward to more than 1.15 m in diameter. The base of the pit was nearly flat. The pit was not lined and did not exhibit evidence of burning. The fill consisted of loose, grayish brown silts and sands that surrounded numerous alluvial gravels and cobbles, carbonate root casts, charcoal flecks, and artifacts. Artifact density declined with depth and primarily consisted of ceramics. The pit truncated two natural strata: an upper argillic soil and lower gravel bed.

Artifacts

A partially reconstructible Dragoon Elaborated Red-on-brown vessel (PD 9483; Vessel No. 44) was found on the floor along the west side of the recessed hearth area. This was the only artifact found in contact with the house floor or in any other sealed or primary context within the structure.

Evidence for Remodeling

There is no evidence that Feature 995 was remodeled.

Abandonment Processes

The oxidized floor and burnt adobe fragments found throughout the structure combined with the general lack of a floor assemblage suggest that this structure had intentionally or accidently burned at some point during or after abandonment. Subsequently, the house pit filled with a mixture of naturally deposited colluvial sediments and domestic trash.

Table B.14. Feature 995 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
5	9381	35	30	50	C
6	9383	31	37	40	C
8	9412	18	18	17	P
9	9414	20	20	15	P
10	9416	32	32	15	P
11	9418	15	15	10	P
12	9420	35	33	20	P
13	9422	13	13	15	P
14	9424	7	7	6	P
15	9426	21	16	18	R
16	9428	8	8	14	P
17	9430	30	25	24	P
18	9432	17	15	12	P
19	9434	8	7	15	P
20	9436	8	7	11	P
21	9438	15	14	17	P
22	9440	10	10	20	P
23	9442	15	13	16	P
24	9444	12	10	18	P
25	9446	19	14	12	P
26	9448	28	26	19	P
27	9450	25	21	15	P
28	9452	17	15	17	P
29	9454	20	19	10	P
30	9456	16	16	27	P
31	9458	20	19	33	P
32	9460	11	10	15	P
33	9462	20	20	20	P
34	9464	20	17	10	P
35	9466	8	8	5	E
36	9468	13	10	13	E
37	9470	10	10	12	E
38	9472	14	13	20	E
39	9474	13	11	19	R
40	9476	23	23	11	R
41	9478	9	8	4	E
42	9480	14	14	20	E
43	9482	16	14	17	R

Key: C = central-support posthole; E = entryway posthole; P = perimeter posthole; PD = provenience designation; R = recessed-hearth-area posthole.

Figure B.22. A large intramural pit (Subfeature 7) in Feature 995, looking east.

Associated, Intrusive, or Superimposed Features

Two roasting pits and a burial were intrusive to Feature 995 (see Figure B.21). One of the roasting pits (Feature 6119) was located adjacent to the entry and truncated a small section of the pit wall and floor groove. The other roasting pit (Feature 9409) removed a section of the floor and the floor groove along the south wall of the house. The burial (Feature 9410) was an extended inhumation that had removed a section of the floor groove along the eastern wall of the structure. The northern end of the structure's entryway was removed by the back wall of Feature 6129, the overlapping pit structure located immediately to the north.

Chronology

An archaeomagnetic sample (SRI 2432) was collected from the hearth; however, it was too imprecise to be dated. The presence of a partially reconstructible Dragoon Elaborated Red-on-brown vessel on the floor suggests that this structure was occupied between A.D. 935 and 1100.

Locus C, Feature 6129

Center of feature UTMs: N 3538656.91, E 541566.55
Architectural type: house-in-a-pit
Date range: A.D. 935–1015
House dimensions: 5.54 by 2.79 m; pit depth 0.25 m; floor area 8.58 m^2
Entryway dimensions: 1.64 by 1.32 m; floor area 0.97 m^2
Shape: subrectangular
Orientation: north
Internal features: 3 hearths, 1 floor groove, 2 central-support postholes, 70 interior and perimeter postholes, and 1 intramural pit
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PDs 8448 and 10,128
Related features: abutted Feature 995, superimposed Feature 10,380, and intruded by Features 6112, 6114, 6115, and 10,138

Feature 6129 was a subrectangular house-in-a-pit with a north-facing entry (Figure B.23). The house contained several floor features, including three stacked hearths (Subfeatures 1, 77, and 78), numerous postholes (Subfeatures 5–76), one wide floor groove (Subfeature 3),

Figure B.23. Plan view of Feature 6129, looking east.

and one large bell-shaped storage pit (Subfeature 4). The floor of the house was plastered and blackened, and the abundant charred structural debris in the house fill suggests that the structure had burned. The back wall of this feature truncated Feature 995, a house with a recessed hearth area. It was intruded by two unexcavated pits (Features 6112 and 6115), a roasting pit (Feature 6114), and a secondary pit cremation (Feature 10,138) and it superimposed a fire pit (Feature 10,380).

Excavation Methods

Feature 6129 was discovered in Stripping Unit 5195 during Phase 2. Excavation began with the mechanical removal of the fill in the western three-fourths of the structure (Half 1) to within a few centimeters of the floor. Observed artifacts were collected, but the fill was not screened. A 2-by-1-m control unit (Test Pit 9312) was then placed along the eastern end of the house and excavated to the floor in two 10-cm levels. The fill from the control unit was screened through 1/4-inch mesh, and a flotation sample was collected from each level (PDs 9313 and 9314). A composite pollen sample was scraped from the exposed floor (PD 9334).

The remaining 1–3 cm of structure fill was excavated as a single, unscreened unit. A flotation sample was collected from the fill (PD 10,100), and a composite pollen sample (PD 8447) was scraped from the floor area around the hearths. Sediment filling the entryway was removed separately as a single unit (Subfeature 2) and level. The fill was screened through 1/4-inch mesh, and no samples were collected.

Once the house floor was exposed, individual floor features were defined and excavated, including 3 stacked hearths, 1 floor groove, 1 storage pit, and 72 postholes. The floor groove and individual postholes were excavated separately in single levels, and the fill was screened through 1/4-inch mesh. The contents of the uppermost hearth (Subfeature 1) were collected as a flotation sample (PD 8444), a pollen sample (PD 8448) was collected from its base, and an archaeomagnetic sample (SRI 2396) was collected from its plastered walls. A second archaeomagnetic sample (SRI 2397) was collected from the walls of the lowest of the 3 stacked hearths (Subfeatures 78). The intramural pit was excavated in a single level, and the fill was screened through 1/4-inch mesh. A flotation sample (PD 10,111) was collected from the lower part of the pit fill, and a pollen sample (PD 10,128) was scraped from its base. Five sherds (PDs 10,346, 10,347, and 10,360) were point located on the floor's surface.

Stratigraphy

The house pit was originally dug into the native calcic paleosol (Stratum IV). This paleosol consisted of a soft, pale brown silt loam that exhibited fine to medium

subangular blocky structure and Stage I–II $CaCO_3$ development (Birkeland 1999:Table A1.5). Two strata were recognized in the fill of the house. The upper fill consisted of postabandonment trash deposits mixed with windblown silts and sands. Small gravels, charcoal flecks, and artifacts were present in the upper fill. This layer was 10–15 cm thick.

The lower fill was distinguished from the upper fill by the presence of structural debris. This was a 10-cm layer of dark brown silt and sand that contained a large amount of burnt charcoal and adobe. Artifact density was noticeably lower in this strata. This deposit represented the burning and collapse of the roof onto the house floor.

Disturbances

Roots, rodents, and insects had slightly damaged parts of the wall, floor, and floor features of the house. In addition, Feature 6129 was impacted by a number of later features that removed portions of the entryway, pit walls, and floor groove, including an unexcavated pit (Feature 6115), a roasting pit (Feature 6114), the debris from the roasting pit (Features 6112), and a secondary pit cremation (Feature 10,138).

Construction Details

Feature 6129 was subrectangular in plan view with a vestibule entryway that protruded from the north wall of the structure (see Figure B.21). The house pit measured 5.54 m east–west by 2.79 m north–south and had a remaining pit depth of 0.25 m. The structure had a floor area of 8.58 m^2 as delimited by the floor groove.

Walls and Roof

As preserved, the pit walls measured 25 cm in height and consisted of the unmodified native subsoil. The pit walls sloped down and met the floor at the floor groove (Subfeature 3). The floor groove was a 30-cm-wide trench encircling the floor that had sloping walls and a flat base. It extended approximately 15 cm below the house floor and acted as a footer for the walls. It also extended into the southern part of the entryway. The fill consisted of reddish brown silts and sands, gravels, and a few artifacts.

Sixty-five perimeter postholes were identified (Subfeatures 7–26, 39–52, 57, 59–61, and 64–76) that, along with the floor groove, originally supported the walls of the house. The perimeter postholes ranged in size from 8 to 24 cm in diameter and 4 to 40 cm in depth (Table B.15). Sixteen of the postholes were located along the interior edge of the floor groove, and 49 of them were located along its exterior edge (see Figure B.21).

Two central-support postholes (Subfeatures 5 and 6) were located along the midline of the structure and extended over 30 cm below the floor (see Table B.15). Three interior postholes (Subfeatures 54–56) were located immediately to the east, south, and west of the hearth (see Figure B.21). This hearth-posthole pattern was usually found in pit structures with recessed hearth areas, including the abutting pit structure to the south (Feature 995). Two additional interior postholes (Subfeatures 53 and 58) may have been used for roof reinforcement.

Entry

A rectangular entryway (Subfeature 2) protruded from the center of the northern pit wall. The floor of the entry ramped up and out of the structure for 1.22 m, and it may originally have been plastered, as evidenced by a possible layer of disintegrating caliche plaster. Short, narrow segments of the floor groove extended into the entry and defined the opening, which was about 45 cm in width. Fourteen postholes (Subfeatures 27–38, 62, and 63) were located along the edges of the pit and likely supported walls of an entry corridor. They ranged in size from 7 to 25 cm in diameter and 10 to 30 cm in depth (see Table B.15). An intrusive roasting pit (Feature 6114) truncated the floor of this feature. The entry fill was similar to the lower strata of house fill and consisted of dark brown sands and silts with small gravels, carbonate nodules, charcoal, and a few artifacts.

Floor

Originally, the floor of the house was plastered. A thin layer of caliche plaster was preserved in small areas throughout the house, including the entry, but was exceptionally well preserved in the northeast corner of the structure (see Figure B.21). In this area, plaster was observed around several of the interior postholes. The floor had an area of 8.58 m^2, as measured from the innermost edge of the floor groove. No evidence of burning or oxidation was observed on the floor.

Floor Features

Hearths

This structure contained three nested hearths (Subfeatures 1, 77, and 78) located in front of the entryway (Figure B.24). The original hearth (Subfeature 78) was large and ovate, measuring around 30 cm long and 20 cm wide. It was later partially filled with sterile sediments, which created a smaller, more circular pit. This second hearth (Subfeature 77) was 18 cm long, 15 cm wide, and 10 cm deep. The third, and most recent, of the nested hearths (Subfeature 1) appears to represent a replastering episode of the second hearth. This most recent hearth was plaster-lined, basin-shaped and had the remnants of a plastered apron. The

Table B.15. Feature 6129 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
5	10,145	40	35	42	C
6	10,147	27	25	30	C
7	10,149	16	16	8	P
8	10,151	11	10	10	P
9	10,153	12	11	23	P
10	10,155	13	10	4	P
11	10,157	17	16	21	P
12	10,159	13	10	28	P
13	10,161	9	9	10	P
14	10,163	12	12	10	P
15	10,165	22	18	40	P
16	10,167	24	19	19	P
17	10,169	18	18	32	P
18	10,171	17	15	20	P
19	10,173	12	9	17	P
20	10,175	12	11	21	P
21	10,177	12	12	12	P
22	10,179	14	13	13	P
23	10,181	13	12	24	P
24	10,183	13	10	15	P
25	10,185	13	13	21	P
26	10,187	20	17	14	P
27	10,189	16	13	17	E
28	10,191	17	13	18	E
29	10,193	18	17	16	E
30	10,195	12	10	18	E
31	10,197	16	16	22	E
32	10,199	14	13	17	E
33	10,201	15	14	25	E
34	10,203	12	11	23	E
35	10,205	18	17	17	E
36	10,207	8	8	17	E
37	10,209	25	18	30	E
38	10,211	14	11	10	E
39	10,213	15	14	6	P
40	10,215	14	14	22	P
41	10,217	14	14	8	P
42	10,219	15	13	18	P
43	10,221	15	15	18	P
44	10,223	14	14	22	P
45	10,225	11	10	21	P
46	10,227	9	8	17	P
47	10,229	9	9	16	P
48	10,231	14	10	19	P
49	10,233	10	10	20	P
50	10,235	19	13	10	P
51	10,237	17	13	20	P
52	10,239	12	11	27	P
53	10,241	14	12	23	I
54	10,243	15	14	16	I
55	10,245	17	17	13	I
56	10,247	15	14	16	I
57	10,351	10	10	18	P

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
58	10,353	16	15	20	I
59	10,355	13	13	9	P
60	10,357	12	14	18	P
61	10,359	8	8	10	P
62	10,364	17	13	15	E
63	10,366	8	7	14	E
64	10,387	9	9	11	P
65	10,422	10	10	20	P
66	10,424	8	8	13	P
67	10,426	8	8	16	P
68	10,428	10	9	20	P
69	10,430	10	10	20	P
70	10,432	10	9	24	P
71	10,434	12	10	25	P
72	10,436	10	10	20	P
73	10,438	16	15	23	P
74	10,440	10	9	26	P
75	10,442	11	10	24	P
76	10,444	11	10	20	P

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.

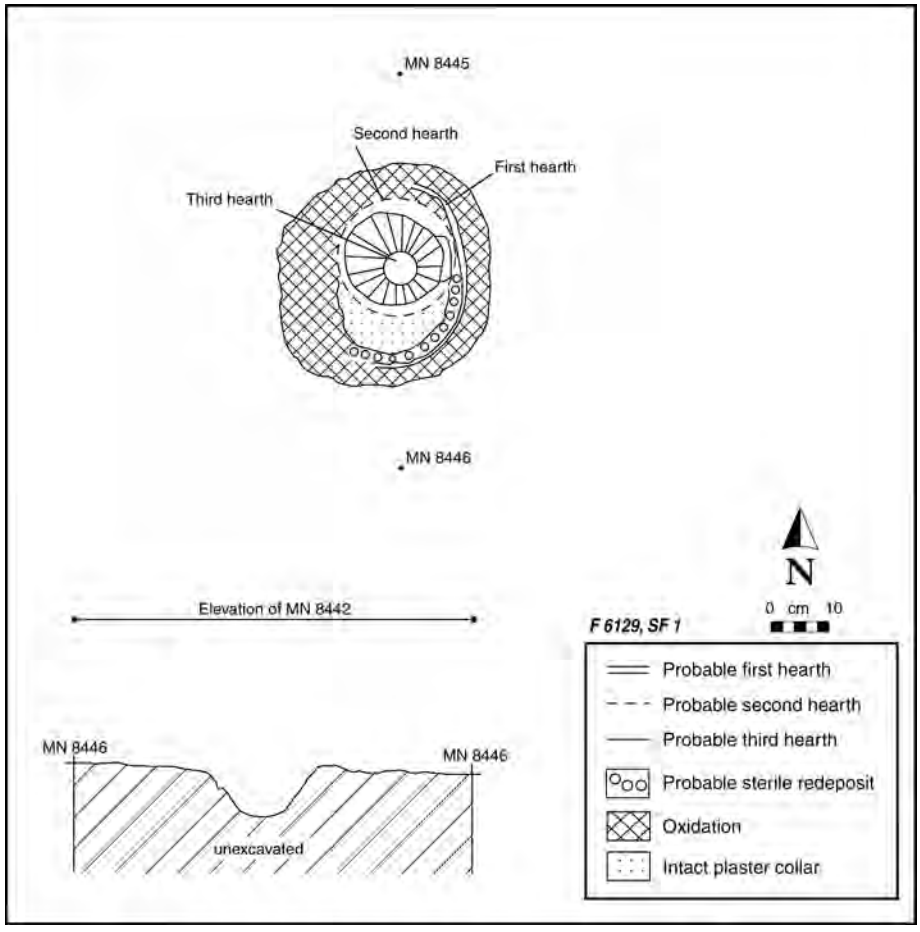

Figure B.24. Plan map of the three nested hearths (Subfeatures 1, 77, and 78) located in Feature 6129.

fill consisted of mottled light and dark brown silty loams with oxidized sediments, charcoal, and ash.

Pits

A large, bell-shaped storage pit (Subfeature 4) was located in the west-central part of the structure, approximately 20 cm east of the floor groove (Figure B.25). Circular in plan view, the opening of the pit was about 70 cm in diameter. The pit was over 1 m wide toward the bottom and reached a depth of 75 cm below the house floor. The base of the pit extended into a Pleistocene channel deposit. The fill consisted of loose, brown to reddish brown silts and sands, along with numerous gravels, cobbles, charcoal flecks, and only a few artifacts. Thin lenses of silt found in contact with the base of the pit may have been the remnants of a lining. The lack of structural debris in the fill suggests that the sediments accumulated inside the pit before the structure burned. This may suggest that the pit was intentionally backfilled before the house was abandoned.

Artifacts

Five ceramic sherds were found in contact with the floor, including four plain ware sherds (PDs 10,347 and 10,360) and a Dragoon Fine Red-on-brown sherd (PD 10,346). They were located along the back wall near the southwestern corner of the house (see Figure B.21). No other floor artifacts were encountered. A trough metate fragment (PD 10,348) recovered from the house fill in the southeast corner was point provenienced.

Evidence for Remodeling

The best evidence for remodeling is the three nested hearths located in front of the entryway. Clearly, this structure was used long enough to warrant the restructuring and relining of the hearth on two separate occasions. Furthermore, the presence of floor plaster over a subfloor pit could be evidence for remodeling during the use of the structure. No other clear evidence for structural remodeling was discovered.

Abandonment Processes

Few artifacts remained on the floor of the house when it was abandoned. The bell-shaped storage pit appears to have been backfilled before the abandonment of the structure. At some point during or after abandonment and after the storage pit was backfilled, the structure intentionally or accidently burned. Subsequently, the abandoned house pit was filled with a mixture of naturally deposited colluvial sediments and domestic trash.

Associated, Intrusive, or Superimposed Features

Feature 6129 was intruded by an unexcavated pit (Feature 6115), a roasting pit (Feature 6114), the debris from the roasting pit (Feature 6112), and a secondary pit cremation (Feature 10,138). It also intruded into an abutting structure and superimposed a fire pit. Feature 6115 was a small unexcavated pit that cut into the southeast corner of the house. Feature 6114 was a small roasting pit that truncated the entry to Feature 6129. The feature was surrounded by ash, charcoal, and fire-cracked rock, which were likely debris from the roasting pit. Feature 6112 was an area of burnt debris located to the east of the roasting pit and was likely an associated clean-out area. Feature 10,138 was a small, secondary pit cremation located at the southwest corner of the entryway. It removed a small portion of the house pit wall and some of the upper fill.

The back wall of Feature 6129 truncated the northern part of the entry of Feature 995, a recessed hearth-style pit structure immediately to the south. Feature 10,380 was a shallow, unlined, basin-shaped fire pit located along the floor groove of Feature 6129. This pit either predated Feature 6129 or was used during the occupation of the house but was backfilled and floored over at some point. Remnants of floor plaster were found capping the pit, and one of the perimeter postholes (Subfeature 58) was excavated into it.

Chronology

Two archaeomagnetic samples were collected from the remodeled hearth. The sample (SRI 2397) collected from the lowest hearth episode (Subfeature 78) returned archaeomagnetic date range options of A.D. 635–665, A.D. 935–1015, and A.D. 1310–1690. The sample (SRI 2396) from the uppermost hearth (Subfeature 1) returned the fairly anomalous date range options of A.D. 585–690, A.D. 1535–1590, and A.D. 1760–1815. Given the architectural style and ceramics recovered from the structure, it is likely that the A.D. 935–1015 date range from the lower hearth most closely estimates the age of the structure. This is supported in part by the recovery of a Dragoon Fine Red-on-brown sherd from the structure's floor, which has a production date range of A.D. 700–950.

Locus C, Features 6098 and 7461

It was typical at Mescal Wash for a house-in-a-pit to be built immediately in front of a structure with a recessed

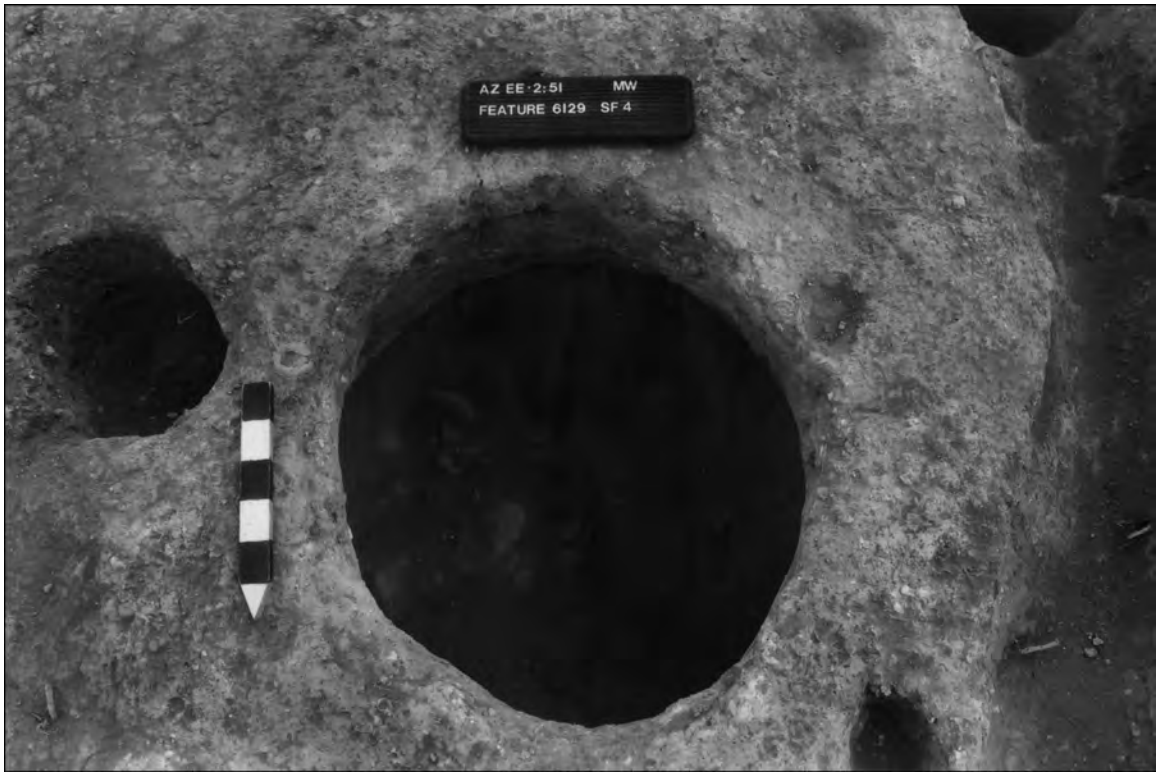

Figure B.25. An intramural pit (Subfeature 4) in Feature 6129.

hearth area shortly after it was abandoned. The architectural similarities between the construction episodes strongly suggests that the same people who built the recessed hearth structures also built the later structures in front of them. Features 6098 and 7461 represent one such house pair.

Locus C, Feature 6098

Center of feature UTMs: N 3538659.97, E 541545.87
Architectural type: house-in-a-pit, recessed hearth
Date range: A.D. 935–1015
House dimensions: 8.10 by 4.83 m; pit depth 0.13 m; floor area 26.17 m^2
Entryway dimensions: unknown
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 1 recessed hearth area, 1 perimeter floor groove, 2 interior floor grooves, 2 central-support postholes, 85 interior and perimeter postholes, and 1 intramural pit
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PDs 7449, 9301, 9356, and 9363
Related features: intruded by Features 7330, 7457, 7458, 7461, 9327, 9328, and 10,141

Feature 6098 was a subrectangular house-in-a-pit that had a distinctive recessed area (Subfeature 2) surrounding the hearth (Figure B.26). It opened to the north and contained a number of floor features, including 1 hearth (Subfeature 1), 1 intramural pit (Subfeature 74), 1 perimeter floor groove (Subfeature 14), 2 interior floor grooves (Subfeatures 81 and 82) and 87 postholes (Subfeatures 3–13, 15–73, 75–80, and 83–93). The discovery of charred posts and floor plaster indicated that the structure had burned catastrophically. Several cores and pecking stones (PDs 9259, 9262, and 9267), 1 tabular knife fragment (PD 9273), 1 possible pestle (PD 9277), and 1 stone palette (PD 8454) were recovered from the structure's floor surface (Table B.16). Two inhumations (Features 7457 and 7458), 1 dog burial (Feature 7330) and 3 extramural pits (Features 9327, 9328, and 10,141) intruded the house fill, and the front wall and entry of the structure had been truncated by a later pit structure (Feature 7461) built to the north.

Excavation Methods

Feature 6098 was exposed during Phase 2 mechanical stripping of Stripping Unit 5190. A 2-by-1-m balk was left along the center of the southern wall of the structure, and the rest of the fill was mechanically and manually

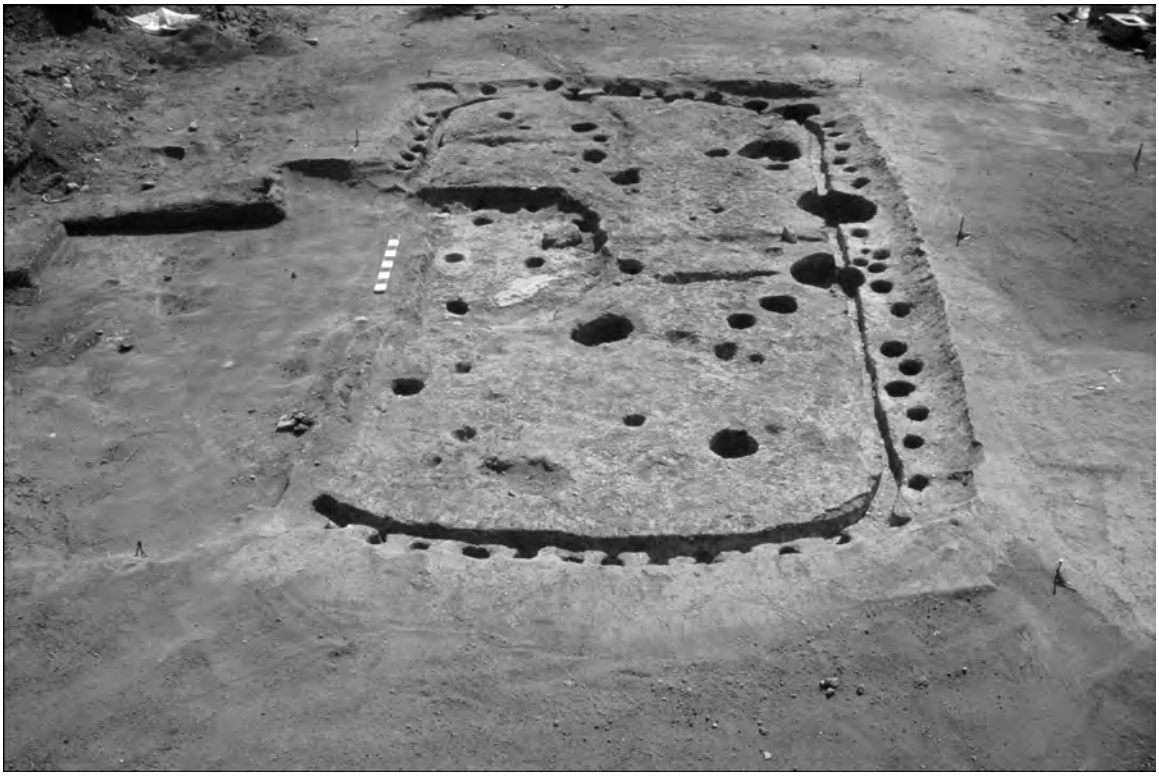

Figure B.26. Plan view of Feature 6098, looking west.

Table B.16. Feature 6098 Point-Located Floor Artifacts

PD No.	Artifact Description
8452	Mano fragment.
8453	Mano fragment.
8454	Schist palette.
9235	Charred deer or mountain-sheep mandible.
9257	Mano.
9258	Indeterminate netherstone fragment.
9259	Partial pecking stone (Catalog No. 468).
9260	Mano.
9261	Mano.
9262	Partial pecking stone/core (Catalog No. 527).
9263	Possible ground stone Not an artifact?
9264	One plain ware sherd.
9265	Hand stone.
9266	One piece of lithic debris.
9267	Core (Catalog No. 518).
9268	One indeterminate red-on-buff sherd.
9269	Cobble in latitudinal floor groove (Subfeature 82); not collected.
9270	Fine-grained metamorphic flake.
9271	Grinding slab.
9272	One plain ware sherd.
9273	Tabular knife fragment.
9274	Polishing stone.
9275	One red ware sherd.
9276	Mano.
9277	Mano.
9304	Mano fragment.

excavated to the floor in a single 3–18 cm level. The fill was not screened, but observed artifacts were collected.

A 2-by-1-m control unit (Test Pit 7447) was placed in the balk along the southern wall. It was excavated in two 10-cm, 1/4-inch-screened levels, and a flotation sample was collected from each level (PDs 7448 and 7449). It was excavated down to the poorly preserved floor of the structure, where a calcined deer mandible (PD 9235) was recovered. A possible stone riser (PD 9269) was discovered in the center of the test pit, just north of the deer mandible.

After the control unit was excavated, the floor was cleaned off with trowels, and the remaining fill was 1/4-inch screened. The exposure of the floor revealed a number of subfeatures, including 1 hearth and recessed hearth area, 1 perimeter floor groove, 2 interior floor grooves, 1 intramural pit, and 2 central-support postholes and 85 interior and perimeter postholes. The perimeter and interior floor grooves and the individual postholes were excavated separately, and the fill was screened through 1/4-inch mesh. An unburnt post segment (PD 9234) and a charred post segment (PD 9283) were collected for macrobotanical analysis from two of the postholes (Subfeatures 62 and 65, respectively). The intramural pit was excavated in a single 1/4-inch-screened level. A flotation sample (PD 9343) was collected from the pit's fill, and a pollen sample (PD 9356) was scraped from its base. The entire fill from the hearth was collected as a flotation sample (PD 7424), a pollen sample (PD 9363) was recovered from its base, and an archaeomagnetic sample (SRI 2428) was collected from its plastered walls. Two micromorph samples (PDs 10,961 and 10,962) were taken from the hearth's clay lining.

Finally, the recessed hearth area was excavated in a single 1/4-inch-screened level to reveal a burnt, caliche plaster-lined floor. A flotation sample (PD 7403) was collected from the fill of this subfeature. Two pollen samples were collected from sealed contexts on the floor: one (PD 9303) was collected from beneath a large chunk of burnt daub and the other (PD 9302) from beneath a large pestle (PD 9277). Three micromorph samples (PDs 10,963–10,965) were recovered from the floor of this area, and an archaeomagnetic sample (SRI 2429) was collected from its burnt plastered walls.

In addition, 25 artifacts (PDs 8452–8454, 9235, 9257–9276, and 9304) were discovered on the main house floor. They were point located and collected individually, and pollen samples (PDs 8455, 9300, 9301, and 9305) were recovered from under four of them (PDs 8454, 9257, 9258, and 9304, respectively). A micromorph sample (PD 10,966) was recovered from the structure's floor in an area southeast of the recessed hearth area. Finally, a pollen sample (PD 9357) was recovered from beneath a stone slab (PD 9358) that was lying on top of the intramural pit.

Stratigraphy

Up to 40 cm of highly compacted gravelly silts and sands covered the structure. Many of these sediments were deposited over the structure during ADOT staging activities associated with the construction of the Marsh Station Interchange. The house pit was dug into a moderately developed calcic paleosol (Stratum IV). This paleosol consisted of a firm, pale brown silty clay loam that exhibited a fine to medium subangular blocky structure and Stage I–II $CaCO_3$ development (Birkeland 1999:Table A1.5). It contained few fine to medium rootlets and small (less than 3 cm) subrounded gravels.

Dark brownish gray sands and silts filled the house pit and covered the remains of the collapsed structure. These sediments were mixed with small to medium-sized gravels, charcoal fragments, burnt daub, ash pockets, and artifacts. Structural debris, including large charcoal fragments and oxidized daub, was very common throughout the lower 10 cm of fill, although artifact density decreased with depth.

Disturbances

A later pit structure (Feature 7461) truncated the entryway and northern wall of Feature 6098. ADOT staging activities had truncated the top of the house pit. Several large roots extended beneath the floor and numerous rodent tunnels were present. Two inhumations, three extramural pits, and one dog burial impacted sections of the pit walls and floor and removed some of the house fill (Features 7330, 7457, 7458, 9327, 9328, and 10,141).

Construction Details

The structure was subrectangular in plan view and opened to the north (Figure B.27). The house pit measured 8.10 m east–west by 4.83 m north–south and had a remaining depth of 13 cm. The structure had a floor area of 26.17 m^2 as delimited by the floor groove. The north and south walls were straight and parallel, whereas the east and west walls were slightly rounded.

Walls and Roof

The pit walls consisted of the native calcic subsoil and sloped down to meet the outside edge of the perimeter floor groove (Subfeature 14). The interior edge of the floor groove marked the extent of the floor. It had parallel walls and a flat base and was 10 cm deep. The fill consisted of a brown silty loam with some charcoal and ash and few artifacts.

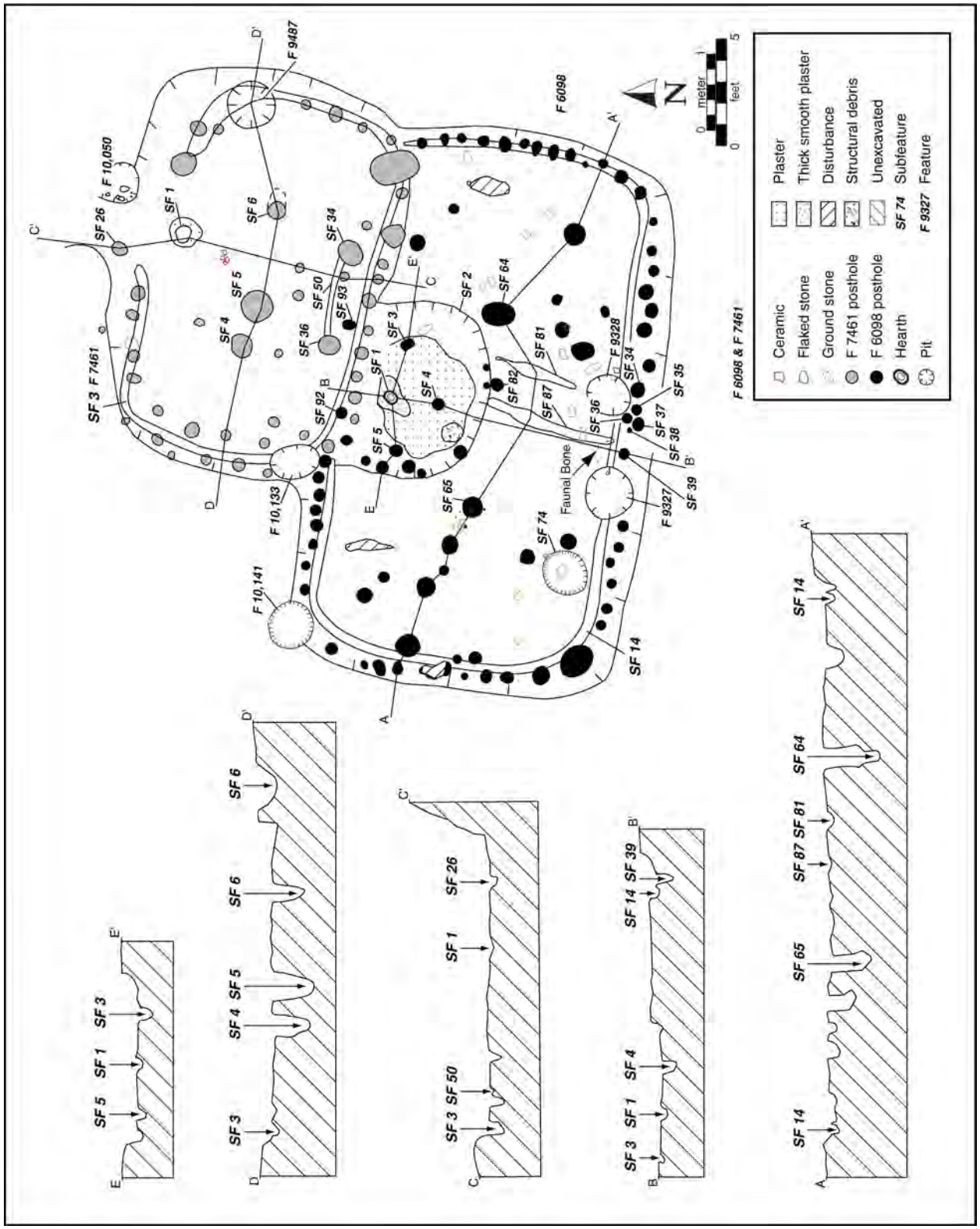

Figure B.27. Plan map of Features 6098 and 7461 showing the location of floor features and intrusive features.

Fifty-two perimeter postholes (Subfeatures 15–63, 80, 89, and 90) were located along the exterior edge of the floor groove, and three (Subfeatures 76–78) were located on the interior edge. Together, they were used to form and support the structure's walls. It is likely that additional postholes were located along the northeast section of the structure; however, this area was truncated by the back wall of Feature 7461 (see Figure B.27). Perimeter postholes ranged in size from 5 to 53 cm in diameter and 5 to 40 cm deep (Table B.17).

Two central-support postholes, located to the east (Subfeature 64) and west (Subfeature 65) of the hearth, were discovered near the structure's midline. They extended over 75 cm below the floor (see Table B.17). An additional 17 postholes (Subfeatures 66–75, 79, and 83–88) were scattered throughout the interior of the house, and some may have served as additional roof supports. One (Subfeature 87) was located just south of the recessed hearth area and may have acted to reinforce a wall or screen associated with this area. These interior postholes ranged in size from 12 to 32 cm in diameter and 10 to 44 cm in depth (see Table B.17).

Entry

This structure most likely had a protruding jacal entryway. However, it was completely removed by the back wall and floor of an intrusive structure (Feature 7461). Two postholes (Subfeatures 92 and 93) discovered during the excavation of Feature 7461 may have been located in the entryway. They were discovered in the center of the north wall of the structure, under the floor of intrusive Feature 7461 and in the likely location of the pit wall/entry juncture (see Figure B.27).

Recessed Hearth Area

The recessed hearth area (Subfeature 2) was a D-shaped pit located in front of the probable entryway (see Figure B.27). It measured approximately 2.6 m in diameter and extended 15–20 cm below the surrounding house floor. Originally, it may have been circular in plan, as in other structures at the site, but the northern edge was truncated by Feature 7461. The structure's hearth (Subfeature 1; see below) was located in the center of this pit. A thick layer of caliche plaster coated much of the floor, and where plaster was not preserved, the floor consisted of highly oxidized native calcic subsoil. The unlined walls of the pit were highly oxidized and blackened as well.

A series of nine postholes (Subfeatures 6–13, and 91) were located along the base of the pit walls. These postholes were limited to the south and west segments of the recessed area and may have supported beams used to construct an annular bench around the hearth. Alternatively, they may have supported a screen that separated the recessed area from the rest of the structure. Three additional postholes, located to the east (Subfeature 3), south (Subfeature 4), and west (Subfeature 5) of the hearth, were discovered in the recessed area as well (see Figure B.27). This same posthole pattern around the hearth was seen in other structures with recessed hearth areas.

Floor

The floor of the structure, as defined by the interior edge of the floor groove, had an area of 26.17 m^2. It consisted of the native calcic subsoil, and there is no evidence that the main floor of the structure was plastered. It also did not show the same level of oxidation and burning discovered in the recessed hearth area.

Floor Features

Hearths

A well-preserved, shallow, basin-shaped hearth (Subfeature 1) was located in the center of the recessed area. It was 17 cm in diameter and 9 cm deep, and it was filled with ashy sands and silts. Dark grayish brown caliche plaster lined the hearth and extended out beyond the rim to form a thick plaster apron (Figure B.28).

Pits

An intramural pit (Subfeature 74) was located near the southwestern corner of the structure (see Figure B.27). This pit was oval in plan view, with slightly bell-shaped walls and a concave base. It was 64 cm long, 60 cm wide, and 23 cm deep. The walls were unlined, and no evidence of burning was observed. Sediments filling the pit consisted of moderately compacted, brown, fine-grained sandy clay. A moderate amount of ash, dispersed charcoal flecks, and a few artifacts were present in the fill.

Other Floor Features

Two latitudinal floor grooves (Subfeatures 81 and 82) were discovered between the recessed area surrounding the hearth and the south wall of the structure (see Figure B.27). These grooves ran roughly north–south, were 5–10 cm deep, and had slightly concave bottoms. The western groove (Subfeature 82) extended south to the perimeter floor groove. The eastern groove (Subfeature 81) most likely had extended to the perimeter groove as well; however, it was truncated by an intrusive pit (Feature 9328). A peculiar clustering of six perimeter postholes (Subfeatures 34–39) was discovered between the southern termini of these two grooves (see Figure B.27) and may have been related to their function. A large stone (PD 9269) was embedded in the southern end of the western groove and, again, may have been related to its function.

The two floor grooves may have worked together to create a bench or small area of raised floor in the house. Alternatively, the perimeter postholes and floor grooves may have functioned together as supports for a wall or screen that divided the structure into east and west halves. It is also possible that one of the grooves replaced the other in a remodeling episode.

Table B.17. Feature 6098 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
3	7426	19	17	35	R
4	7428	18	16	26	R
5	7430	17	15	23	R
6	7432	13	10	12	R
7	7434	15	15	12	R
8	7436	15	15	23	R
9	7438	13	12	15	R
10	7440	17	17	21	R
11	7442	12	10	3	R
12	7444	9	9	2	R
13	7446	14	13	6	R
15	9140	16	16	20	P
16	9142	14	12	15	P
17	9144	11	11	21	P
18	9146	16	13	26	P
19	9148	15	12	26	P
20	9150	15	13	17	P
21	9152	15	12	21	P
22	9154	14	12	28	P
23	9156	14	17	23	P
24	9158	13	13	22	P
25	9160	15	13	18	P
26	9162	15	11	11	P
27	9164	15	12	18	P
28	9166	13	13	18	P
29	9168	16	16	25	P
30	9170	22	20	25	P
31	9172	18	17	24	P
32	9174	19	20	40	P
33	9176	36	18	26	P
34	9178	19	17	31	P
35	9180	15	5	29	P
36	9182	13	13	10	P
37	9184	15	16	30	P
38	9186	9	9	5	P
39	9188	17	17	34	P
40	9190	20	18	16	P
41	9192	14	14	17	P
42	9194	12	13	14	P
43	9196	14	14	21	P
44	9198	16	13	18	P
45	9200	13	12	21	P
46	9202	37	33	39	P
47	9204	21	19	21	P
48	9206	20	15	24	P
49	9208	10	10	20	P
50	9210	20	11	18	P
51	9212	15	15	18	P
52	9214	14	10	10	P

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
53	9216	18	15	20	P
54	9218	25	15	15	P
55	9220	11	11	18	P
56	9222	18	18	14	P
57	9224	16	12	19	P
58	9226	12	12	20	P
59	9228	15	12	24	P
60	9230	17	15	20	P
61	9232	15	15	26	P
62	9234	20	16	40	P
63	9279	8	7	20	P
64	9281	50	30	85	C
65	9283	26	20	75	C
66	9285	16	13	13	I
67	9287	28	28	24	I
68	9289	25	21	18	I
69	9291	15	17	10	I
70	9293	14	11	10	I
71	9295	15	13	10	I
72	9297	15	12	12	I
73	9299	32	29	20	I
75	9345	24	24	44	I
76	9347	38	31	13	P
77	9349	12	10	11	P
78	9351	16	15	9	P
79	9353	23	20	17	I
80	9355	53	44	26	P
83	9392	22	21	11	I
84	9394	16	13	12	I
85	9396	32	26	21	I
86	9398	22	21	19	I
87	9400	20	18	25	I
88	9402	24	22	21	I
89	10,116	18	17	22	P
90	10,118	20	17	26	P
91	10,120	15	13	11	R
92	10,122	14	14	7	E
93	10,124	21	21	37	E

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation; R = recessed-hearth-area posthole.

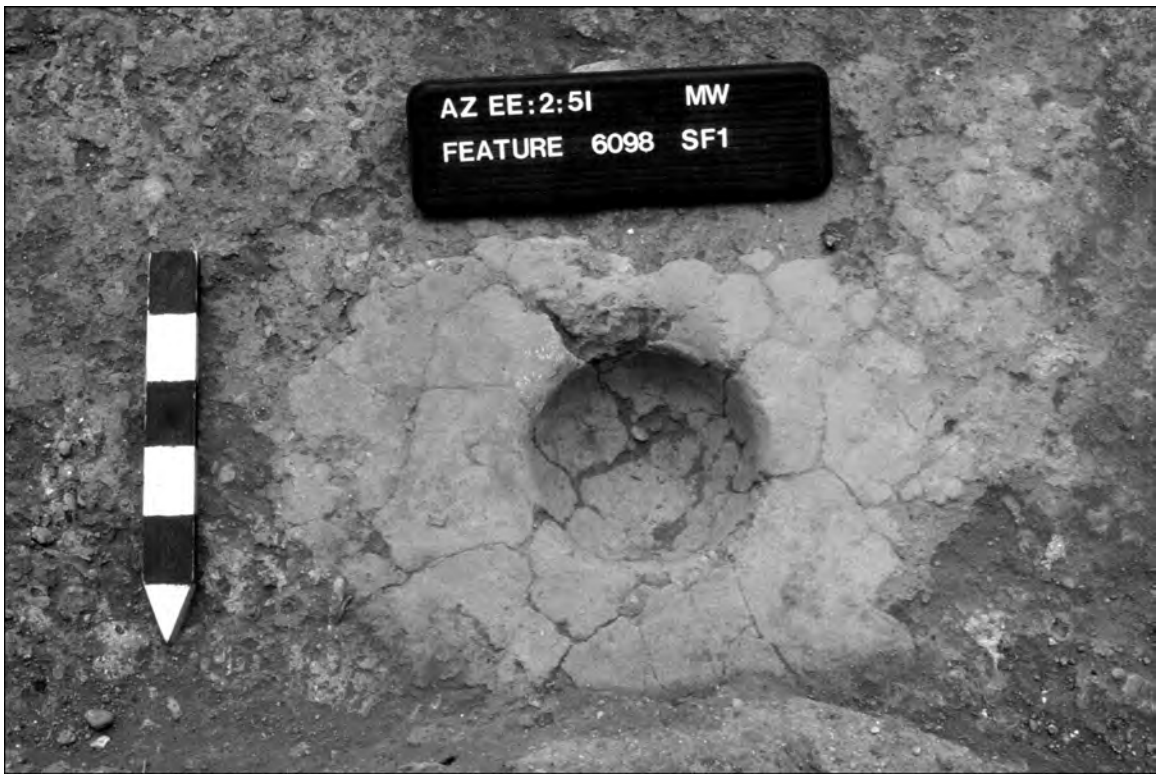

Figure B.28. The hearth (Subfeature 1) of Feature 6098.

Artifacts

A number of artifacts were recovered from the structure's floor (see Table B.16), including six manos (PDs 8452, 8453, 9257, 9265, 9276, and 9304), four sherds (PDs 9264, 9268, 9272, and 9275), three pecking stones or cores (PDs 9259, 9262, and 9267), one palette (PD 8454), one charred deer or mountain sheep mandible (PD 9235), one mano (PD 9277), one polishing stone (PD 9274), one tabular knife fragment (PD 9273), one flake (PD 9270), one piece of lithic debris (PD 9266), and four pieces of ground stone (PDs 9258, 9260, 9261, and 9271). A mano (PD 9277) was located on the floor of the recessed hearth area, and the rest of the artifacts were scattered around the main floor. A possibly shaped cobble (PD 9269) was sunk into the southern end of the western latitudinal floor groove (Subfeature 82), but it was not collected for analysis. In addition, five Dragoon Elaborated Red-on-brown sherds, two indeterminate Tucson Basin red-on-brown sherds, one indeterminate red-on-brown sherd, three plain ware sherds, one partial pecking stone/core (Catalog No. 469), three flakes, and three pieces of lithic debris were collected from the general-floor provenience (PD 7395). Finally, a partially reconstructible vessel (Vessel No. 13) that was painted in the style of a Tanque Verde Red-on-brown pot was recovered from the general-floor provenience (PD 7395).

Evidence for Remodeling

No significant evidence of remodeling was discovered in this structure. It is possible that some of the interior postholes represent later additions used to reinforce the roof. Similarly, the two latitudinal floor grooves may have replaced each other during a remodeling episode.

Abandonment Processes

Numerous charred post segments, oxidized masses of daub, the severe burning in the recessed hearth area, and the presence of an extensive floor assemblage indicate that the structure had burned catastrophically. A shallow depression likely existed after the structure collapsed. Sheetwash and airborne sediments later began to fill this depression, and the numerous artifacts encountered in the upper 10 cm of the fill suggest that later occupants of Locus C deposited trash in this depression.

Associated, Intrusive, or Superimposed Features

Two inhumations (Features 7457 and 7458) intruded the house fill and two extramural pits (Features 9327 and 9328) truncated the house floor. One of the inhumations (Feature 7457) was an adult buried in the supine position along the center segment of the back wall. The other (Feature 7458) was an infant buried in the flexed position in a small pit located in the southwest corner of the floor. The extramural pits were also located along the south wall. Additionally, a dog burial (Feature 7330) cut into the southwest corner of the house-pit wall. An unexcavated pit (Feature 10,141) cut into the northwest corner of the house pit.

A later house-in-a-pit (Feature 7461) was built immediately in front of this pit structure. The construction of Feature 7461 resulted in the removal of the entryway and most of the north wall of Feature 6098. This same construction sequence—replacement of a house-in-a-pit with recessed hearth area by a conventional house-in-a-pit—was also encountered during the excavation of Features 995 and 6129.

Chronology

One archaeomagnetic sample (SRI 2428) was collected from the hearth (Subfeature 1), and a second sample (SRI 2429) was collected from the burnt wall of the recessed hearth area (Subfeature 2). The sample from the hearth yielded date range options of A.D. 935–1015, A.D. 1235–1415, and A.D. 1535–1590. The sample from the burnt wall returned a date range of A.D. 1010–1190. These two samples yielded statistically different directions and, hence, different date range options. Both the first option from the hearth and the date range from the wall are possible, given the artifact assemblage recovered from the house. However, the date range returned from the wall seems too late, given the dating of the intrusive pit structure Feature 7461 (A.D. 935–1040). This places the abandonment of Feature 6098 at A.D. 935–1015.

Locus C, Feature 7461

Center of feature UTMs: N 3538663.19, E 541547.79
Architectural type: house-in-a-pit
Date range: A.D. 935–1040
House dimensions: 5.86 by 3.92 m; pit depth 0.19 m; floor area 14.28 m^2
Entryway dimensions (minimum): 1.57 by 1.66 m
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 1 perimeter floor groove, 1 latitudinal floor grove, 3 central-support postholes, and 43 interior and perimeter postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PDs 10,045, 10,095 10,061, and 10,125
Related features: intrusive to Feature 6098 and intruded by Features 9487, 10,050, 10,133, and 10,698

Feature 7461 was a subrectangular house-in-a-pit with a north-facing entry (Figure B.29). The structure contained a number of floor features, including 1 hearth (Subfeature 1), 1 perimeter floor groove (Subfeature 3), 3 central-support postholes (Subfeatures 4–6), 43 interior and perimeter postholes (Subfeatures 7–49), and 1 east–west trending latitudinal floor groove (Subfeature 50). The oxidized floor and presence of burnt structural debris indicate that the house had burned at some point during or after abandonment. It was built immediately to the north of the Feature 6098 pit structure, truncating the entryway and front wall of that structure. Two roasting pits (Features 9487 and 10,050) and a pit (Feature 10,133) intruded Feature 7461. A highly disturbed infant burial (Feature 10,698) was found near the north wall of the structure.

Excavation Methods

Feature 7461 was exposed during Phase 2 mechanical stripping of Stripping Unit 5190. A 2-by-1-m control unit (Test Pit 7462) was placed near the western wall of the structure. It was excavated in two 10-cm arbitrary levels, and the fill was screened through 1/4-inch mesh. A flotation sample was collected from each level (PDs 7463 and 7464). It was excavated down to the oxidized and plastered floor of the structure, where a pollen sample (PD 7471) was collected.

The remaining fill was manually excavated as a single unit in two levels. The upper level was not screened, but observed artifacts were collected. The fill in the lower level was screened through 1/4-inch mesh. The entryway was excavated separately. Owing to the proximity of Interstate 10, only the southern half of the entryway could be excavated. As in the main structure, sediment filling the entryway was removed in two levels. The upper level was not screened, but observed artifacts were collected; the lower level was screened through 1/4-inch mesh. Artifact density was very low, and no samples were collected from the entry fill.

Removal of the house fill resulted in the exposure of 1 perimeter floor groove, 3 central-support postholes, 43 interior and perimeter postholes, 1 latitudinal floor groove, and 1 plaster-lined hearth. The perimeter floor groove, latitudinal floor groove, and individual postholes were excavated separately in single levels, and the fill was screened through 1/4-inch mesh. Charred post remains (PDs 10,045 and 10,095) were collected from two of the

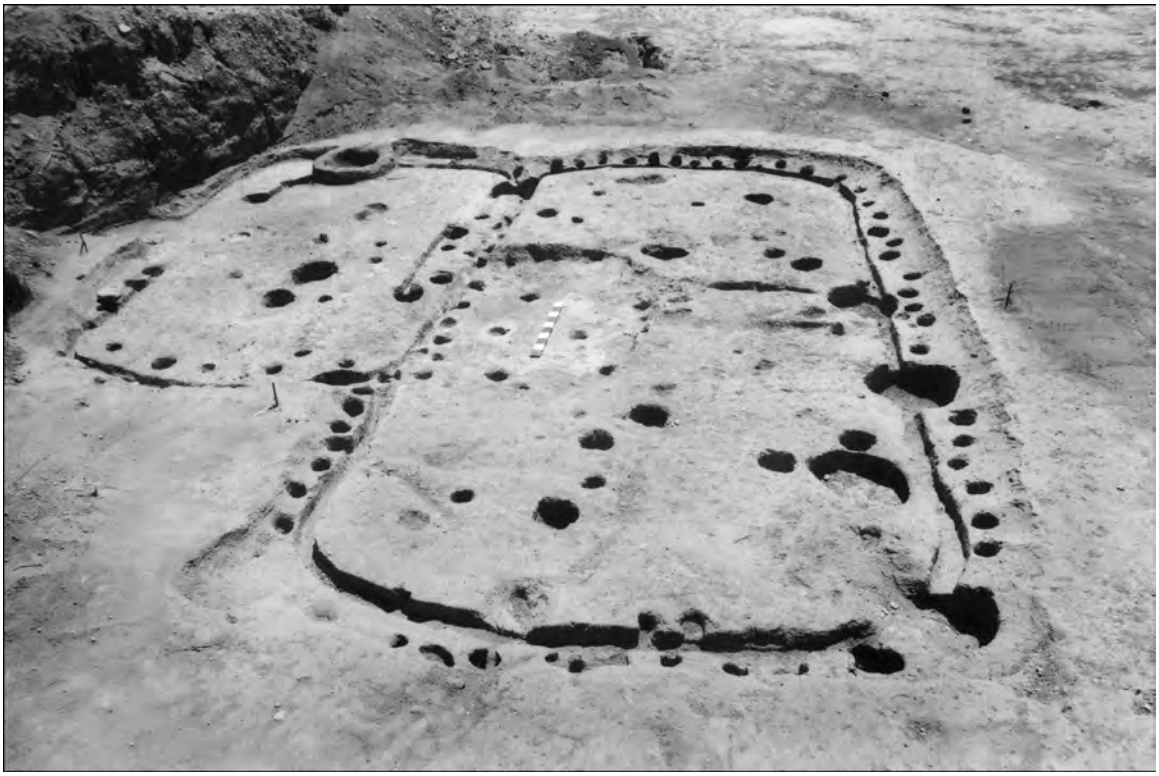

Figure B.29. Plan view of Features 7461 (left) and 6098 (right), looking east.

postholes (Subfeatures 26 and 48) for species identification. The entire fill of the hearth was collected as a flotation sample (PD 9495), a pollen sample (PD 10,061) was collected from its base, and an archaeomagnetic sample (SRI 2430) was collected from its plastered walls. A cluster of four plain ware sherds (PD 10,101) found in direct contact with the floor was point located, and a pollen sample (PD 10,125) was collected from beneath a rock resting on the floor.

Stratigraphy

Between 30 and 40 cm of highly compacted gravelly silts and sands covered the structure. Many of these sediments were deposited during ADOT staging activities in the late 1960s or early 1970s. The house pit was dug into a moderately developed calcic paleosol (Stratum IV). This paleosol consisted of a firm, pale brown silty clay loam that exhibited a fine to medium subangular blocky structure and Stage I–II $CaCO_3$ development (Birkeland 1999:Table A1.5). It contained few fine to medium rootlets and small (<3 cm) subrounded gravels.

Loose, light brownish gray, ash-stained silts and sands filled the house pit, and these sediments included numerous charcoal fragments and artifacts. Structural debris, such as large charcoal fragments and oxidized daub, was encountered throughout the lower 10 cm of fill. Artifact density was moderate to high throughout the structure. The fill appeared to represent a single stratum consisting of postoccupational windblown sand and silts mixed with cultural trash and structural debris. The density of structural debris was much higher toward the base of this stratum.

Disturbances

Observed disturbances included several rodent tunnels and numerous insect castes. Past ADOT staging activities associated with the construction of Interstate 10 and the Marsh Station Traffic Interchange had also truncated the top of the house pit. Several medium to large roots extended beneath the floor. The entryway was truncated by an intrusive roasting pit (Feature 10,050), and a second intrusive roasting pit (Feature 9487) impacted the floor and perimeter floor groove. An inhumation (Feature 10,698) impacted the northwest wall of the house pit.

Construction Details

The structure was subrectangular in plan view and opened to the north (see Figure B.27). It was 5.86 m east–west

and 3.92 m north–south and had a remaining pit depth of 19 cm. The floor, as defined by the space bounded by the floor groove, measured 14.28 m^2. The north and south walls were straight and roughly parallel, whereas the east and west walls were slightly rounded.

Walls and Roof

A shallow, 15-cm-wide floor groove (Subfeature 3) encircled the base of the house pit and delineated the structure's floor. It had straight walls and a rounded base, and it extended 5–10 cm below the house floor. The fill consisted of loose, gray brown fine sandy loam, small subrounded gravels, charcoal flecks, and a few artifacts. The groove was cut into the sterile subsoil and was unlined.

Two series of perimeter postholes were associated with the floor groove and were used to construct the structure's walls (see Figure B.27). Twenty-nine of these (Subfeatures 7–25, 27–31, 37, 43–45, and 49) were located along the exterior of the floor groove. An additional 6 postholes (Subfeatures 32 and 38–42) were located along the interior edge of the floor groove in the western part of the structure. This second series of postholes may reflect remodeling of the west wall. The perimeter postholes ranged in size from 8 to 55 cm in diameter and 7 to 60 cm in depth (Table B.18).

Several central-support postholes (Subfeatures 4–6) were located along the midline of the structure. Subfeatures 4 and 5 were located south and west of the hearth, whereas Subfeature 6 was located south and east of the hearth. These postholes served as the primary roof supports and extended over 50 cm below the floor (see Table B.18). Five additional interior postholes (Subfeatures 33, 35, and 46–48) may have provided further roof support.

Entry

The entryway (Subfeature 2) protruded from the center of the north wall. Owing to the proximity of Interstate 10, only a portion could be excavated, and its maximum extent remains unknown. The size and shape of the entryway was further obscured by a roasting pit (Feature 10,050) that intruded the southeastern quarter. The excavated floor and walls were not plastered and consisted of the native subsoil; slight oxidation was present on the remaining surfaces. The floor ramped up slightly to the north, and a posthole (Subfeature 26) marked the entry juncture. The fill consisted of a single homogenous stratum of loose brown sandy clay with a moderate amount of charcoal, ash, and burnt structural debris.

Floor

The floor consisted of a patchily preserved caliche plaster applied directly over the native subsoil. This caliche plaster was 1–3 cm thick and was severely oxidized or blackened where preserved. The floor undulated slightly in places but was level for the most part. As defined by the interior edge of the floor groove, it had an area of 14.28 m^2.

Floor Features

Hearths

A shallow, basin-shaped and plaster-lined hearth (Subfeature 1) was located in the north-central portion of the floor (see Figure B.27). It was positioned immediately in front of the entry juncture. The hearth was 24 cm in diameter and 7 cm deep and filled with ashy sands and silts. A light brownish gray caliche plaster lined the hearth, and the base had been replastered at least once.

Other Floor Features

A short, east–west floor groove (Subfeature 50) was discovered in the middle of the structure's back wall (see Figure B.27). It was 1.17 m long, 10 cm wide, and 5–10 cm deep and had a roughly flat bottom. Large, circular postholes (Subfeatures 34 and 36) were situated at each end of the groove. They were 30–37 cm in diameter and 35–40 cm deep. The postholes and groove may have functioned as the foundation for a small loom, or they may have supported a small screen or shrine. The fill of the groove and postholes consisted of loose, light brownish gray sands and silts flecked with charcoal.

Artifacts

A cluster of four plain ware sherds (PD 10,101) were collected from the floor of the structure. In addition, six flakes and one piece of lithic debris were collected from the general-floor provenience (PD 9486).

Evidence for Remodeling

A series of postholes located along the inside of the floor groove in the western portion of the structure suggests that the west wall was remodeled. Similarly, the western central-support postholes (Subfeatures 4 and 5) may indicate that the roof was reinforced or that the western central support was moved when the west wall was remodeled. The hearth had been remodeled several times as indicated by separate applications of caliche plaster, but the hearth basin remained in the same location.

Table B.18. Feature 7461 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type	Series [a]
4	9501	37	31	60	C	
5	10,003	47	44	60	C	
6	10,005	27	27	50	C	
7	10,007	14	13	15	P	1
8	10,009	55	50	60	P	1
9	10,011	19	14	10	P	1
10	10,013	35	26	30	P	1
11	10,015	15	15	10	P	1
12	10,017	22	19	20	P	1
13	10,019	18	15	10	P	1
14	10,021	18	15	18	P	1
15	10,023	20	12	18	P	1
16	10,025	16	16	8	P	1
17	10,027	19	18	18	P	1
18	10,029	13	11	8	P	1
19	10,031	19	15	20	P	1
20	10,033	16	14	15	P	1
21	10,035	15	12	10	P	1
22	10,037	16	11	14	P	1
23	10,039	18	18	20	P	1
24	10,041	21	14	24	P	1
25	10,043	8	8	8	P	1
26	10,045	27	17	12	E	
27	10,047	14	10	7	P	1
28	10,052	33	37	20	P	1
29	10,054	20	20	18	P	1
30	10,056	15	20	18	P	1
31	10,058	18	26	15	P	1
32	10,060	14	15	21	P	2
33	10,065	15	14	24	I	
34	10,067	37	25	40	I	
35	10,069	15	15	25	I	
36	10,071	30	28	35	I	
37	10,073	15	15	8	P	1
38	10,075	14	14	24	P	2
39	10,077	14	14	25	P	2
40	10,079	15	14	7	P	2
41	10,081	21	19	17	P	2
42	10,083	14	14	28	P	2
43	10,085	14	9	13	P	1
44	10,087	19	16	13	P	1
45	10,089	21	20	20	P	1
46	10,091	12	12	20	I	
47	10,093	15	15	17	I	
48	10,095	13	13	25	I	
49	10,097	20	19	20	P	1

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.
[a] Refer to text for explanation of the two series of perimeter postholes.

Abandonment Processes

Charred post segments, burnt daub, and a highly oxidized floor indicate that the structure had burned. Few artifacts were discovered in direct contact with the floor, suggesting that the structure was cleaned out before it burned. After the structure collapsed, colluvial and aeolian sediments began to fill the house depression. The numerous artifacts encountered in the fill indicate that later occupants of Locus C intermittently deposited trash in the remaining depression.

Associated, Intrusive, or Superimposed Features

A roasting pit (Feature 9487) was built into the fill in the northeastern corner of the house pit, and an extramural pit (Feature 10,133) intruded the southwestern corner of the house. A second roasting pit (Feature 10,050) was constructed into the fill and southeast wall of the entryway. A disarticulated inhumation (Feature 10,698) cut into the northwest corner of the house.

The construction of Feature 7461 resulted in the removal of the entryway and most of the north wall of adjoining Feature 6098, a pit structure located to the south. The superimposed nature of these two structures suggests that Feature 7461, a typical house-in-a-pit, was built to replace Feature 6098, which contained a recessed hearth area. This same construction sequence was encountered during the excavation of Features 995 and 6129 as well.

Chronology

One archaeomagnetic sample (SRI 2430) was collected from the hearth (Subfeature 1) and returned date range options of A.D. 935–1040 and A.D. 1160–1315. No ceramics were recovered from the floor or from other primary contexts, but several temporally sensitive ceramics were recovered from the lower house fill. These include Rincon Red-on brown, Dragoon Red-on-brown, and Sacaton Red-on-buff sherds, which have a combined production date range of A.D. 950–1150, and a single Tanque Verde Red-on-brown sherd that has a production range of A.D. 1150–1300. Although the deposition of these sherds postdated the abandonment of the structure, they provide a reasonable estimate for when the structure fell out of use. Because the production ranges for most of these types agree with the earlier archaeomagnetic date range option, it seems that the best estimate for the abandonment of Feature 7461 is A.D. 935–1040.

Locus C, Feature 6154

Center of feature UTMs: N 3538643.22, E 541574.08
Architectural type: house-in-a-pit
Date range: A.D. 935–1015
House dimensions: 5.80 by 4.23 m; pit depth 0.18 m; floor area 15.89 m^2
Entryway dimensions: 1.50 by 1.32 m; floor area 1.40 m^2
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 1 floor groove, 2 central-support postholes, 55 perimeter postholes, and 1 intramural pit
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PD 9128
Related features: intruded Feature 6156

Feature 6154 was a subrectangular house-in-a-pit with a protruding entryway oriented toward the north (Figure B.30). Floor features included 2 primary-roof-support postholes (Subfeatures 4 and 5), 1 plastered hearth (Subfeature 1), 1 floor groove (Subfeature 3), and 1 large storage pit (Subfeature 61) along the back wall of the structure. Multiple series of 51 patterned postholes (Subfeatures 6–47 and 51–59) inside and outside of the house pit suggest that the structure was remodeled at least once. The structure was not burned and lacked a floor assemblage, suggesting that it was abandoned in a simple, planned manner.

Excavation Methods

Feature 6154 was identified during Phase 2 stripping in Stripping Unit 5195. A 2-by-1-m control unit (Test Pit 8427) was placed in the eastern half of the structure and hand-excavated to the floor in a single 18-cm level. A flotation sample was collected from the fill (PD 8428), and all remaining sediment was screened through 1/4-inch mesh. A composite pollen sample was taken from the floor (PD 8429).

The remaining pit fill was removed to the floor in two arbitrary levels. The upper level was excavated without screening; a sample of artifacts was collected. A flotation sample (PD 8449) was collected from the lower level, and all remaining sediment was screened through 1/4-inch mesh. The entry was excavated separately in a single level, and the fill was screened through 1/4-inch mesh. No artifacts were encountered in the entry fill, and no samples were collected.

Removal of the fill exposed 1 perimeter floor groove, 55 perimeter postholes, 2 central-support postholes, 1 intramural pit, and 1 hearth. No artifacts were discovered in contact with the floor. The floor groove, intramural pit and

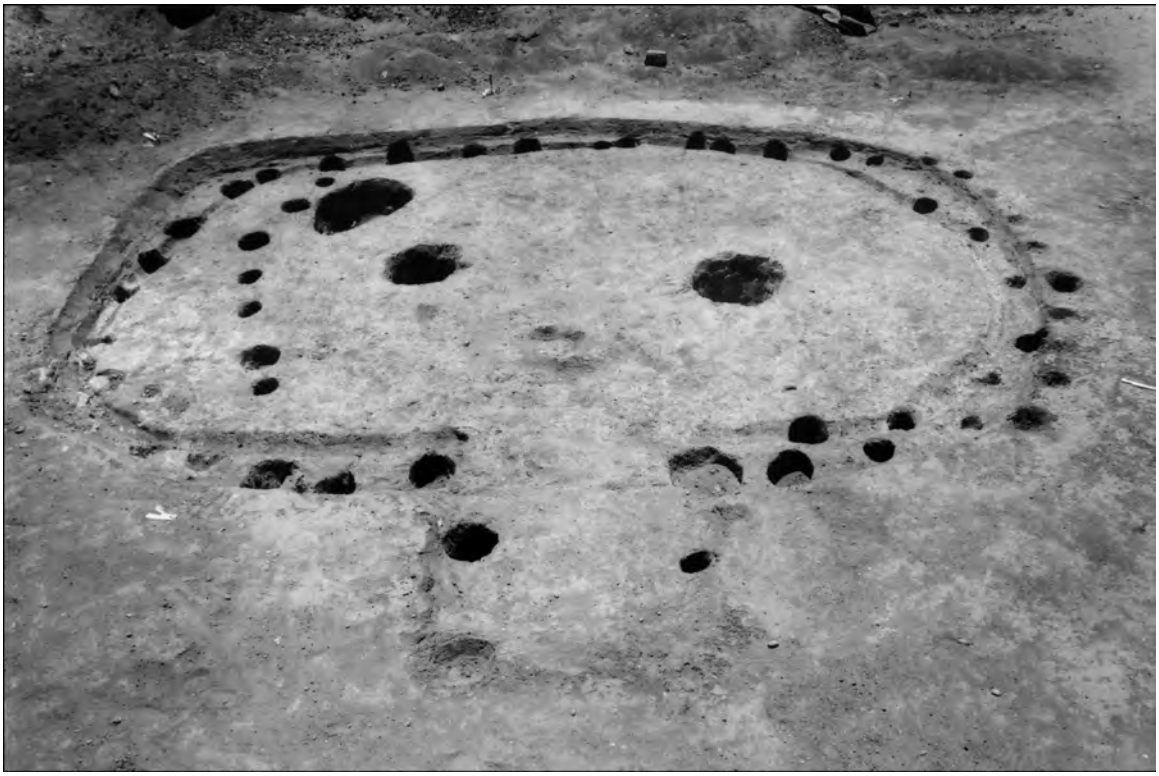

Figure B.30. Plan view of Feature 6154, looking south.

individual postholes were excavated separately in single levels, and the fill was screened through 1/4-inch mesh. A composite flotation sample was collected from the pit (PD 9124), and a pollen sample (PD 9125) was scraped from the pit bottom. The hearth fill was collected as a flotation sample (PD 9002), 1 pollen sample (PD 9128) was collected from the base, and 1 archaeomagnetic sample (SRI 2427) was collected from its plastered walls.

Stratigraphy

The house pit was dug into a moderately developed calcic paleosol (Stratum IV). This paleosol consisted of a soft, pale brown silt loam that exhibited fine to medium subangular blocky structure and Stage I–II $CaCO_3$ development (Birkeland 1999:Table A1.5). The fill of Feature 6154 consisted of a single 18-cm-deep layer of light brown silt and fine sand, with fine to medium-sized subrounded gravels. It contained several artifacts but few charcoal flecks. These sediments were moderately compacted by past ADOT staging activities.

This stratum rested on the earthen floor and was likely the result of natural sedimentation of cultural-bearing constituents. Quantity of calcium carbonate increased with depth, whereas artifact densities declined. Artifact densities were greatest in the uppermost 5 cm of fill.

Disturbances

ADOT staging activities truncated the pit walls and feature fill, resulting in direct contact of the roadbed with the structure and overall shallow feature depth. This is particularly apparent in the shallow depth of the entry pit. It also is likely that these activities led to the observed compaction of the structure's fill. The floor and subfeatures, however, were minimally disturbed by the road and displayed only a minor amount of root, rodent, and insect tunneling. This structure was not impacted by intrusive features.

Construction Details

Feature 6154 was subrectangular in plan view, and the entry opened to the north (Figure B.31). The house pit measured 5.80 m east–west by 4.23 m north–south and had a remaining depth of 18 cm. The pit walls were vertical and consisted of the native calcic subsoil.

Walls and Roof

A floor groove (Subfeature 3) followed the base of the pit and delimited the extent of the structure's floor (see

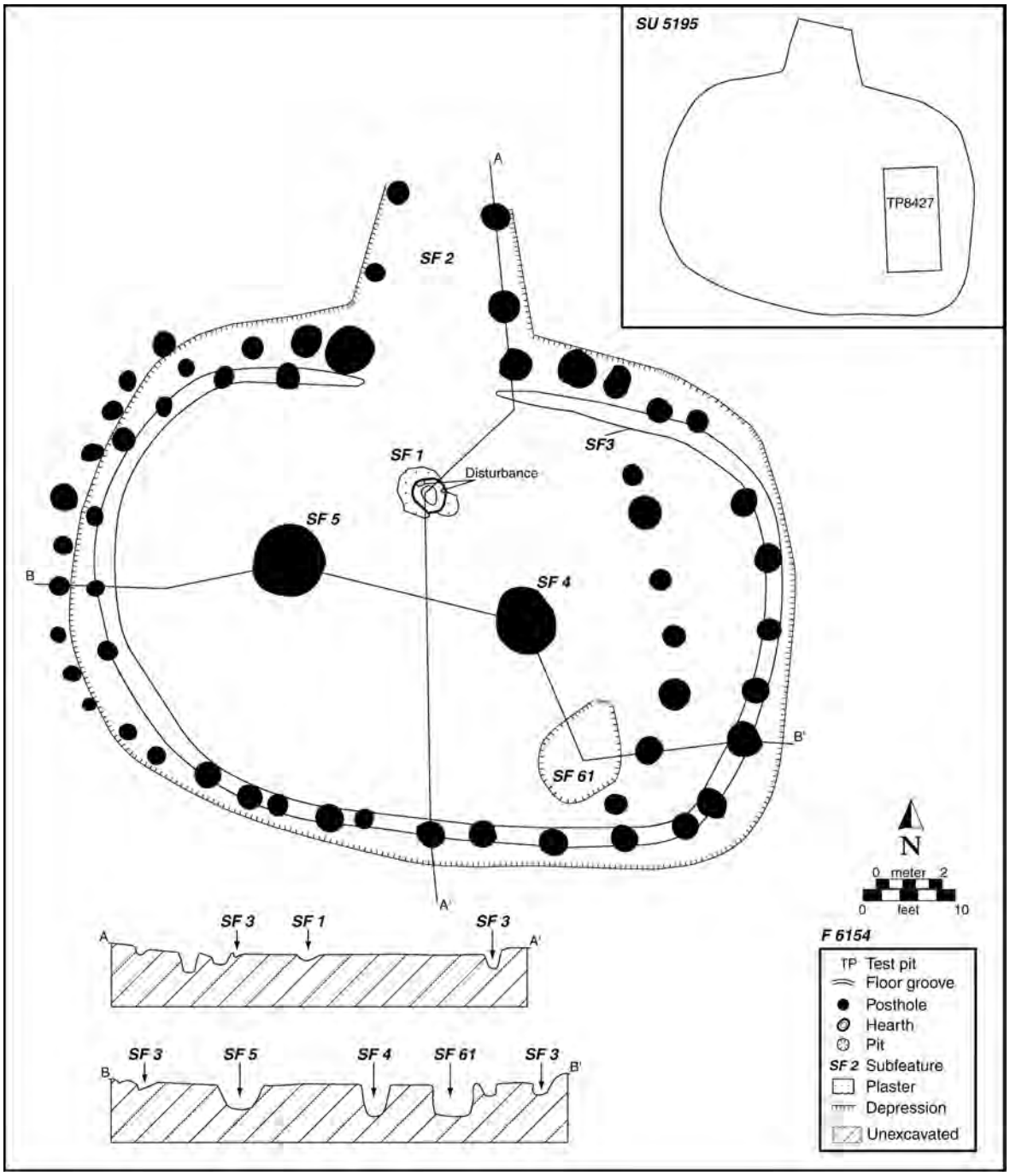

Figure B.31. Plan map of Feature 6154 showing the location of floor features.

Figure B.31). A gap of 2–40 cm was present between the exterior edge of the floor groove and the base of the pit. The groove was dug into the native calcic substrate and contained a single stratum of light brown silt and sand identical to the structure fill. It was plano-shaped, 8 cm deep, and extended around the pit bottom parallel to the pit walls. It terminated abruptly at the juncture of the entry pit and house pit.

At least four series of perimeter postholes (Subfeatures 6–47 and 51–59; Table B.19) were discovered in conjunction with the walls of Feature 6154 (see Figure B.31). Although these series may reflect separate remodeling episodes, their placement suggests that they may have served different functions within the construction of the house. The first series included 25 of the 51 perimeter postholes (Subfeatures 7–24, 30, 32, 35, 37, 40, 43, and 45) and encircled the pit bottom and were either in or adjacent to the floor groove. They likely formed the main support system for the structure walls and roof.

The second series included nine postholes (Subfeatures 6, 25, 26, 42, 44, 46, 47, 58, and 59), which were found in the gap between the floor groove and pit walls. Seven of these were located along the northern pit edge opposite each side of the entryway. When compared to all other postholes, these displayed greater size (approximately 23 cm) and depth (approximately 20 cm) than the floor groove postholes, possibly as a result of a different set of construction methods used to build the entryway.

A third series of postholes (Subfeatures 51–57) was discovered in the structure floor inside the floor groove. Seven postholes formed a north–south line across the eastern quarter of the pit bottom. There is no evidence for changes in the position of the east wall of the structure and, estimating from the size, elevation, and spacing of these postholes, it is likely they represent the remains of an interior wall, possibly an east wall facade used for storage rather than a remodeling of the structure.

A fourth series of postholes (Subfeatures 27–29, 31, 33, 34, 36, 38, 39, and 41) was found outside the western pit edge. These 10 postholes were the shallowest of all the postholes and were also closely spaced. Based upon their location, size, and spacing, it is possible they were added to stabilize the west wall.

In addition to wall supports, two primary-roof-support postholes (Subfeatures 4 and 5) were discovered in the middle of the long axis of the structure. These large postholes measured approximately 52 cm in diameter and 50 cm deep.

Entry

A rectangular entryway (Subfeature 2) protruded from the northern pit wall. It was constructed in a basin-shaped pit measuring 1.32 m east–west by 1.50 m north–south, and 6 cm deep. Four postholes (Subfeatures 48–50 and 60) were located just a few centimeters inside the eastern and western pit edges and likely supported walls of an entry corridor. They ranged in size from 11 to 25 cm in diameter and 6 to 31 cm in depth (see Table B.19). The unprepared floor of the entry ramped gently up and out of the structure, opening to the north. The fill was a light brown silt and fine sand, identical to the fill of the structure pit. No structural debris, charcoal, ash or artifacts were found in the entryway.

Floor

The floor of the structure was the natural calcic substrate. There was no evidence of preparation, and the only discernible oxidation was in association with the hearth. The floor measured 5.31 by 3.47 m from the innermost edge of the floor groove, and it had an area of 15.89 m^2.

Floor Features

Hearths

A basin-shaped plaster-lined hearth (Subfeature 1) was located 55 cm from the base of the entryway ramp. The mouth of the hearth measured 32 cm east–west by 30 cm north–south, whereas the sides sloped gradually to a depth of 7 cm. Heavy oxidation surrounded the hearth area and was visible on the hearth walls where plaster had exfoliated. The fill consisted of a homogenous deposit of dark brown fine silts and sands with a high density of charcoal flecking and some subrounded gravels. No artifacts were observed. Severe disturbances caused by small roots, rodents, and insects made the walls extremely friable. Only a small amount of plaster remained on the walls.

Pits

One conical-shaped pit (Subfeature 61) was located in the southeastern corner of the structure (see Figure B.31). It measured 82 by 62 cm at the opening, and the walls dropped abruptly into a 43-cm-deep flat-bottomed pit. The base and sides were unprepared and carved into two natural substrata. The upper stratum was the pinkish brown calcic horizon, whereas the base was a bed of rounded river cobbles. The fill consisted of a homogeneous deposit of light brown fine sand and silt containing many coarse, subrounded gravels, river cobbles, and charcoal pieces. Artifact density in the pit was high and included ceramic pieces, flaked stone debitage, and faunal bone fragments. Based on its size, shape, and location, this feature may have served as a storage area.

Table B.19. Feature 6154 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type	Series [a]
4	9008	51	47	49	C	
5	9010	55	55	50	C	
6	9012	28	21	25	P	2
7	9014	18	17	14	P	1
8	9016	16	15	12	P	1
9	9018	23	20	10	P	1
10	9020	20	18	8	P	1
11	9022	17	16	15	P	1
12	9024	22	20	20	P	1
13	9026	28	23	17	P	1
14	9028	25	22	18	P	1
15	9030	20	18	17	P	1
16	9032	21	20	20	P	1
17	9034	20	20	19	P	1
18	9036	20	18	11	P	1
19	9038	20	18	23	P	1
20	9040	14	14	10	P	1
21	9042	21	19	18	P	1
22	9044	16	14	12	P	1
23	9046	18	16	16	P	1
24	9048	17	17	12	P	1
25	9050	14	14	8	P	2
26	9052	12	11	7	P	2
27	9054	12	9	6	P	4
28	9056	12	11	12	P	4
29	9058	10	9	4	P	4
30	9060	16	14	9	P	1
31	9062	14	13	5	P	4
32	9064	12	12	10	P	1
33	9066	13	12	7	P	4
34	9068	17	15	18	P	4
35	9070	14	10	7	P	1
36	9072	13	13	7	P	4
37	9074	16	15	12	P	1
38	9076	15	12	5	P	4
39	9078	14	13	7	P	4
40	9080	14	11	9	P	1
41	9082	17	15	10	P	4
42	9084	11	10	12	P	2
43	9086	15	15	24	P	1
44	9088	15	14	18	P	2
45	9090	20	18	25	P	1
46	9092	26	20	18	P	2
47	9094	36	34	22	P	2
48	9096	12	11	12	E	
49	9098	23	21	11	E	

continued on next page

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type	Series [a]
50	9100	25	24	31	E	
51	9102	15	15	16	P	3
52	9104	23	23	17	P	3
53	9106	16	14	20	P	3
54	9108	15	14	13	P	3
55	9110	23	23	20	P	3
56	9112	21	20	20	P	3
57	9114	14	13	13	P	3
58	9116	28	25	14	P	2
59	9118	28	26	30	P	2
60	9120	15	14	6	E	

Key: C = central-support posthole; E = entryway posthole; P = perimeter posthole; PD = provenience designation.
[a] Refer to text for explanation of the four series of perimeter postholes.

Artifacts

No artifacts were recovered from the floor of Feature 6154 or from any other sealed or primary context.

Evidence for Remodeling

It is unclear whether or not Feature 6154 was remodeled; if it was remodeled, the sequence of events is not clear. The fill was homogenous throughout the structure, and there is no evidence that any of the subfeatures were abandoned or that there was a hiatus in occupation. Some of the postholes may represent stabilization, enlargement, downsizing, or the original construction of the structure. If the original structure was indeed remodeled, portions of the original walls, and the original hearth and primary roof support postholes were reused.

Abandonment Processes

The structure was not burned and lacked a floor assemblage, suggesting that it had been abandoned in a simple, planned manner. It subsequently collapsed, and the resulting house depression filled with colluvial sediments and cultural trash.

Associated, Intrusive, or Superimposed Features

Feature 6154 intruded into an unexcavated extramural pit (Feature 6156). No other features were associated directly with Feature 6154.

Chronology

An archaeomagnetic sample (SRI 2427) was recovered from the hearth of Feature 6154. This sample produced the date range options of A.D. 935–1015 and A.D. 1310–1690. Given the architectural style, it is likely that the earlier date range is correct. Ceramics recovered from the fill of this feature included Rincon Red-on-brown sherds from the Tucson Basin and locally produced Dragoon Red-on-brown sherds. Although the deposition of these sherds postdated the abandonment of the structure, they provide a reasonable estimate for when the structure fell out of use. These two types have a combined production range of A.D. 950–1150, which supports the earlier of the two archaeomagnetic dating options. Therefore, the best age estimate for the abandonment of Feature 6154 is A.D. 935–1015.

Locus D, Feature 437

Feature 437 was a large conglomerate feature located at the eastern end of Locus D (see Figure 84). It consisted of numerous extramural pits and three sets of superimposed structures (Figure B.32). Three structures (Features 5781, 5794, and 5795) and a borrow pit (Feature 5793) formed the western lobe of this complex; three structures (Features 3680, 3681, and 8607) formed the central portion of the conglomerate feature; and four structures (Features 3582, 3617, 3879, and 4516) formed the eastern lobe of Feature 437. Several trenches were excavated by hand through the conglomerate feature in order to delineate the different structures. Once these structures were outlined, they were excavated individually.

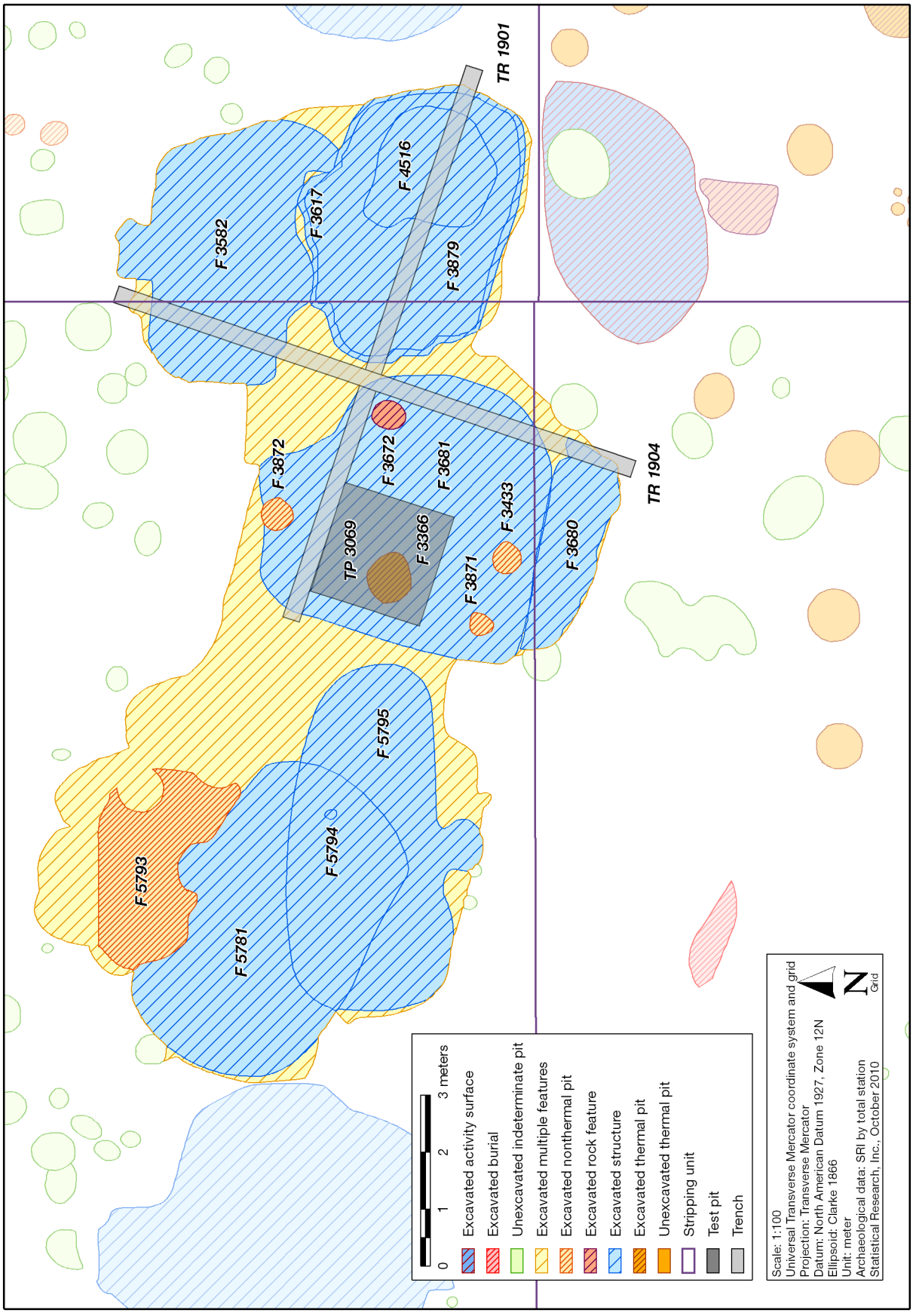

Figure B.32. Plan map of conglomerate Feature 437 showing its component features.

Excavation Methods

Feature 437 was first identified during Phase 1 testing in the profile of Trench 133. The extent of this conglomerate feature was exposed during Phase 2 mechanical stripping of Stripping Units 1759, 1869, 2493, and 3006. Initial excavations concentrated on the portion of Feature 437 that was located east of the trench. Two cross trenches (Trenches 1901 and 1904) were manually excavated through this portion of the conglomerate feature in order to identify the location of the different structures that formed the larger feature. Trench 1901 was excavated along the east–west line through the center of Feature 437. It measured 9.80 m east–west by 0.3 m north–south and was manually excavated in a single 19-cm level. A possible mano (PD 1914) was point located on a floor surface exposed in this trench. Trench 1904 was excavated along the north–south line through the center of Feature 437. It measured 9.17 m north–south by 0.3 m east–west and was manually excavated in a single 7–13 cm level. The fill of neither trench was screened, but observed artifacts were collected.

The floor surface and fill of at least four different structures were identified in the cross trenches, and four irregular hand trenches (Trenches 1906, 1908, 1910, and 1912) were excavated through each quadrant of Feature 437 to further define the extent of these houses. The fill of none of these trenches was screened, but observed artifacts were collected.

Trench 1906 was excavated in the southeast quadrant, starting at the eastern end of Trench 1901 and cutting irregularly southwest through the fill of Feature 437 to connect with the southern end of Trench 1904. It was approximately 6 m long, 0.4–0.5 m wide, and 10–18 cm deep, and it defined the east and south walls of one structure (Feature 3617) and the east wall and southwest corner of a second structure (Feature 3681).

Trench 1908 was excavated in the northeast quadrant, starting at the eastern end of Trench 1901 and cutting irregularly northwest through the fill of Feature 437 to connect with the northern end of Trench 1904. It was approximately 6 m long, 0.3–0.4 m wide, and 12–24 cm deep, and it defined the east and north walls of one structure (Feature 3617) and the north wall of a second structure (Feature 3582).

Trench 1910 was excavated in the northwest quadrant, starting at the northern end of Trench 1904 and cutting irregularly southwest through the fill of Feature 437 to connect with Trench 1901. It was approximately 4.1 m long, 0.4 m wide, and 9–17 cm deep, and it defined the northwest corner of one structure (Feature 3582).

Trench 1912 was excavated in the southwest quadrant as an exploratory trench to define the southwest corner of a structure (Feature 3681) that had been identified in Trench 133 during Phase 1. This trench began at the southern end of Trench 133 and curved south and east to intersect the southern end of Trench 1904. It was approximately 7 m long, 0.3 m wide, and 8–22 cm deep, and it defined the boundary between two structures (Features 3680 to the south and 3681 to the north).

Two additional units (Quarters 1 and 2) were excavated east of Trench 1904 to define the edges between the superimposed structures identified in the various trenches. Quarter 1 was an irregular wedge of fill located between the eastern edge of Trench 1904 and the western edge of Trench 1906. It was approximately 1.5 m north–south and 0–0.5 m east–west. It was excavated in a single 11–18 cm level, and it exposed part of the east wall of Feature 3681, where it cut into Feature 3680. The fill from this unit was a mixture of these two structures; it was not screened, but observed artifacts were collected.

Quarter 2 was excavated to the east of Trench 1904 and to the north of Trench 1901 to expose the northwest corner of Feature 3617. It was 1.4 m long and 1 m wide and exposed portions of three structures (Features 3582, 3617, and 3681). The fill was removed in a single, unscreened, 5–20 cm level. Observed artifacts were collected from the fill, and a metate located 2–10 cm above the top of the floor groove to Feature 3617 was point located (PD 3020). The metate was provenienced to the conglomerate feature (Feature 437), because it only partially overlay the floor groove and could not be assigned definitively to the structure.

A total of five postholes (Subfeatures 3–7) were encountered during the exploratory excavations of Feature 437 that could not be assigned to a specific structure. The postholes were excavated individually in single units and levels, and the fill was screened through 1/4-inch mesh (Table B.20).

Locus D, Feature 5781

Center of feature UTMs: N 3538544.61, E 541489.18
Architectural type: house-in-a-pit
Date range: A.D. 660–940
House dimensions: 5.61 by 3.31 m; .59 m in depth
Entryway dimensions: unknown
Shape: subrectangular to oval
Orientation: unknown
Internal features: 1 hearth
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: intruded by Features 5793, 5794, and 5795

Feature 5781 was the oldest of three superimposed structures that made up the western lobe of conglomerate Feature 437 (see Figure B.32). The limited excavation of Feature 5781 focused on exposing the floor to locate the hearth. A shallow, informal hearth (Subfeature 1) was located within the south-central part of the structure. No

Table B.20. Conglomerate Feature 437 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)
3	3150	22	19	43
4	3152	21	20	58
5	3154	15	14	28
6	3156	35	29	43
7	2456[a]			

Key: PD = provenience designation.
[a] Dimensions not recorded.

other subfeatures were identified, and the entryway was not located. Two later structures (Features 5794 and 5795) capped part of the fill and removed the upper part of the house-pit walls in the southeastern third of the structure. A borrow pit (Feature 5793) intruded the northern wall of the structure. Several other intrusive pits were noted during excavation, but they were not documented separately.

Excavation Methods

Feature 5781 was first identified during the mechanical stripping of Feature 437. The southeastern third of the structure underlay two later structures (Feature 5794 and 5795) and was not excavated. The western two-thirds of Feature 5781 was manually and mechanically excavated to the floor in a single 24–63 cm level in order to locate the hearth and define the outlines of the structure. The fill was not screened, but observed artifacts were collected. No samples were recovered from the fill, and the location of the entryway was not identified.

Excavations revealed an informal hearth located in the south-central part of the structure. The hearth fill was collected as a flotation sample (PD 8603), a pollen sample (PD 8604) was scraped from its base, and an archaeomagnetic sample (SRI 2414) was collected from the oxidized walls. No other subfeatures were located.

Stratigraphy

The fill in the house pit was divided into an upper and lower fill. The upper fill consisted of a dark grayish brown ashy loam, and it was located at and above the level of the floor surface in Features 5794 and 5795. The lower fill was located below the level of these floors, and it consisted of a light brown silty loam with abundant artifacts. Localized deposits of rocks and sandy loam were noted in the lower fill as well, and they may have represented intrusive pits. However, pit outlines could not be distinguished clearly, and these possible features were not treated separately.

Disturbances

Abundant root, insect, and rodent disturbances were noted in the fill. Two later structures (Features 5794 and 5795) removed the upper fill and pit walls in the southeastern third of the structure, and a borrow pit (Feature 5793) intruded the northern wall of the structure. Several extramural pits most likely disturbed the house-pit fill and structure floor, but they were not documented separately.

Construction Details

Feature 5781 was subrectangular to oval in plan view. The remaining house pit measured approximately 5.61 m east–west by 3.31 m north–south.

Walls and Roof

No pit walls or other architectural subfeatures were documented during the course of excavations.

Entry

The location of the entryway could not be discerned from the limited excavations.

Floor

The floor surface consisted of a layer of caliche plaster applied over the native calcic substrate. It did not appear to be oxidized.

Floor Features

Hearths

A shallow, ovate, informal hearth (Subfeature 1) was located in the south-central portion of the structure. It measured 46 by 43 cm in plan view and was 3 cm deep. The pit walls consisted of the oxidized, unprepared native substrate, and the pit was filled with a light gray-brown, ash-laden silty loam.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary context.

Evidence for Remodeling

No evidence for remodeling could be discerned from the limited excavations.

Abandonment Processes

No artifacts were located on the floor and the structure showed no signs of having burned. This suggests that Feature 5781 had a simple, planned abandonment. Subsequently, the house pit filled with naturally deposited sediments and cultural debris. At some point after abandonment, two later structures were constructed into the southeastern third of the house pit, and several extramural pits were constructed within the fill of the house pit.

Associated, Intrusive, or Superimposed Features

The southeastern third of the house pit was intruded by two later structures (Features 5794 and 5795). The floors of these later structures partially capped some of the fill from Feature 5781 and removed the upper part of the house-pit walls in this area. A borrow pit (Feature 5793) intruded the northern wall of the structure. Several other intrusive pits were noted during excavation, but they were not excavated or documented separately.

Chronology

An archaeomagnetic sample (SRI 2414) was collected from the structure's hearth and returned the date range A.D. 660–940. This represents the best age estimate for the abandonment of the structure.

Locus D, Feature 5794

Center of feature UTMs: N 3538542.98, E 541490.44
Architectural type: house-in-a-pit
Date range: A.D. 910–1015
House dimensions: unknown, except for 0.19 m depth
Entryway dimensions: unknown
Shape: unknown
Orientation: unknown
Internal features: 1 hearth
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: intrudes Features 5781; intruded by Features 5795

Feature 5794 was one of three superimposed structures that formed the western lobe of conglomerate Feature 437 (see Figure B.32). This structure's floor partially capped the fill of an earlier structure (Feature 5781), and it was disturbed by the construction of a later structure (Feature 5795). The limited excavation of Feature 5794 focused on exposing the floor to locate the hearth. This revealed a calcic clay plaster floor that had been constructed over the fill of Feature 5781 and a small plastered hearth (Subfeature 1). No other subfeatures were identified, and the entryway was not located. Numerous intrusive pits were noted during excavation, but none was documented.

Excavation Methods

Feature 5794 was identified during the mechanical stripping of Feature 437. The structure's fill had been removed entirely, revealing a hearth and portions of a plastered floor. The house-pit fill was not screened and no artifacts or samples were recovered. The entire fill of the hearth was collected as a flotation sample (PD 8590), a pollen sample was scraped from its base (PD 8597), and an archaeomagnetic sample (SRI 2415) was collected from the hearth walls. No attempt was made to identify other subfeatures or the entryway.

Stratigraphy

The house fill consisted of a dark brown sandy loam with abundant artifacts.

Disturbances

The pit fill and floor were disturbed by roots, insects, and rodents. Also, an unknown number of undocumented extramural pits intruded the pit walls, floor, and fill.

Construction Details

The size and shape of the structure and its construction details were not investigated during the limited excavations.

Walls and Roof

No pit walls or other architectural subfeatures were documented during the course of excavations.

Entry

No evidence of an entryway was encountered.

Floor

The floor surface consisted of a layer of a calcic clay plaster applied over the fill of Feature 5781. It did not appear to be oxidized.

Floor Features

Hearths

A shallow, circular, basin-shaped hearth (Subfeature 1) was located in the floor of Feature 5794. It measured 21 cm in diameter and was 5 cm deep. The walls were highly oxidized, and patches of remnant plaster clung to the upper part of the hearth walls. It was filled with loose, ash-laden silty loam.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary context.

Evidence for Remodeling

No evidence for remodeling could be discerned from the limited excavations.

Abandonment Processes

The structure exhibited no evidence of having burned, and no artifacts were recovered from the floor, suggesting that Feature 5794 had a simple, planned abandonment. Sometime afterward, another structure (Feature 5795) was built partially over this structure.

Associated, Intrusive, or Superimposed Features

Feature 5794 was intruded by Feature 5795, a later structure, and by numerous undocumented intrusive pits.

Chronology

An archaeomagnetic sample (SRI 2415) was collected from the structure's hearth and returned the date range options of A.D. 585–690, 910–1015, and 1335–1890. Based on its architectural style and the fact that it postdates Feature 5781, which was archaeomagnetically dated to A.D. 660–940, the middle option, A.D. 910–1015 most likely represents the best estimate of when this structure was abandoned.

Locus D, Feature 5795

Center of feature UTMs: N 3538542.98, E 541490.44
Architectural type: house-in-a-pit
Date range: A.D. 910–1150
House dimensions: 6.04 m by 2.71 m; 0.16 m depth
Entryway dimensions: unknown
Shape: subrectangular to oval
Orientation: unknown
Internal features: 1 hearth and 1 floor groove
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: intrudes Features 5781 and 5794

Feature 5795 was the youngest of three superimposed structures that formed the western lobe of conglomerate Feature 437. This structure's floor partially capped the fill of one earlier structure (Feature 5781), and it partially overlay the floor of a second structure (Feature 5794). The limited excavation of Feature 5795 focused on exposing the floor to locate the hearth. An unprepared floor surface, floor groove, and informal hearth (Subfeature 1) were identified in this structure. No other subfeatures were identified, and the entryway was not located.

Excavation Methods

Feature 5795 was identified during the mechanical stripping of Feature 437. The structure's fill had been removed

entirely, revealing a hearth, the southern part of a floor groove, and portions of an unprepared floor. The house-pit fill was not screened and no artifacts or samples were recovered. The entire fill of the hearth was collected as a flotation sample (PD 8592), a pollen sample was scraped from its base (PD 8598), and an archaeomagnetic sample (SRI 2416) was collected from the hearth walls. The floor groove was not excavated, and no attempt was made to identify other subfeatures or the entryway.

Stratigraphy

The house pit was constructed into the native calcic subsoil, and it was filled with a dark grayish brown sandy loam.

Disturbances

The fill and floor were disturbed by roots, insects, and rodents.

Construction Details

The house pit was subrectangular to oval in plan view, and it measured 6.04 m north–south by 2.71 m east–west.

Walls and Roof

A floor groove was noted along the southern wall of the structure, but it was not mapped or documented. No other architectural subfeatures were identified.

Entry

No evidence of an entryway was encountered.

Floor

The floor consisted of the unprepared, native calcic subsoil.

Floor Features

Hearths

The large, shallow hearth (Subfeature 1) was ovate in plan view with irregular walls and base. It measured 75 by 57 cm in plan and was 8 cm deep. The unprepared pit walls were excavated into the native calcic subsoil, and they were highly oxidized. The hearth was filled with a loose, light gray ash.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary context.

Evidence for Remodeling

No evidence for remodeling could be discerned from the limited excavations.

Abandonment Processes

The structure exhibited no evidence of having burned, and no artifacts were recovered from the floor, suggesting that Feature 5795 had a simple, planned abandonment. The abandoned house pit filled with naturally deposited sediments and cultural debris.

Associated, Intrusive, or Superimposed Features

Feature 5795 partially overlay the floor of one structure (Feature 5794) and partially overlay the fill of a second structure (Feature 5781).

Chronology

An archaeomagnetic sample (SRI 2416) was collected from the hearth, but it was too imprecise to be dated. This structure appears to postdate Feature 5794, which was archaeomagnetically dated to A.D. 910–1015. Therefore, the abandonment of Feature 5795 must postdate A.D. 910.

Locus D, Feature 3680

Center of feature UTMs: N 3538343.03, E 541556.60
Architectural type: house-in-a-pit
Date range: 2000 B.C.–A.D. 950
House dimensions: unknown, except 0.12 m depth
Entryway dimensions: unknown
Shape: subrectangular
Orientation: unknown
Internal features: 1 floor groove, 7 postholes, and 1 intramural pit

Chronometric techniques: none
Analyzed botanical samples: none
Related features: intruded by Features 3581 and 3681

Feature 3680 was the oldest of three superimposed structures that formed the center of conglomerate Feature 437 (see Figure B.32). Most of the structure was destroyed during the construction of a later structure (Features 3681), and only a small portion of its southern edge remained intact. One floor groove (Subfeature 5), one floor pit (Subfeature 3) and seven postholes (Subfeatures 1, 2, and 6–10) were discovered in the remaining floor area (Figure B.33). An unexcavated pit (Feature 3581) truncated the southwest corner of the structure.

Excavation Methods

Feature 3680 was identified in Trench 1904 during Phase 2 investigations of Feature 437, and the northern edge of the remaining structure was defined in Trench 1912. The fill in the remaining portion of the structure formed an irregularly shaped unit that measured approximately 1.2 m north–south by 2.75 m east–west. It was excavated to the floor in a single 1/4-inch-screened, 6–12 cm level, and two flotation samples (PDs 1941 and 1975) and a pollen sample (PD 1975) were collected from the fill. A possible mano fragment (PD 3066) was point located in the fill of a depressed region of the floor.

Exposure of the floor revealed the presence of several subfeatures, including one floor groove, one pit, and seven postholes. Each of these subfeatures was excavated individually in a single 1/4-inch-screened level. A flotation and a pollen sample (PD 1973) was collected from the pit, and a botanical sample (PD 1971) was collected from one of the postholes (Subfeature 2). Two possible manos (PDs 1958 and 1961) and one unifacial retouched flake (PD 1960) were point located on the floor. A pollen sample (PD 1959) was recovered from beneath one of the manos (PD 1958).

Stratigraphy

The house pit was excavated into the natural argillic subsoil, and subfeatures were excavated through this argillic horizon and into an underlying channel deposit. The pit was filled with a homogenous layer of friable, grayish brown sandy silt loam with abundant fine to coarse gravels and some small cobbles. Artifact density was high throughout the remaining house fill.

Disturbances

The pit fill contained abundant root, rodent, and insect disturbance. The majority of the house fill and much of the house-pit walls, floor, and subfeatures were removed during the construction of a later structure (Feature 3681), which cut through the floor of Feature 3680. In addition, the southwest corner of the house was truncated slightly by an intrusive pit (Feature 3581).

Construction Details

Feature 3680 appears to have been a subrectangular house-in-a-pit; however, only the southern portion of the structure remained intact (see Figure B.33).

Walls and Roof

A floor groove (Subfeature 5) was identified at the base of the pit walls, indicating that the pit had held a walled structure. The remaining 3.5 m segment of floor groove was 8–15 cm wide and 6–7 cm deep. The unprepared groove walls consisted of the argillic subsoil and sloped to the U-shaped base. The base of the floor groove consisted of the gravel-filled channel deposit that underlay the structure's floor. The groove fill was similar to that of the house pit. No evidence of postholes was identified in the base of the groove.

Seven postholes (Subfeatures 1, 2, and 6–10) were located along the inside edge of the floor groove. They most likely formed the southern wall of the structure. These postholes ranged in size from 12 to 22 cm in diameter and 8 to 22 cm in depth (Table B.21). The posthole fill was similar to that of the house pit.

Entry

No evidence of an entry was encountered in the intact portion of the feature.

Floor

The floor consisted of the unprepared and unoxidized natural argillic subsoil.

Floor Features

Pits

An oval, basin-shaped pit (Subfeature 3) was located 10 cm north of the floor groove. It measured 44 by 55 cm in plan and was 15 cm deep. The pit was excavated into the gravel-filled channel deposit that underlay the structure's floor,

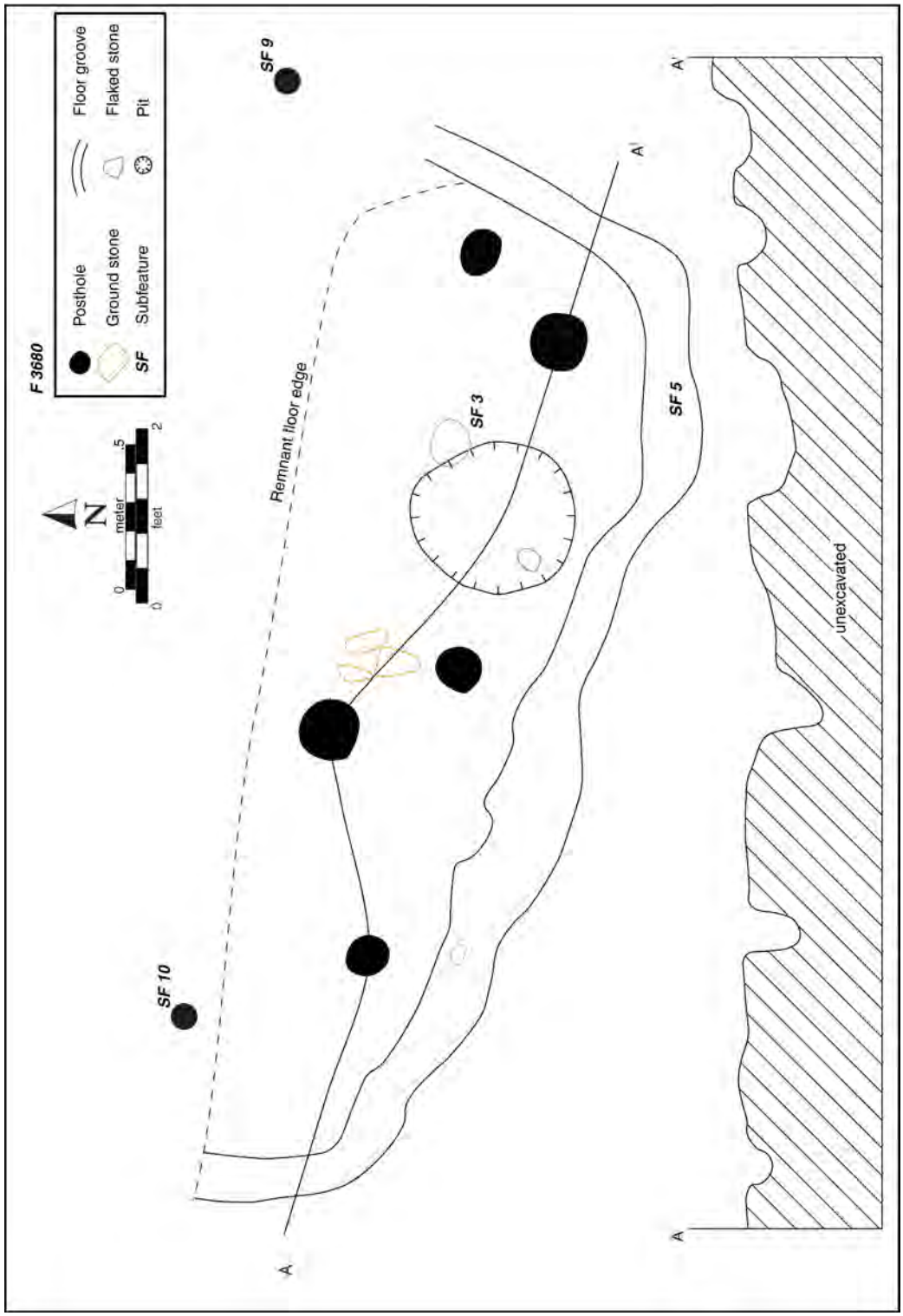

Figure B.33. Plan map of Feature 3680 showing the remaining floor of the structure and the location of subfeatures.

Table B.21. Feature 3680 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)
1	1969	20	22	11
2	1971	12	13	19
6	3057	12	12	8
7	3061	12	12	22
8	3059	16	16	19
9	2266	15	14	14
10	2261	20	19	17

Key: PD = provenience designation.

and the unprepared walls and base of the pit consisted of this deposit. The pit was filled with a loose layer of dark brown, poorly sorted sandy loam and contained a moderate amount of artifacts. It may have functioned as a storage pit.

Artifacts

Two possible manos (PDs 1958 and 1961) and one unifacial retouched flake (PD 1960) were point located on the floor, and one possible mano fragment (PD 3066) was point located in the fill of a depressed region of the floor. In addition, one flake was recovered from the general-floor provenience (PD 1962).

Evidence for Remodeling

The intact portion of Feature 3680 did not include any evidence of remodeling.

Abandonment Processes

Because few artifacts remained on the floor and the structure showed no signs of having burned, Feature 3680 most likely had a simple, planned abandonment. The abandoned house pit gradually filled with naturally deposited sediments and cultural trash. Sometime later, a structure (Features 3681) was constructed into the house pit, removing all but the southern part of Feature 3680.

Associated, Intrusive, or Superimposed Features

Feature 3680 was intruded by a later structure (Feature 3681) and an unexcavated pit (Feature 3581). The floor of Feature 3681 was located a few centimeters below that of Feature 3680, and construction of the later structure removed the floor, walls, and fill of all but the southern edge of Feature 3680. In addition, the unexcavated pit (Feature 3581) truncated the southwest corner of Feature 3680.

Chronology

No chronometric samples were recovered from Feature 3680, and no temporally sensitive artifacts were recovered from sealed or primary contexts. Based on its architectural style, this structure was used and abandoned sometime during the Middle Formative period (ca. A.D. 650–1150).

Locus D, Features 3681 and 8607

Features 3681 and 8607 were two superimposed structures located in the center of conglomerate Feature 437. Feature 3681 clearly intruded and postdated the original structure in this area (Feature 3680). Feature 8607, however, was represented solely by its hearth (Figure B.34) that was bisected by a backhoe trench (Trench 133) during Phase 1 testing, and it is unclear how this structure related to either Feature 3680 or 3681. Because only the hearth remained, Feature 8607 will be discussed in combination with Feature 3681.

Feature 3681 was a subrectangular house-in-a-pit (Figure B.35) that contained a number of subfeatures, including 1 plastered hearth (Subfeature 1), 2 floor pits (Subfeatures 6 and 13), 6 possible central-support postholes (Subfeatures 2, 5, 39–41, and 47), and 39 perimeter and possible entryway postholes (Subfeatures 3, 4, 7–12, 14–38, 42–46, and 48). No definitive entryway was located for the structure, but the patterning of postholes and the location of the hearth indicate that it probably protruded from the center of the north wall. A series of 4 extramural pit features (Features 3366, 3433, 3672, and 3871)

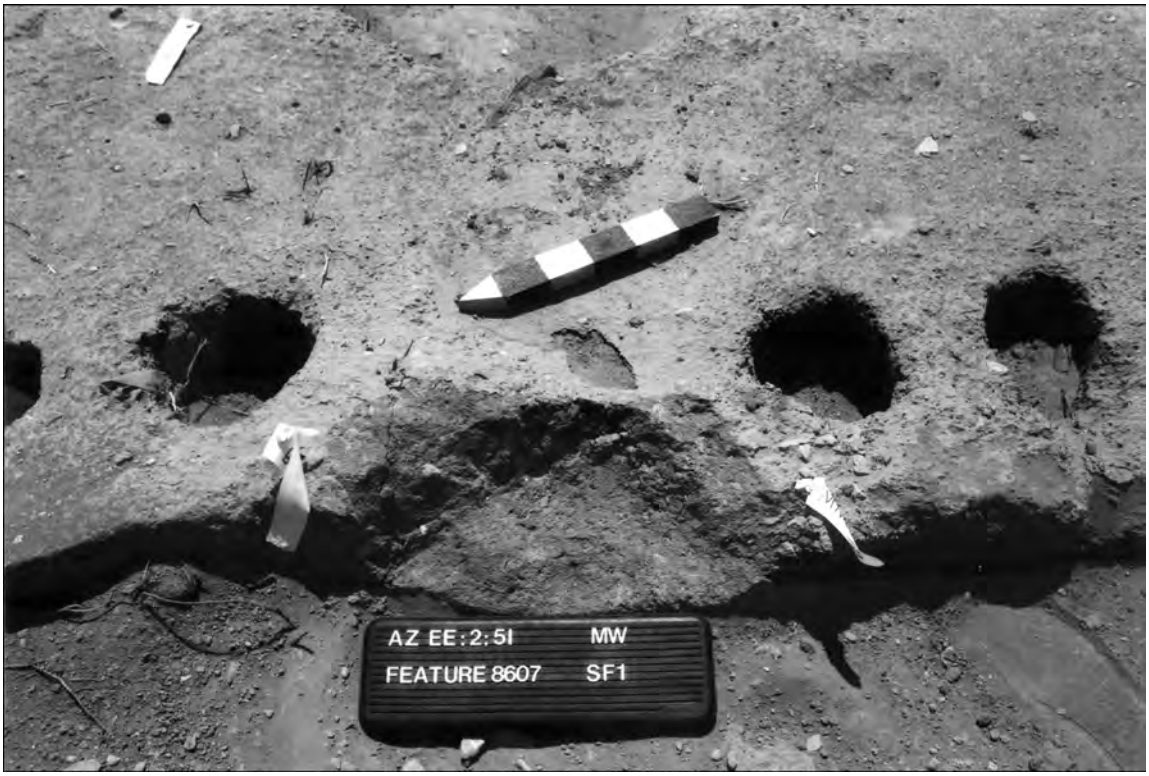

Figure B.34. Plan view of the hearth (Subfeature 1) in Feature 8607.

intruded various parts of the structure, and a fifth pit feature (Feature 3872) may have partially truncated the structure's entryway. There is no evidence that the structure burned, and the house pit apparently served as a trash midden after the structure was abandoned.

Center of feature UTMs: N 3538345.59, E 541557.11
Architectural type: house-in-a-pit
Date range: A.D. 700–950
House dimensions: 4.72 by 3.82 m; floor area 11.37 m^2; pit depth 0.18 m
Entryway dimensions: unknown
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 6 central-support postholes, 39 perimeter postholes, and 2 intramural pits
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PD 3363
Related features: intruded by Features 3366, 3433, 3672, and 3871; intrudes Feature 3680; unknown relationship to Features 3872 and 8607

Excavation Methods

Feature 3681 was discovered in the profile of Trench 133 during Phase 1 testing, and it was identified in plan during Phase 2 mechanical stripping of conglomerate Feature 437. The extent of the structure was defined further during the manual excavation of Trenches 1901, 1904, and 1912. A 2-by-2-m control unit (Test Pit 3069) was placed in the northwest corner of the structure at the intersection of Trenches 133 and 1901. It was excavated to the floor in a 3–11-cm level and an 8–13-cm level. The fill from each level was screened through 1/4-inch mesh, and a flotation sample (PDs 3070 and 3039, respectively) was collected from each.

The remainder of the feature was then divided into two units (Halves 1 and 2). Half 1 included the majority of the remaining house fill and was bounded by Trenches 133, 1901, 1904, and 1912 and by the control unit. It was excavated in two levels. The upper level was 3–12 cm thick and unscreened, but observed artifacts were collected. The lower level was excavated in variable thicknesses, the fill was screened through 1/4-inch mesh, and a composite flotation sample (PD 3125) was collected. In the southwest quadrant of the unit, this approximately 10-cm level was excavated to the floor surface exposed at the base of the control unit. In the eastern half of this unit, however, the lower level was excavated for only 3 cm before an isolated patch of burnt plastered surface was encountered. Three flat-lying plain ware sherds (PDs 3285–3287) were point located at the level of this surface.

At this point, Half 1 was subdivided into two units (Quarters 1 and 2). Quarter 1 consisted of the floor surface

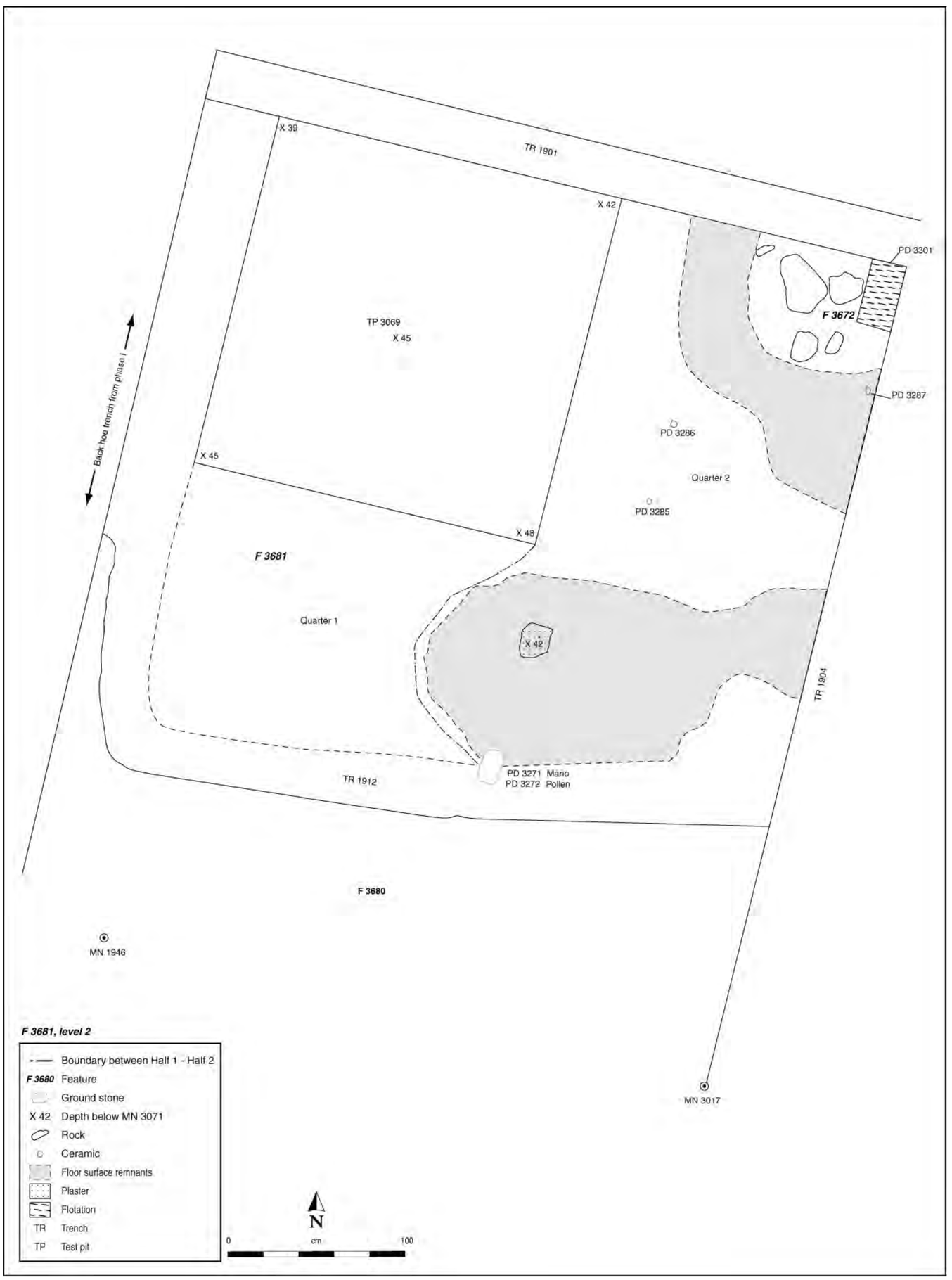

Figure B.35. Plan map showing the location of excavation units in Feature 3681 and the location of the remnant plastered surface encountered in the house fill.

exposed at the base of the southwest quadrant of Half 1 (see Figure B.35). Quarter 2 consisted of the fill capped by the remnant plastered surface exposed in the eastern half of Half 1. This fill was excavated to the structure's floor surface in a single 8–11-cm, 1/4-inch-screened level. A composite flotation sample and composite pollen sample (PD 3290) were collected from this level.

Half 2 consisted of the portion of the house located north of Trench 1901. It was excavated to the floor in a single, unscreened, 12–23-cm level. Observed artifacts were collected, but no samples were recovered from this unit.

The exposure of the structure's floor revealed a number of subfeatures, including 1 hearth, 2 pits, and 45 postholes. The postholes were excavated individually in single 1/4-inch-screened levels. A botanical sample (PD 3374) was collected from one of them (Subfeature 5). Likewise, each of the floor pits was excavated in a single 1/4-inch-screened level. A flotation sample (PDs 3380 and 3419) was collected from each, and a pollen sample (PD 2377) was collected from one of them (Subfeature 13). The hearth also was excavated in a single 1/4-inch-screened level. A flotation sample (PD 3363) and a pollen sample (PD 2364) were collected from the fill, and an archaeomagnetic sample (SRI 2459) was collected from its plastered walls. A possible mano (PD 3271) was point located on the floor, and a pollen sample (PD 3272) was recovered from beneath it.

Finally, the hearth of Feature 8607 was exposed in plan view just outside of the line of postholes that delineated the west wall of Feature 3681. The stratigraphic relationship between this hearth and the postholes was not recorded. The entire fill from the hearth was collected as a flotation sample (PD 8609), a pollen sample (PD 8610) was scraped from its base, and an archaeomagnetic sample (SRI 2417) was collected from its plastered walls.

Stratigraphy

The house pit was dug into natural argillic subsoil, although the south wall of the house pit most likely consisted of the fill from Feature 3681. The pit fill primarily consisted of numerous thin lenses of a grayish brown sandy silt loam interspersed with pockets of ash. This loose friable sediment contained a low abundance of assorted gravels and small cobbles, and chunks of charcoal were dispersed throughout. Artifact density was extremely high throughout the pit fill.

An 8-by-10-cm isolated patch of plastered surface was located approximately 6 cm above the floor in the south-central part of the structure. No other patches of plaster were located, but a few large flat-lying sherds located at the same level in the eastern portion of the structure may have indicated the continuation of this surface. The fill below this possible surface was similar to that in the rest of the house pit.

A thin layer of charcoal-laden, light yellowish brown silts mottled with reddish brown clay rested on the structure's floor surface. This layer probably represented structural debris associated with the decay and collapse of the structure after abandonment. Artifact density remained high in this lowest level.

Disturbances

The fill, pit walls, floor and subfeatures of Feature 3681 were impacted by at least four extramural features. A large roasting pit (Features 3366) cut through the fill and floor in the center of the west part of the structure. Two indeterminate pits (Features 3672 and 3871) truncated portions of the south wall, and an enigmatic rock pile (Feature 3672) impacted the structure's fill near the northeast corner. A fifth pit feature (Feature 3872) may have partially truncated the structure's entryway. In addition, roots, rodents, and insects disturbed the fill, floor, and subfeatures.

Construction Details

Feature 3681 was a subrectangular house-in-a-pit that most likely opened to the north (Figure B.36). It measured 4.72 m east–west by 3.82 m north–south and had a remaining pit depth of 18 cm.

Walls and Roof

The walls of Feature 3681 were delineated by 34 perimeter postholes (Subfeatures 3, 7–12, 14–37, and 42, 43, and 48). They ranged in size from 12 to 40 cm in diameter and 5 to 32 cm in depth (Table B.22), and they were not associated with a floor groove.

Six additional postholes (Subfeatures 2, 5, 39–41, and 47) were located in the center of the structure and most likely held the central roof supports. It is likely that only four of these postholes were in use at the same time and that two of the postholes (Subfeatures 2 or 39 and Subfeatures 5 or 40) represent a remodeling episode during the use of the structure. These central-support postholes ranged in size from 26 to 58 cm in diameter and 30 to 60 cm in depth (see Table B.22).

Entry

An entryway into the structure was not identified during excavation. A break in the posthole pattern near the center of the north wall and the location of the hearth in the northern portion of the structure, however, suggests that the entry faced north. It is possible that five postholes (Subfeatures 4, 38, and 44–46) located in this area formed the corridor of a protruding entry. These postholes ranged in size from 12 to 23 cm in diameter and 8 to 22 cm in depth (see Table B.22).

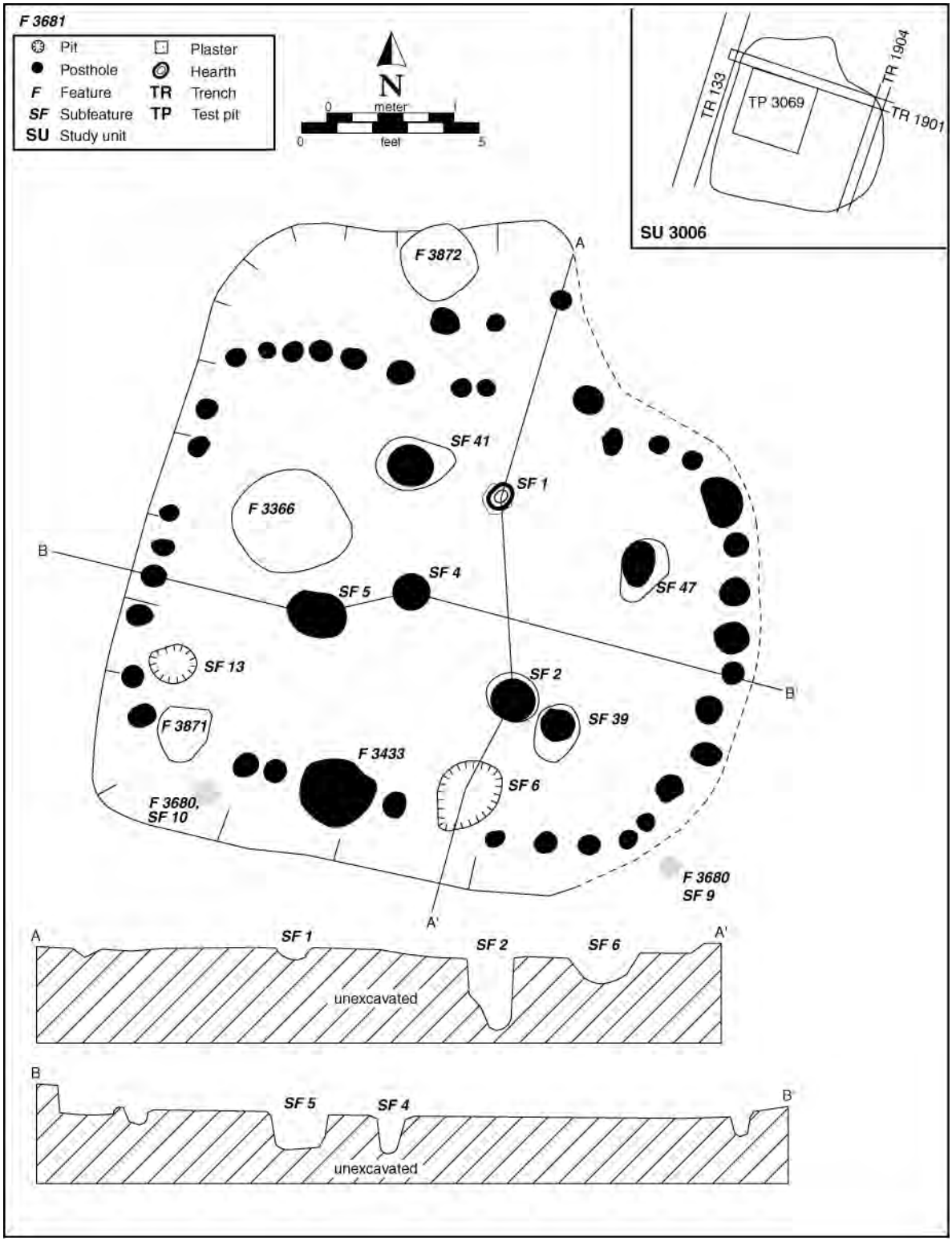

Figure B.36. Plan map of Feature 3681 showing the locations of subfeatures and intrusive features.

Table B.22. Feature 3681 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
2	3365	49	40	60	C
3	3421	18	18	17	P
4	3372	18	18	22	E
5	3374	45	38	32	C
7	3384	22	20	24	P
8	3391	13	13	17	P
9	3411	18	16	16	P
10	3413	18	18	20	P
11	3415	16	16	16	P
12	3417	17	16	19	P
14	3463	17	19	15	P
15	3465	14	14	17	P
16	3464	14	14	10	P
17	3469	12	13	11	P
18	3471	15	13	18	P
19	3473	15	16	12	P
20	3475	20	19	18	P
21	3477	16	17	19	P
22	3479	20	15	14	P
23	3481	13	12	5	P
24	3483	15	14	10	P
25	3485	40	27	32	P
26	3487	18	18	19	P
27	3489	22	23	22	P
28	3491	27	24	20	P
29	3493	18	18	17	P
30	3495	19	20	15	P
31	3497	17	20	14	P
32	3499	14	14	13	P
33	2204	16	16	16	P
34	2206	15	14	20	P
35	2208	15	15	16	P
36	2210	18	15	16	P
37	2212	18	18	16	P
38	3459	22	23	16	E
39	2360	44	32	38	C
40	2362	26	26	30	C
41	2366	40	58	46	C
42	2399	18	18	10	P
43	2401	16	16	10	P
44	2402	12	12	8	E
45	2450	14	16	9	E
46	2452	12	12	8	E
47	2454	52	47	44	C
48	2489	14	18	13	P

Key: C = central-support posthole; E = entryway posthole; P = perimeter posthole; PD = provenience designation.

Floor

The floor to Feature 3681 consisted of a highly compacted layer of argillic sediment that had been redeposited over the native argillic subsoil. The floor showed no signs of oxidation, and it sloped gently to meet the pit walls.

The isolated patch of plastered surface encountered above the structure's floor is not well understood. It could represent a remodeling episode for Feature 3681 or the floor of an intrusive structure, but no subfeatures were encountered at this level and the surface was not well-defined beyond the small area of plaster. It also may represent part of an extramural activity surface associated with postoccupational use of the house pit or structural debris associated with the collapse of the structure. The function of this surface, however, cannot be resolved with the available data.

Floor Features

Hearths

A plastered, circular hearth (Subfeature 1) was located in the northern part of Feature 3681, approximately 50 cm south of the probable entryway (see Figure B.36). It measured 20 cm in diameter and was approximately 9 cm deep.

The hearth associated with Feature 8607 most likely had been circular and basin shaped (see Figure B.34). It measured approximately 40 cm in diameter and was 17 cm deep. The walls and base consisted of the unprepared argillic subsoil, and the pit was filled with a loose, grayish brown silty loam.

Pits

Two intramural pits (Subfeatures 6 and 13) were discovered in the floor of Feature 3681. Subfeature 6 was an oval pit located near the south wall of the structure. It measured 44 by 56 cm in plan and was 26 cm deep. It was excavated into the native calcic subsoil, and the unprepared walls and base showed no signs of oxidation. The pit fill consisted of a homogenous layer of dark gray-brown, ash-laden sandy silt. It most likely served as a storage pit.

Subfeature 13 was an ovate, bell-shaped pit located in the southwest corner of the structure. It measured 30 by 37 cm in plan and was 52 cm deep. It was excavated into the native calcic subsoil, and the unprepared walls and base showed no signs of oxidation. The pit fill consisted of a homogenous layer of dark brown, loose silty loam with a low density of charcoal and artifacts. It similarly most likely served as a storage pit.

Artifacts

A possible mano (PD 3271) was point located on the structure's floor, and 3 plain ware sherds (PDs 3285–3287) were point located at the level of the remnant plastered surface located in the structure's fill. In addition, 1 retouched flake; 1 core; 10 flakes; 25 pieces of lithic debris; 1 Rillito or Rincon Red-on-brown sherd; 1 Canada del Oro or Rillito Red-on-brown sherd; 1 Galiuro Red-on-brown sherd; 2 indeterminate Tucson Basin red-on-brown sherds; 15 plain ware sherds; 1 worked plain ware sherd; and 24 small, indeterminate sherds were recovered from the general-floor provenience (PDs 3294 and 3409).

Evidence for Remodeling

Possible evidence for remodeling of Feature 3681 includes the presence of six possible central-support postholes and the isolated patch of plastered surface located in the fill above the structure's floor. It is possible that at least two of the central-support postholes held replacement posts or provided additional roof support. It is also possible that the isolated plaster patch represents a floor remodeling episode, although this could not be substantiated from the available data. No clearer evidence for remodeling was encountered.

Abandonment Processes

Because few artifacts remained on the floor and the structure showed no signs of having burned, Feature 3681 most likely had a simple, planned abandonment. Subsequently, the structure collapsed and the resulting pit served as a trash midden for later occupants in the area. Extramural activities took place here as well, as indicated by the numerous intrusive pits present in the house-pit fill.

Associated, Intrusive, or Superimposed Features

Feature 3681 was intruded by at least four extramural pit features (Features 3366, 3433, 3672, and 3871), and it intruded on at least one earlier structure (Feature 3680). Feature 3366 was a large roasting pit that cut through the fill and floor in the center of the west part of the structure. Feature 3433 was an indeterminate pit that truncated the center of the south wall of the structure. Feature 3672 was an enigmatic rock pile located in the structure's fill near the northeast corner. Feature 3871 was an indeterminate pit feature that truncated the southwest corner of the structure. A fifth pit feature (Feature 3872) was located just north of one of the possible entryway postholes (Subfeature 4) and may have partially truncated the structure's entryway.

The construction of Feature 3681 removed most of the fill, floor, and house pit of an earlier structure (Feature 3680) located in this area. It is possible that it intruded on a second structure (Feature 8607) as well, but the relationship between Features 3681 and 8607 could not be ascertained from the available data.

Chronology

An archaeomagnetic sample (SRI 2459) was collected from the hearth, but it was too imprecise to be dated. A Galiuro Red-on-brown sherd, Rillito or Rincon Red-on-brown sherd, and a Canada del Oro or Rillito Red-on-brown sherd were recovered from the general-floor provenience. The production date ranges for these different ceramic types overlap between A.D. 750 and 950 .

Locus D, Feature 3582

Center of feature UTMs: N 3538348.99, E 541561.81
Architectural type: house-in-a-pit
Date range: ca. A.D. 700–950
House dimensions: 4.52 by 2.41 m; pit depth 0.17 m
Entryway dimensions: 0.99 by 0.96 m
Shape: subrectangular
Orientation: north
Internal features: 1 hearth; 2 central-support postholes; 41 entry, interior, and perimeter postholes; and 5 intramural pits
Chronometric techniques: none
Analyzed botanical samples:
Related features: intruded by Features 3617 and 3879

Feature 3582 is a subrectangular house-in-a-pit with a protruding, north-facing entry. It was the oldest of four superimposed structures (Features 3582, 3879, 4516, and 3617) that formed the eastern portion of conglomerate Feature 437. Construction of Feature 3879, the next oldest structure in the complex, intruded the southern portion of the structure, removing the south wall and floor. Subsequent remodeling of the house pit from Feature 3879 for use with Feature 3617 also may have impacted the southern portion of Feature 3582.

Feature 3582 contained a number of subfeatures, including 1 hearth (Subfeature 1), 5 pits (Subfeatures 5, 6, 15, 26, and 49), 2 central-support postholes (Subfeatures 2 and 3), and 41 entry, interior and perimeter postholes (Subfeatures 4, 7–14, 16–25, and 27–48). A ramped and stepped, vestibule-style entry (Subfeature 50) protruded from the center of the north wall. A few broken artifacts were recovered from the floor (Table B.23), including a bifacial retouched flake, two pecking stones, four ground stone fragments, and a cluster of sherds. There is no evidence that the structure had burned, and it appeared to have had a simple, planned abandonment.

Excavation Methods

Feature 3582 was identified in both walls of Trench 1904 during Phase 2 investigations of Feature 437. Portions of the northern walls of the structure were defined during the excavation of two hand trenches (Trenches 1908 and 1910) around the perimeter of Feature 437.

The feature was excavated manually in two units (Quarters 1 and 2). Quarter 1 was located on the west side of Trench 1904, and it was excavated to the floor in a single, 4–8-cm level. The fill was screened through 1/4-inch mesh, and a flotation sample (PD 1917) was collected. Quarter 2 was located on the east side of Trench 1904, and it was excavated to the floor in a single 10–13 cm level. The fill was screened through 1/4-inch mesh, and a flotation sample (PD 1918) was collected.

Table B.23. Feature 3582 Point-Located Floor Artifacts

PD No.	Artifact Description
1932	Indeterminate ground stone fragment
1934	Bifacial retouched flake (Catalogue No. 323)
1938	Leporid tibia fragment
1954	Netherstone fragment
1956	Pecking stone (Catalogue No. 505)
1957	Tabular tool
1991	Pecking stone (Catalogue No. 496)
1992	Sherd Cluster: 2 Canada del Oro or Rillito Red-on-brown sherds; 1 Santa Cruz or Sacaton Red-on-buff sherd; 1 possible plain ware disk fragment; 10 plain ware sherds
1993	Indeterminate ground stone fragment

Key: PD = provenience designation.

The entryway was excavated as a separate unit (Subfeature 50). The fill was removed in a single 6–13 cm level, and it was screened through 1/4-inch mesh. A pollen sample (PD 1985) was scraped from the entry floor.

Exposure of the house floor revealed a number of subfeatures, including 1 hearth, 5 pits and 44 postholes. The postholes were excavated individually in single 1/4-inch-screened levels. The entire fill of the hearth was collected as a flotation sample (PD 1996). Likewise, the entire fill of one of the pits (Subfeature 26) was collected as a flotation sample (PD 3114). The other 4 pits (Subfeatures 5, 6, 15, and 49) were excavated individually in single 1/4-inch-screened levels. A flotation sample and pollen sample (PD 3132) were taken from the fill of Subfeature 15. Nine artifacts (PDs 1932, 1934, 1938, 1954, 1956, 1957, and 1991–1993) were point located on the floor (see Table B.23), and pollen samples (PDs 1933, 1935, and 1955) were collected from beneath three of them (PDs 1932, 1934, and 1954, respectively).

Finally, four postholes were discovered within the southwest corner of the structure that could not be assigned definitively to this structure or to the intrusive structures in this area (Features 3617 and 3879). Therefore, these four postholes were excavated as part of the collective Feature 437 (Subfeature 3–6).

Stratigraphy

The house pit and subfeatures were excavated into the light reddish brown, calcic argillic subsoil. The pit was filled with a homogenous layer of dark gray-brown silty loam. Artifact density was moderate to high throughout the fill. In addition, a 1–2-cm-thick lens of ash surrounded the hearth area, and it most likely represents debris left in the hearth and a nearby ash pit (Subfeature 26) at the time of abandonment.

Disturbances

The construction and remodeling of a house pit for two later structures (Features 3617 and 3879) removed the pit wall, floor, and fill from the southern quarter of Feature 3582. It is probable that some subfeatures were removed as well. In addition, roots, rodents, and insects damaged the pit walls, floor, and subfeatures and also disturbed the fill.

Construction Details

Feature 3582 was a subrectangular house-in-a-pit with a protruding, north-facing entry. The house pit measured 4.52 m east–west and approximately 2.41 m north–south, and it had a remaining depth of 17 cm.

Walls and Roof

The walls of the house pit were unprepared and showed no evidence of burning. Twenty-seven perimeter postholes (Subfeatures 4, 7–14, 18–25, 27, 28, and 36–43) were set immediately below these walls, and they were not associated with a floor groove. They ranged in size from 8 to 18 cm in diameter and 8 to 28 cm in depth (Table B.24).

Two central-support postholes (Subfeatures 2 and 3) were located along the central long axis of the structure (Figure B.37). They measured roughly 24 cm in diameter and were 46 to 50 cm deep. An additional five postholes (Subfeatures 16, 17, and 29–31) formed a linear arrangement parallel to the long axis in the southern third of the structure (see Figure B.37). These interior postholes ranged in size from 11 to 17 cm in diameter and 15 to 25 cm in depth (see Table B.24). It is possible that these postholes supported an interior wall. An area of disturbance in the eastern part of the structure is in line with these postholes and may have obscured the location of additional interior postholes.

Entry

A ramped and stepped entryway (Subfeature 50) protruded from the center of the north wall of the structure. The walls and floor of the entry pit consisted of the native argillic substrate, and they exhibited no signs of oxidation. The floor ramped slightly up and out of the house pit for approximately 35–40 cm. A 5-cm-high, 6–8-cm-deep adobe sill was located at the end of this ramp. An 8-cm-high vertical step was located 15 cm beyond the sill and led to the top of the entryway.

Nine postholes (Subfeatures 32–35 and 44–48) outlined the entry corridor (see Figure B.37). Three postholes (Subfeatures 33, 34, and 46) were located north of the upper step and indicate the extent of the entryway. Two postholes (Subfeatures 45 and 47) were located just north of the adobe sill, and two (Subfeatures 32 and 35) were located just below (south) of the sill. Finally, two posthole (Subfeatures 44 and 48) were located just inside the structure at the perimeter and entry wall juncture. These postholes ranged in size from 8 to 18 cm in diameter and 11 to 19 cm in depth (see Table B.24).

Floor

The floor of the structure consisted of the smoothed argillic subsoil. No evidence of oxidation was identified.

Floor Features

Hearths

A circular, basin-shaped hearth (Subfeature 1) was located approximately 55 cm south of the entryway (see

Table B.24. Feature 3582 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
2	1998	25	23	46	C
3	2000	25	23	50	C
4	3042	18	15	20	P
7	3063	12	11	8	P
8	3065	13	13	21	P
9	3078	11	8	14	P
10	3080	13	10	19	P
11	3082	11	11	19	P
12	3084	12	12	20	P
13	3086	11	11	18	P
14	3088	13	10	16	P
16	3092	13	13	22	I
17	3094	13	13	23	I
18	3096	11	11	19	P
19	3100	11	11	16	P
20	3102	12	11	16	P
21	3104	14	13	17	P
22	3106	11	10	17	P
23	3108	10	10	18	P
24	3110	11	11	16	P
25	3112	13	13	19	P
27	3138	12	12	28	P
28	3140	11	10	17	P
29	3142	17	15	15	I
30	3144	14	13	25	I
31	3146	14	11	15	I
32	3163	9	9	15	E
33	3165	8	8	13	E
34	3167	10	10	14	E
35	3169	11	8	19	E
36	3171	12	10	27	P
37	3173	16	13	22	P
38	3175	12	10	25	P
39	3177	10	10	20	P
40	3179	12	10	27	P
41	3181	12	12	22	P
42	3183	12	12	20	P
43	3185	10	8	19	P
44	3262	9	9	12	E
45	3264	15	12	11	E
46	3266	18	17	17	E
47	3268	13	12	14	E
48	3270	10	9	13	E

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.

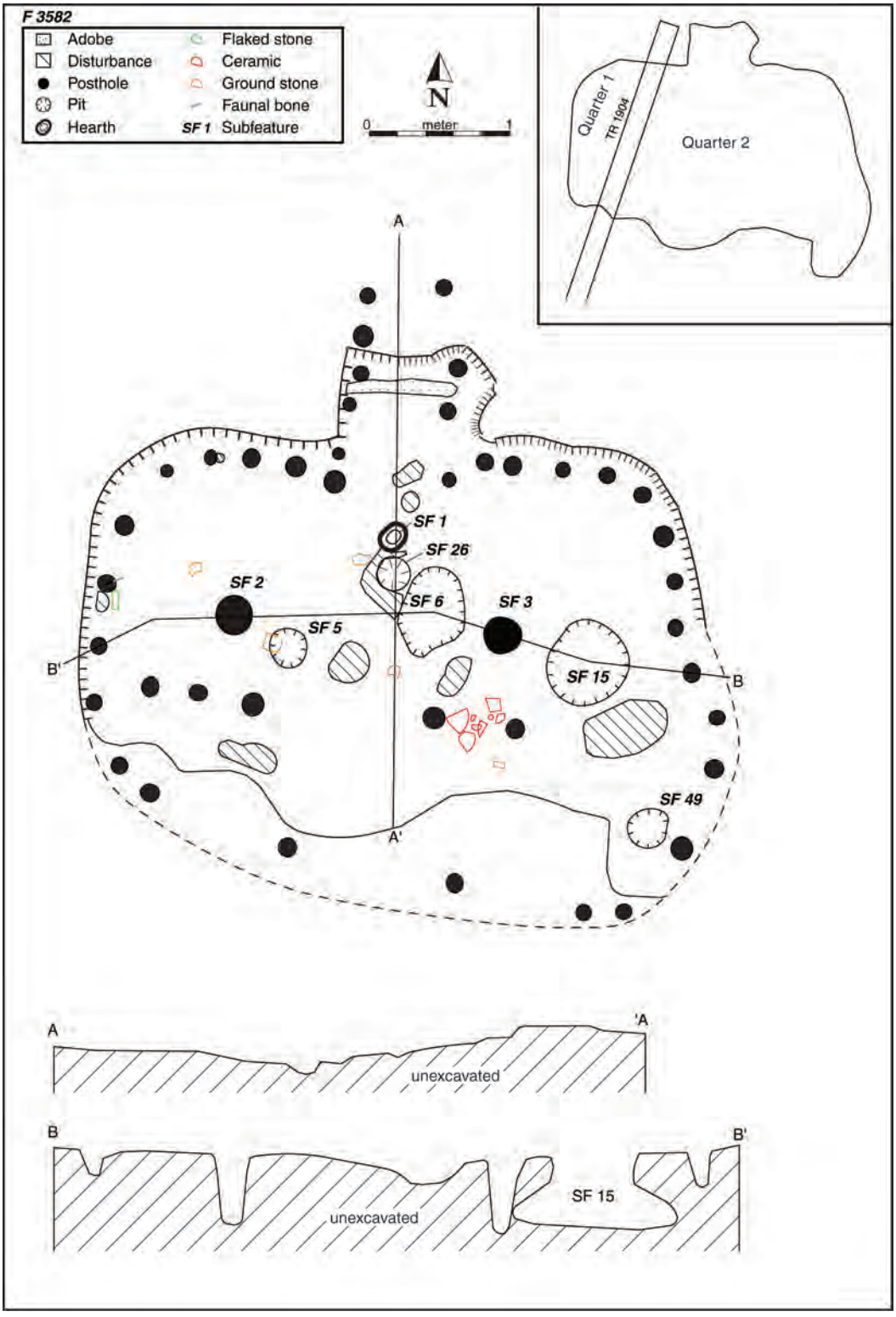

Figure B.37. Plan map of Feature 3582 showing the location of subfeatures and point-located artifacts.

Figure B.37). It measured 18 cm in diameter and was 10 cm deep. The base and sides were unprepared, heavily oxidized, and friable, and the north and south walls and half of the base were destroyed by a rodent tunnel. No plaster was present in or around the hearth, although a small ash-filled pit (Subfeature 26) was discovered just 5 cm to the south. The hearth was filled with a homogenous layer of gray ashy silt and small charcoal inclusions.

Pits

Five intramural pits (Subfeatures 5, 6, 15, 26, and 49) were identified in the floor of Feature 3582 (see Figure B.37). Subfeature 5 was a circular, straight-walled pit located just southeast of one of the central roof supports (Subfeature 2). It measured 26 cm in diameter and was 13 cm deep. It was excavated into the calcic-rich argillic subsoil, and the unprepared sides and base showed no signs of oxidation. The pit was filled with a homogenous layer of dark grayish brown silty loam that was similar to that of the house fill. It most likely functioned as a storage pit.

Subfeature 6 was an ovate, basin-shaped pit located southeast of the hearth. It measured 47 by 63 cm in plan and was 19 cm deep. It was excavated into the calcic-rich argillic subsoil, and the unprepared sides and base showed no signs of oxidation. The pit was filled with a homogenous layer of dark grayish brown silty loam that was similar to that of the house fill. It most likely functioned as a storage pit.

Subfeature 15 was a bell-shaped pit located near center of the east wall (Figure B.38). The mouth of the pit measured 60 cm in diameter, the lower sides flared out to a maximum width of 1.25 m, and the pit depth was approximately 53 cm. It was excavated into the native calcic subsoil, and the unprepared walls and base exhibited no signs of oxidation. The fill consisted of three strata. The lower 10–15 cm consisted of orangish brown argillic sediments with an abundance of calcic nodules and some charcoal, ash, and artifacts. The middle 35–40 cm consisted of trash-laden grayish brown silty loam mottled with orangish brown argillic sediment and calcic nodules. Artifact, ash, and charcoal densities were extremely high in the middle strata. The upper 5 cm consisted of a dark grayish brown silty loam that was similar to the fill present across the floor of the structure. Based upon its size and shape, Subfeature 15 likely functioned as a storage pit.

Subfeature 26 was a circular, basin-shaped ash pit located 5 cm south of the hearth. It measured 24 cm in diameter and was 15 cm deep. It was excavated into the calcic-rich argillic subsoil, and the unprepared sides and base showed no signs of oxidation. The pit was filled with a loose, ashy gray silt and small charcoal inclusions.

Subfeature 49 was a circular, basin-shaped pit located in the southeast corner of the structure. It measured 28 cm in diameter and was 11 cm deep. It was excavated into the calcic-rich argillic subsoil, and the unprepared sides and base showed no signs of oxidation. The pit was filled with a homogenous layer of dark grayish brown silty loam that was similar to that of the house fill. Four large rocks lay on top of the pit fill. This subfeature probably functioned as a small storage pit.

Artifacts

Nine point located artifacts (see Table B.23) were scattered across the floor (see Figure B.37), including 1 sherd cluster (PD 1992), 1 bifacial retouched flake (PD 1934), 2 pecking stones (PDs 1956 and 1991), 1 Leporid tibia fragment (PD 1938), and 4 possible pieces of ground stone (PDs 1932, 1954, 1957, and 1993). In addition, 1 indeterminate red-on-buff sherd, 1 Santa Cruz or Sacaton Red-on-buff sherd, 1 Dragoon or San Simon Red-on-brown sherd, 3 indeterminate Tucson Basin red-on-brown sherds, 1 Canada del Oro or Rillito Red-on-brown sherd, 13 plain ware sherds, 1 small, indeterminate sherd, 1 retouched flake (Catalog No. 321), 1 uniface (Catalog No. 220), 6 flakes, and 1 piece of lithic debris were recovered from the general-floor provenience (PD 1939).

Evidence for Remodeling

No evidence for remodeling was identified for Feature 3582.

Abandonment Processes

Because few artifacts remained on the floor and the structure showed no signs of having burned, Feature 3582 most likely had a simple, planned abandonment. Subsequently, the abandoned house pit filled with naturally deposited sediments and cultural trash. Sometime later, a structure (Features 3879) was constructed into the house pit, removing the southern wall, floor and fill of Feature 3582.

Associated, Intrusive, or Superimposed Features

The southern portion of Feature 3582 was truncated by two superimposed structures (Features 3617 and 3879). A third structure (Feature 4516) was sandwiched between Features 3617 and 3879 and, therefore, postdated the abandonment of Feature 3582 as well, although it did not relate directly to that feature.

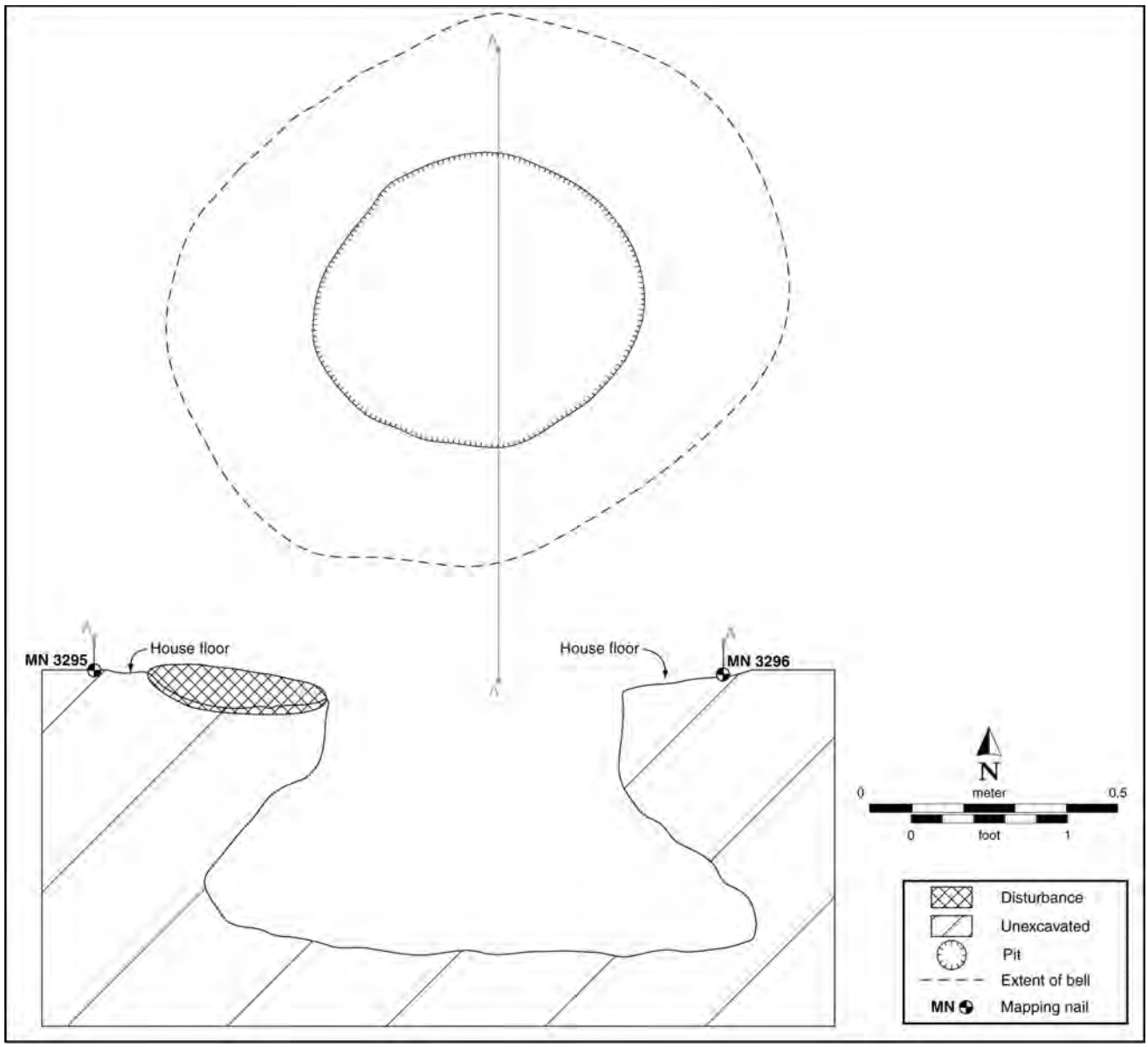

Figure B.38. Plan view and cross section of Subfeature 15, a bell-shaped pit located in Feature 3582.

Chronology

No chronometric samples were recovered from Feature 3582. Painted ceramics recovered from the floor included Santa Cruz or Sacaton Red-on-buff (ca. A.D. 850–1100) and Canada del Oro or Rillito Red-on-brown (ca. A.D. 750–950) sherds. These sherds likely represent postoccupational trash deposits, but the overlap in their production date ranges (ca. A.D. 850–950) provides a rough estimate of when this structure was abandoned.

Locus D, Features 3617, 4516, and 3879

Features 3617, 4516, and 3879 are three superimposed structures that share a common house pit. This series truncated the south wall of an earlier structure (Feature 3582), and the entire complex formed the eastern portion of conglomerate Feature 437. Feature 3879 was the original structure built in this area, and it was a subrectangular

house-in-a-pit with a protruding, north-facing entry. Several subfeatures were associated with this earliest structure, including 2 hearths (Subfeatures 1 and 2), 1 wall groove (Subfeature 6), 1 floor pit (Subfeature 3), 2 central-support postholes (Subfeatures 4 and 5), and 14 interior and perimeter postholes (Subfeatures 7–20).

At some point after Feature 3879 was abandoned, a second structure (Feature 4516) was constructed within the house pit. Feature 4516 was a small circular structure located entirely within the eastern half of the Feature 3879 house pit (Figure B.39). The basic outline of the structure was delineated by a series of 16 perimeter postholes (Subfeatures 2 and 4–18). For the most part, this second structure used the floor surface from Feature 3879; however, the floor area in the northeast portion of the structure cut through the floor of the house pit to form a 5-cm-deep pit edge that helped to delineate this part of the structure. One hearth (Subfeature 1) and 1 additional posthole (Subfeature 3) were located in the interior of the structure. Because Feature 4516 was not discovered until the floor of Feature 3879 had been exposed, only the fill within the subfeatures could be assigned to it.

Finally, the house pit constructed for Feature 3879 was remodeled slightly to accommodate the construction of the latest structure in this sequence (Feature 3617). Feature 3617 was a subrectangular house-in-a-pit that reused the original north-facing entry. A new floor surface was created for this structure that was located approximately 7–14 cm above the floor of the original structure (Feature 3879). Several subfeatures were identified in the floor of this structure, including one hearth (Subfeature 1), one floor groove (Subfeature 2), two central-support postholes (Subfeature 3 and 4), and six perimeter postholes (Subfeatures 5–10). The floor groove used with this structure incorporated the lower floor groove from Feature 3879, and the central-support postholes were located directly over those of the earlier structure as well. No intrusive extramural features were identified for these structures, and all three appeared to have had simple, planned abandonments.

Locus D, Feature 3617

Center of feature UTMs: N 3538345.57, E 541562.34
Architectural type: house-in-a-pit
Date range: A.D. 700–950
House dimensions: 5.02 by 3.30 m; floor area 8.53 m^2; pit depth 0.17 m
Entryway dimensions: 1.14 by 1.49 m
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 1 floor groove, 2 central-support postholes, and 6 perimeter postholes
Chronometric techniques: none
Analyzed botanical samples: PD 3135
Related features: intrudes Features 3582, 3879, and 4516

Excavation Methods

Feature 3617 was originally exposed in plan view during mechanical investigations of conglomerate Feature 437, and it was exposed in profile in both walls of Trench 1901 (Figure B.40). The outline of the feature was further defined by the excavation of two hand trenches (Trenches 1906 and 1908). The house fill was hand-excavated in three units (Quarters 1 and 2 and Half 2). Quarter 1 was located in the northeast quarter of the structure, and it was excavated in a single, 10–23-cm level. The fill was screened through 1/4-inch mesh, and a flotation sample (PD 1926) was collected. A pollen sample (PD 1951) was collected from an ashy area of the floor in the northwest corner of the unit. Because the floor to Feature 3617 was difficult to locate in the southeast part of the unit, it is possible that the unit was excavated below the floor and into the fill of the underlying feature (Feature 3879). Thus, the artifacts collected from this unit may represent a mixed context.

Quarter 2 was located in the northwest quarter of the structure and served as the control unit for the feature. It was excavated to the structure's floor in two 1/4-inch-screened levels. The upper level was 3–7 cm thick, and the lower level was 5–18 cm thick. A flotation sample (PDs 3047 and 3048) was collected from each level.

Half 2 encompassed the south half of the structure, and it was excavated in a single 8–27 cm level. The fill was not screened, but observed artifacts were collected. The floor was not well defined in the eastern third of this unit, and the level was excavated to the floor of the lower structure (Feature 3879) in this area. Therefore, the fill excavated in this unit represents a mixture of fill from Features 3617 and 3879 and most likely from Feature 4516 as well. A possible stone censer (PD 1923) was point located in the fill of this unit and may have come from the fill of the lower structure.

Exposure of the floor revealed the location of several subfeatures, including one hearth, one floor groove, and eight postholes (Figure B.41). The postholes were excavated individually in single 1/4-inch-screened levels. The entire fill of the hearth was collected as a flotation sample (PD 3135). Portions of the floor groove in the north, south, and east sides of the house were excavated as part of the exploratory trenches (Trenches 1901, 1906, and 1908). The remaining portion of the floor groove in the west part of the house was excavated as a single 1/4-inch-screened level. Because this subfeature incorporated the floor groove from the lower house (Feature 3879, Subfeature 6), the fill from both was excavated and screened as a single unit and level. Two possible mano fragments (PDs 2481 and 3119) were point located on the floor, and a pollen sample (PD 3120) was collected from beneath one of them (PD 3119).

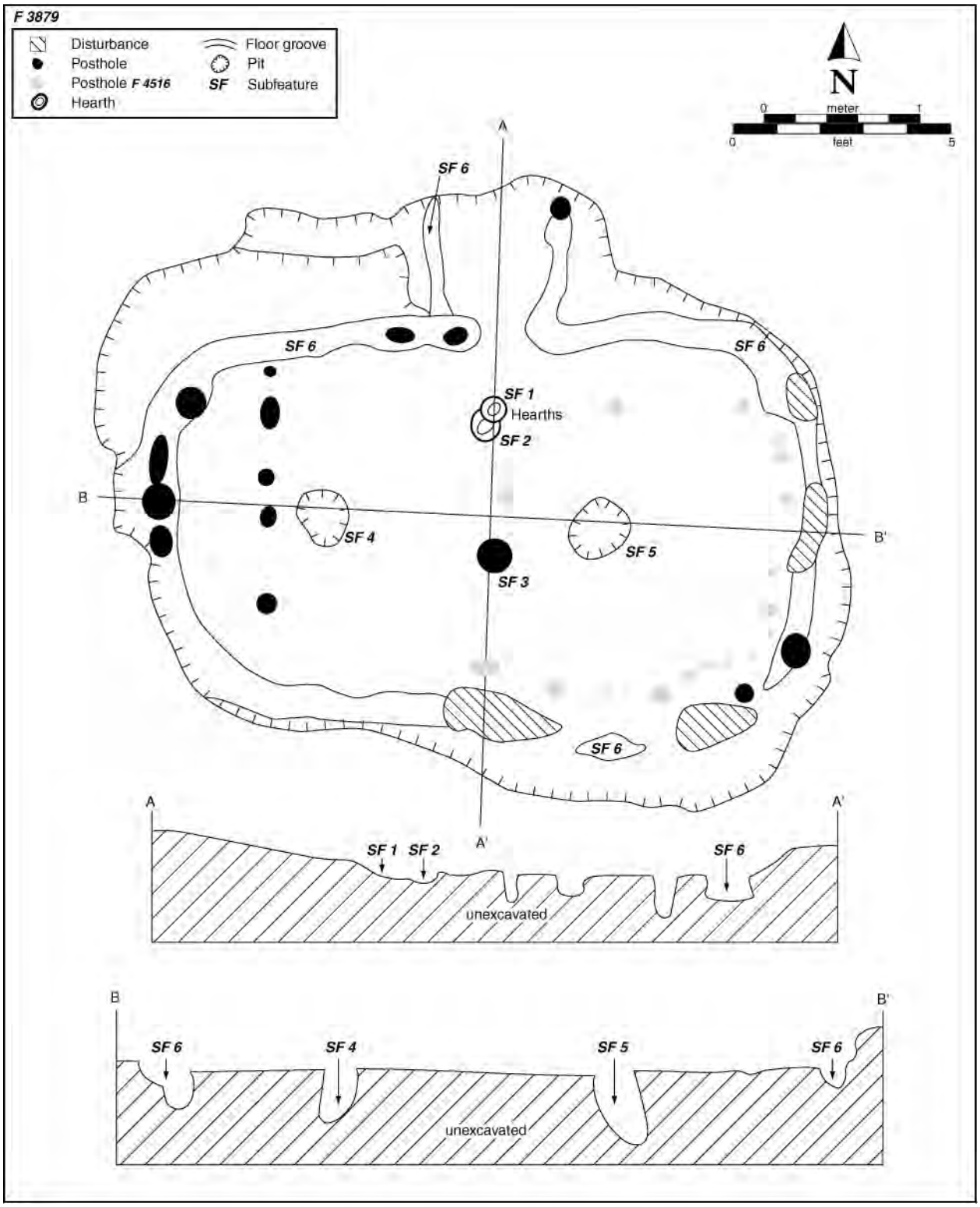

Figure B.39. Plan map of Feature 3879 showing the location of subfeatures.

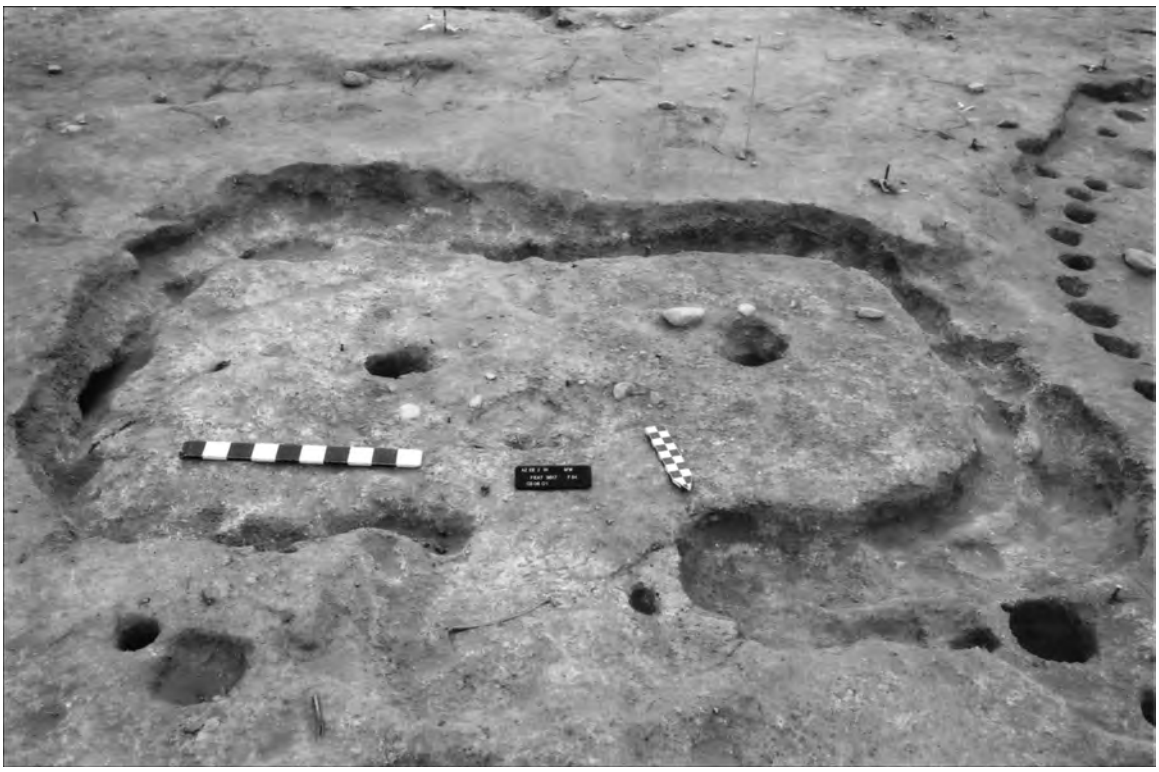

Figure B.40. Plan view of Feature 3617, looking south.

Stratigraphy

The house pit was dug into the reddish brown natural argillic substratum. The pit fill consisted of a loose, grayish brown sandy silt with a moderate abundance of fine to medium-sized gravels and occasional caliche nodules. Artifact density was high throughout. A lens of white silty ash was located on the floor surrounding the hearth area.

Disturbances

Roots, rodents, and insects disturbed the fill, floor, and subfeatures. The cause of extensive disturbance to the floor and floor groove in the eastern quarter of the house could not be determined (see Figure B.41).

Construction Details

The Feature 3617 structure was built within a slightly enlarged preexisting house pit (Feature 3879). It was subrectangular in shape and had a protruding, north-facing entry. The house pit measured 5.02 m east–west by 3.30 m north–south and had a remaining depth of 17 cm.

Walls and Roof. A floor groove (Subfeature 2) was located at the base of the pit walls and delineated the extent of the floor surface. The outer edge of the floor groove was constructed into the natural substratum, whereas the inner edge was formed by the prepared floor surface and underlying fill. Because the groove was excavated partially into the underlying fill, it was difficult to locate its base, and it could not be separated from the floor groove used with the underlying structure. The fill was similar to that of the house pit.

A second floor groove section was discovered in the northwest corner of the structure and also was excavated as part of Subfeature 2. It was located between the pit wall and the main floor groove (see Figure B.41), and it may have provided additional support for this portion of the wall. It also could reflect a remodeling episode at some point during the use of the structure. This second floor groove segment was dug into the sterile substratum, which made it easier to define. Consequently, this was the only area of the upper structure in which perimeter postholes could be distinguished. Six perimeter postholes (Subfeatures 5–10) were discovered at the base of this portion of the floor groove. They ranged in size from 13 to 28 cm in diameter and 4 to 16 cm in depth (Table B.25).

Finally, two central-support postholes (Subfeatures 3 and 4) were found along the central long axis of the structure. They measured 32–45 cm in diameter and extended 60 cm below the house floor (see Table B.25). These postholes were located directly above the central-support postholes used with the original structure in this house pit (Feature 3879), and they extended down into these lower postholes.

Entry. Feature 3617 reused the original, north-facing entry that was constructed for Feature 3879. The entry floor consisted of the same calcic-rich sediments used to construct the structure's floor, and it capped a layer of fill that overlay the

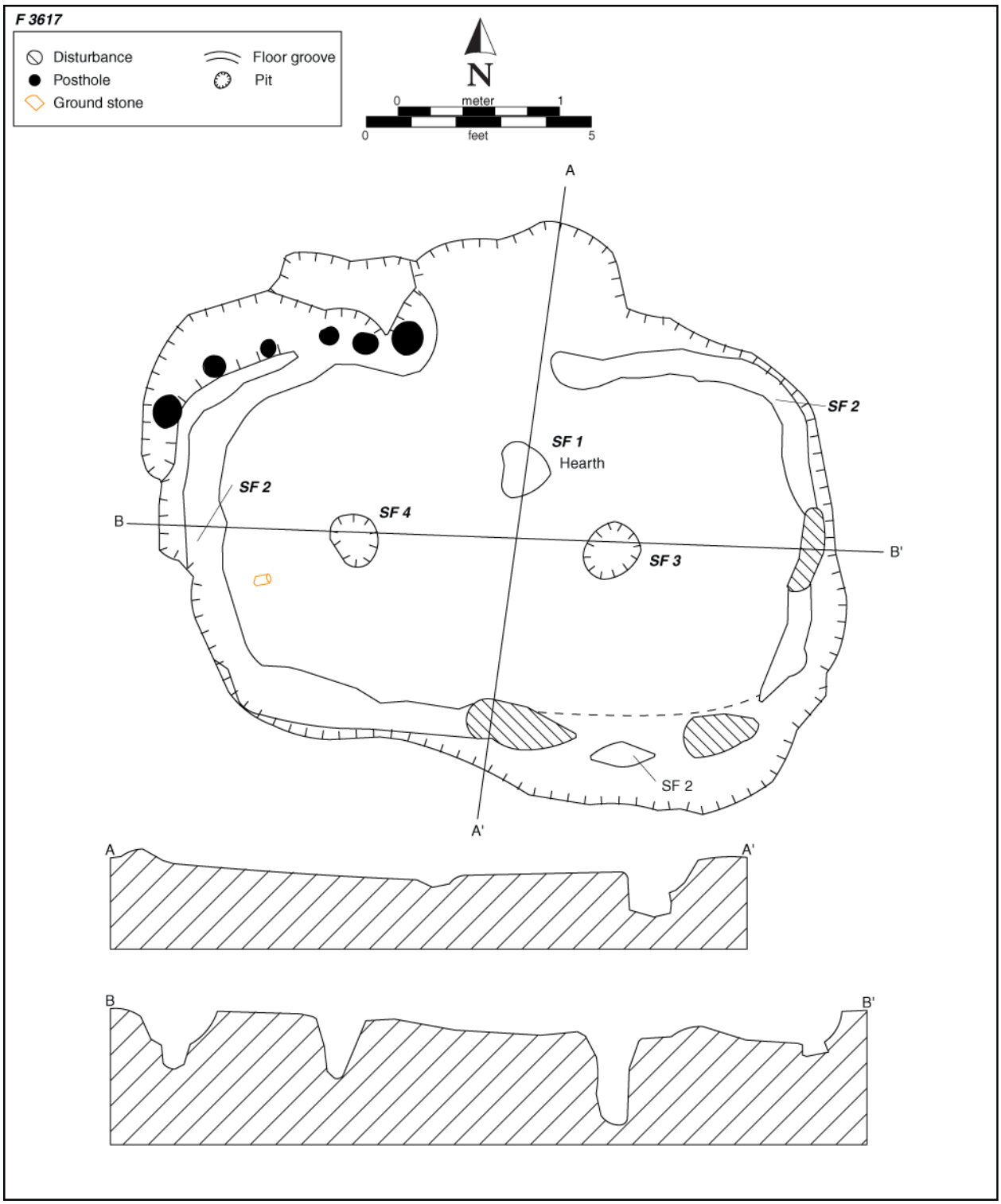

Figure B.41. Plan map of Feature 3617 showing the location of subfeatures.

Table B.25. Feature 3617 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
3	2385	34	32	60	C
4	2405	45	37	60	C
5	2659	22	20	16	P
6	2661	15	14	10	P
7	2663	13	13	4	P
8	2665	18	13	8	P
9	2667	21	14	11	P
10	2669	28	27	10	P

Key: C = central-support posthole; P = perimeter posthole; PD = provenience designation.

original entry floor. The floor was irregular at the northern edge and sloped gently in toward the structure. No postholes or floor groove were discovered within or surrounding the entry pit, and the walls and floor showed no signs of oxidation. The entry fill was similar t that found in the house pit.

Floor. The floor consisted of a layer of carbonate-rich argillic sediments deposited over the fill of an earlier structure. There was no evidence of plastic or oxidation. The deposited material terminated at the interior edge of the floor groove, suggesting that it had been put down during the construction of Feature 3617.

Floor Features

Hearths. An irregular-shaped hearth (Subfeature 1) was located 22 cm south of the entry opening. It measured 36 by 37 cm in plan and extended 10 cm beneath the floor. The base and sides consisted of the calcic-rich floor sediments, and no plaster was present in or around the hearth. The pit was filled with a fine white ash, and a pocket of mixed sediments was located at the base in an area of rodent disturbance.

Artifacts

A mano (PD 2481) and a mano fragment (PD 3119) were the only artifacts found in contact with the floor. In addition, a shell bird pendant was recovered from the general-floor provenience (PD 1951).

Evidence for Remodeling

The presence of a second floor groove segment in the northwest corner of the structure is the only evidence for possible remodeling during the occupation of the structure.

Abandonment Processes

The structure had not burned and few artifacts were recovered from its floor surface, suggesting that Feature 3617 had a simple, planned abandonment. Subsequently, the abandoned house pit filled with natural sediments and cultural trash.

Associated, Intrusive, or Superimposed Features

Feature 3617 was built within the house pit of an earlier structure (Feature 3879) and it superimposed and intruded a second structure (Feature 4516) that also had been built within the house pit. The entire complex of superimposed structures intruded the southern portion of an earlier structure (Feature 3582) located to the north.

Chronology

No chronometric samples were recovered from Feature 3617. A painted ceramic sherd recovered from the fill of the lower structures had a production date range of A.D. 750–950. This sherd cannot be used to estimate the age of the lower structures, because it is unclear when it was deposited in the house pit with respect to its known production date. It is possible that it was redeposited within the house pit long after it was initially discarded as part of an intentional trash-filling episode to prepare the house pit for construction of Feature 3617, in which case it could significantly predate the abandonment of the earlier structures. It indicates, however, that Feature 3617 must have been abandoned at some time after A.D. 750. The architectural style of the structure indicates that it was built and occupied during the Middle Formative period (ca. A.D. 700–1150), and so the best age estimate for this structure is A.D. 750–1150.

Locus D, Feature 3879

Center of feature UTMs: N 3538345.57, E 541562.34
Architectural type: house-in-a-pit
Date range: ca. A.D. 700–950
House dimensions: 4.82 by 3.30 m; floor area 8.54 m^2; pit depth 0.12 m
Entryway dimensions: 1.14 by 1.49 m
Shape: subrectangular
Orientation: north

Internal features: 2 hearths, 1 floor groove, 16 postholes, and 1 intramural pit
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PD 2473
Related features: intrudes Feature 3582; intruded by Features 3617 and 4516

Excavation Methods

Feature 3879 was identified during the excavation of Feature 3617, when it was realized that there was an earlier structure located beneath the floor of Feature 3617. The fill located beneath the floor of Feature 3617 was excavated in one unit and level. This level was 7–14 cm thick, and the fill was screened through 1/4-inch mesh. A flotation sample (PD 2422) was collected from the fill.

Exposure of the floor revealed a number of subfeatures, including 2 hearths, 1 floor groove, 1 storage pit, and 16 postholes. The postholes were excavated individually in single 1/4-inch-screened levels. Two of the postholes (Subfeatures 4 and 5) were the lower portions of postholes from the upper structure (Feature 3617, Subfeatures 3 and 4), and they had been excavated as part of that structure. Likewise, the floor groove to this structure was located directly beneath the floor groove to the upper structure and was excavated primarily as part of that upper groove. The only portion of the floor groove that was excavated separately was the section that extended into the west side of the entry. This part of the groove was capped by the entry floor to the later structure. The fill was excavated in a single 1/4-inch-screened level. The entire fill of the pit was collected as a flotation sample (PD 2477). Likewise, the entire fill of one of the hearths (Subfeature 1) was collected as a flotation sample (PD 2473), and an archaeomagnetic sample (SRI 2378) was collected from its walls. The second hearth (Subfeature 2) was not excavated. A bone awl (PD 2480) was point located on the floor.

Stratigraphy

The Feature 3879 house pit and subfeatures were dug into the local, reddish brown argillic subsoil. The pit fill consisted of a homogenous layer of grayish brown sandy silt with abundant artifacts. This was capped by a layer of highly calcic material that was used to construct the floor to the later structure (Feature 3617).

Disturbances

Two structures were constructed into Feature 3879. Feature 4516 had cut through the eastern half of the floor, whereas Feature 3617 destroyed an unknown amount of the upper pit walls and may have disrupted some of the upper fill. Disturbances from roots, rodents, and insects were abundant throughout the fill, floor, and subfeatures. Rodent disturbance, in particular, was concentrated in the floor-groove area of the structure.

Construction Details

Feature 3879 was a subrectangular house-in-a-pit with a protruding, north-facing entry. The house pit measured 4.82 m east–west by 3.30 m north–south and had a remaining depth of 12 cm. The pit walls and base were unprepared and showed no signs of oxidation.

Walls and Roof. A floor groove (Subfeature 6) encircled the pit base and continued into the entryway. Rodent disturbance made it impossible to locate the portions of the groove in the southeast corner of the structure (see Figure B.39). The section of the groove that extended into the west side of the entry was capped by the later entry floor and represented the only intact, undisturbed part of this subfeature.

Eight perimeter postholes (Subfeatures 7–14) were discovered within the floor groove. They were irregularly spaced and did not appear to have been placed in a deliberate pattern. These postholes ranged in size from 9 to 22 cm in diameter and 4 to 31 cm in depth (Table B.26). Two central-support postholes (Subfeatures 4 and 5) also were discovered along the central long axis of the structure. These postholes were reused by a later structure (Feature 3617) built in this house pit. They measured 32–36 cm in diameter and extended 31–50 cm below the floor.

Entry. Feature 3879 had a ramped, vestibule-style entry that protruded from the center of the north wall (see Figure B.39). The entry pit had been constructed into the native argillic subsoil, and the walls and floor of the pit did not exhibit any signs of oxidation. The ramped floor sloped down into the structure. The structure's floor groove continued into the entryway, constricting the opening between the house and entry wall junctures. One posthole (Subfeature 15) was located within the floor groove on the eastern side of the entry opening. It measured 13 cm in diameter and was 9 cm deep (see Table B.26).

Floor. The floor of the structure consisted of the unprepared calcic subsoil. It exhibited no signs of oxidation aside from the area around the hearth.

Floor Features

Hearths. Two superimposed hearths (Subfeatures 1 and 2) were located about 30 cm in front of the entryway. Subfeature 1 was the more-recent hearth, and it had been highly disturbed by roots and rodent tunneling, leaving approximately one-third of the feature intact. It appeared to have been a circular, basin-shaped pit that measured 28 by 38 cm in plan and was 10 cm deep. The base and sides had been lined with an adobe plaster and exhibited heavy oxidation. It was filled with a homogenous layer of fine, whitish gray ash.

Table B.26. Feature 3879 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
4	2749	34	33	31	C
5	2751	36	32	50	C
7	2755	22	22	21	P
8	2757	15	10	21	P
9	2759	19	16	31	P
10	2761	20	15	8	P
11	2763	18	20	16	P
12	2765	19	14	16	P
13	2767	9	9	4	P
14	2769	20	15	9	P
15	2771	13	13	9	E
16	2834	17	14	20	I
17	2836	13	11	24	I
18	2838	11	10	13	I
19	2840	10	10	11	I
20	2842	21	13	19	I

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.

The earlier hearth (Subfeature 2) was located southwest and beneath the later hearth (see Figure B.39). It was not excavated, but it appeared to have been filled with adobe.

Pits. A circular, basin-shaped pit (Subfeature 3) was located 74 cm south of the southernmost hearth (Subfeature 2). It measured 22 by 24 cm in plan and was 14 cm deep. The sides and base consisted of the unprepared argillic subsoil, and they showed no signs of oxidation. The pit was filled with a homogenous layer of dark brown sandy silt with some small charcoal fragments and gravels. Based upon its size, shape, and depth, it may have functioned as a storage pit. Alternatively, its position with respect to the posthole pattern of Feature 4516 suggests that it could have served as a posthole for this later structure.

Artifacts

A splintered bone awl (PD 2480) was point located on the floor. No other artifacts were recovered from the floor or from any other sealed or primary context associated with this structure.

Evidence for Remodeling

The two superimposed hearths (Subfeatures 1 and 2) provide the only evidence that this structure was remodeled.

Abandonment Processes

The structure had not burned and no artifacts were recovered from its floor surface, suggesting that Feature 3879 had a simple, planned abandonment. At some point shortly after abandonment, a second structure (Feature 4516) was constructed within the house pit, reusing the house-pit floor. Once the second structure was abandoned, the house pit began to fill with natural sediments and cultural trash, before it was reused for a third structure (Feature 3617).

Associated, Intrusive, or Superimposed Features

Feature 3879 truncated the south wall, floor, and subfeatures of an earlier structure located to the north (Feature 3582). In turn, this feature's house pit was reused for two later structures (Features 4516 and 3617).

Chronology

An archaeomagnetic sample (SRI 2378) was collected from one of the structure's hearths (Subfeature 1), but it was too imprecise to be dated. No temporally sensitive artifacts were recovered from the structure's floor, and the subsequent reuse of the house pit and mixing of structural fill makes it impossible to estimate the age of abandonment from fill artifacts. Based on the architectural style of the house, it was constructed, occupied, and abandoned sometime during the Middle Formative period (ca. A.D. 700–1150).

Locus D, Feature 4516

Center of feature UTMs: N 3538541.81, E 541502.36
Architectural type: house-in-a-pit
Date range: ca. A.D. 700–950
House dimensions: 2.05 by 2.01 m
Entryway dimensions: unknown
Shape: circular

Orientation: northwest
Internal features: 1 hearth and 17 postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: intrudes Feature 3879; intruded by Feature 3617

Excavation Methods

Feature 4516 was discovered after the floor of Feature 3879 was exposed, and only its subfeatures were excavated separately. The structure was delineated by a circular pattern of 16 perimeter postholes located in the eastern half of Feature 3879. A hearth and 1 additional posthole were located inside this circle and represent the interior subfeatures for Feature 4516. The postholes were excavated individually in single 1/4-inch-screened levels. The entire fill of the hearth was collected as a flotation sample (PD 2796), and an archaeomagnetic sample (SRI 2379) was collected from its walls.

Stratigraphy

The structural fill associated with Feature 4516 was indistinguishable from that of Feature 3879 and was not excavated separately.

Disturbances

Structural fill and architectural remains may have been removed during the construction of overlying Feature 3617. Some root and insect damage was noted for the subfeatures.

Construction Details

Feature 4516 was a small, circular structure constructed within the Feature 3879 house pit. As delineated by the postholes, the structure measured 2.05 m east–west by 2.01 m north–south. For the most part, this structure reused the floor of the Feature 3879 house pit; however, the floor in the northeast portion of the structure was cut approximately 5 cm below the house-pit floor. This depressed area of floor formed a shallow pit outline that assisted in delineating this portion of the structure (Figure B.42).

Walls and Roof. Feature 4516 was delineated by a circular pattern of 16 perimeter postholes (Subfeatures 2 and 4–18). They ranged in size from 9 to 26 cm in diameter and 8 to 35 cm in depth (Table B.27). One additional posthole (Subfeature 3) was located in the interior of the structure, to the east of the hearth. It was 14 cm in diameter and 17 cm deep, and it may have served as a central roof support. The postholes were filled with a dark brown sandy silt that was similar to the fill of Feature 3879.

Entry. No formal entry was identified. A 60-cm gap between the perimeter postholes (Subfeatures 2 and 4) on the northwestern side of the structure may have served as an informal entrance (see Figure B.42).

Floor. The floor consisted of the unprepared argillic substrate. At least three-fourths of the floor was level with that of Feature 3879. The northeast quarter, however, extended through the floor of Feature 3879, creating a 5-cm vertical separation between the floors in this area.

Floor Features

Hearths. A circular, basin-shaped hearth (Subfeature 1) was located in the center of the feature, 8–10 cm back from the gap in the northwest perimeter postholes (see Figure B.42). It measured 21 by 24 cm in plan and was 5 cm deep. The walls and base were plastered and very oxidized. The hearth contained a fine whitish gray ash with a moderate amount of charcoal inclusions.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary context associated with Feature 4516.

Evidence for Remodeling

No evidence for remodeling was encountered.

Abandonment Processes

The structure had not burned and no artifacts were recovered from its floor surface, suggesting that it had a simple, planned abandonment. The structure may have collapsed or the wall posts may have been scavenged during or after abandonment. The house pit within which the structure was constructed began to fill with natural sediments and cultural trash before it was reused for a later structure (Feature 3617).

Associated, Intrusive, or Superimposed Features

Feature 4516 was constructed within the Feature 3879 pit after the earlier structure had been abandoned. Feature 4516 was later intruded by the construction of Feature 3617.

Chronology

An archaeomagnetic sample (SRI 2379) was collected from the structure's hearth, but it was too imprecise to be dated. Furthermore, no temporally sensitive artifacts could be associated definitively with this structure. It clearly postdated the abandonment of Feature 3879 and predated the construction of Feature 3617. Therefore, it must have been constructed, occupied, and abandoned ca. A.D. 700–950, sometime during the Middle Formative period.

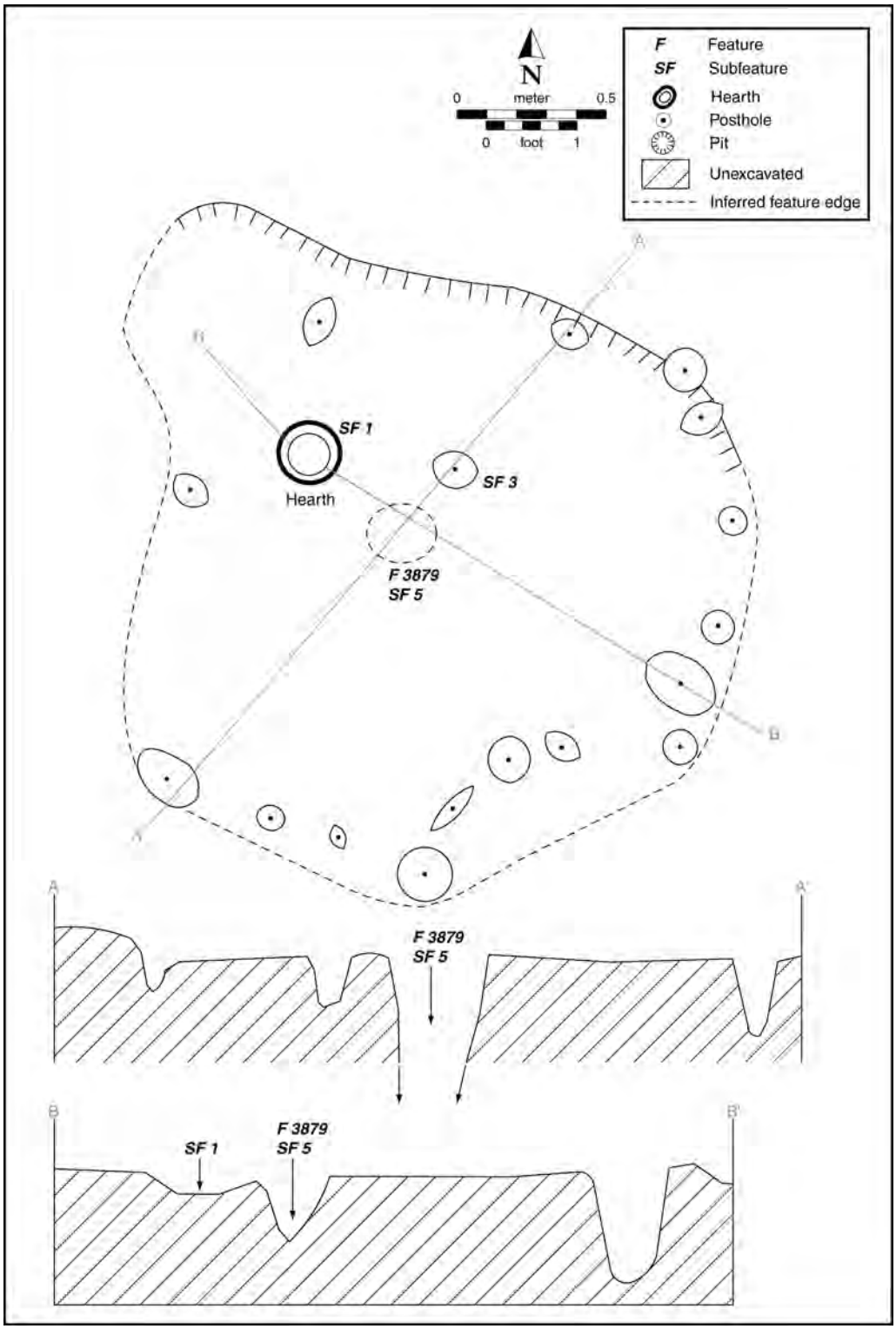

Figure B.42. Plan map of Feature 4516 showing the location of subfeatures and relationship with Feature 3879.

Table B.27. Feature 4516 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
2	2798	16	14	19	P
3	2800	15	13	17	C
4	2802	13	10	21	P
5	2804	11	9	15	P
6	2806	14	13	18	P
7	2808	17	13	20	P
8	2810	11	11	14	P
9	2812	17	13	12	P
10	2814	22	18	35	P
11	2816	13	10	10	P
12	2818	12	13	23	P
13	2820	15	14	14	P
14	2822	19	17	10	P
15	2824	18	15	25	P
16	2826	10	11	8	P
17	2828	10	9	11	P
18	2830	26	13	28	P

Key: C = central-support posthole; P = perimeter posthole; PD = provenience designation.

Locus D, Feature 565

Center of feature UTMs: N 3538358.29, E 541540.67
Architectural type: house-in-a-pit
Date range: A.D. 735–840
House dimensions: 4.00 by 3.01 m; floor area 9.84 m^2; pit depth 0.10 m
Entryway dimensions: unknown
Shape: elliptical
Orientation: north
Internal features: 1 hearth, 1 floor groove, and 6 postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: intruded by Features 3973, 3975, 5819, 10,639, and 10,640

Feature 565 was a shallow, ovate pit structure located in the eastern portion of Locus D (see Figure 84). The limited excavation of Feature 565 focused on clearing the floor to locate the hearth. A possible informal hearth was identified within the structure. The outlines of six postholes and one floor groove were also visible in the house floor; however, they were not excavated. The floor of the structure was oxidized, suggesting that it had burned.

Excavation Methods

Feature 565 was first identified during Phase 1 testing when mechanical excavation of Stripping Unit 558 exposed the southeast corner of the structure. The rest of the structure was defined during Phase 2 in Stripping Units 3006 and 2493, at which point a portion of the floor in the east side of the house was exposed.

Subsequent excavations into the structure aimed at locating the hearth. The remaining 10 cm of house fill was removed mechanically and manually to expose the floor. Observed artifacts were collected, but the fill was not screened. No samples were collected.

Excavations revealed a plastered floor with a small, oval depression that may have been the hearth. The fill from this subfeature was excavated as part of the structure, and an archaeomagnetic sample (SRI 2442) was collected. Outlines of the floor groove and six postholes were exposed as well. These subfeatures were mapped but not excavated.

Stratigraphy

The house was dug into the native paleosol. The house pit was filled with an unstratified layer of dark grayish brown silty loam.

Disturbances

Two extramural pits (Features 3973 and 5819) and two possible roasting pits (Features 10,639 and 10,640) truncated the fill and floor of the structure.

Construction Details

Based on the outline of the floor groove, Feature 565 was elliptical in plan view (Figure B.43). The house pit measured 4.00 m east–west by 3.01 m north–south and had a remaining pit depth of 10 cm. The east side of the house appeared more rounded than the west side, which had more acute corners. The entryway was not discovered, but it may have been located along the north wall of the structure in the middle of a series of intrusive pits.

Walls and Roof

The outlines of a floor groove and six perimeter postholes were observed during excavation. The postholes appeared to originate within the floor groove. Central-support postholes were not identified.

Entry

Although no entry was found, it was likely located along the north wall of the structure in an area heavily disturbed by intrusive pits. The presumed entry location was based on the original house stain exposed during mechanical stripping.

Floor

Patches of well-oxidized, remnant floor plaster were found in the north-central portion of the house. The floor in the rest of the house consisted of the native subsoil.

Floor Features

Hearths

The presumed location of the hearth was marked by a large area of thick, fired plaster. The plaster curved down into an oval depression that was unlined. This oval depression may have served as the hearth. However, it lacked ashy fill and, although oxidized, it did not exhibit the heavy oxidation typical of a hearth.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary context.

Evidence for Remodeling

No evidence for remodeling was encountered.

Abandonment Processes

The lack of artifacts on the floor suggests that the structure was cleaned out prior to abandonment. The structure possibly had burned during or after abandonment, as evidenced by the presence of oxidized floor plaster in the northern portion of the structure. Subsequently, the house pit filled with naturally deposited sediments and cultural debris.

Associated, Intrusive, or Superimposed Features

Several extramural pits intruded Feature 565. These included three nonthermal pits (Features 3973, 3975, and 5819) and two possible roasting pits (Features 10,639 and 10,640). None of these pits was excavated.

Chronology

An archaeomagnetic sample was recovered from the structure's floor and returned a date range of A.D. 735–840. This is the best age estimate for the use and abandonment of this structure.

Locus D, Feature 575

Center of feature UTMs: N 3538544.47, E 541482.22
Architectural type: house-in-a-pit
Date range: ca. A.D. 700–1150 House dimensions: 8.45 by 4.17 m; pit depth 0.37 m
Entryway dimensions: unknown
Shape: subrectangular?
Orientation: north
Internal features: 1 hearth
Chronometric techniques: none
Analyzed botanical samples: none
Related features: intruded by Feature 576

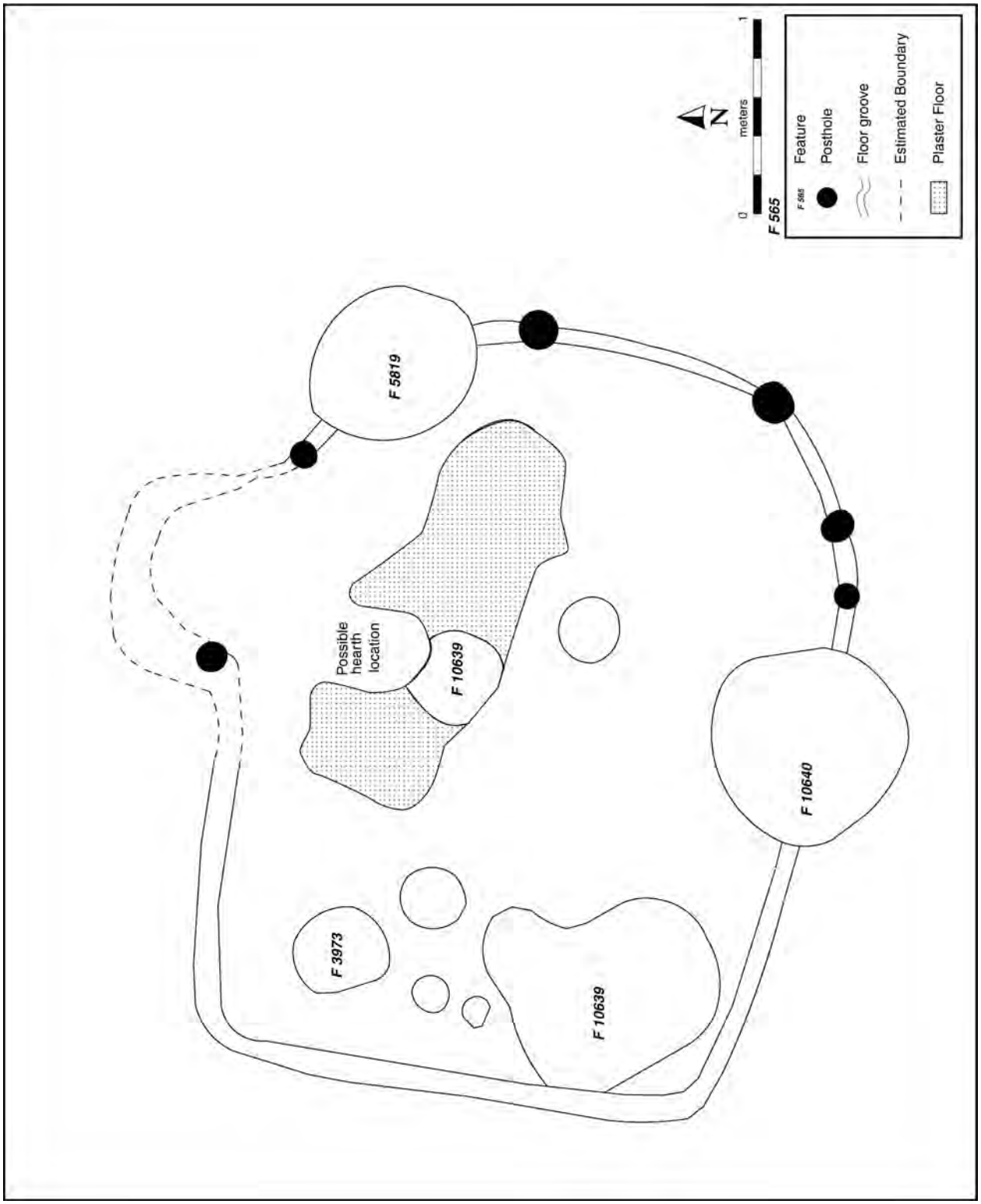

Figure B.43. Plan map of Feature 565 showing the location of exposed subfeatures and intrusive features.

Feature 575 was a possibly subrectangular structure located in the eastern end of Locus D. It was adjacent to the western edge of the large conglomerate Feature 437 (see Figure 84), although it was excavated separately from this feature. The limited excavation of Feature 575 focused on clearing the floor to locate the hearth. A small, plaster-lined hearth was located within the northern part of the structure. In addition, a possible protruding entryway was found on the northern side of the feature. No other subfeatures were identified. An unexcavated roasting pit (Feature 576) cut through the fill and structure floor. Several other intrusive pits were noted during excavation, but they were not documented separately.

Excavation Methods

Feature 575 was identified during Phase 1 in Stripping Unit 558, and it was fully exposed during Phase 2 in Stripping Units 3006 and 2493. Subsequent excavations into the structure aimed at locating the hearth. To this end, the fill in the western two-thirds of the structure was mechanically and manually removed to the floor in a single 17–33 cm level. The fill was not screened, but observed artifacts were collected. No samples were recovered from the fill or from the exposed floor section. The presence of numerous intrusive pits was noted in the fill and in the structure's floor, but none was excavated or documented separately. Likewise, a small plastered hearth was found on the floor surface, but it was not excavated or documented separately, and no samples were recovered. The probable location of the entryway was noted, but it was not excavated. No additional subfeatures were encountered.

Stratigraphy

The fill within the house pit primarily consisted of a loose, dark brownish gray ashy loam. It had a very high artifact density, but it was thought that this may be owing to the intrusive pits rather than to deposits in the house-pit fill. In particular, it was noted that a majority of the faunal bone came from one of the undocumented pits intrusive to the feature.

Disturbances

The pit fill and floor were disturbed by roots, insects, and rodents. An unexcavated roasting pit (Feature 576) cut into the fill and floor of the western edge of the structure. Several other intrusive pits were noted during excavation, but they were not documented separately.

Construction Details

Feature 575 appears to have been a subrectangular house-in-a-pit. The house pit measured 8.45 m east–west by 4.17 m north–south and had a remaining pit depth of 37 cm.

Walls and Roof

No pit walls or other architectural subfeatures were documented during the course of excavations.

Entry

Traces of a protruding entryway located directly north of the hearth were visible in plan view, but it was not explored and no other details were noted.

Floor

The floor consisted of the unprepared native substratum. It did not appear to be oxidized.

Floor Features

No attempt was made to identify floor features other than the hearth. Although the hearth was identified, it was not excavated or recorded.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary context.

Evidence for Remodeling

No evidence for remodeling could be discerned from the limited excavations.

Abandonment Processes

No artifacts were located on the floor and the structure showed no signs of having burned. This suggests that Feature 575 had a simple, planned abandonment. Subsequently, the house pit filled with naturally deposited sediments and cultural debris. At some point after

abandonment, an intrusive roasting pit and several other extramural pits were constructed within the fill of the house pit.

Associated, Intrusive, or Superimposed Features

An unexcavated roasting pit (Feature 576) intruded the western portion of Feature 575. Several other intrusive pits were noted during excavation, but they were not excavated or documented separately.

Chronology

No chronometric data were collected from Feature 575, and no temporally sensitive artifacts were recovered from sealed or primary contexts. Based on the architectural style, this structure was constructed during the Middle Formative period (ca. A.D. 700–1150).

Locus D, Feature 825

Feature 825 represents the composite of two superimposed structures located in the central part of Locus D (see Figure 82). The feature was initially identified during Phase 1 and was partially excavated during Phase 2. Excavations revealed the presence of two hearths (Subfeature 1) and two floor grooves (Subfeatures 2 and 3), indicating that two separate structures occupied the house pit. The structures shared a common north-facing entryway and floor surface. The later structure (Feature 8841) was built slightly to the north and west of the earlier structure (Feature 8842), as evidenced by the positioning of the two floor grooves. Twenty-six postholes, including 4 central-support postholes (Subfeatures 6–9), 2 interior postholes (Subfeatures 10 and 11), 16 entryway postholes (Subfeatures 12–27), and 4 perimeter postholes (Subfeatures 28–31) were identified in the exposed floor section, but none was excavated. Fifteen artifacts remained on the floor of the house pit (Table B.28), and evidence from the fill suggests that the later structure had burned. One partially excavated roasting pit (Feature 8798) was capped by the floor of these structures.

Excavation Methods

During Phase 2, the upper 22–28 cm of fill in the western three-fourths of the shared structure pit was excavated mechanically as a single unit (Half 1). Artifacts observed in this level were collected, but the fill was not screened. The center of this unit and the entryway then was hand-excavated to the floor in a 13–16-cm level to locate the hearth. This lower level was not screened, but observed artifacts were collected.

A 1-by-2-m control unit (Test Pit 8630) was placed against the east wall of the structure and excavated to the floor in four 10-cm arbitrary levels. The fill was screened through 1/4-inch mesh, and a flotation sample was collected from each level (PDs 8632, 8660, 8679, and 8680). A pollen sample (PD 8681) was scraped from the floor exposed at the base of the test pit.

Several subfeatures were revealed in the exposed sections of floor, including 2 superimposed hearths, 2 floor grooves, and 26 postholes. All subfeatures were mapped, but only the hearths were excavated. The limited excavations precluded the definitive assignment of each floor groove and posthole to a specific structure, and thus they were numbered sequentially and assigned to the composite feature (Feature 825). Superpositioning of the hearths, however, allowed the distinction between the earlier and later structure to be made, and each hearth and its contents were assigned to the appropriate structure. The fill from each hearth was collected as a flotation sample (PDs 8584 and 9574), a pollen sample was scraped from the base of the later hearth (PD 8588), and an archaeomagnetic sample was collected from each (SRI 2422 and SRI 2435). A third archaeomagnetic sample (SRI 2423) was collected from an oxidized section of the floor surrounding the hearth. An ash deposit found on the house floor immediately south of the hearth was collected as a flotation sample (PD 8585). A botanical sample (PD 8787) was collected from the floor area near the front wall of the house. Fifteen artifacts (PDs 8728, 8729, 8731, 8732, 8781–8783, 8785, 8786, 8788–8791, 8795, and 8796) were point located on the

Table B.28. Feature 8842 Point-Located Floor Artifacts

PD No.	Artifact Class
8728	Chert San Pedro dart point (Catalog No. 16).
8729	Mano.
8731	Possible polishing stone.
8732	Black-tailed jackrabbit mandible.
8781	Possible polishing stone.
8782	Agate biface base (Catalog No. 15) .
8783	Indeterminate ground stone fragment.
8785	One burnt plain ware sherd.
8786	Utilized flake (Catalog No. 427) .
8788	Chalcedony serrated arrow point (Catalog No. 17) .
8789	Bone awl.
8790	Mano.
8791	Multifacial retouched flake (Catalog No. 333) .
8795	Grinding slab
8796	Possible grinding slab fragment.

Key: PD = provenience designation.

exposed floor surface (see Table B.28). Pollen samples (PDs 8730, 8784, 8792, and 8793) were recovered from beneath four of them (PDs 8729, 8783, 8790, and 8795).

Stratigraphy

The house pit was dug into the native paleosol, which consisted of a reddish brown argillic horizon overlying a light brown calcic horizon. The house fill contained two strata. The upper stratum consisted of approximately 50 cm of naturally deposited, gray-brown silty loam. The top of this stratum had been highly compacted by an overlying roadbed, and compaction decreased with depth.

The upper stratum graded into the lower stratum, which consisted of 3–10 cm of gray-brown silty loam mottled with structural debris. The structural debris consisted of light yellowish brown, calcium-laden daub with dispersed charcoal chunks. The artifact density increased with depth.

Disturbances

A modern roadbed compacted the upper 10 cm of house fill. Roots, rodents, and insects disturbed the feature's fill, floor, and subfeatures.

Evidence for Remodeling

The presence of two hearths, two floor grooves, and two sets of entryway postholes and central-support postholes clearly indicates the reuse of the house pit by a second structure. The later structure, Feature 8841, was probably smaller than the first and was built slightly to the west and north of the earlier structure (Figure B.44). Because of the limited excavations, it was not clear if the actual house pit was remodeled to accommodate the later structure. No evidence was encountered to suggest that the later structure was remodeled.

Abandonment Processes

Excavations revealed no evidence relating to the abandonment of the first structure, Feature 8842, as all of its fill likely had been cleared during the construction of Feature 8841. The later structure probably burned, as evidenced by the presence of extensive charcoal in the lower fill. The worn and fragmentary nature of the artifacts found on the floor surface indicates that the structure was not abandoned suddenly or catastrophically. The superstructure most likely collapsed onto the floor during or shortly after abandonment. The resulting depression subsequently filled with naturally deposited sediments and cultural trash.

Associated, Intrusive, or Superimposed Features

A slightly bell-shaped roasting pit (Feature 8798) was found below the base of the house pit. The feature predated the floor and was capped in part by the earlier hearth and by an ash deposit that may have related to the clean out of the later structure's hearth. An archaeomagnetic sample obtained from this roasting pit most likely predated the existing Southwest curve (i.e., it predated A.D. 585).

Locus D, Feature 8841

Center of feature UTMs: N 3538379.26, E 541464.29
Architectural type: house-in-a-pit
Date range: A.D. 835–865
House dimensions: 5.75 by 4.39 m; pit depth 0.55 m
Entryway dimensions: 0.96 by 1.27 m; floor area 1.30 m^2
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 1 floor groove, and 26 postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: superimposes Features 8798 and 8842

Construction Details

The house pit shared by both structures was subrectangular in plan view with a north-facing, vestibule entry. The pit measured 5.75 m east–west by 4.39 m north–south and had a remaining depth of 55 cm. The northern pit wall stepped in to meet the floor, whereas the western and southern pit walls were sloped. The eastern pit wall was not exposed but appeared to be sloped as well. Based on the outline of the floor groove, the superstructure of Feature 8841 may have been subsquare and smaller than the house originally constructed within the house pit (see Figure B.44).

Walls and Roof

The outline of a floor groove (Subfeature 3) was observed in the floor, and it is thought to have been constructed as part of the later structure. It terminated on either side of the entryway, and the outline of a posthole (Subfeature 13) was observed at the end of the floor groove on the east side of the house. This floor groove was smaller than and cut through a second floor groove that most likely was part of the original structure in this house pit.

The outlines of four possible central-support posts (Subfeatures 6–9) were identified in the floor of the structure. They were located in two pairs along either side of the structure's long axis and on either side of the hearth.

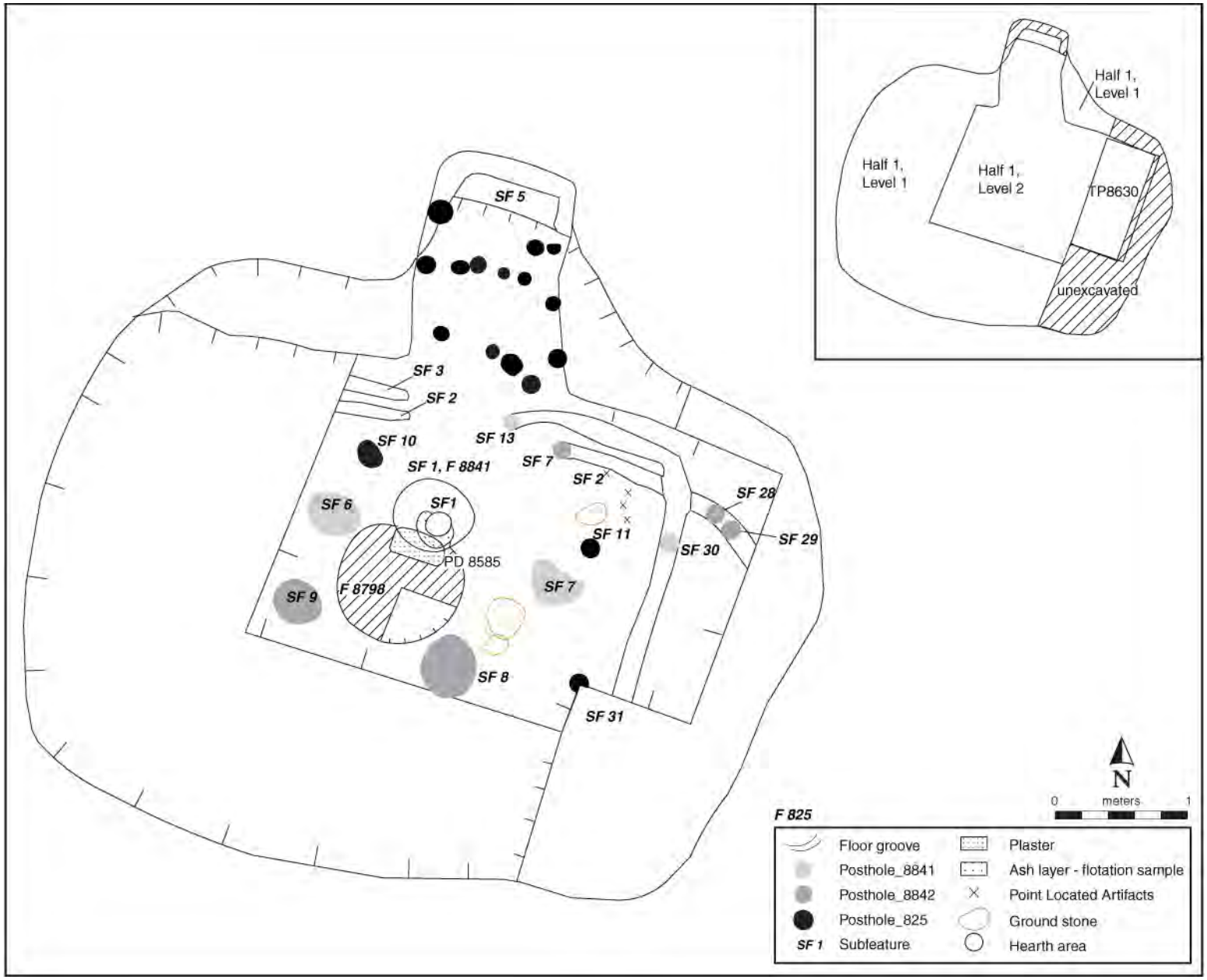

Figure B.44. Plan map of composite Feature 825 (Features 8841 and 8842) showing the location of exposed subfeatures identified with each structure and the superimposed pit (Feature 8798).

Because the floor groove associated with this later structure was shifted slightly north from that of the original structure, it is thought that the northern pair of central-support postholes (Subfeatures 6 and 7) were constructed as part of the later structure. A pair of small interior postholes (Subfeatures 10 and 11) was located just south of the two floor grooves, on either side of the hearth. It is unknown whether these postholes were used with one or both of the structures.

Entry

The structure possessed a vestibule entryway that protruded from the north wall of the house pit. It had parallel-sided walls that were spaced 80 cm apart, and it measured at least 1 m in length. Four postholes (Subfeatures 15, 24, 25, and 27) lined the east side of the entryway, and two postholes (Subfeatures 19 and 26) lined its west side. The entry floor was ramped and possessed a 10-cm-high step (Subfeature 5) at the outside opening. The outlines of two series of four postholes (Subfeatures 15–18 and 20–23) were observed in the middle of the floor. It is unknown if each set was used with one or the other structure, or if they were used in both structures. It is also unknown how they functioned within the entryway.

Floor

The floor consisted of the unprepared calcium-rich substrate. The area of floor surrounding the hearth was oxidized.

Floor Features

Hearths

Feature 8841 had a shallow, basin-shaped hearth (Subfeature 1) that was constructed within the hearth of the earlier structure (Figure B.45). It measured 30 by 25 cm in plan view and extended 10 cm below the house floor. The hearth was filled with ash, and it had been constructed into a layer of argillic soil that had been placed intentionally within the earlier hearth. An ash deposit found on the house floor immediately south of the hearth was presumed to be related to the later hearth.

Artifacts

Fifteen artifacts were point located on the exposed floor surface (see Table B.28). They include two projectile points (PDs 8728 and 8788), one utilized flake (PD 8786), one retouched flake (PD 8791), one biface (PD 8782), two possible polishing stones (PDs 8731 and 8781), five pieces of ground stone (PDs 8729, 8783, 8790, 8795, and 8796), one burnt plain ware sherd (PD 8785), one bone awl (PD 8789), and one black-tailed jackrabbit mandible (PD 8732). In addition, one shell bracelet fragment, one possible piece of ochre, nine plain ware sherds, one base of a biface (Catalog No. 16), and one piece of lithic debris were recovered from the general-floor provenience (PDs 8681 and 8794).

Chronology

An archaeomagnetic sample (SRI 2422) was collected from the structure's hearth and returned a date range of A.D. 835–865. This date range slightly overlaps the date range obtained for the abandonment of the earlier structure. The archaeomagnetic sample (SRI 2423) collected from the structure's floor was not measured.

Locus D, Feature 8842

Center of feature UTMs: N 3538379.27, E 541464.28
Architectural type: house-in-a-pit
Date range: A.D. 735–840
House dimensions: 5.72 by 4.27 m; pit depth 0.55 m
Entryway dimensions: 0.97 by 1.33 m; floor area 1.28 m^2
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 1 floor groove, and 26 postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: superimposes Feature 8798; superimposed by Feature 8841

Construction Details

Based on the small segment of exposed floor groove, Feature 8842 was probably subrectangular in plan view with the long axis oriented roughly east–west. The house pit is the same described for Feature 8841.

Walls and Roof

The outline of a floor groove (Subfeature 2) was observed in the floor, and it is thought to have been constructed as part of the earlier structure. It terminated on either side of the entryway, and the outline of a posthole (Subfeature 12) was observed at the end of the floor groove on the east side of the house. This floor groove was larger than and cut by the floor groove that was constructed with the later structure.

The outlines of four possible central-support postholes (Subfeatures 6–9) were identified in the floor of the structure. They were located in two pairs along either side of the structure's long axis and on either side of the hearth. Because the floor groove associated with this earlier structure was located slightly south of the one from the later structure, it is thought that the southern pair of central-support postholes (Subfeatures 8 and 9) were constructed as part of the earlier

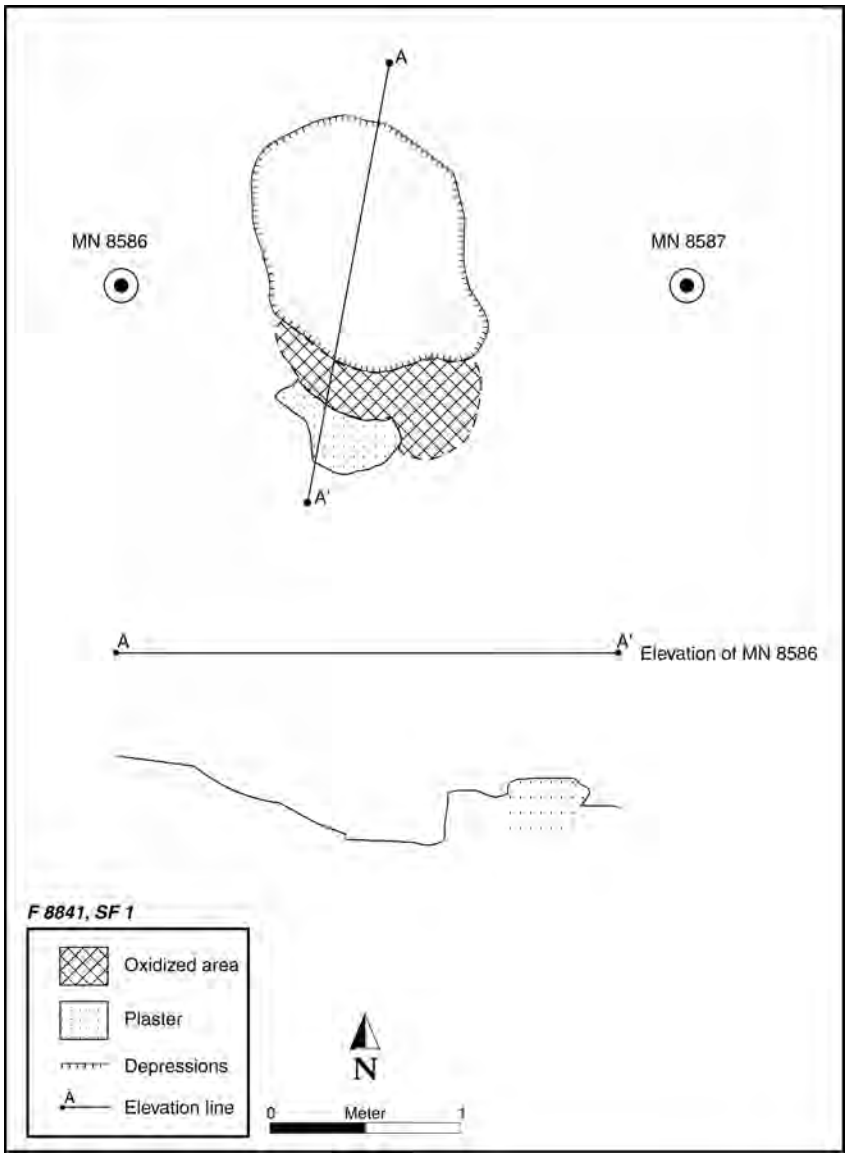

Figure B.45. Plan map of the remodeled hearth (Subfeature 1) located in Feature 8841.

structure. A pair of small interior postholes (Subfeatures 10 and 11) was located just south of the two floor grooves, on either side of the hearth. It is unknown whether these postholes were used with one or both of the structures.

Entry

The structure possessed a vestibule entryway that protruded from the north wall of the house pit. It had parallel-sided walls that were spaced 80 cm apart, and it measured at least 1 m in length. Four postholes (Subfeatures 15, 24, 25, and 27) lined the east side of the entryway, and two postholes (Subfeatures 19 and 26) lined its west side. The entry floor was ramped and possessed a 10-cm-high step (Subfeature 5) at the outside opening. The outlines of two series of four postholes (Subfeatures 15–18 and 20–23) were observed in the middle of the floor. It is unknown if each set was used with one or the other structure, or if they were used in both structures. It is also unknown how they functioned within the entryway.

Floor

The floor consisted of the unprepared calcium-rich substrate. This floor surface was later reused for Feature 8841.

Floor Features

Hearths

Only the southern half of the hearth (Subfeature 1) remained intact, as the northern half had been removed during the construction of the later hearth. Originally, the hearth was probably round with an opening that measured about 15 cm in diameter. Its base was difficult to define, but it most likely was basin shaped. The hearth had plastered walls and a plastered apron; the apron and walls were exposed after removing the argillic sediment used to construct the Feature 8841 hearth. The hearth was constructed in the fill of an earlier, superimposed roasting pit (Feature 8798), and consequently, it had slumped below the house floor.

Artifacts

No artifacts from sealed or primary contexts could be associated definitively with Feature 8842.

Chronology

An archaeomagnetic sample (SRI 2435) was collected from the hearth in Feature 8842, and it returned a date range of A.D. 735–840, which is a good estimate for the abandonment age of this structure. This date range slightly overlaps the date range obtained for the abandonment of the later structure.

Locus D, Feature 834

Center of feature UTMs: N 3538374.97, E 541479.01
Architectural type: house-in-a-pit
Date range: A.D. 685–915
House dimensions: 5.09 by 3.87 m; pit depth 0.37 m
Entryway dimensions: approximately 0.92 by 1.15 m
Shape: subsquare
Orientation: north
Internal features: 1 posthole
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: intruded by Feature 8887; a burial (Feature 7833) was found on the floor

Feature 834 was a subsquare pit structure located in the central part of Locus D (see Figure 86). The structure was partially excavated during Phase 2 in order to locate the hearth. It had a north-facing entry and at least one posthole, but no hearth was discovered. The hearth most likely had been destroyed by an intrusive pit (Feature 8887) that was located in front of the entry, in the presumed hearth area. The structure did not appear to have burned.

Excavation Methods

Feature 834 was identified initially during Phase 1 and was partially excavated during Phase 2. The upper 13–22 cm of fill in the eastern three-fourths of the structure was excavated mechanically as a single unit (Half 1). Artifacts observed in this level were collected, but the fill was not screened. The center of this unit then was hand-excavated to the floor in an approximately 20-cm level in order to locate the hearth. This lower level was not screened, but observed artifacts were collected. A point located flotation sample (PD 8860) was collected from an ashy concentration on the exposed floor. An intrusive pit (Feature 8887) was encountered in the floor in the likely area of the hearth. An archaeomagnetic sample (SRI 2437) was collected from an oxidized section of floor that extended from the southwest edge of the intrusive pit and probably was related to the missing hearth.

A 1-by-2-m control unit (Test Pit 8800) was placed in the western quarter of the house fill. The test pit was excavated to the floor in two arbitrary levels, and the fill from each level was screened through 1/4-inch mesh. A flotation sample was collected from each level (PDs 8802 and 8853), and a composite pollen sample (PD 8853) was collected from the floor exposed in the base of the test pit. One posthole was visible in the floor of the test pit, but it was not excavated. A mano (PD 8857), a small grinding slab (PD 8854) and one possibly worked piece of turquoise (PD 8859) were point located on the floor exposed in the test pit. A pollen sample (PD 8855) was collected from beneath the grinding slab (PD 8854) and a second pollen sample (PD 8856) was collected from beneath a rock on the floor.

Stratigraphy

The house pit was dug into the native paleosol. The fill consisted of loose, ash-laden silty loam with small gravels and cobbles. Charcoal and artifacts were abundant throughout the fill. Occasional pieces of unburnt adobe were encountered in the lower 10 cm of fill.

Disturbances

Abundant root, rodent, and insect disturbances were evident in the fill.

Construction Details

The structure was subsquare in plan view with a protruding, north-facing entry. The house pit measured 5.09 m east–west by 3.87 m north–south and had a remaining pit depth of 37 cm (Figure B.46).

Walls and Roof

The outline of a possible posthole was identified in the floor of the test pit. This was the only subfeature found in the structure, and it was mapped but not excavated (see Figure B.46).

Entry

Although the entryway was not excavated, its outline was visible from the surface of the stripping unit. It was located at the midpoint of the north wall of the structure. Based on surface indications, it protruded to about 1 m from the pit edge and had parallel-sided walls that were about 1 m apart.

Floor

The exposed section of floor was fairly level and consisted of the native substrate.

Floor Features

Hearths

An intrusive pit (Feature 8887) truncated the floor where the hearth probably was located. Evidence of the hearth included a patch of highly oxidized floor that extended southwest from the edge of the intrusive pit and an ashy area located just southwest of the oxidized floor (see Figure B.46).

Artifacts

One mano (PD 8857), a grinding slab (PD 8854) and a piece of possibly worked turquoise (PD 8859) were point located on the floor exposed in the test pit. No other artifacts were recovered from the floor or from any other sealed or primary contexts.

Evidence for Remodeling

No evidence for remodeling was noted within the limited area of excavation.

Abandonment Processes

No evidence that the structure had burned was encountered within the limited area of excavation. Instead, it appears that the structure had a planned abandonment. Eventually, the house collapsed, and the resulting depression filled with natural sediments and cultural trash.

Associated, Intrusive, or Superimposed Features

A shallow, basin-shaped pit (Feature 8887) truncated the floor and probably removed the hearth of Feature 834. A burial (Feature 7833) found on the floor in the southeast portion of the structure appears to have been laid here prior to the structure burning.

Chronology

An archaeomagnetic sample (SRI 2467) was collected from an oxidized section of the structure's floor and returned date range options of A.D. 685–915 and 935–990. Although both options are possible given the architectural style of the structure, Middle Formative A period ceramics found in the feature fill support the earlier date range.

Locus D, Feature 1571

Center of feature UTMs: N 3538388.82, E 541386.26
Architectural type: house-in-a-pit
Date range: A.D. 1–1150
House dimensions: 3.37 by 2.13 m; floor area 7.05 m^2; pit depth 0.13 m
Entryway dimensions: unknown
Shape: subrectangular
Orientation: south?
Internal features: 1 hearth, 1 floor groove, and 44 perimeter postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: none

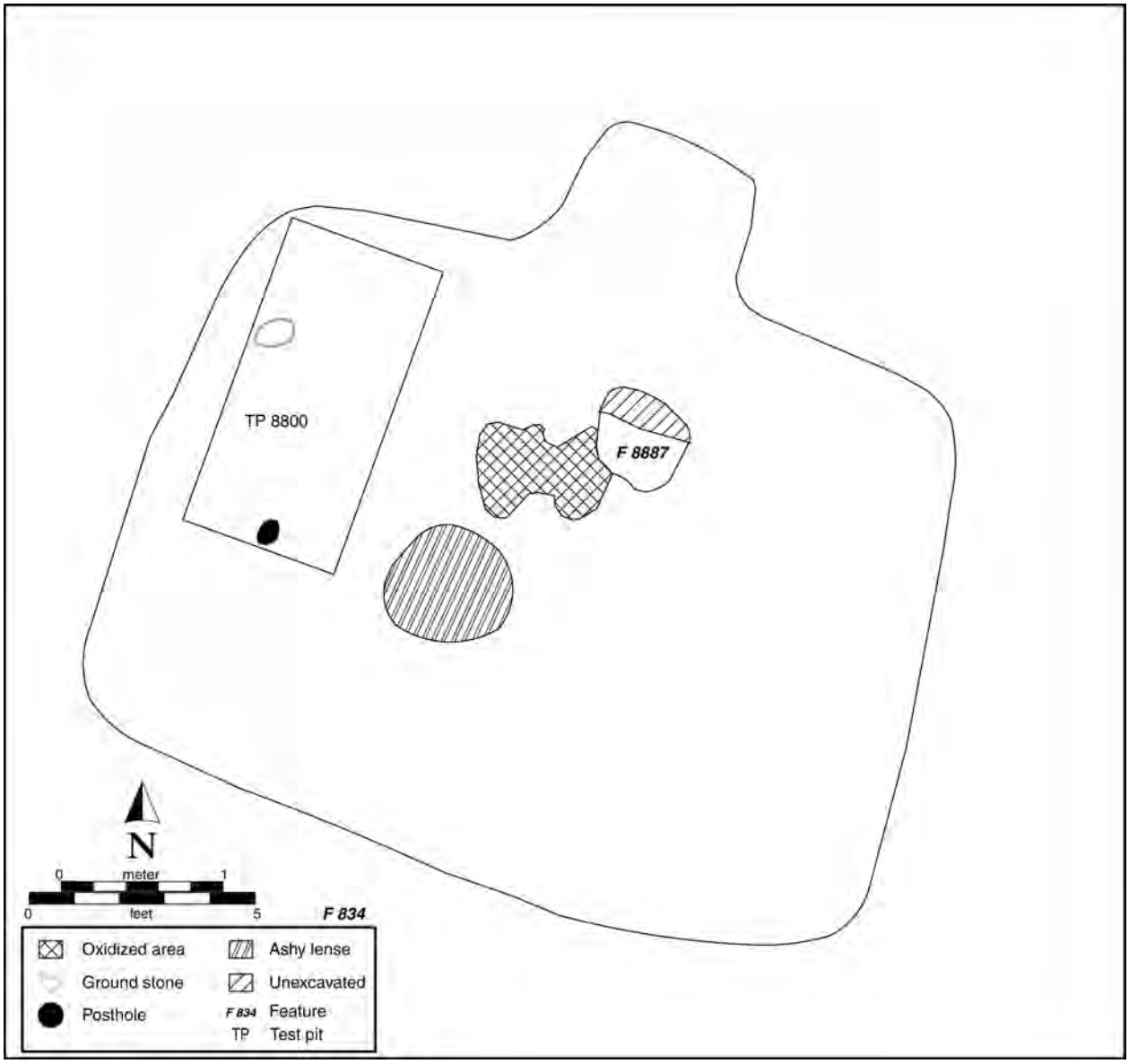

Figure B.46. Plan map of Feature 834 showing the location of intrusive Feature 8887, Test Pit 8800, and posthole.

Feature 1571 was a small, shallow, subrectangular house-in-a-pit located at the far western edge of Locus D (see Figure 85). It had an informal entryway that may have been oriented toward the south. An informal hearth (Subfeature 1), floor groove (Subfeature 2), and 44 perimeter postholes (Subfeatures 3–46) were discovered in the floor. Absence of burning and a limited floor assemblage suggest that the structure had a simple, planned abandonment.

Excavation Methods

Feature 1571 was identified initially during Phase 2 mechanical excavation of Stripping Unit 1543. A 2-by-2-m control unit (Test Pit 1608) was placed in the center of the structure. It was manually excavated to the floor in a single 13-cm level, and the fill was screened through 1/4-inch mesh. A flotation sample (PD 1610) was collected from the fill.

The remaining fill was manually excavated to the floor in a single level. The fill was not screened, but observed artifacts were collected. No samples were collected from this level.

Exposure of the floor revealed several subfeatures, including 1 hearth, 1 floor groove, and 44 postholes. The floor groove and each posthole were excavated individually, and the fill from each was screened through 1/4-inch mesh. The hearth was excavated in a single 1/4-inch-screened level, and a flotation sample was collected from the fill (PD 1620). An archaeomagnetic sample (SRI 2406) was collected from the oxidized walls. Finally, 11 artifacts (PDs 1715, 1716, 1718, 1720, 1722, 1728, 1729, 1731–1733, and 1735) were point located on the floor (Table B.29; Figure B.47). Pollen samples (PDs 1717, 1719, 1721, and 1730) were recovered from beneath four of them (PDs 1716, 1718, 1720, and 1729). An additional pollen sample (PD 1734) was recovered from beneath a rock resting on the floor.

Table B.29. Feature 1571 Point-Located Floor Artifacts

PD No.	Artifact Description
1715	Mano.
1716	Trough metate fragment.
1718	Grinding slab.
1720	Palette.
1722	Mano.
1728	Possible hammerstone.
1729	Basin metate fragment.
1731	Indeterminate ground stone.
1732	Mano fragment.
1733	Mano.
1735	Indeterminate ground stone fragment.

Key: PD = provenience designation.

Stratigraphy

The house pit was dug into the local paleosol. The house fill consisted of two different strata. The upper stratum was 11 cm thick and consisted of a dark brown sandy clay loam with a low density of small dispersed charcoal pieces and fire-cracked rock fragments. Artifact density was moderate for this stratum. The lower stratum was a 1–2-cm-thick lens of darker sediments in contact with the floor. Coloration was the only apparent change from the upper layer. The charcoal, ash, and artifact content was similar to the upper stratum as well.

Disturbances

The top few centimeters of the feature may have been removed during mechanical stripping. Rodent, insect, and root tunneling caused minor disturbances to the fill, floor, and subfeatures.

Construction Details

The structure was subrectangular in plan view and most likely opened to the south. No formal entryway was located for this structure. The house pit measured 3.37 m east–west by 2.13 m north–south and had an average remaining depth of 13 cm. The unprepared pit walls displayed no evidence of burning, and articulated with the base at angles varying from 105° to 150° In plan view, the southern pit edge exhibited a slightly irregular shape, which may be because of the presence of an informal entryway.

Walls and Roof

A 15-cm-wide floor groove (Subfeature 2) encircled the pit base and delineated the structure's floor. It was 7 cm deep and had sloping walls and a rounded base. The groove was cut into the native substrate and was filled with a single stratum of grayish brown sandy loam. Charcoal and artifact density was low in the fill.

A series of 44 perimeter wall postholes (Subfeatures 3–46) was located in the base of the floor groove. Posthole patterning was regular and spaced between 10 and 20 cm apart. They ranged in size from 7 to 19 cm in diameter and 7 to 22 cm in depth (Table B.30). Their fill was identical to that found in the floor groove. No central-support postholes were recognized in the structure floor; however, several shallow basin-shaped disturbances were observed along the central long axis (Figure B.48).

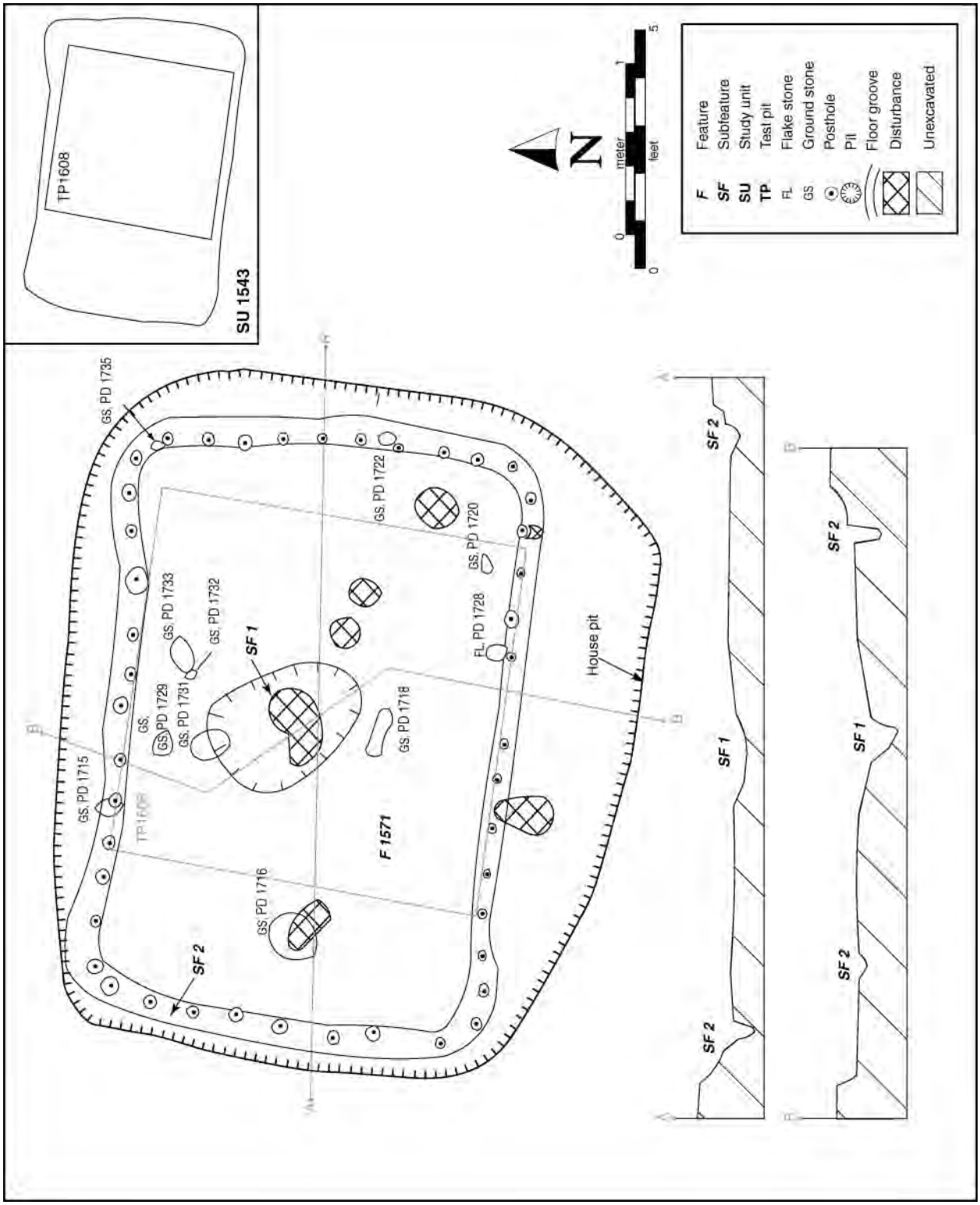

Figure B.47. Plan map of Feature 1571 showing the location of subfeatures and point-located floor artifacts and samples.

Table B.30. Feature 1571 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
3	1624	19	9	17	P
4	1626	10	9	19	P
5	1628	9	8	20	P
6	1630	7	7	20	P
7	1632	9	7	16	P
8	1634	8	8	16	P
9	1636	7	7	12	P
10	1638	9	9	14	P
11	1640	10	8	13	P
12	1642	10	8	11	P
13	1644	9	8	15	P
14	1646	9	9	10	P
15	1648	8	8	10	P
16	1650	11	11	14	P
17	1652	14	11	18	P
18	1654	11	10	12	P
19	1656	11	10	14	P
20	1658	10	9	9	P
21	1660	10	9	9	P
22	1662	9	9	16	P
23	1664	9	8	16	P
24	1666	9	8	10	P
25	1668	8	8	11	P
26	1670	9	9	15	P
27	1672	12	9	12	P
28	1674	10	8	10	P
29	1676	10	8	12	P
30	1678	19	17	22	P
31	1680	9	7	12	P
32	1682	9	9	12	P
33	1684	9	7	11	P
34	1686	10	8	12	P
35	1688	9	8	13	P
36	1690	8	8	16	P
37	1692	10	8	13	P
38	1694	9	8	13	P
39	1696	9	7	13	P
40	1698	8	8	13	P
41	1700	8	8	7	P
42	1702	8	8	15	P
43	1704	7	7	12	P
44	1706	7	6	13	P
45	1708	8	8	13	P
46	1710	7	7	12	P

Key: P = perimeter posthole; PD = provenience designation.

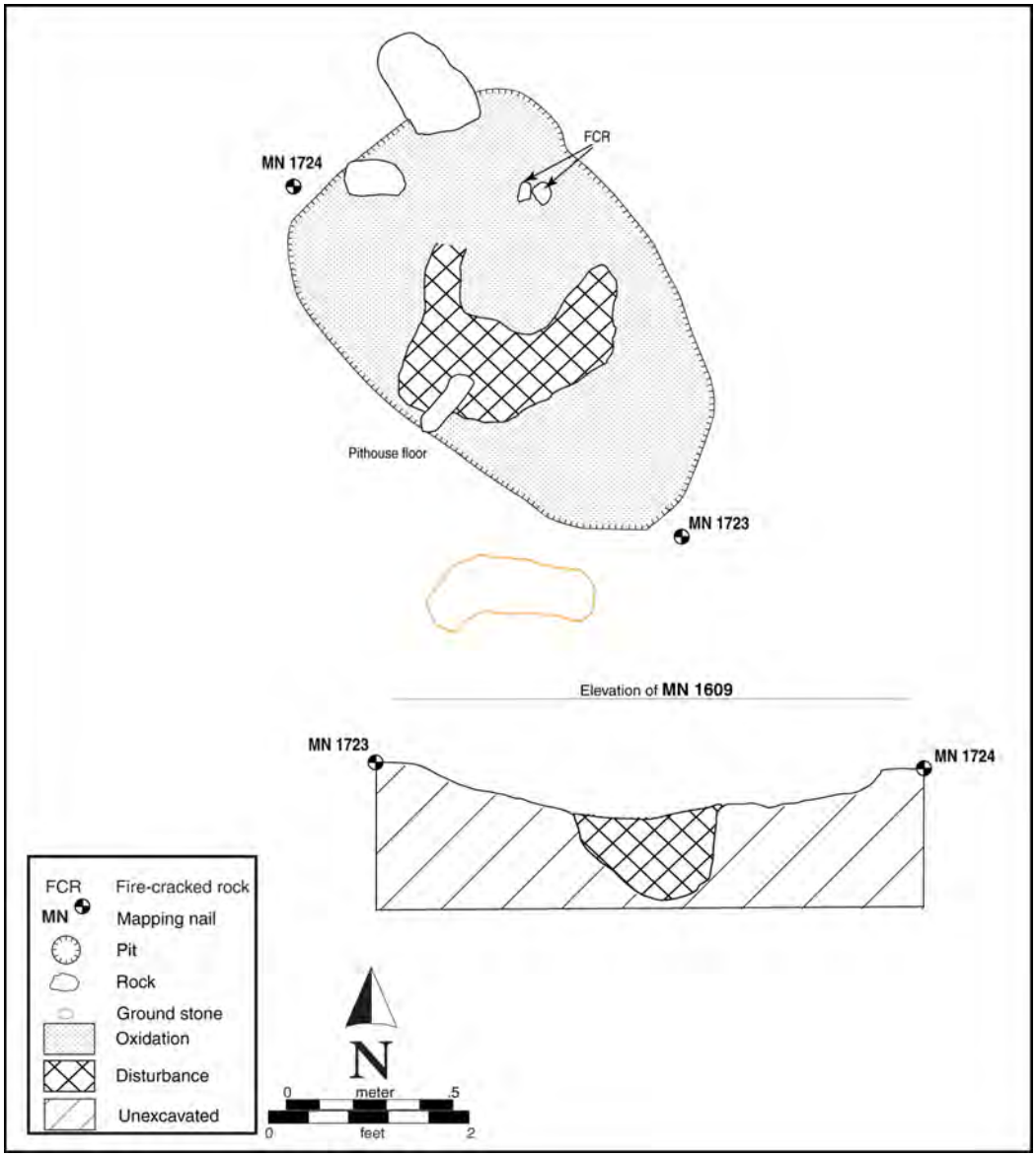

Figure B.48. Plan map of the informal hearth area (Subfeature 1) in Feature 1571.

Entry

A formal entryway was not located. Instead, a 40-cm break in the posthole patterning along the center of the south wall suggests the location of an informal entry (see Figure B.48). In addition, the uncharacteristic shape of the southern pit edge may have been the result of the placement of an informal entryway.

Floor

The floor of the structure consisted of the natural argillic substrate. No evidence of preparation was present, and the only discernible oxidation appeared to be in association with the hearth.

Floor Features

Hearths

An informal hearth area (Subfeature 1) was located near the center of the structure (see Figure B.48). It consisted of a heavily oxidized, broad, irregular depression that was dug into the unprepared native substrate. A large rodent tunnel cut through the center of the depression, obscuring its shape. It is possible that this area consisted of two adjacent basin-shaped hearths rather than one large hearth depression. The hearth area measured 60 by 90 cm in plan

view and had a maximum depth of 8 cm. The fill consisted of mottled ash, charcoal, and grayish brown sandy clay.

Artifacts

Eleven artifacts were discovered in contact with the floor (see Table B.29), including 10 pieces of ground stone (PDs 1715, 1716, 1718, 1720, 1722, 1729, 1731–1733, and 1735) and a possible hammerstone (PD 1728). In addition, 8 flakes, 5 pieces of lithic debris, and 6 plain ware sherds were recovered from the general-floor provenience (PDs 1612 and 1617).

Evidence for Remodeling

There was no evidence that Feature 1571 had been remodeled.

Abandonment Processes

Absence of burning and a limited floor assemblage suggest that the structure had a simple, planned abandonment. Eventually, the structure collapsed, and the resulting depression filled with natural sediments and cultural trash.

Associated, Intrusive, or Superimposed Features

No other features were directly associated with Feature 1571.

Chronology

An archaeomagnetic sample (SRI 2406) was collected from the hearth, but it was too imprecise to be dated against the Southwest curve, SWCV595. No other chronometric data and no temporally sensitive artifacts were recovered from this structure. Based on its architectural style, it is likely that this structure was used and abandoned sometime during the Early or Middle Formative period (A.D. 1–1150).

Locus D, Feature 1575

Center of feature UTMs: N 3538386.23, E 541410.53
Architectural type: adobe-walled house-in-a-pit
Date range: A.D. 1385–1450
House dimensions: 6.70 by 3.26 m; floor area 22.06 m^2; pit depth 0.37 m
Entryway dimensions: 0.65 by 0.61 m; floor area 0.39 m^2
Shape: rectangular
Orientation: northwest
Internal features: 1 hearth, 2 central-support postholes, 24 interior postholes, and 4 intramural pits
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PDs 1858, 1880, and 7331
Related features: intrudes Feature 7827

Feature 1575 was a rectangular, northwest-oriented, adobe-walled pit structure (Figure B.49) located in the far southwest portion of Locus D (see Figure 85). The structure was identified and fully excavated during Phase 2. It contained a number of internal features, including 1 formal hearth (Subfeature 1), 2 central-roof-support postholes (Subfeatures 2 and 18) and 24 regularly spaced postholes (Subfeatures 3–15 and 19–29) that indicate that the floor had been partially raised (Figure B.50). Like the other adobe-walled structures at the site, Feature 1575 possessed an ovate, shallow floor pit (Subfeature 30) at the threshold of the entryway, and a second pit (Subfeature 16) was located between the hearth and the back (south) wall. Two possible puddling pits (Subfeatures 31 and 32) were located on either side of the structure. Numerous artifacts were found on the floor of the house (Table B.31), including a reconstructible Tonto Polychrome vessel (PD 1854), a reconstructible red ware vessel (PD 1764), a reconstructible plain ware vessel (PD 1855), and a side-notched arrow point (PD 7798). The house fill contained a thick layer of charred construction material that clearly indicate the structure had burned. A partially excavated bell-shaped roasting pit (Feature 7827) was located beneath the southeast corner of the structure.

Excavation Methods

Feature 1575 was originally identified during Phase 2 in Stripping Units 1537 and 1543. At the time of discovery, the eastern half of the feature was located within the railroad right-of-way and was covered with a berm. It was left covered until permission was granted to excavate that portion of the structure. The western half of the structure was identified only as an anomalous stain on the surface of the stripping units.

Excavation of the structure began by placing a 2-by-2-m control unit (Test Pit 1560) in the middle of the stain exposed in the stripping units. It was excavated in a total of five 1/4-inch-screened, 10-cm levels. The first two levels were excavated before the structure walls were located. As a result, about 25 percent of the control unit was located outside of the west wall of the structure. (see Figure B.50 insert). The remaining three levels were excavated only within the confines of the house. A flotation sample (PDs 1562, 1564, 1565, 1576, and 1586) was

Figure B.49. Plan view of Feature 1575, looking southeast.

collected from each level, and charred structural materials were collected as botanical samples (PDs 1576 and 1586) from the lower two levels. A pollen sample (PD 1587) was scraped from the floor exposed at the base of the unit.

The remaining fill in the western half of the structure was excavated mechanically to within 10 cm of the floor. The fill was not screened, but observed artifacts were collected. The remaining 10 cm of fill were divided into two units (Quarters 1 and 2), and each unit was excavated to the floor in a single 1/4-inch-screened level. A flotation and a botanical sample were collected from the fill in each unit (PDs 1726 and 1777), and a pollen sample was scraped from the floor exposed at the base of each unit (PDs 1727 and 1778).

Once permission was granted to excavate the eastern half of the structure, the fill was removed manually and mechanically to within 10 cm of the floor. The fill was not screened, but observed artifacts were collected. The remaining fill was hand-excavated to the floor in a single unit (Half 2) and level. The fill was screened through 1/4-inch mesh, and a flotation sample (PD 8007) was collected.

The upper fill from the entryway was removed mechanically, along with the upper fill in the western half of the structure. The rest of the entry fill and the fill used to create the adobe step in the entry were excavated as a separate unit (Subfeature 17) and level. The fill was screened through 1/4-inch mesh, and a pollen sample (PD 5145) was scraped from the exposed entry floor.

Exposure of the structure floor revealed the presence of several subfeatures, including 1 hearth, 4 floor pits, and 26 postholes. Each posthole was excavated separately in a single level, and the fill was screened through 1/4-inch mesh. A botanical sample (PD 1827) was collected from one of the postholes (Subfeature 2). The entire fill from the hearth was collected as a flotation sample (PD 1825), and an archaeomagnetic sample (SRI 2418) was collected from the plaster. Two additional archaeomagnetic samples (SRI 2419 and SRI 2421) were collected from the structure's floor and walls. The entire fill of one of the pits (Subfeature 16) was collected as a flotation sample (PD 1880). A second pit (Subfeatures 30) was excavated in a single 1/4-inch-screened level. A flotation sample (PD 7725) was collected from its fill, and a pollen sample (PD 7732) was scraped from its base. Two additional pits (Subfeatures 31 and 32) were not excavated.

Thirty-one artifacts and artifact clusters (PDs 1740, 1764–1769, 1771–1773, 1854, 1855, 1857, 1858, 1860–1866, 1872, 1874–1877, 7727–7730, and 7798) were point located on the floor surface (see Table B.31). Pollen samples (PDs 1770, 1774, 1856, 1858, 1859, 1857, 1873, and 1878) were recovered from beneath eight of them (PDs 1769, 1773, 1854, 1857, 1855, 1866, 1872, and 1877, respectively). Four additional pollen samples were scraped from the floor. Two (PDs 7726 and 7731) were collected from beneath rocks lying on the floor surface, one (PD 5149) was collected from beneath a sherd lying

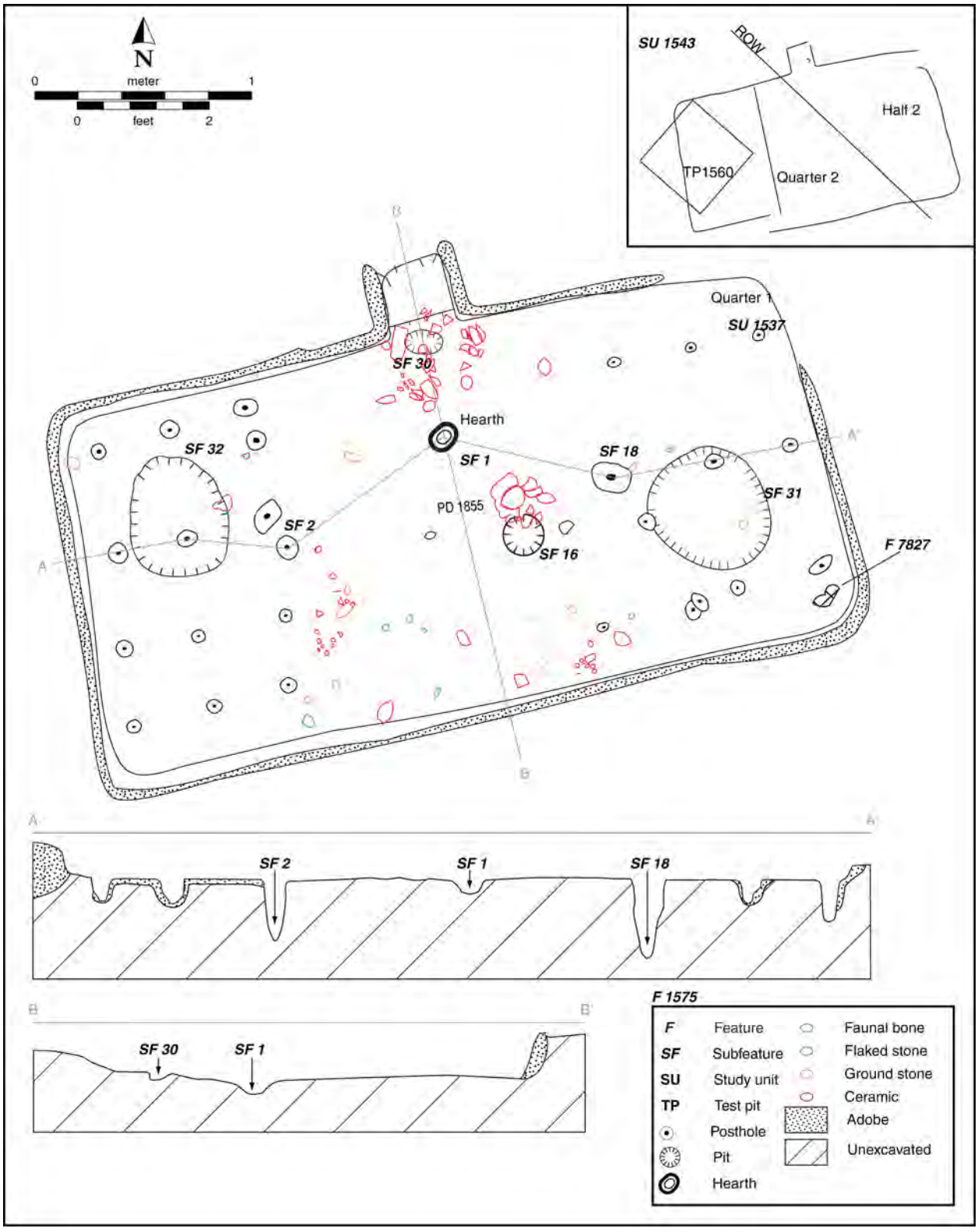

Figure B.50. Plan map and cross sections of Feature 1575 showing the location of subfeatures, related features, and point-located floor artifacts and samples.

Table B.31. Feature 1575 Point-Located Floor Artifacts

PD No.	Artifact Description
1740	Deer and medium artiodactyl foot elements.
1764	Reconstructible red ware vessel (Vessel No. 67).
1765	Partial pecking stone/core.
1766	Hammerstone.
1767	Two pecking stones/cores.
1768	Hammerstone.
1769	Possible pestle.
1771	Handstone fragment.
1772	Sherd scatter consisting of 1 Babocomari Polychrome, 4 Tanque Verde Red-on-brown, 2 indeterminate Tucson Basin red-on-brown, 10 red ware, 5 plain ware, and 1 indeterminate sherd.
1773	10 plain ware sherds.
1854	Reconstructible Tonto Polychrome vessel (Vessel No. 75).
1855	Reconstructible plain ware vessel (Vessel No. 29).
1857	Mano.
1858	Possible core.
1860	Deer cranium.
1861	17 burnt plain ware sherds.
1862	Indeterminate ground stone fragment.
1863	Mano.
1864	Deer scapula and axial elements.
1865	Core.
1866	One ceramic sherd.
1872	Indeterminate ground stone fragment.
1874	Two pecking stones.
1875	Pecking stone.
1876	Pecking stone.
1877	Grinding slab.
7727	Pecking stone/core.
7728	Multifacial retouched flake.
7729	Possible pestle.
7730	Pecking stone.
7798	Chert side-notched arrow point (Catalog No. 5).

Key: PD = provenience designation.

on the floor, and one was collected from between several sherds lying on the floor (PD 5148).

Stratigraphy

The house pit for Feature 1575 was excavated into the native paleosol. A total of six strata were associated with this structure (Figure B.51). The house-pit and house fill were overlain by approximately 60–70 cm of modern sediments that were disturbed and deposited during railroad construction activities (Stratum I). Beneath this was a 15–20-cm layer of grayish brown fine sandy loam with abundant artifacts (Stratum II). This second stratum most likely represents sheet trash from surrounding cultural areas.

The first stratum of house fill consisted of 15–20 cm of orangish brown fine sandy loam with a small amount of small to medium-sized gravels (Stratum III). This layer contained abundant artifacts, and the density of charcoal and burnt architectural debris increased toward its base. A discrete lens of orangish brown sand (Stratum IV) lay below this in places and appears to represent sediments deposited after the structure had burned and collapsed.

Stratum V was a dense horizon of mottled orangish brown oxidized daub, blackened charred wood and thatching, gray ash, and brown organic sediments. This 15–20-cm-thick stratum covered much of the floor surface and contained abundant artifacts. A 1-cm-thick lens of brown sand (Stratum VI) covered the floor of the entry and the structure floor surrounding the hearth. The sand apparently had accumulated through the entryway before the structure had burned. A similar lens of sand was found in the entries of the other adobe structures at the site.

Disturbances

The northeast corner and possibly the top of the pit had been removed during the construction of the railroad (see

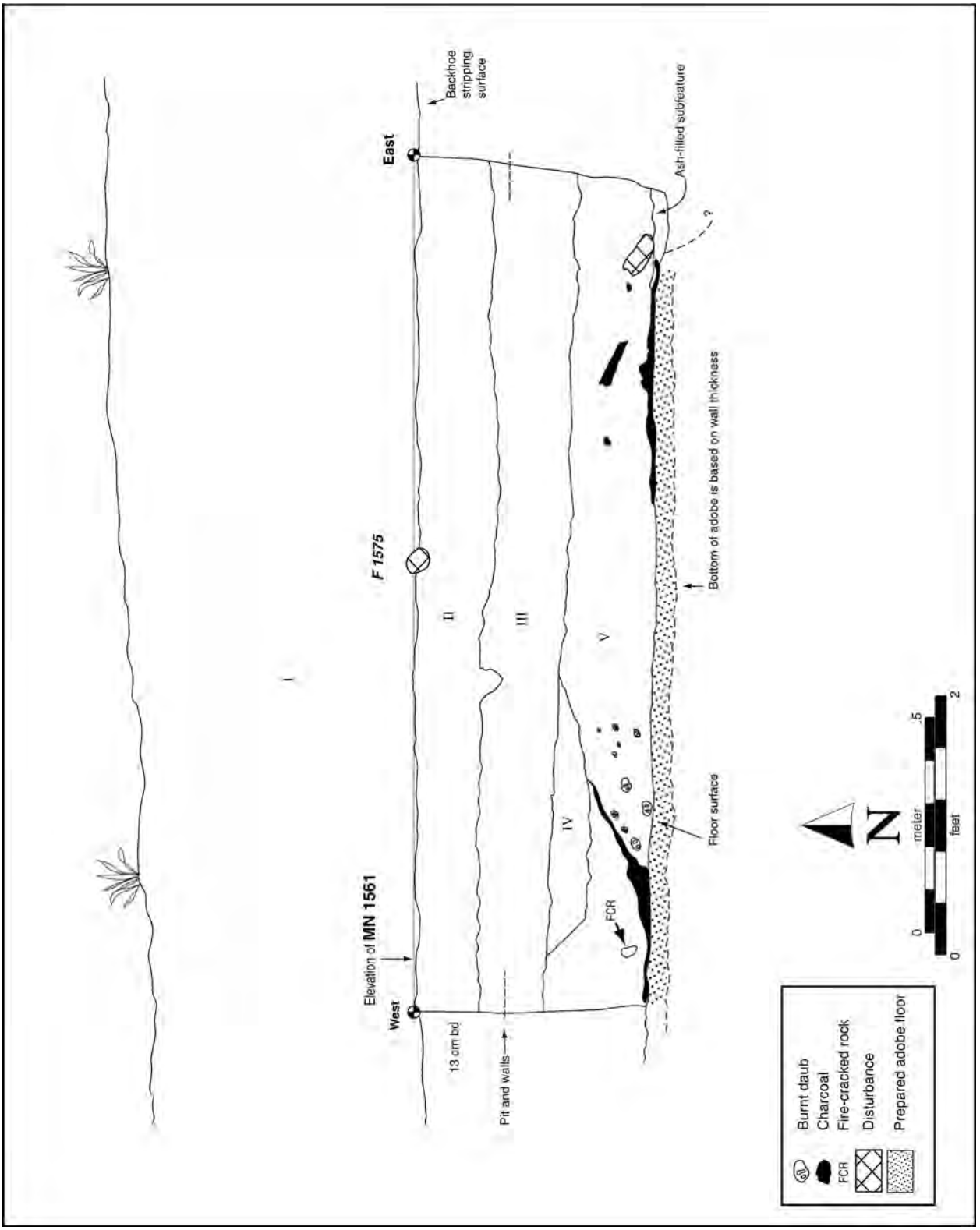

Figure B.51. The northeast profile of Test Pit 1560 in Feature 1575 showing the different strata identified in the house fill.

Figure B.50). The remaining walls, floor, subfeatures, and fill of Feature 1575 have been minimally disturbed by rodent, insect, and root tunneling.

Construction Details

Feature 1575 was rectangular in plan view with a north-facing entry (see Figure B.50). The house pit measured 6.70 m east–west by 3.26 m north–south and had a remaining pit depth of roughly 37 cm.

Walls and Roof

The house-pit walls were coated with a 5-cm-thick layer of puddled adobe that had been applied down to the pit floor (Figure B.52). The adobe was heavily oxidized. The lack of postholes for wall supports suggests that the structure had free-standing, aboveground adobe walls. The remnants of these walls most likely were removed by railroad construction activities.

Two central-roof-support postholes (Subfeatures 2 and 18) were identified in the middle of the long axis of the structure. They measured 18–31 cm in diameter and 54–67 cm in depth (Table B.32). These were the largest and deepest postholes identified in the structure, and they anchored the posts that supported the roof of the house. Large chunks of burnt adobe found in the house fill suggest that the roof was covered with adobe.

Entry

A formal entryway (Subfeature 17) protruded out of the center of the north wall (Figure B.53). It was constructed within a rectangular pit that had vertical walls and a floor that sloped gently down into the structure. The pit measured 0.65 m long by 0.61 m wide and had a floor area of 0.39 m^2. The side walls of the entry pit were prepared with puddled adobe, but they were not plastered or noticeably oxidized. A 12-cm-high adobe step was located at the northern end of the entry pit, approximately 10 cm north of the juncture of the entry and house (see Figure B.50). The entry fill contained very little burnt debris and consisted of a brown silty sand.

Floor

The floor of the house pit consisted of the calcium-rich, native subsoil, which apparently had been puddled to create a smooth, even surface. It measured 6.69 m long by 3.44 m wide and had an area of 22.06 m^2. The patterning of the interior postholes suggests that the structure possessed a partially raised floor. Four rows containing three evenly spaced postholes were found on the west side of the house, and two rows of four and one row of three evenly spaced postholes were found on the east side of the house (see Figure B.50). These postholes ranged in size from 11–28 cm in diameter and 9–41 cm in depth (see Table B.32). They likely supported short, wooden uprights used to elevate the floor. Reeds found in the house fill suggest that the floor may have been covered with matting. Two additional interior postholes were offset slightly from these rows and may reflect remodeling of the floor.

The floor area that was not elevated comprised a roughly 2.8-m-wide strip in the center of the house extending from the entry to the back wall. Patches of adobe plaster were discovered along the edges of this center area, indicating that the central floor was plastered. The hearth and a concentration of floor artifacts were found in this area, which may have been the main activity area of the house.

Floor Features

Hearths

A basin-shaped hearth (Subfeature 1) was located approximately 80 cm in front of the entryway. It measured 35 by 40 cm in plan view and was 12 cm deep. The lower walls and base were lined with a heavily oxidized, friable, blackened plaster. Three fire-affected rocks, possibly representing a trivet, rested in the base of the hearth. No charcoal or ash was observed, and the fill appeared to be consistent with the sand deposit on the floor surrounding the hearth.

Pits

A shallow, circular, basin-shaped pit (Subfeature 16) was discovered in the central floor area (see Figure B.50). It measured 33 cm in diameter and sloped to a depth of 9 cm. The base and sides consisted of the unprepared natural substrate, and no oxidation was evident. Pieces of a reconstructible plain ware vessel (PD 1855) were found scattered over and around the northern side of the pit. The presence of the vessel, in combination with the size, shape, depth, and location of the pit, suggests the pit served as a pot rest.

A shallow basin-shaped pit (Subfeature 30) was located immediately south of the entry juncture (see Figure B.50). It was filled with the sterile, loose sand deposit found across the surrounding floor area. It was 13 cm wide, 25 cm long, and 5 cm deep. The northern pit wall was vertical, whereas the southern wall sloped gently into the basin-shaped bottom. Both the base and sides consisted of the unprepared substrate, and no evidence of oxidization was encountered. The function of this a pit is unknown, but similar pits were found in other adobe houses excavated at the site.

Figure B.52. Close-up view of the southeast corner of Feature 1575, illustrating the structure's remnant adobe walls.

Table B.32. Feature 1575 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
2	1827	20	18	54	C
3	1829	16	15	15	I
4	1831	17	15	19	I
5	1833	25	18	21	I
6	1835	17	16	24	I
7	1837	16	16	18	I
8	1839	16	16	22	I
9	1841	12	12	21	I
10	1843	15	14	17	I
11	1845	20	16	20	I
12	1847	19	16	19	I
13	1849	27	17	13	I
14	1851	17	16	21	I
15	1853	21	18	15	I
18	7701	31	29	67	C
19	7703	17	12	16	I
20	7705	14	12	9	I
21	7707	28	19	13	I
22	7709	18	17	26	I
23	7711	15	13	24	I
24	7713	11	11	22	I
25	7715	14	13	23	I
26	7717	16	14	30	I
27	7719	19	17	28	I
28	7721	15	13	41	I
29	7723	12	12	26	I

Key: C = central-support posthole; I = interior posthole; PD = provenience designation.

Figure B.53. View of the formal adobe entryway to Feature 1575.

A large, circular patch of adobe was found in the eastern (Subfeature 31) and western (Subfeature 32) sides of the structure. They were flush with the floor and measured approximately 1 m in diameter. Although not excavated, the adobe was analogous to the adobe on the pit walls. These subfeatures could have been adobe puddling pits used during the construction of the structure. It is also possible that they predate the structure and were plastered over during construction.

Artifacts

A number of artifacts and artifact scatters were recovered from the floor of Feature 1575 (see Table B.31). These were concentrated primarily in the central part of the house where the floor was not raised (see Figure B.50). Artifacts included 3 reconstructible vessels (PDs 1764, 1854, and 1855), 4 ceramic scatters (PDs 1772, 1773, 1861, and 1866), 1 side-notched arrow point (PD 7798), 1 retouched flake (PD 7728), 13 pecking stones and/or cores (PDs 1765–1768, 1858, 1865, 1874–1876, 7727, and 7730), 8 pieces of ground stone (PDs 1769, 1771, 1857, 1862, 1863, 1872, 1877, and 7729), and various deer bones (PDs 1740, 1860, and 1864). In addition, 1 Gila or Tonto Polychrome sherd; 2 Tanque Verde Red-on-brown sherds; 1 indeterminate red-on-brown sherd; 35 plain ware sherds; 16 red ware sherds; 12 small, indeterminate sherds; 1 chert biface (Catalog No. 10); 1 utilized flake; 1 partial pecking stone/core; 37 flakes; and 38 pieces of lithic debris were recovered from the general-floor provenience (PDs 1587, 1727, 1778, and 8008).

Evidence for Remodeling

The only evidence for possible remodeling found in Feature 1575 is the presence of two interior postholes that did not conform to the overall pattern within the house (see Figure B.53). These postholes may have been added after the house was constructed to provide supplemental support for the raised floor.

Abandonment Processes

Numerous artifacts were left on the floor when it was abandoned. At some point later, the structure had intentionally or accidentally burned, as evidenced by the discrete layer of burnt construction material found in the house fill. The presence of washed-in or blown-in sands below this layer and in front of the entryway suggests that the structure was unoccupied for some time before it was consumed by fire. Thus, the abandonment of the house likely was not catastrophic. Interestingly, two other adobe houses at the

site (Features 4683 and 4684) contained similar washed-in sands, indicating a corresponding mode of abandonment.

Associated, Intrusive, or Superimposed Features

A partially excavated bell-shaped roasting pit (Feature 7827) was located beneath the southeast corner of Feature 1575. No other features were directly related to the structure.

Chronology

An archaeomagnetic sample was collected from the feature's hearth, and a second sample was collected from its floor. The sample recovered from the hearth (SRI 2418) returned date range options of A.D. 585–690, 910–1015, and 1310–1690. The sample recovered from the floor (SRI 2419) returned date range options of A.D. 585–790, 835–1015, and 1385–1815. The sample recovered from the structure's walls (SRI 2421) was not measured. The composite of the data from the two measured samples yielded the date range options of A.D. 585–740, 910–1015, and 1385–1690. Given the architectural style and the presence of a Tonto Polychrome vessel on the floor, it is likely that the latest option (A.D. 1385–1690) is the best age estimate for the abandonment of this structure.

Locus D, Feature 1815

Center of feature UTMs: N 3538363.57, E 541416.71
Architectural type: pole and brush surface structure
Date range: ca. 1500 B.C.–A.D. 700
House dimensions: 2.28 by 2.20 m; 0.02 m depth; floor area 2.97 m^2
Entryway dimensions: unknown
Shape: circular
Orientation: unknown
Internal features: 1 floor groove
Chronometric techniques: none
Analyzed botanical samples: PDs 7821 and 7868
Related features: none

Feature 1815 was a small, circular structure located in the westernmost part of Locus D (see Figure 85). It consisted of a shallow floor groove (Subfeature 1) and an earthen floor, but there was no evidence of an associated house pit (Figures B.54 and B.55). No evidence of postholes was discovered, and the location of the entry could not be

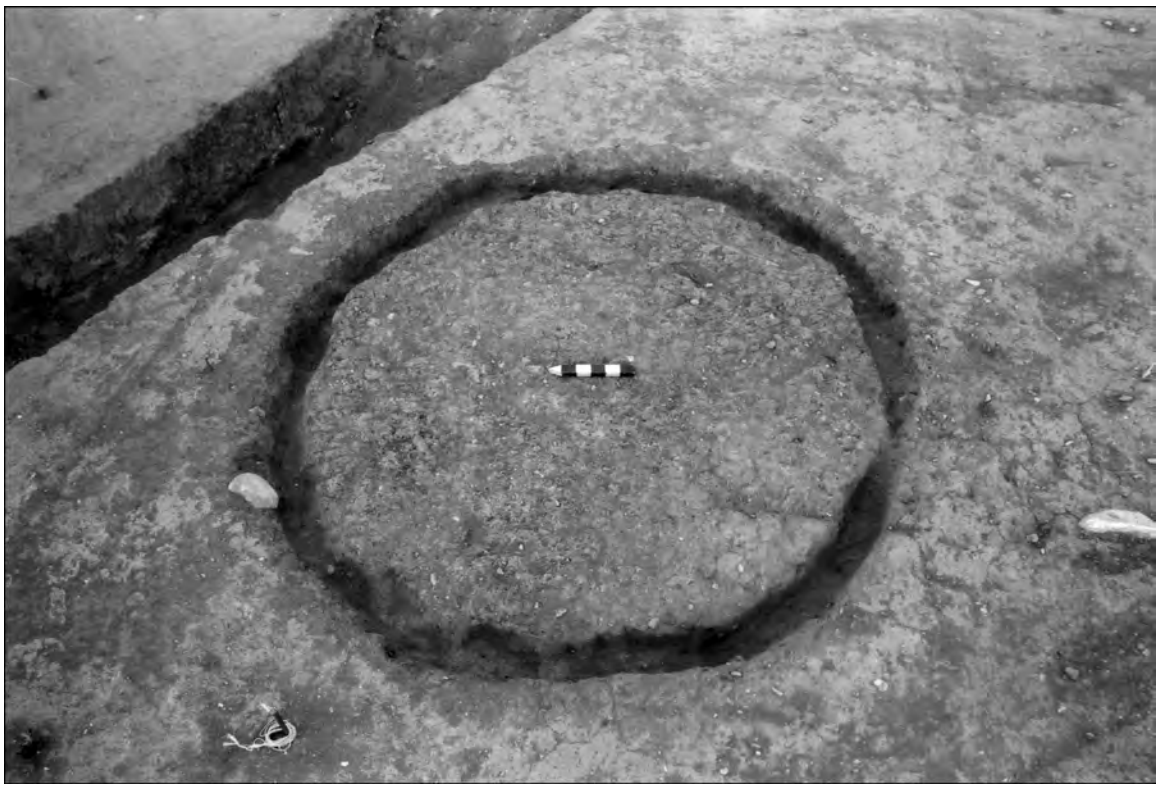

Figure B.54. Plan view of Feature 1815, looking east.

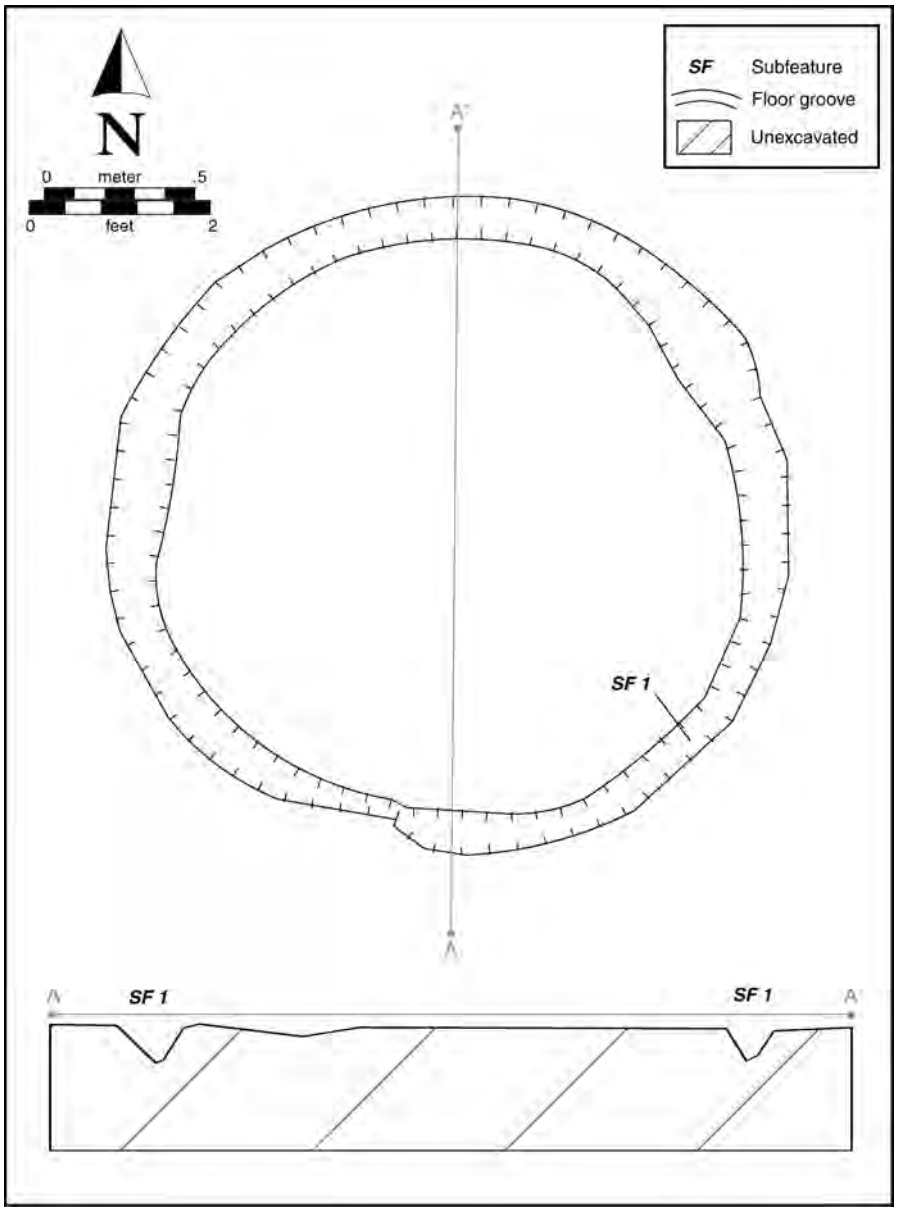

Figure B.55. Plan map of Feature 1815 showing the location of Subfeature 1, the floor groove.

discerned. A similar structure (Feature 1816) was located approximately 2 m east of this structure.

Excavation Methods

Feature 1815 was identified during Phase 2 surface stripping. Only 1–3 cm of fill remained in the structure. The remaining fill was hand-excavated to the floor in a single unit and level. The fill was screened through 1/4-inch mesh, and a flotation sample (PD 7819) was recovered. A composite pollen sample (PD 7821) was collected from the floor.

Exposure of the floor surface revealed the presence of a floor groove. The groove was excavated in a single 1/4-inch-screened level, and a flotation sample was collected from the fill (PD 7870). A possible mano (PD 7867) was point located at the base of the groove, and a pollen sample (PD 7868) was collected from beneath the mano.

Stratigraphy

The structural fill was composed of 1–2 cm of fine, moderately compact, homogenous, brown silty sand. It was

similar to the surrounding substrate but slightly darker in color with less carbonate development. It contained a light density of small dispersed charcoal fragments, fire-cracked rock, and artifacts.

Disturbances

Mechanical stripping may have removed the top few centimeters of the structure fill. A moderate abundance of rodent, insect, and rootlet tunneling was observed throughout the feature fill and floor surface.

Construction Details

There was no indication that the structure had been constructed within a pit; however, it is possible that a house pit was removed during mechanical stripping.

Walls and Roof

A 10–24-cm-wide and 5–12-cm-deep floor groove (Subfeature 1) encircled the structure floor. It was U-shaped and had gradually sloping sides. The walls and base consisted of the unprepared sterile substrate and showed no evidence of burning. The groove was filled with homogenous, dark brown silts and sands that contained a few fine, subrounded gravels and less carbonates than were present in the house fill. Exposure of the bottom revealed no additional subfeatures.

Entry

No evidence of a formal or informal entrance was discovered for this structure.

Floor

The floor of the structure consisted of the natural argillic substrate. No evidence of surface preparation or oxidation was present. As delineated by the interior edge of the floor groove, the floor had an area of 2.97 m^2.

Floor Features

No floor features were discovered.

Artifacts

No artifacts were recovered from the floor surface, but a possible mano (PD 7867) was recovered from the base of the floor groove. A corner-notched dart point midsection (Catalog No. 58) was recovered from the fill of the floor groove (PD 7870).

Evidence of Remodeling

No evidence for remodeling was encountered.

Abandonment Processes

The lack of a floor assemblage and evidence of burning indicate that the structure had a simple, planned abandonment. The structure floor and subfeatures were gradually buried beneath natural sediments mixed with cultural sheet trash.

Associated, Intrusive, or Superimposed Features

No other features were associated directly with this structure.

Chronology

No chronometric data and few artifacts were recovered from Feature 1815. Based on the size and shape of the structure, it likely was occupied during the Late Archaic or Early Formative periods (ca. 1500 B.C.–A.D. 700). This is tentatively supported by the recovery of a corner-notched dart point midsection from the fill of the floor groove.

Locus D, Feature 1816

Center of feature UTMs: N 3538363.96, E 541412.23
Architectural type: pole-and-brush surface structure
Date range: ca. 1500 B.C.–A.D. 700
House dimensions: 2.43 by 2.23 m; 0.01 m depth; floor area 3.37 m^2
Entryway dimensions: unknown
Shape: circular
Orientation: north?
Internal features: 1 floor groove and 2 postholes

Chronometric techniques: none
Analyzed botanical samples: PD 7874
Related features: none

Feature 1816 was a small, circular structure located in the westernmost part of Locus D (see Figure 85). It consisted of one shallow floor groove (Subfeature 1), two interior postholes (Subfeatures 2 and 3), and one earthen floor, but there was no evidence of an associated house pit (Figure B.56). No evidence of perimeter postholes were discovered in association with the floor groove. A 1-m gap in the north section of the floor groove suggested the location of an informal entry.

Excavation Methods

Feature 1816 was identified during Phase 2 surface stripping. A small portion of the floor was uncovered during stripping, indicating that a small amount of fill was present. The remaining fill was hand-excavated to the floor in a single unit and level. The fill was screened through 1/4-inch mesh, and a composite pollen sample (PD 7874) was collected from the floor surface.

Exposure of the floor revealed the presence of a floor groove and two postholes. The groove and each posthole was excavated separately in single, 1/4-inch-screened levels. A flotation sample was collected from the fill of the floor groove (PD 7888).

Stratigraphy

The structure fill was composed of less than 1 cm of a compact, homogenous, brown silty sand. It was similar to the surrounding substrate but slightly darker in color with less carbonate development. Artifact density was low.

Disturbances

Mechanical stripping removed at least some of the fill as well as a 45-by-35-cm portion of the floor. A moderate abundance of rodent, insect, and rootlet tunneling was observed throughout the feature fill and the floor.

Construction Details

There was no indication that the structure had been constructed within a pit; however, it is possible that a house pit was removed during mechanical stripping.

Walls and Roof

A 15-cm-wide and 3–5-cm-deep floor groove (Subfeature 1) encircled the structure floor. It was U-shaped and had gradually sloping sides. The walls and base consisted of the unprepared sterile substrate and showed no evidence of burning. The groove was filled with homogenous, dark brown silts and sands that contained a few fine, subrounded gravels and less carbonates than were present in the house fill.

Two postholes (Subfeatures 2 and 3) were discovered in the interior of the house, and they were located 1.2 m apart. The northern posthole (Subfeature 2) measured 26 by 23 cm and 32 cm in depth. The southern posthole (Subfeature 3) measured 12 by 11 cm and 10 cm in depth. They may have aided in structure stabilization or been the remains of furniture. The fill was analogous to the floor fill, but no artifacts were found.

Entry

No formal entry was discovered for this structure. A 1-m-wide gap in the floor groove in the northern portion of the structure may indicate the location of an informal entry (see Figure B.56).

Floor

The floor of the structure consisted of the natural argillic substrate. No evidence of surface preparation or oxidation was present. As delineated by the floor groove, the floor had an area of 3.37 m^2.

Floor Features

No floor features were discovered.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary context.

Evidence of Remodeling

No evidence of remodeling was discovered.

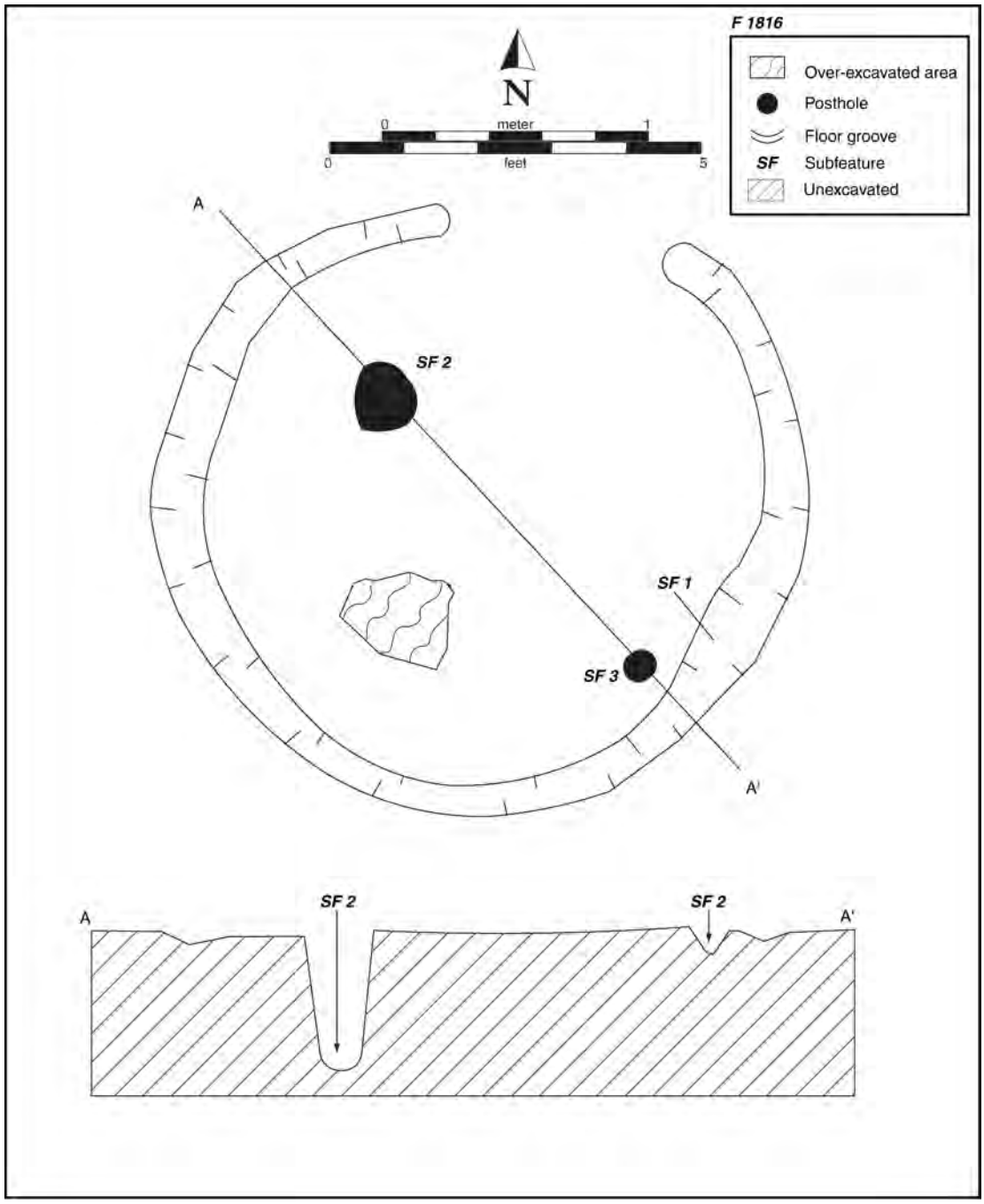

Figure B.56. Plan map of Feature 1816 showing the location of subfeatures.

Abandonment Processes

The lack of a floor assemblage and evidence of burning indicate that the structure had a simple, planned abandonment. The structure floor and subfeatures were gradually buried beneath natural sediments mixed with cultural sheet trash.

Associated, Intrusive, or Superimposed Features

No other features were associated with this structure.

Chronology

No chronometric data and few artifacts were recovered from Feature 1816. Based on the size and shape of the structure, it likely was occupied during the Late Archaic or Early Formative periods (ca. 1500 B.C.–A.D. 700).

Locus D, Feature 3501

Feature 3501 (Figure B.57) consisted of two superimposed structures, Features 7558 and 7559, located in the northeastern corner of Locus D (see Figure 84). These small, shallow, brush-and-pole houses possibly were among the oldest forms of architecture identified at the site. Feature 7558, the earlier of the two structures, consisted of a series of postholes (Subfeatures 3–26) within a shallow floor groove (Subfeature 2), a small patch of floor plaster, and a subfloor storage pit (Subfeature 1). Feature 7559 truncated the eastern end of Feature 7558 and consisted of portions of a floor groove (Subfeature 2), two postholes (Subfeatures 1 and 3), and intact floor plaster. A bell-shaped roasting pit (Feature 3756) and a bell-shaped storage pit (Feature 4105) were found beneath the floors of the structures, and a large pit feature (Feature 3748) truncated the northwestern corner of the later house.

Excavation Methods

Initially, Feature 3501 was thought to consist of a single Middle Formative period structure. The reason for this was twofold. First, the floor plaster for both structures was at a uniform elevation and the overall size of the plastered floor area was consistent with the size of Middle Formative period houses at the site. Second, the floor groove encircling and defining Feature 7559 was not identified as belonging to a separate structure until after the feature was mapped. For these reasons, the feature was excavated as a single structure, and the recovered artifacts and samples were assigned to Feature 3501. Recognition that the feature consisted of two superimposed structures occurred after excavation, when the floor groove and posthole patterning could be discerned. Documentation was then modified to account for both structures.

Feature 3501, the composite of both structures, was identified during Phase 2 mechanical stripping when the backhoe exposed a portion of plaster floor later identified as belonging to Feature 7558. Because no house pit could be discerned, mechanical excavation in the vicinity of this feature was suspended, and a 2-by-2-m test pit (Test Pit 3002) was excavated. The test pit was excavated to the floor in one 14–17-cm-thick level. The fill was screened through 1/4-inch mesh, and a flotation sample (PD 3004) was collected. A pollen sample (PD 5053) was collected from the exposed floor. The test pit provided the only controlled sample of the trash-filled sediments overlaying the superimposed structures.

After completion of the test pit, mechanical excavations resumed, removing the remaining sediments to within 5 cm of the plastered floor surface. The lower 5 cm of fill was then manually excavated to expose the floor. Artifacts encountered during the mechanical and manual excavation were collected, but the fill was not screened.

Once the floor was exposed, a number of subfeatures were revealed, including 26 postholes; 2 floor grooves; and 1 large, bell-shaped pit. The floor grooves and postholes were excavated individually and the fill was screened through 1/4-inch mesh. Likewise, the pit was excavated in a single level, and the fill was screened through 1/4-inch mesh. A flotation sample (PD 3190) and a pollen sample (PD 3190) were collected from the pit's fill. An archaeomagnetic sample was collected from a patch of oxidized floor plaster associated with Feature 7558 (SRI 2371), and a second sample was collected from a patch of oxidized floor plaster associated with Feature 7559 (SRI 2372).

Stratigraphy

A 0.15-m-thick layer of unconsolidated sands and gravels of a dirt road overlay Feature 3501 at the modern ground surface. Beneath this, a 14-cm-thick layer of dark grayish brown to brown silty loam covered the structure floors. These sediments were mixed with subangular gravels, artifacts, some charcoal flecks and a few pieces of burnt daub. The upper 10 cm of this deposit had been compacted from use of the modern road. The structure floors were found at the stratigraphic contact between the midden deposit and the native paleosol, which consisted of a light brown to brown, weakly argillic calcic soil. The fill from each subfeature was indistinguishable from the midden deposits immediately overlaying the structure floors.

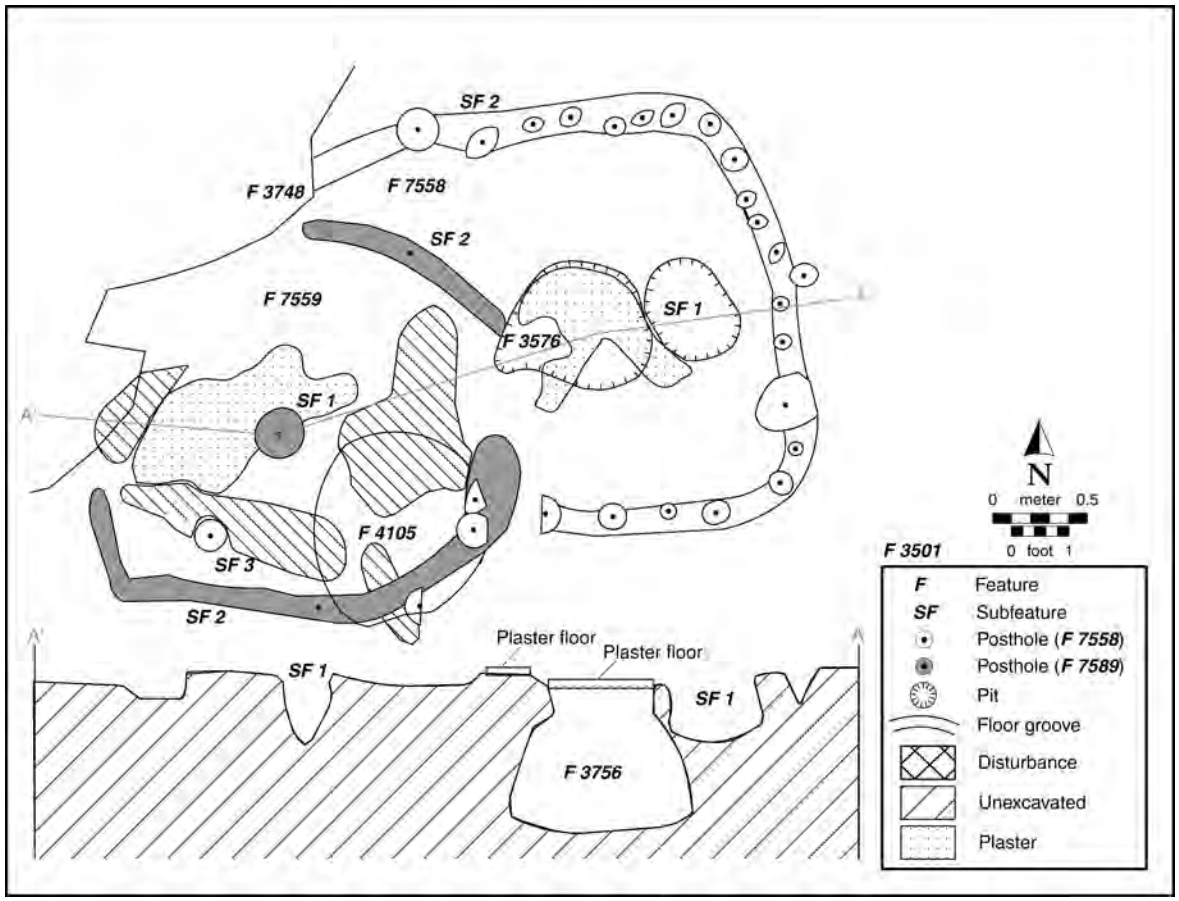

Figure B.57. Plan map and cross section of composite Feature 3501 (Features 7558 and 7559) showing the location of exposed subfeatures identified with each structure, as well as superimposed pits (Features 3756 and 4105) and an intrusive pit (Feature 3748).

Disturbances

Roots, rodents, and insects had damaged the architecture of Features 7558 and 7559, with rodent tunnels particularly abundant in the floor of Feature 7559. In addition, construction of Feature 7559 resulted in the truncation of the southwestern corner of Feature 7558, and an intrusive pit feature (Feature 3748) removed the northwestern portion of Feature 7559.

Artifacts

Several small artifacts were collected from the floor of the test pit (PD 5053). This included two pieces of worked shell, two sherds, six pieces of flaked stone, and two pieces of ground stone. In addition, one mano (PD 3012) was recovered from the portion of floor exposed during mechanical stripping. Because these artifacts were collected when the feature was thought to consist of only one house, it is not clear whether the artifacts came from the floor of Feature 7558 or that of Feature 7559.

Abandonment Processes

The scorched floor plaster encountered in Features 7558 and 7559 suggests that both structures had burned. However, there was no charred construction material in the fill overlaying the floor, as was typical for the other burnt structures at the site. Instead, the floors may have been fire-hardened during house construction. The lack of fill separating the floors of the two structures suggests that one was occupied shortly after the other, and the lack of charred construction material suggests that the later structure (Feature 7559) may have been allowed to collapse from disuse.

Associated, Intrusive, or Superimposed Features

Feature 7558 was constructed over a large, bell-shaped roasting pit (Feature 3756), and a bell-shaped storage pit (Feature 4105) was found beneath the floor of Feature 7559.

A large pit feature (Feature 3748) truncated the northwestern corner of Feature 7559.

Chronology

Archaeomagnetic samples were collected from the fired floor plaster in Feature 7558 (SRI 2371) and in Feature 7559 (SRI 2372). The results from the two samples were ambiguous. The sample from Feature 7558 produced date range options of A.D. 710–740 and 835–915, and the sample from Feature 7559 yielded the date range of A.D. 785–840. If these date ranges are correct, then it seems likely that these two features were last used sometime during the eighth century A.D. However, the ephemeral brush-and-pole architecture of these structures and the lack of a house pit suggest that they may have been constructed and used during the Late Archaic or Early Formative periods. Because these time periods predate the existing archaeomagnetic curve (i.e., earlier than A.D. 585), they currently cannot be dated through archaeomagnetism. Instead, features from this time period will date to later portions of the curve (e.g., A.D. 600–900). Without additional chronometric data it is impossible to determine whether these structures date to the eighth century A.D. or predate A.D. 585.

Locus D, Feature 7558

Center of feature UTMs: N 3538358.31, E 541577.19
Architectural type: pole-and-brush house-in-a-pit
Date range: A.D. 710–740
House dimensions: 2.32 m by 2.11 m; 0.02 m depth
Entryway dimensions: unknown
Shape: subrectangular?
Orientation: unknown
Internal features: 1 floor groove, 24 postholes, and 1 intramural pit
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PD 3190
Related features: intrudes Features 3576; intruded by Feature 7559

Construction Details

The house form was not discernable because of the superimposed structure, Feature 7559. The preserved portion of Feature 7558 suggests that this structure was square or rectangular in plan view with rounded corners (see Figure B.57). It measured 2.32 m north–south, as defined by the outer edges of the floor groove.

Walls and Roof

Although no physical evidence of the superstructure itself remained, the posthole pattern and floor groove indicated a pole framework for this structure. Twenty-four shallow postholes (Subfeatures 3–26), ranging from 10 to 20 cm deep, were found along the perimeter of the house at intervals of 20–30 cm (Table B.33). The postholes were located within a floor groove (Subfeature 2) that was about 15 cm thick and less than 10 cm deep. No interior postholes were found, which suggests that the roof may have been integrated with the walls as in a bent-pole structure, or a flat roof may have been supported directly by the walls.

Entry

No entryway was located for this structure.

Floor

A large, thick patch of oxidized and fire-hardened floor plaster remained in the central portion of the structure. The plaster had sunk 4–5 cm below the floor surface, where it capped the opening to an earlier roasting pit (Feature 3756). The plaster was sampled for archaeomagnetic dating.

Floor Features

Hearths

A hearth was not located.

Pits

A bell-shaped pit (Subfeature 1) with a rounded base was located in the east-central portion of the structure, approximately 20 cm west of the floor groove. The pit measured around 50 cm in diameter at the orifice and expanded to about 55 cm in diameter below the floor. It was 40 cm deep and filled with the same artifact-laden gray-brown silty loam overlaying Feature 3501. The walls were unlined, and no evidence of burning was observed.

Locus D, Feature 7559

Center of feature UTMs: N 3538357.65, E 541575.64
Architectural type: pole-and-brush house-in-a-pit
Date range: A.D. 785–840
House dimensions: 2.28 m by 1.93 m; 0.02 m depth
Entryway dimensions: unknown
Shape: circular
Orientation: east?
Internal features: 1 floor groove and 2 postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: intrudes Features 4105 and 7558; intruded by Feature 3748

Table B.33. Feature 7558 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)
3	6981	23	18	16
4	6983	18	12	17
5	3202	14	11	10
6	5056	10	10	14
7	5058	10	10	13
8	5060	13	10	14
9	5062	12	10	13
10	5064	15	12	13
11	5066	10	9	11
12	5068	10	8	13
13	5070	12	8	9
14	5072	12	9	17
15	5074	10	11	14
16	5076	10	8	16
17	5078	14	10	15
18	5080	30	30	17
19	5082	10	8	8
20	5084	14	10	14
21	5086	14	11	16
22	5088	10	8	11
23	5090	14	12	17
24	5092	17	17	15
25	5094	15	13	16
26	5096	13	10	11

Key: PD = provenience designation.

Construction Details

The form and dimensions of Feature 7559 were determined by the extent of the floor groove. The structure was small, roughly circular in plan view, and measured about 2.2 m in diameter (see Figure B.57).

Walls and Roof

Two postholes (Subfeatures 1 and 3) and one floor groove (Subfeature 2) were the only subfeatures identified with this structure. The floor groove was a 10-cm-wide trench that encircled the house floor. A gap in the groove on the eastern side of the house may represent the entryway. Subfeature 1 was a posthole located in the center of the house. It was 30 cm in diameter and extended 40 cm below the house floor. The other posthole (Subfeature 3) was 17 cm in diameter and 20 cm deep. It was located in the southwestern portion of the house.

Entry

A gap in the floor groove along the east side of the structure may have provided entry into the structure. This gap was about 50 cm wide.

Floor

A large patch of thick, oxidized floor plaster remained in the central part of the structure. The plaster appeared to be composed of fine-grained sandy clay that had been applied directly to the native subsoil. An archaeomagnetic sample was collected from the floor plaster.

Floor Features

No floor features were identified for Feature 7559.

Locus D, Feature 3544

Feature 3544 was a conglomerate of 23 overlapping pits and structures located at the far eastern end of Locus D (Figure B.58; see Figure 84). This area was dense with features but heavily disturbed by an overlaying dirt road. Prior to excavation, the feature appeared as a large, amorphous stain with blurred edges. Excavations revealed that the

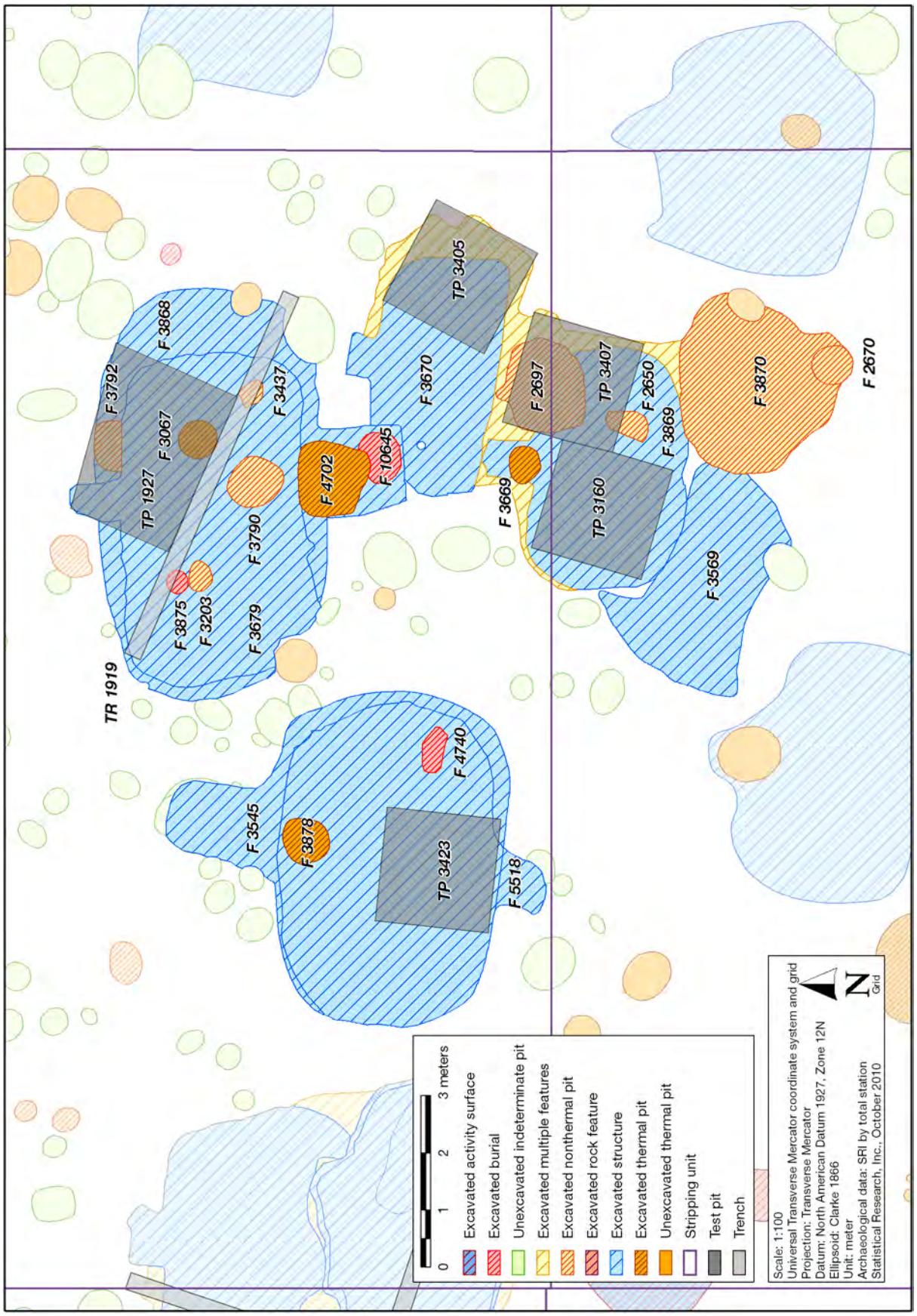

Figure B.58. Plan map of conglomerate Feature 3544 showing its component features.

feature was comprised of 3 poorly preserved, superimposed structures (Features 3569, 3670, and 3869), a pair of superimposed structures in a shared house pit (Features 3679 and 3868), 1 intrusive cremation (Feature 3875), 16 extramural pits and roasting pits (Features 2650, 2670, 2697, 3027, 3067, 3097, 3203, 3437, 3548, 3551, 3643, 3669, 3671, 3790, 3792, and 4702), and 1 large, round pit (Feature 3870) that likely functioned as a borrow pit.

Locus D, Feature 3569

Center of feature UTMs: N 3538537.27, E 541512.36
Architectural type: house-in-a-pit
Date range: A.D. 935–1015
House dimensions: 3.67 by 1.98 m
Entryway dimensions: unknown
Shape: subrectangular?
Orientation: south?
Internal features: 1 hearth and 10 postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PD 1886?
Related features: intrudes Features 3671, 3869, and 3870

Feature 3569 was a possibly subrectangular pit structure (Figure B.59) at the southern end of conglomerate Feature 3544. The structure was identified during Phase 2 mechanical stripping when the backhoe exposed a dense deposit of white ash that covered a hearth. Mechanical stripping removed all of the house pit and a portion of the structure floor. A north–south-oriented historical-period or modern ditch also damaged the western side of the house. The remains of the structure consisted of 1 hearth (Subfeature 1) and 10 postholes (Subfeatures 2–11). The floor of Feature 3569 overlay the southwest corner of Feature 3869, the pit structure to the northeast. In addition, 1 large borrow pit (Feature 3870) and 1 unexcavated pit (Feature 3671) were located beneath the floor of Feature 3569.

Excavation Methods

Feature 3569 was discovered during Phase 2 mechanical stripping in Stripping Unit 1759. Mechanical stripping removed all of the fill and most of the floor of the house. One hearth and 10 postholes were discovered in the floor, and the fill of these subfeatures is the only fill associated with this structure. Each posthole was excavated separately, and the fill was screened through 1/4-inch mesh. The entire fill of the hearth was collected as a flotation sample (PD 1886), and an archaeomagnetic sample (SRI 2373) was collected from its walls and base.

Stratigraphy

The house pit and its fill had been removed during mechanical stripping.

Figure B.59. Plan view of Feature 3569, looking north.

Disturbances

The western end of the house had been cut by a 40-cm-wide, north–west-oriented historical-period or modern drainage ditch or channel (Figure B.60). In addition, mechanical stripping removed the house pit, house fill, parts of the floor, and probably some subfeatures.

Construction Details

Based on the few remaining subfeatures, the structure likely was subrectangular in plan view with the long axis oriented east–west.

Walls and Roof

Eight perimeter postholes (Subfeatures 4–11) remained after mechanical stripping, and they defined the west and south walls of the house. They ranged in size from 13 to 20 cm in diameter and 17 to 40 cm in depth (Table B.34). Based on its location, one of these postholes (Subfeature 8) may have functioned as an entryway posthole rather than a perimeter wall posthole.

Two possible central-support postholes (Subfeatures 2 and 3) were identified along the long axis of the structure. They measured 16–18 cm in diameter and were 26–29 cm deep. Subfeature 3 was found beneath the intrusive drainage channel (see Figure B.60). All of the postholes were filled with a gray-brown silty loam, and some also contained ash, charcoal, and artifacts.

Entry

No entry was located, but based on the placement of the central-support postholes, perimeter postholes, and hearth, it likely faced south (see Figure B.60).

Floor

Most of the remaining house floor consisted of the compact, native paleosol. A small patch of preserved adobe floor plaster was located around the north, east, and south sides of the hearth, and it appears to be made from the calcic-laden sediments of the substrate.

Floor Features

Hearths

The hearth (Subfeature 1) consisted of a well-plastered, slightly ovate, basin-shaped pit. It measured 15 by 20 cm in plan and was 5 cm deep. Most of the hearth's collar and apron was scraped away during backhoe stripping. The fill consisted of gray-brown, ash-laden, silty loam with a soft consistency. The hearth was covered with a thin layer of ash.

Artifacts

No artifacts were left on the floor after mechanical stripping, and none was recovered from any other sealed or primary context associated with this house.

Evidence for Remodeling

No evidence for remodeling was identified.

Abandonment Processes

The nature of the abandonment could not be discerned from the structural remains left after mechanical stripping.

Associated, Intrusive, or Superimposed Features

The floor of Feature 3569 overlay the southwest portion of Feature 3869, the house located immediately to the northeast. It also overlay a possible structure or borrow pit (Feature 3870) and an unexcavated pit (Feature 3671) that was located about 40 cm south of the hearth.

Chronology

An archaeomagnetic sample (SRI 2373) was recovered from the structure's hearth and produced the date range options of A.D. 635–665, 935–1015, 1385–1615, and 1635–1690. Based on the architectural style of the structure, the date range option A.D. 935–1015 is most likely the best estimate of when the structure was abandoned.

Locus D, Feature 3670

Center of feature UTMs: N 3538541.96, E 541516.10
Architectural type: house-in-a-pit
Date range: A.D. 685–990
House dimensions: 4.08 m by 2.16 m; 0.17 m depth
Entryway dimensions: 0.48 by 0.72 m
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 16 postholes, and 2 intramural pits
Chronometric techniques: archaeomagnetism

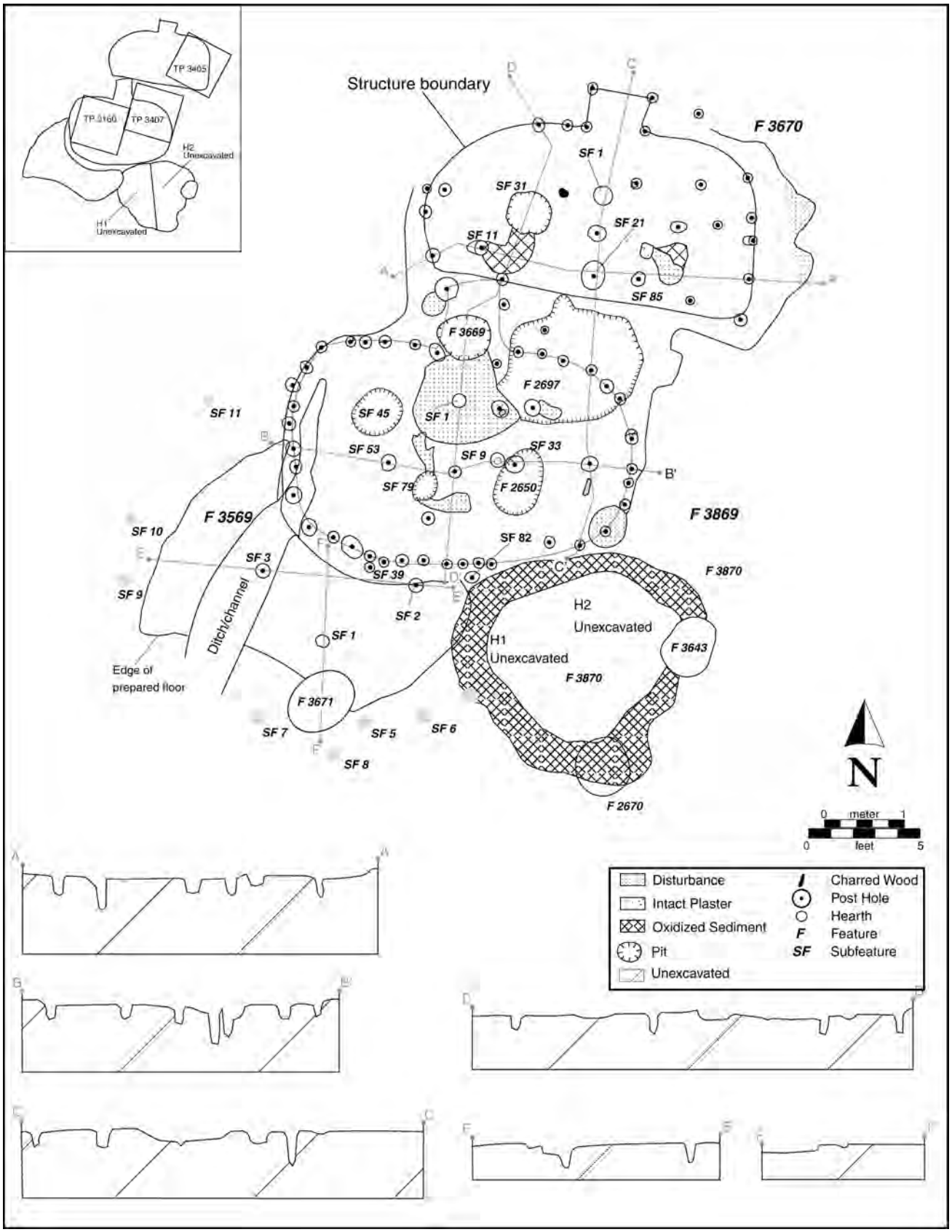

Figure B.60. Plan map of adjacent Features 3869 and 3670 and overlying Feature 3569 showing the location of subfeatures, point-located samples, and intrusive features.

Table B.34. Feature 3569 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
2	1888	18	16	29	C
3	1890	18	17	26	C
4	1892	18	18	31	P
5	1894	20	18	28	P
6	1897	20	19	40	P
7	3354	18	17	28	P
8	3398	15	14	35	P
9	3400	14	13	17	P
10	3402	18	16	26	P
11	3404	15	14	24	P

Key: C = central-support posthole; P = perimeter posthole; PD = provenience designation.

Analyzed botanical samples: PD 2394
Related features: intruded by Features 2697 and 3669; abuts Feature 3869

Feature 3670 was a subrectangular pit structure located in the central portion of conglomerate Feature 3544. Although the house was poorly preserved, 1 hearth (Subfeature 1), a portion of the floor, 16 postholes (Subfeatures 11, 13, 15, 18, 19, 23, 24, 46–48, 85, and 87–91), 2 floor pits (Subfeatures 21 and 31), and a north-facing entry were identified (see Figure B.60). It was architecturally similar to a structure (Feature 3869) that abutted the south wall. Because the two structures were at the same elevation, the temporal relationship could not be discerned. In addition, a borrow pit (Feature 2697) and a roasting pit (Feature 3669) intruded portions of the structure's south wall. Charred structural debris in the fill and charred, in situ post segments suggests that Feature 3670 had burned.

Excavation Methods

This structure was identified when its hearth was exposed during Phase 2 mechanical stripping in Stripping Unit 1869. A 2-by-2-m test pit (Test Pit 3405) was placed within the remaining fill of the feature, along the eastern side of the house. The test pit was excavated manually to the floor in a 10-cm and a 4-cm level. The fill was screened through 1/4-inch mesh, and a flotation sample was collected from each level (PDs 3406 and 3430).

The remaining fill within the structure was excavated manually to the floor as a single unit in one 5–9-cm level. The fill was not screened, but observed artifacts were collected. In addition, a large chunk of charcoal was collected as a macrobotanical sample (PD 2267).

Subfeatures were excavated after the floor was exposed. These included 1 hearth, 16 postholes, and 2 floor pits. The fill from each posthole was excavated separately and screened through 1/4-inch mesh. An in situ, charred post segment was collected as a botanical sample (PDs 2394 and 6641) from each of the central-support postholes (Subfeatures 11 and 85, respectively). The entire fill from the hearth was collected as a flotation sample (PD 5203), and two pollen samples (PDs 5203 and 5206) and an archaeomagnetic sample (SRI 2463) were collected from its base. Each pit was excavated in a single 1/4-inch-screened level, and a pollen sample (PD 2652) was scraped from the base of one of them (Subfeature 31).

Finally, an additional nine postholes (Feature 3544, Subfeatures 12, 14, 16, 17, 20, 22, 25, 37, and 86) were located within the confines of Feature 3670, but they could not be associated definitively with the use of this structure (see Figure B.60). Given the intense superpositioning of structures in this area, it was possible that one or more later structures were unknowingly destroyed during stripping and that subfeatures identified at the level of Feature 3670's floor actually belonged to later structures. Therefore, these nine postholes were assigned to the conglomerate Feature 3544. They were excavated individually, and the fill was screened through 1/4-inch mesh. A macrobotanical sample (PDs 2446 and 2448) was collected from two of these postholes (Subfeatures 16 and 17).

Stratigraphy

The house pit for Feature 3670 cut into the light brown calcium-rich substrate. The house fill consisted of a single 17-cm layer of dark gray-brown sandy loam with small subrounded to subangular gravels, carbonate root casts, and caliche nodules. Charcoal flecks and chunks were dispersed evenly throughout the fill but increased in density near the floor surface. The artifact density was moderate to high, and artifacts were distributed evenly throughout the fill.

A wedge of brown sandy loam was found along the western edge of the house pit and was devoid of cultural materials. It may have represented sediments that were deposited intentionally between the structure walls and house pit.

Disturbances

Much of this structure was removed during Phase 2 mechanical stripping. Roots, rodents, and insects disturbed the house fill, floor, and subfeatures. Furthermore, a borrow pit (Feature 2697) and a roasting pit (Feature 3669) removed most of the structure's south wall and any subfeatures located in that area.

Construction Details

Based on the posthole arrangement, Feature 3670 likely was subrectangular in plan view with a protruding entry that opened to the north. The structure measured 4.08 m east–west by 2.16 m north–south.

Walls and Roof

Ten perimeter postholes (Subfeatures 15, 18, 19, 23, 24, 46–48, 89, and 90) defined the boundaries of Feature 3670. They ranged in size from 10 to 17 cm in diameter and 17 to 39 cm in depth (Table B.35). They were not associated with a floor groove.

Two possible central-support postholes (Subfeatures 11 and 85) were identified along the probable midline of the structure. Each contained the charred remains of an in situ post. They measured 14–18 cm in diameter and extended 25–49 cm below the house floor (see Table B.35).

Finally, six postholes (Feature 3544 Subfeatures 12, 17, 20, 22, 25, and 86) were located within the interior of Feature 3670, and three postholes (Feature 3544 Subfeatures 14, 16, and 37) were located around the perimeter of Feature 3670 (see Figure B.60); these postholes could not be definitively associated with this structure (Table B.36). It is possible that the interior postholes were created to provide supplemental roof support for this structure and the perimeter postholes formed part of the structure's walls, but they may have been constructed with a later feature instead. For this reason they were assigned to the conglomerate Feature 3544.

Entry

The entryway was a fairly short vestibule with a slightly ramped floor that protruded from the midpoint of the north wall. It was defined by four postholes (Subfeatures 13, 87, 88, and 91), with two located on either side of the vestibule (see Figure B.60).

Floor

The floor consisted of the compacted and oxidized native paleosol. A small patch of in situ floor plaster remained in the east-central portion of the house (see Figure B.60), suggesting that there was a plastered apron around the hearth that may have extended throughout the central portion of the house. The floor surface around both central-support postholes was oxidized.

Floor Features

Hearths

Backhoe stripping removed the upper portion of the hearth (Subfeature 1). The remnant hearth consisted of a well-plastered, round, shallow pit with sloping walls and a flat base. It measured 18 cm in diameter and extended less than 5 cm below the house floor. It was filled with brown silty loam and contained few artifacts.

Pits

Two possible intramural pits (Subfeatures 21 and 31) were identified in the house. Subfeature 21 was identified as either a floor pit or a posthole and was located 75 cm behind the hearth. It was oval in plan view with straight walls and a flat base. It measured 28 by 34 cm at its opening and was 23 cm deep. It was filled with dark gray brown sandy loam and contained few artifacts. A floor pit of similar size and shape was found in the same location in Feature 3869 (Subfeature 79), the structure immediately to the south.

Subfeature 31 was a round, shallow pit of indeterminate function located west and slightly south of the hearth. It measured about 55 cm in diameter and was less than 10 cm deep. The upper 1–2 cm of fill consisted of the same gray-brown sandy loam that overlay the floor, and the lower 5–6 cm consisted of brown sandy loam with very few artifacts. A pit similar in size and shape was found in the same location in Feature 3869 (Subfeature 45), the structure immediately to the south.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary context.

Evidence for Remodeling

No evidence for remodeling could be identified for this structure.

Table B.35. Feature 3670 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
11	2415	18	17	49	C
13	2424	13	12	21	E
15	2436	12	12	39	P
18	2463	11	10	28	P
19	2465	15	13	23	P
23	4510	11	10	28	P
24	4512	17	13	34	P
46	5269	16	15	27	P
47	5271	14	14	23	P
48	5273	12	11	22	P
85	6641	14	14	25	C
87	6738	16	12	18	E
88	6740	12	12	24	E
89	6742	13	13	17	P
90	6744	17	12	24	P
91	6749	12	11	12	E

Key: C = central-support posthole; E = entryway posthole; P = perimeter posthole; PD = provenience designation.

Table B.36. Feature 3544 Posthole Data

Subfeature No., by Inclusive Structure	PD No.	Length (cm)	Width (cm)	Depth (cm)
Feature 3670				
12	2417	10	10	34
14	2434	12	12	19
16	2446	15	15	37
17	2448	12	11	36
20	2467	10	10	19
22	2479	16	12	36
25	2502	12	11	28
37	2863	9	9	10
86	6643	23	18	55
Feature 3869				
10	2413	15	15	36
29	2564	15	15	30
30	2645	18	20	27
35	2859	20	20	28
43	2927	15	12	17
52	5358	14	12	28

Key: PD = provenience designation.

Abandonment Processes

The lack of artifacts on the floor suggests that the structure may have been cleaned out upon abandonment. Patches of oxidized floor and the remains of two charred in situ post segments (Subfeatures 11 and 85) indicate that the structure had burned. After abandonment, the house pit began to fill with fluvial and aeolian sediments and cultural trash. Sometime later a borrow pit and a roasting pit were constructed into the southern portion of the structure, removing much of its southern wall and floor features.

Associated, Intrusive, or Superimposed Features

Feature 3670 abutted another structure (Feature 3869), and it was intruded by a borrow pit (Feature 2697) and a roasting pit (Feature 3669). The other structure was located immediately to the south, was similar in size and shape, and had the same floor elevation. The juncture between the structures had been cut by Feature 2697, making it unclear how they articulated or how they dated relative to one another. Given their architectural similarities, these two structures may have been occupied consecutively or within a close time span.

Chronology

An archaeomagnetic sample (SRI 2463) was collected from the structure's hearth, and it yielded the date range options of A.D. 685–790 and A.D. 835–990. Either date range is possible given the architectural style and artifacts recovered from the house fill.

Locus D, Feature 3869

Center of feature UTMs: N 3538342.58, E 541575.14
Architectural type: house-in-a-pit, recessed hearth
Date range: – A.D. 700–1050
House dimensions: 4.54 by 2.87 m; 0.15 m depth; floor area 10.17 m^2
Entryway dimensions: 0.85 by 0.67 m
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 1 recessed hearth area, 3 central-support postholes, 42 entry and perimeter postholes, and 2 intramural pits
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PDs 2363, 2392, and 2482
Related features: intrudes Feature 2650; intruded by Features 2697, 3569, 3669, and 3870; abuts Feature 3670

Feature 3869 was a subrectangular pit structure (Figure B.61) that was located in the central portion of conglomerate Feature 3544 (see Figure B.60). It had a ramped, north-facing entry and a shallow but well-plastered recessed hearth area. A plastered hearth (Subfeature 1) was located in the center of the recessed area, and two small storage pits (Subfeatures 45 and 79) were located to the west and south of the hearth area, respectively. A series of 37 perimeter postholes (Subfeatures 28, 36, 38–42, 54–78, and 80–84) defined the borders of the house. Three possible central-support postholes (Subfeatures 9, 33, and 53) were located along the midline of the structure. A roasting pit (Feature 3669) and two large borrow pits (Features 2697 and 3870) intruded the structure, and a bell-shaped pit (Feature 2650) was capped by the structure's floor. A later structure (Feature 3569) was located above part of Feature 3869, and a second structure (Feature 3670) abutted Feature 3869 to the north. The temporal relationship between Features 3869 and 3670 is unclear since they were located at the same elevation. Evidence from the fill suggests that Feature 3869 had burned.

Excavation Methods

From the surface of Stripping Unit 1869, Feature 3869 appeared as a probable structure within the larger conglomerate Feature 3544. Initial excavations aimed at defining its walls. Two 2-by-2-m test pits (Test Pits 3160 and 3407) were placed within what appeared to be the general boundaries of the feature. Test Pit 3160 comprised approximately the western half of the structure and was excavated in two levels. The first level was 10 cm deep and, in three-fourths of the unit, terminated at the main-structure floor. A large portion of a recessed hearth area was revealed at the base of this level in the northeast quarter of the unit. The fill from this area was removed as the unit's second level, which was 3–5 cm deep. Both levels were 1/4-inch screened, and a flotation and botanical sample (PDs 3161 and 2328) was collected from each. A composite pollen sample (PD 2363) was scraped from the floor of the recessed hearth area exposed at the base of this unit.

Test Pit 3407 was placed along the eastern side of Test Pit 3160, offset about 1 m to the north. The purpose of this unit was to further expose the house floor and to find the eastern wall. It was excavated to the floor in a single 6–11-cm level. The fill was screened through 1/4-inch mesh, and a flotation sample (PD 3408) was collected. A large, intrusive pit (Feature 2697) comprised much of the northern half of the unit, and, therefore, this unit does not represent a controlled sample of the fill from Feature 3869.

Figure B.61. Plan view of Feature 3869, looking southwest into the body of the structure.

The remaining structure fill was removed as a single unit to expose the floor and to define the pit edges. Observed artifacts were collected, but the fill was not screened. After the floor was entirely exposed, subfeatures were identified and excavated. This included a hearth, 45 postholes, and 2 floor pits. Each posthole was excavated individually, and the fill was screened through 1/4-inch mesh. A charred in situ post segment was collected as a botanical sample (PD 2392) from one of the postholes (Subfeature 9). An additional botanical sample (PD 2518) was collected from one of the entryway postholes (Subfeature 26). The entire fill from the hearth was collected as a flotation sample (PD 5198), a pollen sample was collected from the fill (PD 5198), and an archaeomagnetic sample (SRI 2464) was collected from the plastered walls and base. One of the floor pits (Subfeature 45) was excavated in a single 1/4-inch-screened level, and a composite pollen sample (PD 5165) was collected from its base. The other pit (Subfeature 79) originally was thought to be a rodent disturbance and was excavated in a single unscreened level. Several larger chunks of charcoal interpreted as roof or wall fall were point located on the floor and collected for macrobotanical analysis (PD 2482).

Finally, an additional six postholes (Feature 3544, Subfeatures 10, 29, 30, 35, 43, and 52) were located within the confines of Feature 3869, but they could not be associated definitively with the use of this structure (see Figure B.60). Given the intense superpositioning of structures in this area, it was possible that one or more later structures were unknowingly destroyed during stripping and that subfeatures identified at the level of Feature 3869's floor actually belonged to later structures. Therefore, these six postholes were assigned to the conglomerate Feature 3544. They were excavated individually, and the fill was screened through 1/4-inch mesh. No samples were collected from these subfeatures.

Stratigraphy

The fill consisted of a single stratum of dark gray brown sandy loam with pea-sized gravel inclusions, carbonate root casts, caliche nodules, abundant charcoal, and a moderate to high density of artifacts. Several large chunks of charcoal were encountered on the floor. The house was originally excavated into a light brown calcium carbonate–rich paleosol.

Disturbances

The architecture and fill of the house had been severely impacted by roots, rodents, insects, and modern road disturbance. An intrusive roasting pit (Feature 3669) removed part of the entry, and an intrusive borrow pit (Feature 2697) removed the fill and portions of the subfeatures in the northeast corner of the house. A second borrow pit (Feature 3870) removed part of the southeast corner of the structure.

Construction Details

Feature 3869 was subrectangular in plan view and had a protruding, north-facing entry (see Figure B.60). The structure measured 4.54 m east–west by 2.87 m north–south. The floor contained a circular, recessed hearth area in front of the entrance that measured 1.3 m in diameter. The floor in this area was 3–5 cm lower than the floor in the rest of the house.

Walls and Roof

Thirty-seven perimeter postholes (Subfeatures 28, 36, 38–42, 54–78, and 80–84) were identified along the periphery of the house and were spaced fairly evenly apart. They ranged in size from 9 to 31 cm in diameter and 7 to 37 cm in depth (Table B.37). No floor groove was identified in the house.

Three possible central-support postholes (Subfeatures 9, 33, and 53) were identified along the midline of the structure. They ranged from 16 to 22 cm in diameter and extended between 21 and 61 cm below the floor of the house. One of these postholes (Subfeature 9) contained the in situ remains of a charred post segment. The spatial patterning of Subfeatures 9 and 33 suggests that one replaced the other at some point during the use of this structure.

Finally, as discussed under excavation methods, six postholes (Feature 3544, Subfeatures 10, 29, 30, 35, 43, and 52) were located within the confines of Feature 3869 that could not be associated definitively with this structure (see Table B.36). It is possible that these postholes were created to provide supplemental roof support for this structure, but they may have been constructed with a later feature instead.

Entry

The remnant entryway consisted of a well-plastered portion of an entry ramp that sloped up to the north. It was bounded by three postholes on the east (Subfeatures 49–51) and two postholes on the west (Subfeatures 26 and 27). These entryway postholes ranged in size from 10 to 32 cm in diameter and 19 to 35 cm in depth (see Table B.37). The plastered ramp was truncated by an intrusive roasting pit (Feature 3669). The remnant entry, as defined by the postholes, measured about 1.0 by 0.60 m.

Recessed Hearth Area

The recessed hearth area was a slightly depressed area located in front of the entryway (see Figure B.60). It measured approximately 1.4 m in diameter. The floor was plastered in this area and was located less than 5 cm below the main floor of the structure.

Floor

The main floor of the structure consisted of the compacted natural paleosol. It had an area of 10.17 m^2.

Floor Features

Hearths

The hearth (Subfeature 1) was located at the center of the recessed hearth area, immediately in front of the entryway. It was circular in plan view, shallow and basin-shaped in cross section, and contained a well-plastered apron and collar. It measured about 20 cm in diameter and was less than 5 cm deep. It was filled with a grayish brown, ash-laden, silty loam.

Pits

Two possible storage features were identified within the structure. A round, shallow, basin-shaped pit (Subfeature 45) was located just to the west of the recessed hearth area. The pit measured about 60 cm in diameter and was less than 10 cm deep. It was built into the sterile carbonate substrate, and the walls and base show no signs of oxidation. It was filled with a gray-brown sandy loam that was similar to the house fill. The size and shape of this pit suggest that it functioned as a pot rest.

A round, basin-shaped pit (Subfeature 79) was located south of the recessed hearth area. It measured 30 cm in diameter and was 14 cm deep. The walls and base consisted of the sterile substrate and show no signs of oxidation. It was filled with a gray-brown sandy loam that was similar to the house fill. The function of this pit is unknown.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary context.

Evidence for Remodeling

The presence of two possible east-central-support postholes located immediately next to each other may indicate minor remodeling to the superstructure of the house. Likewise, the position of two of the perimeter postholes (Subfeatures 39 and 82) suggests possible modification or reinforcement of the back wall. No other evidence for remodeling could be identified definitively.

Abandonment Processes

No artifacts were encountered in contact with the floor, suggesting that the house either was cleaned out prior to abandonment or that remnant artifacts were scavenged after abandonment. The structure had partially or fully burned, as evidenced by the in situ charred post segments and other

Table B.37. Feature 3869 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
9	2411	17	16	61	C
26	2518	28	32	35	E
27	2520	21	15	29	E
28	2522	14	12	24	P
33	2647	22	22	27	C
36	2861	9	9	7	P
38	2917	31	23	33	P
39	2919	11	11	15	P
40	2921	15	15	21	P
41	2923	12	11	26	P
42	2925	12	10	12	P
49	5319	10	10	30	E
50	5321	12	12	19	E
51	5323	14	14	30	E
53	5360	20	17	21	C
54	5362	14	14	21	P
55	5364	14	14	27	P
56	5366	14	11	21	P
57	5368	14	14	23	P
58	5370	18	13	23	P
59	5372	19	14	32	P
60	5385	15	13	26	P
61	5387	17	15	25	P
62	5389	19	18	21	P
63	5391	19	14	22	P
64	5397	21	20	18	P
65	5399	21	19	37	P
66	5401	13	12	24	P
67	5403	13	12	28	P
68	5405	13	12	23	P
69	5407	11	10	23	P
70	5409	13	12	18	P
71	5411	10	10	19	P
72	5413	12	10	20	P
73	5415	11	10	26	P
74	5417	13	12	21	P
75	5419	18	17	22	P
76	5421	13	13	12	P
77	5423	11	11	7	P
78	5425	11	11	12	P
80	5493	14	12	32	P
81	5495	14	12	32	P
82	5497	17	12	28	P
83	5499	14	13	30	P
84	6639	11	10	24	P

Key: C = central-support posthole; E = entryway posthole; P = perimeter posthole; PD = provenience designation.

large pieces of charcoal found in the house fill. After abandonment, the house pit began to fill with fluvial and aeolian sediments and cultural trash. Sometime later a roasting pit was constructed into the house-pit fill, and two large borrow pits were excavated into the northeast and southeast corners. Finally, a structure was constructed over the southwest corner of the sediment- and trash-filled house pit.

Associated, Intrusive, or Superimposed Features

Feature 3869 was part of a conglomerate of three superimposed structures (also including Features 3569 and 3670) within the larger composite Feature 3544. It partially underlay the floor of Feature 3569 to the southwest, and it abutted Feature 3670 to the northeast. In addition, a roasting pit (Feature 3669) and two large borrow pits (Features 2697 and 3870) intruded the structure, and a bell-shaped pit (Feature 2650) was capped by the structure's floor.

Chronology

An archaeomagnetic sample (SRI 2464) was collected from the structure's hearth, but it was too imprecise to be dated. This structure was superimposed by Feature 3569, which was archaeomagnetically dated to A.D. 935–1015. Therefore, this structure must predate A.D. 1015.

Locus D, Features 3679 and 3868

Features 3679 and 3868 were superimposed structures within a single house pit that formed the northern portion of conglomerate Feature 3544 (Figure B.62). Feature 3679, the later of the two structures, had a north-facing entry, 2 superimposed hearths (Subfeatures 1 and 2), 1 wide floor groove (Subfeature 17), 2 central-support postholes (Subfeatures 3 and 4), 49 interior and perimeter postholes (Subfeatures 5–7, 15, 16, 18–36, 38–40, 42–53, and 55–64), and 1 intramural pit (Subfeature 54). The earlier structure (Feature 3868), which was somewhat larger than Feature 3679, had a south-facing entry and was defined by a set of 14 perimeter postholes (Subfeatures 5–18) and 4 possible entryway postholes (Subfeatures 1–4). Both structures shared a common floor, although it may have been plastered for use in the later structure. Furthermore, oxidized patches of this floor combined with charred structural debris in the fill and in situ charred post segments suggest that the later structure (Feature 3679) had burned.

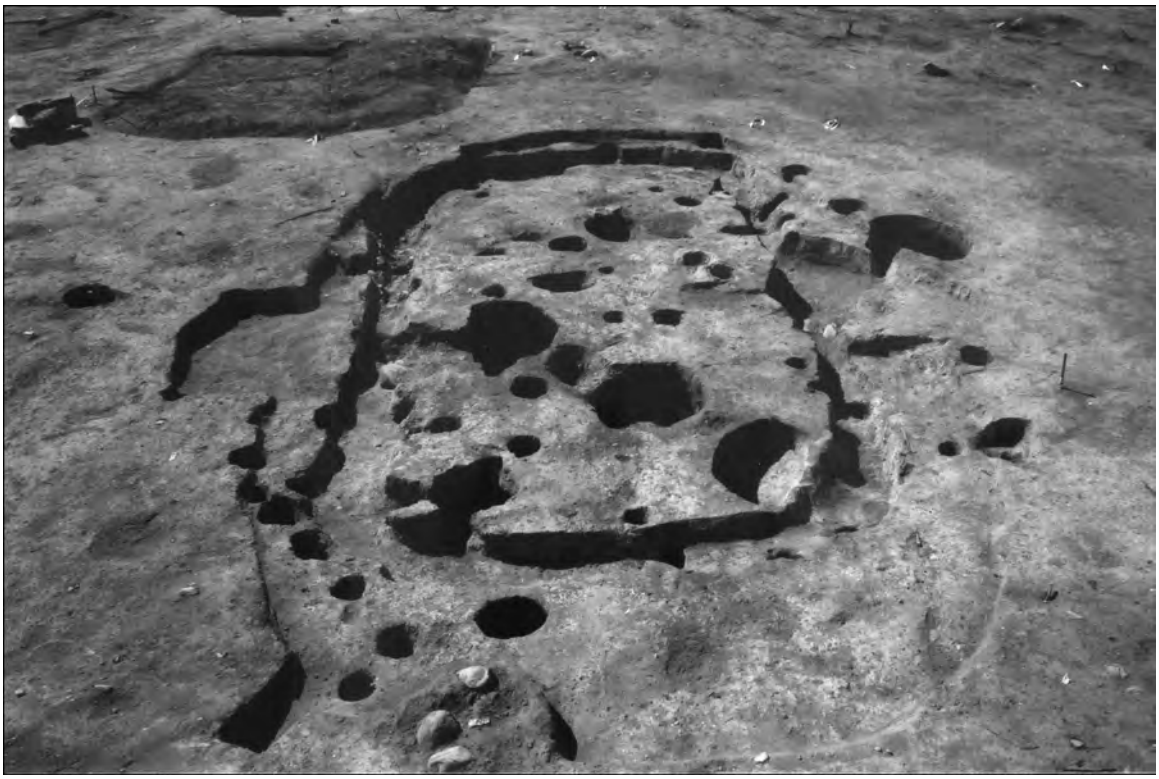

Figure B.62. Plan view of Features 3679 and 3868, looking west. Feature 3679 is the smaller structure outlined by the floor groove in the center of the photograph, and Feature 3868 is the larger structure outlined by postholes and the house pit walls.

These structures were superimposed with a total of 11 other features, including 1 borrow pit (Feature 3027), 2 roasting pits (Features 3067 and 4702), 5 extramural pits (Features 3097, 3203, 3437, 3790, and 3792), 2 unexcavated roasting pits (Features 3548 and 3551), and 1 secondary pit cremation (Feature 3875).

Excavation Methods

Features 3679 and 3868 were identified as part of the Feature 3544 conglomerate during Phase 2 stripping in Stripping Unit 1759. Mechanical stripping had removed most of the house fill, and excavation of the two-structure complex was carried out under the assumption that only one structure (Feature 3679) was present. A 9.0-by-0.30-m shovel trench (Hand Trench 1919) was excavated from the southeast corner to the northwest corner of the feature to define its walls and floor. The floor was exposed after 4–15 cm of fill was removed, and a small portion of a hearth was identified in the trench. Artifacts observed during the trench excavation were collected, but the fill was not screened.

A 3-by-3-m control unit (Test Pit 1927) was then excavated to define the northern pit edge and to continue exposing the floor and hearth. The test pit adjoined the north side of the trench at the approximate center of the house pit. The house-pit edge was encountered in the test pit, so only the southern, approximately three-fourths of the unit was excavated. The test pit was manually excavated to the floor in a single 1–8 cm level. The fill was screened through 1/4-inch mesh, and a flotation sample was collected (PD 1929). A composite pollen sample (PD 1931) was collected from the floor exposed at the base of the unit.

The rest of the fill within the feature, including the fill within the southern entryway, was excavated to the floor as a separate unit in a single 5–10 cm level. Observed artifacts were collected, but the fill was not screened. A composite flotation sample (PD 1936) was collected from the fill, and a composite pollen sample (PD 1950) was collected from the exposed floor.

Exposure of the floor revealed a number of subfeatures, including 2 hearths, 1 floor groove, 1 intramural pit, and 69 postholes. The floor groove and individual postholes were excavated separately, and the fill was screened through 1/4-inch mesh. A flotation and pollen sample (PD 3055) were collected from the floor groove, and a flotation and a pollen sample (PD 3200) were collected from one of the postholes (Feature 3679, Subfeature 5). A charred remnant of a post segment was collected for botanical analysis (PD 3377) from a second posthole (Feature 3679, Subfeature 53). An infant burial (PD 3026) was located at the base of a third posthole (Feature 3868, Subfeature 10). The entire fill from each hearth was collected as a flotation and pollen sample (PDs 1945 and 1949), a second pollen sample (PDs 11,347 and 11,348) was collected from the base of each hearth, and an archaeomagnetic sample (SRI 2376 and SRI 2375, respectively) was collected from the plastered walls of each hearth. A third archaeomagnetic sample was collected from a section of oxidized floor plaster (SRI 2381). A composite pollen sample (PD 1942) was scraped from the floor surrounding the earlier hearth (Subfeature 1). The intramural pit was excavated in a single 1/4-inch-screened level, a flotation sample (PD 3428) was collected from the fill, and a pollen sample (PD 3429) was collected from its base. Three possible pieces of ground stone (PDs 3126, 3128, and 3136) and one Dragoon Broad red-on-brown sherd (PD 3130) were point located on the floor, and pollen samples (PDs 3127, 3129, and 3131) were collected from beneath three of them (PDs 3126, 3128, and 3130, respectively).

The feature was recognized as consisting of two structures only after the subfeatures were excavated. Eighteen postholes and the south-facing entryway were reassigned to the earlier structure, Feature 3868. All other subfeatures remained designated as part of Feature 3679.

Stratigraphy

The house pit was excavated into the native calcic paleosol, which consisted of a compact brown silty loam that contained carbonates and small gravels. The fill of the house pit consisted of an unstratified layer of dark brown silty loam with small gravels, carbonates, occasional charcoal flecking, and oxidized sediments. Artifact density was moderate throughout the fill.

Disturbances

The floor, subfeatures, and pit walls were heavily damaged by a series of intrusive features. The southeast and southwest corners of the house pit were disturbed by two roasting pits (Features 3548 and 3551). A roasting pit (Feature 3067), extramural pit (Feature 3437), and secondary pit cremation (Feature 3875) removed portions of the fill and floor from the central portion of the house pit and may have impacted subfeatures in this area. Two additional intramural pits (Features 3790 and 3792) damaged the floor surface used by the earlier structure (Feature 3868). Furthermore, the reuse of the house pit by Feature 3679 removed or obscured many of the subfeatures related to the earlier structure (Feature 3868). Finally, the floor and subfeatures were heavily damaged by roots, rodents, and insects.

Evidence for Remodeling

The house pit constructed for Feature 3868 was remodeled to accommodate the later structure, Feature 3679. A new entry, hearth, floor groove, and perimeter postholes were added during the construction of the second house. Furthermore, the central-roof-support posts may have been repositioned, and the original floor surface may have been plastered for use with the later structure. Once built, Feature 3679 also was remodeled, as indicated by the presence of overlapping hearths.

Abandonment Processes

At some point after Feature 3868 was abandoned, two extramural pits (Features 3790 and 3792) were constructed within the house pit. After these pits fell out of use, the house pit was remodeled for use with a new structure (Feature 3679). Because of this reuse, the nature of the original structure's abandonment could not be determined. The oxidized floor and charred post segments found in the fill of the house pit suggest that the later structure (Feature 3679) had burned. The remnant house pit subsequently filled with naturally deposited sediments and cultural debris. This area continued to be used for extramural activities as evidenced by the numerous intrusive pit features present in the fill of the house pit.

Associated, Intrusive, or Superimposed Features

Features 3679 and 3868 were superimposed with a total of 11 other features. A borrow pit (Feature 3027) and a roasting pit (Feature 4702) were located beneath portions of both structures and clearly predate the construction of the house pit. Two extramural pits (Features 3790 and 3792), on the other hand, appear to have been constructed after Feature 3868 was abandoned but before Feature 3679 was constructed, because they are intruded by some of the subfeatures associated with the later structure (Figure B.63). A third extramural pit (Feature 3203) was partially capped by the floor plaster of Feature 3679, but its relationship with the earlier structure is unclear. A bell-shaped pit (Feature 3097) abutted the center of the northern wall of the house pit, in the hypothesized location of the entry to Feature 3679. This pit may postdate both structures in the house pit, but this could not be verified. Two unexcavated roasting pits (Features 3548 and 3551) intruded the southeast and southwest corners of the house pit, respectively, and, therefore postdate the earlier structure. Feature 3551 also intrudes the floor groove associated with the later structure and, thus, must postdate this structure as well. The relationship between Feature 3548 and the later structure is unclear. Finally, a roasting pit (Feature 3067), extramural pit (Feature 3437), and secondary pit cremation (Feature 3875) intrude the interior of Feature 3679, indicating that they postdate both structures.

Locus D, Feature 3679

Center of feature UTMs: N 3538349.49, E 541574.37
Architectural type: house-in-a-pit
Date range: A.D. 835–865
House dimensions: 7.24 m by 3.78 m; 0.08 m depth; floor area 11.90 m^2
Entryway dimensions: unknown
Shape: subrectangular
Orientation: north
Internal features: 2 hearths, 1 floor groove, 2 central-support postholes, 49 interior and perimeter postholes, and 1 intramural pit
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PD 3377
Related features: intruded by Features 3067, 3437, and 3875; intrudes Features 3027, 3203, 3790, 3792, 3868, and 4702

Construction Details

As delineated by the floor groove, Feature 3679 (Figure B.64) was subrectangular in plan view and measured 7.24 m east–west by 3.78 m north–south (see Figure B.63). The structure was built within and along the west end of a large preexisting house pit, as evidenced by the relative position of the floor groove to the pit edge.

Walls and Roof. The structure possessed a fairly large floor groove (Subfeature 17) that measured 25–45 cm in width and extended approximately 20 cm below the house floor. It was U-shaped in profile, and the unplastered walls showed signs of oxidation. Along the eastern side of the house, the floor groove was about 1 m from the pit edge, and in the rest of the house, the floor groove was located at the edge of the pit. The fill consisted of brown silts and sands with some charcoal flecking and a low density of artifacts.

A total of 34 perimeter postholes (Subfeatures 7, 15, 16, 18–36, 38–40, 42–44, 47, 48, 55–57, and 64) were found along the inner and outer edges of the floor groove. They ranged in size from 6 to 33 cm in diameter and 7 to 35 cm in depth (Table B.38).

Seventeen additional postholes (Subfeatures 3–6, 45, 46, 49–53, and 58–63) were found in the interior of the house. However, because Features 3679 and 3868 shared a single floor surface, it was difficult to determine whether they all were in use with the later structure or if some were reused from, or only used with, the earlier structure. The

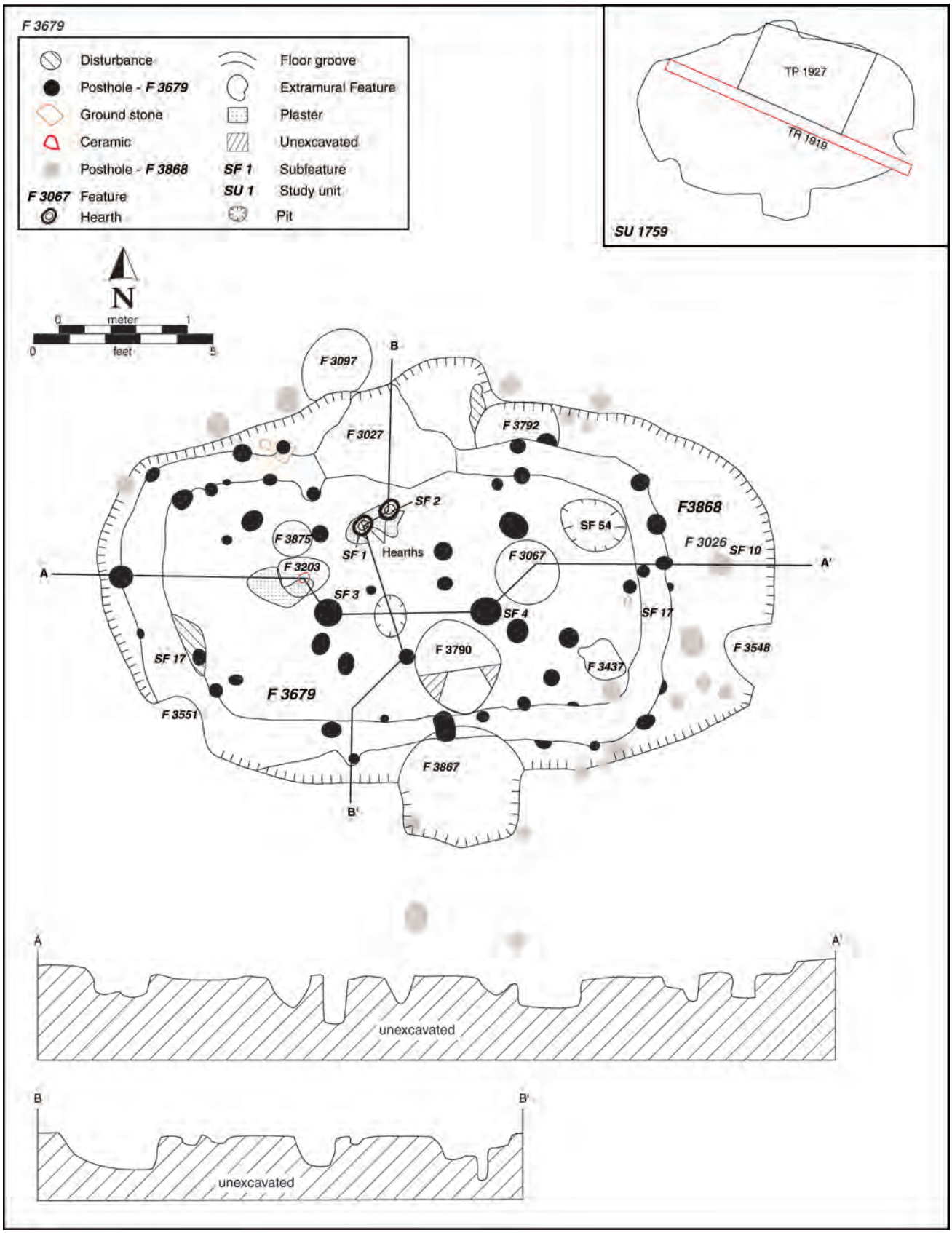

Figure B.63. Plan map of superimposed Features 3679 and 3868 showing the location of subfeatures and intrusive features.

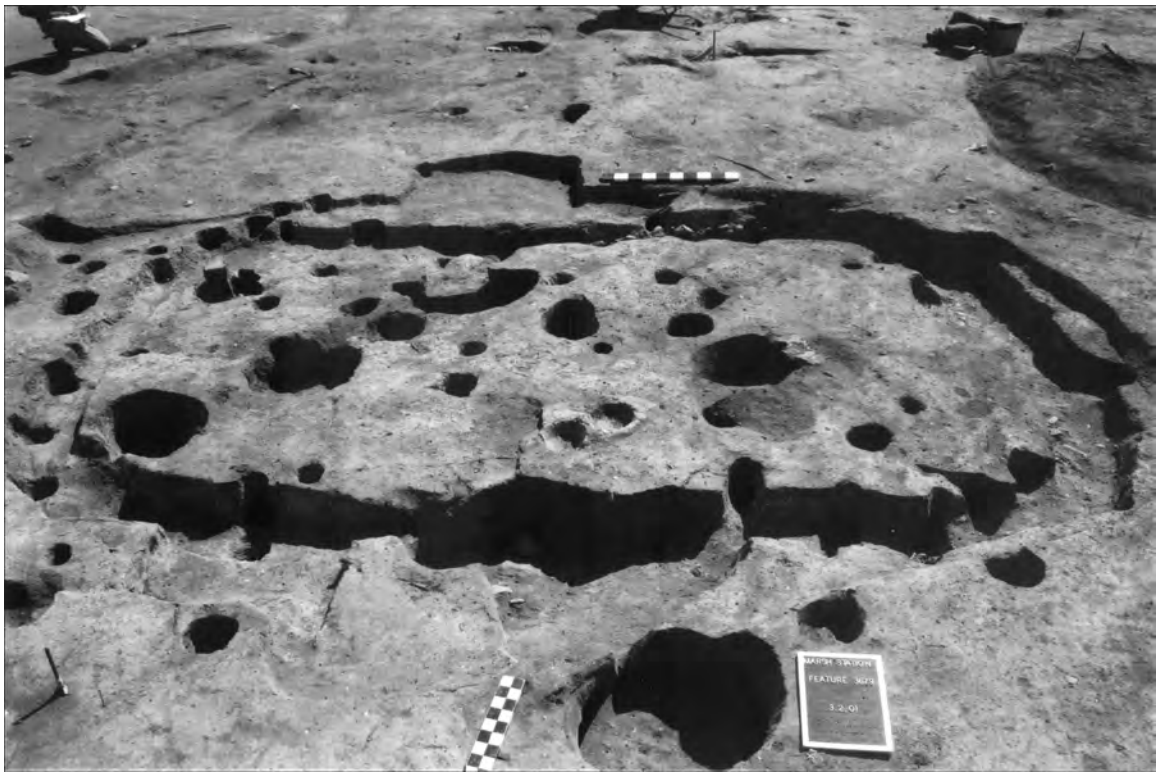

Figure B.64. Plan view of Feature 3679, looking south through the probable entryway.

Table B.38. Feature 3679 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
3	3196	30	26	43	C
4	3198	35	31	20	C
5	3200	44	32	29	I
6	3202	18	17	10	I
7	3115	19	17	35	P
15	3118	22	19	14	P
16	3122	18	19	14	P
18	3206	16	13	24	P
19	3208	13	11	13	P
20	3210	14	14	25	P
21	3212	22	20	35	P
22	3214	12	12	13	P
23	3216	13	13	28	P
24	3218	25	24	17	P
25	3220	23	24	18	P
26	3222	15	10	19	P
27	3224	17	18	21	P
28	3226	18	18	15	P
29	3228	12	11	15	P
30	3230	13	10	12	P
31	3232	33	25	28	P
32	3234	17	11	12	P
33	3236	13	14	25	P

continued on next page

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
34	3238	13	13	7	P
35	3240	10	9	16	P
36	3242	16	23	31	P
38	3246	18	18	27	P
39	3248	17	18	23	P
40	3250	16	17	33	P
42	3254	20	14	14	P
43	3256	11	11	10	P
44	3258	12	12	23	P
45	3260	19	20	27	I
46	3284	16	16	11	I
47	3298	18	18	19	P
48	3333	14	14	34	P
49	3335	23	16	24	I
50	3337	22	22	21	I
51	1953	16	16	14	I
52	3015	18	14	16	I
53	3377	13	12	18	I
55	2214	12	12	14	P
56	2216	14	11	16	P
57	2218	19	16	8	P
58	2220	23	16	22	I
59	2222	11	11	16	I
60	2224	18	18	38	I
61	2226	23	20	23	I
62	2228	11	10	10	I
63	2426	27	22	30	I
64	2432	9	6	14	P

Key: C = central-support posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.

most likely candidates for the central-support postholes for Feature 3679 were Subfeatures 3 and 4. These postholes measured 26–35 cm in diameter and 20–43 cm in depth and formed a two-post arrangement along the midline of the structure. Alternatively, four evenly spaced postholes found in the center of Feature 3679 (Subfeatures 49, 50, 60, and 63) may have formed a four-post arrangement that was used at some point with this later structure or that was used with the earlier structure and then sealed over by the later floor. Because no floor plaster was found over or around these postholes, it was difficult to ascertain whether either of these scenarios was plausible. These four postholes ranged in size from 16 to 27 cm in diameter and 21 to 38 cm in depth (see Table B.38). The remaining 11 postholes (Subfeatures 5, 6, 45, 46, 51–53, 58, 59, 61, and 62) found in the interior of Feature 3679 likely provided additional roof support for this house or for Feature 3868. They ranged in size from 10 to 44 cm in diameter and 10 to 29 cm in depth (see Table B.38).

Entry. The entry to Feature 3679 was not identified; however, it most likely was located near the center of the north wall of the structure, immediately north of the superimposed hearths. A borrow pit (Feature 3027) that predated the structure and an intrusive possible storage pit (Feature 3097) were identified and excavated in this vicinity, thus destroying any evidence for the entryway.

Floor. Feature 3679 reused the floor surface constructed with Feature 3868. It consisted primarily of the compacted native paleosol; however, patches of preserved floor plaster were identified in the western portion of the house and in the vicinity of the hearths. The floor was extremely difficult to define owing to the presence of several underlying and intrusive pits and abundant root and rodent disturbance.

Floor Features

Hearths. The structure possessed two superimposed, plaster-lined hearths (Subfeatures 1 and 2) located in the

north-central part of the house (see Figure B.63). The earlier hearth (Subfeature 1) was circular and basin-shaped and had a plastered collar and apron. It measured 22 cm in diameter and 11 cm in depth and was filled with a dark gray-brown, ash-laden fine sandy loam. The northeastern portion of the hearth and hearth fill were capped by the plaster apron from the second (later) hearth (Subfeature 2; Figure B.65).

Subfeature 2 was a circular, basin-shaped hearth with a plastered collar and apron. It measured 20 cm in diameter and 10 cm in depth. The later hearth was filled with a dark gray-brown, ash-laden fine sandy loam.

Pits. A possible storage pit (Subfeature 54) was located in the northeast corner of the structure (see Figure B.63). It was ovate in plan view with nearly vertical walls and a basin-shaped base. The pit measured 45 by 67 cm at its opening and was about 30 cm deep. It was constructed into the native paleosol, and the unprepared walls and base showed no signs of oxidation. The pit was filled with a homogenous layer of dark grayish brown fine sandy loam with some ash, charcoal flecking, carbonates, gravels, and few artifacts.

Artifacts

Point-located floor artifacts included 1 piece of ground stone (PD 3136) located near the floor groove in the west side of the house, 1 piece of ground stone (PD 3128) located on top of the floor groove in the northwest part of the house, and 1 Dragoon Broad Red-on-brown sherd (PD 3130) located on top of a patch of floor plaster that capped an earlier pit (Feature 3203). In addition, 1 shell bracelet fragment, 4 utilized flakes, 1 retouched flake, 2 cores, 21 flakes, and 17 pieces of lithic debris were recovered from the general-floor proveniences (PDs 1931 and 1950). Two Dragoon or San Simon Red-on-brown sherds; two Tucson Basin red-on-brown or Dragoon Red-on-brown sherds; 1 indeterminate Tucson Basin red-on-brown sherd; 1 indeterminate red-on-brown sherd; 24 plain ware sherds; and 15 small, indeterminate sherds were also recovered from the general-floor proveniences.

Chronology

The archaeomagnetic sample (SRI 2376) collected from the earlier hearth (Subfeature 1) returned the date range of A.D. 735–865. The archaeomagnetic sample (SRI 2375)

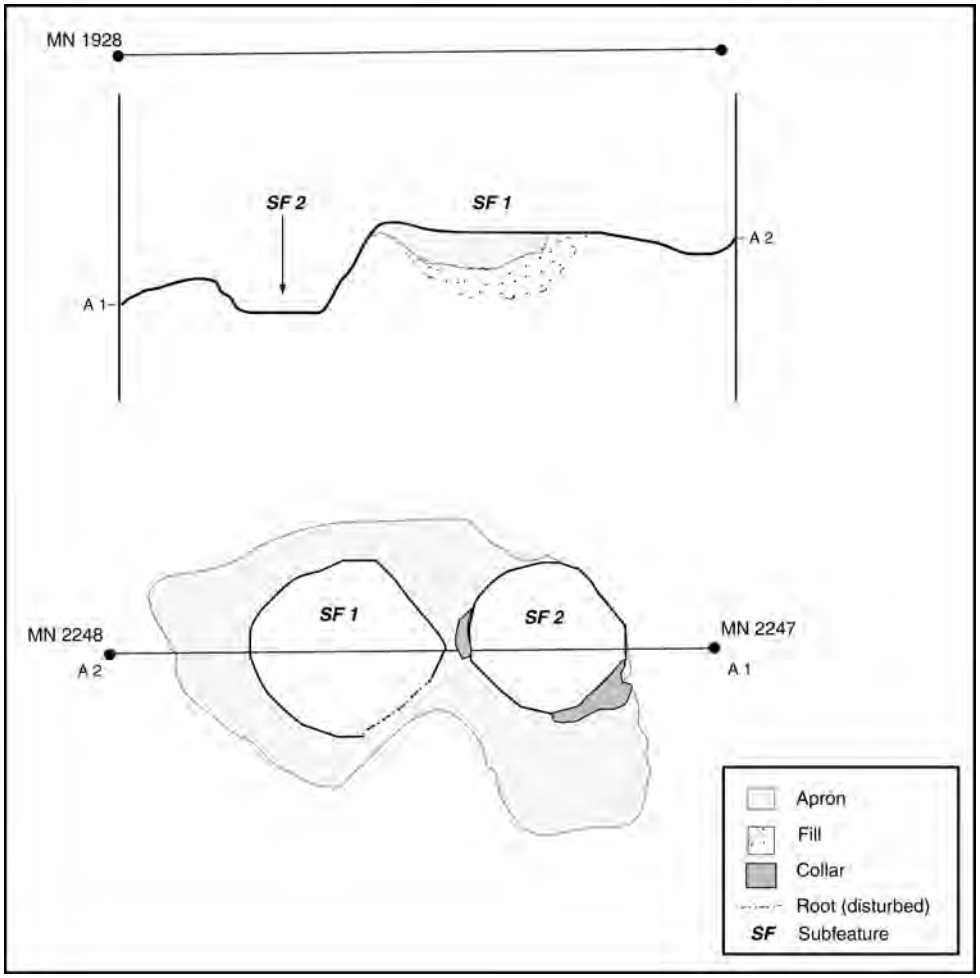

Figure B.65. Plan and profile of the superimposed hearths (Subfeatures 1 and 2) in Feature 3679.

collected from the later hearth (Subfeature 2) returned the date range of A.D. 835–865. When the data from these two samples are combined (SRI 3991-avg) they yield the composite date range of A.D. 835–865, which is the best age estimate for the abandonment of Feature 3679.

Locus D, Feature 3868

Center of feature UTMs: N 3538349.49, E 541574.37
Architectural type: house-in-a-pit
Date range: A.D. 600–865
House dimensions: 7.24 by 3.78 m; 0.68 m depth
Entryway dimensions: unknown
Shape: ovate
Orientation: south
Internal features: 18 postholes
Chronometric techniques: none
Analyzed botanical samples: none
Related features: abuts Feature 3097; intruded by Features 3548, 3551, 3679, 3790, and 3792; intrudes Features 3027 and 4702

Construction Details

The structure (Figure B.66) was constructed in a house pit that was ovate in plan view and measured 7.24 m east–west by 3.78 m north–south. The original size and shape of the superstructure constructed within the house pit remains unknown, but it most likely opened to the south.

Walls and Roof. Fourteen perimeter postholes (Subfeatures 5–18) were clearly associated with this structure. Nine of these were located along the inside edge of the house pit (Subfeatures 5, 6, 8, 10, and 14–18), and 5 flanked the exterior pit edge along the northern wall (Subfeatures 7, 9, and 11–13). They ranged in size from 10 to 40 cm in diameter and 10 to 35 cm in depth (Table B.39). An infant inhumation was found at the bottom of one of the postholes (Subfeature 10).

No central-support postholes could be associated definitively with Feature 3868. However, it is possible that four interior postholes documented as part of Feature 3679 (Subfeatures 49, 50, 60, and 63) may have formed the roof support system for this earlier structure (see Figure B.63). Likewise, it is possible that some of the other interior postholes documented with the later structure may have originated or been used exclusively with this earlier structure.

Entry. The entry was indicated by a gap in the southern pit wall and by the presence of four postholes (Subfeatures 1–4). The postholes represented the original entry walls, which were parallel-sided, stood about 1.3 m apart, and formed an area protruding at least 1.5 m from the middle of the southern wall of the house. The entryway was built over an extramural pit (Feature 4702).

Floor. The original floor of Feature 3868 was identified along the eastern side of the house pit, outside of the floor groove to Feature 3679 (see Figure B.63). The floor in this

Figure B.66. Plan view of Feature 3868, looking north through the entryway. Note the large posthole (Subfeature 3) in the foreground that marks the probable extent of the structure's entryway.

Table B.39. Feature 3868 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
1	1987	18	15	68	E
2	1989	15	13	32	E
3	3022	34	25	21	E
4	3024	17	16	52	E
5	1947	18	18	22	P
6	3244	29	25	35	P
7	3051	40	24	14	P
8	3252	13	10	15	P
9	3053	21	19	16	P
10	3026	26	22	24	P
11	3073	24	24	16	P
12	3075	26	25	15	P
13	3076	20	20	28	P
14	2231	20	14	17	P
15	2233	12	12	22	P
16	2235	26	22	17	P
17	2372	15	15	10	P
18	2428	16	16	12	P

Key: E = entryway posthole; P = perimeter posthole; PD = provenience designation.

area consisted of the native, use-compacted paleosol. It showed no signs of oxidation or of having been plastered.

Floor Features

Hearth(s). The hearth for Feature 3868 was not located, and it may have been removed by an intrusive bell-shaped storage pit (Feature 3790).

Artifacts

No artifacts from the floor or from other sealed or primary contexts could be definitively associated with this structure.

Chronology

No chronometric samples or temporally sensitive artifacts were recovered from this structure. However, it predates Feature 3679, which was archaeomagnetically dated to A.D. 835–865. Therefore, this structure must predate A.D. 865 as well.

Locus D, Features 3545 and 5518

Located at the far eastern end of Locus D (see Figure 84), this feature was composed of two superimposed structures, Feature 3545 and Feature 5518, built within a single house pit (Figure B.67). Feature 5518, the earlier of the two structures, had 1 hearth (Subfeature 1), a south-facing entry (Subfeature 2), 2 central-support postholes (Subfeatures 7 and 8), 4 perimeter postholes (Subfeatures 3–6), and 1 intramural pit (Subfeature 9). The orientation of Feature 3545, the later structure, was exactly the opposite. This structure had a north-facing entry (Subfeature 2), 1 hearth (Subfeature 1), 2 central-support postholes (Subfeatures 51 and 52), 62 perimeter and interior postholes (Subfeatures 3–13, 16–35, 37–48, 50, 54–56, 61, 63–66, and 68–77), 10 intramural pits (Subfeatures 14, 15, 36, 49, 53, 57–60, and 62), and 1 ash pit (Subfeature 67). Both structures shared a common floor surface that consisted of the unprepared native subsoil. Perimeter postholes, most of which were assigned to Feature 3545, were likely shared by both structures. Charred structural debris in the fill and an in situ charred post in Subfeature 52 suggest that the later structure (Feature 3545) had burned. Four unexcavated pits (Features 2898, 5514, 5515, and 5519) and 1 roasting pit (Feature 3878) intruded the house fill, and the northern extent of the entry to Feature 3545 was removed by 1 large, intrusive pit (Feature 3588). Both structures superimposed a flexed inhumation (Feature 4740).

Excavation Methods

Features 3545 and 5518 were discovered during Phase 2 mechanical stripping of Locus D. Initially, it was thought

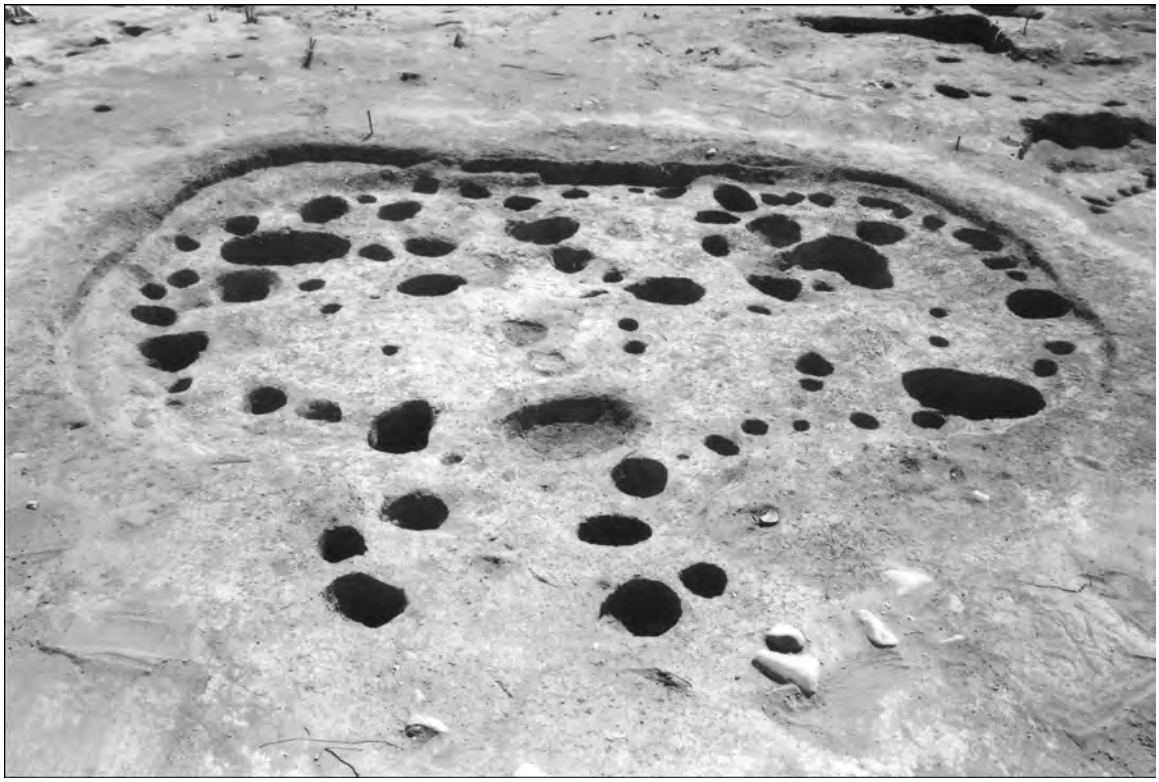

Figure B.67. Plan view of Features 3545 and 5518, looking south.

that only one structure was present, and the methods of excavation and recording were geared toward a single house, Feature 3545. Recognition that the feature was composed of two superimposed structures came near the end of excavation, when the entry and hearth for the earlier structure were identified. Documentation was then modified to account for both the earlier and later house; however, only those subfeatures that clearly belonged with the earlier structure, Feature 5518, were reassigned subfeature numbers associating them with this structure. All other subfeatures remained assigned to Feature 3545, even if it was not clear as to which structure they belonged.

Excavation of Features 3545 and 5518 began with a 2-by-2-m control unit (Test Pit 3423) placed along the south wall of the house pit, in the center of the feature. The test pit was excavated in two levels, the fill was screened through 1/4-inch mesh, and flotation samples (PDs 2367 and 3425) were collected from each level. The first level, which was 2–28 cm in thickness, was excavated to the depth of the lowest point exposed during mechanical stripping with the intent of creating an even excavation surface. The second level was excavated to the floor of the house and was 5–19 cm thick.

The remaining fill in the house pit was removed as two levels from a single unit. The upper level was removed to within about 10 cm of the floor; observed artifacts were collected, but the fill was not screened. The lower fill was removed to expose the floor and was screened through 1/4-inch mesh. A flotation sample was collected from each level (PDs 2391 and 2429), and a pollen sample (PD 5462) was taken from beneath an ash deposit in the lower fill level. A third flotation sample was collected from an ashy area of the floor in the north-central part of the house (PD 2397).

The entry to Feature 3545 was excavated separately in a single 2–8-cm level, and the fill was screened through 1/4-inch mesh. No samples were taken. The entry to Feature 5518 was excavated in a single 20–25-cm level, and the fill was screened through 1/4-inch mesh. A flotation sample was collected from the fill (PD 6818), and a pollen sample was scraped from the entry floor (PD 6838).

The exposure of the floor revealed a number of floor features associated with Feature 3545, including 1 hearth, 1 ash pit, 10 intramural pits, 2 central-support postholes, and 62 interior and perimeter postholes. Each posthole was excavated separately, and the fill was 1/4-inch screened. An intact juniper post was collected from one of the postholes (Subfeature 52) and submitted for dendrochronological analysis (PD 5041). Nine of the ten intramural pits (Subfeatures 14, 15, 36, 49, 53, 57, 58, 60, and 62) were excavated in single 1/4-inch-screened levels, and a flotation sample was collected from the fill of each (PDs 2550, 2552, 2731, 2933, 5116, 5167, 5283, 5325, and 5377, respectively). Because the tenth pit (Subfeature 59) was much smaller than the rest, its entire fill was collected as a flotation sample (PD 5314). Two pollen samples were recovered from one of the intramural pits (Subfeature 58): one from the upper part of pit fill (PD 5290) and one

from the lower part of pit fill (PD 5291). Pollen samples (PDs 5118, 5280, 2905, 5005, 5117, 5168, 5315, and 5344) also were recovered from the base of eight of the remaining pits (Subfeatures 14, 15, 36, 49, 53, 57, 59, and 60 respectively). The ash pit was excavated in a single 1/4-inch-screened level, and a pollen sample was collected (PD 5462). The entire fill from the hearth was collected as a flotation sample (PD 2524), a pollen sample was scraped from its base (PD 5374), and an archaeomagnetic sample (SRI 2377) was collected from the plaster.

In clearing the floor and excavating the floor features associated with Feature 3545, several additional floor features were located that were associated with Feature 5518. These included one ephemeral hearth, one extramural pit, two central-support postholes, and four interior postholes. The hearth associated with Feature 5518 was highly deteriorated and not clearly defined, and it was unknowingly excavated with the floor of the house. The postholes were excavated individually, and the fill was screened with 1/4-inch mesh. This pit was partially covered by the Feature 3545 hearth and was not excavated to preserve the hearth for archaeomagnetic dating. A point-provenienced flotation sample (PD 5375) was collected from the exposed surface of the floor pit. A second flotation sample (PD 6858) was collected from above one of the central-support postholes (Subfeature 8).

In addition, 10 artifacts (PDs 2631–2634, 2636, 2397, 2902, 2934, 5328, and 5373) were discovered on the house floor. They were point located and collected individually; a pollen sample (PD 2635) was recovered from under one of the ground stone fragments (PD 2631).

Stratigraphy

The house pit associated with Features 3545 and 5518 originally was dug into the calcium carbonate–rich argillic horizon present throughout Locus D. The floor of the feature consisted of this natural stratum, although it was compacted and worn from use. The house fill was a homogenous, dark gray-brown trash-filled deposit. It consisted of silts and sands with small, subrounded gravels; river cobbles; calcium carbonate nodules; and abundant charcoal flecks and artifacts. The artifact density was high and included plain and decorated sherds, flake stone debitage and tools, ground stones, and faunal bones. The fill of the subfeatures was similar to the house fill.

Disturbances

The subterranean architecture of Features 3545 and 5518 was well preserved except for some damage caused by roots, rodents, and insects. The northern extent of the entry to Feature 3545 was removed by a large, intrusive pit (Feature 3588). Four unexcavated pits (Features 2898, 5515, 5514, and 5519) and a roasting pit (Feature 3878) replaced some of the house fill.

Artifacts

Point-located floor artifacts included five pieces of ground stone (PDs 2631, 2634, 2902, 2934, 5328), two pecking stones (PDs 2632 and 5373), one core (PD 2633), and one plain ware sherd (PD 2636) (Table B.40). These artifacts were either left on the floor when Feature 3545 was abandoned, or they were thrown into the abandoned house pit as trash sometime afterward. In addition, one Dragoon Fine Red-on-brown sherd and four plain ware sherds were recovered from the general-floor provenience (PD 2390).

Evidence for Remodeling

The house pit that was originally constructed for Feature 5518 was reused for a second structure, Feature 3545. This was indicated by the presence of two entryways, two hearths, and two separate sets of central-support postholes. Modifications made to the original house-pit architecture included the construction of the north-facing entryway and possible expansion of the upper portion of the eastern pit wall. The perimeter postholes were apparently reused from the earlier house, as only one ring of perimeter postholes was identified. Some of the perimeter postholes were stepped in cross section. These postholes may have been remodeled for Feature 3545 to anchor posts that differed in size from the original posts.

Abandonment Processes

The presence of charcoal in the house fill and the in situ charred post segment in Subfeature 52 suggests that

Table B.40. Feature 3545 Point-Located Floor Artifacts

PD No.	Artifact Description
2631	Indeterminate ground stone fragment
2632	Pecking stone (Catalog No. 501).
2633	Core (Catalog No. 553).
2634	Pestle.
2636	One plain ware sherd.
2902	Polishing stone
2934	Mano
5328	Hand stone fragment
5373	Pecking stone (Catalog No. 495).

Feature 3545 had burned. Although some artifacts were recovered from the house floor, they do not appear to reflect a catastrophic abandonment. The depression created by the abandoned house pit eventually filled with colluvial sediment and possibly with some primary refuse. Excavations revealed no evidence relating to the abandonment of the first structure, Feature 5518, as all of its fill likely had been cleared during the construction of Feature 3545.

Associated, Intrusive, or Superimposed Features

Features 3545 and 5518 were intruded by five unexcavated pits of unknown function (Features 3588, 2898, 5515, 5514, and 5519) and one roasting pit (Feature 3878). An early, possibly Archaic period, flexed inhumation (Feature 4740) was located beneath Subfeature 53 of Feature 3545. The burial predated both Features 3545 and 5518.

Chronology

An archaeomagnetic sample was collected from the hearth in Feature 3545 (SRI 2377). It returned date range options of A.D. 585–740, 860–1015, 1535–1615, and 1760–1815. A preserved juniper post (PD 5041) from one of the central-support postholes in Feature 3545 was submitted for dendrochronological analysis, but it could not be dated against existing tree ring chronologies. A Dragoon Fine Red-on-brown sherd was recovered from the general-floor provenience and has a production date range of A.D. 700–950, which supports the second archaeomagnetic date range option. Therefore, the best age estimate for the abandonment of the later structure is A.D. 860–1015.

No chronometric data were collected from the earlier structure, Feature 5518, but it must predate the use and abandonment of Feature 3545. Therefore, the best age estimate for this structure is pre–A.D. 1015.

Locus D, Feature 3545

Center of feature UTMs: N 3538346.42, E 541568.36
Architectural type: house-in-a-pit
Date range: A.D. 860–1015
House dimensions: 5.78 by 3.70 m; floor area 20.20 m^2; pit depth 0.17 m
Entryway dimensions: 2.05 by 1.26 m
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 2 central-support postholes, 7 entryway, 55 perimeter and interior postholes, 10 intramural pits, and 1 ash pit
Chronometric techniques: archaeomagnetism and dendrochronology
Analyzed botanical samples: PDs 2397, 2524, and 5041
Related features: intrudes Features 4740 and 5518; intruded by Features 2898, 3588, 3878, 5515, 5514, and 5519

Construction Details

Feature 3545 was subrectangular in plan view and measured 5.78 by 3.70 m with the long axis oriented roughly east–west (Figure B.68). A vestibule entryway protruded from the north wall of the house pit.

Walls and Roof

The preserved house pit was about 30 cm deep, and the pit walls consisted of the unmodified native paleosol into which the house pit was dug. Along the west side of the house, the pit wall sloped down gently to meet the floor. On the east side, the wall was stepped. The step may have been created when Feature 3545 was constructed within the preexisting house pit, as the wall smoothly meshed with this structure's entryway.

Twenty-four postholes (Subfeatures 47, 48, 50–52, 54–56, 61, 63–66, and 68–77) were scattered throughout the interior of the house pit. They ranged in size from 8 to 36 cm in diameter and 11 to 43 cm in depth (Table B.41). Because all of the postholes originated at the same level and contained similar fill, it was difficult to differentiate between postholes belonging to Feature 3545 and those used in Feature 5518, the earlier house. Based on the typical post arrangement for subrectangular houses of this time period, Feature 3545 likely contained at least two central-support postholes, Subfeatures 51 and 52, which lined up along the midline of the structure (see Figure B.68). These postholes were large and deep relative to the other postholes identified in the structure, and Subfeature 52, the possible east-central support, still contained the remains of a charred post segment (PD 5041). Subfeature 50, located immediately to the west of the west-central support, also lined up with these postholes and may have provided further roof support. In addition to these three postholes, 21 other interior postholes were excavated; however, they could not be associated definitively with a single structure in the two-structure complex.

A single ring of 34 perimeter postholes (Subfeatures 3–13, 16–35, and 37–39) was found around the inside edge of the house pit, suggesting that both structures used the same set. They ranged in size from 8 to 43 cm in diameter and 7 to 45 cm in depth (see Table B.41). No associated floor groove was found. In general, the perimeter postholes along the west side of the house were more uniform in size and evenly

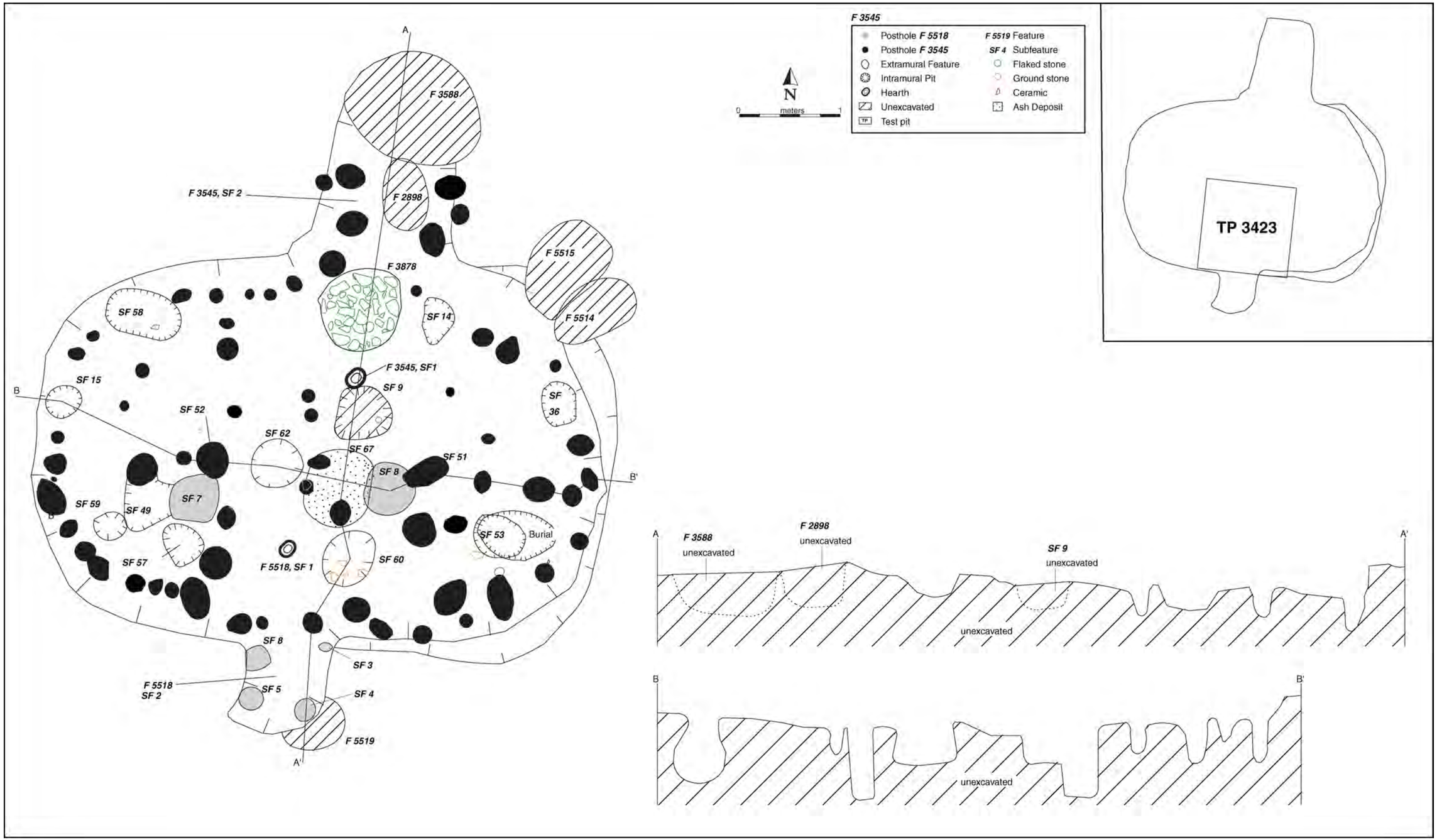

Figure B.68. Plan map of Features 3545 and 5518 showing floor features and intrusive features.

Table B.41. Feature 3545 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
3	2528	35	27	26	P
4	2530	23	19	17	P
5	2532	12	11	20	P
6	2534	16	13	15	P
7	2536	12	11	13	P
8	2538	20	11	20	P
9	2540	14	14	18	P
10	2542	8	10	7	P
11	2544	11	13	14	P
12	2546	19	14	16	P
13	2548	10	9	8	P
16	2554	19	15	12	P
17	2556	18	18	9	P
18	2560	15	15	12	P
19	2562	20	18	9	P
20	2682	16	14	12	P
21	2684	14	12	11	P
22	2686	40	27	45	P
23	2688	20	20	26	P
24	2690	22	26	34	P
25	2692	23	17	25	P
26	2711	24	20	14	P
27	2713	12	12	11	P
28	2715	21	16	31	P
29	2717	13	13	19	P
30	2719	43	30	36	P
31	2721	21	25	44	P
32	2723	16	16	30	P
33	2725	18	21	21	P
34	2727	16	19	44	P
35	2729	25	20	29	P
37	2733	13	12	27	P
38	2735	24	22	32	P
39	2737	15	19	10	P
40	2845	27	25	29	E
41	2847	28	30	34	E
42	2849	27	29	35	E
43	2851	19	18	21	E
44	2853	29	24	19	E
45	2855	16	18	22	E
46	2857	30	26	24	E
47	2929	29	25	37	I
48	2931	29	26	30	I
50	5037	16	17	30	I
51	5039	45	28	59	C
52	5041	39	33	68	C
54	5133	35	34	32	I
55	5142	23	19	24	I
56	5144	13	12	13	I

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
61	5343	19	23	43	I
63	5427	25	20	21	I
64	5464	19	15	26	I
65	5466	21	25	31	I
66	5468	14	14	35	I
68	5475	33	35	23	I
69	5471	13	13	29	I
70	5473	36	30	25	I
71	5479	10	10	20	I
72	5481	10	10	20	I
73	5483	10	14	25	I
74	5485	12	12	25	I
75	5487	11	13	19	I
76	5489	8	8	11	I
77	5491	13	11	21	I

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.

spaced than those on the east side of the house. Some of the postholes were stepped in cross section, perhaps owing to their reuse in Feature 3545 in order to anchor a set of posts that were different from those used in Feature 5518.

Entry

Feature 3545 had a protruding, slightly ramped entry (Subfeature 2) located at the midpoint of the north wall of the house. It had parallel walls that were 1.26 m apart. Seven large postholes (Subfeatures 40–46) lined the edges of the entry pit (see Table B.41). The northern extent of the entry was destroyed by an intrusive pit (Feature 3588), and a second intrusive pit (Feature 2898) removed a portion of the fill and floor in the center of the entry. Neither of these pits was excavated.

Floor

The floor consisted of the smoothed and leveled native paleosol with a possible patch of plaster capping the fill of the Feature 5518 west-central-support posthole (Subfeature 5518.7). The floor was riddled with insect tunnels and undulated somewhat, perhaps as the result of natural disturbances. This surface was the same one used for Feature 5518.

Floor Features

Hearths

The hearth (Subfeature 1) was located about 1 m north of the entry. It was a small, plaster-lined, basin-shaped pit with a plaster collar and apron. It measured 20 cm in diameter and was about 10 cm deep. The remnant plaster apron that surrounded the hearth pit was 2–5 cm wide. Roots had destroyed the southern portion of the apron and collar. It was filled with grayish brown ashy sands and silts.

Pits

Eleven additional pits (Subfeatures 14, 15, 36, 49, 53, 57–60, 62, and 67) were recorded with the feature (Table B.42), although it was impossible to unequivocally link any of these pits to the earlier or the later house. Four of the pits had bell-shaped walls (Subfeatures 14, 15, 36, and 58), and all four were located around the edge of the house pit, in line with the perimeter postholes (see Figure B.68). Subfeature 58 was much larger than the other three bell-shaped pits, and it contained remnants of reed matting at its base. The remaining seven pits were located in the center or along the back of the house. The walls of all eleven pits were composed of the native calcic subsoil, and none showed evidence of having been plastered or burned.

Locus D, Feature 5518

Center of feature UTMs: N 3538346.42, E 541568.36
Architectural type: house-in-a-pit
Date range: A.D. 700–1015
House dimensions: 5.78 by 3.70 m; floor area 20.20 m^2; pit depth 0.17 m
Entryway dimensions: 0.90 by 0.70 m
Shape: subrectangular
Orientation: south
Internal features: 1 hearth, 2 central-support postholes, 4 perimeter postholes, and 1 intramural pit
Chronometric techniques: none
Analyzed botanical samples: none

Table B.42. Feature 3545 Intramural Pit Data

Subfeature No.	Shape	Dimensions (l × w × h) (cm)	Bell Pit Diameter or Maximum Dimensions (l × w) (cm)	Fill	Comments
14	slightly bell-shaped	47 × 30 × 52	50 × 40	silty sand with carbonate nodules, artifacts	Large sherds lined bottom.
15	bell-shaped	38 × 32 × 64	50 × 42	fine sandy loam with carbonate nodules, charcoal, daub, artifacts	
36	bell-shaped	38 × 35 × 56	70 × 50	ash-laden silty sand with carbonate nodules, artifacts	Base of pit extended into cobble bed.
49	basin-shaped	60 × 40 × 19		dark, fine silty loam with carbonate nodules; gravels; artifacts	Three cobbles lined bottom.
53	irregular, basin-shaped	50 × 50 × 56		charcoal-rich, silty loam	Intruded into a flexed inhumation (Feature 4740).
57	basin-shaped	40 × 35 × 24		dark brown, fine silty loam with carbonate nodules; gravels; charcoal; few artifacts	
58	irregular, bell-shaped	72 × 48 × 47	110 × 80	dark brown, fine silty loam with gravels and carbonate nodules; charcoal; artifacts; reed matting	Pit bells on western side only.
59	steep-sided basin-shaped	36 × 33 × 12		dark brown, fine silty loam with gravels and carbonate nodules; charcoal; artifacts	
60	steep-sided basin-shaped	58 × 46 × 45		dark brown, fine silty loam with gravels and carbonate nodules; charcoal; artifacts	Some rodent disturbance present.
62	cylindrical to slightly bell-shaped	51 × 50 × 38	57	light to medium brown silty loam with carbonate nodules; 3 medium-sized rocks; artifacts	Possibly intentionally back filled.
67	shallow basin-shaped	80 × 60 × 16		ash	

Related features: intrudes Feature 4740; intruded by Features 2898, 3545, 3878, 5515, 5514, and 5519

Construction Details

The house form was the same as discussed above with Feature 3545, except that the entryway faced south.

Walls and Roof

Subfeatures 7 and 8, the only two interior postholes recorded with Feature 5518, likely provided the main roof support (Table B.43). These postholes were specifically recorded to Feature 5518 based on their ideal location relative to the structure's hearth and entryway. The postholes lined up at a slight angle relative to the long axis of the house pit, and both were set 1 m from the hearth. These large postholes measured more than 40 cm in diameter and were around 40 cm deep. Subfeature 8, the east-central-support posthole, was capped by a thin layer of calcium-rich, sterile sediment. This sediment appeared to be flooring material used to cover the posthole when the second house was built. This supports the interpretation that Subfeature 8 belonged to the earlier structure.

Entry

Feature 5518 had a vestibule entryway that protruded from the midpoint of the southern pit wall. It had parallel sides and a curved opening. Four postholes (Subfeatures 3–6) lined the entry pit. The entry measured 70 cm wide and was 90 cm long. Oddly, the entryway floor ramped down slightly toward the outside of the house.

Floor

The floor of the house pit is the same as that of Feature 3545.

Floor Features

Pits

Subfeature 9 was a possible floor pit assigned to Feature 5518. The subfeature appeared as an ashy stain on the floor of the house that measured 50 cm in

Table B.43. Feature 5518 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
3	6825	12	16	10	E
4	6827	27	20	32	E
5	6829	17	24	10	E
6	6831	27	20	15	E
7	6850	53	44	41	C
8	6851	40	33	39	C

Key: C = central-support posthole; E = entryway posthole; PD = provenience designation.

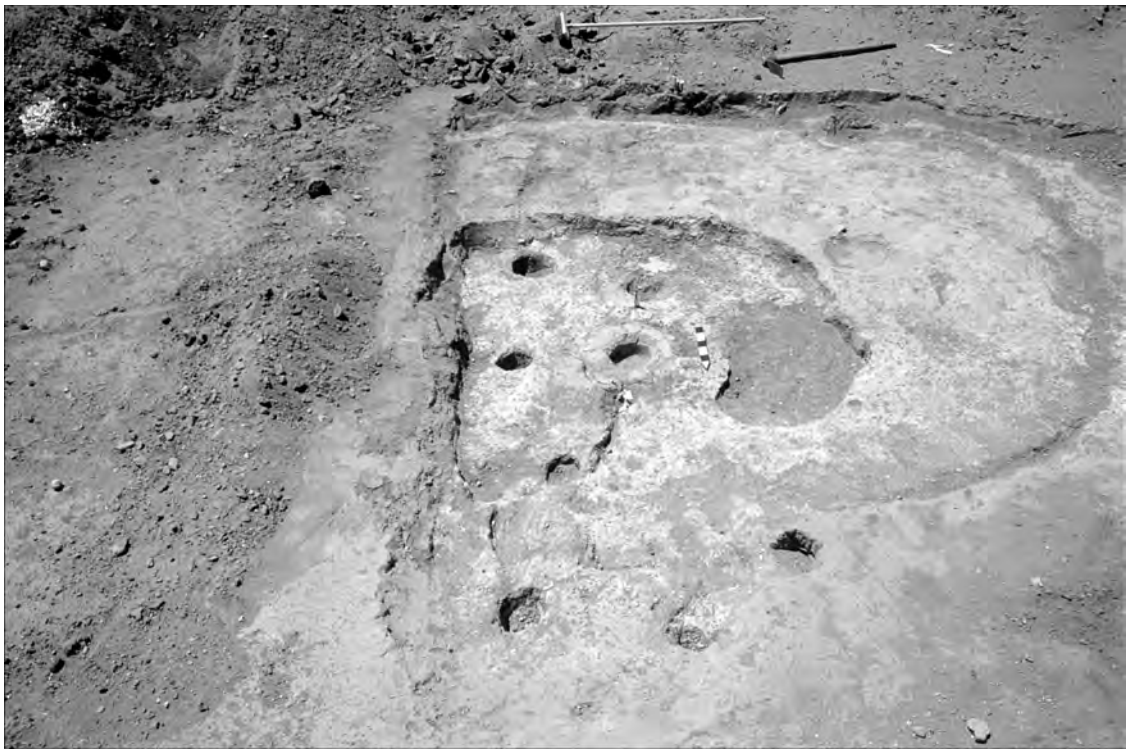

Figure B.69. Plan view of Features 10,781 and 10,782, looking south.

diameter. Because it was located beneath the hearth from Feature 3545, it was not excavated.

Locus D, Feature 3595

Feature 3595 was located at the far eastern end of Locus D (see Figure 84), and it consisted of two superimposed structures (Features 10,781 and 10,782) that shared a common house pit (Figure B.69). These structures were only partially excavated in order to locate the hearth. The earlier of the two structures, Feature 10,781, was a subrectangular house with a recessed hearth area (Subfeature 2) and a plastered hearth (Subfeature 1). Five postholes were uncovered in the recessed hearth area, and a central-support posthole was located on the house floor; however, none of these postholes were excavated. An earlier pit, Feature 10,780, was intruded by the structure's recessed hearth area, but it was not excavated.

This structure ultimately burned and a smaller structure, Feature 10,782, was built within the original house pit, probably reusing the floor and entry from the earlier house. As part of the construction of Feature 10,782, the recessed hearth area of the earlier structure was intentionally filled, and a second hearth (Subfeature 1) was built on top of the fill. A floor groove, entry sill, and at least six postholes were added as well. Only the hearth was excavated.

Excavation Methods

Feature 3595 was exposed during Phase 2 mechanical stripping in Stripping Unit 1881, and the western three-fourths of the shared house pit was excavated. The fill was removed manually and mechanically as a single unit to expose the floor. Artifacts observed in the fill were collected and assigned to the composite feature, but the fill was not screened and no samples were collected.

Exposure of the floor revealed the hearth of Feature 10,782 and the upper fill of the Feature 10,781 recessed hearth area. The hearth was excavated, and all of the fill was collected as a flotation sample (PD 10,605). A pollen sample (PD 10,586) was scraped from the base of the hearth, and the plaster was sampled for archaeomagnetic dating (SRI 2444).

After the hearth of Feature 10,782 was excavated, the fill within the recessed hearth area was removed manually. Observed artifacts were collected, but the fill was not screened. The hearth to Feature 10,781 was exposed at the base of this area. It was excavated, and the lower fill was collected as a flotation sample (PD 10,583). A pollen sample (PD 10,606) was scraped from the base of the hearth pit, and the plaster was sampled for archaeomagnetic dating (SRI 2465). No other subfeatures were excavated, although the outlines of subfeatures visible in the house floor were documented on the feature plan map (Figure B.70).

Stratigraphy

The Feature 3595 house pit originally was dug into the calcium carbonate–rich argillic horizon present throughout Locus D. The fill from the house pit consisted of a 10–15-cm-thick layer of dark brown silty loam with few artifacts. The fill within the recessed hearth area consisted of a 5–10-cm-thick layer of mixed clay loam and calcic clay loam that was intentionally deposited within the recessed hearth area to level the floor for the second structure (Feature 10,782).

Disturbances

Some root and rodent damage was noted in the fill and architecture of the feature. No extramural features intruded the two structures.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary context.

Evidence for Remodeling

The recessed hearth area was intentionally filled with redeposited calcic soil and the hearth of Feature 10,782 was built into this sediment. The filling of the recessed hearth area likely coincided with the construction of Feature 10,782. Likewise, the floor groove appears to have been added during the construction of Feature 10,782, resulting in a smaller floor area for the later house.

Abandonment Processes

The heavily oxidized walls of the recessed hearth area suggest that Feature 10,781 burned before the recessed hearth area was filled in for the construction of Feature 10,782. The house pit was probably cleaned out before the second structure was built, as evidenced by the lack of burnt construction material in the fill of the recessed hearth area. There was no evidence to suggest that the later structure had burned when it was abandoned. The depression resulting from the abandoned house pit filled with naturally deposited sediments and secondary refuse.

Associated, Intrusive, or Superimposed Features

Feature 10,781 was built on top of a large extramural pit, Feature 10,780. This pit was visible in plan view in the recessed hearth area of the house, and portions of the plaster floor in this area capped the pit. The pit was not excavated.

Chronology

An archaeomagnetic sample was collected from the hearth in each structure. The sample collected from Feature 10,781 (SRI 2465) returned date range options of A.D. 585–690, 935–1015, 1535–1590, and 1760–1815. The sample collected from Feature 10,782 (SRI 2444) yielded date range options of A.D. 935–1015 and 1335–390. The architectural style of both houses, including the recessed hearth area in Feature 10,781, suggests that the A.D. 935–1015 option for both samples is the best age estimate for these structures.

Locus D, Feature 10,781

Center of feature UTMs: N 3538345.18, E 541587.51
Architectural type: house-in-a-pit, recessed-hearth style
Date range: A.D. 935–1015

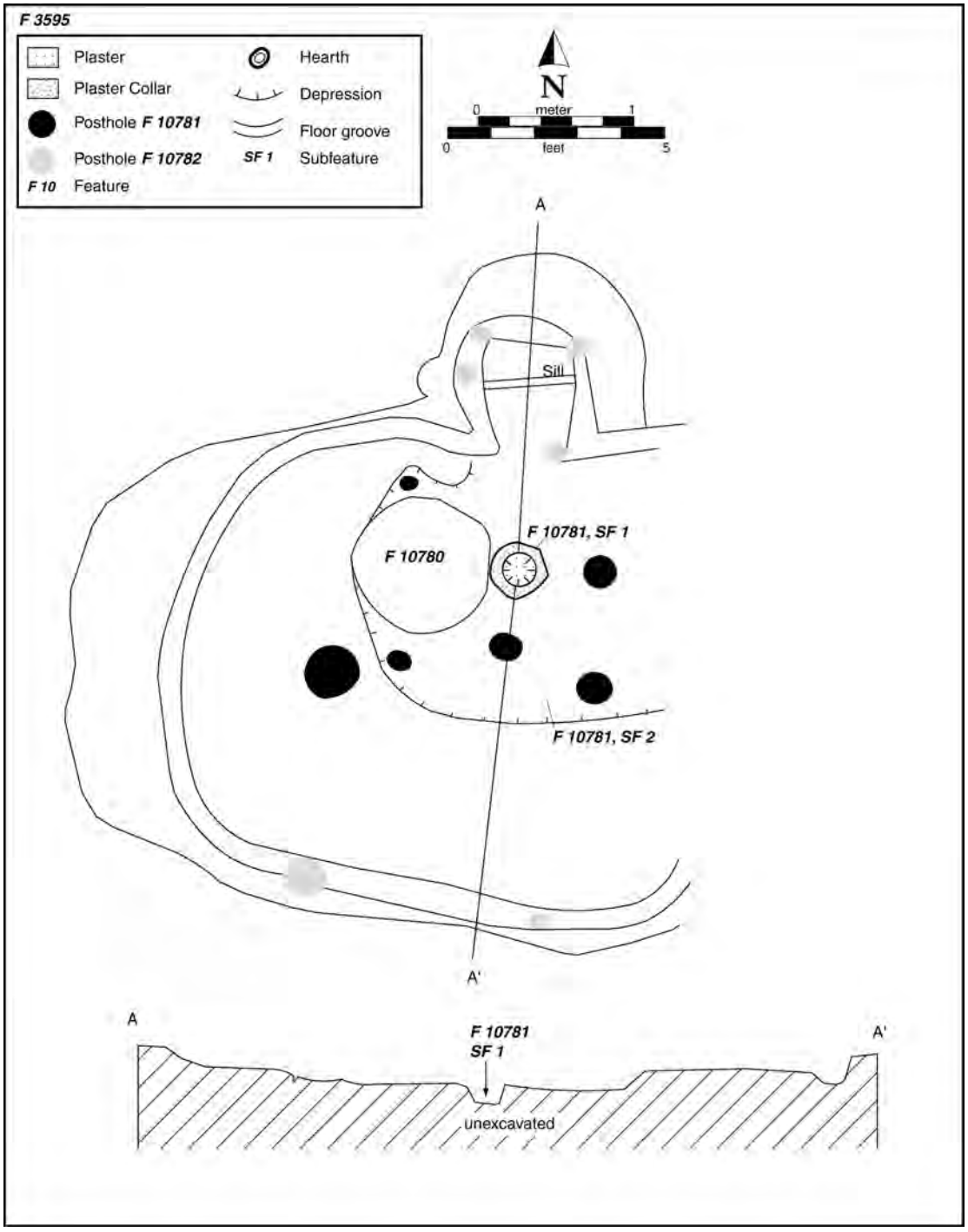

Figure B.70. Plan map of Features 10,781 and 10,782 showing the location of exposed subfeatures.

House dimensions (minimum): 3.8 by 2.8 m; pit depth 0.11 m
Entryway dimensions: 0.73 by 0.60 m
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 1 recessed hearth area, 1 central-support posthole, and 5 interior postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PD 10,606
Related features: intrudes Feature 10,780; superimposed by Feature 10,782

Construction Details

The outline of the house pit suggests that the original structure, Feature 10,781, was subrectangular in plan view with the long axis oriented east–west. The short axis of the house pit measured 2.8 m. The structure possessed a shallow, recessed hearth area at the front of the house and a protruding, north-facing entry.

Walls and Roof

One possible central-support post was exposed in plan view but was not excavated. It was located along the structure's midline in the west-central part of the house (see Figure B.70). This posthole may have been used in both structures. It is likely that a second central-support posthole was located in the unexcavated portion of the house.

Entry

The structure had a parallel-sided entry that protruded from the north wall of the house. It was 0.60 m wide and protruded 0.73 m beyond the north wall.

Recessed Hearth Area

The recessed hearth area (Subfeature 2) was a shallow pit located in front of the entryway (see Figure B.70). It extended 10 cm below the surrounding house floor, and it had steep-sloping walls and a flat, plastered floor. The pit walls and floor plaster were heavily oxidized. The hearth (Subfeature 1) occupied the center of the pit. The outlines of two postholes located to the east and south of the hearth is suggestive of the three-post pattern documented for the other recessed hearth houses at the site (see Figure B.70). A possible outline of a third posthole to the west of the hearth was observed within the fill of an extramural pit (Feature 10,780). Three additional postholes were observed around the perimeter of the recessed hearth area.

Floor

The main house floor consisted of the smoothed, native calcic subsoil. There is no evidence that the main floor was plastered.

Floor Features

Hearths

A formal, plaster-lined hearth (Subfeature 1) was found in the center of the recessed hearth area about 50 cm south of the entryway. The hearth was circular in plan view and cylindrical in cross section. It measured 20 cm in diameter and was about 15 cm deep. A plaster apron and collar surrounded the hearth pit. The upper 10 cm of fill within the hearth consisted of the same redeposited sterile sediment used to fill the recessed hearth area. The lower 5 cm of fill was comprised of ash.

Locus D, Feature 10,782

Center of feature UTMs: N 3538345.18, E 541587.51
Architectural type: house-in-a-pit
Date range: A.D. 935–1015
House dimensions (minimum): 3.3 by 2.7 m; pit depth 0.11 m
Entryway dimensions: 0.73 by 0.60 m
Shape: oval
Orientation: north
Internal features: 1 hearth, 1 floor groove, 1 entry sill, and 6 perimeter postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: superimposes Feature 10,781

Construction Details

Based on the layout of the floor groove, this structure was oval in plan view and shared the same orientation and entryway axis as the earlier structure (see Figure B.70). The size of the floor groove relative to the size of the house pit suggests that Feature 10,782 was smaller than the original house.

Walls and Roof

The outline of a floor groove and two perimeter postholes were visible in plan view. A possible central-support posthole was observed in the west-central portion of the house. It is likely that other postholes were located in the floor groove, but they were not observed during the limited excavations of this feature.

Entry

The north-facing entryway from Feature 10,781 was reused for this house. The outline of a narrow sill and four postholes was visible in the floor. The structure's floor groove appeared to have wrapped around the entry.

Floor

The floor consisted of the smoothed, native calcic subsoil. The exception was the area around the hearth, which consisted of the redeposited sterile soil used to fill in the recessed hearth area of the earlier structure.

Floor Features

Hearths

A formal, plaster-lined hearth (Subfeature 1) was located about 60 cm in front of the entryway. It was circular in plan view and basin-shaped in cross section. It measured 16 cm in diameter and was about 5 cm deep. Remnants of a plaster apron surrounded the hearth pit. The fill consisted of ash-laden sandy loam with very few artifacts.

Locus D, Feature 3663

Center of feature UTMs: N 3538335.03, E 541578.03
Architectural type: house-in-a-pit
Date range: A.D. 935–1040
House dimensions: 4.76 by 2.62 m; pit depth 0.10 m
Entryway dimensions: 0.99 by 1.03 m
Shape: ovate
Orientation: north
Internal features: 1 hearth, 1 floor groove, and 2 central-support postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: intruded by Features 3654, 10,637, and 10,638

Feature 3663 was an ovate, north-facing pit structure located in the southeastern corner of Locus D (Figure B.71; see Figure 84). It was initially identified during Phase 2 mechanical stripping. Subsequent excavation was aimed at locating and recording the hearth. The plaster-lined hearth (Subfeature 1) was the only subfeature excavated in the structure. The outlines of other subfeatures, including the floor groove and two central-support postholes, were documented on the structure's plan map but were not excavated. The structure did not appear to have burned. Two unexcavated extramural pits (Features 10,637 and 10,638) intruded the northwest corner of the house, and an ashy area (Feature 3654) intruded the center of the structure.

Excavation Methods

Feature 3663 was exposed during Phase 2 excavation of Stripping Unit 1869. On the surface of the stripping unit, it appeared as an irregularly shaped dark stain that potentially was related to Feature 3654, a roasting pit at the center of the deposit. It was not immediately clear whether the stain represented a house. Subsequent excavations ensued to determine the nature of the stain.

Approximately 10 cm of fill was removed by the backhoe before exposing the floor. The rest of the floor was then cleared both mechanically and manually to expose the hearth and the outlines of a floor groove and two central-support postholes. Artifacts observed during excavation were collected, but the fill was not screened. The fill from the hearth was collected as a flotation sample (PD 8668), and a pollen sample (PD 8669) was scraped from its base. Later, the hearth was sampled for archaeomagnetic dating (SRI 2447). None of the other subfeatures were excavated, but they were documented on the structure's plan map (see Figure B.71).

Stratigraphy

The house pit was originally dug into the native paleosol. The fill consisted of light brown silty loam.

Disturbances

Two intrusive, unexcavated pits (Features 10,637 and 10,638) removed the northwest corner of the structure.

Construction Details

Based on the outline of the floor groove, the house was ovate in plan view with the long axis oriented roughly east–west (see Figure B.71). The entry was located along the north wall of the structure, slightly off-center to the west. The structure measured 4.76 by 2.62 m, as defined by the outside edge of the floor groove.

Walls and Roof

The outlines of two central-support postholes were visible in the floor of the house. These were located along the midline of the structure in the east-central and the west-central portions of the house. The western central support measured nearly 30 cm in diameter, whereas the eastern one measured 20 cm in diameter. The outline of a floor groove encircled the house and appeared to extend into the entryway. Although the floor groove and the central-support postholes were not excavated, they were documented on the structure's plan map (see Figure B.71).

Entry

Feature 3663 had a parallel-sided entry that protruded from the north wall of the structure. Based on its tenuous

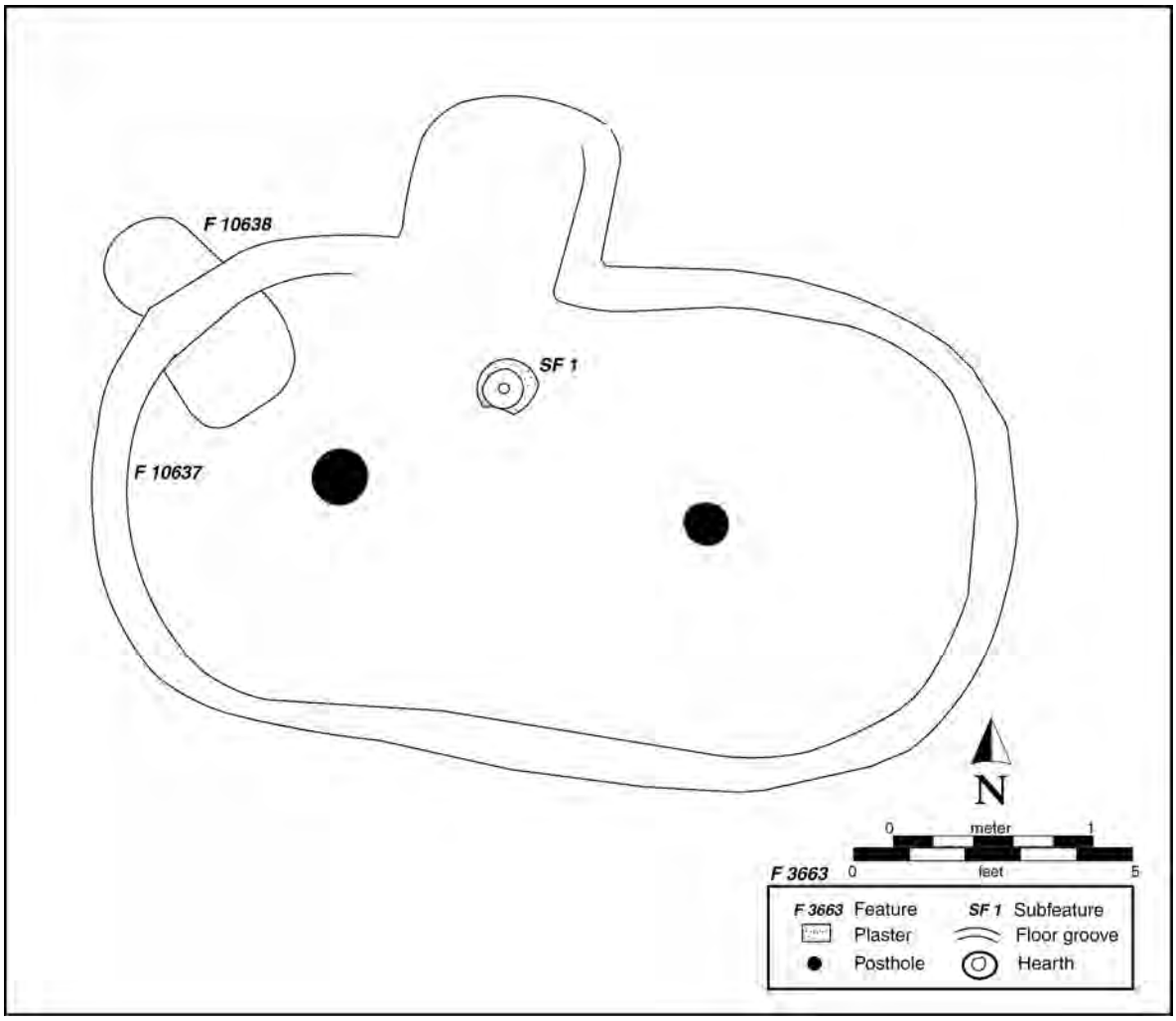

Figure B.71. Plan map of Feature 3663 showing floor features and intrusive features.

outline, the entry extended at least 1 m from the pit wall and was about 0.80 m at the inside opening.

Floor

The floor consisted of the smoothed native calcic subsoil. There was no evidence that the floor was plastered or that it had burned.

Floor Features

Hearths

The plaster-lined hearth (Subfeature 1) was circular in plan view and basin-shaped in cross section. It measured 20 cm in diameter and 5 cm deep. It was filled with grayish brown, ash-laden silty loam. No artifacts were observed in the fill.

Artifacts

No artifacts were recovered from the floor or other primary or sealed contexts.

Evidence for Remodeling

No evidence for remodeling was observed.

Abandonment Processes

The structure did not appear to have burned. The lack of artifacts on the floor suggests that it was cleaned out before abandonment. The resulting house pit then filled with colluvial sediments and some cultural trash deposits.

Associated, Intrusive, or Superimposed Features

Two unexcavated extramural pits (Features 10,637 and 10,638) truncated the floor groove in the northwest corner of the house. An ashy area (Feature 3654) was located in the center of the house.

Chronology

An archaeomagnetic sample (SRI 2447) was collected from the hearth. It returned date range options of A.D. 935–1040 and 1160–1415. The architectural style of the house is more typical of the earlier date range.

Locus D, Feature 3710

Center of feature UTMs: N 3538380.64, E 541510.38
Architectural type: house-in-a-pit
Date range: A.D. 685915
House dimensions: 4.47 by 2.69 m; floor area 8.11 m^2; pit depth 0.13 m
Entryway dimensions: 1.44 by 1.01 m; floor area 0.60 m^2
Shape: subrectangular
Orientation: south
Internal features: 1 hearth, 1 floor groove, 2 central-support postholes, 2 entryway, and 40 perimeter postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PD 2703
Related features: none

Feature 3710 was a small pit structure located in the north-central portion of Locus D (see Figure 82). It was exposed and fully excavated during Phase 2. The structure was subrectangular in plan view with a south-facing, bulbous entry (Figure B.72). It contained 1 informal hearth (Subfeature 1), 1 floor groove (Subfeature 2), 2 central-support postholes (Subfeatures 45 and 46), and 42 perimeter postholes (Subfeatures 3–44). No artifacts were encountered on the floor, and the structure had not burned.

Excavation Methods

The structure was identified during Phase 2 stripping of Stripping Unit 3033. Much of the fill was removed during this stripping, particularly in the northeast corner of the house where only 1 cm remained prior to excavation. The structure was excavated in two units. Half 1 consisted of the fill in the western two-thirds of the structure and the entryway. This unit was excavated to the floor in a single 12-cm level. The fill was screened through 1/4-inch mesh,

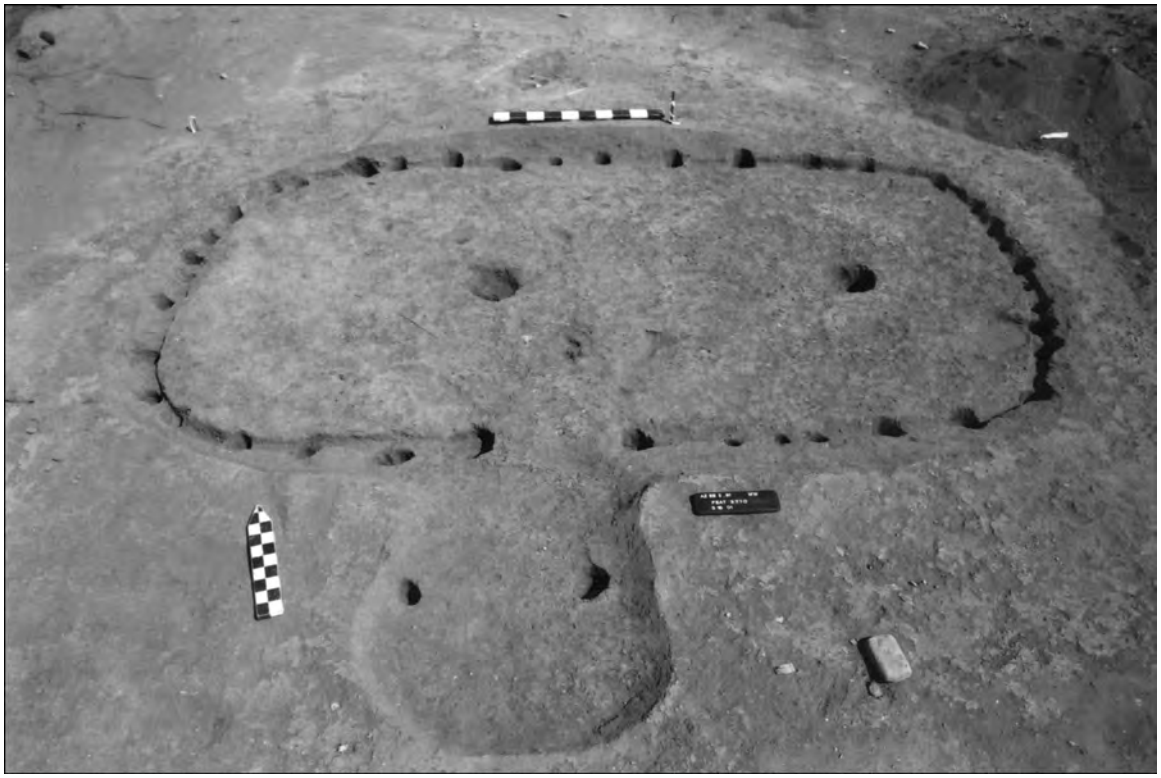

Figure B.72. Plan view of Feature 3710, looking north.

and a flotation sample was collected (PD 2675). The eastern third of the structure, Half 2, was excavated to the floor in two levels. The upper 2–3 cm were not screened, but observed artifacts were collected. The remaining 5–6 cm were screened through 1/4-inch mesh, and a flotation sample was collected from the fill (PD 2700).

The exposure of the floor revealed a number of subfeatures, including 1 hearth, 1 floor groove, 2 central-support postholes, 2 entryway, and 40 perimeter postholes. The floor groove and individual postholes were excavated separately, and the fill was screened through 1/4-inch mesh. The entire fill from the hearth was collected as a flotation sample (PD 2703), a pollen sample (PD 5047) was recovered from its base, and an archaeomagnetic sample (SRI 2390) was collected from its plaster.

Stratigraphy

The house pit was dug into the local Pleistocene terrace, which consisted of a compact, orange-brown soil matrix with small gravels and carbonates. A homogenous layer of dark brown silty loam filled the house pit. These sediments were mixed with small gravels, abundant artifacts, and occasional small pieces of charcoal.

Disturbances

A large rodent burrow removed the southwest floor of the entry. Roots, insects, and rodents damaged other parts of the house floor and walls. The northwest corner of the structure had also been damaged, perhaps because of historical-period or modern road construction activities.

Construction Details

The house was subrectangular in plan view and opened to the south (Figure B.73). The house pit measured 4.47 m east–west by 2.69 m north–south and had a remaining depth of 13 cm.

Walls and Roof

The pit walls consisted of the native calcic subsoil and sloped down to meet the outside edge of the perimeter floor groove (Subfeature 2). The interior edge of the floor groove marked the extent of the floor, and it terminated at each side of the entryway. There was a break in the floor groove in the center of the north wall, but it is unclear whether this break was intentional or a product of postabandonment processes. It was 10 cm wide and 3 cm deep, with slanted walls and a flat base. The fill consisted of a dark brown silty loam with small gravels and few artifacts.

Forty perimeter postholes (Subfeatures 3–42) were located within the floor groove. They ranged in size from 6 to 23 cm in diameter and 9 to 26 cm in depth (Table B.44). Two main support postholes (Subfeatures 45 and 46) were identified along the midline of the structure. Extending more than 50 cm below the house floor, they were the largest and deepest postholes found in the house.

Entry

The entry was located along the south wall of the structure, slightly off-center to the west. It was bulbous in plan view and protruded about 1 m from the pit edge. The inside opening was about 80 cm. Two small postholes (Subfeatures 43 and 44) and a large rodent burrow were found in the floor of the entryway (see Table B.44). The floor and walls of the entry were unlined and showed no evidence of burning.

Floor

The floor consisted of the argillic paleosol, and there is no evidence that it burned. Oxidized sediments were found on the floor in the vicinity of the hearth and were likely related to hearth use.

Floor Features

Hearths

The hearth was located about 70 cm north of the entry and consisted of a shallow, oxidized depression in the floor of the structure. It measured 50 cm in diameter and was less than 5 cm deep. The fill was similar to the house fill and consisted of brown, silty loam.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary context in the house.

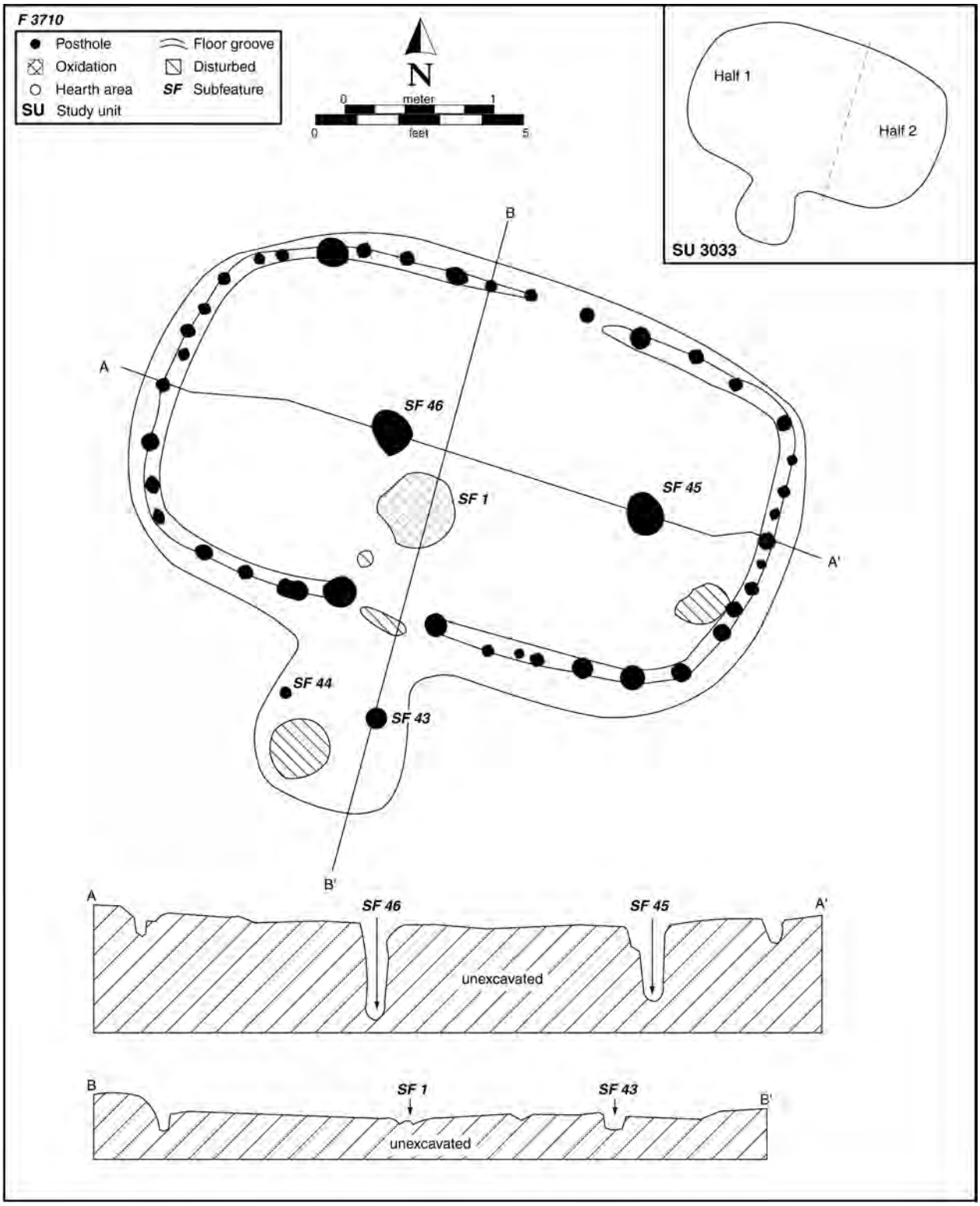

Figure B.73. Plan map of Feature 3710 showing the location of subfeatures.

Table B.44. Feature 3710 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
3	2865	23	23	22	P
4	2867	17	14	20	P
5	2869	14	13	15	P
6	2871	11	11	20	P
7	2873	13	11	10	P
8	2875	14	12	18	P
9	2877	14	14	15	P
10	2879	10	8	15	P
11	2881	7	7	11	P
12	2883	11	9	17	P
13	2885	8	8	14	P
14	2887	9	8	16	P
15	2889	10	8	10	P
16	2891	9	9	16	P
17	2893	20	19	18	P
18	2895	10	10	16	P
19	2938	11	11	15	P
20	2940	15	12	15	P
21	2942	7	7	13	P
22	2944	9	8	9	P
23	2946	9	9	17	P
24	2948	15	14	20	P
25	2950	9	9	23	P
26	2952	9	9	22	P
27	2954	10	10	19	P
28	2956	7	7	17	P
29	2958	9	9	18	P
30	2960	8	7	14	P
31	2962	11	11	18	P
32	2964	6	6	13	P
33	2966	9	9	15	P
34	2968	13	12	19	P
35	2970	11	11	20	P
36	2972	13	12	19	P
37	2974	15	15	26	P
38	2976	13	13	21	P
39	2978	9	9	23	P
40	2980	7	6	10	P
41	2982	9	9	16	P
42	2984	13	13	24	P
43	2986	13	13	21	E
44	2988	8	8	21	E
45	2990	16	16	52	C
46	5046	16	16	64	C

Key: C = central-support posthole; E = entryway posthole; P = perimeter posthole; PD = provenience designation.

Evidence for Remodeling

No evidence for remodeling was observed.

Abandonment Processes

The structure did not appear to have burned. The superstructure of the house may have collapsed through time, or it may have been scavenged for construction material. The depression created by the abandoned house pit subsequently filled with natural sediments and primary and secondary refuse.

Associated, Intrusive, or Superimposed Features

This structure was located immediately to the southeast of Feature 438, a feature comprised of three superimposed structures. Numerous extramural pits surrounded Feature 3710 as well. However, no features were superimposed directly with Feature 3710.

Chronology

An archaeomagnetic sample (SRI 2390) was collected from the informal hearth. It returned date range options of A.D. 685–790 and 835–915. The painted ceramics recovered from the lower levels of house fill have production date ranges of between approximately A.D. 700 and 950, suggesting that either of the archaeomagnetic dating options is viable. Without additional chronometric data, it is impossible to determine which option is the best age estimate for the abandonment of the house.

Locus D, Feature 3737

Feature 3737 was a complex of superimposed features located in the northeastern portion of Locus D (see Figure 84). Only the western two-thirds to three-fourths of the feature was excavated. The excavated portion of the feature consisted of a structure (Feature 10,729) and a large non-thermal pit (Feature 5766). The structure made up the southern lobe of Feature 3737, and the extramural pit was found to its north, truncating the structure's entryway. Neither the structure nor the pit was fully excavated.

Excavation Methods

Feature 3737 was discovered during Phase 2 mechanical stripping in Locus D. On the surface of the stripping unit, the feature appeared as an irregularly shaped gray stain, possibly composed of two or more superimposed structures. The objective of the subsequent excavation was to identify and define the structures and to locate their hearths.

First, the upper 25–40 cm of fill in the western two-thirds to three-fourths of the conglomerate feature (Half 1) was removed with the backhoe. Observed artifacts were collected, but the fill was not screened. The excavation revealed the existence of Features 10,729 and 5766.

A 0.70-by-0.67-m test pit (Test Pit 10,736) was placed within Feature 10,729 to locate the hearth. It was excavated to the floor in a single 10–13-cm level. Observed artifacts were collected, but the fill was not screened. No samples were collected from the test pit.

The hearth (Subfeature 1) was located at the base of the test pit. The entire fill of the hearth was collected as a flotation sample (PD 10,730), a pollen sample (PD 10,731) was scraped from its base, and an archaeomagnetic sample (SRI 2466) was collected from its plaster. No other subfeatures were located.

Locus D, Feature 10,729

Center of feature UTMs: N 3538555.21, E 541506.46
Architectural type: house-in-a-pit
Date range: A.D. 935–1015
House dimensions: 3.67 by 3.21 m; pit depth 0.46 m
Entryway dimensions: 0.40 by 1.00 m
Shape: subrectangular
Orientation: north
Internal features: 1 hearth
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: intruded by Features 5000 and 5766

Feature 10,729 was a subrectangular structure that opened to the north. Only a small portion of the feature was excavated to expose the hearth (Subfeature 1), and no attempt was made to identify other subfeatures. The limited floor area exposed in the structure consisted of the native, calcium-rich subsoil. An intrusive possible borrow pit (Feature 5766) truncated the structure's entryway, and an unexcavated pit (Feature 5000) may have intruded part of the structure's south wall.

Stratigraphy

The house pit was excavated into the native calcic subsoil. The fill consisted of a single layer of dark grayish brown silty loam with gravel inclusions and abundant artifacts.

Disturbances

A large non-thermal pit (Feature 5766) truncated the structure's entryway, and an unexcavated pit (Feature 5000) may have intruded part of the structure's south wall. Roots, rodents, and insects disturbed the structure's floor and fill.

Construction Details

Feature 10,729 was subrectangular in plan view and opened to the north. The house pit measured 3.67 m east–west by 3.21 m north–south and had a remaining pit depth of 46 cm.

Walls and Roof

No evidence of the wall or roof construction was located within the limited area of excavation.

Entry

The entry protruded from the center of the north wall of the structure. It was truncated by an intrusive borrow pit (Feature 5766).

Floor

The limited area of exposed floor consisted of the native calcic subsoil.

Floor Features

Hearths

A plaster-lined, bell-shaped hearth was located in front of the entry. It measured 20 cm in diameter and was 12 cm deep. Three strata were identified in the pit fill. The top 5 cm consisted of a compact dark gray ash. This deposit rested on a 2–3-cm-thick layer of oxidized reddish brown gravely clay. The lowest stratum consisted of grayish white compact ash.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary context.

Evidence for Remodeling

No evidence for remodeling was observed within the limited area of excavation.

Abandonment Processes

The nature of the abandonment could not be discerned from the limited area of excavation. However, no evidence of burning was encountered.

Associated, Intrusive, or Superimposed Features

A large non-thermal pit (Feature 5766) truncated the entryway to the structure. An unexcavated pit (Feature 5000) may have intruded part of the structure's south wall.

Chronology

An archaeomagnetic sample (SRI 2466) was collected from the feature's hearth, and it returned date range options of A.D. 935–1015 and 1310–1690. Based on the architectural style of the structure, the earlier option most likely provides the best age estimate for the abandonment of the structure.

Locus D, Feature 3817

Center of feature UTMs: 3538354.78, E 541551.38
Architectural type: house-in-a-pit
Date range: A.D. - 700–1015
House dimensions: 3.75 by 2.11 m; floor area 5.39 m^2; pit depth 0.09 m
Entryway dimensions: unknown
Shape: ovate
Orientation: north?
Internal features: 1 hearth, 36 interior and perimeter postholes, and 4 intramural pits
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PD 2504
Related features: intruded by Features 3874 and 4716; superimposed with Features 2679, 5612, and 5647; adjacent to Feature 3818

Feature 3817 was a small, ovate pit structure (Figure B.74) located near the eastern end of Locus D (see Figure 84). It was identified and fully excavated during Phase 2. No entryway was identified, but several subfeatures were encountered, including 36 postholes (Subfeatures 2, 3, 5–9, 11–33, 35, 37–39, 41, and 43), an informal hearth area (Subfeature 1), and four intramural pits (Subfeatures 34, 36, 40, and 42). The floor of the house consisted of the

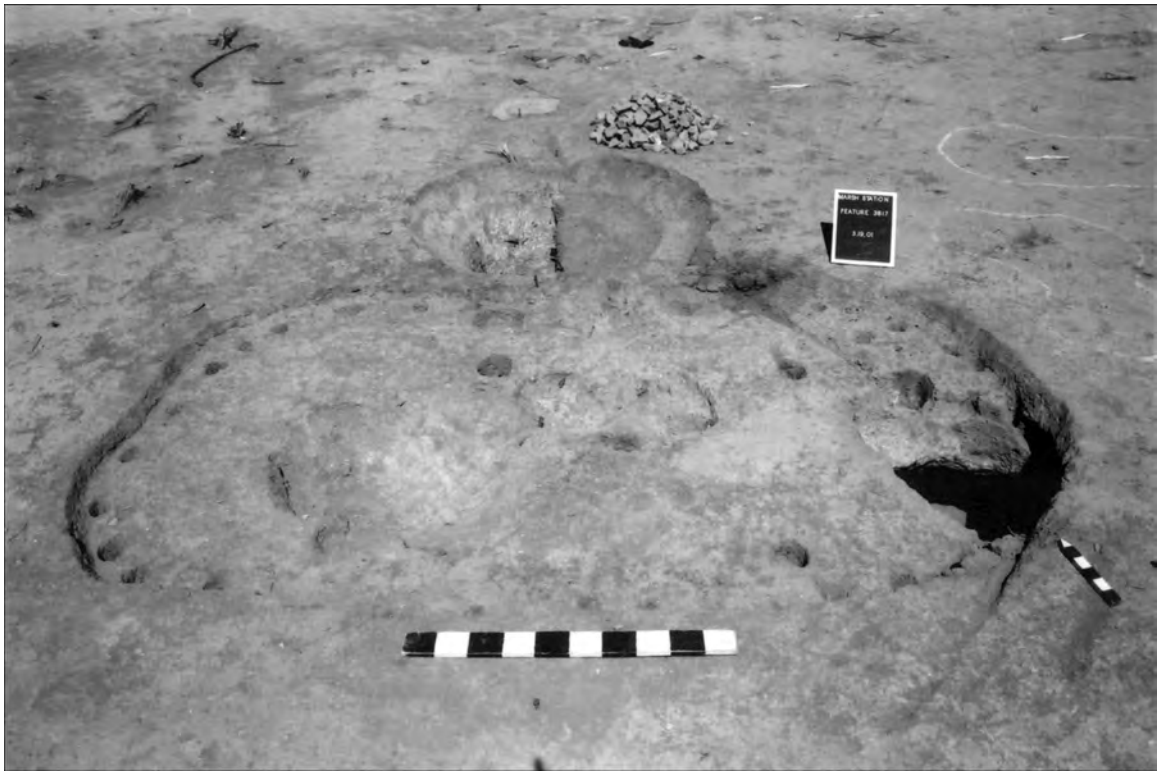

Figure B.74. Plan view of Feature 3817, looking north.

native subsoil and did not appear to be plastered or burned. Two extramural pits (Features 3874 and 4716) intruded the house fill, floor, walls and hearth area. Three additional features, an extended inhumation (Feature 2679), indeterminate pit (Feature 5647), and a large bell-shaped roasting pit (Feature 5612), were located in the southwest corner of the house, but it could not be determined whether these features pre- or postdated the house. A large *horno* (Feature 3818) was located just to the north of the structure and may have removed its entryway.

Excavation Methods

This structure was exposed during Phase 2 in Stripping Unit 3006. The structure was then excavated in two units. The eastern half of the house (Half 1), measured roughly 2 by 2 m and was excavated as the structure's control unit. The unit was excavated to the floor in a single 8-cm level, and the fill was screened through 1/4-inch mesh. A flotation sample was collected from this level (PD 3435). The fill in the western half of the house (Half 2) was removed in one 8-cm level as well. The fill from this unit was not screened, but observed artifacts were recovered, and a flotation sample was collected from the fill (PD 2203).

Exposure of the floor revealed a number of floor features, including 1 informal hearth, 36 postholes, and 4 intramural pits. The postholes were excavated individually, and the fill from each was screened though 1/4-inch mesh. Two of the postholes (Subfeatures 41 and 43) were originally thought to be floor pits. Subfeature 41 intruded into an earlier, underlying pit (Feature 5647), and it was difficult to distinguish it from the earlier pit. The fill from both the posthole and the extramural pit was screened together through 1/4-inch mesh, and a mixed flotation sample was collected (PD 2678). Subfeature 43 was excavated in two levels. The entire fill from the first level was collected as a flotation sample (PD 2914), and the second level was 1/4-inch screened. A pollen sample was recovered from the base of the first level (PD 2914); no samples were recovered from the second level. The fill from the hearth was removed during the excavation of Half 1, before it was recognized as a subfeature, and so a flotation sample could not be collected. A pollen sample (PD 2903) was collected from the base of the hearth, and an archaeomagnetic sample (SRI 2382) was collected from its plaster. The four intramural pits were excavated individually, and the excavation methods varied by pit. Subfeature 34 was excavated as part of Half 1 before it was recognized as a subfeature; the rest of the pit's fill was collected as a pollen sample (PD 2785). The entire fill of Subfeature 36 was removed as a flotation sample (PD 2350). The fill from Subfeature 42 was removed and screened during the excavation of the western half of Subfeature 40, before it was interpreted as a separate subfeature.

Subfeature 40, a large bell-shaped storage pit, was excavated in three units. The portion between the top of the

pit and the start of the bell curve was excavated in two halves, and the lower, bell-shaped part of the pit was excavated as a single unit. The western half of the upper part of the pit was excavated in a single, 36-cm level. The fill was 1/4-inch screened, and a flotation sample was collected from the fill (PD 2370). The eastern half was excavated in two stratigraphic levels that were roughly 8 cm and 25 cm thick. The fill from each level was screened through 1/4-inch mesh, and a flotation sample was collected from each level (PDs 2406 and 2407). The lower fill was removed in two 1/4-inch-screened stratigraphic levels that were roughly 43 cm and 5 cm thick. Three flotation samples (PD 2408) and one composite pollen sample (PD 2408) were recovered from the upper level, and one flotation sample (PD 2504) and one composite pollen sample (PD 2504) were recovered from the lower level. A second pollen sample (PD 2506) was recovered from beneath a large sherd that was resting on top of this strata.

Stratigraphy

The house pit was dug into the local Pleistocene terrace, which consisted of a compact, orange-brown soil matrix with small gravels and carbonates. The house pit was filled with a single layer of dark grayish brown, weakly indurated fine sandy loam. Calcium carbonate nodules and disperse charcoal fragments and artifacts were encountered throughout the fill.

Disturbances

Fine to medium roots caused minor damage in the house fill and floor, and one large root caused significant damage to the floor in the eastern side of the house. An unexcavated extramural pit (Feature 3874) truncated the northeastern corner of the structure, and a second extramural pit (Feature 4716) removed half of the hearth. An extended inhumation (Feature 2679), indeterminate pit (Feature 5647), and a large bell-shaped roasting pit (Feature 5612) may have removed the floor area in the southwest corner of the house. A large *horno* (Feature 3818) was located just to the north of the structure and may have removed the entryway.

Construction Details

The house pit was ovate in plan view with the long axis oriented roughly east–west (Figure B.75). The remnant house pit measured 3.75 m north–south and 2.11 m east–west and extended approximately 10 cm below the surface of the stripping unit.

Walls and Roof

A total of 36 possible postholes were found within the structure. Twenty-nine of these (Subfeatures 2, 5–9, and 11–33) were small, perimeter postholes that encircled the floor of the house (see Figure B.75). They were evenly spaced around the perimeter of the house pit and ranged in size from 7 to 20 cm in diameter and 7 to 23 cm in depth (Table B.45). A gap in the perimeter postholes along the northern pit wall suggests the location of the structure's entryway. No floor groove was found in association with these postholes. It should be noted that six postholes located in the southwest corner of the house may have been part of the fill from a possibly intrusive roasting pit (Feature 5612) rather than actual floor features.

An additional seven possible postholes (Subfeatures 3, 35, 37–39, 41, and 43) were found in the interior of the structure. They were distributed primarily in the central portion of the house. These postholes did not pattern into a typical central-support arrangement, and any combination of these postholes could have provided the main roof support. Again, at least one of these postholes (Subfeature 3), may have been part of the fill from Feature 5612 rather than an actual posthole. Likewise, the relationship between posthole Subfeature 41 and a possibly intrusive pit (Feature 5647) could not be resolved in the field, and it may have been part of the pit fill rather than a posthole.

Entry

No entry was identified. Based on the location of the hearth and a gap in the perimeter postholes, it is likely that the entry was located in the center of the north wall. A large extramural *horno* (Feature 3818) was found outside of the house pit in this vicinity, and it may have removed the entry.

Floor

The floor consisted of the natural argillic paleosol. Plaster was not present on the house floor, and no evidence of burning was observed.

Floor Features

Hearths

A shallow, oxidized depression in the house floor functioned as an informal hearth (Subfeature 1). It was located slightly to the north of the center of the house and was truncated by an intrusive pit (Feature 4716). The remaining hearth pit was 3 cm deep, and the oxidation was 5 cm thick.

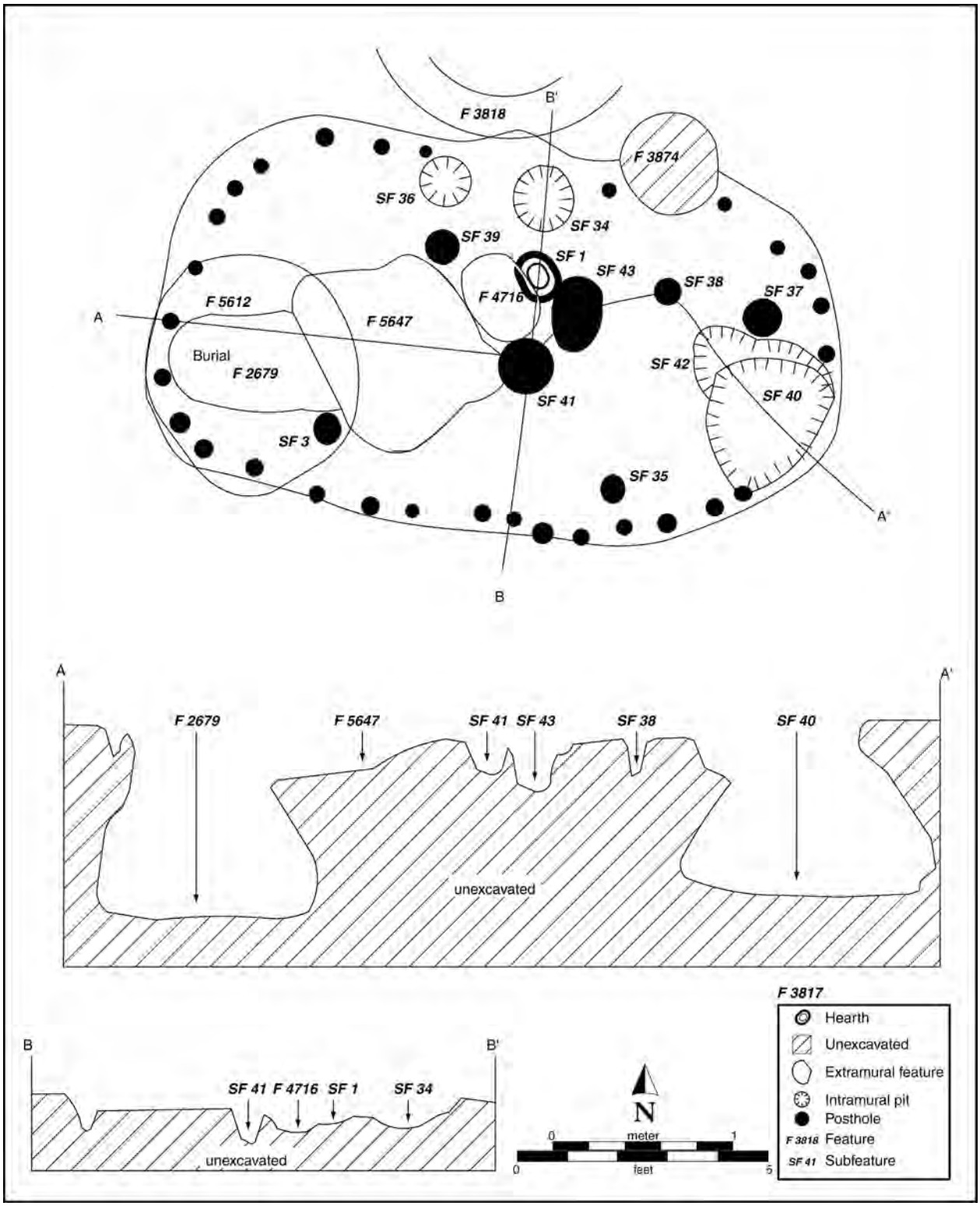

Figure B.75. Plan map of Feature 3817 showing the location of floor features and associated features.

Table B.45. Feature 3817 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
2	2246	20	20	23	P
3	2254	14	14	9	I
5	2284	7	7	8	P
6	2286	8	8	8	P
7	2288	8	7	8	P
8	2290	8	7	8	P
9	2292	9	8	11	P
11	2296	9	9	12	P
12	2298	8	8	10	P
13	2300	10	9	13	P
14	2302	9	9	11	P
15	2304	9	8	10	P
16	2306	10	9	11	P
17	2308	7	7	9	P
18	2310	8	8	11	P
19	2312	7	7	8	P
20	2314	9	9	13	P
21	2316	9	8	7	P
22	2318	8	8	12	P
23	2320	10	10	11	P
24	2322	11	10	11	P
25	2324	10	9	13	P
26	2329	9	8	9	P
27	2331	8	7	8	P
28	2333	9	8	8	P
29	2335	8	8	7	P
30	2337	8	8	8	P
31	2339	10	10	11	P
32	2341	8	8	9	P
33	2343	8	7	8	P
35	2347	8	8	11	I
37	2280	18	16	18	I
38	2353	14	12	20	I
39	2355	18	16	13	I
41	2358	40	40	13	I
43	2915	39	32	25	I

Key: I = interior posthole; P = perimeter posthole; PD = provenience designation.

Pits

Four intramural pits were identified in this structure (Table B.46). Three of these (Subfeatures 34, 36, and 42) were fairly small and basin-shaped, and the fourth (Subfeature 40) was large and bell-shaped. The three basin-shaped pits may have predated or postdated the occupation of the house, given their peculiar location within the structure (see Figure B.75). Subfeatures 34 and 36 were found in the hypothesized location of the entryway, and Subfeature 42 overlapped with the bell-shaped pit. The function of these three pits remained undetermined.

The bell-shaped pit was located in the southeastern corner of the house and measured 1.34 m in diameter and 0.85 m deep. The walls were unlined, and no evidence of burning was observed. It contained three discrete strata, the middle of which may represent intentional backfilling. Three large plain ware sherds were found near the base of the feature. The shape and location of the pit suggest that it was used for storage.

Table B.46. Feature 3817 Floor-Pit Data

Subfeature No.	Shape (Plan, Profile)	Diameter × Depth (m)	Fill	Comments
34	circular, basin-shaped	0.35 × 0.08	Fine sandy loam with few small flecks of charcoal and no observed artifacts. Indistinguishable from floor fill.	Located adjacent to northern pit wall, may have been an intrusive pit.
36	circular, basin-shaped	0.27 × 0.11	Gray-brown fine sandy loam with charcoal and ash.	Located adjacent to northern pit wall, may have been an intrusive pit.
40	ovate, bell-shaped	0.85 × 0.75 (opening); 1.34 × 0.85 (maximum)	Stratum A (0.11 m thick): dark gray-brown silty loam with few fine to coarse gravels. Small charcoal flecks and artifacts were present. Stratum B (0.71 m thick): brown silty loam with many medium to coarse gravels, sparse charcoal chunks, and artifacts. Deposit appeared to be intentional back fill. Stratum C (0.08 m thick): very dark brown, soft sandy loam with abundant medium to coarse rounded gravels, charcoal flecks and chunks, and artifacts, including large sherds.	Located adjacent to southeastern pit wall.
42	circular, basin-shaped	0.40 × 0.20	Dark gray-brown silty loam with few fine to coarse gravels. Small charcoal flecks and artifacts were present.	Superimposed with Subfeature 40, although unclear which was built first.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary context in the structure.

Evidence for Remodeling

The presence of several large postholes in the interior of the house suggests that the roof support system may have undergone some form of remodeling. In addition, the backfill episode identified within the bell-shaped pit (Subfeature 40) suggests that the structure's inhabitants stopped using this feature at some point during the occupation of the house. Finally, the superpositioning of Subfeatures 40 and 42 indicates that at least one episode of floor feature remodeling took place.

Abandonment Processes

The characteristics of the fill and the lack of oxidation on the floor suggest that the structure had not burned. It may have collapsed naturally through time or was scavenged for construction materials. The depression formed by the abandoned house pit subsequently filled with natural sediments and sheet trash. The density of extramural pits superimposed with the structure and in its vicinity suggests that this area continued to be used after the house was abandoned.

Associated, Intrusive, or Superimposed Features

At least five extramural features were superimposed with Feature 3817, and a sixth feature was directly adjacent to the structure. Two extramural pits (Features 3874 and 4716) intruded portions of the structure and clearly postdated the abandonment of the house. Feature 4716 was a shallow, basin-shaped pit that removed half of the hearth, and Feature 3874 was an unexcavated pit that truncated the northeastern corner of the structure. A large *horno* (Feature 3818) was located just to the north of the structure and may have removed its entryway.

A bell-shaped roasting pit (Feature 5612), shallow extramural pit (Feature 5647), and extended inhumation (Feature 2679) were encountered in the southwest portion of the structure, but their temporal relationship to the house could not be ascertained. These three features were superimposed with each other in such a manner that the western end of the inhumation (Feature 2679) overlapped a portion of the roasting pit (Feature 5612), and the eastern end of the burial was removed by the shallow pit (Feature 5647). If Subfeature 41 was indeed a posthole that intruded into

the fill of Feature 5647, then all three features predated the structure. However, if Subfeature 41 was simply part of the fill from Feature 5647, it is possible that all three features intruded into the house fill after the structure was abandoned. Alternatively, the roasting pit may have been used as a storage pit while the house was occupied. Its location in the southwestern corner of the house mirrors that of Subfeature 40, the bell-shaped storage pit, and suggests its possible intramural use. In that case, the other two features would have postdated the occupation of the house, again rendering Subfeature 41 as a nonfeature. In either of these last two cases, the six southwest perimeter postholes and Subfeature 3 would be reclassified as part of feature fill from the roasting pit, rather than true subfeatures associated with the structure.

Chronology

An archaeomagnetic sample (SRI 2382) was collected from the hearth, but it was too imprecise to be dated. The few painted ceramics recovered from the fill have production date ranges of A.D. 750–950. Likewise, the *horno* (Feature 3818) located just to the north of the structure had an archaeomagnetic date range of A.D. 935–1015 or 1210–1690. The few datable ceramics recovered from this *horno* had production dates of A.D. 750–950 as well, which tentatively supports the earlier archaeomagnetic dating option. It seems likely, then, that this structure was abandoned by or before roughly A.D. 950.

A painted sherd with a production date of A.D. 950–1150 was recovered from the lowest level of the bell-shaped roasting pit (Feature 5612), which indicates that this feature could not have been filled before A.D. 950. Other painted sherds recovered from this pit had production dates of between A.D. 600 and 950. If this roasting pit originated as a subfeature of the structure or if it postdated use of the structure, these dates provide added support for the idea that the structure was abandoned around roughly A.D. 950. However, if this pit predated the construction of the structure, as suggested by the presence of Subfeature 41, then the house could not have been abandoned until sometime after A.D. 950. Unfortunately, this enigma cannot be resolved with the available data.

Locus D, Features 4682, 5616, and 4684

The south-central portion of Locus D was distinguished by a cluster of three overlapping houses identified during the Phase 2 mechanical stripping of Locus D (see Figure 82). The northernmost and oldest structure in the complex was Feature 4682, a shallow house that opened to the northeast. The southwestern corner of this structure was truncated by the second feature in the complex, Feature 5616. This was a small, ovate feature that may have been an ephemeral structure. This feature was not completely excavated. Finally, the largest and youngest structure of the three was Feature 4684, an adobe-walled pit structure that was partially built on top of the ephemeral structure. This house was located immediately west of Feature 4683, one of three other adobe houses excavated in Locus D.

Locus D, Feature 4682

Center of feature UTMs: N 3538370.65, E 541486.02
Architectural type: house-in-a-pit
Date range: A.D. 825–1015
House dimensions: 4.27 by 2.65 m; floor area 9.14 m^2; pit depth 0.17 m
Entryway dimensions: unknown
Shape: subrectangular
Orientation: northeast
Internal features: 1 hearth, 1 floor groove, 36 postholes, and 3 intramural pits
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: superimposed by Features 5616 and 4684

Feature 4682 was a subrectangular house-in-a-pit that opened to the northeast (Figure B.76). It contained several floor features, including 1 hearth (Subfeature 1), 1 floor groove (Subfeature 2), 36 postholes (Subfeature 6–41), and 3 intramural pits (Subfeatures 3–5), 2 of which were slightly bell-shaped. As preserved, the structure was shallow and possessed the remains of an adobe-plastered floor. The floor appeared oxidized, suggesting that the structure had burned. Few artifacts remained on the floor of the house.

Excavation Methods

Feature 4682 was discovered during Phase 2 in Stripping Unit 6791. A 1-by-2-m control unit (Test Pit 6996) was placed in the north-central portion of the structure to locate the hearth. The test pit was excavated to the floor in one arbitrary 10-cm level, and the fill was screened though 1/4-inch mesh. A flotation sample was collected from the fill (PD 6997), and a pollen sample (PD 5563) was collected from beneath a mano (PD 5562) resting on the floor. The hearth was discovered at the base of this unit.

The rest of the fill was removed manually as a single unit in a 3–9-cm-thick level. The fill was screened through 1/4-inch mesh, and a composite flotation sample was collected (PD 5543). Two pollen samples (PDs 5564 and 5565) were collected from beneath rocks resting on the floor.

Figure B.76. Plan view of Feature 4682, looking southwest.

The exposure of the floor revealed a number of floor features, including 1 floor groove, 1 hearth, 36 postholes, and 3 floor pits. The floor groove and individual postholes were each excavated in a single level, and the fill was screened through 1/4-inch mesh. A botanical sample (PD 5713) was recovered from one of the postholes (Subfeature 35). The entire fill of the hearth was collected as a flotation sample (PD 5557). Archaeomagnetic samples were collected from the structure's floor (SRI 2410) and hearth (SRI 2411). Each floor pit was excavated in a single 1/4-inch screened level, and a flotation sample (PDs 5561 and 5653) was collected from two of them (Subfeatures 3 and 5). Additionally, a pollen sample (PD 5724) was collected from one of the pits (Subfeature 3). Finally, four possible manos were point located on the floor surface (PDs 5562 and 5736–5738), and pollen samples were recovered from under three of them (PDs 5563, 5739, and 5740).

Stratigraphy

The Feature 4682 house pit was originally dug into the native argillic subsoil. After mechanical stripping, only 10 cm or less of fill remained in the house pit. This fill was heavily compacted from an overlying roadbed. It consisted of a single layer of gray-brown silty loam with some charcoal, ash pockets, and small artifacts.

Disturbances

The southwest corner of the house was impacted by the construction of two later structures (Features 5616 and 4684). The north wall of both structures removed the pit wall, floor groove, and an unknown number of postholes from this part of Feature 4682. Other disturbances included small to medium roots and abundant insect and rodent burrows. Many of the structure's subfeatures, most notably two of the floor pits (Subfeatures 4 and 5), were severely damaged by rodent burrows.

Construction Details

Feature 4682 was subrectangular in plan view and opened to the northeast. The house pit measured 4.27 m; m east–west by 2.65 m north–south and had a remaining depth of 17 cm. The north and south walls were parallel, and the east and west walls were slightly rounded. The floor space, as delimited by the interior edge of the floor groove, measured 9.14 m^2 (Figure B.77).

Walls and Roof

A 10-cm-wide floor groove (Subfeature 2) encircled the structure's floor. It was basin-shaped in profile and

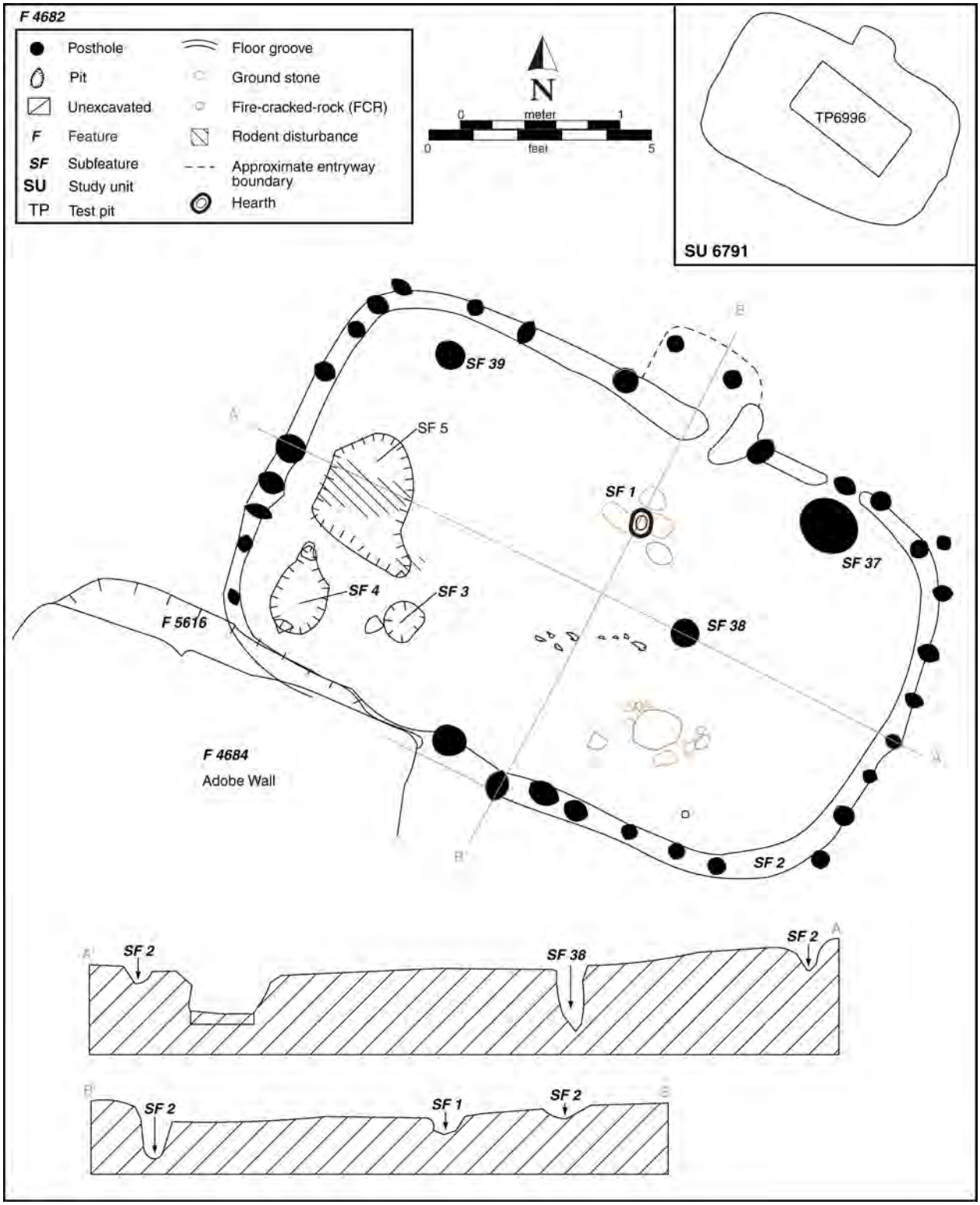

Figure B.77. Plan map of Feature 4682 showing the location of subfeatures, floor artifacts, and intrusive structures (Features 4684 and 5616).

extended less than 10 cm below the house floor. The walls of the floor groove were unprepared and showed no signs of oxidation. The fill consisted of a gray-brown silty loam and resembled that of the house pit.

A total of 30 perimeter postholes (Subfeatures 6–20 and 22–36) originated at the base of the floor groove and were evenly spaced about 20 cm apart (see Figure B.77). An additional perimeter posthole (Subfeature 21) was located just outside of the floor groove in the northeast corner of the house. The perimeter postholes ranged in size from 8 to 25 cm in diameter and 8 to 32 cm in depth (Table B.47).

Only one main support posthole (Subfeature 38) was identified during excavation. It measured 20 cm in diameter and 40 cm deep and was located in the east-central part of the house. A counterpart to this posthole was not located in the west-central part of the house. Two additional interior postholes (Subfeatures 37 and 39) were located near the structure's front wall, on either side of the entry, and may have functioned as additional roof supports. They measured between 16 and 32 cm in diameter and 12 and 29 cm in depth (see Table B.47).

Entry

The entryway was difficult to define, as much of it had been removed during mechanical stripping. Two shallow depressions, located on the exterior of the house pit and interpreted as remnant postholes (Subfeatures 40 and 41), provided the only indication of the presence and placement of the entry. These postholes measured between 11 and 15 cm in diameter and 5 and 7 cm in depth.

The entry was located at the midpoint of the north wall and protruded at least 40 cm from the house pit. The floor of the entryway ramped slightly into the structure. The structure's floor groove (Subfeature 2) partially cut across the west side of the entryway floor and extended partially up the east edge of the entry pit (see Figure B.77).

Floor

Small patches of heavily oxidized adobe found at the base of the house pit indicate that the floor most likely was plastered. The plaster had been applied directly to the native argillic subsoil. The floor was fairly uneven throughout the house and damaged considerably by rodents. As delineated by the interior edge of the floor groove, the floor measured 4.06 m by 2.41 m and had an area of 9.14 m^2.

Floor Features

Hearths

The hearth (Subfeature 1) consisted of a small, informal, basin-shaped pit located 50 cm in front of the entryway. It measured 20 cm in diameter and 10 cm in depth. The pit walls were heavily oxidized and consisted of the native argillic subsoil. The fill was similar to that of the house pit, indicating that it had been cleaned out prior to abandonment.

Pits

Three pits (Subfeatures 3–5) were located in the southwest corner of the structure. Subfeature 3 was a bell-shaped pit with a flat base that may have functioned as a storage pit. It measured 26 cm in diameter at its opening, flared to a maximum diameter of 39 cm, and was 40 cm deep. The walls and base were unoxidized and consisted of the unmodified subsoil, which graded from the weak argillic substrate into the calcium carbonate–rich substrate. The upper 30 cm of fill consisted of fine gray-brown sandy silt, and the lower 10 cm consisted of dark brown sandy silt with ash lenses and charcoal flecks.

Subfeature 4 also was bell-shaped and also may have served as a storage pit. It measured 45 by 30 cm at its opening and was 22 cm deep. The pit walls were heavily damaged by rodent tunnels, but they appeared to be unprepared and unoxidized. The pit fill consisted of gray-brown sandy silt with small gravels, charcoal flecks, and small artifacts.

Subfeature 5 was a shallow, basin-shaped pit that may have functioned as a pot rest. It measured 83 by 70 cm at its opening and was 25 cm deep. The base of this pit was heavily damaged by rodent tunnels but, as with the pit walls, appeared to be unmodified and unoxidized. The fill consisted of gray-brown sandy silt with charcoal flecks and few artifacts.

Artifacts

The floor artifacts from Feature 4682 included four pieces of ground stone, two (PDs 5563 and 5738) of which were found partially overlying the hearth. The other two pieces (PDs 5736 and 5737) were found in the northwest corner of the house mixed with a cluster of fire-cracked rock. In addition, three plain ware sherds and three flakes were recovered from the general-floor provenience (PD 5545).

Evidence for Remodeling

No evidence for remodeling was encountered.

Abandonment Processes

The oxidized floor of the house suggests that the structure had burned, although there was little charcoal or burnt structural debris present in the house fill. The few artifacts recovered from the floor of the structure suggest that the house was cleaned out prior to abandonment and that the fire likely was not catastrophic. The depression formed by the abandoned house pit subsequently filled with naturally deposited sediments and midden refuse. Later, the

Table B.47. Feature 4682 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
6	5655	25	17	21	P
7	5657	20	15	24	P
8	5659	18	15	8	P
9	5661	16	12	19	P
10	5663	10	09	8	P
11	5665	12	12	22	P
12	5667	11	10	9	P
13	5669	10	10	12	P
14	5671	12	11	15	P
15	5673	10	10	16	P
16	5675	11	10	13	P
17	5677	11	10	13	P
18	5679	13	11	14	P
19	5681	12	13	14	P
20	5683	11	10	8	P
21	5685	11	10	10	P
22	5687	11	10	9	P
23	5689	13	11	17	P
24	5691	15	17	22	P
25	5693	15	14	32	P
26	5695	15	10	24	P
27	5697	10	8	15	P
28	5699	13	8	12	P
29	5701	13	11	17	P
30	5703	10	10	16	P
31	5705	13	12	20	P
32	5707	18	16	12	P
33	5709	18	14	21	P
35	5711	19	10	23	P
35	5713	11	11	15	P
36	5715	12	10	10	P
37	5717	32	30	29	I
38	5719	18	14	40	C
39	5871	18	16	12	I
40	5873	15	13	7	E
41	5875	12	11	5	E

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.

southwestern corner of the house was destroyed during the construction of Features 5616 and 4684.

Associated, Intrusive, or Superimposed Features

This was the northernmost and oldest structure in the complex of three overlapping structures (including Features 4684 and 5616). No other features were associated directly with this structure.

Chronology

An archaeomagnetic sample (SRI 2411) was collected from the structure's hearth and returned the date range options of A.D. 585–1015 and 1385–1690. A second sample (SRI 2410) was collected from the floor but could not be dated against the Southwest curve, SWCV595. The data from this second sample were located near the A.D. 850–900 section of the curve. The combined data from these two samples also fell near the A.D. 850–900 section of the curve, but they could not be dated directly against this curve. The architectural

style of the structure suggests that it was constructed sometime during the Middle Formative period (A.D. 700–1150), which agrees with the first date range option obtained from the hearth. Therefore, the best age estimate for the abandonment of Feature 4682 is A.D. 585–1015.

Locus D, Feature 5616

Center of feature UTMs: unknown
Architectural type: house-in-a-pit
Date range: A.D. 500–1310
House dimensions: unknown, except depth was 0.2 m
Entryway dimensions: unknown
Shape: round to ovate
Orientation: unknown
Internal features: unknown
Chronometric techniques: none
Analyzed botanical samples: none
Related features: intrudes Feature 4682; intruded by Feature 4684

Only a small portion of Feature 5616 was excavated, and no attempt was made to clear its floor or define its floor features. Based on these limited excavations, the feature appeared to be small and fairly round to ovate, and it had an unprepared floor that consisted of the native calcic subsoil. The feature truncated the southwestern corner of Feature 4682 and was found below the floor of Feature 4684. In fact, an adobe wall was built within the Feature 4684 house pit to shore up the fill from Feature 5616. Feature 5616 may have been an ephemeral structure.

Excavation Methods

The objective of the Feature 5616 excavation was to define its boundaries. A 20-cm-wide trench that cut through the floor of Feature 4684 was hand-excavated to the edge of Feature 5616. Approximately 21 cm of fill separated the floors of the two features. Observed artifacts were collected, but the fill was not screened. No samples were collected.

Stratigraphy

The upper 10 cm of fill consisted of reddish brown, clayey calcic loam with some charcoal flecks. This deposit was likely the subfloor fill of Feature 4684 that was intentionally deposited to create a level floor for the adobe house. The lower 10 cm of fill consisted of brown to dark brown sandy loam with charcoal flecks. Both strata contained artifacts.

Disturbances

This feature was intruded by a later adobe house (Feature 4684).

Construction Details

Feature 5616 was round to ovate in plan view, and its dimensions are unknown.

Walls and Roof

Because of the limited excavations, nothing is known about the walls or roof of this structure.

Entry

The entry was not located for this structure.

Floor

The floor consisted of the native calcic subsoil.

Floor Features

No attempt was made to identify or define floor features.

Artifacts

Because of the limited excavations, no artifacts were recovered from the floor or any other sealed or primary context.

Evidence for Remodeling

No evidence for remodeling was encountered within the limited area of excavation.

Abandonment Processes

The nature of the abandonment could not be discerned from the limited area of excavation.

Associated, Intrusive, or Superimposed Features

Feature 5616 was overlain partially by Feature 4684, and it truncated the southwest corner of Feature 4682. The

area that underlay the Feature 4684 floor was capped with adobe, and an adobe wall was built within the house pit of Feature 4684 to shore up the uncapped fill from Feature 5616.

Chronology

No chronometric data were recovered from Feature 5616. Based on stratigraphy, it was abandoned sometime after Feature 4682, which most likely dated to A.D. 825–1015, and before Feature 4684, which dated to A.D. 1310–1690. Therefore, the only estimate for the age of this structure is between A.D. 825 and 1310.

Locus D, Feature 4684

Center of feature UTMs: N 3538368.51, E 541481.01
Architectural type: adobe walled pit structure
Date range: A.D. 1310–1690
House dimensions: 5.87 by 4.31 m; floor area 25.12 m^2; pit depth 0.39 m
Entryway dimensions: 0.40 by 0.56 m; floor area 0.27 m^2
Shape: rectangular
Orientation: south
Internal features: 1 hearth, 3 central-support postholes, 28 interior postholes, and 2 intramural pits
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PD 5326
Related features: intrudes Feature 5616

Feature 4684 was one of four adobe-walled pit structures excavated at the site (Figure B.78). It was located immediately to the east of one of these adobe houses (Feature 4683), and they possibly were contemporary with each other. Feature 4684 consisted of a rectangular house pit with a south-facing entry (Subfeature 2), and it contained 24 evenly spaced interior postholes (Subfeatures 5–26, 28, and 29) that most likely supported a raised floor. One hearth (Subfeature 1), 3 central-support postholes (Subfeatures 3, 4, and 30), 2 intramural pits (Subfeatures 34 and 35), and 4 additional interior postholes (Subfeatures 27 and 31–33) were located in the floor as well. The back wall of the house pit truncated Feature 5616, an underlying structure, and a thick adobe wall had been constructed in this location to shore up the fill from the earlier feature. Numerous artifacts were found on the floor of the house, including 1 deer skull (PD 5347), 4 projectile points (PDs 5394, 5395, 5428, and 6950), and fragments of a partially reconstructible Gila Polychrome vessel (PD 5392). The house fill contained a thick layer of charred construction material, indicating that the structure had burned.

Excavation Methods

Feature 4684 was initially identified during Phase 2 mechanical stripping of Stripping Units 6791 and 6795 when remnants of its adobe walls were exposed by the backhoe. A 2-by-2-m control unit (Test Pit 5006) was placed along the south wall of the structure immediately in front of the entry. The test pit was excavated to the floor in three stratigraphic levels. All of the fill was screened through 1/4-inch mesh, and flotation samples were collected from each level (PDs 5009, 5015, and 5101). In addition, a pollen sample was collected from a sand lens located in front of the entry in the third level (PD 5137). A second pollen sample was collected from the floor surface beneath the sand lens (PD 5138), and a composite pollen sample was scraped from the floor surface exposed in the rest of the test pit (PD 5102).

The upper 40 cm of fill in the rest of the house was removed mechanically in a single, unscreened unit. Artifacts observed in this level were collected, but no samples were taken. The entire fill from the entry was excavated manually at this time in a single, unscreened level, and the observed artifacts were collected with those of the rest of the house. A pollen sample was collected from the surface of the exposed entry step (PD 5209).

An approximately 10-cm-thick layer of fill remained in the house pit. The structure was bisected to form two units, and the fill from each unit was excavated to the floor in a single 1/4-inch-screened level. A flotation sample was collected from the northern unit (PD 5326), and a pollen sample was scraped from the floor in each unit (PDs 5293 and 5327).

Exposure of the floor revealed a number of interior floor features, including 1 hearth, 2 intramural pits, and 31 postholes. The postholes were excavated separately in single 1/4-inch-screened levels. Botanical samples (PDs 6660, 6698, 6700, 6708, and 6710) were recovered from 5 of the postholes (Subfeatures 4, 23, 24, 28, and 29). The upper 8 cm of hearth fill was removed as structural debris and screened with the fill from the southern half of the house. The remaining 6 cm of fill in the hearth was collected as a flotation sample (PD 6655), and an archaeomagnetic sample (SRI 2384) was collected from the hearth walls. Likewise, the entire fill from 1 of the intramural pits (Subfeature 34) was collected as a flotation sample (PD 6862). One mano (PD 6866) was point located at the base of this pit, and a pollen sample was collected from beneath it (PD 6867). The other pit (Subfeature 35) was excavated in a single 1/4-inch-screened level. A flotation sample (PD 6926) was collected from the fill, and a pollen sample (PD 6491) was collected from the base. Finally, 11 artifacts and artifact clusters (PDs 5139, 5214, 5347, 5392–5395, 5428, 6809–6810, and 6950) were point located on the floor (Table B.48), and pollen samples (PDs 6811 and 6812) were collected from beneath 2 sherds of the point located reconstructible vessel (PD 5392).

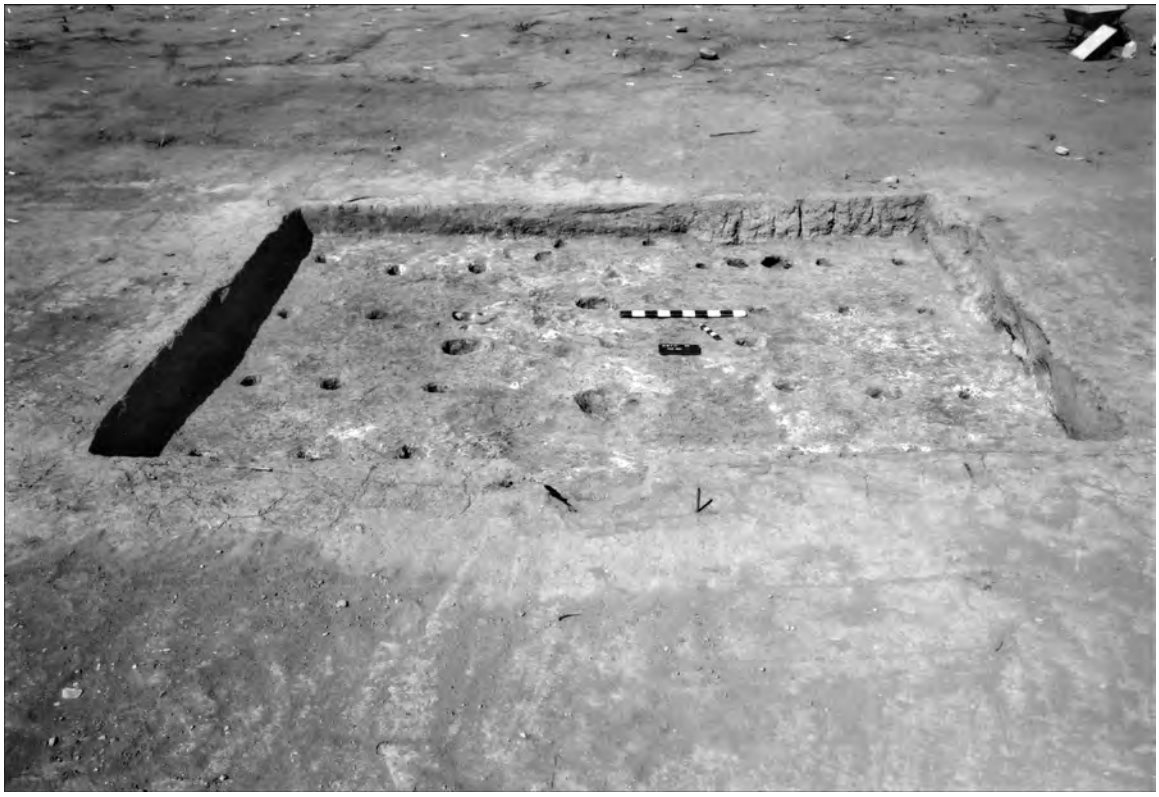

Figure B.78. Plan view of Feature 4684, looking north.

Table B.48. Feature 4684 Point-Located Floor Artifacts

PD No.	Artifact Description
5139	Indeterminate ground stone fragment with possible malachite staining.
5214	Cluster of 24 plain ware sherds.
5347	Deer skull.
5392	Partially reconstructible Gila Polychrome vessel (Vessel No. 28).
5393	Sherd cluster consisting of: 1 partially reconstructible red ware vessel (Vessel No. 33), 1 Gila Polychrome sherd, 7 plain ware sherds, and 2 unidentifiable small sherds.
5394	Classic obsidian arrow point (Catalog No. 166).
5395	Sinagua side-notched obsidian arrow point (Catalog No. 148).
5428	Salado side-notched Whetstone chert arrow point (Catalog No. 125).
6809	Hand stone fragment.
6810	Mano.
6950	Salado side-notched Whetstone chert arrow point (Catalog No. 064).

Key: PD = provenience designation.

Stratigraphy

The house pit was dug into the natural calcium-rich subsoil that underlay most of Locus D. The house fill consisted of four primary strata, and two additional localized deposits were identified for the structure. The upper 10 cm of fill consisted of light gray, heavily compacted fine silts and sands. Sediment compaction was attributed to an overlying roadbed. Below this was a 10–18-cm layer composed of several thin lenses of darker gray-brown, fine silts and sands that had formed when water puddled into the abandoned house pit. The next 5–10 cm of fill was similar to the second stratum but contained a higher density of charcoal and calcic material, perhaps resulting from adobe melt. The lowest stratum was a 10–15-cm-thick layer of structural debris resting on the house floor and consisted of abundant lumps of oxidized adobe, burnt beam segments, and reed thatching. The artifact density was relatively uniform throughout the structural fill. The recovered artifacts were small and appeared to originate from naturally deposited sheet trash.

A 10-cm-thick deposit of reddish brown, clayey calcic loam was found beneath the house floor in the area where the structure truncated Feature 5616. This sediment may have been intentionally deposited to cap the earlier structure's fill and to create a level floor for Feature 4684. In addition, a concentration of tan sand devoid of artifacts was present in front of the entry on the floor. This deposit sloped down from the entry into the house and averaged about 5 cm in thickness. The sand apparently washed into the house through the entry before the structure burned and collapsed. This suggests that the house was abandoned for some time before it was accidently or intentionally burned. These fluvial sands have been encountered within other adobe houses excavated at the Mescal Wash site, including Feature 4683 immediately to the east.

Disturbances

Roots, rodents, and insect activity inflicted some damage to the architecture of the house. The floor of the house was marked with numerous insect tunnels, and a few root casts and rodent tunnels damaged the walls and the floor. Roots and rodent holes were found throughout the fill of the house as well. In addition, an overlying road bed severely compacted the upper 10 cm of the house fill. Overall, however, the house was in good condition.

Construction Details

Feature 4684 was rectangular in plan view with slightly rounded corners, and it opened to the south (Figure B.79). The house pit measured 5.87 m east–west by 4.31 m north–south, with the long axis oriented roughly northwest–southeast.

Walls and Roof

The house originally had aboveground adobe walls that were set into a shallow notch along the outside edge of the house pit (Figure B.80). Remnants of these walls were visible in plan view along the northern side of the house. The adobe walls were about 10 cm thick, and the lack of evidence for postreinforcement indicates that they were free-standing. The adobe extended 12–15 cm into the house pit and was smoothed flush with the pit walls. The remnant pit walls were 30–40 cm high and consisted of the unmodified native paleosol into which the house pit was excavated. In the northeast corner of the house, where the structure truncated a preexisting feature (Feature 5616), an approximately 22-cm-thick adobe wall had been constructed inside of the pit to shore up the earlier feature's fill. The pit walls were vertical and met the floor at a right angle.

The roof was made of wood and adobe as evidenced by the construction debris found in the house fill. Three postholes located in the interior of the house originally held the posts that supported the roof. Two of the postholes (Subfeatures 3 and 4) were located along the structure's midline, and the third (Subfeature 30) was centered between the two but offset from the midline by about 70 cm. The posthole closest to the eastern house wall (Subfeature 4) contained the in situ remains of a burnt post segment (PD 6660). Two other postholes (Subfeatures 32 and 33) were centered along the back wall of the house. These small postholes may have provided supplemental roof support or could have held a small bench or shelf.

Entry

The entry (Subfeature 2) consisted of a 50-cm-wide entry pad that extended about 50 cm from the midpoint of the south wall of the house. Its sides were roughly parallel but bulged out on the west side at the juncture with the pit wall. The entry pad ramped slightly into the house and terminated with a 20-cm-deep step into the house pit. The pit wall beneath the entry pad was slightly concave. A small ovate pit of unknown function (Subfeature 34) was located in the floor immediately in front of the entry. The other adobe-walled houses at the site had similar pits in front of their entryways.

Floor

The floor of the house pit consisted of the calcium-rich, native subsoil, which apparently had been puddled to create a smooth, even surface. It had an area of 25.12 m^2. The patterning of 24 of the interior postholes (Subfeatures 5–26, 28, and 29) suggest that the structure possessed a partially raised floor. Four rows containing three evenly spaced postholes were found on either side of the house (see Figure B.79). These postholes ranged in size from 10 to 23 cm in diameter and 18 to 59 cm in depth (Table B.49).

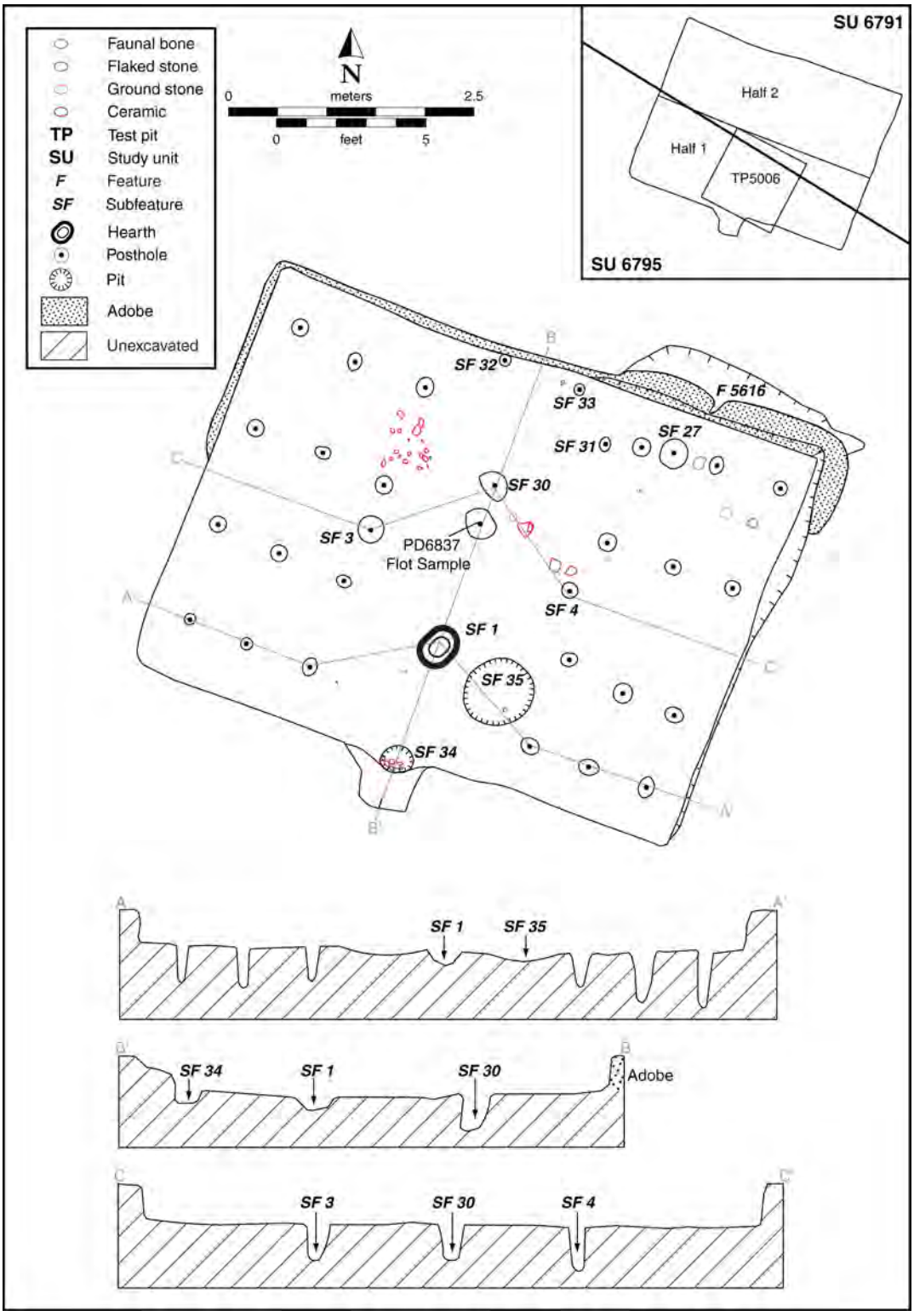

Figure B.79. Plan map of Feature 4684 showing the location of subfeatures and point-located artifacts and samples.

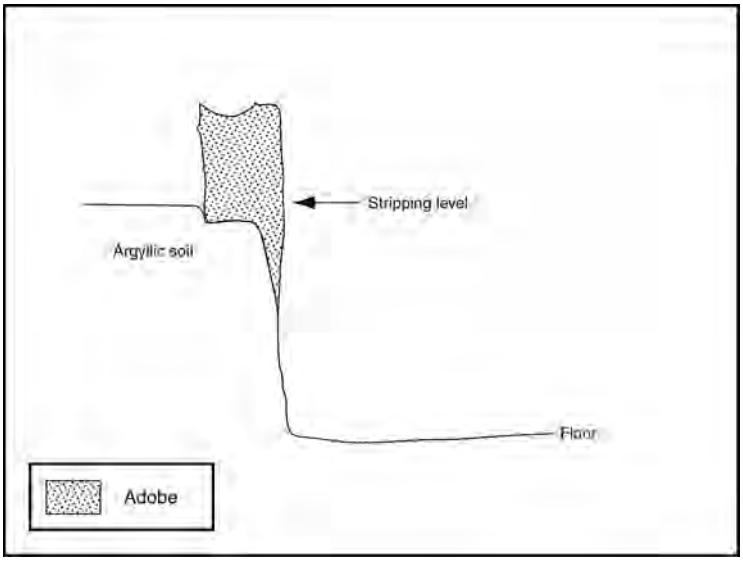

Figure B.80. An illustration of the remnant adobe walls of Feature 4684 prior to mechanical stripping.

Table B.49. Feature 4684 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
3	6658	27	26	39	C
4	6660	17	15	43	C
5	6662	12	11	40	I
6	6664	12	10	41	I
7	6666	21	15	35	I
8	6668	21	15	36	I
9	6670	23	19	54	I
10	6672	21	17	59	I
11	6674	16	15	42	I
12	6676	17	17	44	I
13	6678	15	13	18	I
14	6680	19	15	34	I
15	6682	22	20	49	I
16	6684	19	16	46	I
17	6686	16	15	39	I
18	6688	14	15	25	I
19	6690	20	16	26	I
20	6692	17	15	28	I
21	6694	17	16	42	I
22	6696	17	15	43	I
23	6698	17	15	31	I
24	6700	18	14	30	I
25	6702	20	18	26	I
26	6704	19	18	46	I
27	6706	27	29	21	I
28	6708	19	16	42	I
29	6710	15	15	36	I
30	6836	36	26	37	I
31	6842	15	12	15	I
32	6844	12	13	10	I
33	6846	13	13	12	I

Key: C = central-support posthole; I = interior posthole; PD = provenience designation.

A 2.3-m-wide area extending from the entry to the back wall was not elevated. The calcium-laden subsoil that comprised the floor in this area was heavily worn as compared to the areas where the floor would have been raised. Reeds found in the house fill suggest that the floor was originally covered with matting.

Floor Features

Hearths

The structure possessed a basin-shaped hearth (Subfeature 1) located approximately 1 m in front of the entryway. It measured 40 cm in diameter and was 15 cm deep. The pit walls were highly oxidized but were not plastered. The hearth had been cleaned out after its final use and later filled with sand that washed into the house through the door. Burnt construction material was found on top of the sand fill.

Pits

Two additional interior pits (Subfeatures 34 and 35) were identified and excavated in Feature 4684. Subfeature 34 was the ovate, basin-shaped pit located at the threshold of the entryway. It measured 25 by 30 cm in diameter and extended about 10 cm below the house floor. The walls of the pit were composed of the unmodified native calcic subsoil. The pit was filled with sand that had washed in through the entry. An intact mano (PD 6866) was found at the bottom of the pit.

Subfeature 35 was a shallow pit located 30 cm southeast of the hearth and 60 cm north of the structure's south wall. A similar pit was found in this same location in Feature 4683, the adobe-walled house located immediately to the east. The pit was about 70 cm in diameter and only 5 cm deep. The walls were composed of the unmodified native subsoil. The upper 1–2 cm of fill consisted of naturally deposited silt and clay. Below this was silt and sand that surrounded small, abundant artifacts and few charcoal flecks. The feature may have been used as a pot rest or for puddling adobe.

Artifacts

Several intact and broken artifacts were recovered from the floor of Feature 4684 (see Table B.48). These were concentrated primarily in the central part of the house where the floor was not raised. Artifacts included one partially reconstructible Gila Polychrome jar (PD 5392), two obsidian projectile points (PDs 5394 and 5395), two Salado side-notched chert projectile points (PDs 5428 and 6950), one handstone fragment (PD 6809), and one ground stone fragment covered in pigment (PD 5139). In addition, one deer skull (PD 5347) was found along the back wall near the northeastern corner of the house, and five cores, two flakes, three red ware sherds, five plain ware sherds, and two Roosevelt Red ware sherds were recovered from the general-floor provenience (PDs 5102, 5293, and 5327).

Evidence for Remodeling

Feature 4684 did not appear to exhibit any major remodeling. The only evidence for possible remodeling is suggested by the location of two postholes (Subfeatures 27 and 31) that did not conform to the overall posthole patterning within the house. Both postholes were located in the portion of the house built on top of the Feature 5616 fill. These postholes may have been added later to provide further support to the raised floor in this structurally weak area.

Abandonment Processes

Several artifacts were left on the floor of the house when it was abandoned. At some point later, the structure intentionally or accidently burned, as evidenced by the discrete layer of burnt construction material found in the house fill. The presence of fluvial sands in front of the entryway suggests that the structure was unoccupied for some time before it burned. Thus, the abandonment of the house likely was not catastrophic. Interestingly, the adobe house immediately to the east (Feature 4683) contained similar washed-in sands, indicating a corresponding process of abandonment.

Associated, Intrusive, or Superimposed Features

Feature 4684 partially overlay two earlier structures (Features 4682 and 5616). It was not associated directly with any other feature, but it was one of four Late Formative period adobe-walled structures identified at the Mescal Wash site. It was located immediately to the west of and may have been contemporary with Feature 4683, one such adobe house. Both structures had similar architectural features, including a raised floor and corresponding floor pits, although Feature 4684 was larger than Feature 4683.

Chronology

An archaeomagnetic sample (SRI 2384) was collected from the structure's hearth and returned the date range options of A.D. 585–1015 and 1310–1690. The architectural style of the house and the projectile points and ceramics recovered from the floor indicate that the later date range is the best age estimate for the abandonment of this adobe structure.

Locus D, Feature 4683

Center of feature UTMs: N 3538364.74, E 541487.07
Architectural type: adobe-walled pit structure
Date range: A.D. 1385–1450
House dimensions: 5.45 by 3.65 m; floor area 13.55 m^2; pit depth 0.57 m
Entryway dimensions: 0.93 by 0.48 m; floor area 0.26 m^2
Shape: rectangular
Orientation: southwest
Internal features: 1 hearth, 2 central-support postholes, 28 interior postholes, and 2 intramural pits
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PDs 2999, 5034, and 6651
Related features: none

Feature 4683 was a rectangular, southwest-facing, adobe-walled pit structure located in the south-central portion of Locus D (see Figure 82). It was located immediately to the east of a possibly contemporary adobe house (Feature 4684) (Figure B.81). The structure was identified and fully excavated during Phase 2. It contained a number of internal features, including 1 formal hearth (Subfeature 1), 2 central-roof-support postholes (Subfeatures 3 and 13) and 24 regularly spaced postholes (Subfeatures 4–12, 14–18, 20–26, 28, 29, and 31) that indicate that the floor had been raised (Figure B.82). Four additional interior postholes may reflect remodeling of the floor (Subfeatures 19, 27, 30, and 32). Similar to the other adobe-walled structures at the site, Feature 4683 possessed an ovate, shallow floor pit (Subfeature 34) at the threshold of the entryway, and a second pit (Subfeature 33) was located to the side of the entry opening. Numerous artifacts were found on the floor of the house (Table B.50), including four partially reconstructible plain ware vessels (PDs 5031, 5033, and 6645), half of a plain ware jar (PD 6872), one possible spindle whorl (PD 5032), and one bone awl (PD 6868). The house fill contained a thick layer of charred construction material that clearly indicates the structure had burned.

Excavation Methods

Feature 4683 was initially identified during the Phase 2 mechanical stripping of Stripping Units 6791 and 6793 when the backhoe exposed the top of its adobe walls. The fill in the western two-thirds of the structure was removed mechanically as a single 40-cm-thick unit (Half 1) to within approximately 10 cm of the floor. Observed artifacts were collected, but the fill was not screened. Half 1 was then bisected and hand-excavated to the floor in two units (Quarters 1 and 2). All of the fill was screened though 1/4-inch mesh, and a flotation sample was collected from each unit (PDs 2997 and 2999). Likewise, botanical samples were collected from the structural debris encountered in each unit (PDs 2997 and 2999). The entry to the house was excavated as part of Quarter 1. Two pieces of ground stone were point located in the structural debris of Quarter 1 (PDs 5029 and 5030), and a pollen sample was scraped from the floor beneath each (PDs 5034 and 5035). Two additional pollen samples were collected from the entry floor exposed in Quarter 1 (PDs 5004 and 6646). Finally, six pollen samples (PDs 6754–6759) were collected from the different strata exposed in the structural profile during excavation of Quarters 1 and 2.

A 1-by-2-m control unit (Test Pit 6761) was placed in the eastern third of the structure. It was excavated manually to the floor in five 10-cm arbitrary levels. The fill was screened through 1/4-inch mesh, and a flotation sample was collected from each level (PDs 6763, 6803, 6813, 6814, and 6820).

The remaining fill in the structure was excavated manually to the floor as one unit (Half 2) in two levels. The upper level consisted of the upper approximately 40 cm of fill and terminated at the structural debris. Observed artifacts were collected, but this level was not screened. The lower level consisted of the 10 cm of structural debris above the floor, and it was screened through 1/4-inch mesh. A flotation sample was collected from the fill (PD 7039).

Exposure of the floor revealed a number of subfeatures, including 1 hearth, 30 postholes, and 2 floor pits. Each posthole was excavated in a single level, and the fill was screened through 1/4-inch mesh. A botanical sample (PDs 6653, 6891, 6893, 6895, 6897, and 6901) was collected from 6 of the postholes (Subfeatures 3, 12–15, and 17). The entire fill from the hearth was collected as a flotation sample (PD 6651), a pollen sample was scraped from the base (PD 6651), and an archaeomagnetic sample (SRI 2383) was collected from the pit walls. A second archaeomagnetic sample (SRI 2388) was collected from the structure's floor and walls. One of the floor pits (Subfeature 33) was excavated in a single 1/4-inch-screened level, and a flotation sample was collected from the fill (PD 5543). The entire fill from the other floor pit (Subfeature 34) was collected as a flotation sample (PD 5567), and a pollen sample (PD 5638) was scraped from its base. A possible mano (PD 5637) was point located on top of the pit fill, and a pollen sample was collected from beneath it (PD 5631). Other artifacts encountered on the floor surface were point located as well (see Table B.50), and eight pollen samples (PDs 5276, 6647–6649, 6774, 6770, 6777, and 6780) were collected from beneath five of them (PDs 5274, 6645, 6769, 6776, and 6779).

Stratigraphy

The house pit for Feature 4683 was excavated into the native paleosol. The upper portion of the pit walls consisted of

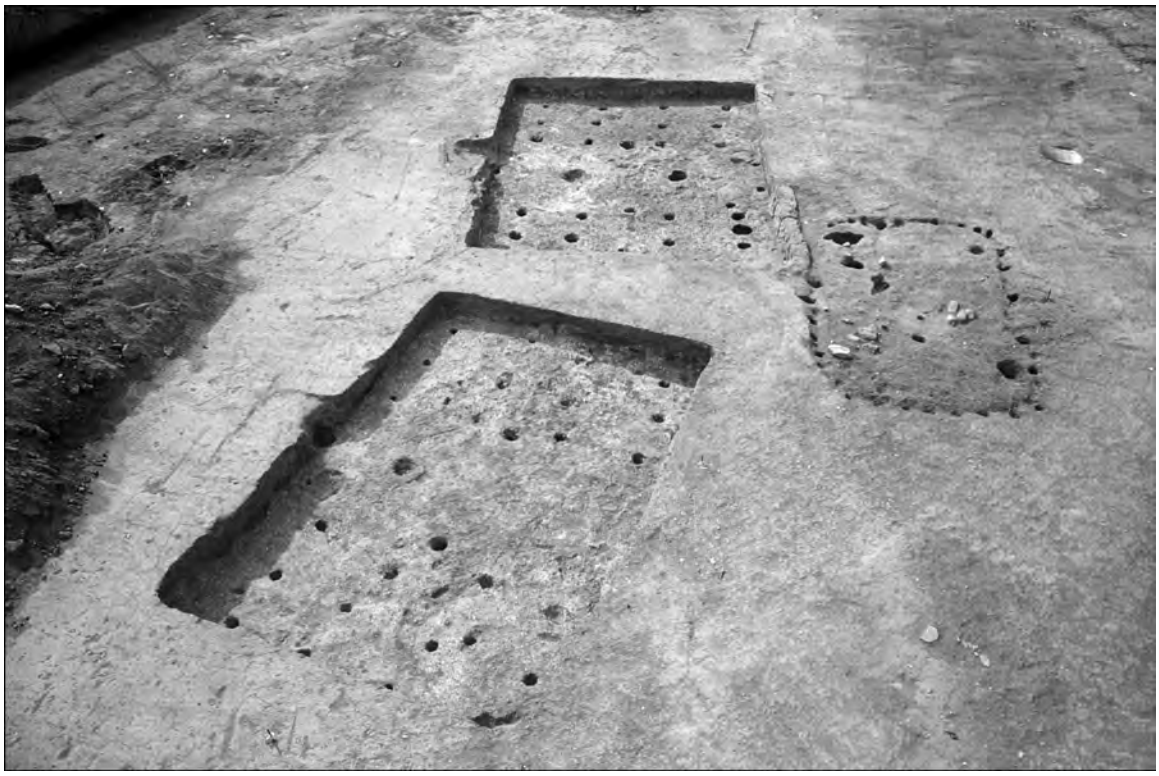

Figure B.81. Overview of Features 4683 and 4684 (adjacent adobe structures) and Feature 4682, a Middle Formative period house-in-a-pit.

Figure B.82. Plan view of Feature 4683, looking south.

Table B.50. Feature 4683 Point-Located Floor Artifacts

PD No.	Artifact Description
5031	Sherd cluster consisting of a plain ware reconstructible vessel (Vessel No. 47), 1 Roosevelt Red ware sherd, 1 indeterminate Tucson Basin red-on-brown sherd, and 2 plain ware sherds.
5032	1 plain ware spindle whorl.
5033	Plain ware reconstructible vessel (Vessel No. 57).
5052	Grinding slab.
5274	Grinding slab.
5275	Mano fragment.
5277	14 plain ware sherds.
5278	Netherstone fragment.
5279	Mano fragment.
6644	Mano with blue pigment.
6645	Sherd cluster consisting of 2 plain ware reconstructible vessels (Vessel No. 50 and 60), 1 red-on-brown sherd, 10 plain ware sherds, 1 possibly worked plain ware sherd, and 14 small indeterminate sherds.
6768	Unifacial utilized flake (Tool No. 394).
6769	Bifacial chopper (Tool No. 396).
6771	Grinding slab fragment.
6772	Mano.
6773	1 plain ware sherd.
6775	Pecking stone/core (Tool No. 583).
6776	1 plain ware sherd.
6778	Core.
6779	Possible pestle.
6781	3 plain ware sherds.
6815	Flake.
6868	Pronghorn bone awl.
6869	Possible hammer stone.
6870	Possible core.
6871	Mano fragment.
6872	Half of an intact plain ware jar (Vessel No. 58).
6873	Mano fragment.

Key: PD = provenience designation.

highly oxidized, reddish argillic sediment. The lower portion of the house pit and the floor consisted of calcic soil.

Three discrete deposits were recognized in the fill of the house: feature fill, structural debris, and floor fill. The feature fill comprised the upper 32–40 cm of sediment in the house pit and consisted of postoccupational, wind-blown silts and sands mixed with light cultural material and adobe melt. This stratum represents the collapse of the adobe walls and the concurrent and subsequent infilling of the structure. The artifact density throughout this level was low, and charcoal was present but not abundant. Melted adobe from the collapsed walls of the structure was present toward the base of the level, concentrated along the pit walls. The upper 20 cm of fill in this level was extremely compact because of the overlying railroad access road.

Below the feature fill was a 10-cm-thick layer of structural debris. This deposit was comprised of large chunks of orange, burnt adobe on top of a 1–3-cm-thick lens of charcoal. The charcoal contained large beam fragments and the remains of reed matting, both of which were collected for species identification. This deposit represents the burning and collapse of the house's superstructure.

The floor fill consisted of a 2–5-cm-thick layer of light brown, clean sand and was present in the eastern and western sides of the house beneath the structural debris. The location of this deposit within the house coincided with the areas where the floor was originally raised. In addition, a localized, thick deposit of washed- or blown-in sand was found concentrated immediately inside of the entryway. The sand apparently had accumulated through the entryway before the structure had burned.

Disturbances

An overlying, modern road used for railroad maintenance had severely compacted the upper fill of the house, making manual excavation fairly difficult. In addition, roots, rodents, and insect activity had significantly damaged the walls and floor.

Construction Details

Feature 4683 was rectangular in plan view with a south-facing entryway (Figure B.83). The house pit measured 5.45 m east–west by 3.65 m north–south with the long axis oriented roughly northwest–southeast.

Walls and Roof

The house originally had aboveground adobe walls that were constructed along the outside edge of the house pit. Remnants of these walls were exposed but then later destroyed during Phase 2 mechanical stripping. The adobe walls were about 10 cm thick and appear to have been free-standing, as there was no evidence for postreinforcement.

The house pit was about 50 cm deep and had vertical walls that were lined with a thick, gray plaster. The plaster was notably well preserved, although slumping had occurred in some places. Where plaster was not preserved, the pit walls were highly oxidized and orange in color. The pit walls met the floor at a 90° angle with a slight slope at the juncture between the two.

Two central-support postholes (Subfeatures 3 and 13) were found along the midline of the structure, spaced 1.7 m apart. They measured 12–18 cm in diameter and were 23–26 cm deep (Table B.51). These were the largest and deepest postholes identified in the structure, and they anchored the posts that supported the roof of the house. Large chunks of burnt adobe found in the house fill suggest that the roof was covered with adobe.

Entry

The entry (Subfeature 2) consisted of a 50-cm-wide entry pad that extended 60 cm out from the south wall of the house. The entry pad ramped slightly into the house and terminated with a 40-cm-deep step into the house pit. The wall of the house pit beneath the entry pad was slightly concave. A small, ovate pit (Subfeature 34) of unknown function was located in the house floor immediately in front of the entry. Similar pits were found in other adobe houses excavated at the site.

Floor

The floor of the house pit consisted of the calcium-rich, native subsoil, which apparently had been puddled to create a smooth, even surface. It measured 4.89 m long by 3.10 m wide and had an area of 13.55 m^2. The patterning of 24 interior postholes (Subfeatures 4–12, 14–18, 20–26, 28, 29, and 31) suggests that the structure possessed a partially raised floor. Four rows containing three evenly spaced postholes were found on either side of the house (see Figure B.83). These postholes ranged in size from 6 to 25 cm in diameter and 6 to 24 cm in depth (see Table B.51). They likely supported short, wooden uprights used to elevate the floor. Reeds found in the house fill suggest that the floor may have been covered with matting. Four additional interior postholes (Subfeatures 19, 27, 30, and 32) were offset slightly from these rows and may reflect remodeling of the floor.

The floor area that was not elevated consisted of a 2-m-wide strip in the center of the house extending from the entry to the back wall. Here, the floor was plastered, heavily worn, and stained gray. The hearth and a concentration of floor artifacts were found in this area, which may have been the main activity area of the house.

Floor Features

Hearths

The hearth (Subfeature 1) was a small, circular, plaster-lined pit located about 1 m in front of the entryway. It measured 25 cm in diameter and was 10 cm deep, and it had a well-preserved, 10–12-cm-wide plaster collar. Much of the plaster inside the hearth pit had been impacted by roots and rodents. The fill within the hearth consisted of gray-brown, ash-laden silts and sands with small charcoal flecks and a few pieces of burnt animal bone. An anomalous pocket of ash was found beneath the floor to the north of and adjacent to the hearth. This pocket was likely the result of a rodent disturbance, as a rodent tunnel led from the ash pocket to the hearth.

Pits

Subfeature 33 was a shallow, oval, plaster-lined pit located along the southern wall of the house near the entry. It measured 40 by 30 cm in plan view and was a maximum of 3 cm deep. Its morphology and location within the house suggest that it may have functioned as a pot rest or mixing bin of some sort. The plaster inside of the pit was cracked and heavily affected by root and rodent activity.

Subfeature 34 was a small, ovate pit located directly in front of the entryway. It measured 28 by 22 cm in plan view and was a maximum of 14 cm deep. The pit walls and base consisted of the native calcic substrate and showed no signs of oxidization. The pit was filled with silty loam that had a high density of artifacts. A large mano (PD 5637) capped the fill of the pit at the level of the floor.

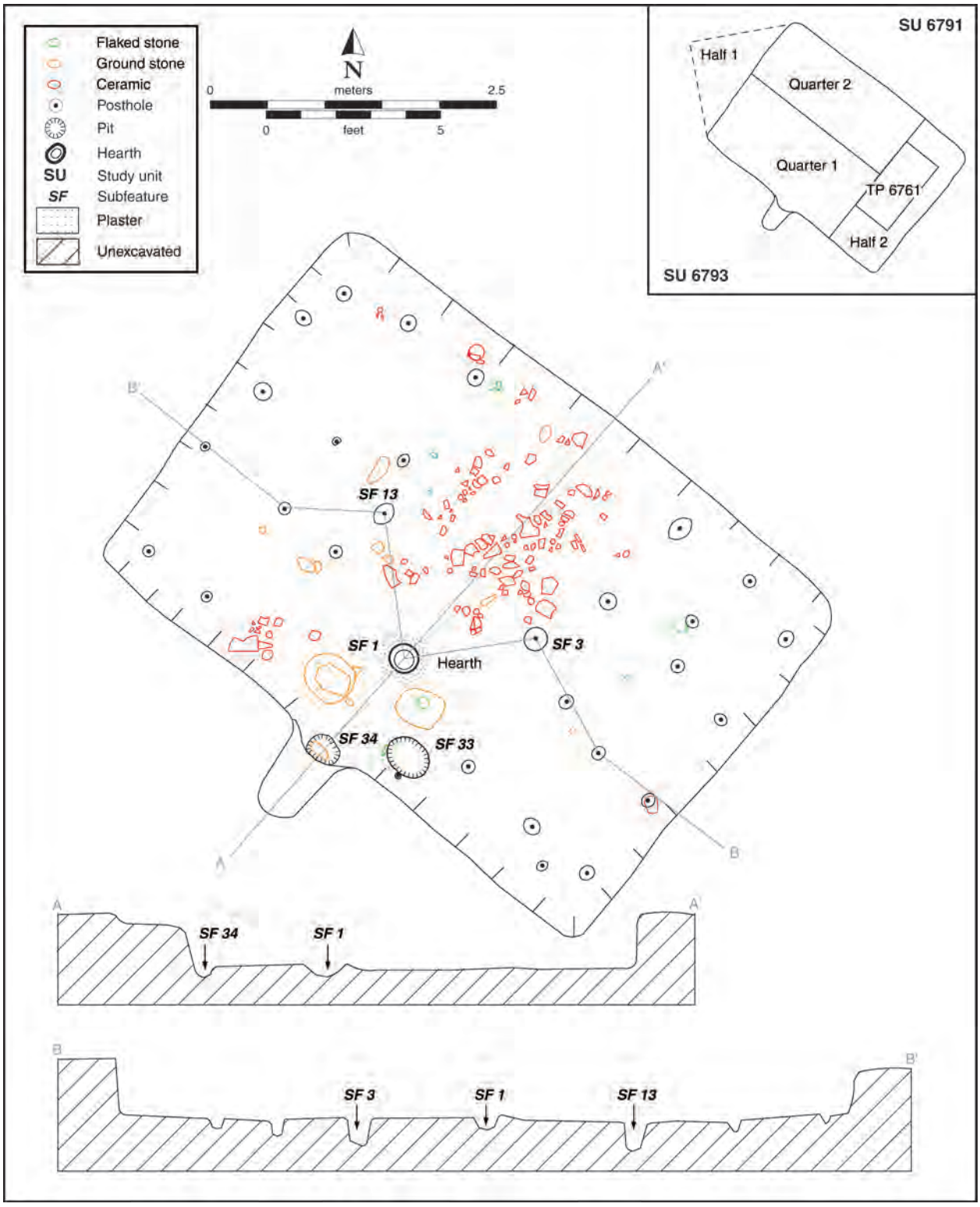

Figure B.83. Plan map of Feature 4683 showing the locations of subfeatures and point-located floor artifacts and samples.

Table B.51. Feature 4683 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
3	6653	18	17	23	C
4	6875	9	9	20	I
5	6877	14	14	6	I
6	6879	14	13	24	I
7	6881	14	13	9	I
8	6883	9	9	6	I
9	6885	13	10	8	I
10	6887	10	8	11	I
11	6889	9	8	10	I
12	6891	13	12	7	I
13	6893	17	12	26	C
14	6895	12	10	9	I
15	6897	15	14	13	I
16	6899	25	16	9	I
17	6901	16	15	10	I
18	6903	16	12	11	I
19	6905	7	6	13	I
20	6907	12	12	10	I
21	6909	12	11	7	I
22	6911	13	13	12	I
23	6913	18	16	10	I
24	6915	10	9	10	I
25	6917	12	12	11	I
26	6919	13	13	11	I
27	6928	11	9	11	I
28	6930	11	11	16	I
29	6932	13	11	11	I
30	6934	10	8	6	I
31	6936	8	6	12	I
32	6938	17	14	7	I

Key: C = central-support posthole; I = interior posthole; PD = provenience designation.

Artifacts

Several intact and broken artifacts were recovered from the floor of Feature 4683 (see Table B.50). These were concentrated primarily in the central part of the house where the floor was plastered and not raised. Artifacts included 4 reconstructible plain ware vessels (PDs 5031, 5033, and 6645), almost half of 1 small, intact, plain ware jar (PD 6872), 1 plain ware spindle whorl (PD 5032), 1 bone awl (PD 6868), 11 pieces of ground stone (PDs 5052, 5274, 5275, 5278, 5279, 6644, 6771, 6772, 6779, 6871, and 6873), and 3 flaked stone tools (PDs 6768, 6769, and 6775). In addition, 6 pieces of debitage, 6 flakes, 2 cores, 2 flaked stone tools, 1 arrow point blank, 4 Roosevelt Red ware sherds, 1 red ware sherd, 31 plain ware sherds, and 1 possibly worked plain ware sherd were recovered from the general-floor provenience (PDs 2998, 3000, 6832, and 7040).

Evidence for Remodeling

The only evidence for possible remodeling found in Feature 4863 is the presence of four interior postholes (Subfeatures 19, 27, 30, 32) that did not conform to the overall pattern within the house. These postholes may have been added after the house was constructed to provide supplemental support for the raised floor.

Abandonment Processes

Several artifacts were left on the floor when it was abandoned. At some point later, the structure intentionally or accidentally burned, as evidenced by the discrete layer of burnt construction material found in the house fill.

The presence of washed-in or blown-in sands below this layer and in front of the entryway suggests that the structure was unoccupied for some time before it was consumed by fire. Thus, the abandonment of the house likely was not catastrophic. Interestingly, the adobe house immediately to the west (Feature 4684) contained similar washed-in sands, indicating a corresponding mode of abandonment.

Associated, Intrusive, or Superimposed Features

No features were directly related to Feature 4683, but it is one of four adobe structures excavated at the site. It was located immediately to the east of and may have been contemporary with Feature 4684, one such adobe house. Both structures had similar architectural features, including a raised floor and corresponding floor pits although Feature 4684 was larger than Feature 4683.

Chronology

An archaeomagnetic sample (SRI 2383) was recovered from the structure's hearth and returned date range options of A.D. 635–690, 910–1015, and 1385–1690. A second sample (SRI 2388) was collected from the structure floor and walls, but it was not analyzed. Based on the architectural style and the Roosevelt Red ware sherds recovered from the floor, the latest date range option (A.D. 1385–1690) is the best age estimate for the abandonment of the structure.

Locus D, Feature 4733

Center of feature UTMs: N 3538400.97, E 541429.25
Architectural type: house-in-a-pit (pole-and-brush)
Date range: ca. post A.D 500
House dimensions: 2.29 by 1.82 m; floor area 2.46 m^2; pit depth 0.09 m
Entryway dimensions: unknown
Shape: oval
Orientation: south?
Internal features: 1 floor groove, 1 central-support posthole, 17 perimeter postholes, and 2 intramural pits
Chronometric techniques: none
Analyzed botanical samples: none
Related features: none

Feature 4733 was a small, shallow, oval house-in-a-pit of pole-and-brush type (Figure B.84). It was discovered beneath the dirt access road along the north side of the railroad in the far western portion of Locus D (see Figure 81), and it was completely excavated. This structure contained

Figure B.84. Plan view of Feature 4733, looking south.

1 floor groove (Subfeature 2), 1 central-support posthole (Subfeature 20), 2 intramural pits (Subfeatures 1 and 21), and 17 perimeter postholes (Subfeatures 3–19). No hearth or hearth area was discovered, and no entryway was located. A narrow break in the floor groove along the south wall of the house may indicate the entry position for this structure. No other features were stratigraphically associated with this structure.

Excavation Methods

Feature 4733 was exposed during the Phase 2 mechanical stripping of Locus D. It was excavated to the floor in two halves. The southern half (Half 1) was stripped to the floor, and the pit walls were removed in order to expedite location of the hearth. Observed artifacts were collected, but the fill was not screened. No hearth was located, but a floor groove and the southern half of a pit orifice were exposed. The pit was thought to be intrusive to the structure, and the exposed portion was excavated separately from the structure. During excavation, it became apparent that the pit fill did not differ from that of the structure and that it was actually an intramural floor pit. Based on the relationship between pit and structure, the decision was made to completely excavate Feature 4733.

The northern half (Half 2) was excavated to the floor in a single 7–8-cm level, and the fill was screened through 1/4-inch mesh. A flotation sample (PD 9575) and a pollen sample (PD 9575) were collected from this level.

Exposure of the floor revealed a number of floor features, including 1 floor groove, 1 central-support posthole, 17 perimeter postholes, and 2 pits. The floor groove and postholes were excavated individually, and the fill was screened through 1/4-inch mesh. The large bell-shaped floor pit (Subfeature 1) was excavated in two halves. The southern half was excavated in two 1/4-inch-screened levels, and a flotation sample was collected from each level (PDs 8896 and 8900). The northern half was excavated in a single level. The fill was not screened, but observed artifacts were collected. The second, smaller pit (Subfeature 21) was excavated in a single 1/4-inch-screened level, and a pollen sample was collected from its base (PD 9641). Finally, a composite pollen sample (PD 8910) was collected from the structure's floor.

Stratigraphy

The house pit was dug into the calcium carbonate–rich, reddish brown argillic horizon present throughout Locus D. The pit was filled with a grayish brown clayey loam. This deposit contained 1–2 percent gravels and few artifacts. It had been compacted by traffic along the overlying dirt road.

Disturbances

Feature 4733 was intruded by a historical-period or modern groove that was similar to bulldozer ripper marks (Figure B.85). The groove was identified after the floor was cleared and left unexcavated. It was determined to be related to the construction of the railroad or the interstate interchange. The groove was oriented northwest–southeast. Rodents, insects, and roots also contributed to the disturbance of Feature 4733. No other features intruded the structure.

Construction Details

The structure was oval in plan view and may have opened to the south (see Figure B.85). The house pit measured 2.29 m east–west and 1.82 m north–south, and it had a remaining depth of 9 cm.

Walls and Roof

The pit walls consisted of the native, sterile subsoil and sloped down to meet the floor about 1–2 cm from the outer edge of the floor groove (Subfeature 2). The floor groove was 7–20 cm wide and 3–5 cm deep, and filled with a grayish brown clayey loam that was similar to the house fill.

Seventeen postholes (Subfeatures 3–19) were found inside the floor groove. They ranged from 5 to 12 cm in diameter and 9 to 26 cm in depth (Table B.52). A central-support posthole (Subfeature 20) was discovered in the center of the structure and extended 26 cm below the floor. One of the perpendicular grooves truncated the eastern two-thirds of this post, disturbing it to a depth of 6 cm below floor. The upper fill of the postholes resembled that of the structure. The lower two-thirds of the postholes, however, contained redeposited sterile soil. This was a light brown silty clay loam, and it was probably deposited as backfill around the wall posts. Based on the burnt and unburnt daub found in the fill, the superstructure probably consisted of earth covered brush.

Entry

A formal entry was not identified for this feature. A gap in the floor groove along the south wall of the structure may indicate the location of the entry, but it is also possible that this portion of the floor groove was scraped away during mechanical excavation.

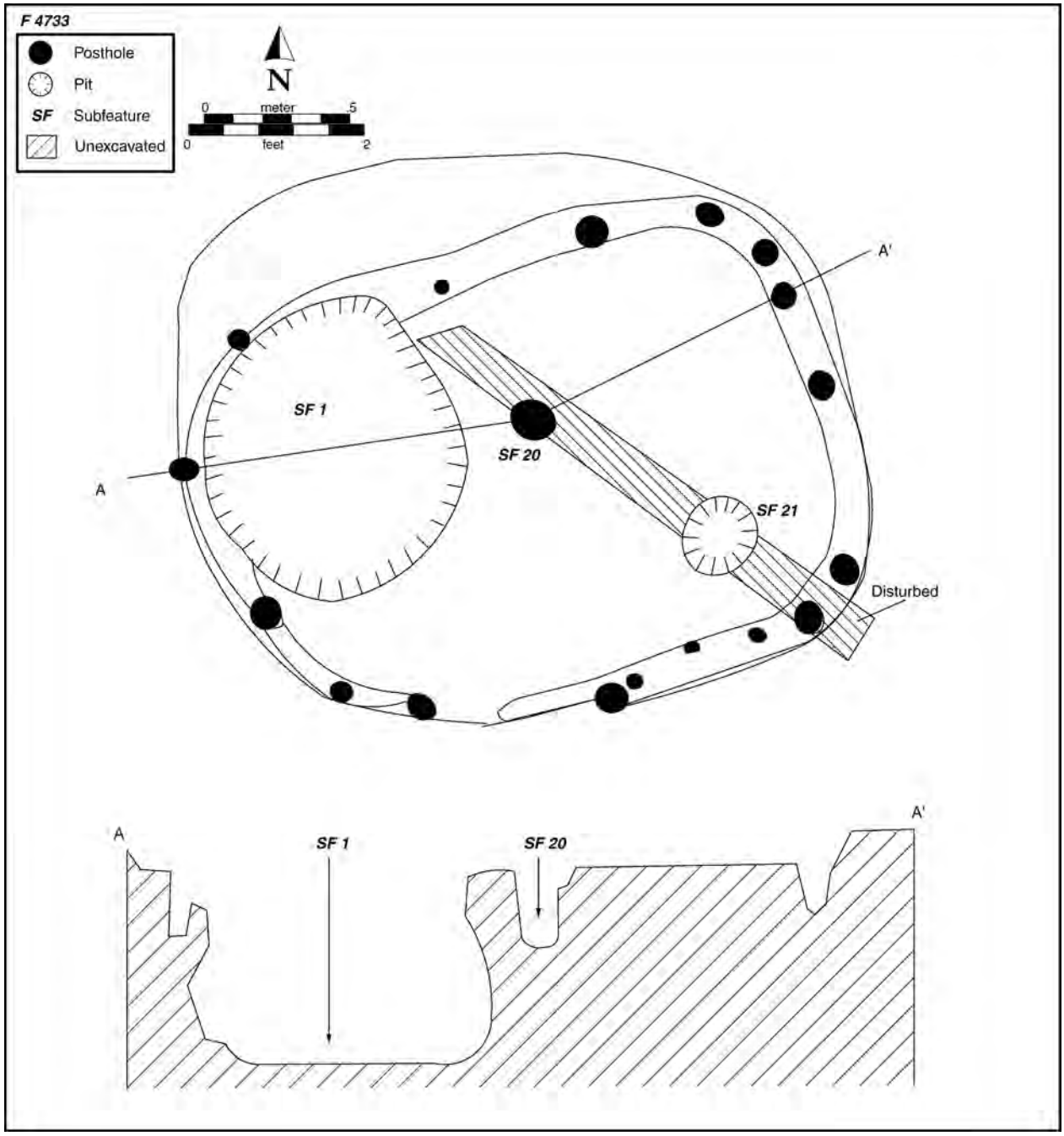

Figure B.85. Plan map of Feature 4733 showing the location of floor features.

Table B.52. Feature 4733 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
3	9594	7	7	18	P
4	9596	12	10	14	P
5	9598	7	6	13	P
6	9600	9	9	13	P
7	9608	10	8	13	P
8	9610	5	5	10	P
9	9612	5	5	10	P
10	9614	5	5	9	P
11	9616	10	10	18	P
12	9618	11	10	18	P
13	9620	11	10	16	P
14	9622	9	8	19	P
15	9624	9	8	16	P
16	9626	10	10	19	P
17	9628	12	10	17	P
18	9630	5	5	10	P
19	9632	7	7	26	P
20	9634	16	13	26	C

Key: C = central-support posthole; P = perimeter posthole; PD = provenience designation.

Floor

The floor consisted of the calcic, sterile substrate. It was not plastered, and no evidence of burning was noted.

Floor Features

Hearths

No hearth was discovered in Feature 4733.

Pits

Two pits were located in the floor of this structure (see Figure B.85). The first pit (Subfeature 1) was a bell-shaped storage pit that was located in the northwest corner of the house; it undercut the structure's floor groove in this area. It was 96 cm long, 84 cm wide, and 70 cm deep. The pit was circular in plan view and had slightly bell-shaped walls. The walls consisted of the native calcic paleosol and an underlying layer of gravel and sand, and the base was lined with a calcic clay layer. The pit's fill consisted of a grayish brown clayey loam mixed with gravels, and it may have been deposited intentionally before the house was abandoned.

The second pit feature (Subfeature 21) was located in the southeast corner of the structure. It was a shallow, basin-shaped pit that may have functioned as a pot or basket rest. It was 28 cm long, 27 cm wide, and 5 cm deep where preserved. The historical-period or modern groove removed the central portion of this pit. The fill of this subfeature was similar to that of the structure.

Artifacts

No artifacts were found in contact with the floor.

Evidence for Remodeling

There was no evidence that Feature 4733 was remodeled.

Abandonment Processes

This structure was cleaned out before being abandoned, and it is possible that the large bell-shaped storage pit was intentionally filled by the structure's occupants. The burnt and unburnt daub encountered during excavation suggest that the structure partially burned after it was abandoned. The house pit then filled with windblown sediments and cultural trash.

Associated, Intrusive, or Superimposed Features

No other features are associated directly with this structure.

Chronology

No chronometric samples were collected from this structure, and very few datable ceramics were recovered from the structure's fill. Two painted ceramics from the fill of the bell-shaped storage pit have production dates of A.D. 750–850, but they may or may not reflect the age of the structure. Based on the architectural style, this structure was built and occupied during the Middle Formative period (ca. A.D. 700–1150). Its age cannot be refined further without additional chronometric data.

Locus D, Features 4768 and 8655

Features 4768 and 8655 were superimposed structures (Figure B.86) located in the northwest corner of Locus D (see Figure 81). They were identified in the walls of Trench 163 and given a single feature number (Feature 472) during Phase 1. The composite nature of the feature was determined during Phase 2 mechanical stripping. Both structures were subrectangular in shape. Feature 4768 was a slightly darker stain that intruded on the southern portion of Feature 8655, indicating that it postdated Feature 8655. Feature 4768 was excavated first, allowing for complete exposure of Feature 8655.

Locus D, Feature 4768

Center of feature UTMs: N 3538429.37, E 541433.74
Architectural type: house-in-a-pit
Date range: A.D. 1010–1090
House dimensions: 5.37 by 3.42 m; floor area 15.34 m^2; pit depth 0.48 m
Entryway dimensions: 1.57 by 1.76 m
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 1 floor groove, 1 entry floor groove, 2 central-support postholes, and 60 interior and perimeter postholes
Dating techniques: archaeomagnetism and dendrochronology
Analyzed botanical samples: PDs 8932, 8948, 8950, 8972, 8982, and 11,346
Related features: intrudes Feature 8655

Feature 4768 was a subrectangular pit structure with a formal stepped entrance oriented toward the north (Figure B.87). It contained a number of floor features, including 1 hearth (Subfeature 1), 1 floor groove (Subfeature 2), 1 entry floor groove (Subfeature 18), and 62 postholes (Subfeatures 4, 6–17, 19–60, and 62–68). The pattern of postholes across most of the house pit indicates that the structure had a raised wooden floor, and a square area of plaster located immediately inside the entryway likely served as a lower floor area around the hearth. Charred architectural debris (Figure B.88) in contact with the oxidized pit floor indicates that the structure had burned. A scorched juniper lintel (PD 8972) was recovered from the step in the entry, and it was submitted for dendrochronological analysis.

Excavation Methods

Feature 4768 was excavated in four units. The eastern three-fourths of the structure (Half 1) was manually and mechanically excavated in one 30-cm level. The fill was not screened, but observed artifacts were collected. In an effort to locate the floor, manual excavation continued for an additional 10 cm in a 1-by-1-m area in the center of this unit. The fill from this area was not screened, and collected artifacts were included with the rest of the artifacts from the first level of Half 1.

A 1-by-2-m control unit (Test Pit 8892) was placed in the western quarter of the structure. It was manually excavated in three 10-cm arbitrary levels and a fourth 6-cm level that terminated at the floor. The fill from all four levels was screened through 1/4-inch mesh. A flotation sample was collected from each level (PDs 8894, 8895, 8901, and 8902), and a composite pollen sample was recovered from the exposed floor (PD 8903).

Following excavation of the test pit, the rest of the fill in the western quarter (Half 2) was manually excavated in one 30-cm level to within 10 cm of the floor. The fill was not screened, but observed artifacts were collected. No samples were collected from this unit.

Finally, the 10 cm of fill left in the house pit was manually excavated to the floor in a single 1/4-inch-screened level. A flotation sample was collected from each quadrant of the house (PDs 8906, 8907, 8908, and 8909), and a composite pollen sample was recovered from the floor surface (PD 8918).

The entryway was excavated as a separate subfeature in two levels. The first level terminated at the top of the entry step; this level were not screened, but a sample of artifacts was collected. A pollen sample was collected from this level (PD 8961). The second level was excavated to the entry floor, and the fill from this level was screened

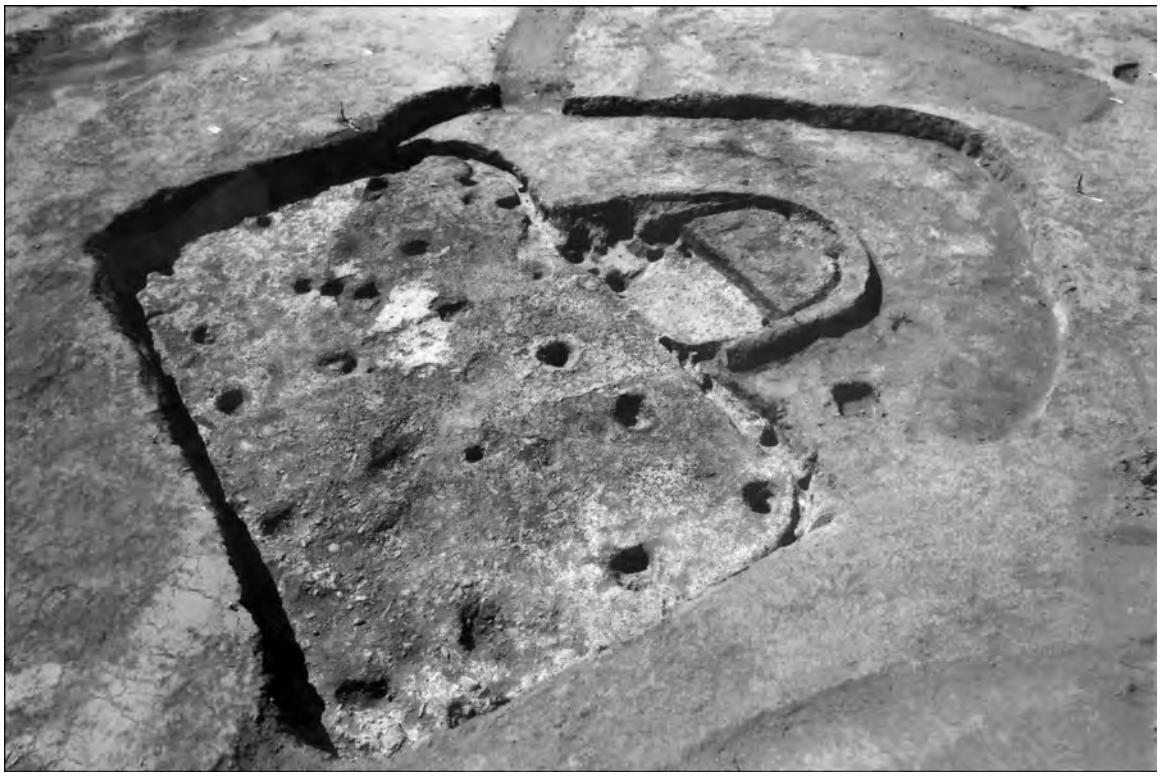

Figure B.86. Plan view of superimposed Features 4768 and 8655, looking northwest. Feature 8655 is only partially excavated in this photograph.

Figure B.87. Plan view of Feature 4768, looking northwest.

Figure B.88. Close-up of structural debris (PD 8917) encountered on the floor of Feature 4768.

through 1/4-inch mesh. A flotation sample (PD 8930) and a pollen sample (PD 8962) were collected from this level. A wooden sill (PD 8972) was discovered on the entry floor against the base of the earthen step, and a pollen sample was recovered from beneath this sill (PD 8973).

The exposure of the floor revealed a number of floor features, including 1 hearth, 1 floor groove, 1 entry floor groove, and 62 postholes. The floor grooves and individual postholes were excavated separately, and the fill was screened through 1/4-inch mesh. Botanical samples (PDs 8940, 8948, 8950, 8954, and 8958) were collected from five of the postholes (Subfeatures 7, 11, 12, 14, and 16). The hearth was excavated in two levels, and the fill from each level was collected as a flotation sample (PDs 8928 and 8929). A pollen sample (PD 8932) was scraped from the hearth's plastered base, and an archaeomagnetic sample (SRI 2450) was collected from the plaster. A second archaeomagnetic sample (SRI 2434) was collected from the structure's floor. Finally, 11 artifacts, artifact clusters, and botanical samples were point provenienced (PDs 8911, 8916, 8917, 8919–8922, 8963, 8979, 8981, and 8983) on the floor (Table B.53). Pollen samples (PDs 8980 and 8982) were recovered from beneath two of the point provenienced artifacts (PDs 8979 and 8981), and a third pollen sample (PD 8984) was recovered from beneath a rock located in the southwest corner of the structure.

Stratigraphy

The Feature 4768 house pit was constructed into three natural strata. The upper strata consisted of a 20-cm-deep reddish brown, sterile argillic horizon. This overlay a 20–30-cm-deep light brown to white, sterile calcic horizon. Finally, a channel-deposited layer of waterworn gravels was present in the southeastern portion of the pit bottom.

The pit fill was 40 cm deep and contained three strata. Stratum I was a 20-cm-thick layer of light brown silty clay loam with some ash and charcoal flecks. It included a small quantity of sherds and flaked stone artifacts. Stratum II was approximately 10 cm thick, darker and ashier than Stratum I, and had a higher organic content. Burnt reed, twigs, and wood were common, along with chunks of reddish orange (oxidized) and yellow (unoxidized) daub. Stratum II contained a moderate abundance of sherds and flaked stone artifacts, and a low quantity of ground stone. Stratum III was approximately 16 cm thick and rested on the floor of the structure. It was characterized by burnt architectural materials, which accounted for more than 50 percent of the matrix. Burnt materials included daub, wood, reeds, and grass thatching. Artifact content of Stratum III was similar to Stratum II.

Table B.53. Feature 4768 Point-Located Floor Artifacts

PD No.	Artifact Description
8911	Burnt reeds or grasses.
8916	One Rincon Red-on-brown sherd.
8917	Burnt structural debris.
8920	Burnt structural debris.
8921	Sherd cluster consisting of one Rincon Red-on-brown sherd, two indeterminate red-on-brown sherds, and six plain ware sherds.
8922	Sherd cluster consisting of one partially reconstructible Rincon Red-on-brown vessel and one plain ware sherd.
8963	Sherd cluster.
8972	Wooden entry sill or step riser; submitted for dendrochronology.
8979	Slab metate.
8981	Grinding slab fragment.
8983	Pestle.

Key: PD = provenience designation.

Disturbances

Trench 163 cut into the upper 25 cm of the pit fill and walls. Moderate amounts of rodent, root, and insect tunneling were observed throughout the feature. No features intruded this structure.

Construction Details

The structure was subrectangular in plan view and opened to the north (Figure B.89). The house pit measured 5.37 m east–west by 3.42 m north–south and had a remaining depth of 48 cm.

Walls and Roof

The walls of the pit were unprepared and showed no evidence of burning. The lower portion of the pit walls were undercut, articulating with the pit base at an 80° angle. A U-shaped floor groove (Subfeature 2) followed the edges of the pit base and marked the extent of the floor. It was 8–15 cm wide and 8 cm deep. It was filled with unstratified, well-sorted, light brown fine sands and silts, with a small quantity of dispersed coarse, subangular sand and fine gravel and a few artifacts.

Twenty-eight perimeter postholes (PDs 24–48 and 62–64) were located within the floor groove. They tended to be closer together along the western wall and more evenly distributed around the other three sides of the pit (see Figure B.89). They ranged in size from 6 to 22 cm in diameter and 1 to 15 cm in depth (Table B.54). Most cut into the pit walls, articulating with the floor at an 80° angle. Their fill was identical to that of the floor groove. The undercut pit walls and angled postholes suggest that the exterior walls canted in toward the center of the structure.

Two central roof support postholes (Subfeatures 14 and 54) were located along the long axis of the structure. These were larger than the perimeter postholes, measuring approximately 16 cm in diameter and more than 40 cm deep.

Entry

Feature 4768 had a combination ramp-and-step entry (Subfeature 3) that protruded from the northern pit edge. The entry pit measured 1.76 m east–west by 1.57 m north–south and had been excavated partially into the fill of Feature 8655. The floor of the entry ramp was composed of the sterile calcic subsoil and showed no sign of oxidation. The ramped floor sloped gently to the north to meet a 15-cm-high step that crossed the center of the entry pit. This step was composed of fill from Feature 8655 and was capped with a layer of prepared argillic soil.

An intact, split-plank juniper sill (PD 8972; Figure B.90) was discovered at the bottom edge of the vertically faced entry step. It measured 1.5 m long and extended several centimeters beyond the floor groove on each end. The western end of the juniper sill was scorched slightly. Two small postholes (Subfeatures 22 and 52) below the step probably functioned as sill anchors.

The perimeter floor groove from the main part of the structure continued into the entry pit to form the entry floor groove (Subfeature 18; see Figure B.87). It was U-shaped and 7 cm deep. Seven postholes (Subfeatures 20, 21, 23, 49–51, and 53) were discovered in the groove, and they ranged in size from 10 to 23 cm in diameter and 8 to 31 cm in depth (see Table B.54). They probably supported posts that would have framed the opening at each end of the entryway corridor (see Figure B.89).

The upper fill was similar to the uppermost stratum (Stratum I) found in the house pit and consisted of a light brown silty clay loam. The lower fill contained structural debris similar to the lowest stratum (Stratum III) of the main pit fill.

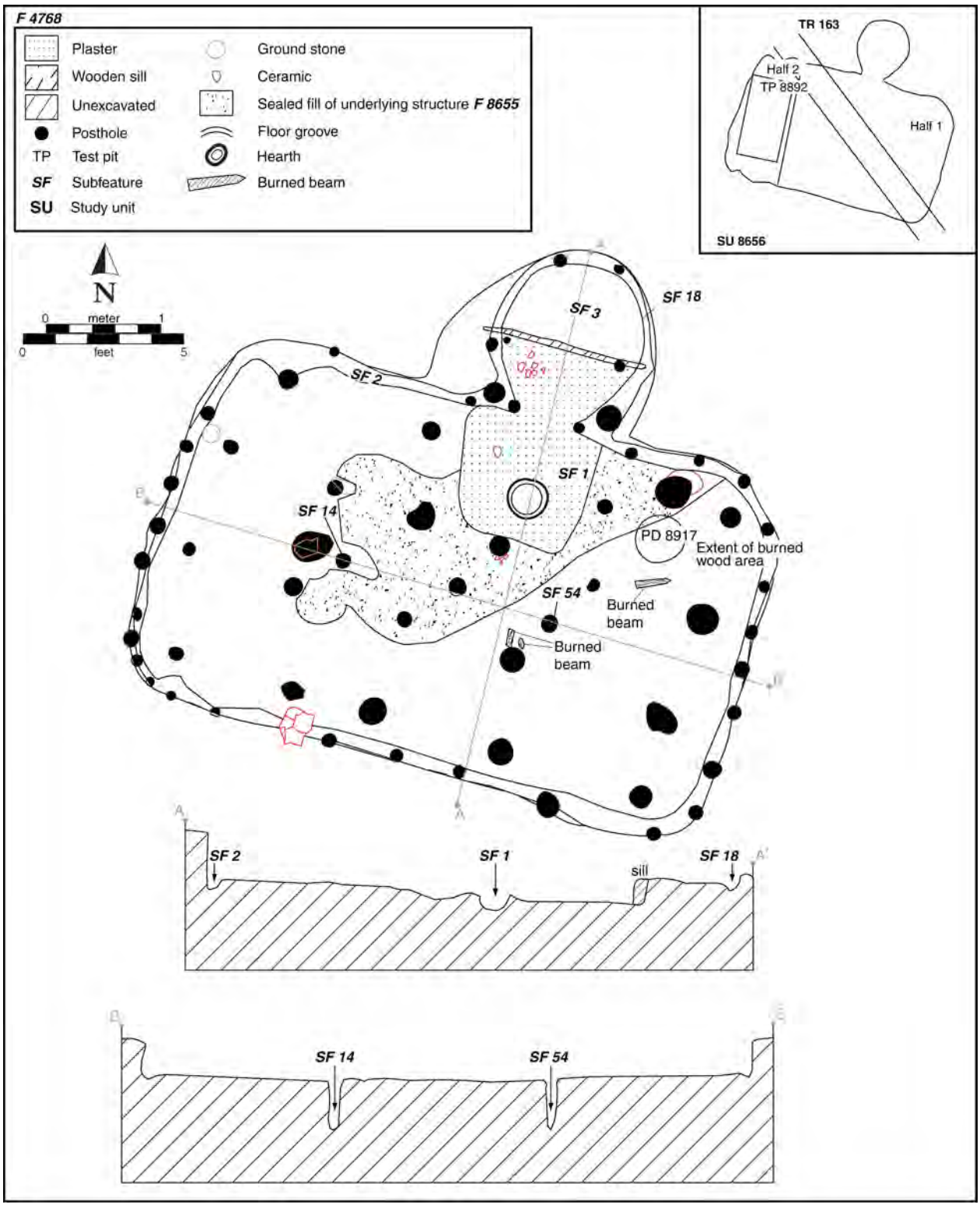

Figure B.89. Plan map of Feature 4768 showing the location of subfeatures and point-located artifacts.

Table B.54. Feature 4768 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
4	8934	13	9	7	I
6	8938	14	14	18	I
7	8940	14	13	28	I
8	8942	17	14	36	I
9	8944	16	12	12	I
10	8946	30	22	22	I
11	8948	23	22	36	I
12	8950	16	8	16	I
13	8952	9	9	3	I
14	8954	20	15	43	C
15	8956	20	21	9	I
16	8958	28	29	16	I
17	8960	20	22	12	I
19	8967	23	20	13	I
20	8971	23	17	31	E
21	8987	9	8	20	E
22	8989	9	9	8	E
23	8991	9	10	10	E
24	8993	10	10	6	P
25	8995	10	10	7	P
26	8997	11	12	15	P
27	8999	11	12	11	P
28	9501	14	12	10	P
29	9503	11	11	12	P
30	9505	18	16	5	P
31	9507	12	11	10	P
32	9509	11	10	10	P
33	9511	13	13	6	P
34	9533	22	18	12	P
35	9514	10	10	1	P
36	9516	11	11	5	P
37	9518	12	11	7	P
38	9520	9	9	8	P
39	9522	8	8	10	P
40	9524	7	7	7	P
41	9526	10	6	12	P
42	9528	9	8	6	P
43	9530	13	13	8	P
44	9532	15	14	13	P
45	9535	13	13	9	P
46	9537	12	11	10	P
47	9539	11	10	9	P
48	9541	10	8	9	P
49	9543	19	17	25	E
50	9545	10	10	15	E
51	9547	11	10	15	E
52	9549	6	5	7	E

continued on next page

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
53	9551	10	10	8	E
54	9553	14	14	44	C
55	9555	19	17	12	I
56	9557	23	24	10	I
57	9559	21	17	14	I
58	9561	15	9	13	I
59	9563	11	10	14	I
60	9565	12	12	40	I
62	9569	12	10	10	P
63	9571	13	12	8	P
64	9573	9	9	5	P
65	9889	36	26	41	I
66	9896	17	17	24	I
67	9898	15	12	20	I
68	9900	15	15	15	I

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.

Figure B.90. Close-up of the split-plank juniper sill located in the entry of Feature 4768.

Floor

The patterning of 23 postholes (Subfeatures 4, 6–13, 15–19, 55–60, and 65–68) in parallel, evenly spaced rows across the pit floor indicates that the structure had a raised floor (see Figure B.89). These postholes were between 9 and 36 cm in diameter and 3 and 41 cm in depth (see Table B.54). A square apron of applied plaster was discovered around the hearth and probably functioned as a lowered, open floor area. This apron was approximately 1.2 by 1.1 m.

The pit floor beneath the raised floor had an area of 15.34 m^2. It was prepared by wetting the sterile calcic substrate and then tamping it smooth to seal it. The primary roof-support posts and the floor posts were in place prior to this preparation, as this surface extended slightly over the posthole fill to form lips where it had once abutted upright posts. In parts of the structure, patches of this material were found to overlie a lower prepared surface that consisted of a reddish brown argillic clay. In the northwest portion, the red clay layer was used to seal the underlying fill from intruded Feature 8655. In the southeast part of the structure, the red clay was used to cover channel-deposited gravels. All intact surfaces were oxidized.

Floor Features

Hearths

A round, steep-sided, basin-shaped hearth (Subfeature 1) was located 50 cm south of the entry corridor in an area surrounded by floor plaster. An 8-cm-high raised plaster collar surrounded the hearth lip and sloped down to form the apron. The hearth measured 34 cm in diameter and was 15 cm deep. The collar and hearth plaster were heavily oxidized. The upper 8 cm of fill contained sediments and structural debris, presumably from the collapse of the structure, and the lower 7 cm of fill consisted of a light gray, fine ash with a few fine charcoal flecks.

Artifacts

Few artifacts were found in contact with the floor, and most were located along the walls in the plastered hearth area or in the entry (see Figure B.89). In total, one partially reconstructible Rincon Red-on-brown vessel (PD 8922), two sherd clusters (PDs 8921 and 8963), one Rincon Red-on-brown sherd (PD 8916), and three pieces of ground stone (PDs 8979, 8981, and 8983) were recovered from the floor of this structure. Several botanical remains, including charred wood and reeds (PDs 8911, 8917, 8919, and 8920; see Figure B.88), were removed from the floor for analysis. In addition, one Sacaton Red-on-buff, three Rincon Red-on-brown, one Tucson Basin or Dragoon Indeterminate red-on-brown, six indeterminate red-on-brown, and 18 plain ware sherds were recovered from the general-floor provenience (PDs 8903 and 8918). Likewise, a serrated Hohokam arrow point (PD 8918, Catalog No. 248) and 10 flakes were recovered from the general-floor provenience (PDs 8903 and 8918).

Evidence for Remodeling

There is no evidence that Feature 4768 was remodeled.

Abandonment Processes

The house was substantially burnt, as indicated by the extensive structural debris encountered throughout the structure and the heavily oxidized floor plaster. However, the minimal floor assemblage suggests that this was a planned, rather than catastrophic, abandonment and that the house was intentionally burned as part of this process. Eventually, the abandoned house pit filled with colluvial sediment and possibly some primary cultural refuse.

Associated, Intrusive, or Superimposed Features

Feature 4768 intruded the southern portion of the underlying pit structure Feature 8655. It was not intruded by any other feature.

Chronology

An archaeomagnetic sample was collected from the structure's hearth (SRI 2450), and a second sample was collected from the oxidized floor (SRI 2434). The hearth sample yielded date range options of A.D. 1010–1040 and 1160–1315, and the floor sample yielded date range options of A.D. 1010–1190 and 1235–1265. When the specimens from these two samples are combined, they yield the composite archaeomagnetic date ranges of A.D. 1010–1040, 1060–1090, 1160–1190, and 1235–1265 for the structure. The ceramics recovered from the floor context, including a partially reconstructible Rincon Red-on-brown vessel, have a combined production date range of A.D. 950–1150. A scorched juniper lintel (PD 8972) was submitted for dendrochronological analysis, but it could not be dated against the existing regional chronologies. Together, these data suggest that Feature 4768 was abandoned sometime between A.D. 1010 and 1090.

Locus D, Feature 8655

Center of feature UTMs: N 3538431.57, E 541434.32
Architectural type: house-in-a-pit
Date range: A.D. 825–1080
House dimensions: 5.38 by 3.68 m; floor area 16.53 m^2; pit depth 0.36 m
Entryway dimensions: unknown
Shape: subrectangular
Orientation: southeast?
Internal features: 1 hearth, 1 floor groove, 2 pits, and 78 postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PDs 8976, 8977, 9643, 9874, and 9875
Related features: intruded by Feature 4768

Feature 8655 was a subrectangular house-in-a-pit with an informal entryway that may have opened to the southeast (Figure B.91). It contained a number of floor features, including 1 hearth (Subfeature 1), 1 floor groove (Subfeature 2), 2 shallow pits (Subfeatures 52 and 59), and 78 postholes (Subfeatures 3–51, 53–58, and 60–82). Burnt structural debris in the fill and modest oxidation across the floor suggest that the structure had burned to some degree. The lack of a floor assemblage, however, indicates that it was probably not a catastrophic event. The southern portion of this structure was intruded by overlying structure Feature 4768.

Excavation Methods

Owing to the intrusion of Feature 4768, Feature 8655 was excavated in three irregularly shaped units and a test pit. Excavation began with a 1-by-2-m control unit (Test Pit 8974) positioned along the eastern edge of the feature stain in an area unaffected by the construction of Feature 4768. This unit was manually excavated to the floor in three 10-cm-deep levels. A composite flotation sample was collected from each level (PDs 8976, 8977, and 9635), and all remaining soil was 1/4-inch screened. A composite pollen sample was collected from the floor (PD 9636). No artifacts were found in contact with the floor.

The rest of the fill not affected by the construction of Feature 4768 was manually excavated in one unit (Half 1). A 21-cm-deep level was excavated to within approximately 10 cm of the floor. This level was not screened, but observed artifacts were collected. The second 10-cm level was excavated to the floor, and the fill was screened through 1/4-inch mesh. A composite flotation sample was collected from the second level (PD 9643), and a pollen sample was taken from the floor (PD 9644).

Finally, the fill that had been capped by Feature 4768 was excavated in two units. The first unit consisted of the structure fill that had been incorporated into the entry step of Feature 4768 (Feature 4768, Subfeature 3). This unit was excavated manually to the floor in a single 16-cm level, and the fill was screened through 1/4-inch mesh. A flotation sample was collected from the fill (PD 9815), and a pollen sample

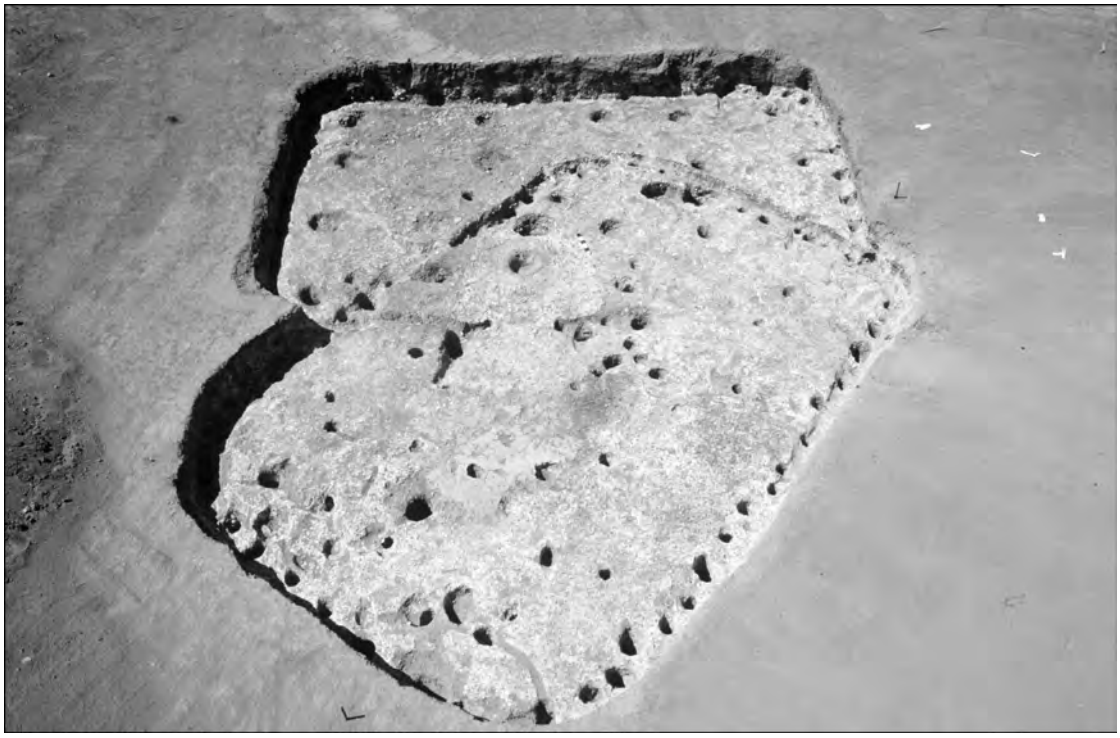

Figure B.91. Plan view of Feature 8655 (bottom), completely excavated and looking southwest. The intrusive structure Feature 4768 (top) is also shown.

was collected from the plastered floor (PD 9816). The remainder of the fill capped by Feature 4768 (Half 2) was excavated manually to the floor in a single 1–8-cm, 1/4-inch-screened level. A composite flotation sample (PD 9874) was collected from the fill, and a pollen sample (PD 9876) was recovered from the floor. In addition, an ashy area located on the floor in the center of this unit was collected for flotation (PD 9875). Artifacts found in contact with the floor at the base of both units were collected under a single provenience.

Once the floor was exposed, a number of floor features were recognized, including 1 informal hearth, 1 floor groove, 2 shallow pits, and 78 postholes. The individual postholes and 2 floor pits were excavated in single 1/4-inch-screened levels. Botanical samples (PDs 9698, 9700, 9704, and 9706) were recovered from four of the postholes (Subfeatures 24, 25, 27, and 28). The floor groove was excavated in two units (Halves 1 and 2), each of which was excavated in a single 1/4-inch-screened level. A bone awl (PD 9653) partially overlay the floor groove in the northeast part of the house (Figure B.92). The informal hearth area was excavated as part of the structure's floor, and no artifacts or samples were associated directly with this feature. An archaeomagnetic sample (SRI 2452) and a pollen sample (PD 9877) were collected from an oxidized section of floor plaster.

Stratigraphy

The Feature 8655 house pit was dug into a 20-cm-deep, reddish brown, sterile argillic horizon that overlay a 20-cm-deep, light brown to white calcic horizon. A channel-deposited layer of waterworn gravels was present in the southern portion of the pit bottom.

The structure fill was 34 cm deep and consisted of three strata. Stratum I was approximately 17 cm thick and consisted of a light brown silty clay loam with some ash and sparse charcoal flecks. Artifact density for this upper stratum was fairly low, and overall the stratum was similar to Stratum I in Feature 4768. Stratum II consisted of 12–14 cm of burnt and unburnt architectural debris mixed with brown sandy clay loam and reddish brown argillic clay. Artifact density was somewhat higher than in the preceding stratum. Stratum III was a 1–3-cm-deep lens of dark brown organic loam that probably originated as burnt structural debris. This layer included abundant, large charcoal pieces and had an artifact density similar to Stratum II.

Disturbances

The construction of Feature 4768 removed about 30 cm of the pit walls and fill in the southeastern third of the structure. Trench 163 removed 30 cm of fill from a small portion in the northwest corner. The floor retained most of its original surface and was easy to define. Minor rodent, insect, and root tunneling were present throughout the fill, floor, and some subfeatures as well.

Construction Details

Feature 8655 was subrectangular in plan view and opened to the southeast (see Figure B.91). The house pit measured 5.38 m east–west by 3.68 m north–south and had a remaining pit depth of 36 cm. The structure had a floor area of 16.53 m^2 as defined by the perimeter floor groove.

Walls and Roof

The pit walls were unprepared and showed no evidence of burning. They sloped down to meet the floor at the perimeter floor groove (Subfeature 2). The U-shaped groove was 10–15 cm wide and 8 cm deep, and it was cut into the native substrata. For the most part, the fill resembled the Stratum III house fill; however, this was underlain in some places by a brown sandy loam that may have been deposited during occupation of the structure or soon after abandonment. Artifact density was very low throughout the groove fill.

Fifty-five perimeter postholes (Subfeatures 3–22, 24, 26, 27, 29–42, 64, 66–81, and 83) were discovered at the base of the groove. The postholes were spaced fairly regularly throughout the groove, and they ranged in size from 6 to 19 cm in diameter and 6 to 42 cm in depth (Table B.55). All of the postholes contained charcoal, and a few contained charred and uncharred wood fragments as well (e.g., Subfeatures 24 and 27). Artifact density in the postholes was similar to that in the floor groove. A sherd disc (PD 9702) was discovered in one posthole (Subfeature 26).

Two central roof-support postholes (Subfeatures 25 and 62) were identified in the pit floor along the long axis of the structure. They measured around 40 cm in depth and 18 cm in diameter (see Table B.55). One of the roof-support postholes (Subfeature 25) contained the remains of a charred post. An additional 21 interior postholes (Subfeatures 23, 28, 43–51, 53–58, 60, 61, 63, and 82) were concentrated in the northern and central parts of the structure. They ranged in size from 5 to 16 cm in diameter and 5 to 33 cm in depth (see Table B.55). There was no discernable patterning to these postholes, and they may have provided additional roof support, aided in the division of space, or served another utilitarian function.

Entry

A formal entry was not found, although a 60-cm break in the line of postholes in the center of the southeast wall suggests that an informal entry may have been located there (see Figure B.91). The floor groove became suspiciously shallow in this area, and a single posthole was discovered immediately outside the pit (Subfeature 65). The location of the hearth area implies that the entry was located within the southeast wall as well.

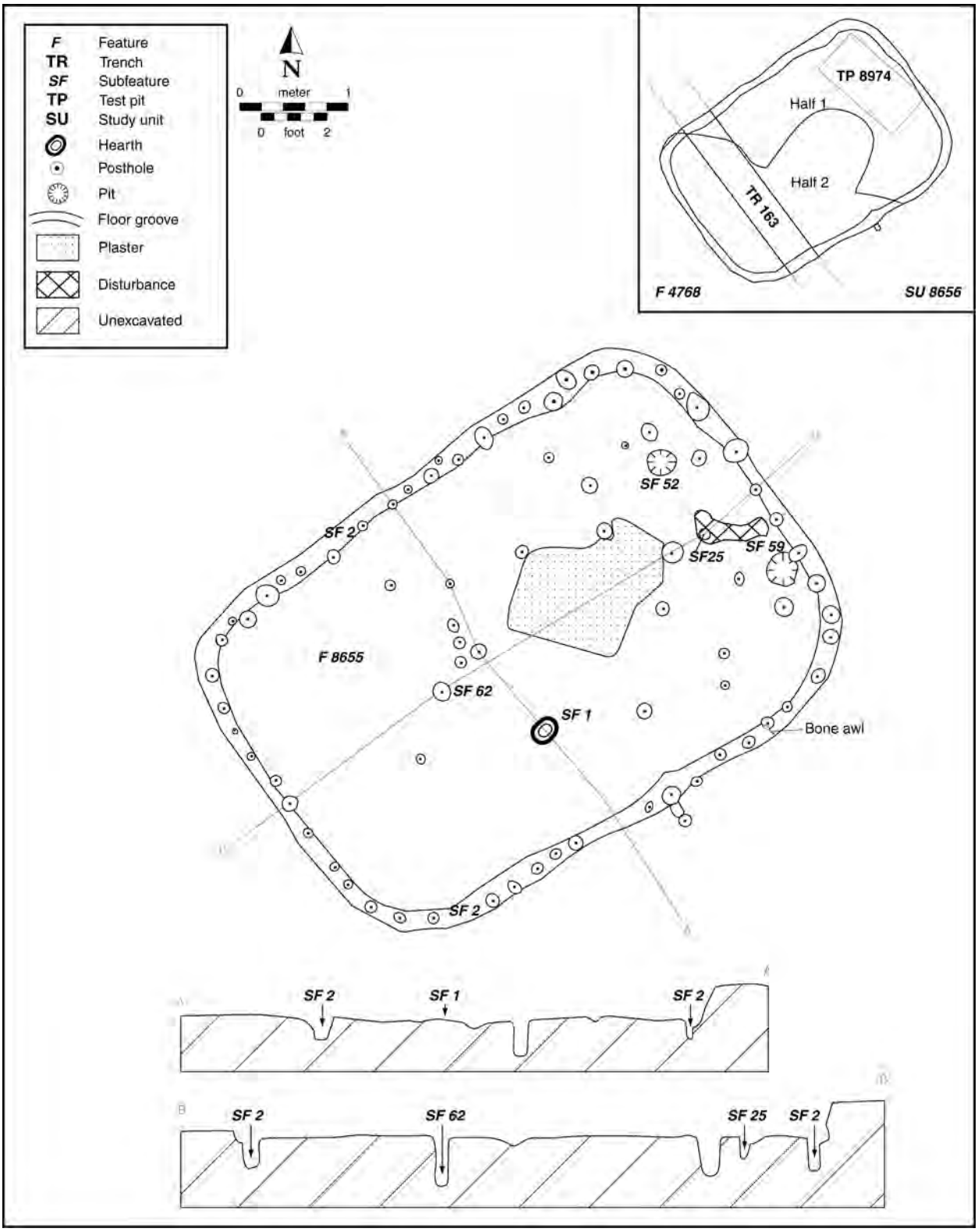

Figure B.92. Plan map of Feature 8655 showing the location of subfeatures.

Table B.55. Feature 8655 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
3	9655	10	10	19	P
4	9657	10	10	22	P
5	9659	10	10	17	P
6	9662	7	7	10	P
7	9664	12	11	25	P
8	9666	18	17	40	P
9	9668	9	9	24	P
10	9670	13	12	26	P
11	9672	8	8	21	P
12	9674	7	6	18	P
13	9676	8	8	19	P
14	9678	14	14	25	P
15	9680	8	7	6	P
16	9682	10	9	19	P
17	9684	18	16	42	P
18	9686	10	10	31	P
19	9688	11	11	23	P
20	9690	15	14	32	P
21	9692	12	12	38	P
22	9694	9	9	18	P
23	9696	8	8	5	I
24	9698	9	9	31	P
25	9700	20	18	37	C
26	9702	13	13	29	P
27	9704	11	11	31	P
28	9706	11	10	30	I
29	9708	12	11	20	P
30	9710	10	9	27	P
31	9712	11	9	22	P
32	9714	17	12	38	P
33	9716	19	18	27	P
34	9718	10	10	32	P
35	9720	11	10	28	P
36	9906	11	11	26	P
37	9908	11	10	28	P
38	9910	13	9	29	P
39	9912	9	9	22	P
40	9914	12	9	24	P
41	9916	8	8	29	P
42	9918	8	7	11	P
43	9920	8	8	22	I
44	9922	11	10	13	I
45	9924	12	10	10	I
46	9926	14	11	33	I
47	9928	11	9	11	I
48	9930	14	12	24	I
49	9932	10	10	32	I

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Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
50	9934	14	13	26	I
51	9936	12	11	6	I
53	9940	16	13	24	I
54	9942	15	11	28	I
55	9944	8	8	21	I
56	9946	11	6	18	I
57	9948	8	8	15	I
58	9950	13	12	14	I
60	9954	9	7	12	I
61	9956	5	5	29	I
62	9958	18	17	44	C
63	9960	9	9	8	I
64	9962	8	8	17	P
65	9964	9	8	9	E?
66	9966	9	8	22	P
67	9968	10	9	27	P
68	9970	11	10	25	P
69	9972	10	10	38	P
70	9974	12	10	26	P
71	9976	13	12	28	P
72	9978	11	10	17	P
73	9980	12	8	16	P
74	9982	11	10	14	P
75	9984	8	8	17	P
76	9986	8	8	25	P
77	9988	9	8	27	P
78	9990	13	13	27	P
79	9992	10	10	22	P
80	9994	8	7	32	P
81	9996	6	6	25	P
82	9998	12	12	29	I

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.

Floor

The floor of the pit consisted of the natural, brownish white calcic substrate. As defined by the interior edge of the floor groove, it had an area of 16.53 m^2. Patches of this surface had an extremely smooth texture, suggesting that it had been wetted and leveled during floor preparation. An irregular 1.6-by-3.5-m plastered area was located in the center of the structure about 50 cm north of the hearth. The plaster consisted of compact, dark gray, carbonate-rich clayey silt and was applied to the pit base in a single 3–5-cm-thick layer. The dark gray color of the surface indicates that it had been heated to high temperatures. The patch of plaster terminated abruptly, and no further traces of it were discovered on the pit base.

Floor Features

Hearths

No formal hearth was discovered, but an oxidized area in the central pit floor may have served as an informal hearth area (Subfeature 1; see Figure B.92). This area was 20 cm in diameter and consisted of the sandy subsoil. No depression was present, and no fill was observed. It was located 1 m in front of the suspected entryway.

Pits

A circular, basin-shaped pit (Subfeature 52) was discovered near the north corner of the house (see Figure B.92). It was 26 cm long, 24 cm wide, and 15 cm deep. The pit

walls and base were unoxidized and consisted of the native calcic substrate. The pit was filled with a heavily bioturbated, brown sandy loam that contained few gravels and charcoal flecks and no artifacts. Based upon size, shape, depth, and location, this feature may have functioned as a pot rest or storage pit.

A second pit (Subfeature 59) was discovered near the east corner of the house (see Figure B.92). This circular, basin-shaped pit measured 32 cm long, 30 cm wide, and 12 cm deep. The pit walls and base were unoxidized and consisted of the native calcic substrate. The fill was similar to that found in Subfeature 52, and it may have functioned as a pot rest or storage pit as well.

Artifacts

Few artifacts were found in contact with the floor, and only one worked plain ware ceramic sherd (PD 9660) was point provenienced. A second plain ware ceramic sherd and one Rincon phase arrow point (Catalog No. 069) were recovered from the general-floor provenience (PD 9644). One bone awl (PD 9653) was recovered from the southern portion of the floor groove (see Figure B.92), and one plain ware sherd (PD 8985) that was thought to be part of a scoop was recovered from the structural debris beneath Feature 4768.

Evidence for Remodeling

There is no evidence that Feature 8655 was remodeled.

Abandonment Processes

The lack of a floor assemblage suggests that a planned abandonment took place and that the house had been intentionally cleaned out at the time. The extensive burnt structural debris, charred post segments, and oxidized floor plaster encountered in the house pit indicate that the structure was burned sometime during or after abandonment. The resulting depression then filled with sheetwash and airborne sediments.

Associated, Intrusive, or Superimposed Features

Feature 8655 was intruded by overlying structure 4768.

Chronology

An archaeomagnetic sample (SRI 2452) was collected from the oxidized floor plaster but could not be dated directly against the existing Southwest reference curve. The data from this sample fall near the A.D. 800–900 segment of the dating curve, and it is likely that the structure was abandoned at some point during this time. The few ceramics recovered from the structure fill seem to support this, in that most of the painted ceramics recovered from the fill have a production date range of A.D. 650–800.

Locus D, Feature 4895

Feature 4895 was discovered during the stripping of the western end of Locus D (see Figure 81). The feature consisted of a group of at least three superimposed structures (Features 9729, 9867, and 11,390). Feature 9729 was the earliest of the three structures, and its south wall was removed by the construction of Feature 9867. Likewise, the majority of Feature 9867 was removed by the construction of Feature 11,390, the latest of the three structures. None of the houses was fully excavated.

Excavation Methods

Excavation of this feature conglomerate began with the mechanical excavation of its western portion. A balk was left in the eastern portion for a control unit, and the fill in the rest of the conglomerate was removed to within approximately 10 cm of the structure floors. Originally, it was believed that the conglomerate consisted of only two structures (Features 9729 and 9867), and the boundary between these two was clear only in the eastern portion of the conglomerate. The fill removed from the western part of the conglomerate was mixed, and the artifacts collected from this area were assigned to the conglomerate feature number (Feature 4895).

A control unit (Test Pit 9730) was placed in the balk left in the northeast corner of the conglomerate, where it appeared to be associated only with Feature 9729. The test pit measured 1.4 by 1.4 m so that it would fit within the designated space and still have the volume of a 1-by-2 m unit. Before excavation, an area next to the test pit was probed to ascertain the depth to the floor. The test pit then was excavated to the floor in two 15-cm-deep, 1/4-inch-screened levels and a third 10-cm-deep, 1/4-inch-screened

level. A flotation sample was collected from each level (PDs 9732–9734), and a pollen sample was taken from the floor surface (PD 9735).

The outline of the second structure (Feature 9867) also was identified in the eastern part of the conglomerate. This structure was somewhat longer than Feature 9279 but did not extend as far north, leaving the eastern portion of the structure separate from Feature 9279. This section of Feature 9867, however, was not excavated. Just west of this area, an irregularly shaped unit (Half 1) was manually excavated to expose part of the floor and locate the hearth. The fill was not screened, but observed artifacts were collected. The location of the exposed hearth in front of the entryway to Feature 9867 indicates that both the hearth and the exposed floor surface are related to this structure. The contents of the hearth were collected for flotation (PD 9869), a pollen sample (PD 9870) was scraped from the base, and an archaeomagnetic sample (SRI 2451) was collected from the remnant plaster.

A floor groove and three associated postholes were discovered in the southwest corner of the floor surface exposed in Test Pit 9730, but they did not appear to conform with the shape of Feature 9729. Instead, a third structure (Feature 11,390) was proposed to explain the presence of these floor features. However, no further excavation was conducted to verify the existence of this structure. It is possible that it was built within the depression left by the abandonment of Feature 9867 and that the hearth and entryway from this feature were reused. It is possible as well that the hearth and floor surface assigned to Feature 9867 actually were constructed as part of Feature 11,390. The limited excavations conducted in this three-feature conglomerate limits our ability to ascertain the relationship between these structures.

Stratigraphy

The house pit for Feature 9729 was excavated to the calcic horizon of the native argillic substrate. The upper 30 cm of house fill consisted of gray-brown sandy loam that contained subangular gravels, very little charcoal, and no ash. The lower 10 cm of fill consisted of the gray-brown sandy loam as well, but also contained pieces of structural debris and some flecks of charcoal. Artifact density was very low throughout the fill.

The mixed fill of the conglomerate feature (Feature 4895) was similar to that of Feature 9729 and consisted of a grayish brown loam with some charcoal flecks. Burnt and unburnt structural debris and pockets of ash were encountered throughout the fill, and the overall artifact density was very low. The fill of Feature 4895 was homogenous, and the three structures could not be differentiated in the center of the composite feature.

Feature 9867 was built in the fill of Feature 9729 and the sterile argillic subsoil. Feature 11,390 appears to have been constructed entirely within the confines of the other two structures. A layer of fine ash was located above the floor of Feature 9867 or 11,390.

Locus D, Feature 9729

Center of feature UTMs: N 3538611.93, E 541366.80
Architectural type: house-in-a-pit
Date range: A.D. 500–840
House dimensions: unknown; pit depth 0.36 m
Entryway dimensions: unknown
Shape: subrectangular?
Orientation: south?
Internal features: none
Chronometric techniques: none
Analyzed botanical samples: none
Related features: intruded by Features 9867 and 11,390

Feature 9729 was the earliest of the houses in Feature 4895. The discernable northeast corner of this structure indicated that the structure probably was subrectangular; however, the structure was only partially excavated, and the exact shape could not be determined. No entryway or floor features associated with this structure were identified, but the intact northern wall suggests that the structure may have opened to the south.

Disturbances

Feature 9729 was disturbed initially by the construction of Feature 9867. Later, the construction of Feature 11,390 removed more of the remaining house fill, leaving only a 1.5-m-wide strip of original fill along the north wall. Rodents and roots contributed to the mixing of the fill in this feature.

Construction Details

Based on the shape of the northeast corner, the structure appeared to be subrectangular. The long axis of the house was oriented east–west. No further details could be ascertained from the limited area of excavation.

Walls and Roof

Nothing could be discerned from the limited area of excavation regarding the nature of the house wall construction or roof supports.

Entry

No entry was identified for this structure, and it may have been removed by the construction of Feature 9867. The intact northern wall and east–west oriented long axis suggest that the entry may have faced south.

Floor

The floor consisted of the smoothed calcic substrate exposed at the bottom of the house pit. No evidence of plaster or oxidation was visible on the exposed floor area.

Floor Features

No floor features were identified in the limited area of excavation that could be assigned to this structure.

Artifacts

No artifacts were discovered in contact with the exposed section of floor or from any other sealed or primary context associated with this structure.

Evidence for Remodeling

No evidence for remodeling could be discerned within the limited area of excavation.

Abandonment Processes

The structure appears to have been intentionally abandoned. There was no evidence of catastrophic burning, and there were no artifacts found in contact with the floor. The presence of some burnt structural debris in the lower house fill suggests that the structure may have burned during or after abandonment, but it is possible that this debris was related to one of the later structures as well. Sometime after the structure was abandoned, the house pit for Feature 9867 was constructed partially within its fill. The unintruded portion of the house pit filled naturally or intentionally with sediments and only minor amounts of cultural trash.

Associated, Intrusive, or Superimposed Features

Feature 9729 was intruded by both Feature 9867, which truncated its southern wall, and Feature 11,390, which may have removed some of the original house fill.

Chronology

Based on stratigraphy, Feature 9729 is earlier than Features 9867 and 11,390. As discussed below, Feature 9867 was dated archaeomagnetically to A.D. 760–840. The majority of ceramics recovered from the Feature 9729 house fill are plain ware sherds, although two painted sherds with a production date range of A.D. 700–850 also were recovered. Together, these data suggest that Feature 9729 was abandoned sometime between A.D. 500 and 840. Without additional chronometric information, the age of this structure cannot be ascertained more precisely.

Locus D, Feature 9867

Center of feature UTMs: N 3538611.93, E 541366.80
Architectural type: house-in-a-pit
Date range: A.D. 760–840
House dimensions: unknown; pit depth 0.48 m
Entryway dimensions: unknown
Shape: subrectangular
Orientation: south
Internal features: 1 hearth
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: intrudes Feature 9729; intruded by Feature 11,390

Feature 9867 was the second structure identified within conglomerate Feature 4895. It was a subrectangular house that truncated the southern portion of Feature 9729, and it was intruded by Feature 11,390. The entry of this structure opened toward the south. A hearth was the only floor feature associated with this structure. Oxidation of the floor and burnt structural debris in the fill indicate that the structure burned at some point during or after abandonment.

Disturbances

The house fill and likely the pit walls were impacted by the construction of Feature 11,390. Roots, rodents, and insects disturbed the fill as well.

Construction Details

Feature 9867 was longer than Feature 9729 but was placed farther south. The shape of the intact and undisturbed eastern and northern walls indicate that the house was subrectangular. The outline of the entryway, exposed during

mechanical stripping, indicates that the house opened to the south. No further details could be ascertained from the limited excavations.

Walls and Roof

Nothing could be discerned from the limited area of excavation regarding the nature of the house wall construction or roof supports.

Entry

The outline of the entry exposed during mechanical stripping indicates that it was located along the structure's midline and opened to the south toward Cienega Creek. The entryway was not excavated, and no other details pertaining to it could be discerned.

Floor

The floor consisted of the smoothed, native calcic subsoil, and it was oxidized in places. No evidence of floor plaster was exposed within the limited area of excavation.

Floor Features

Hearths

The plaster-lined, basin-shaped hearth was located in front of the entryway. It was 17 by 22 cm in plan and 8 cm deep. It originally had a plastered apron, but this was removed after abandonment of the structure, possibly during the construction of Feature 11,390. The association of the hearth with Feature 9867 is based upon its position in front of the entry attributed to Feature 9867.

Artifacts

No artifacts were found in contact with the floor of this feature.

Evidence for Remodeling

No evidence for remodeling was discerned within the limited area of excavation.

Abandonment Processes

The oxidized patches of floor and higher amounts of burnt structural debris indicate that the Feature 9867 burned at some point during or after abandonment. No artifacts were encountered on the exposed floor surface, however, suggesting that abandonment may have been planned. Sometime after abandonment, the house pit for Feature 11,390 was constructed within the fill of Features 9867 and 9729.

Associated, Intrusive, or Superimposed Features

Feature 9867 truncated the southern wall of Feature 9729. Feature 11,390 was built inside of this structure.

Chronology

An archaeomagnetic sample (SRI 2451) was collected from the hearth and returned a date range of A.D. 760–840. This structure was stratigraphically between Structures 9729 and 11,390, and this date helped to place these two structures in time.

Locus D, Feature 11,390

Center of feature UTMs: N 3538611.93, E 541366.80
Architectural type: house-in-a-pit
Date range: post–A.D. 760
House dimensions: unknown; pit depth 0.48 m
Entryway dimensions: unknown
Shape: unknown
Orientation: south?
Internal features: 1 floor groove and 3 postholes
Chronometric techniques: none
Analyzed botanical samples: none
Related features: intrudes Features 9729 and 9867

Feature 11,390 was found in the floor of Feature 9729, and it is the latest structure within the Feature 4895 complex. This structure appeared as a floor groove and three postholes in the southwest corner of Test Pit 9730. No further excavation was conducted to confirm the presence of Feature 11,390. This structure appears to have been built fully within the abandoned house pits of Features 9867 and 9729. The occupants of this structure may have reused the hearth and entryway of Feature 9867.

Disturbances

The structure fill was disturbed by roots and rodents.

Construction Details

The limited excavations did not allow the house form to be determined; however, the arc of the floor groove exposed in Test Pit 9730 suggests that the structure could have been ovate or subrectangular.

Walls and Roof

One floor groove and three postholes were identified with this structure, but none was excavated. They most likely formed a portion of the southeastern wall or corner of the structure. The roof support arrangement was not determined because the structure was not fully excavated.

Entry

No entry was located that could be associated specifically with Feature 11,390. The builders of this structure may have reused the entry from intruded Feature 9867.

Floor

The floor located inside of the arc of the exposed postholes and floor groove consisted of the smoothed, calcic, sterile substrate.

Floor Features

No floor features were located within the limited area of excavation that could be associated definitively with Feature 11,390. It is possible that the occupants of this structure reused the hearth from Feature 9867.

Artifacts

No artifacts were found in contact with the exposed floor surfaces.

Evidence for Remodeling

No evidence for remodeling of Feature 11,390 was encountered.

Abandonment Processes

The nature of the abandonment of this structure could not be determined from the limited area of excavation.

Associated, Intrusive, or Superimposed Features

This structure most likely was constructed entirely within the fill of Features 9867 and 9729.

Chronology

This structure stratigraphically postdated Feature 9867, which was dated archaeomagnetically to A.D. 760–840. No other chronometric information could be definitively associated with this structure, and its age could not be determined more precisely than postdating A.D. 760.

Locus D, Feature 4912

Center of feature UTMs: N 3538412.64, E 541440.77
Architectural type: house-in-a-pit (pole-and-brush)
Date range: A.D. 1–700
House dimensions: 2.04 by 1.96 m; floor area 2.42 m^2; pit depth 0.25 m
Entryway dimensions: unknown
Shape: circular
Orientation: unknown
Internal features: 12 postholes
Chronometric techniques: none
Analyzed botanical samples: none
Related features: none

Feature 4912 was a small, round structure located near the western end of Locus D (see Figure 81). It was built within a substantial pit that measured approximately 25 cm in depth (Figure B.93). The house contained 12 deep perimeter postholes (Subfeatures 2–13), suggesting that it originally had a brush-and-pole framework. The floor consisted of the smoothed native subsoil. A large cobble (Subfeature 1) was found embedded in the floor near the center of the house and apparently was part of an underlying cobble bed. The upper portions of the pit walls were slightly oxidized, suggesting that the structure had burned.

Excavation Methods

Feature 4912 was exposed during Phase 2 mechanical stripping of Stripping Units 8661 and 8663 in the western end of Locus D. Because of its small size, the feature was bisected and excavated in two units. The western half

Figure B.93. Plan view of Feature 4912, looking south.

(Half 1) was excavated to the floor in a single 14–24-cm level, and the fill was screened through 1/4-inch mesh. A flotation sample (PD 5310) was collected from the fill, and a pollen sample (PD 5337) was scraped from the floor.

The eastern half (Half 2) of the house served as the control unit, and it was excavated to the floor in two 1/4-inch-screened levels. The first level consisted of the upper 20 cm of fill, and the second level consisted of the lower 6–8 cm of fill. A flotation sample (PD 5339) was collected from the lower level, and a composite pollen sample (PD 5340) was scraped from the floor.

Exposure of the floor revealed the presence of 12 perimeter postholes and a large cobble embedded in the floor. Each posthole was excavated in a single level and the fill was screened through 1/4-inch mesh. The soil immediately surrounding the embedded cobble was excavated and screened through 1/4-inch mesh to determine whether the cobble had been placed there by the structure's occupants. A pollen sample (PD 6711) was collected from beneath the cobble.

Stratigraphy

The house pit was dug into the native paleosol. This consisted of a light brown silty loam mixed with gravels and carbonates that graded into a more calcium carbonate–rich soil. A natural cobble stratum was encountered just beneath the house floor. A few of the structure's postholes reached into this underlying cobble bed.

The house pit was filled with two strata. The upper 20 cm of fill consisted of brown silty loam with small to medium-sized gravels, oxidized sediment, carbonates, charcoal, and artifacts. The lower 5 cm of fill was similar to the upper fill but contained an increased amount of oxidized material. The artifact density appeared to decline with depth.

Disturbances

Disturbances included rodent holes, fine to medium-sized root casts, and insect tunnels. Overall, however, the house was well preserved.

Construction Details

Feature 4912 was circular in plan view with vertical walls and a level floor. The house pit measured about 2 m in diameter and 25 cm in depth.

Walls and Roof

Although no physical evidence of the superstructure itself remained, the posthole pattern indicated a pole framework for

this structure. Twelve fairly deep postholes (Subfeatures 2–13) were identified along the perimeter of the house pit. They ranged in size from 8 to 18 cm in diameter and 52 to 66 cm in depth (Table B.56). Several of them angled outward, suggesting that the roof may have been integrated with the walls as in a bent-pole structure. No central-support postholes or interior postholes were located in the house. The upper portion of the pit walls displayed signs of oxidation.

Entry

Although an entry was not identified in Feature 4912, at least three large gaps existed in the spacing of the perimeter postholes (Figure B.94). Any one of these spaces may have represented the original entryway into the house.

Floor

The floor consisted of the compacted, natural calcic paleosol, and it displayed no evidence of plaster or oxidation. As delineated by the inside edge of the perimeter postholes, the floor had an area of 2.42 m^2.

Floor Features

Other Floor Features

An enigmatic boulder embedded in the house floor was classified as Subfeature 1 (see Figure B.94). The boulder appeared to be part of the natural, underlying cobble bed, although it may have served some function within the house. The rock did not appear ground or modified, and its function remained unclear.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary context.

Evidence for Remodeling

No evidence for remodeling was encountered.

Abandonment Processes

The presence of oxidation on the upper portion of the pit walls suggests that the structure had burned. The abandoned house pit subsequently filled with trash and naturally deposited sediments.

Associated, Intrusive, or Superimposed Features

Feature 4912 was not associated with any other feature.

Chronology

No chronometric samples were recovered from this structure, and very few artifacts were encountered in the fill. Based on the size and shape of the structure, it likely was occupied during the Late Archaic or Early Formative periods (ca. 1500 B.C.–A.D. 700).

Table B.56. Feature 4912 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)
2	5432	13	13	57
3	5434	13	13	64
4	5436	13	12	61
5	5438	18	15	62
6	5440	16	13	60
7	5442	16	14	65
8	5444	18	14	66
9	5446	11	9	54
10	5448	9	8	52
11	5450	10	10	55
12	6985	10	9	59
13	6987	9	9	56

Key: PD = provenience designation.

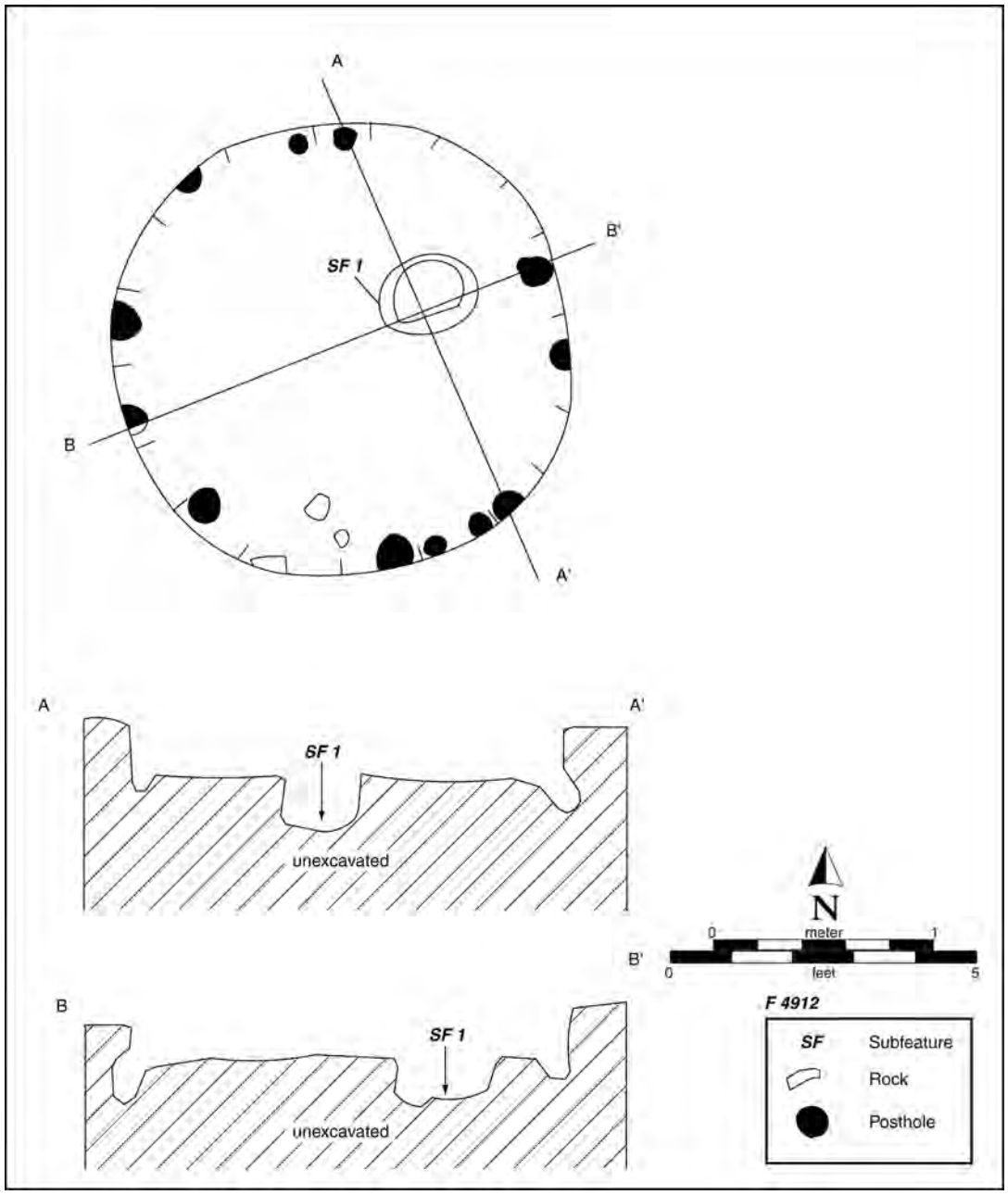

Figure B.94. Plan map of Feature 4912 showing the location of subfeatures.

Locus D, Feature 4935

Center of feature UTMs: N 3538397.02, E 541458.33
Architectural type: pole-and-brush surface structure
Date range: post A.D. 1–1450
House dimensions: 2.53 by 2.42 m; 0.01 m depth; floor area 4.15 m^2
Entryway dimensions: unknown
Shape: circular
Orientation: southeast?
Internal features: 1 floor groove and 2 intramural pits
Chronometric techniques: none
Analyzed botanical samples: none
Related features: none

Feature 4935 was a small, circular structure measuring about 2.45 m in diameter (Figure B.95). The structure did not appear to be constructed within a house pit, but a shallow floor groove (Subfeature 1) encircled the earthen floor (Figure B.96). A 52-cm gap in the floor groove suggests the location of a possible informal entry on the southeast side of the structure. Internal floor features consisted of two shallow, basin-shaped pits (Subfeatures 2 and 3).

Excavation Methods

Feature 4935 was identified during Phase 2 mechanical stripping of Stripping Unit 6801 near the center of Locus D (see Figure 82). This stripping removed all of the house fill and exposed the structure's floor. Because the structure was not identified until after the floor was exposed, no artifacts or samples were collected from the fill.

A floor groove and two intramural pits were identified in the floor. The floor groove was excavated in a single 1/4-inch-screened level, and a flotation sample was collected from the fill (PD 10,592). The entire fill of one of the intramural pits (Subfeature 2) was collected as a flotation sample (PD 10,594), and a pollen sample was collected from its base (PD 10,595). The other pit (Subfeature 3) was excavated in a single level, and the fill was screened through 1/4-inch mesh.

Stratigraphy

Although no structure fill remained, the floor groove contained a homogenous grayish brown silt and sand with dispersed fine subrounded gravels and numerous charcoal pieces. Few artifacts were recovered. The intramural pits contained a similar grayish brown silt and sand, although charcoal and artifacts were not a component of the fill. It was also noted that numerous fine root hairs exhibited early stage carbonate development in Subfeature 2.

Disturbances

Owing to the shallow nature of the feature, disturbances were likely produced during mechanical stripping. This

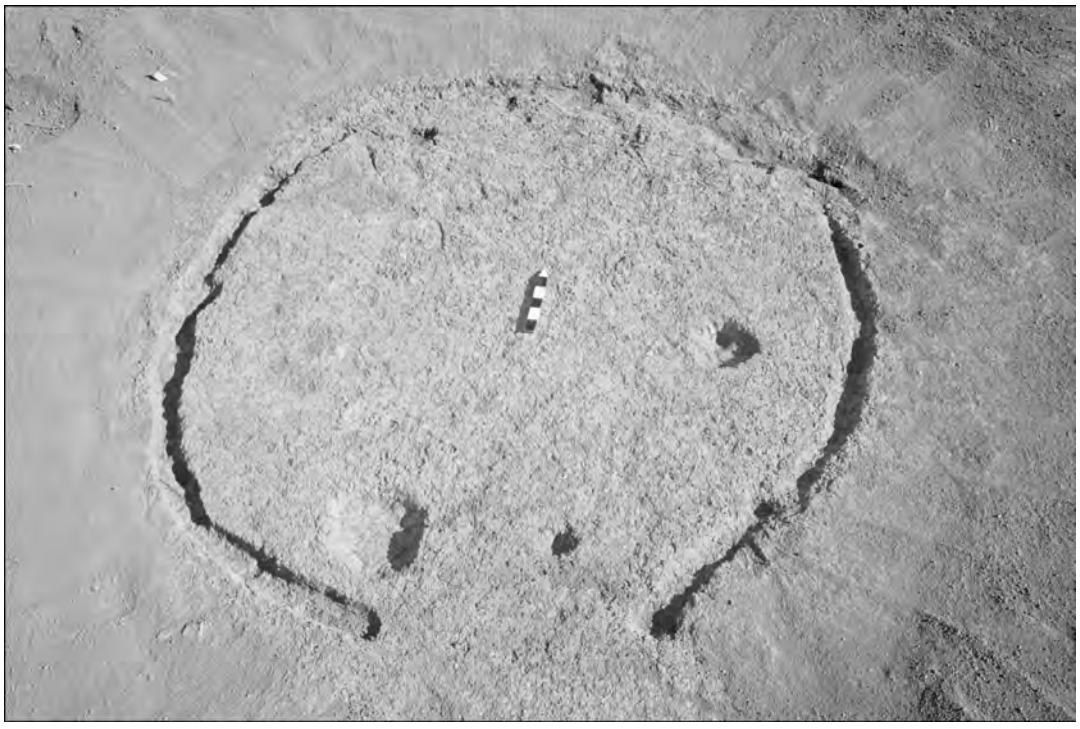

Figure B.95. Plan view of Feature 4935, looking north.

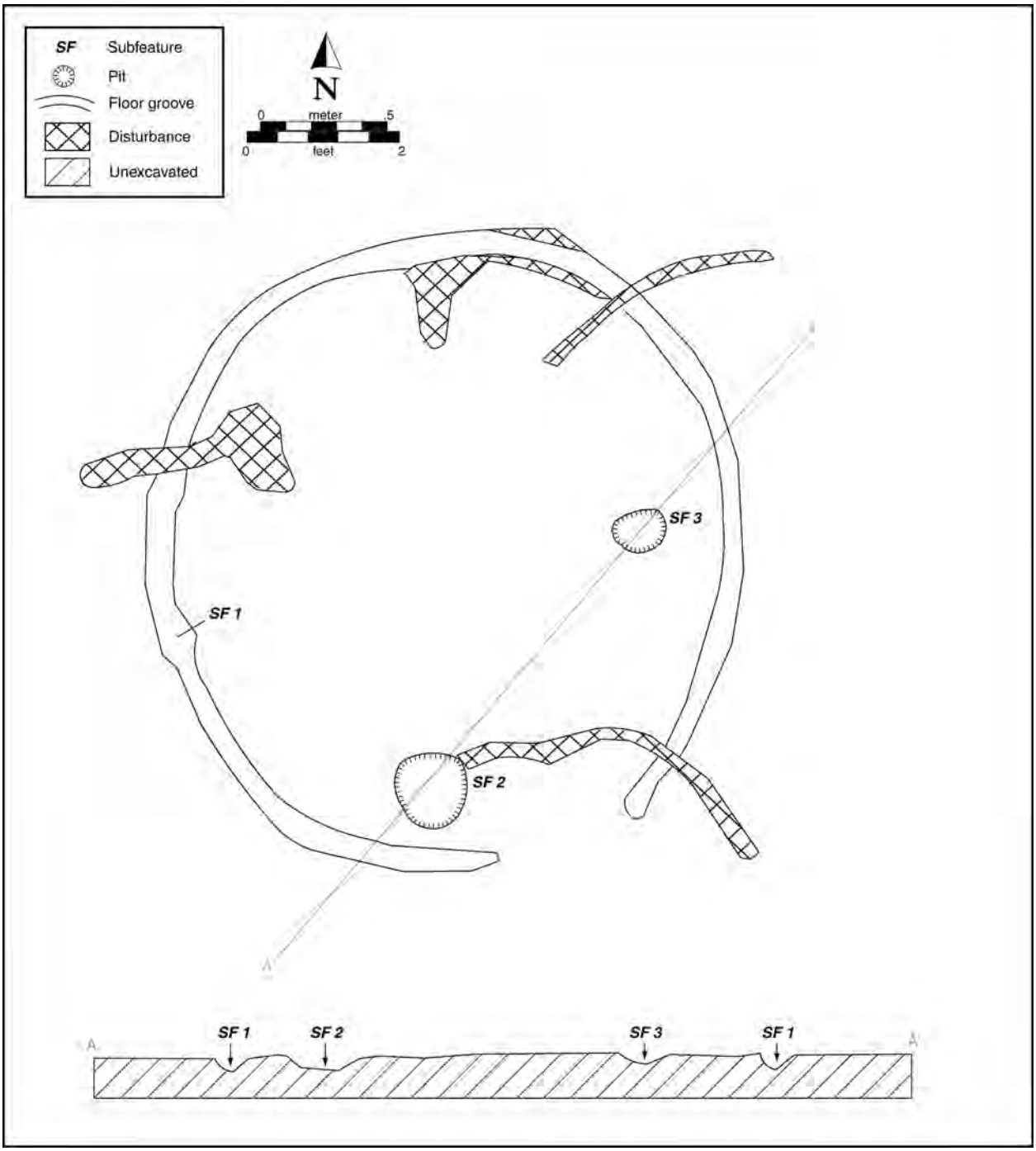

Figure B.96. Plan map of Feature 4935 showing the location of subfeatures.

process could have removed structure fill and possibly destroyed the top few centimeters of the floor and subfeatures. Additionally, rodent tunneling disturbed much of the northwest quarter of the floor, and tree roots upset a small section in the northeast quarter of the floor groove.

Construction Details

There was no indication that the structure had been constructed within a house pit, and if a house pit existed, it was removed during mechanical stripping.

Walls and Roof

A 10-cm-wide and 4-cm-deep floor groove (Subfeature 1) encircled the structure floor. The sides varied between vertical to gently sloping, and it had a U-shaped base. Both the base and sides consisted of the unprepared and unoxidized substrate. No postholes were discovered in association with the primary architecture.

Entry

No formal entry was identified for this structure. A 52-cm gap in an undisturbed portion of the floor groove may indicate the location of an informal entryway in the southeast part of the structure (see Figure B.96).

Floor

Based upon the size of the feature and the depth of the subfeatures, the excavated surface was probably close to the elevation of the original floor. It consisted of the natural argillic substrate with no evidence of surface preparation or oxidation.

Floor Features

Pits

Two unlined basin-shaped pits (Subfeatures 2 and 3) were located in the interior of the structure. Subfeature 2 was located immediately west of the possible entryway (see Figure B.96). It was 32 cm in diameter and 5 cm deep with gently sloping sides. The base and sides consisted of the unprepared and unoxidized native substrate. Based upon size, shape, depth, and location, it possibly functioned as a pot or basket rest.

Subfeature 3 was located 1 m northeast of Subfeature 2. This pit measured 20 cm in diameter and 7 cm in depth, with gently sloping sides. The base and sides consisted of the unprepared and unoxidized native substrate. Animal disturbance made it difficult to ascertain the integrity and/or function of the feature.

Artifacts

No artifacts were recovered from the floor or from any other sealed or primary context.

Evidence for Remodeling

No evidence for remodeling was discovered.

Abandonment Processes

The nature of abandonment could not be discerned from the remaining subfeatures.

Associated, Intrusive, or Superimposed Features

Feature 4935 was not associated with any other feature.

Chronology

No chronometric data and very few artifacts were recovered from this structure. Based on the structure's shape, it is possible that it was built and used during the Late Archaic or Early Formative periods.

Locus D, Features 5513, 4729, and 4725 (7942 and 7943)

The western end of Locus D was distinguished by a conglomerate of four overlapping structures that was identified and fully excavated during Phase 2 (see Figure 81). This group of houses represents the most visually striking and clear-cut case of structural superpositioning at the site (Figures B.97 and B.98). The youngest and most intact structure in the complex was Feature 4729, an adobe-walled pit structure with a long vestibule entryway. The construction of this house removed the eastern half of Feature 5513, a

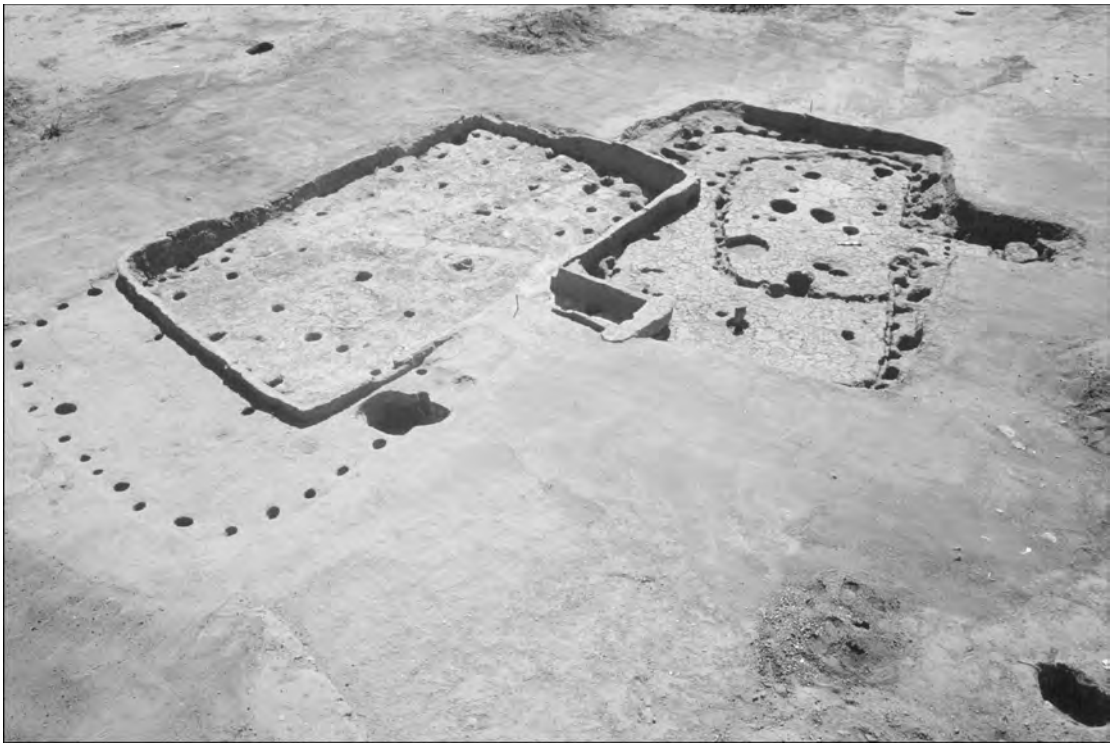

Figure B.97. Overview of the four superimposed structures (Features 4729, 5513, 7942, and 7943) located in the western end of Locus D. The outline of Feature 5513 is visible at the left edge of the photograph, Feature 4729 is the large adobe-walled pit structure located in the center of the photograph, Feature 7943 is the large pit structure located at the right of the photograph, and Feature 7942 is the small pit structure located within the outline of Feature 7943.

subrectangular pit structure. The southern portion of the conglomerate was composed of Feature 4725, which itself consisted of two superimposed structures, Features 7942 and 7943. Feature 7943, the larger and earlier of the two houses, was a rectangular structure with a long vestibule entry that protruded from its south wall. The northwest corner and a portion of the back wall of this feature were truncated by Feature 4729. Feature 7942 was about half the size of Feature 7943 and was built entirely within the earlier structure, reusing the entry, hearth, and floor surface.

Locus D, Feature 5513

Center of feature UTMs: N 3538420.51, E 541412.84
Architectural type: house-in-a-pit
Date range: A.D. 500–1390
House dimensions (minimum): 4.74 by 1.69 m; pit depth 0.14 m
Entryway dimensions: unknown
Shape: subrectangular
Orientation: east
Internal features: 2 central-support postholes and 23 perimeter postholes
Chronometric techniques: none
Analyzed botanical samples: none
Related features: intruded by Features 4729, 5866, and 7560; intrudes Feature 7663

This pit structure comprised the westernmost lobe in the four-structure complex (see Figure B.98). A large portion of the structure had been removed by Feature 4729, the adobe house. The preserved remains of Feature 5513 included a shallow house pit containing a ring of 23 perimeter postholes (Subfeatures 1–19, 21, 22, 24, and 25) and two possible central-support postholes (Subfeatures 20 and 23). A few ground stone and lithic artifacts remained on the floor of the house (Table B.57), which consisted of the natural substrate. The house did not appear to have burned.

Excavation Methods

Feature 5513 was discovered during Phase 2 mechanical stripping of Locus D. A 1-by-2-m control unit (Test Pit 6764) was placed along the western wall of the structure and was excavated in three $^{1}/_{4}$-inch-screened levels.

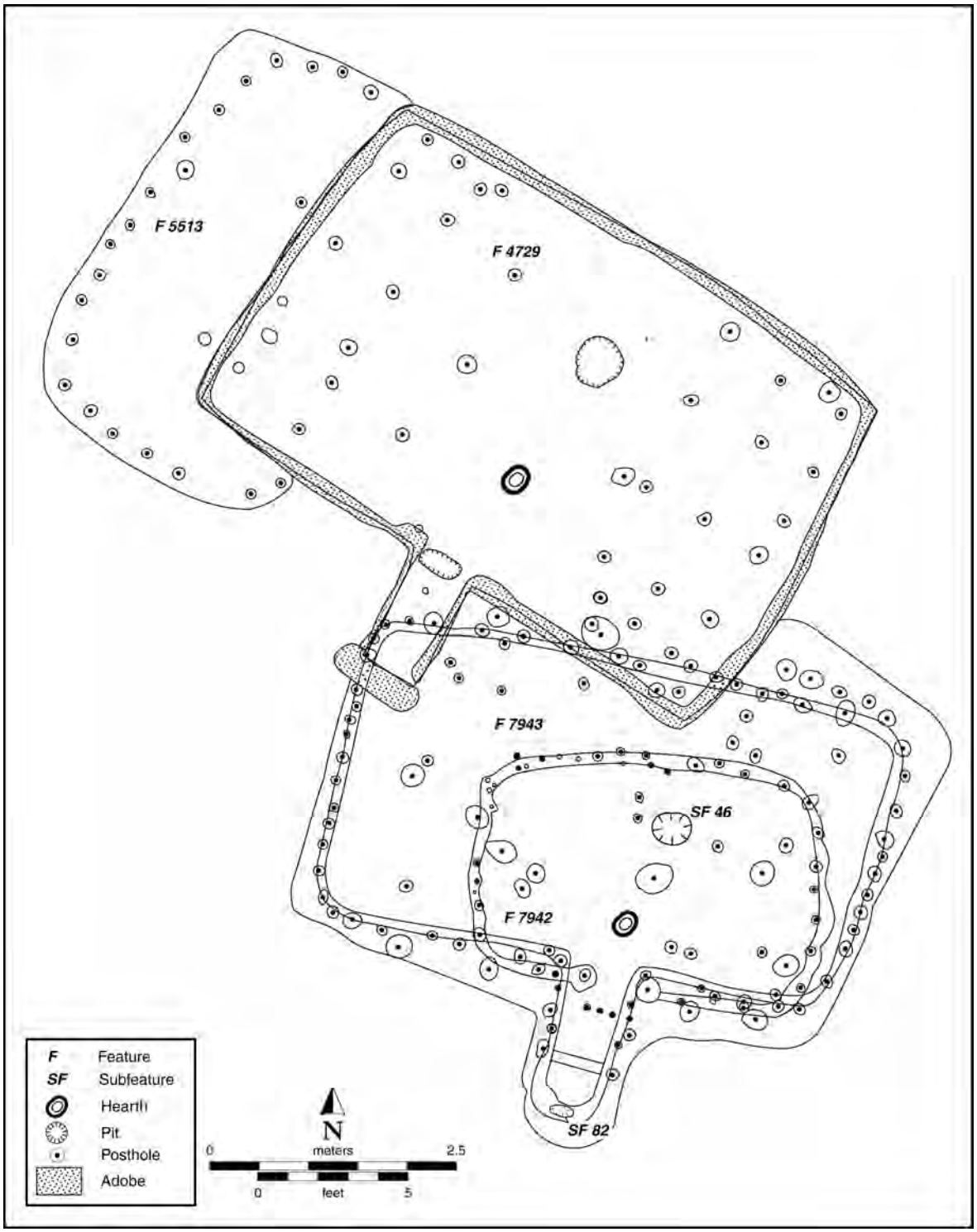

Figure B.98. Plan map showing the relationship of the four superimposed structures.

Table B.57. Feature 5513 Point-Located Floor Artifacts

PD No.	Artifact Description
5757	Pecking stone (Catalog No. 470)
6847	Hammer stone
6848	Indeterminate ground stone fragment
6849	Hand stone fragment

Key: PD = provenience designation.

The first level was 10 cm deep, and the second and third levels were each 2 cm deep. The division between the second and third levels was marked by an increase in sediment compaction and the presence of large, flat-oriented artifacts. It was thought that the base of the second level might represent a living surface, but this distinction was not noted outside of the test pit. The base of the third level consisted of the native, carbonate-rich substrate and was identified as the structure's floor surface. Flotation samples were collected from the first and second levels (PDs 6821 and 6839), and a composite pollen sample was scraped from the floor exposed at the base of the third level (PD 6840).

The remaining structure fill was excavated manually to the floor as a single unit in two levels. The upper 10-cm level was not screened, but observed artifacts were collected. The lower 5-cm level was screened through 1/4-inch mesh, and a flotation sample (PD 5769) was collected. A composite pollen sample (PD 5917) was collected from the floor.

Exposure of the floor revealed the presence of 25 postholes and 4 floor artifacts. Each posthole was excavated separately, and the fill was screened through 1/4-inch mesh. A flotation sample (PD 5958) was collected from one of the central-support postholes (Subfeature 20). The floor artifacts were individually point provenienced (see Table B.57).

Stratigraphy

The house pit was originally dug into the native, calcium carbonate–rich subsoil, and the pit walls and floor were composed of this sediment. The pit was filled with a single layer of brown silty loam that contained some small to medium gravels. Artifact density was low, and very light charcoal flecking was noted throughout. Overall, however, the fill appeared to consist of clean, aeolian silt. It was moderately to highly compact because of an overlying road bed.

Disturbances

The construction of Feature 4729 removed most of the east wall and presumably the entry to Feature 5513. Intrusive pits 7560 and 5866 removed small portions of the house pit and possibly several postholes (Figure B.99). In addition, large root, small rootlet, insect, and rodent disturbances were abundant throughout the fill and in the floor of the structure.

Construction Details

Slightly more than the western half of the structure remained intact (see Figure B.99). The preserved posthole patterning and pit walls suggest that the structure was subrectangular in plain view. The north and south walls were slightly rounded, whereas the west wall was relatively straight. The north–south long axis of the house measured 4.74 m, and the preserved east–west short axis measured 1.69 m. The preserved house pit had a remaining depth of 14 cm.

Walls and Roof

Twenty-three postholes (Subfeatures 1–19, 21, 22, 24, and 25) were identified around the perimeter of the structure, and 2 of them (Subfeatures 24 and 25) were discovered beneath the floor of intrusive Feature 4729. They ranged in size from 7 to 21 cm in diameter and 12 to 28 cm in depth (Table B.58). Two additional postholes (Subfeatures 20 and 23) were located along the midline of the structure and may have held central roof supports. These two postholes were about 12 cm in diameter and over 20 cm deep.

Entry

No entry was present in the remaining portion of the structure. It was most likely removed during the construction of Feature 4729 and probably would have been located along the eastern wall of the house.

Floor

The house floor consisted of the calcium carbonate–rich native subsoil. It was relatively level and showed no sign of oxidation.

Floor Features

No floor features were located within the remaining structure.

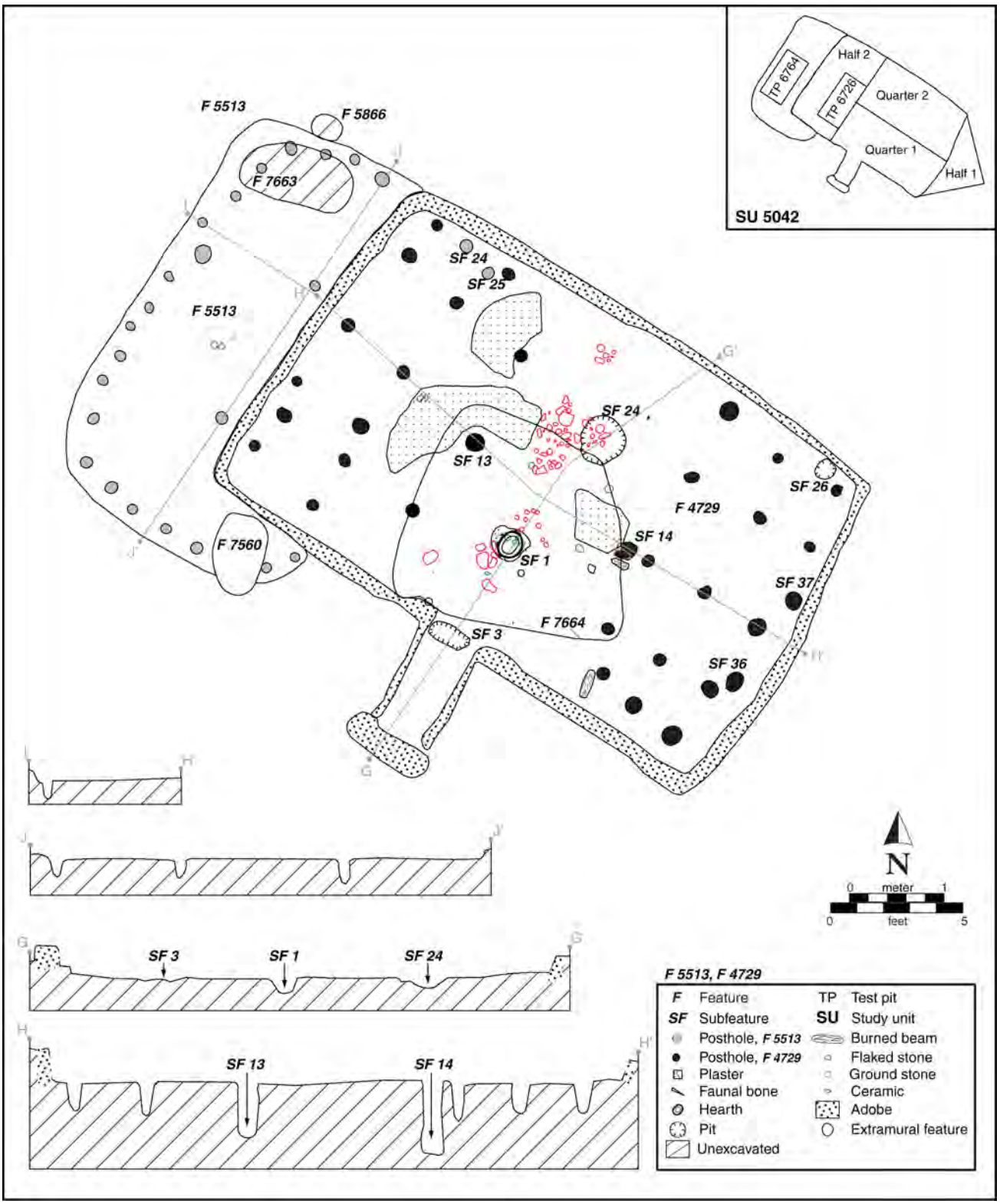

Figure B.99. Plan map of Features 4729 and 5513 showing the location of subfeatures, associated features, and point-located floor artifacts.

Table B.58. Feature 5513 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
1	5920	15	15	17	P
2	5922	12	11	19	P
3	5924	11	11	16	P
4	5926	13	12	20	P
5	5928	11	10	25	P
6	5930	10	10	22	P
7	5932	10	9	20	P
8	5934	21	17	28	P
9	5936	10	10	25	P
10	5938	10	9	25	P
11	5940	9	7	17	P
12	5942	13	13	19	P
13	5944	10	10	17	P
14	5946	15	12	20	P
15	5948	12	12	15	P
16	5950	13	12	17	P
17	5952	10	10	26	P
18	5954	12	10	24	P
19	5956	13	12	19	P
20	5958	13	11	24	C
21	5960	10	10	23	P
22	5962	10	10	22	P
23	7655	11	11	21	C
24	7657	11	10	14	P
25	7659	11	11	12	P

Key: C = central-support posthole; P = perimeter posthole; PD = provenience designation.

Artifacts

Floor artifacts (see Table B.57) included two pieces of ground stone (PDs 6848 and 6849), possibly from the same tool, and two possible hammerstones (PDs 6847 and 5757). These artifacts were located near the western wall of the structure and were identified at the base of the test pit.

Evidence for Remodeling

No evidence for remodeling was encountered.

Abandonment Processes

The lack of burnt construction material in the house fill suggests that the structure had not burned. The house was abandoned with few artifacts left on the floor, and at some point later, roasting pit refuse was thrown into the abandoned house pit. The house pit subsequently filled in naturally with wind- and water-deposited sediments.

Associated, Intrusive, or Superimposed Features

Two extramural pits (Features 7560 and 5866) intruded Feature 5513, and a third, unexcavated pit (Feature 7663) was located beneath the structure. Feature 7560 was a fairly large, basin-shaped pit that truncated the southeast corner of Feature 5513, and Feature 5866 was an ovate pit distinguished by a cluster of unburnt rocks that slightly truncated the northwest corner of the structure. The latter pit was not excavated, although sherds from its surface were collected. Feature 7663 was completely superimposed by the structure's floor. Three of the postholes cut through the fill of this pit, indicating that it predated the construction of the house. Finally, an adobe structure (Feature 4729) superimposed the eastern half of the structure.

Chronology

Feature 5513 predates adobe structure Feature 4729, the abandonment of which was radiocarbon dated to cal A.D. 1270–1390. Painted ceramics in the structure fill indicate that the earliest date is A.D. 500. No chronometric data were recovered directly from the structure, and no temporally sensitive artifacts were recovered from good contexts within the house.

Locus D, Feature 4729

Center of feature UTMs: N 3538418.99, E 541416.37
Architectural type: adobe-walled pit structure
Date range: cal A.D. 1340–1390
House dimensions: 6.27 by 4.02 m; floor area 21.98 m^2; pit depth 0.42 m
Entryway dimensions: 1.35 by 0.65 m; floor area 0.74 m^2
Shape: rectangular
Orientation: southwest
Internal features: 1 hearth, 2 central-support postholes, 31 interior postholes, and 3 intramural pits
Chronometric techniques: archaeomagnetism and radiocarbon
Analyzed botanical samples: PDs 5299, 5329, 5330, 5455, 6728, 6731, and 6976
Related features: intrudes Features 5513, 7664, and 7943

Feature 4729 was a rectangular, southwest-facing, adobe-walled pit structure (Figure B.100) located in the western end of Locus D. It superimposed at least two other structures (Features 5513 and 7943) and was built over a borrow pit (Feature 7664). The structure had a long vestibule entryway (Subfeature 2) that opened to the southwest, and it contained a number of internal features, including 1 formal hearth (Subfeature 1), 2 central roof-support postholes (Subfeatures 13 and 14), and 29 regularly spaced postholes (Subfeatures 4–12, 15–23, 25, 27–35, and 38) that indicate that the floor had been raised (see Figure B.99). Two additional interior postholes (Subfeatures 36 and 37) may reflect remodeling of the floor. Like the other adobe-walled structures at the site, Feature 4729 possessed an ovate, shallow floor pit (Subfeature 3) at the threshold of the entryway. A second shallow pit (Subfeature 24) was located toward the back of the central part of the house, and a third small pit (Subfeature 26) was located in the eastern corner of the house. Numerous artifacts, including one partially reconstructible Gila Polychrome vessel (PD 5298; Figure B.101), two possible tabular tools (PDs 5221 and 5300), and numerous flaked stone tools (PDs 5220, 5304, 5305, 5354, 5451, 5453, 5456, 6804, and 6805) were recovered from the floor of the house (Table B.59). Charred construction material present in the house fill suggests that the structure had burned.

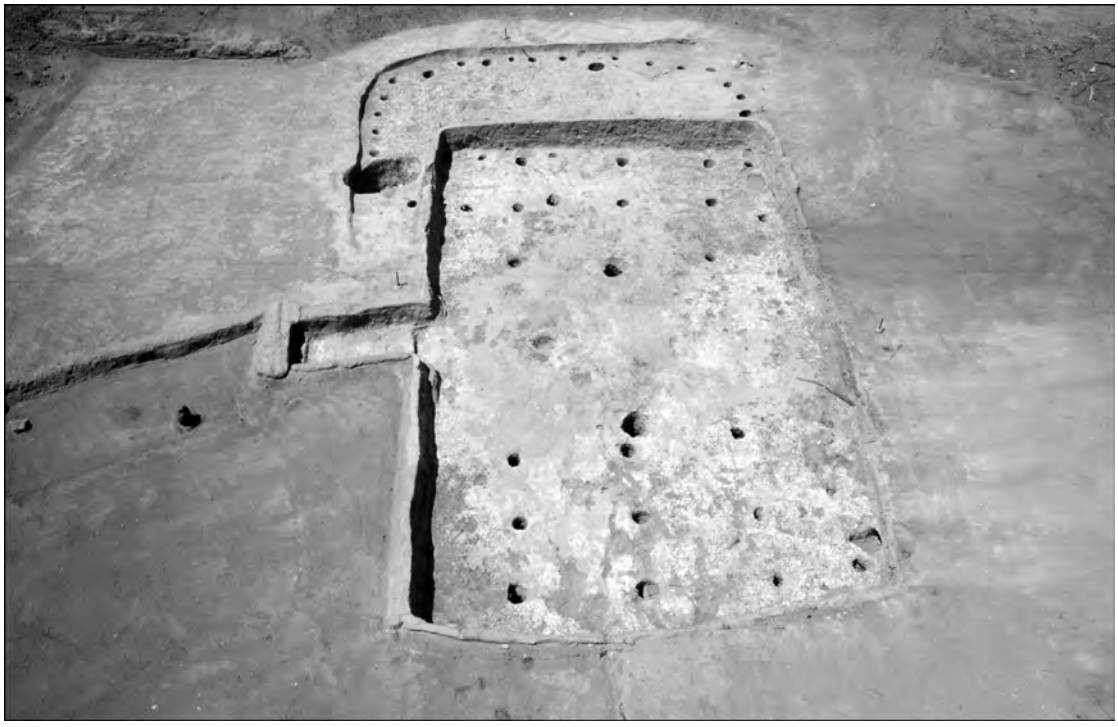

Figure B.100. View of Feature 4729, looking west. The outline of superimposed Feature 5513 is visible near the top of the photograph.

Figure B.101. Close-up of a partially reconstructible Gila Polychrome vessel (PD 5298) located on the floor of Feature 4729, next to the structure's hearth (Subfeature 1).

Table B.59. Feature 4729 Point-Located Floor Artifacts

PD No.	Artifact Description
5220	Obsidian unifacial retouched flake (Tool No. 353).
5221	Possible tabular tool fragment. Not an artifact?
5296	Mano.
5298	Partially reconstructible Gila Polychrome vessel (Vessel No. 70).
5300	Tabular tool fragment.
5302	Sherd cluster consisting of 19 plain ware; 3 indeterminate red-on-brown; and 5 small, indeterminate sherds.
5304	Partial pecking stone/core (Tool No. 587).
5305	Partial pecking stone/core (Tool No. 487).
5353	Grinding slab fragment.
5354	Unifacial scraper (Tool No. 397).
5451	Complete pecking stone (Tool No. 471).
5452	Sherd cluster consisting of 1 partially reconstructible plain ware vessel (Vessel No. 49) and 7 plain ware sherds.
5453	Multifacial retouched flake (Tool No. 305).
5454	Sherd cluster consisting of 12 plain ware, 3 Tanque Verde Red-on-brown, and 2 indeterminate red-on-brown sherds.
5456	Unifacial retouched flake (Tool No. 310).
6804	Utilized flake (Tool No. 389).
6805	Possible utilized flake.

Key: PD = provenience designation.

Excavation Methods

Feature 4729 was discovered during Phase 2 mechanical stripping when the top of its adobe walls appeared at the surface of the stripping unit. The fill in the eastern two-thirds of the structure was removed mechanically as a single, 32-cm-thick unit (Half 1) to within approximately 10 cm of the floor. Observed artifacts were collected, but the fill was not screened. Half 1 was then bisected and hand-excavated to the floor in two units (Quarters 1 and 2). All of the fill was screened though 1/4-inch mesh, and a flotation sample was collected from each unit (PDs 5176 and 5178). Two structural beams (PDs 5306 and 5307) were point located within the structural debris of Quarter 1, and a pollen sample was scraped from the floor exposed in Quarter 2 (PD 5179). Finally, nine pollen samples (PDs 6716–6724) were collected from the different strata in the structural profile exposed in the fill of the western third of the structure (Figure B.102).

A 1-by-2-m control unit (Test Pit 6726) was placed in the western third of the structure. It was excavated manually to the floor in four 10-cm arbitrary levels. The fill was screened through 1/4-inch mesh, and a flotation sample was collected from each level (PDs 6731, 6747, 6750, and 6766). An additional flotation sample was collected from an area of burnt structural debris in the fourth level (PD 6784). A pollen sample was scraped from the floor exposed at the base of the test pit (PD 6767).

The remaining fill in the structure was excavated manually to the floor as one unit (Half 2) in two levels. The upper level consisted of the upper approximately 32 cm of fill and correlated to the upper level from Half 1. Observed artifacts were collected, but this level was not screened. The lower level consisted of the 10 cm of fill above the floor, and it was screened through 1/4-inch mesh. A flotation sample was collected from the fill (PD 7042), and a pollen sample was scraped from the floor exposed at the base of the unit (PD 7043).

The entry to the house was excavated separately in a single 25–30-cm level. The fill from the entry was screened through 1/4-inch mesh, and a flotation sample was collected (PD 5180). A pollen sample (PD 5308) was scraped from the entry floor. Six additional pollen samples (PDs 5331–5336) were collected from the different strata observed in the entry profile (Figure B.103).

Exposure of the floor revealed a number of subfeatures, including 1 hearth, 3 floor pits, and 33 postholes. Each posthole was excavated in a single level, and the fill was screened through 1/4-inch mesh. A burnt remnant post was collected as a botanical sample (PD 6976) from one of the postholes (Subfeature 14). In addition, a possible piece of ground stone (PD 6977) was point located at the base of Subfeature 14, and a pollen sample was collected from beneath it (PD 6978). The entire fill from the hearth was collected as a flotation sample (PD 6728), and an archaeomagnetic sample (SRI 2385) was collected from the pit walls. A possible core (PD 5720) and a possible piece of ground stone (PD 5721) were point located in the hearth's fill. A second archaeomagnetic sample (SRI 2386) was collected from oxidized sections of the structure's plastered floor. Two of the floor pits (Subfeatures 3 and 26) were excavated in single 1/4-inch-screened levels. A pollen sample (PD 6725) was collected from the base of one of them (Subfeature 3), and a flotation sample (PD 5550) was collected from the fill of the other (Subfeature 26). The entire fill from the third floor pit (Subfeature 24) was collected as a flotation sample (PD 5538). Finally, 17 artifacts and artifact clusters (PDs 5220, 5221, 5296, 5298, 5300, 5302, 5304, 5305, 5353, 5354, 5451–5454, 5456, 6804, and 6805) were encountered on the floor surface (see Table B.59), and pollen samples (PDs 5297, 5299, 5301, 5303, 5455, and 6806) were collected from beneath six of them (PDs 5296, 5298, 5300, 5302, 5452, and 6805). Two burnt beams were collected from the floor as botanical samples (PDs 5329 and 5330).

Stratigraphy

The house pit for Feature 4729 was constructed within portions of the fill of two earlier houses (Features 7943 and 5513) as well as the native calcic subsoil. The fill within this house pit consisted of three strata. The upper 15 cm of fill consisted of thin lenses of brown colluvial sands and silts that had accumulated and puddled in the abandoned house pit. Artifacts density was fairly high in this stratum.

The middle stratum was 20 cm thick and consisted of dark grayish brown very fine sandy loam mottled with construction debris. It contained large chunks of charcoal, adobe, and daub, and many artifacts.

The lower stratum was 2–15 cm thick and consisted of a thin lens of very dark gray to black silt with abundant charcoal and burnt reed fragments. This stratum was thickest along the front (south) wall. It was primarily found in the areas of the house where the floor was raised and was likely the remains of the raised floor itself.

Disturbances

The top 10 cm of house fill had been compacted from the overlying railroad-access road. Other disturbances to the house floor, walls, and subfeatures included small to medium-sized roots and rodent and insect burrows.

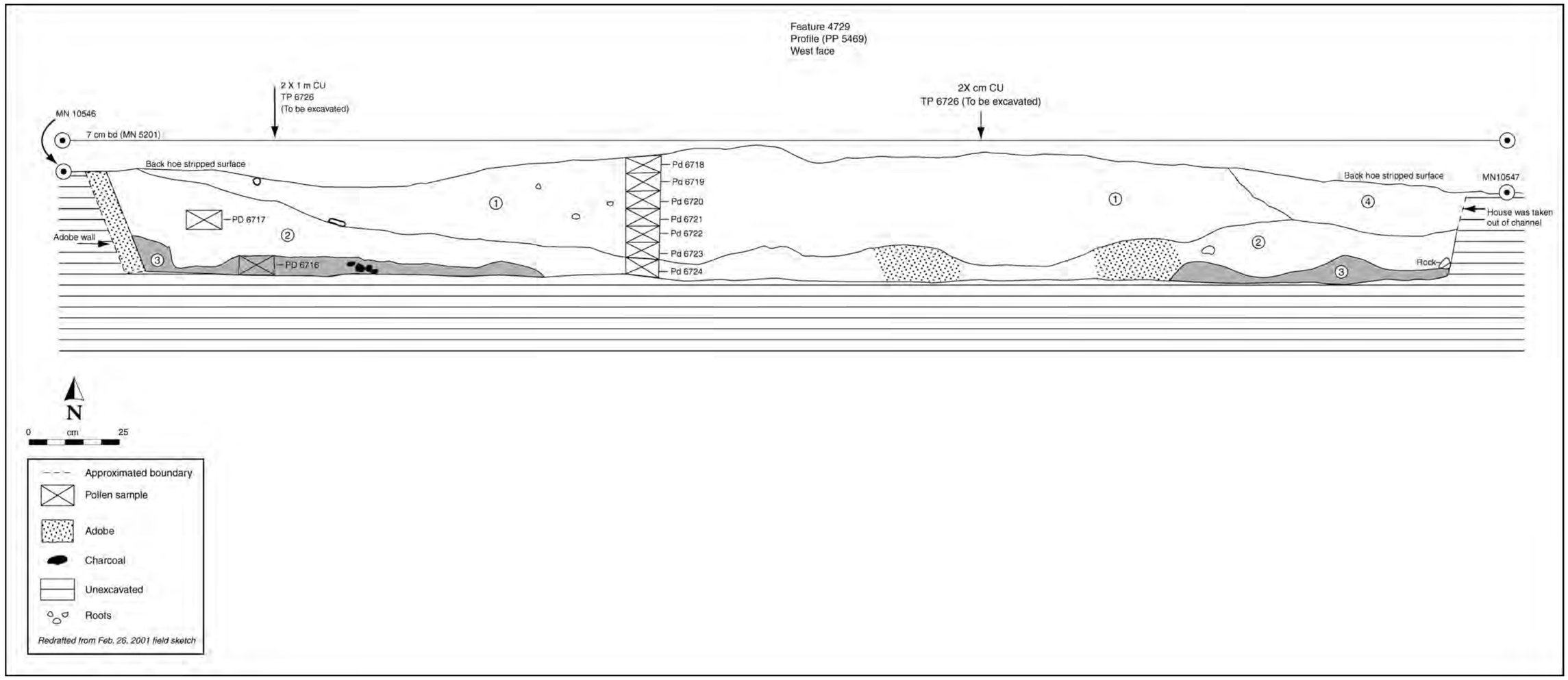

Figure B.102. Profile drawing of the west face of Test Pit 6726 in Feature 4729 showing the location of pollen samples collected from the different strata observed in the fill.

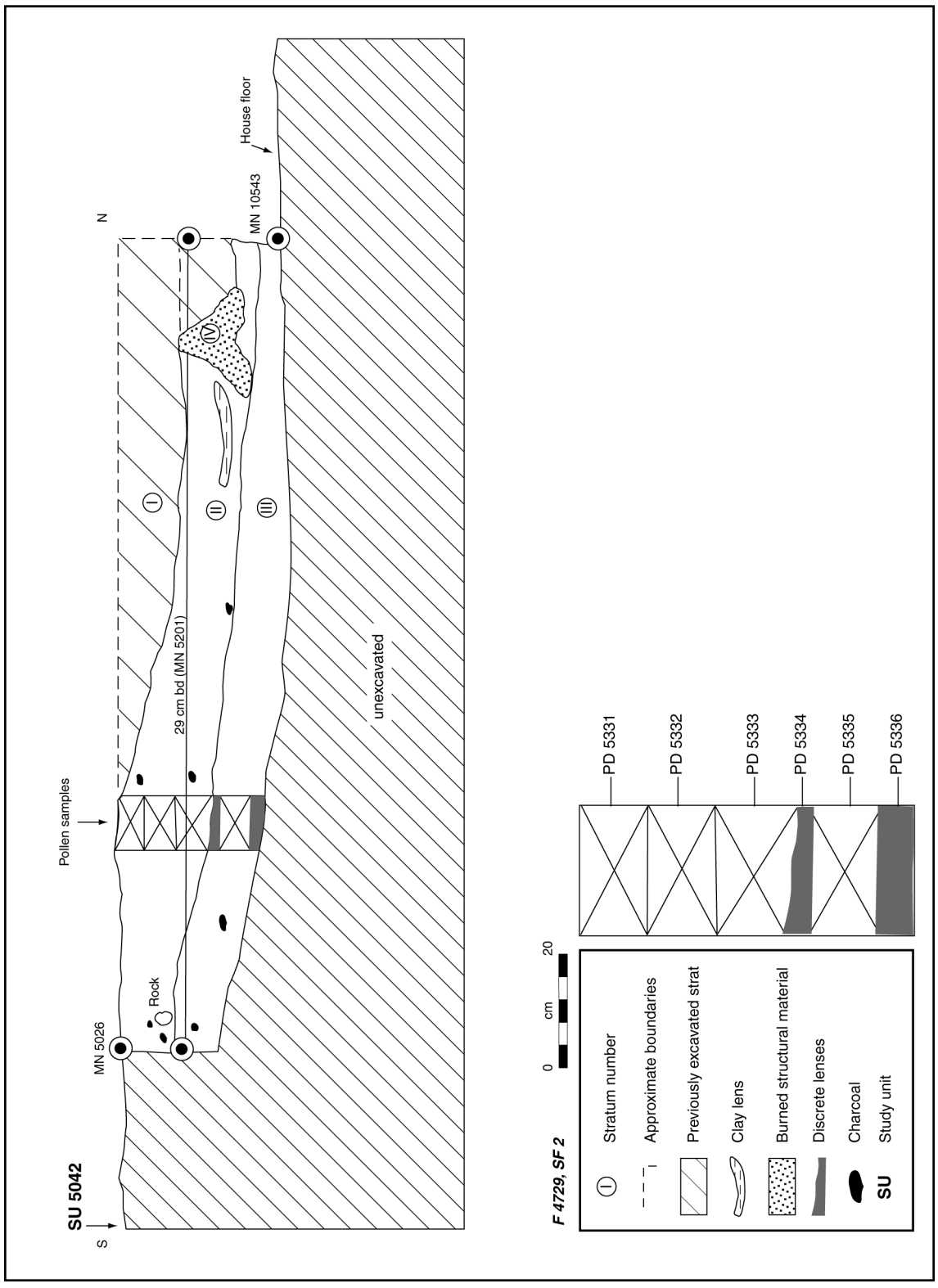

Figure B.103. Profile drawing of the west face of the entryway (Subfeature 2) of Feature 4729 showing the location of pollen samples collected from the different strata observed in the fill.

Construction Details

Feature 4729 was rectangular in plan view with a rectangular entryway that protruded from the southwest wall (see Figure B.99). The structure measured 6.27 m east–west by 4.02 m north–south and had a remaining pit depth of 42 cm.

Walls and Roof

This structure had adobe walls that were constructed against the inside edge of the house-pit walls. They measured about 10 cm in thickness and formed a 90° angle with the house floor. These walls likely represented the lower portion of much thicker, free-standing adobe walls constructed at the outer edge of the house pit. There was no evidence to suggest that they were reinforced by posts or thatching. The interior of the adobe walls were faced with plaster that was preserved best on the south wall of the house. Here, plaster extended down the walls and stopped a few centimeters short of the floor. This break likely marked the standing height of the raised floor.

The roof was constructed of wood and adobe, as evidenced by the burnt debris found in the house fill and on the floor. Two postholes (Subfeatures 13 and 14) located along the midline of the structure anchored the posts that supported the roof. They measured between 20 and 24 cm in diameter and extended 56 to 75 cm below the house floor (Table B.60). Flat river cobbles used as shims lined a portion of Subfeature 13, and a large charred post fragment was discovered in Subfeature 14 (PD 6976). A flat rock and a possible piece of ground stone (PD 6977) were found at the base of Subfeature 14.

Entry

The structure had a 1.35-by-0.65-m rectangular entry that protruded from the midpoint of the south wall. A 25–30-cm-wide adobe pad was identified at the outer opening of the entry and created a 25-cm-deep step into the entry pit. A more shallow step was carved into the native subsoil about 10 cm beyond the adobe pad, from which the entry floor ramped down slightly to meet the house floor. The entry vestibule had adobe walls that wrapped around the interior of the house at the entry-wall juncture (see Figure B.99). These walls showed no indication of burning. The fill from the entryway consisted of colluvial sediments. Structural debris was notably absent from the fill, suggesting that this part of the house had not burned.

Floor

The floor of the house pit consisted of the calcium-rich, native subsoil, which apparently had been puddled to create a smooth, even surface. It had an area of 21.98 m^2. The patterning of 29 interior postholes (Subfeatures 4–12, 15–23, 25, 27–35, and 38) suggest that the structure possessed a partially raised floor. Six rows of 2–3 evenly spaced postholes were found on the west side of the structure, and five rows of 3 evenly spaced postholes were found on the east side of the structure (see Figure B.99). These postholes ranged in size from 9 to 22 cm in diameter and 17 to 54 cm in depth (see Table B.60). They likely supported short, wooden uprights used to elevate the floor. Reeds found in the house fill suggest that the floor may have been covered with matting. Two additional interior postholes (Subfeatures 36 and 37) were offset slightly from the rows in the east side of the house and may reflect remodeling of the floor.

The floor area that was not elevated comprised a roughly 2-m-wide strip in the center of the house extending from the entry to the back wall. Here, the floor was plastered and highly oxidized. The hearth and a concentration of floor artifacts were found in this area, which may have been the main activity area of the house.

Floor Features

Hearths

The hearth (Subfeature 1) consisted of a small, basin-shaped, plaster-lined pit surrounded by a 5–10-cm-wide plaster apron. It was located about 95 cm north of the entry, roughly equidistant from the two central-support postholes. The hearth measured 30 by 22 cm in plan view and extended 15 cm below the house floor. It was filled with ash-laden silt and charcoal, which was probably refuse from the final use of the subfeature.

Pits

Three floor pits were identified in the house. Subfeature 3 was an ovate, shallow pit located immediately in front of the entry (see Figure B.99). It measured 44 by 22 cm in plan view and was only 3 cm deep. The pit was dug into the native calcic subsoil, and the fill consisted of clean, light colored sands and silts with no charcoal or artifacts. The function of this pit is unknown, although similar pits were found in front of the entryways to the other three adobe-walled houses at the site.

Subfeature 24 was a circular, shallow pit located near the center of the back wall. It measured 53 cm in diameter and was 12 cm deep. The pit was dug into the native calcic subsoil, and the fill consisted of mottled structural debris, suggesting that it was open when the house burned. A partially reconstructible plain ware vessel (PD 5452) covered part of the opening to the subfeature. The pit may have functioned as a support for a storage vessel, such as the one found associated with it.

Subfeature 26 was a possible storage pit located along the back wall of the house near the northeast corner. Its opening was irregular in shape and measured 28 by 22 cm. The pit extended 38 cm below the floor of the house, and half of it was basin-shaped, whereas the other half was

Table B.60. Feature 4729 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
4	6956	14	14	30	I
5	6958	16	14	33	I
6	6960	14	13	33	I
7	6962	15	15	29	I
8	6964	18	17	42	I
9	6966	11	10	28	I
10	6968	14	13	28	I
11	6970	16	14	33	I
12	6972	13	12	23	I
13	6974	21	20	56	C
14	6976	24	24	75	C
15	7000	13	12	37	I
16	5522	13	13	38	I
17	5524	14	14	42	I
18	5526	16	16	33	I
19	5528	14	14	31	I
20	5530	14	14	38	I
21	5532	14	10	35	I
22	5534	14	11	35	I
23	5536	16	12	34	I
25	5540	21	21	18	I
27	7080	14	12	27	I
28	5554	10	9	18	I
29	5633	12	12	24	I
30	5635	11	9	17	I
31	5723	11	11	34	I
32	7666	13	12	28	I
33	7668	12	10	28	I
34	10504	14	13	32	I
35	10506	14	14	43	I
36	40559	22	20	23	I
37	10563	19	18	25	I
38	9818	18	15	54	I

Key: C = central-support posthole; I = interior posthole; PD = provenience designation.

bell-shaped. The fill consisted of dark brown loam that graded into dark yellowish brown loam. Small charcoal chunks and artifacts were present.

Artifacts

Several intact and broken artifacts were recovered from the floor of Feature 4729 (see Table B.59). These were concentrated primarily in the central part of the house where the floor was plastered and not raised. Artifacts included 1 partially reconstructible Gila Polychrome vessel (PD 5298; see Figure B.101), 1 partially reconstructible plain ware vessel (PD 5452), 2 ceramic sherd clusters (PDs 5302 and 5454), 9 flaked stone tools (PDs 5220, 5304, 5305, 5354, 5451, 5453, 5456, 6804, and 6805), 2 manos (PDs 5296 and 5353), and 1 tabular tool (PD 5300). In addition, 1 retouched flake tool, 2 cores, 2 flakes, 10 plain ware sherds, and 2 indeterminate red-on-brown sherds were recovered from the general-floor provenience (PDs 5177, 5179, 6767, and 7043).

Evidence for Remodeling

The only evidence for possible remodeling encountered in the structure was the presence of two interior postholes (Subfeatures 36 and 37) that did not conform to the overall pattern within the house. These postholes may have been added after the house was constructed to provide supplemental support for the raised floor.

Abandonment Processes

Numerous charred post segments, burnt floor matting, oxidized masses of daub, and the oxidized floor suggest that the structure had burned. The presence of burnt construction material resting directly on the floor of the house suggest that the fire occurred upon or very soon after abandonment. The fire may have been catastrophic as evidenced by the number of artifacts left on the floor of the house. Wind and water deposited sediments and cultural trash eventually filled the abandoned house pit.

Associated, Intrusive, or Superimposed Features

Feature 4729 truncated two earlier pit structures (Features 5513 and 7943) and a shallow borrow pit (Feature 7664). The borrow pit was located in front of the entry and appeared as a squarish stain in the floor that was capped in some places by patches of plaster. It most likely was filled intentionally and then capped with plaster during the construction of Feature 4729.

Chronology

An archaeomagnetic sample (SRI 2385) was collected from the structure's hearth and returned date range options of A.D. 935–1015 and 1310–1690. A second sample (SRI 2386) collected from the floor was not measured. A monocot bundle recovered from the structure's hearth fill (PD 6728) was submitted for AMS dating (Beta-206385) and returned the 2-sigma calibrated date ranges of cal A.D. 1270–1320 and 1340–1390. The Gila Polychrome vessel on the structure floor dates to A.D. 1320–1450. Together, these chronometric data suggest that the best age estimate for the abandonment of this structure is cal A.D. 1340–1390.

Locus D, Feature 4725

Feature 4725 was the southwesternmost lobe in the complex of four superimposed structures located at the far western end of Locus D. Feature 4725 consisted of two superimposed structures (Figure B.104) in which the

Figure B.104. Plan view of composite Feature 4725 showing the location of the two superimposed structures (Features 7942 and 7943), looking northeast.

later structure (Feature 7942) was constructed entirely within the earlier structure (Feature 7943). Because the fill from Feature 7942 was indistinguishable from that of Feature 7943, the smaller structure was not identified until the floor of Feature 7943 was cleared. Feature 7943 was about twice the size of Feature 7942, which reused the floor and hearth from Feature 7943. The entryway, which originated as a long vestibule complete with a step and a sill, was reused in the later structure as well, although it was modified somewhat from its original design. The presence of floor plaster from Feature 7942 over one of the central-support postholes (Subfeature 71) of Feature 7943 allowed the relative age of the two structures to be determined.

Excavation Methods

Conglomerate Feature 4725 was identified during Phase 2 mechanical stripping of Stripping Unit 5012. The upper 20–25 cm of feature fill were removed with the backhoe, leaving about 10 cm of fill above the floor and a 1-m-wide balk along the west wall for a control unit. Artifacts observed during the mechanical excavation were collected, but this fill was not screened. The fill removed with this unit consisted of the mixed sediments from both Feature 7943 and Feature 7942, and therefore, artifacts could not be provenienced to an individual structure.

The control unit (Test Pit 6745) was excavated to the floor in two 10-cm and one 5-cm levels. The fill was screened through 1/4-inch mesh, and a flotation sample was collected from each level (PDs 6746, 6807, and 7883). A pollen sample (PD 7884) was scraped from the floor, and a portion of an in situ charred post was collected as a botanical sample (PD 6746) from the upper level. Later, this post was determined to be intrusive to the feature. Once the house was exposed, it was determined that this unit was located completely within Feature 7943, and all artifacts and samples recovered from this unit were reassigned to this feature.

The 10 cm of fill left in the rest of the conglomerate feature was bisected to form two units. The western unit (Half 1) was excavated to the floor in a single 1/4-inch-screened level. A flotation sample was recovered from the fill (PD 7885). The exposure of the floor in this unit revealed the presence of two discreet floor grooves, which indicated that at least two different structures existed within the conglomerate feature. Thus, the artifacts and samples recovered from the fill of this unit were mixed and could not be provenienced to an individual structure. Care was taken to isolate the floor of each structure exposed in this unit so that artifacts and samples recovered from the floor could be assigned to the appropriate structure. To this end, a pollen sample was recovered from the floor of Feature 7943 (PD 7886) and the floor of Feature 7942 (PD 5154) exposed in this unit. In addition, a partially reconstructible plain ware vessel (PD 5152) was point located on the floor of Feature 7942 in this unit.

When the two structures comprising Feature 4725 were identified, the eastern unit (Half 2) in the conglomerate feature was divided between the two structures, and each was excavated separately. To isolate the fill remaining in Feature 7942, a shovel trench was excavated that followed the feature's floor groove. The mixed fill from the shovel trench was screened through 1/4-inch mesh, and recovered artifacts were provenienced to Feature 4725. The fill encircled by the floor groove consisted of about 10 cm of unmixed sediment left in the eastern half of Feature 7942. This fill was removed in one level and screened through 1/4-inch mesh. A flotation sample (PD 7937) was collected from the fill and a pollen sample (PD 5155) was scraped from the floor.

The fill remaining after Feature 7942 was excavated was assigned to Feature 7943. It was excavated as a single unit (Half 2) in one 10-cm level. This fill was screened through 1/4-inch mesh, and a flotation sample was collected (PD 7938). A large piece of burnt structural wood was point provenienced in the fill (PD 8543), and a composite sample of burnt wood was collected as a botanical sample (PD 7938) from the general fill. A pollen sample was collected from the floor (PD 7939).

The entryway used in both structures was excavated to the floor in two 20-cm levels. Excavation of the upper level exposed the floor in the southern end of the vestibule to the south of the step. The fill was not screened, but observed artifacts were collected. The fill from the lower level was 1/4-inch screened, and a flotation sample (PD 8549) was collected from the fill. A pollen sample (PD 8564) was scraped from the exposed floor. A second pollen sample (PD 8548) was collected from the entry pad.

The exposure of the floor shared by the two structures revealed a number of subfeatures that were able to be assigned to the individual structures. Feature 7942 subfeatures included 1 hearth, 1 floor groove, 62 postholes, and 1 floor pit. The floor groove and each posthole were excavated individually in single-level units, and the fill was screened through 1/4-inch mesh. A flotation sample was collected from the floor groove (PD 8566) and two of the postholes (Subfeature 45, PD 8806; Subfeature 57, PD 8884), and botanical samples (PDs 8876 and 8884) were collected from two of the postholes (Subfeatures 54 and 57). A piece of ground stone (PD 8809) was point located in the fill of one of the central-support postholes (Subfeature 45), and a pollen sample was collected beneath it (PD 8810). The entire fill of the hearth was collected as a flotation sample (PD 8696), a pollen sample (PD 8727) was scraped from its base, and an archaeomagnetic sample (SRI 2449) was collected from the hearth plaster. A second pollen sample (PD 7995) was scraped from the floor surrounding the hearth. The floor pit was excavated in a single 1/4-inch-screened level, and a flotation sample (PD 8808) was collected from the fill. One pollen sample (PD 8851), two possible manos (PDs 8848 and 8849),

and one possible hammerstone (PD 8850) were collected from its base. A partially reconstructible plain ware vessel (PD 5152) was point located on the floor, and two pollen samples (PDs 7949 and 7950) were collected from beneath it. Two possible pieces of flaked stone (PDs 10,567 and 10,568) were recovered from the floor of the entryway.

The subfeatures associated with Feature 7943 included 1 wall groove, 1 entry groove, 1 floor pit, and 84 postholes. The hearth used in Feature 7942 most likely originated in this structure, but none of the samples collected from it would relate to its original use. The floor groove and the perimeter postholes within the floor groove were excavated together as a single-level unit, and the fill was screened through 1/4-inch mesh. Only notable artifacts and in situ post remains were provenienced to specific perimeter postholes. All other postholes were excavated individually as separate 1/4-inch-screened units. A botanical sample (PD 10,532) was collected from one of the perimeter postholes (Subfeature 77), and a burnt post (PDs 8542 and 10,661) was collected from one of the central-support postholes (Subfeature 70). A possible piece of ground stone (PDs 10,566 and 10,569) was point located at the base of two entryway postholes (Subfeatures 93 and 92, respectively). The entry groove was excavated in four separate single-level units, each corresponding to a different section of the groove. The fill from the groove sections that flanked the west (Subfeature 89) and east (Subfeature 90) sides of the entryway and from the section that held the retaining sill (Subfeature 91) were collected as flotation samples (PDs 8569, 8571, and 8573). The fill from the section across the front of the entryway (Subfeature 84) was screened through 1/4-inch mesh; no artifacts were encountered and no samples were collected. The small floor pit was excavated in a single 1/4-inch-screened level, and no samples were collected. Five burnt beam sections were collected as botanical samples (PDs 8542–8546) from the exposed structure floor. Two large flakes (PDs 8547 and 8563) were point located on the floor.

Stratigraphy

The original house pit (Feature 7943) was dug into the native calcic subsoil, whereas the house pit of the later structure (Feature 7942) was dug into the fill from this house pit. By the time of excavation, the fill from the two house pits was indistinguishable and consisted of a single stratum of brown to dark grayish brown silty loam with chunks of charcoal, pockets of ash, pockets of reddish brown clayey soil, and artifacts. Segments of charred posts or beams were present near the floor of both structures.

Locus D, Feature 7942

Center of feature UTMs: N 3538414.14, E 541417.49
Architectural type: house-in-a-pit
Date range: ca. A.D. 700–925
House dimensions: 3.73 by 2.60 m; 0.33 m depth; floor area 7.25 m^2
Entryway dimensions: 0.75 by 0.65 m
Shape: subrectangular
Orientation: south
Internal features: 1 hearth, 1 floor groove, 62 postholes, and 1 intramural pit
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PD 8851
Related features: superimposes Feature 7943; intruded by Feature 7940

Feature 7942 was the later and smaller of the two structures in composite Feature 4725. It was constructed entirely within the Feature 7943 house pit and used the hearth and floor of the earlier structure (Figure B.105). The entry from Feature 7943 was reused as well, but it was remodeled from its original design. Feature 7942 contained 1 plaster-lined hearth (Subfeature 1), 1 floor groove (Subfeature 3), 62 postholes (Subfeatures 4, 5, 7–45, and 47–67), and 1 small possible storage pit (Subfeature 46) that was located near the back wall. Few artifacts remained on the floor of the house, and the structure had apparently burned.

Disturbances

Disturbances to the house pit and fill primarily resulted from small to medium-sized roots and fairly abundant rodent and insect burrows. A modern pit or posthole (Feature 7940) cut through the floor and part of the floor groove in the northwest corner of the house.

Construction Details

Feature 7942 was subrectangular to ovate in shape and measured 3.73 m east–west by 2.60 m north–south (Figure B.106). The walls were fairly straight to slightly curved, and the corners were rounded. The entry, which had been remodeled from the earlier house, protruded from the south wall of the structure.

Walls and Roof. A 6–16-cm-wide floor groove (Subfeature 3) defined the perimeter of the house and delimited the floor area. The floor groove was about 5 cm deep and roughly basin-shaped in profile. A total of 41 perimeter postholes (Subfeatures 7–44, 50, 53, and 59) were found within and along the interior edge of the groove. They ranged in size from 4 to 34 cm in diameter and 10 to 47 cm in depth (Table B.61).

A large central-support posthole (Subfeature 45) was identified in the center of the structure just northeast of the hearth. It measured 27 cm in diameter and 29 cm in depth. This posthole likely anchored the main post that supported the roof of the structure and originally may have been used as a main support for Feature 7943. Ten other postholes (Subfeatures 47–49, 51, 52, and 54–58) found within the

Figure B.105. Plan view of Feature 7942, looking south.

interior of the house likely provided additional roof support (see Table B.61). These ranged in size from 8 to 26 cm in diameter and 17 to 44 cm in depth, and they were distributed somewhat randomly within the house floor. They may have provided additional roof support or served to divide the interior space of the structure.

A light yellowish brown silty loam comprised the lower fill of the postholes. This light-colored sediment may have been redeposited intentionally to secure the posts.

Entry. The entry (Subfeature 2) was remodeled from the earlier structure (Feature 7943) and was located at the midpoint of the structure's south wall. Four small postholes (Subfeatures 60–63), two on either side, defined the outline of the entry as it was used in this structure. An additional line of four small, shallow postholes (Subfeatures 64–67) cut across the entryway floor. These postholes may have been used to construct a step into the house. The eight small postholes ranged in size from 7 to 11 cm in diameter and 7 to 34 cm in depth (see Table B.61). Two fairly large postholes (Subfeatures 4 and 5) were found on either side of the entry at the terminal points of the floor groove, and they were 25–28 cm in diameter and 25–26 cm in depth. As defined by the postholes, the entryway measured approximately 75 cm long and 65 cm wide and was about half the length of the original entry. The fill from the entry was basically indistinguishable from the rest of the feature except for a 3-cm-thick deposit of orangish brown sandy loam that may be related to the remodeling of this subfeature during the construction of the later house.

Floor. The floor consisted of a silty clay plaster applied directly to the native calcic substrate. It measured 3–4 cm thick in places. This appeared to be the same floor surface used with Feature 7943. As delineated by the interior edge of the floor groove, it had an area of 7.25 m^2.

Floor Features

Hearths. A formal, well-plastered hearth (Subfeature 1) was located about 50 cm in front of the entry. The hearth was circular in plan view and slightly bell-shaped in cross section. It measured 20 cm at the opening and extended almost 20 cm below the house floor. The sides of the hearth undercut the rim by 1–2 cm. The fill consisted of ash-laden, brownish gray silty loam. This hearth may have originated with Feature 7943, although there were no signs of replastering or remodeling.

Pits. A possible storage pit (Subfeature 46) was identified near the center of the back wall of the house. It was circular and slightly bulbous in shape, and it measured about 35 cm in diameter and 50 cm in depth. The walls consisted of the unmodified, native calcic subsoil and showed no signs of oxidation. The upper 5–10 cm of fill consisted of a dark grayish brown silty loam similar to the house fill. The lower pit fill was a light yellowish brown silty loam. Numerous flaked stone artifacts were recovered from the

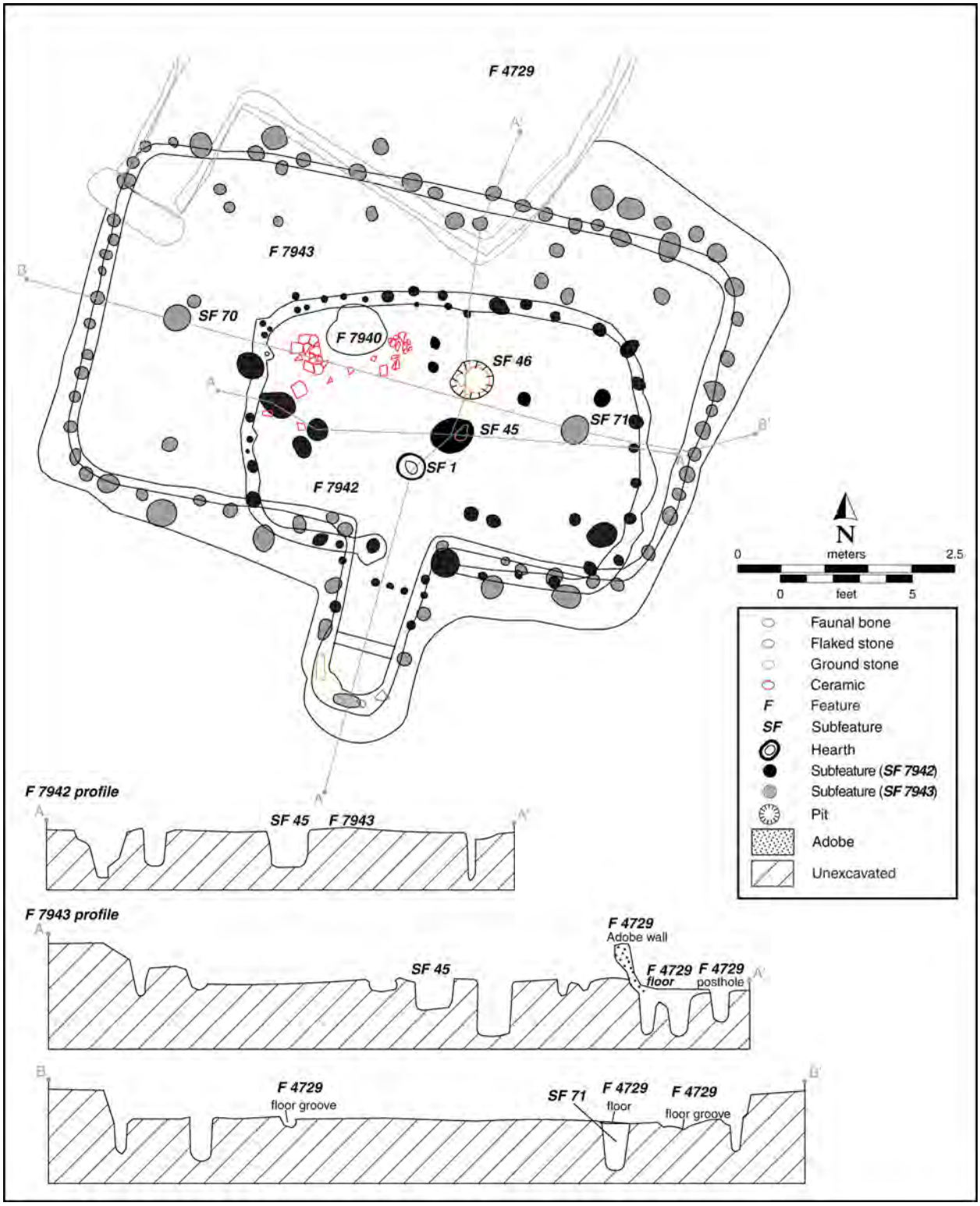

Figure B.106. Plan map of Feature 7942 showing the location of subfeatures, point-located floor artifacts, and related structures.

Table B.61. Feature 7942 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
4	8623	28	28	26	E
5	8625	25	25	25	E
7	8700	15	15	10	P
8	8702	5	5	19	P
9	8704	6	6	14	P
10	8706	11	11	23	P
11	8708	23	22	24	P
12	8710	14	13	28	P
13	8712	13	13	18	P
14	8714	9	7	26	P
15	8716	6	6	21	P
16	8718	7	6	26	P
17	8720	9	8	29	P
18	8722	8	8	32	P
19	8724	5	4	18	P
20	8726	8	7	26	P
21	8734	7	7	23	P
22	8736	8	7	19	P
23	8738	9	8	19	P
24	8740	8	7	19	P
25	8742	15	10	28	P
26	8744	10	9	12	P
27	8746	5	4	19	P
28	8748	12	9	32	P
29	8750	8	6	29	P
30	8752	9	8	19	P
31	8754	18	17	29	P
32	8756	11	10	20	P
33	8758	14	14	47	P
34	8760	8	8	19	P
35	8762	15	12	22	P
36	8764	13	13	18	P
37	8766	12	10	35	P
38	8768	9	9	16	P
39	8770	12	11	19	P
40	8772	8	8	18	P
41	8774	12	10	18	P
42	8776	9	9	23	P
43	8778	7	7	23	P
44	8780	8	7	24	P
45	8806	37	27	29	C
47	8862	26	22	24	I
48	8864	14	13	36	I
49	8866	13	12	41	I
50	8868	12	10	21	P
51	88	12	10	17	I
52	88	12	10	39	I

continued on next page

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
53	88	34	28	44	P
54	88	21	19	30	I
55	88	20	15	24	I
56	88	15	12	34	I
57	8854	15	12	44	I
58	9814	9	8	35	I
59	10565	11	13	30	P
60	8575	11	10	23	E
61	8615	9	8	20	E
62	8617	9	8	34	E
63	8684	11	10	22	E
64	8688	8	7	7	E
65	8690	8	7	8	E
66	8692	8	7	10	E
67	8694	8	7	10	E

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.

fill, suggesting that the pit may have functioned as a catchment for flaked stone debris. Several stones at the base of the pit may have functioned as a lining. Two possible manos (PDs 8848 and 8849) and one possible hammerstone (PD 8850) were point located at the base.

Artifacts

A partially reconstructible plain ware vessel (PD 5152, Vessel No. 23) was located on the floor in the northwest corner of the structure. Four additional plain ware sherds were recovered from the general-floor provenience (PDs 5154 and 5155).

Evidence for Remodeling

Although Features 7942 and 7943 are discussed as two separate, distinct structures, Feature 7942 may instead represent a remodeling of the earlier house. This is supported by the continued use of a single hearth, floor surface, entry, and possibly a main support posthole. No clear evidence for remodeling of Feature 7942 was encountered.

Abandonment Processes

The presence of burnt construction material in the house fill suggests that the structure had burned. Few artifacts were left on the floor at the time of the fire. The collapsed structure created a depression that eventually filled with wind- and water-deposited sediments and cultural trash.

Associated, Intrusive, or Superimposed Features

Feature 7942 superimposed an earlier structure (Feature 7943). A modern pit or posthole (Feature 7940) cut through the floor and part of the floor groove of this structure.

Chronology

An archaeomagnetic sample (SRI 2449) was collected from the hearth but could not be dated against the Southwest curve SWCV595. The data from this sample were located near the A.D. 900 portion of the curve and most likely date to A.D. 850–900. Four Gila Butte Red-on-buff sherds (A.D. 750-850) were recovered from the fill above the floor and may support this tentative date range for the abandonment of the structure.

Locus D, Feature 7943

Center of feature UTMs: N 3538414.82, E 541416.99
Architectural type: house-in-a-pit
Date range: ca. A.D. 700–925
House dimensions: 5.41 by 3.04 m; floor area 15.85 m^2; pit depth 0.33 m
Entryway dimensions: 1.59 by 0.57 m
Shape: rectangular
Orientation: south
Internal features: 1 hearth, 1 wall groove, 1 entry groove, 84postholes, and 1 intramural pit
Chronometric techniques: none
Analyzed botanical samples: PDs 6746, 8545, and 8546
Related features: intruded by Feature 4729 and superimposed by Feature 7942

Feature 7943 was the earlier and larger of the two structures in conglomerate Feature 4725. This structure was rectangular in plan view and had a long, straight-sided vestibule entryway

(Subfeature 2) that protruded from the south wall. The house also contained 1 floor groove (Subfeature 3), 1 entry groove (Subfeatures 84 and 89–91), 1 floor pit (Subfeature 82), 82 perimeter, entryway, and interior postholes (Subfeatures 4–44, 46–69, 72–81, 85–88, and 92–95), and 2 central-support postholes (Subfeatures 70 and 71). Charred post segments found on the floor of the house and in the fill suggest that the structure had burned. Feature 4729, an adobe structure, truncated the northwest corner of this feature.

Disturbances

A portion of the back wall of Feature 7943, including the northwest corner of the structure, was destroyed during the construction of Feature 4729, a later adobe house. Likewise, the construction of Feature 7942 removed a large portion of the house fill, cut through the front floor groove of the structure, altered the entryway, and plastered over at least one posthole from Feature 7943. Other disturbances included small to medium-sized roots and rodent and insect burrows.

Construction Details

The structure was rectangular in plan view with parallel walls and slightly rounded corners (Figure B.107). A long, rectangular entry protruded from the south wall of the house. The floor space, as defined by the interior edge of the floor groove, measured 15.85 m^2. The structure was built within a house pit that was nearly rectangular in plan view although the preserved portion of the north pit wall angled out at more than a 90° from the northeast corner. The house pit measured 5.41 m north–south by 3.04 m east west.

Walls and Roof. The preserved pit walls measured 33 cm in height and consisted of the native calcic subsoil. The north and south walls gradually sloped down to meet the floor, whereas the east and west walls were fairly straight. A floor groove (Subfeature 3) encircled the inside perimeter of the house pit. It was 6 to 10 cm wide and less than 10 cm deep. Sixty-six perimeter postholes (Subfeatures 5–29, 34–44, 46–68, 77–81, 94, and 95) were found within the groove and along its exterior edge. Most of these postholes were fairly uniform in size, but they ranged from 6 to 28 cm in diameter and 13 to 53 cm in depth (Table B.62). Ten of the larger perimeter postholes (Subfeatures 6, 18, 26, 34, 40–42, 44, 51, and 66) were located outside of the floor groove and cut into the north and south pit walls.

The structure contained two central-support postholes (Subfeatures 70 and 71) located along the midline of the structure on the east and west sides of the house. They measured about 25 cm in diameter and extended 43–50 cm below the house floor (see Table B.62). Floor plaster from the later structure, Feature 7942, sealed the eastern posthole (Subfeature 71), allowing the relative age of the two structures to be determined. The structure may have required a third central support, considering the size of the house and the space separating the east and west central supports. A pit (Feature 7942, Subfeature 46) or a large posthole (Feature 7942, Subfeature 45) within Feature 7942 originally may have served this purpose. These two subfeatures were located between the central-support postholes of Feature 7943.

Nine additional interior postholes (Subfeatures 31–33, 72–76, and 83) were found scattered along the back wall of the structure, and a tenth (Subfeature 30) was located in the southwest corner of the house. These postholes ranged in size from 5 to 16 cm in diameter and 23 to 70 cm in depth (see Table B.62). They may have provided additional support for the roof or functioned to divide the interior space of the house.

The fill from the postholes generally consisted of a central cone of brown sandy loam surrounded by a yellowish brown silty clay. The silty clay may have been intentionally packed into the postholes to support the posts. The sediment from the floor groove was similar to the brown fill found in the postholes.

Entry. The entryway (Subfeature 2) was a long, straight-sided vestibule located near the center of the south wall of the structure. It was 1.59 m long and measured 57 cm at the outer opening and 70 cm at the inner opening. The entryway floor was encircled by a narrow, shallow trench (Subfeatures 84, 89, and 90) that was less than 10 cm thick and about 6 cm deep. A shallow, oval pit of unknown function (Subfeature 82) was found within the groove at the outer opening to the house. Two postholes (Subfeatures 4 and 69) were located at the juncture between the entryway and the structure, and four postholes (Subfeatures 85–88) were set just outside of the entry grove, two on either side of the vestibule (see Figure B.107). Two additional postholes (Subfeatures 92 and 93) were found within the groove on the east and west sides of the outer opening. These postholes, which did not extend below the groove, contained several stones that were probably used to anchor the posts. An earthen step was located about 30 cm from the outer opening of the entryway, and a narrow sill (Subfeature 91) that was less than 10 cm deep was found at the base of the step. The sill probably originally held the lower portion of a wooden plank used to secure the step. The entryway was later remodeled and reused in Feature 7942.

Floor. The floor consisted of a 3–5-cm-thick layer of compact silty clay. It was essentially the same sediment as the natural, underlying substratum except that it was more compact. As delineated by the interior edge of the floor groove, it had an area of 15.85 m^2.

Floor Features

Hearths. No hearth could be found other than of the one recorded with Feature 7942. The hearth identified with Feature 7942 may have originated with Feature 7943 but was then reused with the later structure.

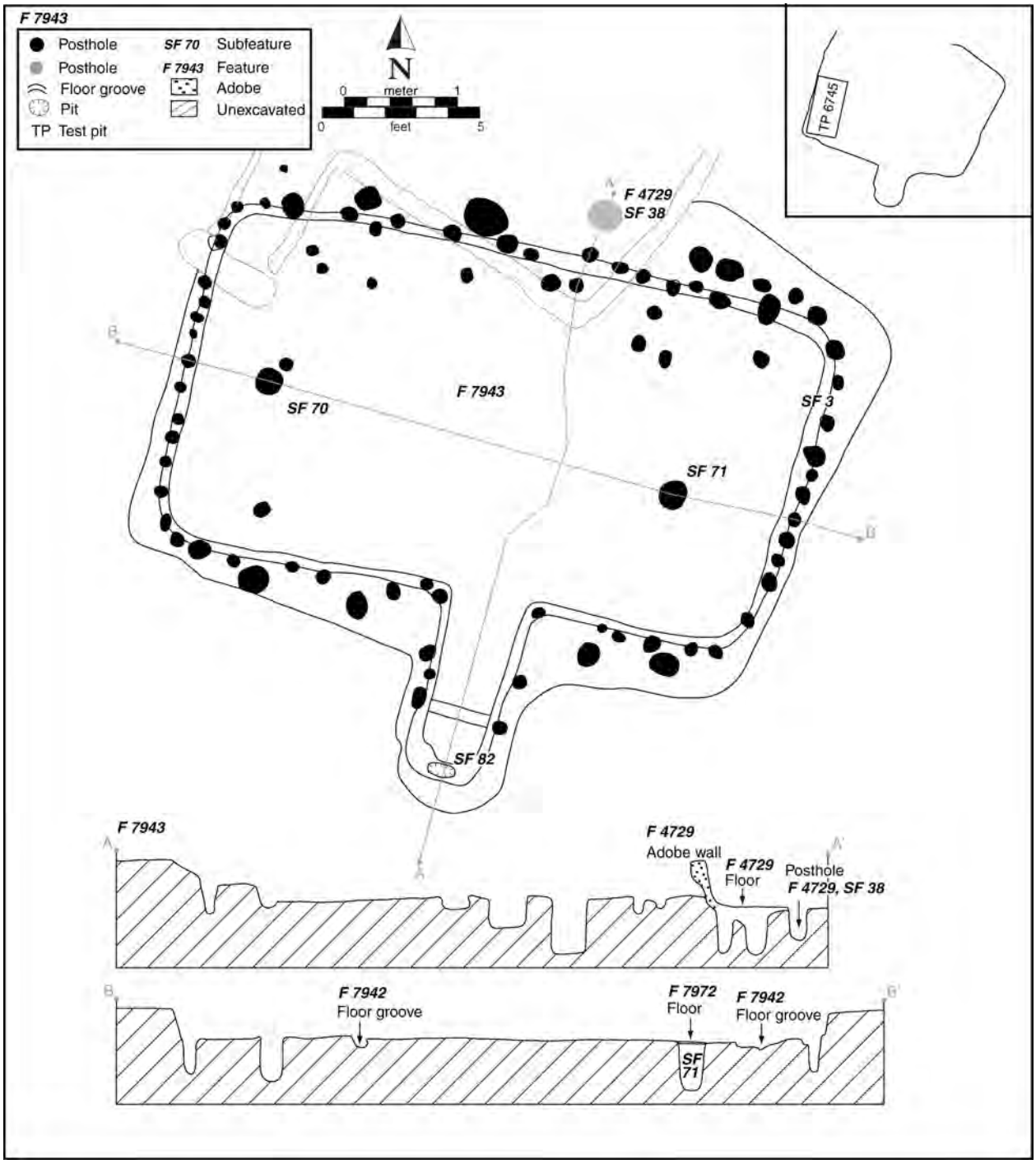

Figure B.107. Plan map of Feature 7943 showing the location of subfeatures.

Table B.62. Feature 7943 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
4	9724	13	11	26	E
5	9726	12	11	22	P
6	9728	28	22	35	P
7	9738	12	11	31	P
8	9740	11	8	27	P
9	9742	12	9	31	P
10	9744	20	12	35	P
11	9746	16	7	30	P
12	9748	9	9	36	P
13	9750	10	7	34	P
14	9752	10	7	37	P
15	9754	8	6	30	P
16	9756	9	8	34	P
17	9758	9	9	33	P
18	9760	23	22	44	P
19	9762	10	10	20	P
20	9764	8	6	27	P
21	9766	8	7	18	P
22	9768	9	9	27	P
23	9770	9	8	24	P
24	9772	2	18	35	P
25	9774	12	12	36	P
26	9776	18	17	30	P
27	9778	9	9	23	P
28	9780	13	9	38	P
29	9782	11	9	25	P
30	9784	12	11	29	I
31	9786	9	9	26	I
32	9788	7	5	31	I
33	9790	9	7	36	I
34	9792	9	8	31	P
35	9794	18	18	26	P
36	9796	12	9	40	P
37	9798	20	10	29	P
38	9800	13	11	42	P
39	9802	11	11	33	P
40	9804	11	10	50	P
41	9806	22	22	41	P
42	9808	11	10	23	P
43	9810	12	10	27	P
44	9812	14	13	29	P
46	9820	12	10	33	P
47	9822	12	10	26	P
48	9824	12	10	15	P
49	9826	8	7	38	P
50	9828	16	16	37	P
51	9830	18	10	33	P

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Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
52	9832	26	21	32	P
53	9834	13	11	23	P
54	9836	13	13	23	P
55	9838	11	9	53	P
56	9840	13	11	35	P
57	9842	20	18	47	P
58	9844	10	10	24	P
59	9846	13	12	45	P
60	9848	13	11	47	P
61	9850	12	12	31	P
62	9852	10	10	43	P
63	9854	11	10	37	P
64	9856	13	9	27	P
65	9858	9	7	38	P
66	9860	25	21	37	P
67	9862	16	12	44	P
68	9864	8	8	24	P
69	9866	9	9	40	E
70	10518	25	24	50	C
71	10520	25	25	43	C
72	10522	14	14	45	I
73	10524	16	11	70	I
74	10526	16	14	55	I
75	10528	13	13	24	I
76	10530	14	12	23	I
77	10532	11	9	15	P
78	10534	10	10	14	P
79	8698	13	13	28	P
80	10536	9	6	14	P
81	10538	6	6	13	P
83	10579	12	11	36	I
85	8579	12	12	20	E
86	8581	13	13	24	E
87	8577	21	14	28	E
88	8686	12	11	9	E
92[a]	8619				E
93[a]	8621				E
94[a]					P
95[a]					P

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.
[a] Unexcavated subfeature; no length, width, or depth measurements are available.

Pits. Subfeature 82 was a small, ovate pit discovered in the center of the groove at the outer opening of the entryway. It measured 10 by 25 cm and was about 25 cm deep. The fill from the pit was indistinguishable from that of the entry groove and consisted of gray-brown silty loam. The function of the pit is unknown.

Artifacts

Two large flakes (PDs 8547 and 8563) located in the eastern half of the structure were point located on the floor. No artifacts were recovered from the general-floor provenience (PDs 7886 and 7939).

Evidence for Remodeling

It is possible that Feature 7943 was remodeled into Feature 7942 with little or no hiatus between the use of the two structures. In addition, the interior postholes and large exterior perimeter postholes may reflect one or more remodeling episodes to Feature 7943 itself.

Abandonment Processes

The presence of several charred post or beam segments on the floor and in the fill indicates that the structure had burned. The burning may have been planned as indicated by the few artifacts left on the floor of the house. At some point later, Feature 7942 was constructed in the abandoned house pit, reusing the floor, hearth, and entryway of the older structure. It is unknown how much time lapsed between the building episodes.

Associated, Intrusive, or Superimposed Features

Feature 7943 was superimposed by structure 7942, and the northwest corner of the house was truncated by an adobe structure (Feature 4729).

Chronology

No chronometric data were obtained from Feature 7943, and no temporally diagnostic artifacts were recovered from sealed or primary contexts.. This structure clearly predates Feature 7942, which appears to have been abandoned sometime during A.D. 700–925.

Locus D, Feature 5994

Center of feature UTMs: N 3538566.61, E 541402.25
Architectural type: house-in-a-pit
Date range: ca. A.D. 650– 950
House dimensions: 6.34 by 4.04 m; pit depth 0.50 m
Entryway dimensions: 1.20 by 1.57 m
Shape: subrectangular
Orientation: east
Internal features: 1 hearth and 8 postholes
Chronometric techniques: archaeomagnetism and dendrochronology
Analyzed botanical samples: PDs 7944 and 7997
Related features: none

Feature 5994 was a subrectangular pit structure located in the central part of Locus D (see Figure 82). It was partially excavated during Phase 2. Excavations removed all of the upper fill and exposed approximately 15 percent of the house floor. One piece of ground stone was encountered on the floor, and one large hearth (Subfeature 1) and six postholes (Subfeatures 2–7) were discovered in the exposed section of floor. The structure had a stepped, east-facing entryway, and the outlines of two postholes (Subfeatures 8 and 9) were identified on the entry floor. Burnt structural debris in the fill suggests that Feature 5994 had burned.

Excavation Methods

Feature 5994 was discovered during Phase 2 excavation of Stripping Unit 6799. The northern three-fourths of the feature (Half 1) were excavated mechanically to within approximately 5–10 cm of the floor, and the pit walls and entryway were defined with shovels and trowels. Then the area in front of the entryway was excavated manually to the floor to locate the hearth. This was the only portion of Half 1 in which the floor was exposed. Artifacts observed during the excavation of Half 1 were collected, but the fill was not screened.

A 1-by-2-m control unit (Test Pit 7934) was placed in the southern quarter of the structure, and it was excavated to the floor in four arbitrary 10-cm levels. All of the fill from the test pit was screened through 1/4-inch mesh, and a flotation sample was collected from each level (PDs 7934–7936, and 7944). A pollen sample was collected from the house floor (PD 7945).

One hearth and six postholes were exposed in the structure floor. The hearth was the only subfeature that was completely excavated. All of its fill was collected for flotation (PD 8502), a pollen sample was scraped from the base (PD 8510), and an archaeomagnetic sample (SRI 2409) was collected from its walls. A second archaeomagnetic sample (SRI 2408) was collected from a burnt patch of floor plaster. Two of the postholes (Subfeatures 2 and 3) were partially excavated to obtain macrobotanical samples (PDs 7997 and 8627). Two additional postholes were identified during exposure of the entry, but neither was excavated.

Stratigraphy

The house pit was excavated into the native argillic substrate present throughout Locus D. The top 20 cm of house fill consisted of gray-brown silty loam with pockets of ash and abundant, evenly dispersed artifacts. The upper fill graded into gray-brown silty loam mottled with structural debris, including oxidized daub, charcoal chunks, burnt reed matting, and light yellowish brown adobe melt. The density of structural debris increased with depth so that the lower 12–14 cm of fill was comprised of 30–50 percent construction material. The artifact density dropped only slightly with this level. A 1–2-cm-thick lens of dark gray-brown, charcoal-stained, silty loam rested directly on the floor. This deposit likely represented roof fall.

Disturbances

Insect tunnels were noted throughout the fill and in the floor of the structure.

Construction Details

The house pit was subrectangular in plan view with a protruding, east-facing entryway. The house pit measured 6.34 m east–west and 4.04 m north–south, and it had a remaining depth of 50 cm.

Walls and Roof

The outlines of four perimeter postholes (Subfeatures 4–7) were identified at the base of the test pit along the southern pit edge, and a fifth perimeter posthole (Subfeature 2) was located along the western pit edge. Subfeature 2 contained the remains of a charred post segment, which was collected as a macrobotanical sample (PD 7997). A sixth posthole containing large chunks of charcoal (Subfeature 3) was identified in the house floor immediately to the north of the hearth. It was not clear how this posthole articulated with the superstructure of the house. The charcoal within Subfeature 3 was also collected as a macrobotanical sample (PD 8627). No other postholes were identified within the exposed floor areas.

Entry

Feature 5994 had an east-facing, parallel-sided, vestibule entryway. The entryway pit was 1.20 m wide and 1.57 m long. The floor contained two steps: the lower step was 23 cm high and the upper step was 16 cm high. The outlines of two postholes (Subfeatures 8 and 9) were visible on either side of the upper step.

Floor

The floor primarily consisted of the smoothed light brown native subsoil. Patches of oxidized plaster were identified around one of the postholes (Subfeature 3), suggesting that at least some portions of the floor had been plastered. The remnant plaster around the posthole was 2 cm thick.

Floor Features

Hearths

Feature 5994 possessed a round, basin-shaped hearth (Subfeature 1) that measured 37 cm in diameter and 17 cm in depth. The hearth walls were composed of the unlined but moderately oxidized native subsoil. Its fill consisted of loose, gray-brown silty loam with a moderate amount of ash.

Artifacts

One mano (PD 7998) was collected from the floor area exposed in the test pit.

Evidence for Remodeling

No evidence for remodeling was encountered.

Abandonment Processes

The characteristics of the floor and fill suggest that the structure had burned. The fire likely occurred during or soon after abandonment, as evidenced by structural debris found directly on the house floor. The lack of floor artifacts indicates that abandonment may have been planned.

Associated, Intrusive, or Superimposed Features

No features were directly associated with Feature 5994.

Chronology

An archaeomagnetic sample (SRI 2409) was collected from the hearth, and a second sample (SRI 2408) was collected from the floor of Feature 5994, but neither sample produced usable data. Likewise, the burnt juniper post (PD 7997) recovered from posthole Subfeature 2 was submitted for dendrochronological analysis, but it could not be dated against the existing tree-ring chronologies. Few datable ceramics were recovered from the fill of Feature 5994, and none was recovered from sealed or primary contexts. None of the datable ceramics had production date ranges that postdated A.D. 950. This and the nature of the structure suggest that Feature 5994 was occupied between ca. A.D. 700–950.

Locus D, Feature 7697

Feature 7697 was the collective designation given to three superimposed pit structures (Features 438, 5986, and 7978) that shared a common house pit (Figure B.108). The structures were located in the north-central portion of Locus D (see Figure 82).The most-recent structure (Feature 438) was also the largest, and it was constructed by expanding the existing house pit. It was a subrectangular house-in-a-pit with a protruding, north-facing entry. Several subfeatures were identified in the floor of this structure, including 1 hearth (Subfeature 50) and oxidized hearth area (Subfeature 1), 1 intramural pit (Subfeature 58), and 55 interior and perimeter postholes, and 1 central. (Subfeatures 2–49, 51–57, and 59). The floor and walls showed signs of oxidation and charred posts were recovered from two postholes, suggesting that the structure had burned sometime during or after abandonment.

The two earlier structures (Features 5986 and 7978) shared a single floor that was located about 8 cm below the floor of Feature 438. The presence of these earlier structures was indicated by a distinct line in the floor of Feature 438 that marked an abrupt change between the native subsoil of the expanded pit floor and the redeposited argillic soil used to fill in the lower house pit. Two distinct sets of perimeter postholes were identified in the shared lower floor, indicating the presence of two different structures. The inner ring of postholes (Subfeatures 2–51) and a floor groove (Subfeature 1) were assigned to Feature 5986, and the outer ring (Subfeatures 1–44) was assigned to Feature 7978. The temporal relationship between these two structures, however, could not be ascertained. Eight floor pits (Subfeatures 20, 22, 23, 26, 27, and 30–32) were present in the shared floor as well, but they could not be assigned to a particular structure. Instead, these pits were assigned to the collective Feature 7697. Likewise, an additional 33 postholes (Subfeatures 1–19, 21, 24, 25, 28, 29, and 33–41) identified in this floor were assigned to Feature 7697.

Excavation Methods

The pit containing the three features was discovered in both walls of Trench 155 during Phase 1. It was designated as Feature 438, mapped in profile, and backfilled to maintain integrity. Phase 2 mechanical stripping later uncovered the subrectangular stain in plan view. A 2-by-2-m control unit (Test Pit 2790) was placed in the eastern half of the stain and excavated to the floor of Feature 438 in four 10-cm levels. The fill was screened through 1/4-inch mesh, and a flotation sample was collected from each level (PDs 2791, 2897, 2901, and 2906). A pollen sample (PD 2907) and an additional flotation sample (PD 2907) were collected from the floor exposed at the base of the test pit.

The remaining structure fill was removed in two units. The west half (Half 1) was excavated to the floor in two levels. The upper 22 cm were removed with a backhoe, and no artifacts or samples were collected. The lower 8 cm were excavated manually, and the fill was screened through 1/4-inch mesh. A flotation sample (PD 5210) was collected from this lower level. The east half (Half 2) was excavated manually to the floor in two levels. The upper 36 cm were not screened, but observed artifacts were collected. The lower 4–5 cm were screened through 1/4-inch mesh, and a flotation sample (PD 5105) was collected from the fill. A pollen sample (PD 5351) was collected from beneath a rock sitting on the floor.

Fifty-nine subfeatures were identified in the argillic floor exposed at the base of the two units, including 1 hearth, 1 oxidized hearth area, 1 pit, and 56 postholes. In addition, the outlines of a lower and smaller structure were revealed as a distinct line in the exposed floor. Because of this, the argillic floor and associated subfeatures were assigned to Feature 438, the latest structure in the sequence. Each of the postholes was excavated individually in single 1/4-inch-screened levels. Botanical samples (PDs 6506, 6522, 6626, 6628, 7811, and 7925) were recovered from six of the postholes (Subfeatures 3, 5, 42, 43, 55, and 56), and a flotation sample (PD 7811) was collected from one of the postholes (Subfeature 55). The intramural pit was excavated in a single 1/4-inch-screened level. The entire fill of the hearth pit was collected as a flotation sample (PD 7541), and a pollen sample (PD 7542) was scraped from its base. The ashy fill covering the oxidized hearth area was collected as a flotation sample (PD 5787), and an archaeomagnetic sample was collected from the oxidized soil (SRI 2456). Two additional archaeomagnetic samples (SRI 2387 and SRI 2455) were collected from other patches of oxidized floor. Several artifacts were found in contact with this floor as well, and they were point located individually (Table B.63). Pollen samples (PDs 5349 and

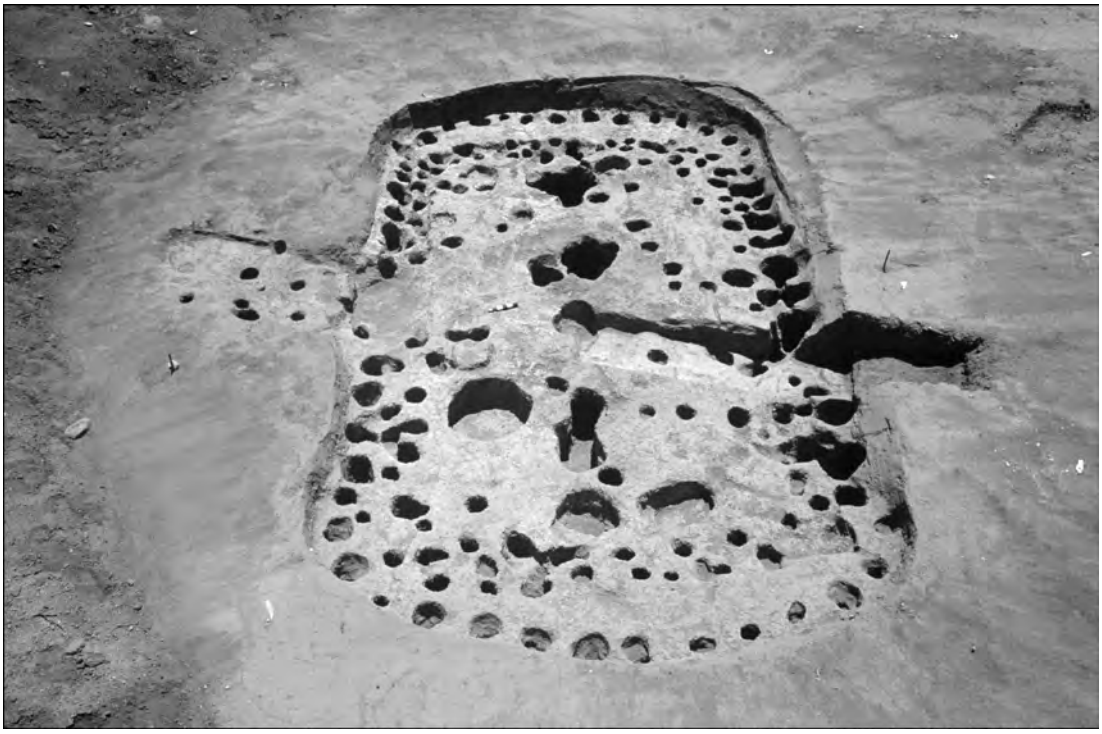

Figure B.108. Plan view of the Feature 7697 conglomerate, looking east.

Table B.63. Feature 438 Point-Located Floor Artifacts

PD No.	Artifact Description
5348	Trough metate.
5352	Mano fragment.
5915	Indeterminate ground stone fragment.
6922	Indeterminate grinding slab fragment.

Key: PD = provenience designation.

5350) were collected from beneath two of these artifacts (PDs 5348 and 6922).

Once the Feature 438 subfeatures were excavated and the floor artifacts collected, the fill used to create the Feature 438 floor surface was excavated to the lower floor in one unit and one 1/4-inch-screened level. A flotation sample was collected from the fill (PD 5987). The lower floor was located 2–11 cm below the floor of Feature 438, and it contained a number of subfeatures from two additional structures, including two rings of 127 perimeter postholes, 1 floor groove, and 8 floor pits. The inner ring of 50 perimeter postholes and the floor groove were assigned to Feature 5986, the outer ring of 44 postholes was assigned to Feature 7978. An additional 33 perimeter postholes and the 8 floor pits were assigned to the collective Feature 7697, because they could not be associated definitively with one of the lower structures. All of the postholes were excavated individually, and the fill was screened through 1/4-inch mesh. Botanical samples were recovered from 1 of the postholes (Subfeatures 16) assigned to Feature 5986 (PD 5884), 2 of the postholes (Subfeatures 3 and 4) assigned to Feature 7978 (PDs 6544 and 6548), and 3 of the postholes (Subfeatures 11, 13, and 19) assigned to Feature 7697 (PDs 5589, 7591, and 7768). In addition, a flotation sample was collected from 1 of the postholes (Subfeature 48) in Feature 5986 (PD 8530). The floor groove was excavated in a single level and screened through 1/4-inch mesh. Six of the intramural pits (Subfeatures 20, 22, 23, 26, 27, and 32) were excavated in single 1/4-inch-screened levels. Flotation samples (PDs 7800, 7813, and 7896) were collected from the fill of three of these (Subfeatures 20, 22, and 26), and pollen samples (PDs 7803, 7836, 7899, 8511, and 7987) were scraped from the base of five (Subfeatures 20, 22, 26, 27, and 32). Five possible ground stone fragments (PDs 8512–8516) were point located in the base of Subfeature 27. The entire fill of a seventh pit (Subfeature 31) was collected as a flotation sample (PD 7968), and a pollen sample (PD 7977) was scraped from its base. The eighth pit (Subfeature 30) was excavated in two 1/4-inch-screened stratigraphic levels, and a flotation sample was collected from each level (PDs 7912 and 7921). A pollen sample (PD 7919) was scraped from the base of the pit, and six pieces of ground stone (PDs 7914–7918 and 7920) were point located in the base.

Stratigraphy

The house pit for the three structures was dug into the argillic and calcic subsoils present throughout Locus D. Three different strata were identified within this house pit. The first stratum consisted of the loose grayish brown silty loam that filled the main house pit associated with Feature 438. It contained abundant ash, charcoal, and artifacts, with a moderate amount of burnt architectural debris near the structure's floor. This stratum likely represents burnt debris from the destruction of Feature 438 and subsequent trash filling.

The second stratum consisted of a 0.5-cm-thick plaster layer applied to portions of the Feature 438 floor surface. This layer was observed throughout much of the house, and it apparently capped the fill from the lower structures.

The third stratum consisted of a compact, brown sandy loam that contained abundant fine to medium-sized gravels. A moderate amount of ash and charcoal but few artifacts were encountered in this stratum. The surface of the stratum appeared to have been intentionally wetted and smoothed to form the subfloor of Feature 438 but at lower elevations it was unconsolidated. This stratum most likely represents the intentional backfilling of the remaining house pit from the lower structures to form a level floor for Feature 438.

Locus D, Feature 438

Center of feature UTMs: N 3538386.44, E 541503.81
Architectural type: house-in-a-pit
Date range: A.D. 735–865 or A.D. 935–990
House dimensions: 7.61 by 4.35 m; pit depth 0.45 m
Entryway dimensions: 1.37 by 2.80 m
Shape: subrectangular
Orientation: north
Internal features: 2 hearths, 56 postholes, and 1 intramural pit
Chronometric techniques: archaeomagnetism,
Analyzed botanical samples: PDs 2901, 5210, and 7925
Related features: superimposes Features 5986, 7978, and 9576; intruded by Feature 11,442 (a cache)

Disturbances

Trench 155 went through the center of the house and damaged a few centimeters of the southern half of the floor, the entry pit, and the southern pit wall of Feature 438. Roots, insects, and rodents disturbed portions of the feature's fill and subfeatures.

Construction Details

Feature 438 was subrectangular in plan view with a protruding, north-facing entry. The house pit measured 7.61 m east–west by 4.35 m north–south and had a remaining depth of 45 cm. The unprepared pit walls curved into the bottom creating a basin shape.

Walls and Roof

Forty-nine perimeter postholes (Subfeatures 4–49, 51, 52, and 57) were located along the edges of the house pit. They ranged in size from 10 to 38 cm in diameter and 5 to 64 cm in depth (Table B.64).

One central-support posthole was identified for this structure (Subfeature 3), although it is likely that there were at least two in use. A partially burnt post (PD 6506) was recovered from this subfeature. Three additional central-support postholes were assigned to the feature conglomerate (Feature 7697, Subfeatures 13, 21, and 24), and at least one of these may have been used with this structure.

Six other interior postholes (Subfeatures 2, 53–56, and 59) were assigned to Feature 438, and they ranged in size from 10 to 26 cm in diameter and 12 to 60 cm in depth (see Table B.64). These postholes were arranged into three pairs that surround the hearth area, a pattern that is seen in the recessed hearth structures at the site. The close proximity of the postholes in two of these pairs (Subfeatures 53 and 54 and Subfeatures 55 and 56) suggests that one replaced the other in each location. The same may be true for the postholes in the third pair (Subfeatures 2 and 59), but they are spaced farther apart. The remains of a partially burnt post (PD 7925) were recovered from one of the postholes (Subfeature 56). The fill of the postholes was similar to that of the house pit and consisted of a grayish brown silty loam with abundant artifacts.

Entry

Feature 438 had a protruding, stepped entry located at the midpoint of the north wall of the house pit. The entry pit walls consisted of the unprepared native subsoil and showed no signs of oxidation. The step was created at the front of the entry after the entry pit was excavated. The inside edge of the step was capped with a layer of caliche plaster. It is likely that this entry was shared by all three structures in this house pit, and therefore none of the eight postholes (Feature 7697, Subfeatures 33–40; Table B.65) located along the edges of the entry pit could be definitively associated with a particular structure.

Floor

The floor of Feature 438 was dish-shaped and consisted of a mix of materials. The outer 40 cm of the floor, along the edges of the pit, consisted of the wetted and smoothed

Table B.64. Feature 438 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
2	6504	20	20	12	I
3	6506	22	22	50	C
4	6520	32	33	41	P
5	6522	30	25	42	P
6	6526	20	20	64	P
7	6528	20	23	20	P
8	6532	25	29	24	P
9	6534	24	20	36	P
10	6538	24	28	33	P
11	6542	14	12	30	P
12	6546	10	10	25	P
13	6552	17	17	24	P
14	6554	20	16	33	P
15	6556	12	12	25	P
16	6558	12	11	28	P
17	6562	20	20	16	P
18	6564	21	19	30	P
19	6566	22	17	20	P
20	6568	14	15	36	P
21	6570	12	11	38	P
22	6572	24	18	37	P
23	6574	16	18	40	P
24	6576	25	28	26	P
25	6578	13	10	36	P
26	6580	18	16	5	P
27	6588	22	17	25	P
28	6598	30	28	25	P
29	6600	26	30	26	P
30	6602	38	28	24	P
31	6604	25	30	28	P
32	6606	15	18	16	P
33	6608	20	23	20	P
34	6610	26	26	22	P
35	6612	10	10	15	P
36	6614	22	22	18	P
37	6616	22	22	16	P
38	6618	20	20	20	P
39	6620	25	25	22	P
40	6622	18	24	14	P
41	6624	17	10	18	P
42	6626	12	12	24	P
43	6628	10	12	20	P
44	6630	23	25	26	P
45	6632	18	18	26	P
46	6634	17	17	14	P
47	6636	22	18	20	P
48	5880	32	30	31	P
49	5882	35	30	26	P
51	8016	16	18	26	P

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
52	7750	22	22	20	P
53	7807	18	18	23	I
54	7809	26	20	35	I
55	7811	20	20	60	I
56	7925	18	14	34	I
57	7976	20	20	39	P
59	5605	10	14	15	I

Key: C = central-support posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.

Table B.65. Feature 7697 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
1	6502	18	16	22	I
2	6508	26	18	30	I
3	6510	17	18	36	I
4	6512	20	20	31	I
5	6514	17	20	18	I
6	6516	12	14	18	I
7	5577	18	15	20	I
8	5579	20	19	36	I
9	5583	16	15	18	P
10	5587	12	12	21	P
11	5589	16	16	36	I
12	5603	18	22	22	I
13	7591	32	36	30	C
14	7637	16	16	12	I
15	7639	18	19	16	I
16	7641	13	14	14	I
17	7643	15	17	27	I
18	7645	18	18	21	I
19	7768	18	18	17	I
21	7805	40	60	42	C
24	7892	34	34	75	C
25	7894	18	18	24	I
28	7929	24	18	34	P
29	7931	15	15	41	P
33	7595	16	20	20	E
34	7597	14	14	24	E
35	8012	18	18	21	E
36	8014	14	14	18	E
37	7699	22	22	23	E
38	9602	10	10	18	E
39	9604	12	12	23	E
40	9606	12	12	31	E
41	8028	17	15	19	I

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.

native calcic subsoil. The rest of the floor area consisted of a layer of plaster that capped the fill of the underlying house pits. This plastered surface also capped the pits and postholes of the underlying structures, allowing the distinction between internal subfeatures to be made. Both the floor plaster and smoothed calcic floor area exhibited signs of oxidation.

Floor Features

Hearths

An informal basin-shaped hearth (Subfeature 50) was located approximately 1.5 m in front of the entryway (Figure B.109), and it was surrounded by a 50-by-80-cm patch of oxidized plaster that may have served as an informal hearth area (Subfeature 1). The basin-shaped hearth was 30 cm in diameter and 5 cm deep. It had been dug into the native calcic substrate, which displayed heavy oxidation from repeated use. The fill contained dense pockets of ash. The subfeatures were located in a lower area of the floor surface, and the area beneath these subfeatures was not excavated. Therefore, it is unknown whether they were associated with Feature 438 alone or if they were used in all three structures.

Pits

An ovate, irregularly shaped pit (Subfeature 58) was located just east of the entry. It was assigned to Feature 438 because the floor plaster seemed to abut it, suggesting that it was constructed as part of that structure (see Figure B.109).It measured 30 by 38 cm in plan view and 20 cm in depth. The unprepared and unoxidized walls sloped gently to the base. This pit may have functioned as a basket or pot rest.

Artifacts

Four artifacts were recovered from the floor of Feature 438 (see Table B.63). A trough metate (PD 5348) and an indeterminate ground stone fragment (PD 5915) were located next to each other in the southeast corner of the structure; the ground stone fragment was located above one of the postholes from the underlying structures (Feature 5986, Subfeature 45). A mano fragment (PD 5352) was located above a posthole from the underlying structures (Feature 7697, Subfeature 1). A grinding slab fragment (PD 6922) was recovered from the floor surface as well. Several flakes and plain ware sherds were recovered from the general-floor provenience (PDs 5106 and 5356), as was one Rillito or Rincon Red-on-brown sherd and one shell bracelet fragment.

Evidence for Remodeling

The patterning of the interior postholes, particularly Subfeatures 53 and 54, suggest that Feature 438 was remodeled at least once. No other clear evidence for remodeling could be identified for Feature 438.

Abandonment Processes

The fill contained abundant artifacts and a small quantity of burnt architectural debris immediately above the floor. Few artifacts, however, were found in contact with the floor, suggesting that the structure had a planned abandonment. The charred post remnants recovered from Subfeatures 3 and 56 and the slightly oxidized pit walls and floor indicate that the structure had burned sometime during or after abandonment. The depression left by the house pit then filled with cultural trash and natural sediments.

Associated, Intrusive, or Superimposed Features

Feature 438 superimposed and reused part of the house pit for Features 5986 and 7978. An unexcavated pit (Feature 9576) was located beneath the structure's floor and entryway. A cache (Feature 11,442) consisting of two stone censers was found in the structure fill.

Chronology

One archaeomagnetic sample (SRI 2456) was collected from the oxidized hearth area (Subfeature 1) but did not produce usable data. Two archaeomagnetic samples were also collected from the burnt floor. One of these samples (SRI 2387) returned the date range options of A.D. 635–1015 and 1385–1690. The other sample (SRI 2455) returned the date range of A.D. 785–840. The combined data from these two samples produced the composite date range options of A.D. 735–865 and 935–990. The lack of additional chronometric data and the high density of postoccupational fill make it difficult to determine which of these options is the best age estimate for the structure.

Locus D, Feature 5986

Center of feature UTMs: N 3538386.44, E 541503.81
Architectural type: house-in-a-pit

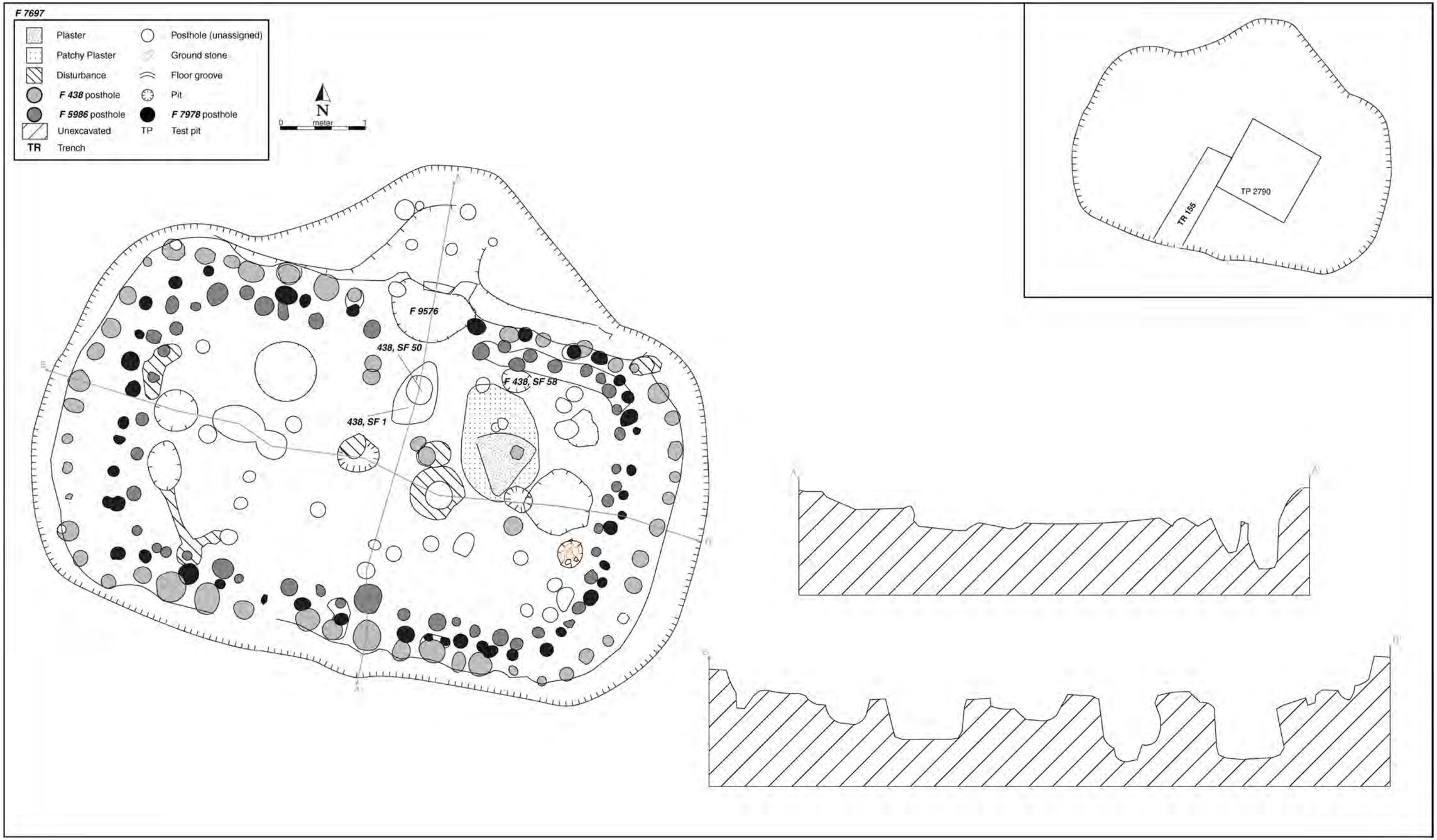

Figure B.109. Plan map of the Feature 7697 conglomerate showing the location of subfeatures assigned to Features 438, 5986 and 7978 and those assigned to the conglomerate Feature 7697. The locations of point-located artifacts are shown as well.

Date range: A.D. 700–865
House dimensions: 5.50 by 3.15 m
Entryway dimensions: unknown
Shape: subrectangular
Orientation: north
Internal features: 1 floor groove and 50 postholes
Chronometric techniques: none
Analyzed botanical samples: none
Related features: Feature 7978, superimposed by Feature 438

Construction Details

Feature 5986 was constructed within a subrectangular pit that measured approximately 5.50 m east–west by 3.15 m north–south. The pit size was estimated because of its partial destruction during the construction of overlying Feature 438. This structure most likely opened to the north.

Walls and Roof

Fifty perimeter postholes (Subfeatures 2–51) were assigned to Feature 5986, and they delineated the floor boundaries. The postholes located along the northeast section of the wall were associated with a possible floor groove (Subfeature 1). Traces of the floor groove could not be found in other areas of the structure. It may have been removed during a remodeling episode, or the feature identified as a floor groove actually may have been a rodent run. The postholes identified with this structure ranged in size from 10 to 34 cm in diameter and 7 to 46 cm in depth (Table B.66). It is likely that some of the internal postholes and central-support postholes identified at this floor level were also associated with Feature 5986, but this could not be definitively ascertained. Instead, these postholes were assigned to conglomerate Feature 7697.

Entry

Based upon the break in the ring of perimeter postholes, the entry to Feature 5986 was located along the midline of the north wall. It is unclear whether the entry associated with Feature 438 was constructed originally during the occupation of one of the earlier features or if it expanded on a preexisting entry pit that was associated with these structures.

Floor

Feature 5986 shared a floor with Feature 7978, and it consisted of the natural pit substrate. There is no evidence that this floor was plastered or oxidized.

Locus D, Feature 7978

Center of feature UTMs: N 3538386.44, E 541503.81
Architectural type: house-in-a-pit
Date range: A.D. 700–865
House dimensions: 5.95 by 3.65 m; 0.11 m depth
Entryway dimensions: unknown
Shape: subrectangular
Orientation: north
Internal features: 44 postholes
Chronometric techniques: none
Analyzed botanical samples: none
Related features: Feature 5986, superimposed by Feature 438

Construction Details

Features 7978 was built in a subrectangular pit measuring approximately 5.95 m east–west by 3.65 m north–south. The pit size was estimated because of its partial destruction during the construction of Feature 438. This structure most likely opened to the north.

Walls and Roof

Forty four perimeter postholes were associated with Feature 7978 (Subfeatures 1–44). This ring of postholes was located outside of the ring associated with Feature 5986 and delineated a slightly larger floor area. No floor groove was discovered in association with these postholes. They ranged in size from 9 to 30 cm in diameter and 4 to 51 cm in depth (Table B.67). It is likely that some of the internal postholes and central-support postholes identified at this floor level were also associated with Feature 7978, but this could not be definitively ascertained. Instead, these postholes were assigned to conglomerate Feature 7697.

Entry

Based upon the break in the ring of perimeter postholes, the entry to Feature 7978 was located along the midline of the north wall. It is unclear whether the entry associated with Feature 438 was constructed originally during the occupation of one of the earlier features or if it expanded on a preexisting entry pit that was associated with these structures.

Floor

Feature 7978 shared a floor with Feature 5986, which consisted of the natural pit substrate. There is no evidence that this floor was plastered or oxidized.

Table B.66. Feature 5986 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
2	6518	34	30	40	P
3	6524	20	20	14	P
4	6530	22	20	30	P
5	6582	13	10	16	P
6	6638	16	14	32	P
7	6590	16	20	28	P
8	6592	10	10	14	P
9	6594	16	16	29	P
10	7082	14	12	22	P
11	7084	14	12	10	P
12	5581	24	17	36	P
13	5585	15	12	22	P
14	5591	16	14	46	P
15	5597	18	18	17	P
16	5884	24	23	19	P
17	7593	22	16	21	P
18	8018	16	16	28	P
19	8020	16	16	22	P
20	7599	12	16	10	P
21	7607	12	12	13	P
22	7611	14	15	18	P
23	7621	14	19	17	P
24	7623	23	14	14	P
25	7625	10	10	20	P
26	7627	16	16	18	P
27	7629	16	15	18	P
28	7748	10	10	26	P
29	7752	18	18	23	P
30	7754	15	16	15	P
31	7756	16	13	23	P
32	7758	13	13	21	P
33	7760	22	22	37	P
34	7762	21	12	20	P
35	7764	20	20	32	P
36	7927	15	13	32	P
37	7952	11	11	30	P
38	7954	14	11	24	P
39	7956	15	14	25	P
40	7960	12	11	28	P
41	7962	14	12	27	P
42	7966	13	13	23	P
43	7970	10	10	25	P
44	7972	17	14	36	P
45	8518	16	13	23	P
46	6550	14	12	20	P
47	8526	11	10	27	P
48	8530	10	10	7	P

continued on next page

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
49	9578	16	16	—	P
50	9580	13	13	—	P
51	9582	11	11	14	P

Key: P = perimeter posthole; PD = provenience designation.

Table B.67. Feature 7978 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
1	6536	16	16	17	P
2	6540	14	16	10	P
3	6544	14	11	28	P
4	6548	16	16	30	P
5	6560	24	16	30	P
6	6588	10	10	29	P
7	6584	17	16	28	P
8	6586	23	22	18	P
9	6596	20	22	23	P
10	6715	13	11	30	P
11	5547	20	20	33	P
12	8532	18	15	29	P
13	8534	12	12	26	P
14	5593	22	18	36	P
15	5595	14	9	33	P
16	5601	20	30	18	P
17	8022	12	12	31	P
18	7601	16	14	20	P
19	7603	16	18	4	P
20	7605	20	26	15	P
21	7609	14	14	17	P
22	7613	13	14	13	P
23	7615	18	16	12	P
24	7617	20	20	17	P
25	7619	10	10	15	P
26	7631	18	26	22	P
27	7633	17	11	19	P
28	7635	17	16	29	P
29	8030	11	11	12	P
30	8026	12	12	16	P
31	7744	12	12	26	P
32	7746	22	22	46	P
33	7766	20	20	51	P
34	7958	10	10	27	P
35	7964	12	12	25	P
36	7974	15	13	29	P
37	7980	15	18	27	P
38	7982	10	10	20	P
39	8520	13	12	29	P
40	8522	13	12	25	P
41	8524	15	15	35	P
42	8528	12	11	12	P
43	9584	17	14	32	P
44	9586	10	10	28	P

Key: P = perimeter posthole; PD = provenience designation.

Locus D, Conglomerate Feature 7697

Center of feature UTMs: N 3538386.44, E 541503.81
Architectural type: house pit
Date range: pre–A.D. 990
House dimensions: n/a
Entryway dimensions: n/a
Shape: subrectangular
Orientation: north
Internal features: 33 postholes and 8 intramural pits
Dating techniques: n/a
Analyzed botanical samples: 7921
Related features: encompasses Features 438, 5968, and 7978

Construction Details

Walls and Roof

A total of 33 postholes from the lower house level could not be assigned to either Feature 5968 or 7978, and instead were assigned to general conglomerate Feature 7697. Of these, 4 were perimeter postholes (Subfeatures 9, 10, 28, and 29), 18 were interior postholes (Subfeatures 1–8, 11, 12, 14–19, 25, and 41), 3 were central-support postholes (Subfeatures 13, 21, and 24), and 8 were located in the entryway (Subfeatures 33–40). The central-support postholes were located along the midline of the house and ranged in size from 32 to 60 cm in diameter and 30 to 75 cm in depth (see Table B.65). It is likely that only 2 were in use at any one time, and it is possible that 1 of the 2 postholes in the west side of the house (Subfeatures 13 and 21) were associated with Feature 438 instead of or in addition to the lower two structures.

The interior postholes ranged in size from 12 to 26 cm in diameter and 12 to 36 cm in depth (see Table B.65). They were scattered across the floor surface, and it is unknown whether they all were in use at the same time. At least two different linear series of postholes were identified (Subfeatures 2–6 and Subfeatures 15–18), and they may have functioned to support interior walls or furniture (see Figure B.109).

The eight postholes in the entryway ranged in size from 10 to 22 cm in diameter and 18 to 31 cm in depth (see Table B.65). They most likely formed the walls of the entry corridor, but it is unknown whether they all were in use at the same time or if they were related to different use episodes of the entry pit.

Floor Features

Hearths

It is possible that Feature 438 reused the hearth area from one or both of the lower structures. No hearth area was discovered in direct association with the lower floor, but it is possible that an earlier hearth was located in the unexcavated area beneath the upper floor hearth.

Pits

Eight floor pits (Subfeatures 20, 22, 23, 26, 27, and 30–32) were associated with the lower structures, but none were able to be assigned to a specific structure. They varied in size and shape, and their functions probably ranged from storage (Subfeatures 20, 22, 26, and 30), to food processing (Subfeature 32), to basket and/or pot rests (Subfeatures 23, 27, 31, and 32). The size, shape and fill of these pits are described in Table B.68.

Artifacts

No artifacts could be associated definitively with the occupation of either Feature 5986 or 7978.

Disturbances

The construction of either Feature 5986 or 7978 removed the fill and possibly altered the subfeatures of the other structure. The construction of Feature 438 impacted both structures by removing most of the upper pit walls and all of the fill from the later of the two structures. Rodent tunneling affected the integrity of some of the subfeatures from these lower structure, and the floor exhibited root, insect, and rodent damage.

Evidence for Remodeling

Because the interior subfeatures could not be assigned to specific structures, no evidence for remodeling to a specific structure could be identified. The only discernible remodeling for these two structures took the form of replacement of one structure by the other.

Abandonment Processes

There was no evidence of oxidation or burning from these lower structures, and none of the original fill was left. It is unknown what form the abandonment of either structure took, or how long they lay empty before the construction of later structures took place.

Associated, Intrusive, or Superimposed Features

Features 5986 and 7978 were superimposed by Feature 438. An unexcavated pit (Feature 9576) was discovered before

Table B.68. Feature 7697 Floor-Pit Data

Subfeature No.	Shape (Plan, Profile)	Diameter or Dimensions (l × w) × Depth (m)	Fill	Comments
20	circular, cylindrical	0.40 × 0.20	Unconsolidated fine silty loam with ash and some charcoal and artifacts.	Capped by the floor of Feature 438.
22	circular, partially bell-shaped	0.70 × 0.72 × 0.30	Unconsolidated fine silty loam mottled with argillic clay; contained ash, few charcoal flecks, and some artifacts.	Capped by the floor of Feature 438.
23	ovate, irregular	0.60 × 0.40 × 0.22	Unconsolidated fine silty loam mottled with argillic clay and architectural debris; contained ash, little charcoal, and few artifacts.	Capped by the floor of Feature 438.
26	circular, cylindrical	0.41 × 0.44 × 0.28	Unconsolidated fine silty loam with ash and few artifacts.	Capped by the floor of Feature 438.
27	ovate, cylindrical	0.28 × 0.35 × 0.20	Unconsolidated fine silty loam with ash, little charcoal, and few artifacts.	Base of pit was lined with cobbles; it was capped by the floor of Feature 438.
30	circular, bell-shaped with a flat base	0.78 × 0.89 × 0.70	Stratum 1: unconsolidated fine silty loam mottled with argillic clay; some charcoal; and moderate artifacts. Stratum 2: unconsolidated fine silty loam redeposit with some charcoal and few artifacts.	Pit was excavated down to channel deposit; it was capped by the floor of Feature 438.
31	ovate, cylindrical	0.22 × 0.27 × 0.16	Unconsolidated fine silty loam with moderate artifacts.	Capped by the floor of Feature 438.
32	circular, basin-shaped	0.41 × 0.42 × 0.13	Unconsolidated fine silty loam with little charcoal and some artifacts.	Capped by the floor of Feature 438.

the floor of Feature 438 and the entryway, and it is possible that it predated the two earlier structures as well.

Chronology

No chronometric data were recovered from Features 5986 or 7978, and no artifacts were recovered from sealed, primary contexts. Therefore, these structures could only be dated through their stratigraphic relationship with Feature 438. The composite archaeomagnetic date range for Feature 438 is A.D. 735–865 or 935–990. Without additional information, the use and abandonment of the lower structures can be placed only before A.D. 990, the last possible use for the overlying structure. Furthermore, it is unknown whether Feature 5986 predated Feature 7978 or if it replaced it in the construction sequence.

Locus D, Features 7879 and 7880

Features 7879 and 7880 were two superimposed pit structures in the western end of Locus D (Figure 81) that shared a common house pit (Figure B.110). Feature 7879, the earlier of the two structures, had a north-facing entry, 1 floor groove (Subfeature 1), and at least 27 interior and perimeter postholes (Subfeatures 2–28). Feature 7880, the later and marginally smaller structure, reused and remodeled the entryway from Feature 7879 as well as portions of the floor groove and several postholes (Figure B.111). In addition, this later structure had 1 hearth (Subfeature 1), 1 separate floor groove (Subfeature 3), 1 central-support posthole (Subfeature 4), 3 floor pits (Subfeatures 5–7), and 58 perimeter and interior postholes (Subfeatures 8–65). It is likely that the hearth, floor pits, central-support posthole and some of the perimeter and interior postholes assigned to Feature 7880 were used in the earlier structure as well. Both structures shared a common floor surface, which consisted of the unprepared native subsoil. A number of artifacts were recovered from the floor (Table B.69), including one Hohokam barbed arrow point fragment, three possible polishing stones, one possible censer, and one shell bracelet. Charred structural debris in the fill suggest that the later structure, Feature 7880, had burned. Five unexcavated pits (Features 5978 and 7737–7740), one partially excavated pit (Feature 7742), and one informal hearth area (Feature 5520) intruded the house fill and portions of the house-pit walls (see Figure B.111). An intrusive inhumation (Feature 5512) removed part of the south wall of the house pit.

Figure B.110. Plan view of superimposed Features 7879 and 7880, looking south.

Excavation Methods

Features 7879 and 7880 were identified in the south profile of Trench 64 during Phase 1, and the younger structure (Feature 7880) was exposed in plan view during Phase 2 mechanical stripping. Initially, it was thought that only one structure was present, designated Feature 784, and the methods of excavation and recording were geared toward a single house. The presence of the second structure was not recognized until the floor was exposed. Documentation was then modified to account for both the earlier and later house.

Excavation began with the mechanical removal of fill in the western two-thirds of the house pit to within 10 cm of the floor. This fill was removed in a single, 26–45-cm level. It was not screened, but observed artifacts were collected. Excavation of this unit was halted temporarily when an intrusive seated burial (Feature 5512) was encountered in the fill along the south wall. Mechanical excavation resumed once the burial had been removed.

A 1-by-2-m control unit (Test Pit 6854) was placed in the eastern third of the house pit, along the east wall. It was excavated to the floor in five 10-cm arbitrary levels and a sixth 3-cm level. The fill was screened through 1/4-inch mesh, and flotation samples were collected from each level (PDs 6855, 6856, 6863, 6923, 6939, and 6942).

The remaining house fill was divided into two excavation units (Halves 1 and 2). Each unit was hand-excavated to the floor in a single 1/4-inch-screened level. Flotation, pollen, and macrobotanical samples were collected from each unit (PDs 6988 and 7078). A composite pollen sample was removed from the best-preserved portion of the floor in the western half (PD 6989). Burnt reeds were collected as a botanical sample (PD 5742) from near the back wall in the eastern half.

The entry was excavated separately in two levels. The upper level was 37–49 cm thick and corresponded to the mechanically excavated level in the structure. It was not screened, and observed artifacts were collected and bagged with those from the upper level of house fill. The lower level was 10–12 cm thick, the fill was 1/4-inch screened, and a flotation sample was collected (PD 5725). A composite pollen sample was collected from the entry ramp surface (PD 7831).

The exposure of the floor revealed a number of subfeatures, and it became apparent that there was at least one major remodeling episode or two structures present within the house pit. Because several of the subfeatures were sealed over with a red argillic soil, it was possible to identify those subfeatures that had been used exclusively in the earlier structure (Feature 7879). The rest of the subfeatures were assigned to the later structure (Feature 7880), with the understanding that many of them probably had been used in the earlier structure as well (or possibly only in Feature 7879). The subfeatures assigned to Feature 7880 included 1 hearth, 1 floor groove, 1 central-support

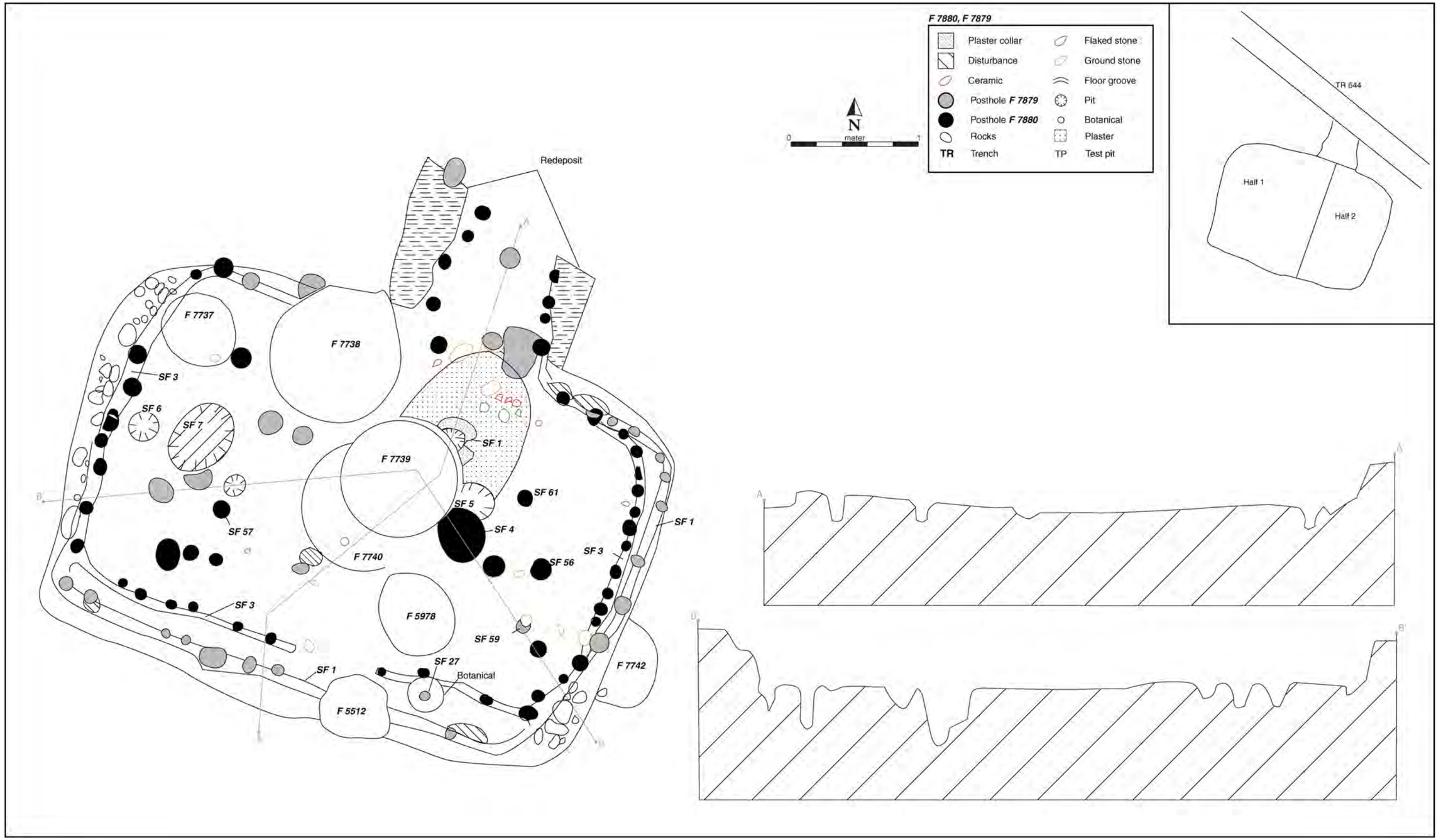

Figure B.111. Plan map of superimposed Features 7879 and 7880 showing the location of floor features and intrusive features.

Table B.69. Feature 7880 Point-Located Floor Artifacts

PD No.	Artifact Description
5570	Core (Catalog No. 584).
5571	Four burnt plain ware sherds.
5573	Possible pestle.
5574	Slate palette fragment.
5575	Core (Catalog No. 858).
5728	Grinding slab.
5730	Mano.
5732	Pecking stone (Catalog No. 489).
5733	Cluster of seven plain ware sherds.
5734	Pecking stone (Catalog No. 478).
5735	28 pieces of flaked stone, including 1 unifacial utilized flake (Catalog No. 410), 1 bifacial utilized flake (Catalog No. 426), 1 globular core (Catalog No. 581), 5 unifacial retouched flakes (Catalog Nos. 343, 354, 347, 348, and 357), 2 partial pecking stones/cores (Catalog Nos. 484 and 485), 1 single-platform core (Catalog No. 580), 1 full pecking stone (Catalog No. 480), 1 unnotched San Pedro dart point (Catalog No. 48), 1 uniface (Catalog No. 232), 11 pieces of debitage, and 3 pieces of debris.
5741	Seven burnt black-tailed jackrabbit foot bones.
6782	Shell bracelet.
6783	Worked plain ware sherd.
6944	Partial pecking stone/core (Catalog No. 481).
6945	Possible polishing stone.
6946	Hand stone.
6947	One plain ware sherd.
6948	Chert Hohokam barbed arrow point tip/midsection.
6995	Censer.

Key: PD = provenience designation.

posthole, 3 floor pits, and 58 interior and perimeter postholes. The floor groove and 58 of the postholes were excavated separately, and the fill was 1/4-inch screened. A burnt, in situ post was collected from one of the postholes (Subfeature 55) as a botanical sample (PD 5727), and an additional botanical sample was collected from the central-support posthole (Subfeature 4). A flotation (PD 7549) and a pollen (PD 7550) sample were collected from one of the postholes (Subfeature 59). The fill from the fifty-ninth posthole (Subfeature 57) was collected as a flotation sample (PD 7531), and a pollen sample (PD 7543) was scraped from its plaster lining. The entire fill of the hearth was collected as a flotation sample (PD 5964), a composite pollen sample (PD 7563) was recovered from the walls and base, and an archaeomagnetic sample (SRI 2407) was collected from the plaster. Two of the three intramural pits (Subfeatures 5 and 6) were excavated individually in single 1/4-inch-screened levels. A flotation sample (PDs 7903 and 7556) was collected from each, and a pollen sample (PDs 7904 and 7557) was scraped from each base. The third intramural pit (Subfeature 7) was not excavated. Finally, 20 artifacts (PDs 5570, 5571, 5573–5575, 5728, 5730, 5732–5735, 5741, 6782, 6783, 6944–6948, and 6995) were discovered on the house floor and assigned to the occupation of Feature 7880 (see Table B.69). They were point located and collected individually, and a pollen sample (PDs 5572, 5729, and 5731) was recovered from under three of them (PDs 5571, 5728, and 5730).

The subfeatures that could be assigned definitively to Feature 7879 included 1 floor groove and 27 postholes. Each of these subfeatures was excavated individually in a single 1/4-inch-screened level. A botanical sample (PD 5970) was collected from one of the postholes (Subfeature 23).

Stratigraphy

The house pit was dug into the local paleosol, which consisted of a reddish brown argillic horizon overlying a light yellowish brown calcic-laden horizon. Four strata were identified in the fill of the structure. The upper stratum was 26 cm thick and consisted of a compact grayish brown sandy loam. It was slightly ashy and sparsely flecked with charcoal. Artifact density was high in this stratum.

The second stratum was 17 cm thick and consisted of a grayish brown sandy loam mottled with reddish orange oxidized daub, yellowish brown daub, and charcoal. Charcoal size and content increased significantly from the

upper stratum, and artifact density dropped. This stratum graded into the third stratum, with the sediments becoming increasingly darker and mottled with more charcoal and architectural debris. This third stratum was approximately 10 cm thick and had a moderate artifact density. The lowest stratum was a 1–2-cm-thick lens of dark brown silty loam. It contained burnt and decomposed organic materials lying directly on the floor surface.

Disturbances

Feature 7879 was almost completely remodeled by the construction of Feature 7880. The fill and floor features of the later structure and portions of the house-pit walls were impacted heavily by the construction of six intrusive pits (Features 5978, 7737–7740, and 7742) and one informal hearth area (Feature 5520). An intrusive inhumation (Feature 5512) removed part of the south wall of the house pit. Trench 64 removed the northern end of the entryway. The pit walls, floor, and subfeatures exhibited moderate root, rodent, and insect damage as well.

Evidence for Remodeling

If these two structures resulted from temporally separate occupations, then there is no clear evidence that either was remodeled. Feature 7880, however, may represent a massive remodeling of Feature 7879 rather than a later structure. Remodeling is supported by the fact that only portions of the original floor groove were replaced by the later floor groove; the sections of floor groove along the west and north walls, and the accompanying postholes, were reused in the later occupation. The postholes in the replaced sections of floor groove were capped with a red argillic clay, as were several interior postholes, indicating that they belonged to the earlier occupation.

Abandonment Processes

Little is known about the abandonment process of Feature 7879. It is probable that the perimeter posts of the east and south walls were removed, although it is unknown if they were reused in the construction of Feature 7880 or elsewhere.

The abandonment of Feature 7880 is better understood. Functional tool remains were minimal and suggest that a planned abandonment occurred. Although the structural debris encountered in the house fill indicates that the structure burned at least partially, the lack of oxidation on the floor and pit walls suggests that the burn was not catastrophic. The abandoned house pit then filled with natural sediments and cultural trash. At some point after abandonment, eight different extramural features were constructed within the house pit.

Associated, Intrusive, or Superimposed Features

Feature 7880 was intruded by eight features. Five unexcavated pits (Features 5978 and 7737–7740), one partially excavated pit (Feature 7742), and one informal hearth area (Feature 5520) intruded the house fill and portions of the house-pit walls (see Figure B.111). An intrusive inhumation (Feature 5512) removed part of the south wall of the house pit.

Locus D, Feature 7879

Center of feature UTMs: N 3538389.43, E 541451.36
Architectural type: house-in-a-pit
Date range: 2000 B.C.–A.D. 865
House dimensions: 4.98 by 3.49 m; floor area 10.40 m^2; pit depth 0.49 m
Entryway dimensions: 1.55 by 0.95 m
Shape: subrectangular
Orientation: north
Internal features: 1 floor groove and 27 postholes
Chronometric techniques: none
Analyzed botanical samples: PD 5970
Related features: intruded by Features 5512, 5520, 5978, 7737–7740, 7742, and 7880

Construction Details

The house form was the same as discussed above with Feature 7880.

Walls and Roof

An 8–12-cm-wide floor groove (Subfeature 1) encircled the structure floor at the base of the house-pit walls. It had parallel sides and a flat base and was cut into the sterile subsoil. The portions of the floor groove along the west and north walls were reused in the later structure, and only the south and east sections could be associated definitively with the earlier occupation. Likewise, only the 17 perimeter postholes (Subfeatures 4–20) located within these sections of the floor groove could be assigned specifically to this earlier structure. They ranged in size from 8 to 17 cm in diameter and 11 to 28 cm in depth (Table B.70). Some or all of the 11 postholes located in the west and north portions of the floor groove most likely were used in this structure as well (Feature 7880, Subfeatures 39–49).

It is likely that the central-support posthole discussed with Feature 7880 (Subfeature 4) originated in Feature 7879, but it is difficult to ascertain this definitively. Six interior postholes (Subfeatures 22–27) were assigned to this earlier structure because they were capped with argillic clay and appeared to predate the later structure. These postholes ranged in size

Table B.70. Feature 7879 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
2	7650	16	15	22	E
3	7517	18	14	16	E
4	8046	14	13	27	P
5	8048	9	9	28	P
6	8050	10	9	22	P
7	8052	10	10	23	P
8	8054	10	8	21	P
9	8056	10	10	23	P
10	8058	12	10	21	P
11	8060	15	13	20	P
12	8062	16	16	22	P
13	8074	10	10	20	P
14	8082	12	12	11	P
15	8086	17	12	12	P
16	7734	12	10	11	P
17	8090	9	8	19	P
18	8094	9	8	21	P
19	8102	11	10	18	P
20	8104	12	11	18	P
21	5970	46	44	26	E
22	7519	18	17	13	I
23	7521	22	20	13	I
24	7523	18	14	13	I
25	7525	19	19	17	I
26	7527	12	12	8	I
27	8076	13	10	17	I
28	7878	17	16	24	E

Key: E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.

from 12 to 22 cm in diameter and 8 to 17 cm in depth (see Table B.70). Five of these postholes (Subfeature 22–26) were lined with plaster and located in the western half of the structure. The sixth posthole was located in the southeast corner between the two floor grooves and may have served as an additional perimeter posthole. As with the other postholes in this house pit, it is likely that at least some of the interior postholes discussed with Feature 7880 were originally used in this earlier structure.

The fill within the groove and postholes consisted of a single stratum of loose grayish brown sandy loam with dispersed charcoal inclusions. Artifact density of the floor groove was moderate.

Entry

As with the later structure, the entry to the original structure was located along the midline of the north wall. It was a ramped, protruding entry constructed within a rectangular pit. The original entry vestibule was located farther west in the entry pit than the later entry, as indicated by the location of four postholes and the presence of redeposited sterile fill along the entry walls (see Figure B.111). One posthole (Subfeature 28) was located on the west side of the vestibule, beneath the redeposited soil, and the other three (Subfeatures 2, 3, and 21) were located along the east side of the vestibule. They ranged in size from 15 to 46 cm in diameter and 16 to 26 cm in depth (see Table B.70).

Floor

The floor surface of Feature 7879 was the same as that used in Feature 7880.

Floor Features

No floor features could be associated exclusively with Feature 7879. It is likely that the hearth and one or more floor pits from Feature 7880 originated with Feature 7879.

Artifacts

No artifacts were recovered from primary contexts associated with Feature 7879.

Chronology

No chronometric data were collected from Feature 7879, and no artifacts were recovered from primary contexts. Stratigraphically, Feature 7879 predated Feature 7880, which was abandoned between A.D. 735 and 865. Therefore, Feature 7879 was abandoned sometime before A.D. 865.

Locus D, Feature 7880

Center of feature UTMs: N 3538389.43, E 541451.36
Architectural type: house-in-a-pit
Date range: A.D. 735–865
House dimensions: 4.98 by 3.49 m; floor area 10.91 m^2; pit depth 0.49 m
Entryway dimensions: 1.55 by 0.95 m
Shape: subrectangular
Orientation: north
Internal features: 1 hearth, 1 floor groove, 59 postholes, and 3 intramural pits
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PDs 5731 and 6856
Related features: intruded by Features 5512, 5520, 5978, 7737–7740, and 7742; superimposes Feature 7879

Construction Details

The structure was constructed within a subrectangular pit that measured 4.98 m east–west by 3.49 m north–south and had a remaining depth of approximately 49 cm. A ramped, vestibule-style entry protruded from the north wall of the house pit (see Figure B.111).

Walls and Roof

This structure used a floor groove that consisted of two new segments unique to Feature 7880 (Subfeature 3) and two old segments reused from the original structure (Feature 7879, Subfeature 1). The new segments ran along the south and east wall and were roughly 6–10 cm wide. A series of 22 perimeter postholes (Subfeatures 13–25 and 30–38) were located within these two new floor groove segments, and an additional 16 perimeter postholes (Subfeatures 12, 26–29, and 39–49) were located within the reused groove segments. These 38 perimeter postholes ranged in size from 6 to 19 cm in diameter and 12 to 34 cm in depth (Table B.71).

One central-support posthole (Subfeature 4) was located in the east side of the house, along the structure's midline. It was 40–48 cm in diameter and 49 cm deep. The western central-support posthole may have been removed by intrusive Feature 7740. An additional 11 postholes (Subfeatures 55–65) were scattered throughout the interior of the structure. They ranged in size from 9 to 20 cm in diameter and 6 to 36 cm in depth (see Table B.71). Four of them had a plaster lining (Subfeatures 56, 57, 59, and 61). It is likely that they served several different functions, such as providing added roof support and structural integrity, dividing internal space, or supporting furniture.

The fill within the groove segments and all of the postholes was similar. It consisted of a single stratum of loose grayish brown sandy loam with dispersed charcoal inclusions and few artifacts.

Entry

Feature 7880 had a ramped, vestibule-style entry (Subfeature 2) that protruded from the north wall of the structure. It had been remodeled from the original structure's entry by shifting it 20–40 cm to the east. The entry pit was truncated by Trench 64 at its northern end. The original pit walls and floor consisted of the unprepared calcic substrate and showed no signs of oxidation. Nine postholes (Subfeatures 8–11 and 50–54) lined the edges of the entry and indicated the location of the vestibule walls. They ranged in size from 9 to 18 cm in diameter and 13 to 29 cm in depth (see Table B.71). A layer of light brown sandy loam was deposited between the original pit walls and the postholes lining the remodeled entry vestibule.

Floor

The pit floor consisted of the natural calcic substrate. As delineated by the interior edge of the floor groove, it had an area of 10.91 m^2. Remnants of an oval plastered apron surrounded the hearth area and formed a solid work surface. It was truncated on the south by intrusive Features 7739 and 7740 and had a remaining size of 1.2 by 1.1 m. Patches of red argillic clay adhered to portions of the floor and may have been remnants of a plastered floor. This clay also covered several of the interior floor features. The floor surface was highly bioturbated and showed no signs of oxidation.

Floor Features

Hearths

A shallow plastered hearth (Subfeature 1) was located approximately 80 cm in front of the entryway (see Figure B.110). No evidence of remodeling was present, although the south half was truncated by two intrusive pits (Features 7739 and 7740). The hearth appeared to

Table B.71. Feature 7880 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
4	7902	48	40	49	C
8	8036	11	11	14	E
9	8038	10	10	17	E
10	8040	10	9	23	E
11	8042	13	13	29	E
12	8044	15	14	23	P
13	7771	11	11	28	P
14	7773	11	10	13	P
15	7775	11	11	15	P
16	7777	11	8	12	P
17	7779	11	9	17	P
18	7781	8	8	20	P
19	7783	12	11	21	P
20	7785	8	8	16	P
21	7787	11	8	17	P
22	7789	10	9	19	P
23	7791	9	8	20	P
24	7793	9	8	18	P
25	7795	12	8	18	P
26	8064	15	13	21	P
27	8066	9	9	27	P
28	8068	12	12	24	P
29	8070	15	12	27	P
30	8072	13	8	26	P
31	8078	12	10	17	P
32	8080	8	8	18	P
33	8084	9	9	20	P
34	8088	9	9	21	P
35	8092	8	8	20	P
36	8096	10	9	13	P
37	8098	11	11	12	P
38	8100	8	6	12	P
39	8106	15	13	34	P
40	8108	12	12	20	P
41	8110	14	13	20	P
42	8112	12	10	19	P
43	8114	19	13	22	P
44	8116	14	14	21	P
45	8118	14	14	26	P
46	8120	8	8	15	P
47	8122	18	17	23	P
48	8124	15	15	30	P
49	8126	14	14	U	P
50	8128	12	11	22	E
51	8130	14	12	19	E
52	8132	18	12	13	E
53	8134	14	11	26	E

continued on next page

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
54	7736	16	14	17	E
55	5966	20	18	18	I
56	7529	16	16	9	I
57	7531	15	15	8	I
58	7545	15	15	36	I
59	7549	12	12	6	I
60	7552	19	17	18	I
61	7554	14	13	11	I
62	7562	17	15	13	I
63	7565	12	12	26	I
64	7567	10	9	10	I
65	7569	13	12	13	I

Key: C = central-support posthole; E = entryway posthole; I = interior posthole; P = perimeter posthole; PD = provenience designation.

have been basin-shaped, with a diameter of 20 cm and a depth of 10 cm. The walls and collar were well-plastered (1–2 cm thick) and heavily oxidized. The fill was a loose, homogenous, grayish brown silty loam that consisted primarily of ash. Few dispersed charcoal pieces were present, and no artifacts were observed.

Pits

Three pits were identified in the floor of the feature. Subfeature 5 was a shallow, basin-shaped pit located 62 cm southeast of the hearth. An intrusive pit (Feature 7739) and the central-support posthole (Subfeature 4) clipped the southern and western edges. The pit had a diameter of 32 cm at the top and a depth of 18 cm. The walls consisted of the natural calcic substrate and exhibited no signs of plastering or oxidation. The pit was filled with a loose, brown sandy loam with pockets of fine, gray silty ash. Dispersed charcoal fragments and a few artifacts were present. The feature may have functioned as a pot rest or as a receptacle for a hearth clean-out.

Subfeature 6 was a shallow, basin-shaped pit located along the west wall of the structure. The pit had a diameter of 22 cm and a depth of 21 cm. The unplastered walls were vertical and the base was disturbed by rodents, making it difficult to discern whether the bottom was flat or rounded. In addition, the southern part of the pit ended at the gravel channel deposits. The pit showed no evidence of burning, and the fill was a loose, grayish brown sandy loam with dispersed charcoal flecks and few artifacts.

Subfeature 7 appeared as a circular stain on the floor in the western quarter of the structure. This possible floor pit measured approximately 48 by 70 cm in diameter. It was mapped but not excavated.

Artifacts

Numerous point-located artifacts were recovered from the structure floor, particularly from the plastered apron surrounding the hearth (see Table B.69; Figure B.111). They included plain ware sherds (PDs 5571, 5733, and 6947), nine cores or pecking stones (PDs 5570, 5575, 5732, 5734, 5735, and 6944), one grinding slab (PDs 5728), a mano (PD 5730), one possible pestle (PD 5573), a possible polishing stone (PD 5573), a handstone (PD 6946),), one shell bracelet (PD 6782), one worked plain ware sherd (PD 6783), one censer (PD 6995), and abundant lithic artifacts such as projectile points (PDs 5735 and 6948) and utilized flakes (PD 5735). In addition, 29 plain ware sherds, one unifacial retouched flake (Catalog No. 349), one chert flake blank tip (Catalog No. 184), five flakes, and five pieces of lithic debris were recovered from the general-floor provenience (PDs 5636, 6943, and 6989).

Chronology

An archaeomagnetic sample (SRI 2407) was collected from the hearth in Feature 7880, and it returned a date range of A.D. 735–865. This indicates that the structure was abandoned sometime between A.D. 735 and 865.

Locus D, Feature 8643 and 8644

Located in the central portion of Locus D (see Figure 82), this feature was composed of two superimposed structures, Feature 8643 and 8644, built within a single house pit (Figure B.112). The features were initially identified during Phase 1 in Stripping unit 808, and thought to be a single structure (Feature 866). During Phase 2, they were partially excavated as separate houses. Approximately two-thirds of the shared house pit was excavated, exposing the shared floor, two separate hearths and opposing entryways.

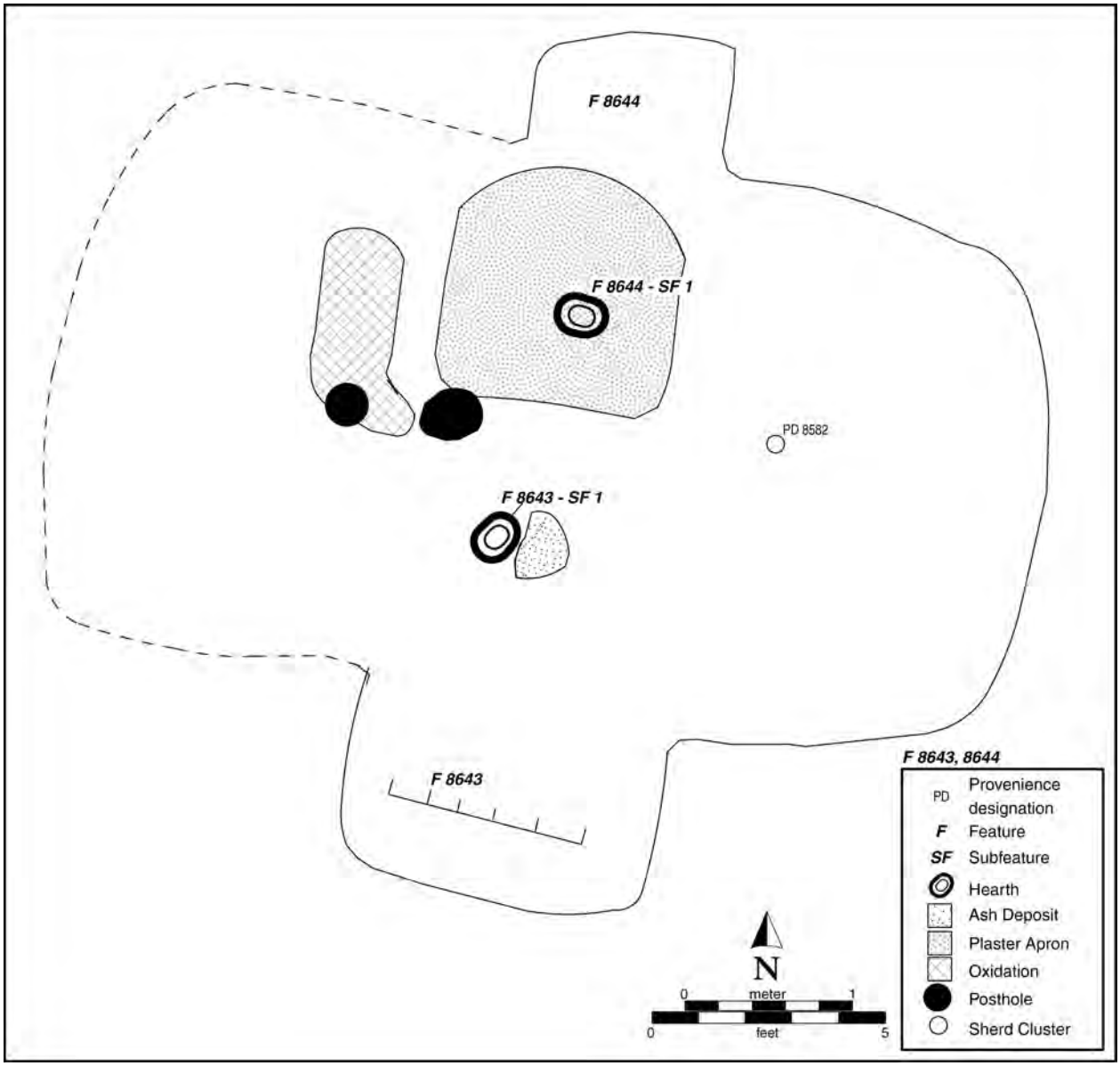

Figure B.112. Plan map of Features 8643 and 8644 showing the location of exposed floor features.

Feature 8643 was the earlier structure and had a south-facing entry, whereas the later structure, Feature 8644, faced north. Although the outlines of perimeter and interior postholes were observed in the house floor, only the hearths were excavated and assigned subfeature numbers. Evidence from the fill suggests that the later house, Feature 8644, had burned.

Excavation Methods

Features 8643 and 8644 were identified initially in profile during Phase 1 trenching and were partially excavated during Phase 2. The upper 29–36 cm level of fill in the eastern three-fourths of the shared house pit was excavated mechanically as a single unit (Half 1). Artifacts observed in this level were collected, but the fill was not screened. The center of this unit then was hand-excavated to the floor in a 10-cm level in order to locate the hearth. This lower level was not screened, but observed artifacts were collected.

A 1-by-2-m control unit (Test Pit 8507) was placed against the west wall of the structure and was excavated to the floor in four 10-cm arbitrary levels. The fill was screened through 1/4-inch mesh, and a flotation sample was collected from the second, third, and fourth levels (PDs 8535, 8536, and 8539). Charred reeds were collected from the fourth level fill as a botanical sample (PD 8539), and a flotation and pollen sample (PD 8540) was collected from an ashy deposit in the northeast corner of the fourth level. A pollen sample (PD 8541) was collected from the house floor exposed at the base of the test pit.

The entry pits were defined and the upper fill removed as part of the first level in Half 1. Observed artifacts were bagged with the house fill, and no samples were collected. Neither entry was excavated to the floor.

Two hearths were revealed in the limited section of exposed floor. The fill from the hearth associated with Feature 8643 was removed during the excavation of the second level in Half 1. An archaeomagnetic sample was collected from its plastered base (SRI 2412). A flotation and pollen sample (PD 8554) were collected from an ashy concentration on the exposed floor adjacent to this hearth, but it is unknown whether the two features were contemporary. The entire fill of the hearth from Feature 8644 was collected for flotation (PD 8552), a pollen sample was collected from its base (PD 8561), and an archaeomagnetic sample (SRI 2413) was collected from the oxidized walls and base. A second pollen sample (PD 8560) was collected from the plastered apron surrounding this hearth. The outlines of 11 possible postholes were visible in the house floor as well. They were documented on the plan map but were not excavated. A unifacial retouched flake (PD 8559, Catalog No. 346) and a sherd cluster (PD 8582) were point located on the exposed floor surface.

Stratigraphy

The house pit was dug into the native paleosol, which consisted of a reddish brown argillic horizon overlying a light brown calcic horizon. The house fill contained two strata. The upper stratum consisted of approximately 30 cm of naturally deposited, gray-brown silty loam. The top of this stratum had been highly compacted by an overlying road bed, and compaction decreased with depth.

The upper stratum graded into the lower stratum, which consisted of a 10-cm-thick layer of gray-brown silty loam mottled with structural debris. The structural debris made up approximately 50 percent of the sediment matrix and consisted of oxidized daub, unburnt daub, and charcoal chunks. The artifact density was high throughout both strata.

Two thin lenses of washed-in, fine sands were encountered in front of the north-facing entryway of Feature 8644. One of these lenses was 1–2 cm thick and was located on top of structural debris. The second lens was about 1 cm thick and rested on the house floor below the structural debris. This lower lens may have accumulated either during the occupation of the house or after it was abandoned but before it burned.

Disturbances

A modern roadbed compacted the upper 10 cm of house fill. Roots, rodents, and insects disturbed the feature's fill, floor, and subfeatures.

Evidence for Remodeling

The house pit originally created for Feature 8643 was remodeled for the construction of the later house, Feature 8644. The orientation was changed from south-facing to north-facing, and the floor surface was lowered slightly, removing the upper portion of the earlier structure's hearth. A hearth was then constructed in the floor in front of the new, north-facing entryway, and red, argillic plaster was applied to the floor surrounding the hearth. No evidence for remodeling of Feature 8644 was encountered.

Abandonment Processes

Excavations revealed no evidence relating to the abandonment of the first structure, Feature 8643, as all of its fill likely had been cleared during the construction of Feature 8644. The later structure clearly burned, as evidenced by the charcoal and burnt daub in the lower fill and the oxidized house floor. The oxidation around the interior postholes suggests that the superstructure burned while upright. The thin lens of washed-in, fine sands on the floor in front of the entryway suggests that the house was abandoned for some time prior to its eventual burning and collapse.

Associated, Intrusive, or Superimposed Features

No other features were directly associated with Features 8643 and 8644.

Locus D, Feature 8643

Center of feature UTMs: N 3538573.72, E 541410.95
Architectural type: house-in-a-pit
Date range: A.D. 700–915
House dimensions: 5.95 by 3.41 m; pit depth 0.44 m
Entryway dimensions: 1.19 by 1.90 m
Shape: subrectangular
Orientation: south
Internal features: 1 hearth and 11 postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: none
Related features: superimposed by Feature 8644

Construction Details

Feature 8643 was subrectangular in plan view with a south-facing, vestibule entryway (see Figure B.112). The house

pit measured 5.95 m east–west by 3.41 m north–south and had a remaining depth of 44 cm.

Walls and Roof

The outlines of eight possible perimeter postholes were visible in the floor of the test pit, but it is unknown if all eight postholes were used in this earlier structure. No evidence of a floor groove was encountered in the limited area of excavation. Three possible interior postholes were encountered as well. One of these was located in the west-central portion of the house and may have been a main support. Because of the limited excavations, these postholes could not be definitively associated with either of the two structures in this house pit.

Entry

A 1.80-m-wide vestibule entry protruded from the center of the south wall of Feature 8643. A 1.28-m-wide step was found in the center of the entryway and most likely was constructed from redeposited sterile soil. The floor of the entry was not exposed, and nothing else was able to be discerned from the limited area of excavation.

Floor

The differing elevations of the two structure's hearths suggest that the floor to Feature 8643 was higher than that of the later structure, and thus, it was removed during the construction of the Feature 8644 floor.

Floor Features

Hearths

Only the plaster-lined base of the hearth remained from Feature 8643 (Figure B.113). The rest of the hearth most likely had been destroyed during the construction of the later structure. The hearth base measured about 18 cm in diameter and was 2 cm deep. Gray ash surrounded the remnant hearth and filled an adjacent shallow depression that may have served as an ash pit.

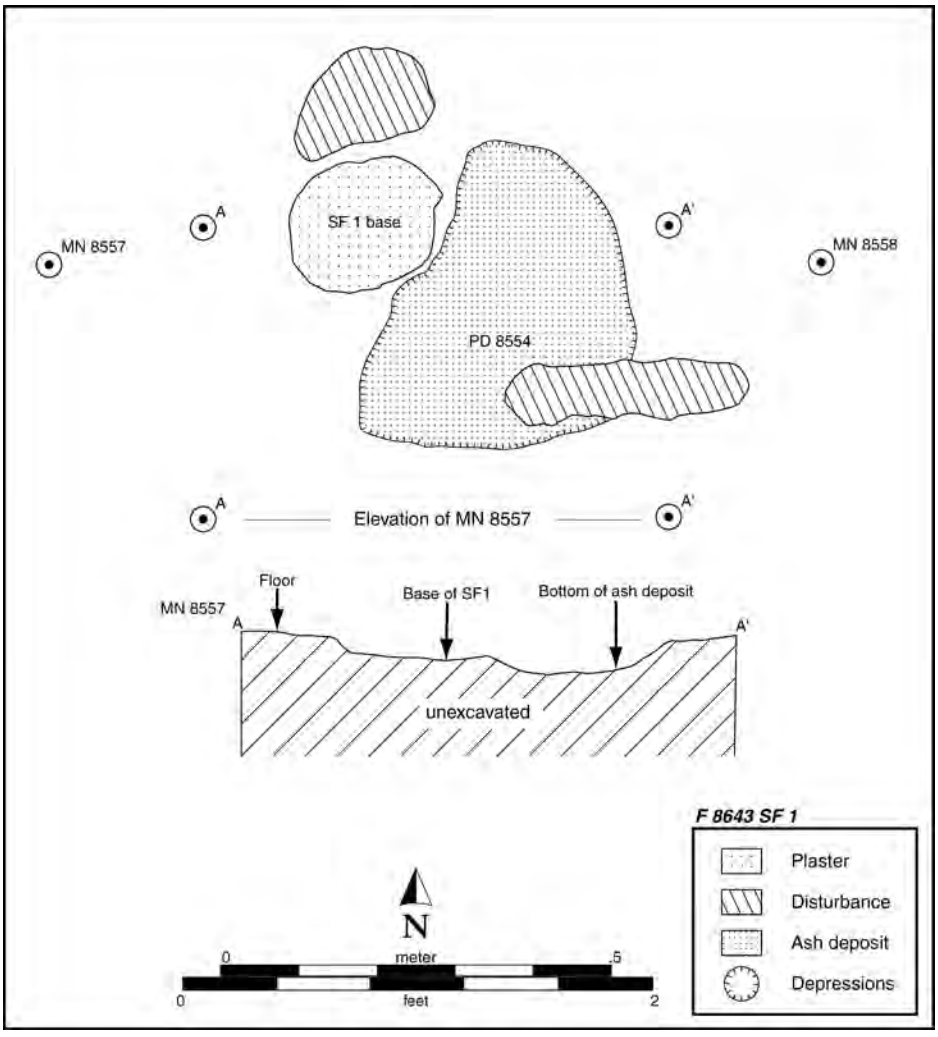

Figure B.113. Plan map and cross section of the hearth (Subfeature 1) associated with Feature 8643.

Artifacts

No artifacts were recovered from sealed or primary contexts that could be associated definitively with Feature 8643.

Chronology

An archaeomagnetic sample (SRI 2412) was recovered from the structure's hearth, but it was too imprecise to be dated. Instead, this feature was dated through its stratigraphic relationship with Feature 8644, which was abandoned prior to A.D. 915.

Locus D, Feature 8644

Center of feature UTMs: N 3538573.72, E 541410.95
Architectural type: house-in-a-pit
Date range: A.D. 685–915
House dimensions: 5.95 by 3.41 m; pit depth 0.44 m
Entryway dimensions: 0.74 by 1.18 m
Shape: subrectangular
Orientation: north
Internal features: 1 hearth and 11 postholes
Chronometric techniques: archaeomagnetism
Analyzed botanical samples: PDs 8536 and 8539
Related features: superimposes Feature 8643

Construction Details

Feature 8644 reused the house pit constructed for Feature 8643, but the entry of this later structure was relocated to the north wall (see Figure B.112).

Walls and Roof

The outlines of eight possible perimeter postholes were visible in the floor of the test pit, but it is unknown if all eight postholes were used in this earlier structure. No evidence of a floor groove was encountered in the limited area of excavation. Three possible interior postholes were encountered as well. One of these was located in the west-central portion of the house and may have been a main support. Because of the limited excavations, these postholes could not be definitively associated with either of the two structures in this house pit.

Entry

The structure had a vestibule entry that protruded from the center of the north wall. The entry was 1.18 m wide and extended 0.74 m from the pit wall. The floor of the entry was not exposed, and nothing else was able to be discerned from the limited area of excavation.

Floor

Patches of the wetted and smoothed native calcic substrate were noted in the structure, but much of the floor was highly bioturbated. A large, square area surrounding the hearth was plastered with a layer of reddish brown argillic clay. Patches of oxidation were present throughout the floor, including around the possible interior postholes.

Floor Features

Hearths

A round, basin-shaped hearth was located immediately in front of the north-facing entryway (Figure B.114). It measured 30 cm in diameter and 10 cm in depth. The presence of a plastered apron and collar indicates that the hearth originally was plastered, but bioturbation had removed the plaster lining from the interior of the hearth pit. The hearth was filled with light gray ash.

Artifacts

Point-located floor artifacts consisted of 1 unifacial retouched flake (PD 8559, Catalog No. 346) found at the base of the test pit and a cluster of 3 red-on-brown, 11 plain ware, and 2 indeterminate sherds (PD 8582) located in the east-central part of the house. In addition, 3 shell bracelet fragments and 5 plain ware sherds were recovered from the general-floor provenience (PDs 8539, 8541 and 8562).

Chronology

An archaeomagnetic sample (SRI 2413) was recovered from the structure's hearth and returned a date range of A.D. 685–915. This places the abandonment of this structure at no later than A.D. 915.

Locus D, Feature 11,251

Center of feature UTMs: N 3538360.01, E 541520.54
Architectural type: pole-and-brush surface structure
Date range: ca. 200 B.C.–A.D. 700
House dimensions: 2.11 by 2.07 m; floor area 3.55 m^2
Entryway dimensions: unknown
Shape: circular

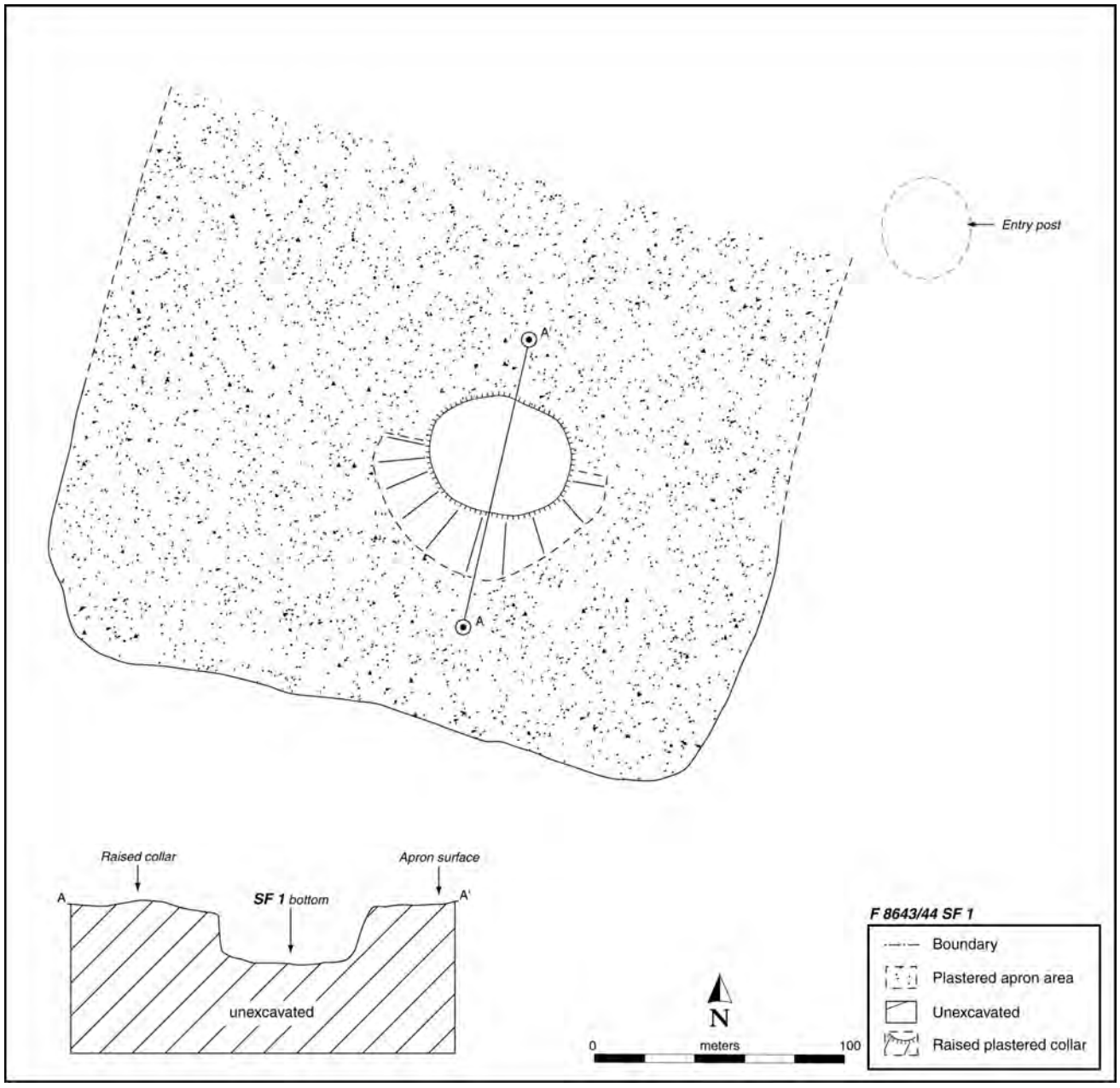

Figure B.114. Plan map and cross section of the hearth (Subfeature 1) associated with Feature 8644.

Orientation: northeast?
Internal features: 1 floor groove, 20 interior and perimeter postholes, and 1 intramural pit
Chronometric techniques: none
Analyzed botanical samples: PD 11,257
Related features: intruded by Feature 4149

Feature 11,251 was a small, circular structure located in the eastern portion of Locus D (see Figure 83). It consisted of 1 shallow floor groove (Subfeature 1), 17 perimeter postholes (Subfeatures 2–14 and 17–20), and an earthen floor, but there was no evidence of an associated house pit (Figure B.115). Entry to the structure may have been from the northeast, as suggested by a 40-cm gap between postholes in the floor groove. Four subfeatures, including a large bell-shaped pit (Subfeature 22) and 3 interior postholes (Subfeatures 15, 16, and 21), were discovered within the structure. A basin-shaped pit (Feature 4149) intruded the northwest wall of the structure.

Excavation Methods

Feature 11,251 was identified during Phase 2 in Stripping Units 2493 and 2495. The house fill and floor were completely removed during mechanical stripping of these units, and only 22 floor features remained for controlled exploration. These floor features included 1 floor groove, 20 postholes, and 1 bell-shaped intramural pit.

The floor groove and each posthole were excavated separately in a single level, and the fill was screened through 1/4-inch mesh. The bell-shaped pit was excavated in two halves. The western half was excavated in a single 1/4-inch-screened level, and a composite flotation sample was recovered from the fill (PD 11,257). The eastern half of the pit was excavated in a single, unscreened level, and no artifacts were collected. A composite pollen sample was taken from the base of the pit (PD 11,258).

Stratigraphy

No structure fill remained in this feature.

Disturbances

Owing to the shallow nature of the feature, mechanical stripping may have removed most of the structure fill and floor and likely destroyed the top few centimeters of some subfeatures. Rodent, insect, and root tunneling were observed throughout the exposed surface and subfeatures.

Construction Details

There was no indication that the structure had been constructed within a pit; however, it is possible that a house pit was removed during mechanical stripping.

Walls and Roof

A 1–6-cm-deep and 11-cm-wide floor groove (Subfeature 2) encircled the structure floor. It was U-shaped and had gradually sloping sides. The southern portion of the groove had been removed at some point, possibly during mechanical stripping. The groove was filled with homogenous grayish brown silts and sands and contained a moderate abundance of dispersed, fine, subrounded gravel.

Seventeen shallow perimeter postholes (Subfeatures 2–14 and 17–20) were discovered in association with the floor groove. They ranged in size from 6 to 23 cm in diameter and 2 to 8 cm in depth (Table B.72). Three additional postholes (Subfeatures 15, 16, and 21) were found within the structure floor, and they may have served to support and stabilize the **walls and roof.** These interior postholes ranged in size from 13 to 18 cm in diameter and 5 to 9 cm in depth. The fill of the postholes resembled that of the floor groove.

Entry

No formal entry was discovered for this structure. A 40-cm gap between two perimeter postholes in the intact northeast portion of the structure may indicate the location of an informal entry (Figure B.116).

Floor

The structure floor was completely removed during mechanical stripping. However, as delineated by the inside edge of the floor groove, it had an area of 3.55 m^2.

Floor Features

Pits

A bell-shaped pit (Subfeature 22) was located 4 cm away from the floor groove in the northern half of the structure. It measured 82 by 72 cm at the opening and was 52 cm deep. The broadest portion of the pit had a diameter of 88 cm, and it had a basin-shaped base (see Figure B.116). Both the base and sides consisted of the unprepared and unoxidized natural substrate. The fill consisted of homogenous brown silts and sands with scattered subrounded gravels and a low quantity of ash and charcoal.

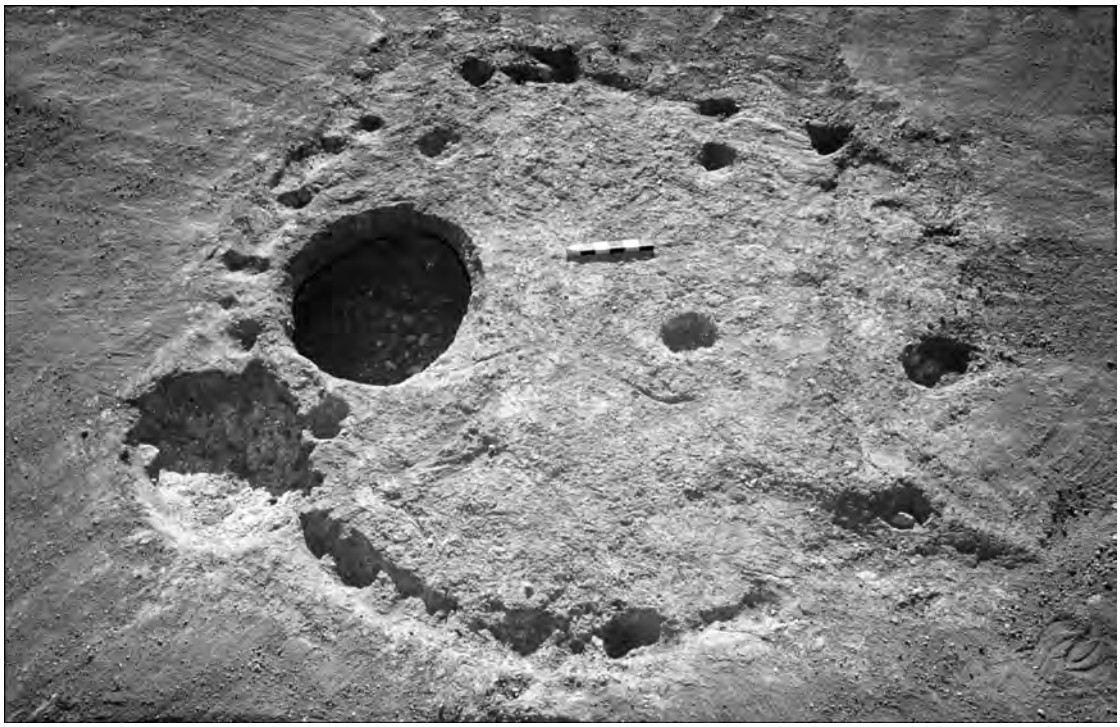

Figure B.115. Plan view of Feature 11,251, looking east.

Table B.72. Feature 11,251 Posthole Data

Subfeature No.	PD No.	Length (cm)	Width (cm)	Depth (cm)	Type
2	11,264	6	6	4	P
3	11,266	15	12	6	P
4	11,268	15	12	6	P
5	11,269	15	12	4	P
6	11,270	15	12	5	P
7	11,271	15	12	6	P
8	11,272	17	14	4	P
9	11,274	15	12	8	P
10	11,275	13	13	2	P
11	11,276	23	16	7	P
12	11,278	10	11	5	P
13	11,280	16	14	4	P
14	11,282	13	12	6	P
15	11,283	18	14	5	I
16	11,284	15	14	5	I
17	11,285	17	17	4	P
18	11,308	15	15	8	P
19	11,310	11	11	5	P
20	11,312	13	12	5	P
21	11,314	16	13	9	I

Key: I = interior posthole; P = perimeter posthole; PD = provenience designation.

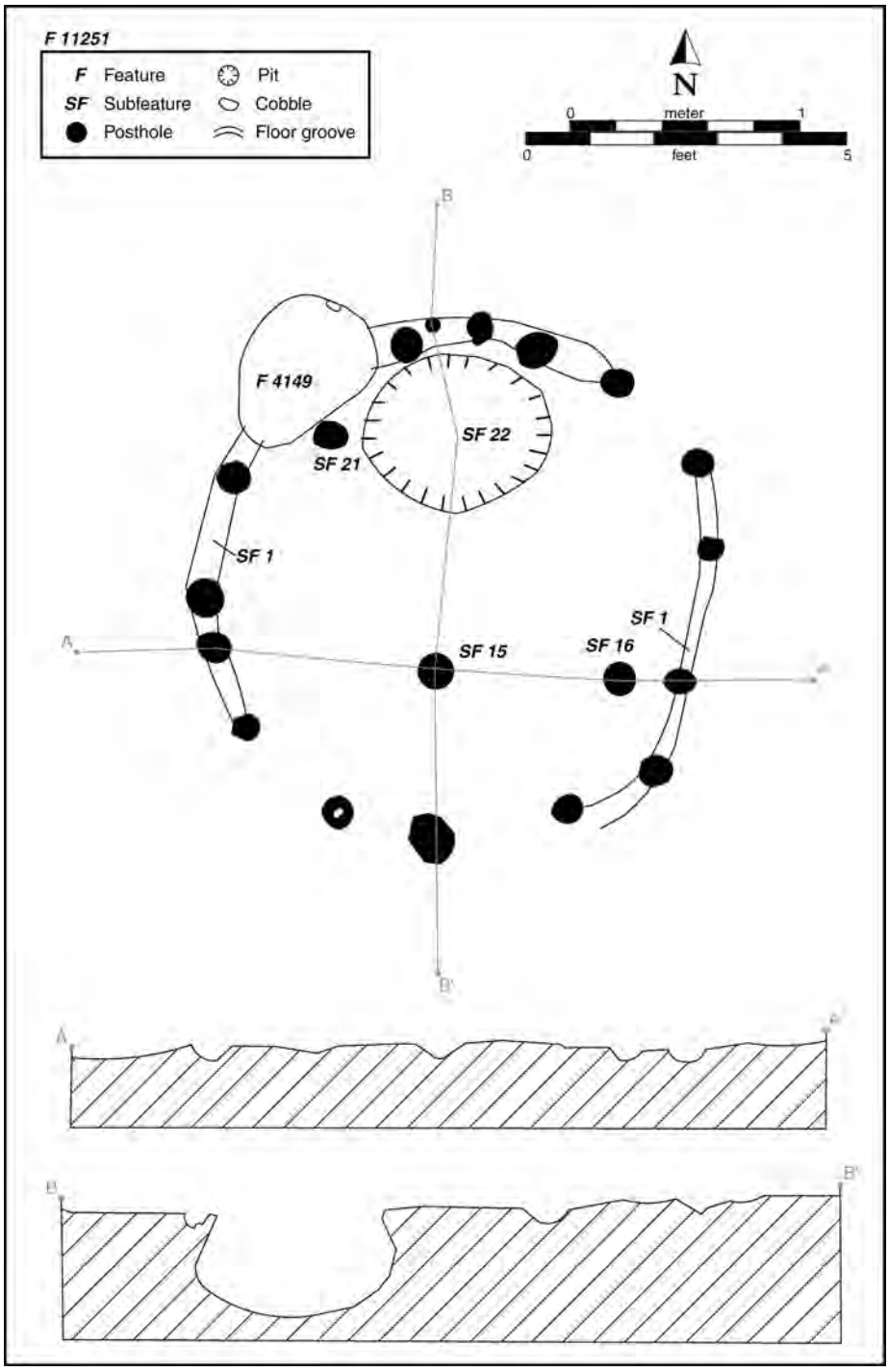

Figure B.116. Plan map of Feature 11,251 showing the location of floor features and intrusive features.

Artifacts

No artifacts were found on the floor or in any other sealed or primary context.

Evidence for Remodeling

Investigations at Feature 11,251 did not identify any evidence of remodeling.

Abandonment Processes

The nature of abandonment could not be discerned from the structure remains.

Associated, Intrusive, or Superimposed Features

A basin-shaped pit (Feature 4149) intruded the northwest portion of the structure (see Figure B.116). It removed part of the floor groove and may have removed one or more postholes associated with the structure. Based on its shallow depth, the pit may have been dug from an elevation above that of the Feature 11,251 structure floor.

Chronology

No chronometric data and few artifacts were recovered from Feature 11,251. Based on the size and shape of the structure, it likely was occupied during the Late Archaic or Early Formative periods (ca. 1500 B.C.–A.D. 650).

APPENDIX C

Burial Descriptions

Christopher P. Garraty, Amber Harrison, Mitchell A. Keur, and Kandus Linde

SRI's 2000 and 2001 investigations at the Mescal Wash site resulted in the excavation of 48 human burial features, consisting of 30 (62.5 percent) cremations and 18 inhumations (37.5 percent) (Figure C.1; Table C.1). Nine burials were excavated during Phase 1, and 39 were excavated during Phase 2. The burials identified during Phase 1 include 1 feature in Locus A, 2 features in Locus C, 4 features in Locus D, and 2 features in Locus E. No burial features were identified during Phase 1 testing in Loci B and F. Phase 2 focused primary on Loci A, C, and D, especially Locus D. During this phase, 16 additional burials were excavated in Locus C, and 23 burials were excavated in Locus D. No burials were uncovered in Locus A during Phase 2. Note that several of the burials initially exposed during Phase 1 were later fully excavated during Phase 2. Overall, more than half of the burial features were excavated in Locus D (n = 27; 56 percent), and smaller percentages were excavated in Locus C (n = 18; 38 percent), Locus E (n = 2; 4 percent), and Locus A (n = 1; 2 percent).

The 48 feature descriptions below are ordered according to locus (A through E). Within each locus, the discussions of inhumations and cremations are presented separately. Each description conforms to the same organization and subsections. The "Location" subsection refers to the physical location and context of discovery for each feature. "Mode of Interment" refers to the formal classification (e.g., inhumation, primary cremation, or secondary pit cremation). The subsection "Excavation Methods" is self-explanatory. Worth noting, however, is that, to avoid excessive repetition, we refer the reader to the general discussion of burial-excavation methods in Chapter 3 of this volume and focus the discussion here on the unique or situational aspects of each feature's excavation. A detailed discussion of the classification system employed for this study is presented in Volume 2, Chapter 11 of this series. The "Fill" subsection is a description of the feature matrix, including soil contents, natural inclusions, cultural materials, and any evidence of postdepositional disturbance observed in the fill.

The "Burial Pit Description" subsection focuses on the size and shape of the burial pit. In some cases, however, the outline (or presence) of a pit was ambiguous, constituting another point of discussion. Several mortuary features appeared to consist of a deceased person left on the floor of a structure rather than interred in a pit. The "Burial Treatment" subsection offers interpretations of the human practices responsible for the mortuary deposit and the means by which the deceased individual in the feature was laid to rest, based on the various lines of evidence presented in the previous subsections. The "Dating" subsection describes any pertinent chronological information or insights about the feature. Few of these features were directly subjected to chronometric analysis, but approximate date ranges were inferable for several features based on stratigraphic relationships with dated features and/or on the presence of time-sensitive artifacts. The final subsection, "Associated Features," describes spatial and stratigraphic relationships with any other features that overlapped with, or abutted, the burial feature.

Locus A

Cremation

Feature 220

LOCATION: Feature 220 was exposed during Phase 1 mechanical excavation in the western wall of Trench 11 (see Figure C.1). The cremated remains appear to have been situated within a relict rodent burrow and probably

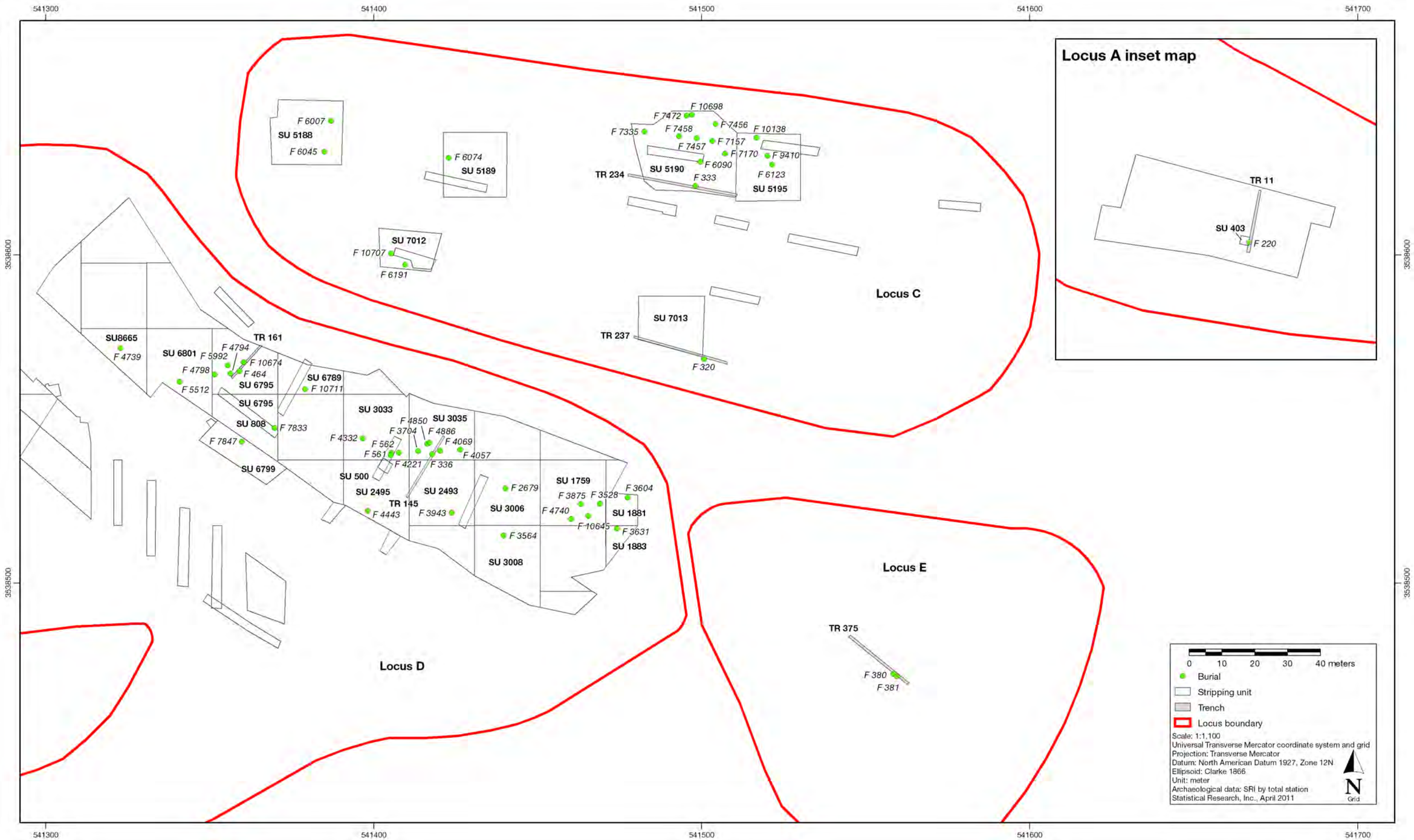

Figure C.1. Map of Mescal Wash showing the locations of the excavated mortuary features (green dots).

Table C.1. Attribute Information for Mortuary Features Excavated during Phase 1 and Phase 2 at Mescal Wash

Feature	Excavation Phase	Burial Type	Cremation Type	Layout	Position	Head Direction	Sex	Age	Inferred Date Range	Pit Plan View	Cross Section	Orientation	Length (cm)	Width (cm)	Depth (cm)	Funerary Objects
Locus A																
220	1	cremation	secondary pit (disturbed)				indeterminate	indeterminate	unknown, but possibly Middle Formative B period, based on presence in Locus A	irregular	irregular		15	15	7	none observed in direct association with the human remains, but sherds and a turquoise bead were found in trench backfill
Locus C																
320	1	cremation	secondary pit				indeterminate	indeterminate	unknown	circular	inward-sloping walls, rounded base		100	100	38	plain ware bowl (capping vessel)
333	1	cremation	secondary urn				indeterminate	adult	A.D. 950–1150	circular (inferred)	straight sides, flat base		56	40	22	Sacaton Red-on-buff jar with Gila shoulder, neck removed (inverted cremation urn)
6007	2	inhumation		extended	supine	east	male	middle adult (45–55 years)	unknown	subrectangular	straight sides, flat base	east–west	190	47	15	none
6045	2	cremation	secondary pit				indeterminate	adult	unknown	circular	basin shaped, rounded base		30	29	8	none
6074	2	cremation	secondary pit				indeterminate	adult	unknown	circular	unknown		80[a]	80[a]	24[a]	none
6090	2	cremation	secondary urn				indeterminate	young adult	A.D. 950–1150	circular	straight to inward-sloping sides, flat base		19	23	10	Rincon Red-on-brown jar (urn); plain ware bowl (lid)
6123	2	inhumation		extended	supine	northeast	indeterminate	child	unknown	subrectangular	inward-sloping sides, sloping base	northeast–southwest	117	37	12	none
6191	2	inhumation		extended	supine	northeast	female	adult	post–A.D. 700	subrectangular	shallow, sloping base	northeast–southwest	185	50	12	Santa Cruz Red-on-buff sherd may be associated with burial
7170	2	inhumation		semiflexed	possibly seated	northeast?	indeterminate	infant	A.D. 950–1150	ovoid	straight sides, flat base		78	66	44	shell beads, probably from a shell ring or pendant
7335	2	cremation	secondary pit				female	adult	unknown	circular	inward-sloping sides, flat base		60	60	22	none
7456	2	cremation	secondary pit				indeterminate	juvenile and adult	unknown	circular	straight to inward-sloping sides, flat base		35	34	15	none
7457	2	inhumation		semiflexed	left side	east	male	old adult (50–65 years)	A.D. 935–1015	indeterminate	indeterminate	east–west	~170	~55	15+	none
7458	2	inhumation		unknown	unknown	southeast?	indeterminate	child (2–4 years)	A.D. 935–1015	circular	basin shaped		~63	~48	16+	none
7472	2	cremation	secondary urn				indeterminate	indeterminate	A.D. 950–1400	circular	straight to inward-sloping sides, flat base		30	29	10+	Dragoon Red-on-brown jar (urn)
9410	2	inhumation		semiflexed	supine	south	male	young adult (25–35 years)	post–A.D. 935	ovoid	shallow, irregular	north–south	140	60	23+	none
10,138	2	cremation	secondary pit				female	adult	post–A.D. 935	ovoid	basin shaped, rounded base		25	20	41	shell beads (possible necklace or bracelet)
10,698	2	inhumation		unknown	unknown	unknown	indeterminate	neonate	post–A.D. 935	heavily disturbed	heavily disturbed		~19	~59	~20	none
10,707	2	cremation	secondary pit				indeterminate	adult	unknown	circular	straight to inward-sloping sides, flat base		30	30	9	none
Locus D																
336	1	inhumation		extended	supine	east	female	adult	post–200 B.C.	subrectangular	straight to inward-sloping sides, flat base	east–west	180	45	41	*Olivella*-shell bead, possibly associated with the human remains
464	1	cremation	secondary pit				indeterminate	indeterminate	unknown	circular	inward-sloping walls, flat base		19	19	18	none
561	1	cremation	secondary pit				indeterminate	indeterminate	unknown	circular	convex sides, flat base		29	28	13	inverted red ware bowl placed at the opening of the burial pit
562	1	cremation	secondary pit				indeterminate	indeterminate	unknown	circular	straight to inward-sloping sides, flat base		32	28	15	none
2679	2	inhumation		extended	supine	east	female	adult	A.D. 750–1015	rectangular	straight walls, flat base	northwest–southeast	95+	53	34+	none

continued on next page

Feature	Excavation Phase	Burial Type	Cremation Type	Layout	Position	Head Direction	Sex	Age	Inferred Date Range	Pit Plan View	Cross Section	Orientation	Length (cm)	Width (cm)	Depth (cm)	Funerary Objects
3528	2	inhumation		unknown	unknown	east?	indeterminate	infant	unknown	rectangular	straight walls, flat base	east–west	42	26	37	none
3564	2	inhumation		extended	supine	southeast	male	middle adult (30–40 years)	A.D. 950–1150?	oval	indeterminate	northwest–southeast	200	60	19	Dragoon Red-on-brown bowl; possible Empire point (Archaic)
3604	2	cremation	secondary pit				indeterminate	indeterminate	A.D. 700–950	circular	inward-sloping, curved walls and rounded base		65	54	12	2 Dragoon Red-on-brown bowls (fine line)
3704	2	cremation	primary cremation				indeterminate	indeterminate	unknown	rectangular	inward-sloping walls, flat base	east–west	170	80	8	none
3875	2	cremation	secondary pit				indeterminate	indeterminate	post–A.D. 835	circular	straight to inward-sloping sides, flat base		44	40	15	none
3943	2	inhumation		possibly tightly flexed	seated	unknown	indeterminate	child (6 years)	unknown	circular	indeterminate		50	40	15	none
4057	2	cremation	secondary urn				indeterminate	child	post–200 B.C.	ovoid	straight to inward-sloping sides, flat base		60	45	11	plain ware jar (urn); burned shell-bracelet fragments
4069	2	cremation	primary cremation				indeterminate	at least 2 adults	post–200 B.C.	subrectangular	inward-sloping walls, flat base	east–west	161	75	15	partial plain ware bowl or jar; ocher-stained, carved stone censer; calcined awl; piece of hematite-like material, possibly associated with the human remains
4221	2	cremation	primary cremation				indeterminate	adult	A.D. 585–790, 835–1015, or 1385–1815	subrectangular	inward-sloping walls, flat base	east–west	223	83	21	plain ware jar and bowl fragments; bone awl; biface and hematite in fill
4739	2	cremation	secondary pit				indeterminate	infant	unknown	circular	straight to inward-sloping sides, flat base		40	40	24	none
4740	2	inhumation		fully flexed	right side	east	male	old adult (50+ years)	pre–A.D. 1015	ovoid	inward-sloping, curved walls, and flat base	east–west	90	55	55	none
4794	2	cremation	secondary pit				indeterminate	young adult	unknown	circular	straight walls, flat base	east–west	16	16	24	shell fragment
4798	2	cremation	primary cremation				indeterminate	indeterminate	unknown	subrectangular	inward-sloping walls, flat base	east–west	150	80	10	none
4850	2	cremation	secondary urn				female	adult	unknown	circular	straight to inward-sloping walls, flat base		38	32	19	plain ware jar (urn)
4886	2	inhumation		extended	supine	east	male	middle adult (45+ years)	unknown	subrectangular	straight walls, flat base	east–west	180	55	43	2 bone awls
5512	2	inhumation		semi-flexed	seated	northwest	male	middle adult (35–49 years)	post–A.D. 735	ovoid	straight to inward-sloping sides, flat base	northwest–southeast	75	53	57	bone awl
5992	2	cremation	secondary pit				indeterminate	indeterminate	unknown	ovoid	straight walls, flat base	northwest–southeast	56	45	4	none
7833	2	inhumation		extended	supine	southeast	indeterminate	child (6–7 years)	A.D. 685–915?	indeterminate	indeterminate		130	40	19	none
7847	2	cremation	secondary pit				indeterminate	indeterminate	unknown	ovoid	inward-sloping, curved walls and rounded base	east–west	35	20	8	none
10,645	2	inhumation		tightly flexed	supine	east	male	adult	pre–A.D. 865 (possibly Late Archaic/Early Formative)	semicircular	indeterminate		95	60	24	inverted metate
10,674	2	cremation	secondary pit				indeterminate	middle adult	unknown	circular	straight to inward-sloping sides, flat base		30	27	13	bone awl
10,711	2	cremation	secondary pit				indeterminate	indeterminate	unknown	circular	inward-sloping walls and rounded base		23	28	13	none
								Locus E								
380	1	cremation	secondary pit				indeterminate	adult	unknown	circular	inward-sloping, curved walls and rounded base		33	33	22	plain ware rim sherd and body sherd
381	1	cremation	secondary pit				indeterminate	child	unknown	circular	straight to inward-sloping sides, flat base		24	24	23	none

[a] Cremated remains encompassed an area of only 8 cm (diameter) by 8 cm (depth) within this larger pit.

were transported from a burial pit somewhere in the vicinity. The top of the feature originated at approximately 40 cm below the surface and was not intrusive on any other features.

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: During the trench excavation, the backhoe removed most of the burial remains. Consequently, after the initial discovery of the cremated bone, the loose soil and backfill from this area were sifted through a 1/8-inch-mesh screen. Next, the backhoe and shovels were used to remove sediments overlying the feature in a 2.8-by-2.6-m area (Stripping Unit 403). An 0.35-by-0.35-m test pit (Test Pit 554) was then excavated alongside the west wall of the trench to remove the remaining in situ portion of the burial, i.e., the eastern wall of the unit corresponded to the western wall of the trench. The feature was excavated as a single level, defined by the area containing the human remains. The bones were concentrated within an amorphous area of roughly 15 by 15 cm. No burial pit could be defined, and bone fragments were present only in the upper 7 cm of the visible burrow outline. No weight was recorded for the recovered cremated bone. For additional excavation details, see discussion of burial-excavation methods in Chapter 3.

FILL: The fill consisted of dark-colored sediment with flecks of charcoal. No in situ burial artifacts were recovered in the vicinity of the human remains. Screening of the backdirt and loose fill from the mechanical trench revealed a small number of sherds and a turquoise bead. However, it was unclear whether they originated from the burial fill. The sherds were not reconstructible as a whole vessel and did not appear to have been from a cremation urn. Aside from the rodent burrow, no additional disturbances were observed.

BURIAL PIT DESCRIPTION: The feature consisted of a secondary deposit of cremated remains (of indeterminate age and sex) within an irregularly shaped rodent burrow (Figure C.2). The burrow measured approximately 23 cm in diameter in plan at the top of the feature and extended to

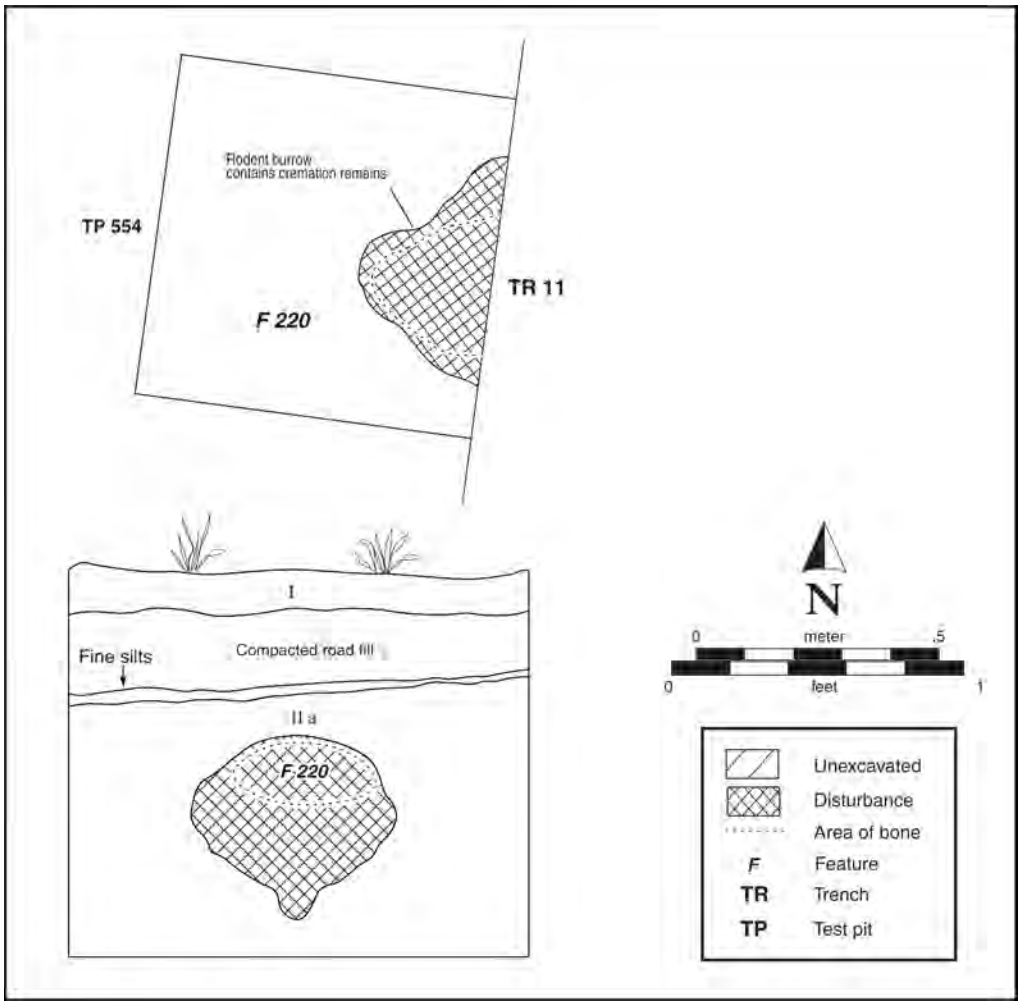

Figure C.2. Plan map and profile (in west wall of Trench 11) of Feature 220, Locus A.

a maximum depth of 16 cm. The field crew was unable to identify a pit outline within or near the cremated remains.

BURIAL TREATMENT: This feature contained a secondary deposit of the cremated remains of an individual of unknown age or sex. The cremated remains were clearly not present within their primary location of cremation, indicating a secondary deposit. However, the disturbed context of this feature precludes interpretation of the mortuary treatment and mode of interment. It is not clear whether the rodent transported the human remains from their original location of interment (presumably a burial pit in the vicinity) or whether the burrow obfuscated or removed the outline of the pit in the location of discovery.

DATING: This feature was not subjected to chronometric analysis. However, all of the features subjected to chronological analysis in Locus A were assigned to the Middle Formative B period (see Volume 2, Chapter 2), indicating a probable single-component occupation. If so, we can indirectly infer that Feature 220 was interred during the Middle Formative B period.

ASSOCIATED FEATURES: None

Locus C

Inhumations

Feature 6007

LOCATION: Feature 6007 was identified in Phase 2 during mechanical stripping in the northwest quadrant of Stripping Unit 5188 (see Figure C.1). The feature was located 13.5 m north and 18.4 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 12 cm below the ground surface and was not intrusive on any other features.

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The entire burial pit and its contents were excavated as a single level.

FILL: The fill consisted of a simple redeposit of grayish brown silty loam with a small number of caliche inclusions. The soil was loosely consolidated in most of the pit, but slightly more compact in the western portion. Moderate rodent disturbances and small root inclusions were prevalent. Ceramic sherds, faunal remains, and a few unspecified lithic artifacts were recovered in the fill but probably were not associated with the mortuary remains.

BURIAL PIT DESCRIPTION: The burial pit was subrectangular in plan, with straight side walls and a flat base. The pit measured 190 by 47 cm, with a maximum depth of 15 cm. The long axis of the pit was oriented east–west, with the head pointing to the east (Figure C.3).

BURIAL TREATMENT: This burial pit contained the remains of an adult male, 45–55 years of age. The skeleton was roughly one-half complete, and the backhoe had removed the left side of the cranium during stripping. Fragmentary skeletal remains recovered included elements of the cranium, clavicles, right scapula, ilia, ribs, humeri, radii, ulnae, femora, tibiae, and fibulae. Probably as a result of rodent activity, the left femur was found flipped anteriorly, relative to the pelvis. The individual was interred in a formally prepared pit, in an extended, supine position, with the arms placed on the side of the body. The cranium was oriented to the east, and the head was resting on its right side. No mortuary offerings were found in association with this burial.

DATING: None

ASSOCIATED FEATURES: None

Feature 6123

LOCATION: Feature 6123 was identified during Phase 2 mechanical stripping in the central area of Stripping Unit 5195 (see Figure C.1). The backhoe exposed the top of the skull during stripping. It was located 15.8 m north and 10 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 17 cm below the ground surface and was not intrusive on any other features.

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The entire burial pit and its contents were excavated as a single level.

FILL: The pit fill consisted of a simple redeposit of a fine, silty loam with a small number of small caliche nodules. Moderate disturbance from root and rodent activity was observed. No artifacts were present in the fill.

BURIAL PIT DESCRIPTION: The burial pit was shallow and subrectangular in plan, with a base that gradually sloped upward from northeast to southwest (Figure C.4). The pit measured 117 by 37 cm at the exposed surface, with

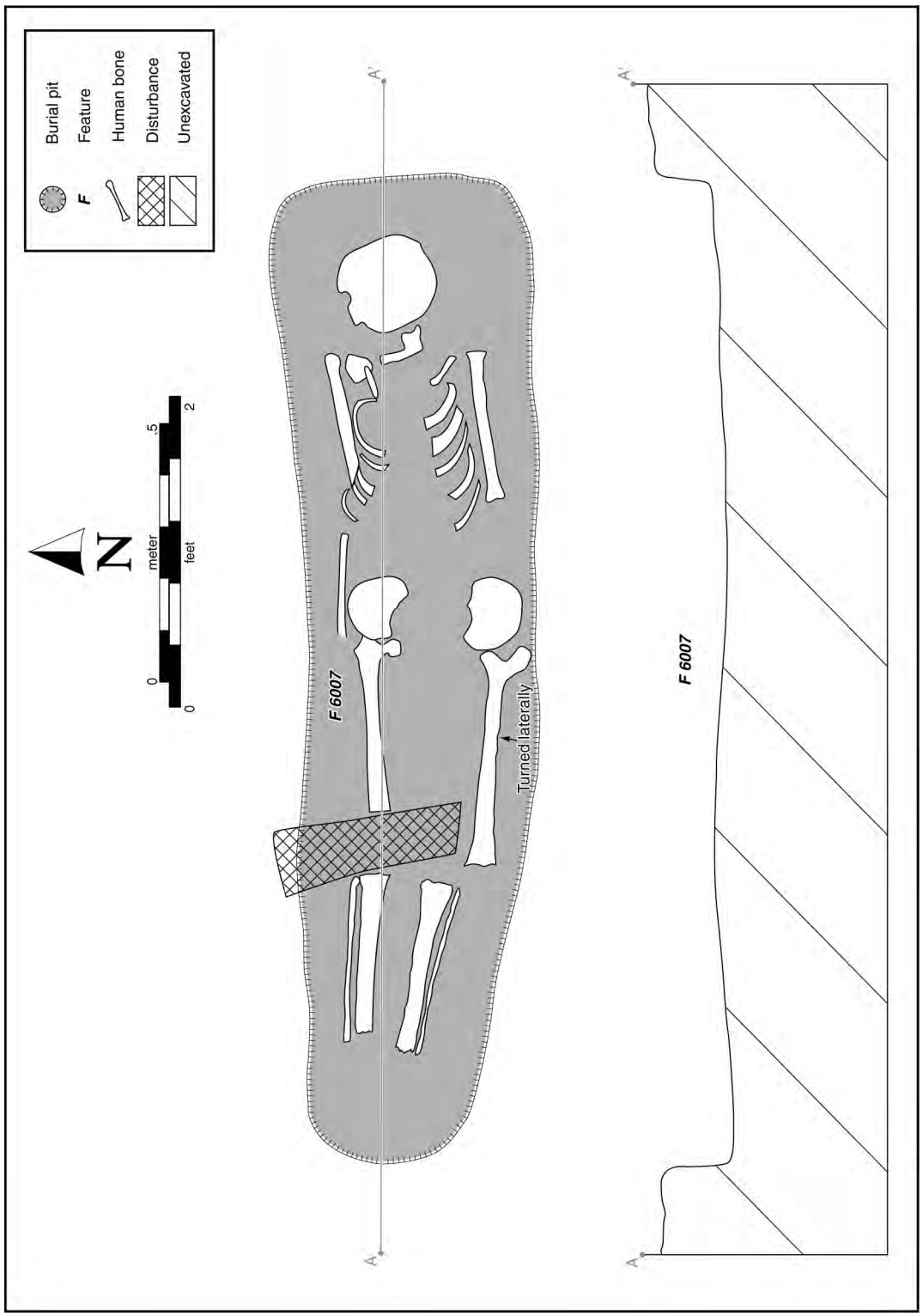

Figure C.3. Plan map and cross section of Feature 6007, Locus C.

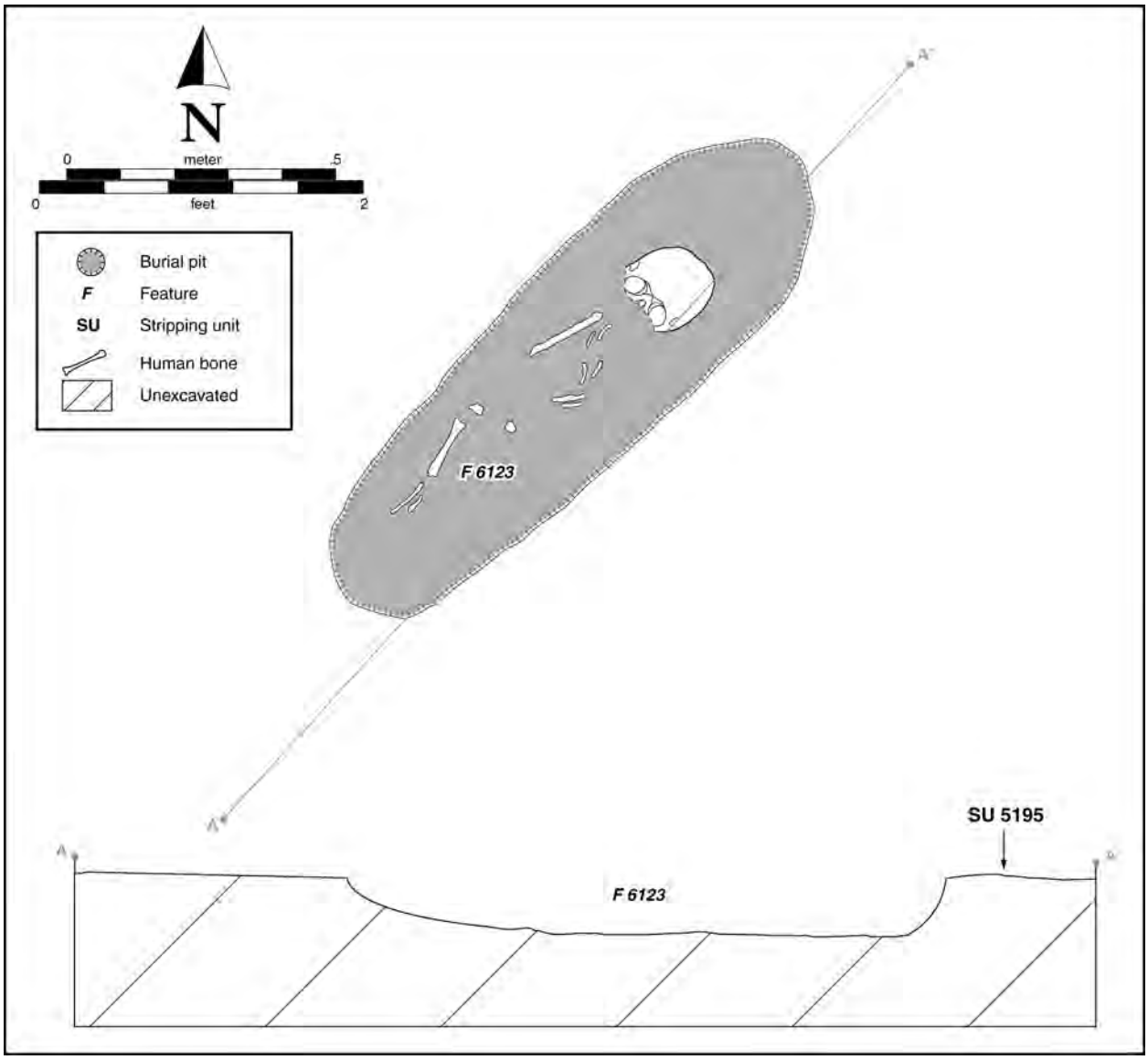

Figure C.4. Plan map and cross section of Feature 6123, Locus C.

a maximum depth of 12 cm. The pit was oriented northeast–southwest, with the head pointing to the northeast. Only a slight depression was visible in profile. The shallow depth, inward-sloping sides, and sloping base might suggest an expediently prepared and informal burial pit.

BURIAL TREATMENT: This burial pit contained a primary inhumation of a child (age range is unknown) of indeterminate sex. The skeletal remains were incomplete but the recovered elements were in articulation. Partial and fragmentary skeletal elements recovered were the cranium, humeri, radii, left ulna, right femur, right tibia, and both fibulae. The individual was interred in a supine position, fully extended, with the head oriented to the northeast and propped up. The arms were placed on the side of the body. No artifacts were recovered in association with this burial.

DATING: None

ASSOCIATED FEATURES: None

Feature 6191

LOCATION: Feature 6191 was identified during Phase 2 mechanical stripping in the south-central area of Stripping Unit 7012. The backhoe removed the upper portion of the torso during stripping. The feature was located 1.2 m north and 7.5 m east of the southwest corner of the stripping unit (see Figure C.1). The top of the feature originated approximately 12 cm below the ground surface and was not intrusive on any other features.

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The entire burial pit and its contents were excavated as a single level.

FILL: The pit fill consisted of a simple redeposit of loosely consolidated grayish brown silt. Several charcoal flecks, pebbles, faunal bones, sherds, and lithics were present in the fill, none of which was associated with the inhumation. Recent rains had loosened the compactness of the soil, and minor root damage was observed. No artifacts were recovered in direct association with the human remains, although sherds, faunal bone, and debitage were recovered in the upper fill.

BURIAL PIT DESCRIPTION: The burial pit was subrectangular in plan but did not exhibit a distinctive pit outline in cross section (Figure C.5). The pit measured 175 by 50 cm, with a maximum depth of 12 cm. The pit was oriented northeast–southwest, with the head pointing to the northeast. In cross section, the burial pit was very shallow, with a slightly curved east wall, and no discernible west wall. The presence of a shallow pit with a poorly prepared and uneven base might suggest an expediently prepared and informal pit.

BURIAL TREATMENT: This feature held a primary inhumation of an adult female (age range is indeterminate). Although most of the upper torso and cranium had been removed during mechanical stripping, the rest of the remains were in articulation. Partial and fragmentary skeletal elements recovered included the pelvis, right ribs, right radius, femora, tibiae, and fibulae. The individual was interred in an extended supine position, and the postcranial positioning suggests that the head had been facing to the northeast. The placement of the arms is unknown.

DATING: The inferred date range for Feature 6191 is A.D. 700 or later, based on the presence of temporally diagnostic sherds in the fill. Specifically, the presence of a Santa Cruz Red-on-buff sherd in the fill (A.D. 850–950) may suggest a date of interment during the latter half of the Middle Formative A period, although the sherd deposit may pre- or postdate the interment.

ASSOCIATED FEATURES: None

Feature 7170

LOCATION: Feature 7170 was identified during Phase 2 mechanical stripping in Stripping Unit 5190 (see Figure C.1). The feature was located 11.4 m south and 27.3 m east of the stripping unit's western projection. The top of the feature originated approximately 13 cm below the ground surface and was not intrusive on any other features.

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The entire burial pit and its contents were excavated as a single level.

FILL: The upper levels of the pit fill consisted of a very hard to moderately consolidated light brown to medium brown silty sand. The lower portion of the fill consisted of softer, darker brown soil with charcoal flecks. Small shell-disk beads were recovered from the screened fill above and below the remains. Sherds and debitage were recovered from the base of the pit but did not appear to be associated with the human remains. Some medium-sized to small rocks were embedded in the compact soil in the northern portion of the pit base. Extensive rodent and insect disturbances were present at the base on the southwest side.

BURIAL PIT DESCRIPTION: The burial pit was slightly ovoid in plan, with straight sides and a flat base (Figure C.6). The pit measured 78 by 66 cm in plan, with a maximum depth of 44 cm. The pit was slightly elongated to the northwest and more bulbous toward the southeastern edge. Although the contents suffered extreme damage as a result of bioturbation, the sides and base of the pit were distinguishable from the surrounding matrix. The large size of the pit suggests that it had been originally dug for a purpose other than this interment; the disarticulated remains of an infant and the small number of associated artifacts would not have required such a large pit. Furthermore, the presence of miscellaneous nonburial artifacts (sherds, debitage) and charcoal in the feature matrix suggests that the fill included redeposited cultural fill, possibly domestic refuse that had been discarded in the previously abandoned pit. These lines of evidence indicate that the burial pit had been previously used as a nonmortuary, nonthermal pit.

BURIAL TREATMENT: This feature contained the disarticulated remains of an infant. The remains were too disturbed to determine the original position of the individual within the pit; however, cranial elements indicate that the head had been facing to the northeast. The distribution of long bones along the southern wall suggests that the individual was placed in the pit in a semiflexed and possibly seated position. Skeletal elements recovered included cranial fragments, teeth, and long-bone fragments. Shell beads and a shell ring or pendant were recovered in direct association with the burial and probably were placed in the pit during the mortuary episode. Scattered sherds and debitage also were recovered throughout the pit fill but were probably not interred during the mortuary event. These materials probably reflect refuse deposition or bioturbation

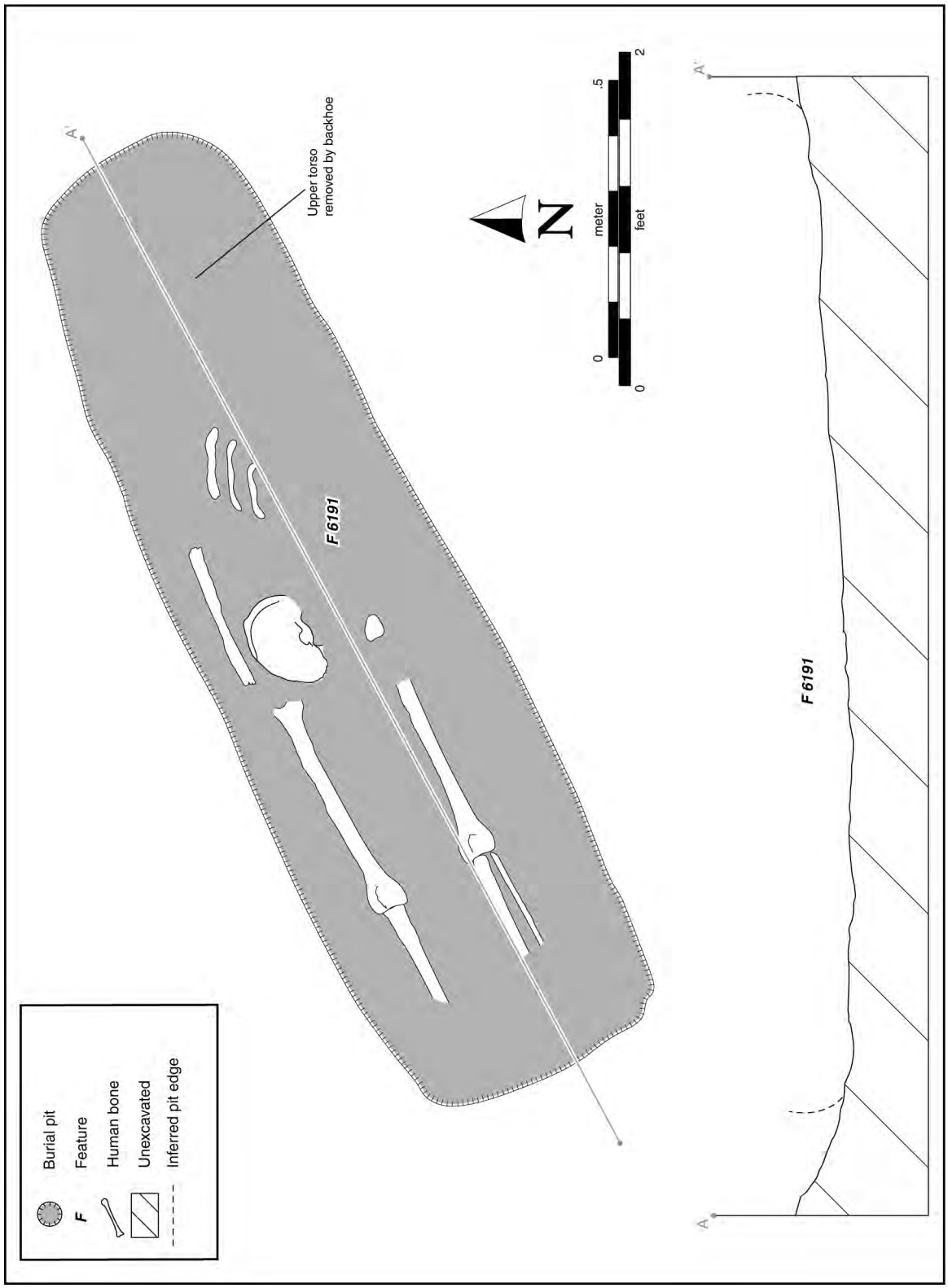

Figure C.5. Plan map and cross section of Feature 6191, Locus C.

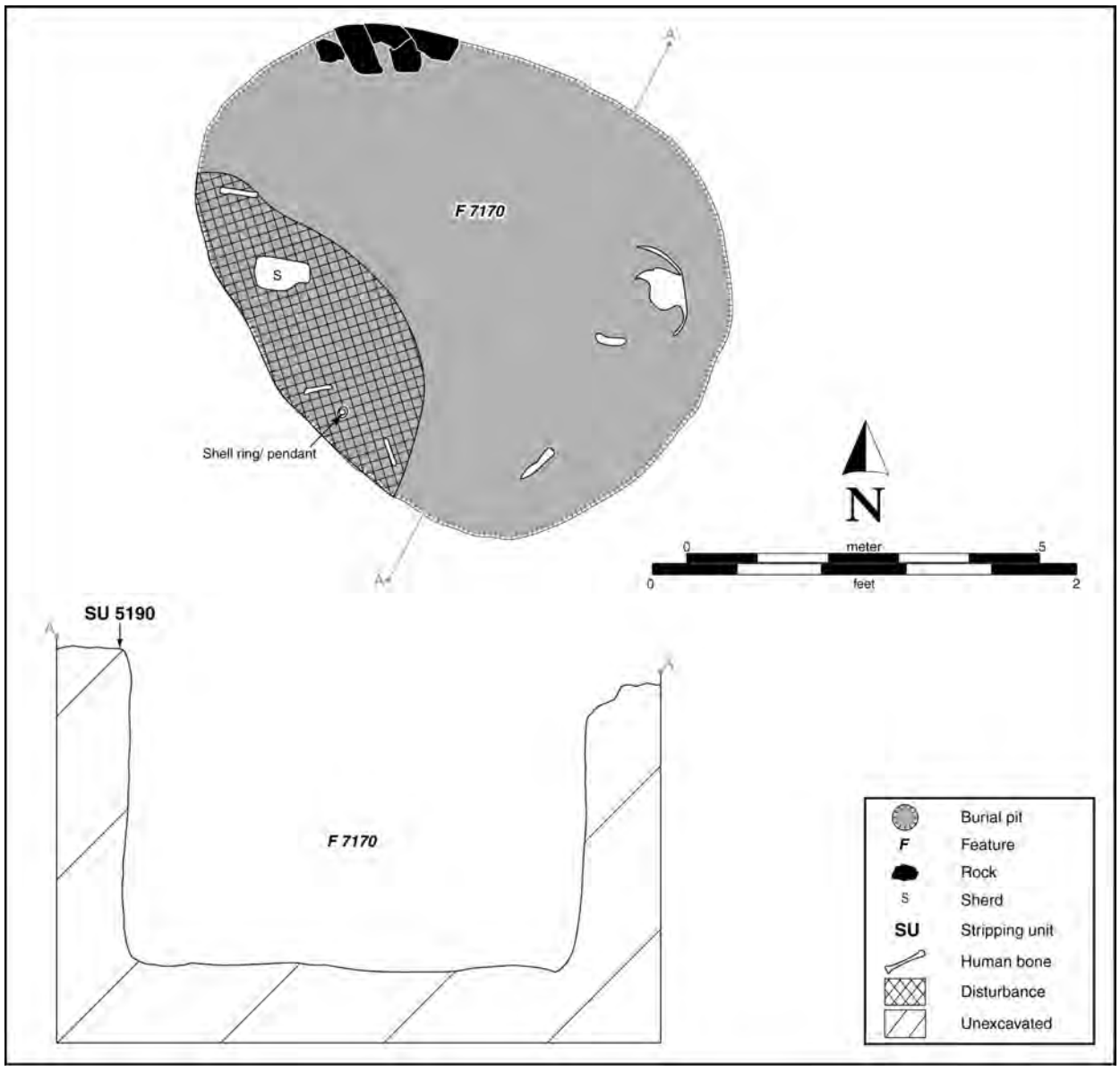

Figure C.6. Plan map and cross section of Feature 7170, Locus C.

that pre- or postdate the interment. The burial pit appears to have been located in an extramural space situated between concentrations of residential structures, possibly within a plaza or courtyard.

DATING: A.D. 950–1150, based on ceramics in the pit fill

ASSOCIATED FEATURES: None

Feature 7457

LOCATION: Feature 7457 was identified during Phase 2 excavation of a structure (Feature 6098) in the north-central portion of Stripping Unit 5190 (see Figure C.1). The skeletal remains were observed while the fill overlying the floor of the structure was being excavated. The structure was located 5.3 m south and 19.5 m east of the stripping unit's western projection. The burial lay at approximately the same elevation as the floor, along the back wall of the structure. Although a pit was not identified, the skeletal remains originated approximately 42 cm below the ground surface.

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: This burial, which was exposed during excavation of structure Feature 6098, was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The entire feature and its contents were excavated as a single level, as defined by the skeletal remains. The mortuary remains were assigned a feature number distinct from that of the associated structure.

FILL: The fill surrounding the human remains was composed of a mixture of compact calcic soil, possible adobe, and dark grayish brown silt with burned wood and charcoal. The upper 10 cm of soil was very compact and reddish brown to pinkish brown in color. It is possible that, rather than a simple redeposit, the fill is fall from the roof of the associated structure (Feature 6098), with sterile soil beneath the remains. No disturbances from root or rodent activity were noted. A few sherds, flakes, and faunal bone fragments were encountered, along with a clay ball (possible the top of a ceramic bell or effigy pot), but the materials probably were not associated with the mortuary deposit.

BURIAL PIT DESCRIPTION: The feature did not exhibit a formal outline, and it is possible that the interred individual was not placed in a burial pit (Figure C.7). The area defined as the feature matrix measured 170 by 55 cm, with a maximum depth of 15 cm. On the one hand, the east side of the burial was situated at approximately the same level as the structure floor, suggesting the possibility of interment on the floor of the structure at the time of abandonment (along with nearby inhumation Feature 7458). On the other hand, a small depression in the floor was observed beneath the west portion of the body, indicating a possible informal burial pit.

BURIAL TREATMENT: The feature included the well-preserved remains of an adult male, 50–65 years of age. Skeletal elements recovered consisted of the cranium, both clavicles, pelvis, left patella, ribs, humeri, radii, ulnae, femora, tibiae, fibulae, and hand and foot. The individual was interred on the left side in a very slightly flexed position, with the head was pointing to the east and facing south. The spine was slightly curved, and the upper right portion of the body was slightly backwards and bent at the elbow region, so that the individual's right hand was resting on the pelvic region. The left arm was extended along the side of the ribcage. The right leg was extended but turned to the left side. The right foot was slightly flexed so that the heel faced away from the body. The left leg was slightly bent so that the heel pointed toward the right leg.

The body was recovered near the floor level of the structure or perhaps in a slight depression originating at the floor. The absence of a visible pit outline and the placement of the individual on a house floor suggest that this may not have been a formal burial. No artifacts were recovered in direct association with this individual. The associated structure (Feature 6098) was burned at the time of abandonment, and burned wood and ash were recovered in the burial fill. As noted, possible remains from the roof fall also were recovered in the burial fill. On the basis of this evidence, it is highly plausible that the interred individual (along with the individual interred in nearby Feature 7458) was placed on the structure floor before it was set on fire. The evidence does not indicate a formally prepared burial.

DATING: If the individual had been placed on the floor of structure Feature 6098 at the time of abandonment, as posited above, then the date range for Feature 7457 would equate with that of Feature 6098 (A.D. 935–1015), suggesting a date of interment during the Middle Formative B period.

ASSOCIATED FEATURES: Feature 7457 was found within the footprint of structure Feature 6098. Feature 7458, another inhumation, was recovered within the boundary of the same structure.

Feature 7458

LOCATION: Feature 7458 was identified during Phase 2 excavation of a structure (Feature 6098) in the north-central portion of Stripping Unit 5190 (see Figure C.1). The skeletal elements were observed in the fill overlying the floor of the structure, 3.4 m south and 14 m east of the stripping unit's western projection. The top of the feature originated approximately 19 cm below the ground surface. Feature 7457, another inhumation (see above, was also present in the fill of the structure.

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: This burial, which was exposed during excavation of structure Feature 6098, was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The entire feature and its contents were excavated as a single level, as defined by the skeletal remains. The mortuary remains were assigned a feature number distinct from that of the associated structure.

FILL: The fill consisted of a moderately consolidated deposit of dark grayish brown silt with charcoal and burned wood inclusions. The fill surrounding the human remains exhibited evidence of burning above and surrounding the skeletal remains, probably a result of burning of the associated structure and subsequent roof fall. Some areas were compacted and lighter brown. Several sherds, lithics, and pieces of faunal bone were present in the fill, none of which was clearly related to the mortuary deposit. No disturbance from root or rodent activity was noted.

BURIAL PIT DESCRIPTION: The head of the interred individual was approximately level with the floor of the structure, but additional skeletal elements appear to have been placed in a shallow subfloor pit. The pit was circular in plan, but the floor of the structure obscured the edges of the pit outline (Figure C.8). The pit measured approximately 63 by 48 cm, with a minimum depth of 16 cm. The base of the pit was crudely basin shaped but uneven, suggesting that it was hastily prepared and informal. It may have been an intramural pit

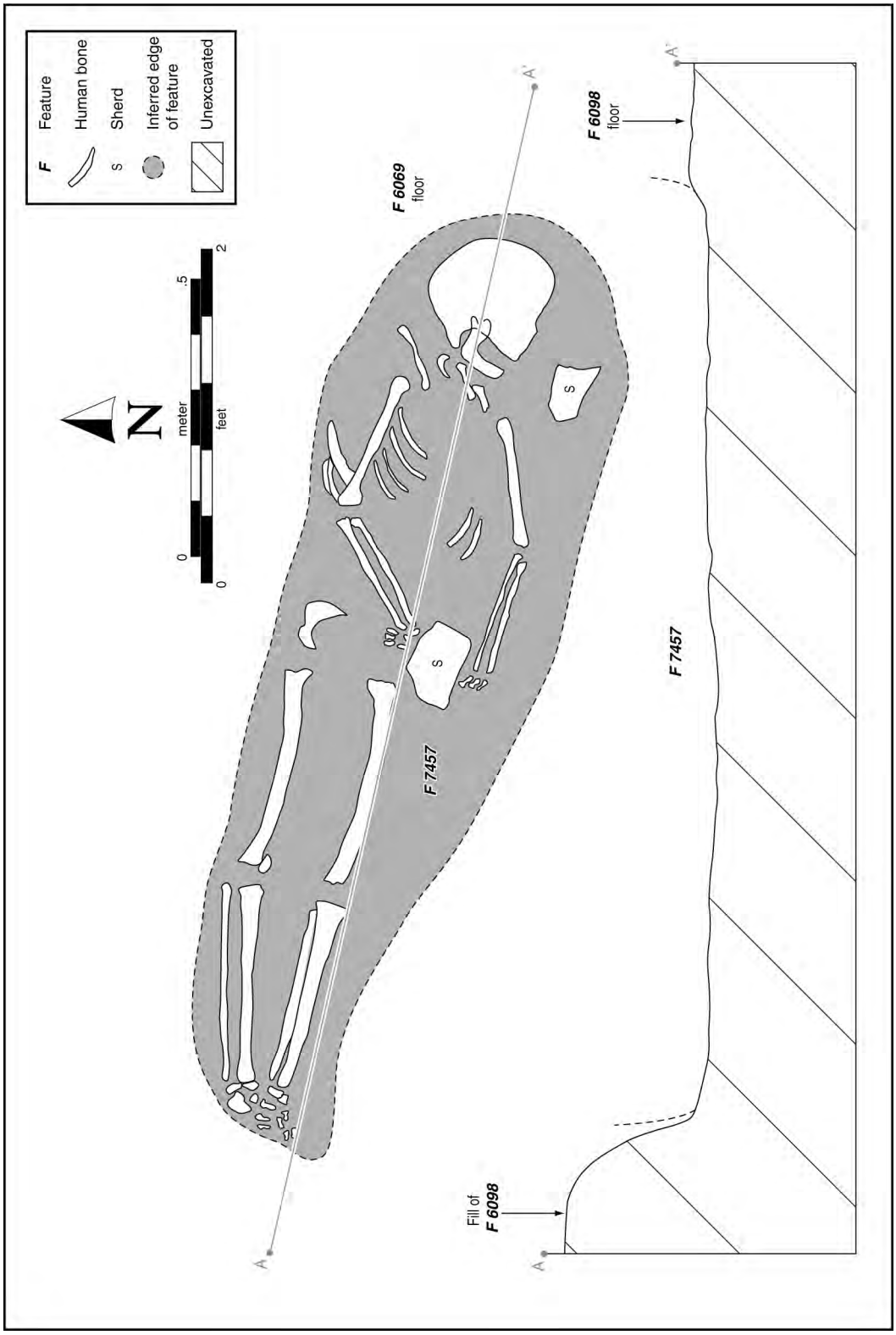

Figure C.7. Plan map and cross section of Feature 7457, Locus C.

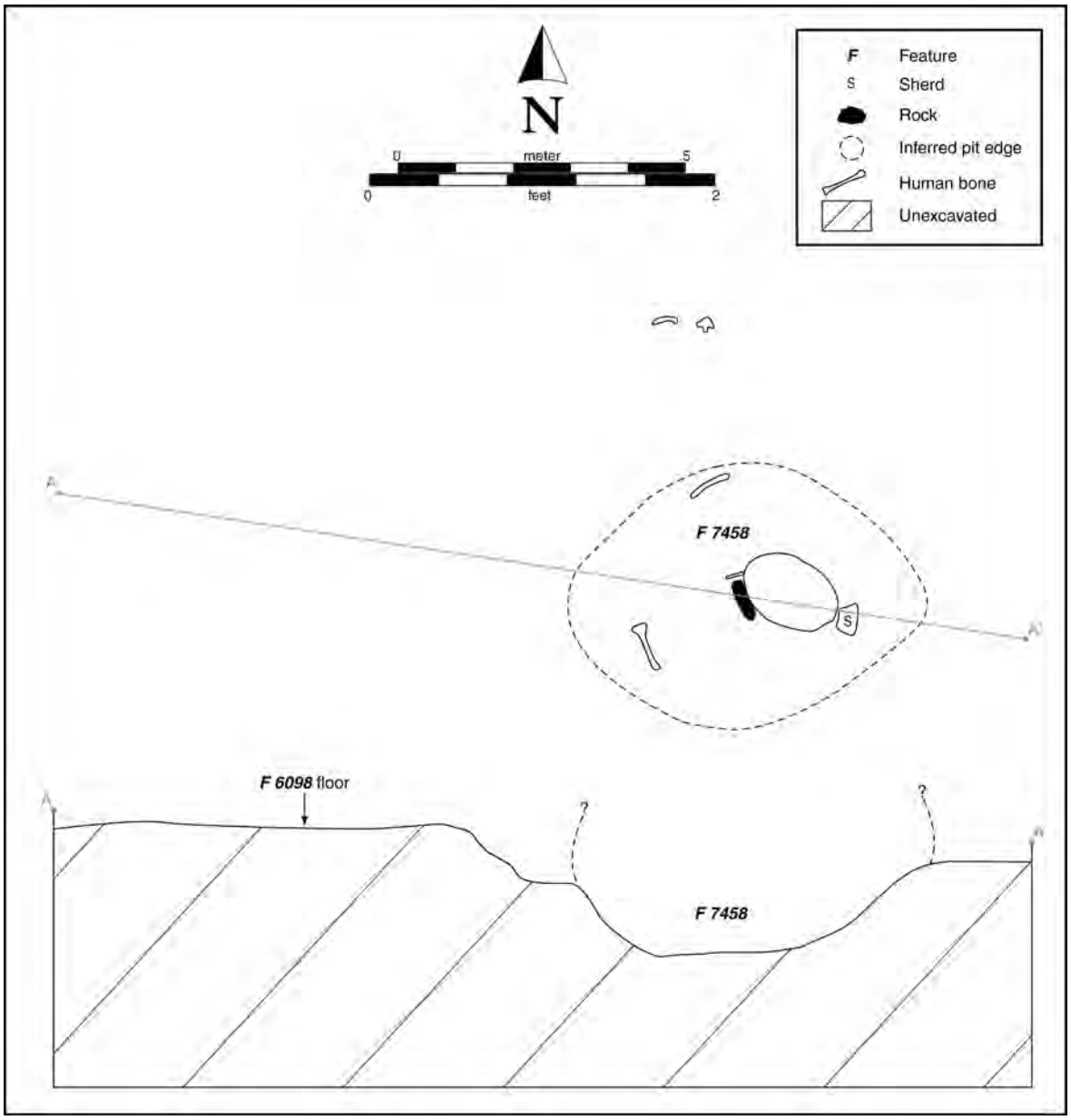

Figure C.8. Plan map and cross section of Feature 7458, Locus C.

that had been used for domestic purposes before being used as a burial pit. The individual was laid in the shallow pit, and the body extended above it and was covered by sediments associated with the burning of the structure. Several large rocks were recovered in the base of the pit, but it is unclear whether they were intentionally interred with the human remains.

BURIAL TREATMENT: This feature held the disarticulated remains of a 2–4-year-old child of indeterminate sex. Partial and fragmentary skeletal elements recovered consisted of the cranium, tibiae, fibulae, and ribs. Some of the bone elements (tibia and fibula) were located approximately 20 cm outside the pit, which could suggest that the pit was not filled in after the body was placed in it. The remains were too disturbed to establish the original position of the individual within the pit. The lack of articulation and the incompleteness of the skeleton suggest that it either was a secondary deposit or was heavily disturbed as a result of postdepositional bioturbation. In situ cranial elements suggest that the head had been facing southeast. No artifacts were directly associated with this individual.

The associated pit structure (Feature 6098) was burned at the time of abandonment, and burned wood and ash were recovered in the burial fill. As noted, possible remains from the roof fall also were recovered in the burial fill. On the basis of this evidence, we hypothesize that the interred individual (along with the individual interred in nearby Feature 7457) was placed in a makeshift and informal pit

dug into the structure floor (or in a preexisting domestic subfloor pit) before it was set on fire. It is possible that the pit was not filled in and/or that some portions of the body were not securely placed within the pit.

DATING: If our hypothesis is correct that the individual had been interred within structure Feature 6098 at the time of abandonment, as posited above, then the date range for Feature 7457 would equate with that of Feature 6098 (A.D. 935–1015), suggesting a date of interment during the Middle Formative B period.

ASSOCIATED FEATURES: Feature 7458 was recovered within the footprint of Feature 6098, a pit structure. Feature 7457, another inhumation, was located nearby within Feature 6098.

Feature 9410

LOCATION: Feature 9410 was first exposed during Phase 2 excavation of a structure (Feature 995) located near the center of Stripping Unit 5195. It was situated 14 m north and 9.2 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 10 cm below the ground surface and originated in the fill of Feature 995 (see Figure C.1).

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The entire burial pit and its contents were excavated as a single level.

FILL: The fill consisted of compact to moderately consolidated grayish brown silty sand, possibly composed of a redeposit of cultural fill. Some caliche nodules were present in the fill, and thin layers of calcium carbonate appeared in the east wall of the pit. Ceramic sherds, a rabbit bone, and two fragments of shell were recovered from the fill but probably were not associated with the mortuary episode. The burial pit was intrusive on Feature 995, and thus the artifacts may have been from the fill of the earlier structure. Extensive rodent and moderate insect disturbances were observed. Rodent disturbances were particularly prevalent in the northern third of the feature.

BURIAL PIT DESCRIPTION: The burial pit was ovoid in plan and oriented along a north–south axis (Figure C.9). The pit measured 140 cm by 60 cm in plan, with a minimum depth of 23 cm. The pit cross section was shallow and irregular, suggesting the possibility of an expediently constructed pit and informal burial episode. The pit appeared to have been barely large enough to contain the semiflexed body of the interred individual, implying that it was constructed specifically as a burial pit for that individual (i.e., it does not appear to have been a reused nonmortuary pit).

The pit clearly originated within the fill above the floor in the eastern end of Feature 995, suggesting a date of interment after an indeterminate period following the structure's abandonment. The pit extended through the floor of the structure.

BURIAL TREATMENT: This feature contained the remains of an adult male, 25–35 years of age. The skeleton was roughly one-third complete but was articulated and in a fair state of preservation. Skeletal elements consisted of the cranium, clavicles, scapulae, pelvis, ribs, humeri, radii, ulnae, femora, tibiae, fibulae, and hand. The body was interred in a semiflexed and supine position, with the head oriented to the south. The legs were bent at the knees and positioned upward (and slightly to the right) within the pit. The arms were bent and crossed over the chest, with the right hand over the left hand. No mortuary artifacts were associated with the burial.

DATING: On the basis of stratigraphic relations and the presence of temporally diagnostic ceramics, Feature 995 is inferred to have been occupied within a time range of A.D. 935–1100 (for details, see Volume 2, Chapter 2). The burial pit in Feature 9410 originated in the fill of Feature 995, indicating a date of interment after the structure abandonment. The inferred date range for Feature 9410 is thus A.D. 935 or later.

ASSOCIATED FEATURES: Feature 9410 was recovered within the fill of Feature 995, a pit structure.

Feature 10,698

LOCATION: Feature 10,698 was identified during Phase 2 excavation of a wall in a structure (Feature 7461) located near the northern edge of Stripping Unit 5190. It was located 2.6 m north and 18.6 m east of the stripping unit's western projection. The top of the feature (as defined by the scatter of human remains) originated 19 cm below the modern ground surface and overlapped with (i.e., was intrusive to) the north wall of Feature 7461 (see Figure C.1).

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: Feature 10,698 was a secondary deposit of human remains that were exposed within a rodent burrow during the excavation of Feature 7461. This burial was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The entire feature contents—defined as the soil matrix immediately surrounding the scatter of exposed human remains—were excavated as a single level.

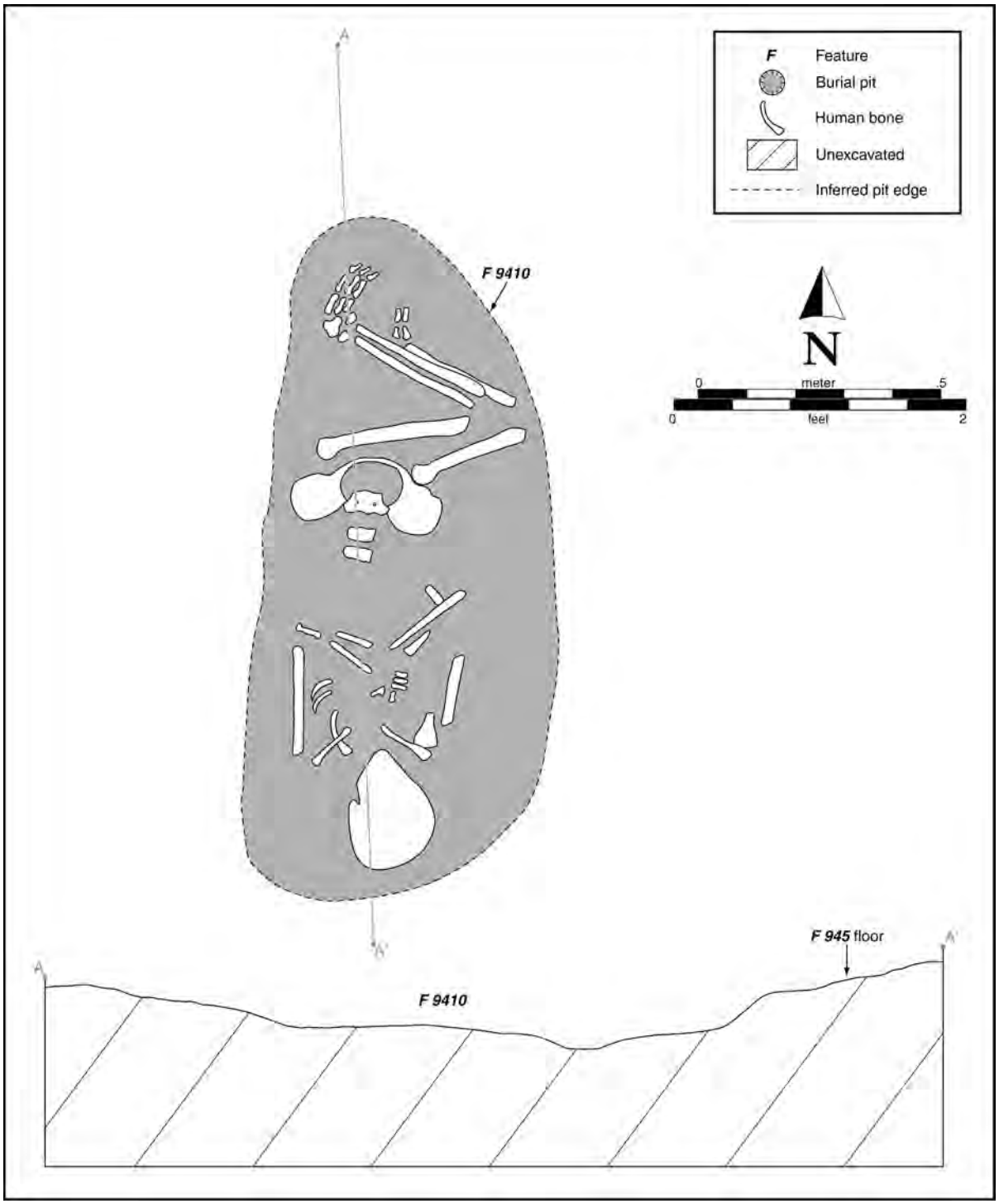

Figure C.9. Plan map and cross section of Feature 9410, Locus C.

FILL: The fill consisted of loosely consolidated grayish brown silt with charcoal flecks. Aside from the fact that the feature was in a rodent burrow, no additional postdepositional disturbances were noted. No mortuary artifacts were recovered from the fill.

BURIAL DESCRIPTION: The rodent burrow was irregular in plan, with irregular margins (Figure C.10). It originated approximately 19 cm below the modern ground surface and was 20 cm deep. The bone remains were recovered within a 19-by-39-cm area of the burrow.

BURIAL TREATMENT: The burrow contained the disarticulated remains of a neonate. The remains probably were transported by a rodent into the north wall of the structure, where the individual may have been originally interred. Consequently, no information about the primary context of the burial was inferable. No artifacts were found in association with the remains.

DATING: As determined from stratigraphic relationships, the individual in Feature 10,698 either postdates or was contemporaneous with Feature 7461. Archaeomagnetic analyses indicate a date range of A.D. 935–1040 for Feature 7461 (see Volume 2, Chapter 2). Hence, the inferred date range for 10698 is A.D. 935 or later.

ASSOCIATED FEATURES: Feature 10,698 was recovered during the excavation of the northern edge of Feature 7461, a pit structure.

Cremations

Feature 320

LOCATION: Feature 320 was exposed in the south wall of Trench 237 during Phase 1 trench excavations. The backhoe removed most of the northern half of the feature during the trench excavation. The remaining portion of the feature was subsequently exposed and excavated with a 1-by-1-m test pit (Test Pit 323; see Figure C.1). The top of the feature originated at 38 cm below the surface and was not intrusive on any other features.

MODE OF INTERMENT: Secondary pit cremation (with capping vessel)

EXCAVATION METHODS: This burial was encountered during mechanical excavation of Trench 237. The trench backdirt and loose soil from the vicinity of the feature were sifted with 1/4-inch-mesh screens to recover any bone or potentially associated artifacts. A 1-by-1-m test pit (Test Pit 323) was then placed over the burial pit. The pit was excavated into the eastern wall of the trench: i.e., the western wall of the unit corresponded with the eastern wall of the trench (Figure C.11). The unit was excavated by skimming the ground surface with shovels and trowels until the top of the burial was exposed. (The soils overlying the feature were not screened or collected.) Once the top of the feature had been exposed, the contents of the

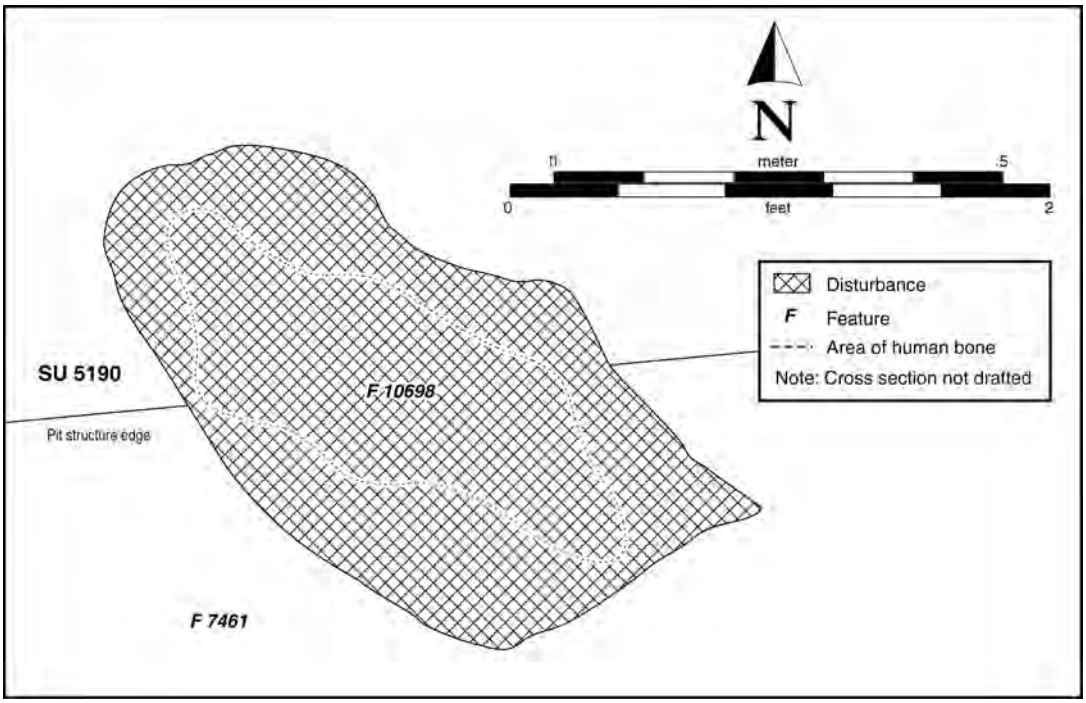

Figure C.10. Plan map of Feature 10698, Locus C, showing approximate horizontal extent of scattered human remains.

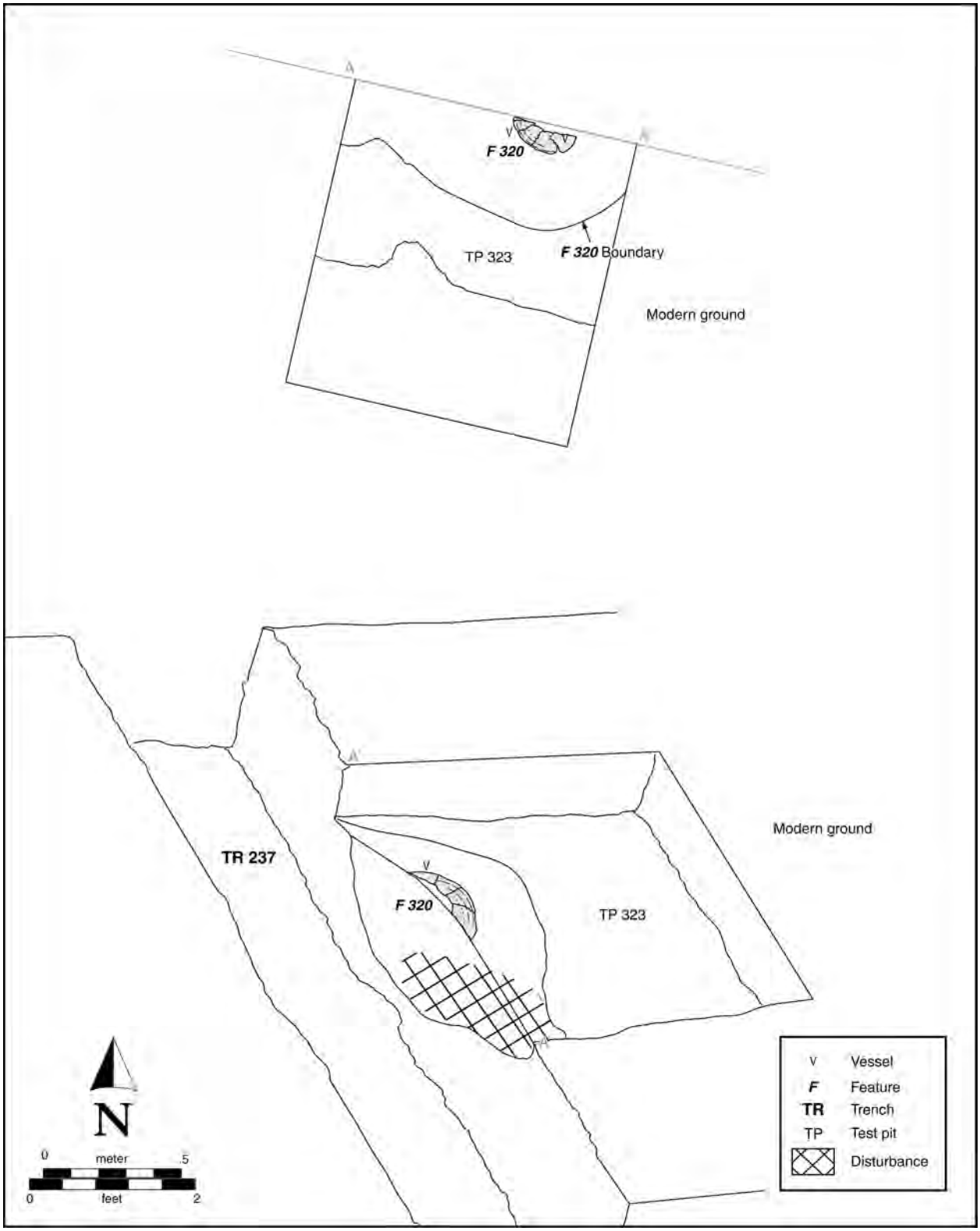

Figure C.11. Plan map and oblique view of Feature 320, Locus C.

pit were collected in their entirety without screening the fill. The weight of the recovered cremated bone was not recorded. For additional excavation details, see the discussion of burial-excavation methods in Chapter 3.

FILL: The fill contained burned skeletal fragments, plain ware ceramic sherds, flaked stone debitage, and glass fragments (probably transported into the feature matrix as a result of either rodent activity or mechanical disturbance from the trench excavation). About half of the feature was removed by the backhoe, and rodent activity had disturbed the western portion of the pit. Fragments of a partial plain ware bowl were recovered in the upper portion of the burial pit, roughly 5–10 cm above the burned human remains. Also, a polishing stone was recovered from the backdirt; however, it is unclear whether it was associated with the burial. Two flaked stone pieces were located close to the southern feature boundary but probably were not associated with the mortuary episode.

BURIAL PIT DESCRIPTION: The burial pit was circular in plan, with an inferred pit diameter of about 1 m and maximum depth of 38 cm (see Figure C.11). In cross section, the pit was basin shaped, with inward-sloping walls and a rounded base.

BURIAL TREATMENT: The burial was a secondary deposit of the cremated remains of an individual of unknown age or sex. The lack of burning on the pit walls or base suggests that the bone had been incinerated elsewhere and secondarily interred in the burial pit. The bone appears to have been placed on the bottom of the pit and covered with fill. A plain ware bowl (fragmented at the time of discovery) was then inverted over opening of the burial pit; this bowl is interpreted as a capping vessel. Apart from the vessel, none of the artifacts recovered in the fill and backdirt appears to have been associated with the human remains.

DATING: None

ASSOCIATED FEATURES: None

Feature 333

LOCATION: Feature 333 was exposed during the Phase 1 excavation of Trench 234, near the southeast corner of Stripping Unit 5190, and was later fully excavated during Phase 2. Fragments of an inverted urn overlying the cremated remains were visible in the north wall of Trench 234. The urn was partially cut through by the backhoe. The top of the feature originated at 18 cm below the site surface and was not intrusive on any other feature (see Figure C.1).

MODE OF INTERMENT: Secondary urn cremation (inverted vessel)

EXCAVATION METHODS: During Phase 1, the trench backdirt was 1/8-inch screened for cremated bone and potentially associated artifacts. However, no further work was conducted at the time; rather, the remaining portion of the feature was left in place. In Phase 2, the feature was relocated during the excavation of Stripping Unit 5190. The surrounding soil was disturbed; therefore, it was screened through a 1/8-inch-mesh screen. All fill from the rest of the pit was collected. Once the top of the feature was exposed, it was excavated in accordance with the burial-excavation methods outlined in Chapter 3. All remains were recovered as a single level, as defined by the inferred edge of the burial pit.

FILL: The pit outline was not well defined during the excavation, but the fill appears to have been a simple redeposit of somewhat loosely consolidated soil. Small pebbles and a few small pieces of charcoal were present in the inferred feature matrix. It is unclear whether the fill was uniform or stratified. No mortuary artifacts were encountered in this feature, aside from the burial urn.

BURIAL PIT DESCRIPTION: The burial appears to have been roughly circular in plan. Despite the ambiguity of the pit outline, straight walls and a flat base could be discerned (Figure C.12). The observable dimensions of the pit opening were 56 by 40 cm, with a minimum depth of 22 cm. A significant portion of the pit had been previously removed during excavation of Trench 234 during Phase 1. The burial pit appears to have been located in an extramural space situated between concentrations of residential structures, possibly within a plaza or courtyard.

BURIAL TREATMENT: This feature contained a secondary deposit of the cremated remains of an adult individual of unknown sex (age range is indeterminate). The burial urn was inverted over the calcined human bone in the base of the pit. The urn was a fragmented Sacaton Red-on-buff jar, with a Gila shoulder. The jar neck had been removed before the mortuary episode, and the break at the neck-body juncture was reworked to create a rounded rim. Other than the urn, no artifacts were found in association with the burial. The absence of burning on the pit walls or base suggests that this was not the primary site of cremation, indicating a secondary deposit. The total weight of the cremated remains was 573.35 g.

DATING: This feature was not dated by chronometric techniques, but the Sacaton Red-on-buff jar suggests a date range of A.D. 950–1150. This evidence indicates a date of interment during the Late Formative B period.

ASSOCIATED FEATURES: None

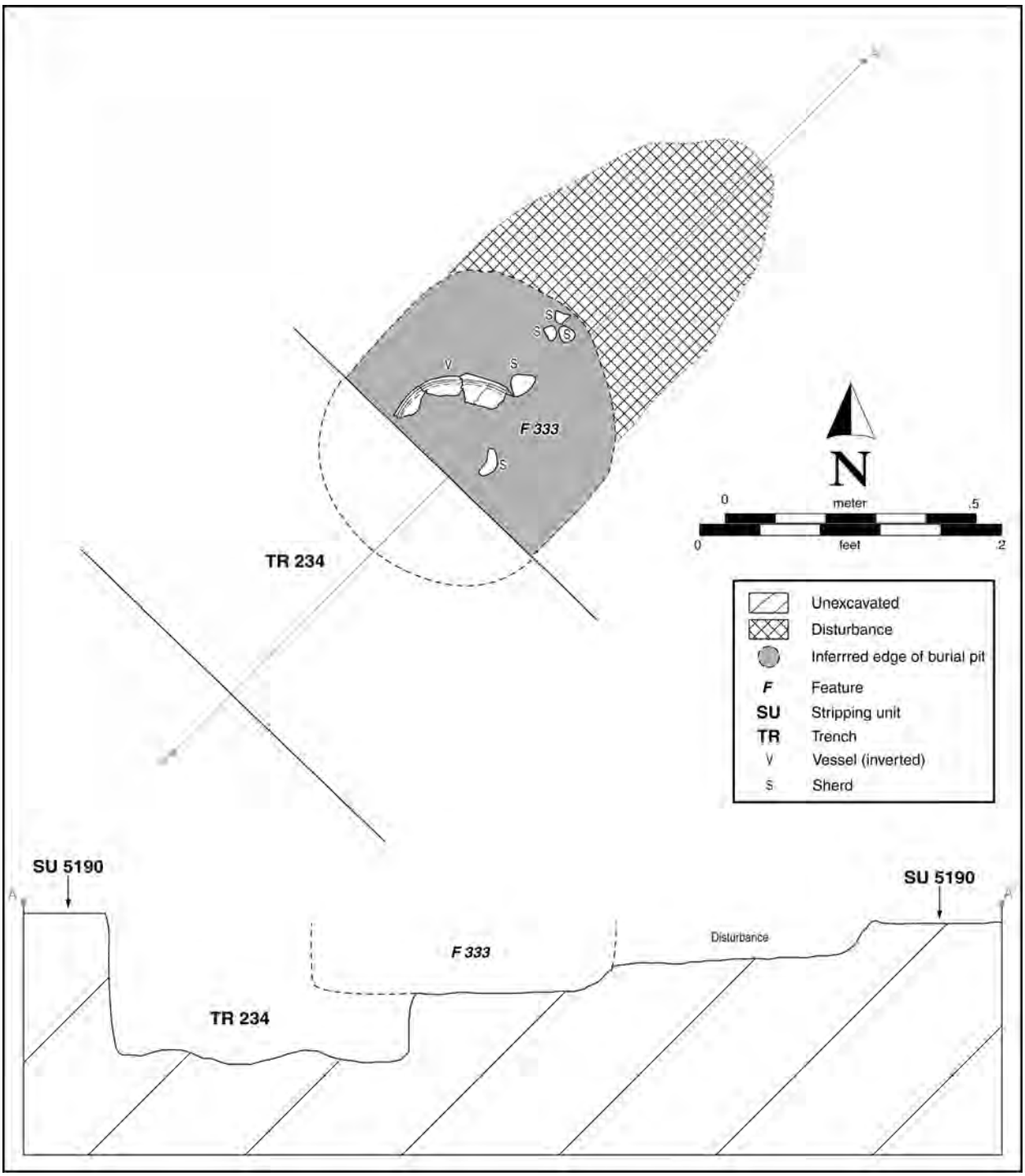

Figure C.12. Plan map and cross section of Feature 333, Locus C.

Feature 6045

LOCATION: Feature 6045 was exposed during Phase 2 mechanical stripping in the southeast corner of Stripping Unit 5188. It was located 3.8 m north and 16.1 m east of the southwest corner of the stripping unit. The top of the feature originated at approximately 5 cm below the ground surface and was not intrusive on any other features (see Figure C.1).

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The entire burial pit and its contents were excavated as a single level.

FILL: The fill was composed of light brown silty loam, with minimal evidence of disturbance from bioturbation. No artifacts were recovered in association with this burial, although large rocks were recovered in the base of the pit, beneath the cremated remains.

BURIAL PIT DESCRIPTION: The pit was circular in plan, with a shallow, basin-shaped profile and rounded base (Figure C.13). The pit measured approximately 30 cm in diameter, with a minimum depth of 8 cm. The presence of large rocks in the base of the pit suggests deliberate placement at the time of the interment. Feature 6045 was one of two cremations (along with Feature 3875 in Locus D) that appeared to have been intentionally placed in rock-lined burial pits.

BURIAL TREATMENT: This feature contained a secondary cremation deposit of an adult individual of unknown sex (age range is indeterminate). The cremated remains probably were placed on top of a rock-lined base and covered with fill. The absence of burning on the pit walls or base suggests that this was not the primary site of cremation, indicating a secondary deposit. The total weight of the cremated remains was 391.71 g.

DATING: None

ASSOCIATED FEATURES: None

Feature 6074

LOCATION: Feature 6074 was identified during Phase 2 mechanical stripping in the west-central portion of Stripping Unit 5189. It was located 12 m north and 1.5 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 1 cm below the ground surface and was not intrusive on any other feature (see Figure C.1).

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: This feature encompassed a pocket of cremated bone within a large, circular stain representing an unexcavated pit. The concentration of cremated bone covered only a small area (approximately 8 cm in diameter, with a maximum depth of 8 cm) within the much larger pit. The cremated remains were excavated in accordance with the burial-excavation methods outlined in Chapter 3. The entire feature was excavated and recorded as a single level. No cross-sectional illustration of the feature was made.

FILL: The burial fill consisted of gray silt, with caliche inclusions. No postdepositional disturbances were noted. No artifacts or other cultural materials were recovered in the fill, other than the concentration of cremated bone.

BURIAL PIT DESCRIPTION: The pit was circular in plan, with a diameter of 80 cm (Figure C.14). The concentration of cremated bone encompassed an area with a diameter of 8 cm and a depth of 8 cm near the southern edge of the pit. The significance or purpose of the large pit, which was not recorded as a separate feature, was not immediately apparent. However, no artifacts or other cultural materials were recovered outside the concentration of cremated bone.

BURIAL TREATMENT: The burial feature consisted of a small secondary deposit of cremated remains of an adult individual of unknown sex (age range is indeterminate). No urn or other artifacts were recovered in association with this burial. The absence of burning of the soil around the deposit indicates that this was not the primary location of the cremation, indicating a secondary deposit. The total weight of the cremated remains was 6.5 g.

DATING: None

ASSOCIATED FEATURES: None

Feature 6090

LOCATION: Feature 6090 was identified during Phase 2 mechanical stripping in the north-central area of Stripping Unit 5190 (see Figure C.1), and the lid covering the cremation urn was exposed (and fractured) during the mechanical stripping. The feature was located 24 m south and 18.6 m east of the stripping unit's western projection. The top originated approximately 15 cm below the ground surface and was not intrusive on any other feature.

MODE OF INTERMENT: Secondary urn cremation (upright vessel)

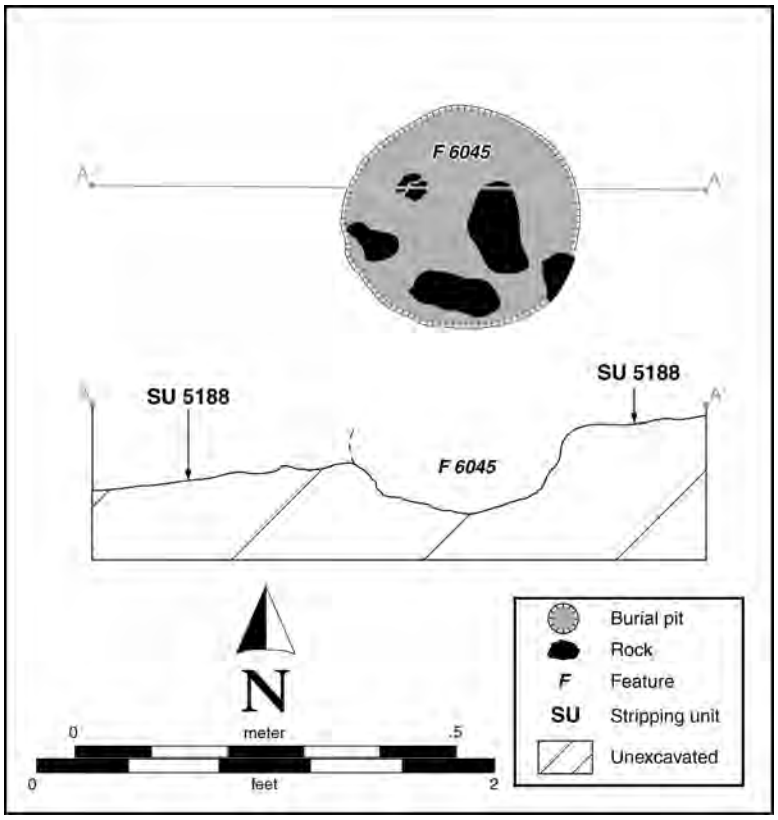

Figure C.13. Plan map and cross section of Feature 6045, Locus C.

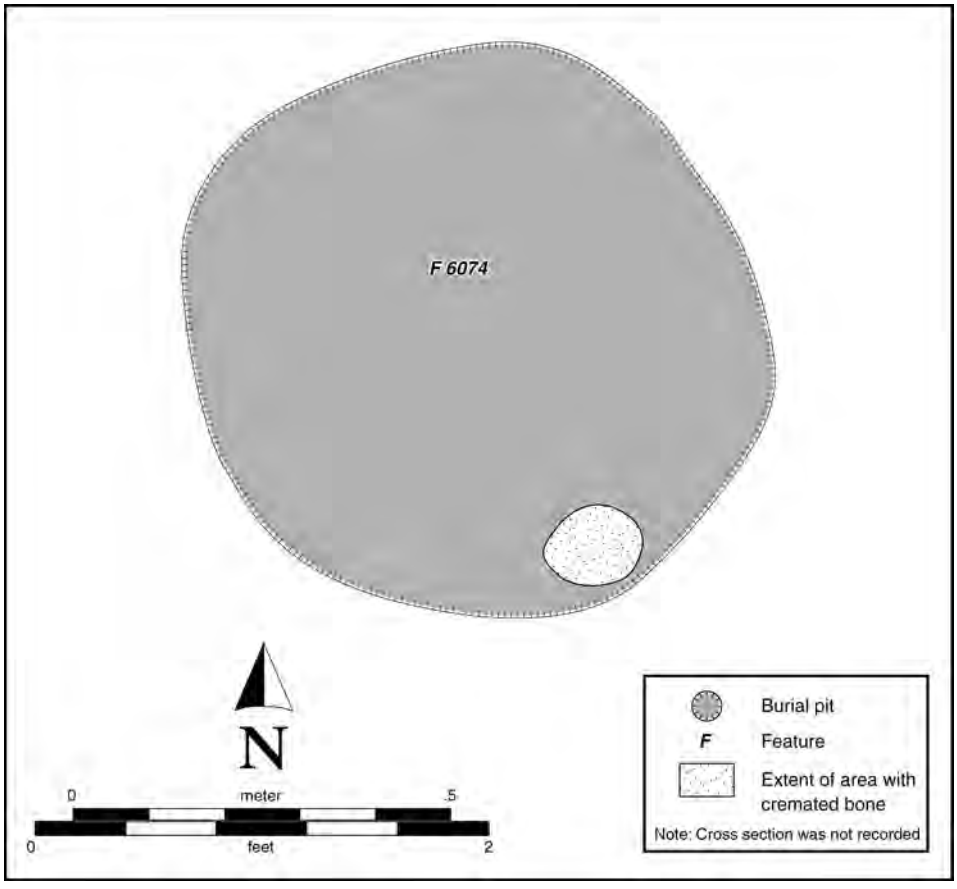

Figure C.14. Plan map of Feature 6074, Locus C.

EXCAVATION METHODS: This burial was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The cremation urn, lid, and associated remains were removed as a single unit, as defined by the presence of the outline of the burial pit. The feature fill was collected in bulk and was not screened.

FILL: The fill was a slightly compacted redeposit of reddish silt, with no inclusions. No disturbance from root or rodent activity was noted. No artifacts were encountered in the fill, aside from the cremation urn and lid.

BURIAL PIT DESCRIPTION: The burial pit was circular in plan and shallow, with straight to slightly incurving side walls and a flat base (Figure C.15). The pit measured 19 by 23 cm, with a maximum depth of 10 cm. The pit appears to have been deliberately constructed to be large enough to accommodate only the burial vessel and lid. The burial pit appears to have been located in an extramural space situated in between concentrations of residential structures, possibly within a plaza or courtyard.

BURIAL TREATMENT: This feature contained a secondary deposit of the cremated remains of a young adult of unknown sex (age range is indeterminate). A Rincon Red-on-brown vessel contained the remains, and a plain ware bowl was placed in an inverted position over the urn as a lid. The containing vessel was a jar-with-neck in which the neck was removed before the interment; the neck-body break was subsequently reworked to create a rounded rim tip. The lid was a Type II (sand-tempered) plain ware bowl, which was fragmented at the time of discovery as a result of damage during the mechanical stripping. Apart from the urn and lid, no additional artifacts were recovered. The absence of burning on the pit walls or base suggests that this was not the primary site of cremation, indicating a secondary deposit. The total weight of the cremated remains was 115 g.

DATING: This feature was not dated by chronometric techniques, but the Rincon Red-on-brown jar with elaborated decoration suggests a date range of A.D. 950–1150. This evidence indicates a date of interment during the Late Formative B period.

ASSOCIATED FEATURES: None

Feature 7335

LOCATION: Feature 7335 was identified during Phase 2 mechanical stripping in the northwest portion of Stripping Unit 5190 (see Figure C.1). It was located 4 m south and

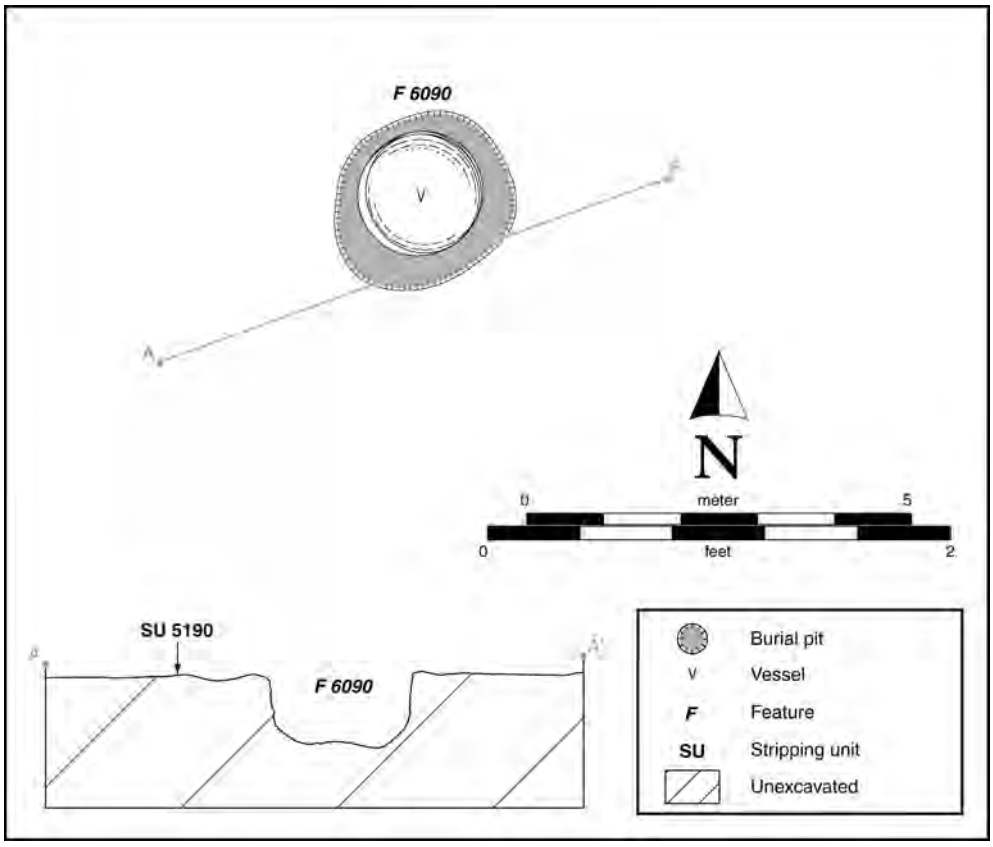

Figure C.15. Plan map and cross section of Feature 6090, Locus C.

3.5 m east of the stripping unit's western projection. The top of the feature originated at 22 cm below the ground surface and intruded on Feature 7146, a roasting pit that predated the burial pit.

MODE OF INTERMENT: Secondary pit cremation
EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The entire burial pit and its contents were excavated as a single level.

FILL: The fill consisted of loosely consolidated grayish brown silt with chunks of charcoal. A few sherds and lithics were present in the fill but probably were not associated with the cremation episode. Significant rodent disturbance was observed in the fill, as evidenced by the recovery of a bone beneath and to the side of the burial pit. Sherds and debitage were recovered in the upper fill of the feature, but these materials probably were not part of the mortuary deposit.

BURIAL PIT DESCRIPTION: The burial pit was circular in plan, with incurving side walls and a relatively flat base (Figure C.16). The diameter of the pit was 60 cm in plan, with a depth of 22 cm. The burial pit appears to have been located in an extramural space situated to the west of a concentration of residential structures near the edge of the stripping unit. This area may have functioned as an open plaza or courtyard area.

BURIAL TREATMENT: This feature contained a secondary deposit of cremated remains of an adult female (age range is indeterminate). The cremated remains were placed in the base of the pit and covered with fill. The absence of burning on the pit walls or base suggests that this was not the primary site of cremation, indicating a secondary deposit. The total weight of the cremated remains was 445.5 g.

DATING: None

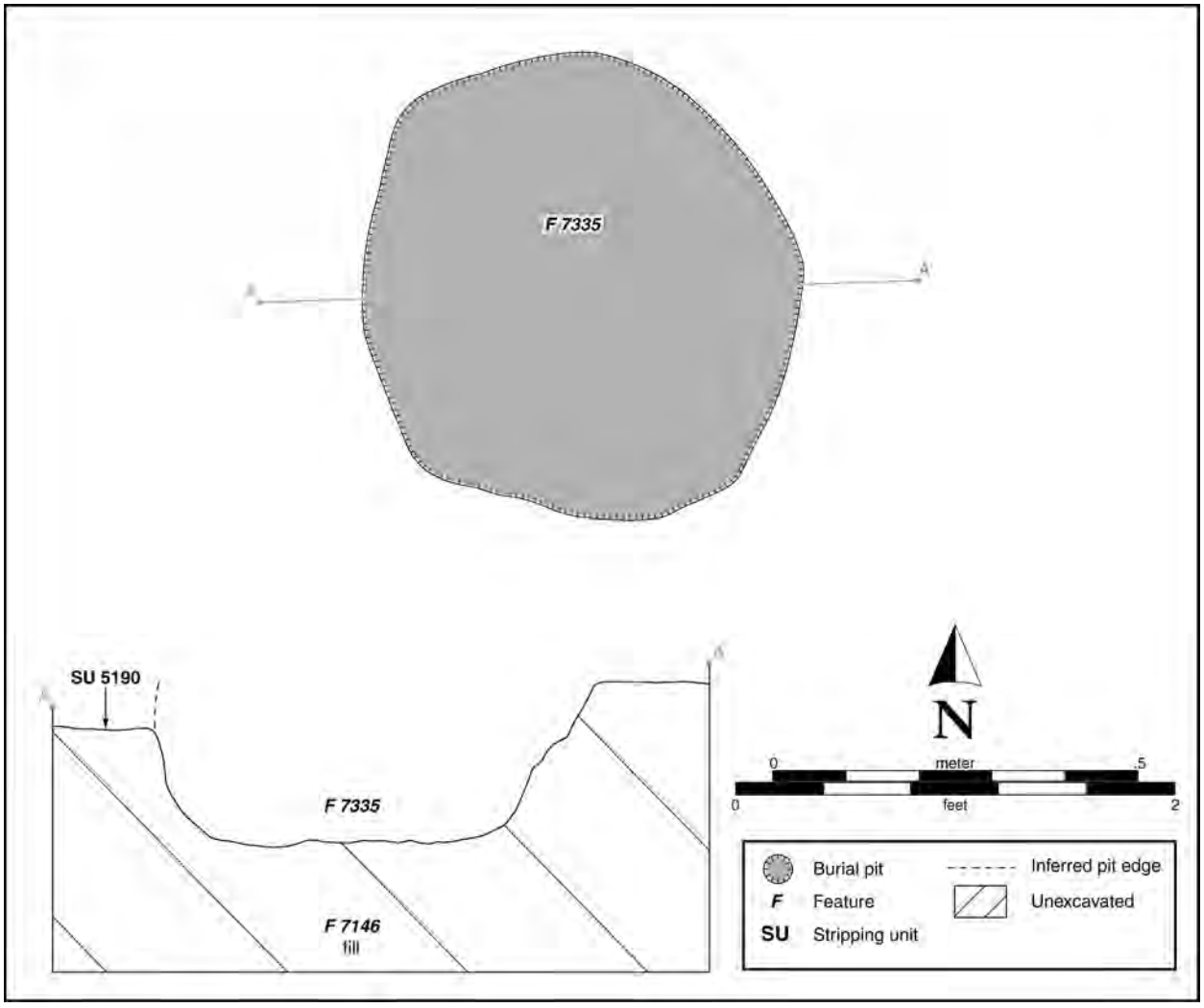

Figure C.16. Plan map and cross section of Feature 7335, Locus C.

ASSOCIATED FEATURES: Feature 7335 was recovered within the boundaries of a roasting pit (Feature 7146). Based on this stratigraphic relationship, it is clear that Feature 7335 postdates Feature 7146.

Feature 7456

LOCATION: Feature 7456 was exposed during Phase 2 mechanical stripping in the northeastern portion of Stripping Unit 5190 (see Figure C.1). It was located 25.7 m east of the stripping unit's western projection. The top of the feature originated approximately 19 cm below the ground surface and was not intrusive on any other feature.

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The entire burial pit and its contents were excavated as a single level.

FILL: The fill consisted of moderately consolidated reddish brown silt and calcic soil, which contained a large quantity of incompletely incinerated skeletal elements. Some small pebbles were intermixed in the fill. It is unclear whether the fill was uniform or stratified. Sherds and faunal-bone fragments were recovered in the fill, but these materials probably were not interred as part of the mortuary deposit.

BURIAL PIT DESCRIPTION: The burial pit was circular in plan, with straight to slightly incurving side walls and a relatively flat base (Figure C.17). The circular pit had a diameter of about 35 cm, with a depth of 15 cm. The cremated remains were placed in the base of the pit and covered with fill. Much of the bone was incompletely incinerated and only blackened. The burial pit appears to have been located in an extramural space situated to the east of a concentration of residential structures, possibly within a plaza or courtyard.

BURIAL TREATMENT: This feature contained a secondary deposit of cremated remains of at least two individuals: one juvenile and one adult (age ranges are indeterminate). Differences in the thicknesses of recovered cranial fragments provided the evidence for the age differences of these individuals. Sex could not be determined for either individual. The absence of burning on the pit walls or base suggests that this was not the primary site of cremation, indicating a secondary deposit. The total weight of the cremated remains was 1,243.8 g.

DATING: None

ASSOCIATED FEATURES: None

Feature 7472

LOCATION: Feature 7472 was identified during Phase 2 mechanical stripping of the north-central portion of Stripping Unit 5190 (see Figure C.1). The backhoe removed the upper portion of the containing vessel during stripping; however, most of the vessel, which contained the cremated remains and fill, remained intact. It was located 2 m north and 17 m east of the stripping unit's western projection. The top of the feature originated approximately 19 cm below the ground surface and was not intrusive on any other features.

MODE OF INTERMENT: Secondary urn cremation (upright vessel)

EXCAVATION METHODS: This burial was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The cremation urn and associated remains were removed as a single unit, as defined by the presence of the urn and associated human remains. The feature fill was collected in bulk and was not screened.

FILL: The pit fill consisted of moderately consolidated brownish red silt. No artifacts or other cultural materials were present in the fill, aside from the cremation urn. No disturbance from root or rodent activity was observed.

BURIAL PIT DESCRIPTION: The burial pit was circular in plan, with straight to slightly inward-sloping side walls and a relatively flat base (Figure C.18). The pit had a diameter of approximately 30 cm at the exposed surface, with a maximum observed depth of 10 cm. As noted, however, the upper portion of the feature was removed during stripping, and thus the original depth was greater than 10 cm.

BURIAL TREATMENT: This feature consisted of a largely intact urn situated in an upright position; it contained the cremated remains of an individual of unknown age and sex. The cremation vessel was placed in the base of the pit and covered with fill. No lid was observed covering the vessel orifice, but it is possible that a lid was removed by the backhoe during stripping. The containing vessel was a Dragoon Red-on-brown jar with elaborated decoration (Heckman 2000). The jar's neck was missing at the time of discovery, but it is not clear whether a neck was present before the mechanical disturbance. In two other secondary urn cremations in Locus C (Features 333 and 6090; see above), the containing vessels consisted of jars-with-necks in which the necks were removed before the interment. It is thus plausible that this jar recovered in Feature 7472 also had had its neck removed. The absence of burning on the pit walls and base suggests that the pit was not the primary site of cremation, indicating a secondary deposit. Aside from the urn, no artifacts were recovered

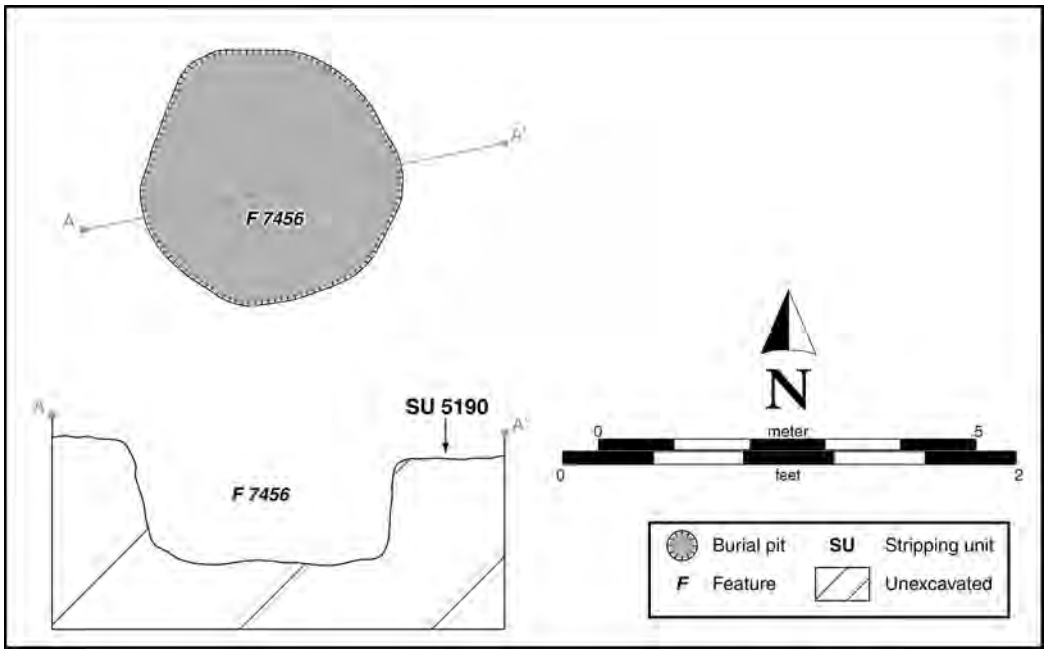

Figure C.17. Plan map and cross section of Feature 7456, Locus C.

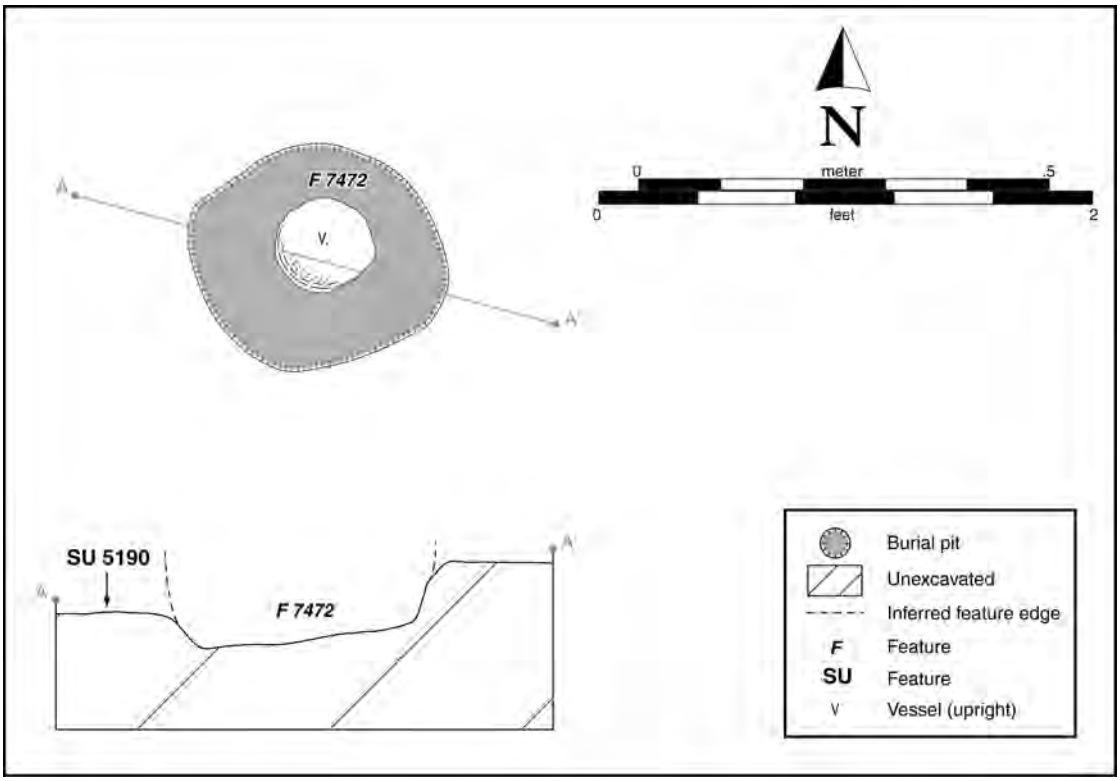

Figure C.18. Plan map and cross section of Feature 7472, Locus C.

in association with this burial. The weight of the cremated remains was not recorded.

DATING: This feature was not directly dated by chronometric techniques, but the Dragoon Red-on-brown jar with elaborated design suggests a date range of A.D. 950–1400. Also, it was located close to (but did not overlap with) structure Feature 7461, which was assigned a date range of A.D. 935–1040, based on archaeomagnetic evidence and the presence of temporally diagnostic decorated ceramics (see Volume 2, Chapter 2). This evidence indicates a date of interment during the Middle Formative B period.

ASSOCIATED FEATURES: None

Feature 10,138

LOCATION: Feature 10,138 was identified in Phase 2 during the excavation of a pit structure (Feature 6129). Feature 10,138 was located 19.5 m north and 6 m east of the southwest corner of the stripping unit (see Figure C.1). It was exposed during excavation of the floor groove, and the relationship between the two features is uncertain.

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: The cremated remains were excavated in accordance with the burial-excavation methods outlined in Chapter 3. The entire feature, as defined by the burial pit, was excavated and recorded as a single level.

FILL: The fill consisted of silty, sandy, ashy fill, with small numbers of caliche nodules and charcoal fragments. With the exception of the charcoal deposit, the stratification of the burial fill was uniform. Minimal root and rodent disturbances were observed. A small number of sherds and hundreds of small shell beads were recovered in the feature fill. The materials probably were not associated with the cremation, however. The shell beads probably entered the feature matrix as a mortuary offering associated with the interred individual, probably as a shell necklace or bracelet.

BURIAL PIT DESCRIPTION: Only the northern extent of the burial pit was interpretable, and thus the pit dimensions reported here are inferred based on the intact portion. The burial pit appears to have been ovoid in plan, with a basin-shaped profile and a rounded base (Figure C.19). The pit measured 25 by 20 cm at the exposed surface, with a depth of 20 cm. The cremated remains were placed in the base of the pit and covered with fill.

BURIAL TREATMENT: The pit contained a secondary cremation deposit of the remains of an adult female (age range is indeterminate). The cremated remains were placed in the base of the pit and covered with fill. The absence of burning on the pit walls or base suggests that this was not the primary site of cremation, indicating a secondary deposit. The weight of the cremated remains was 164.9 g.

A large number of shell beads were associated with the individual, but no evidence of burning was observed on them. The unburned beads probably entered the feature matrix as a mortuary offering at the time of the interment (as one or multiple necklaces or bracelets). The beads do not appear to have been subjected of the crematory fire, however.

It is unclear whether the intramural location of the burial pit was intentional. It is possible that the wall trench was constructed over a preexisting (and formerly extramural) cremation. Another possibility is that the burial pit was placed in the wall trench at the time of the structure's construction or soon after it was abandoned.

DATING: None

ASSOCIATED FEATURES: Feature 10,138 originated at the floor level of Feature 6129. The association between the two features is indeterminate.

Feature 10,707

LOCATION: Feature 10,707 was identified during Phase 2 mechanical stripping in the southwest portion of Stripping Unit 7012 (see Figure C.1). It was located 4.1 m north and 3.3 m east of the southwest corner of the stripping unit. The top of the feature originated at approximately 12 cm below the ground surface and was not intrusive on any other feature.

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The entire feature, as defined by the burial pit, was excavated and recorded as a single level.

FILL: The fill was gray, loosely compacted, ashy silt. Rodent disturbances somewhat obscured the pit's edge in the northern and eastern sides of the pit. No artifacts were discovered in the fill.

BURIAL PIT DESCRIPTION: The burial pit was circular in plan, with straight to slightly incurving side walls and a flat base (Figure C.20). The pit diameter was 30 cm at the exposed surface, with a minimum depth of 9 cm. Rodent disturbances impacted the north and east walls of the pit; these disturbances have slightly obscured the pit's horizontal dimensions.

BURIAL TREATMENT: The feature contained a secondary deposit of cremated remains of an adult of unknown sex (age range is indeterminate). The cremated remains were placed in the base of the pit and covered with fill. The absence of burning on the pit walls or base suggests

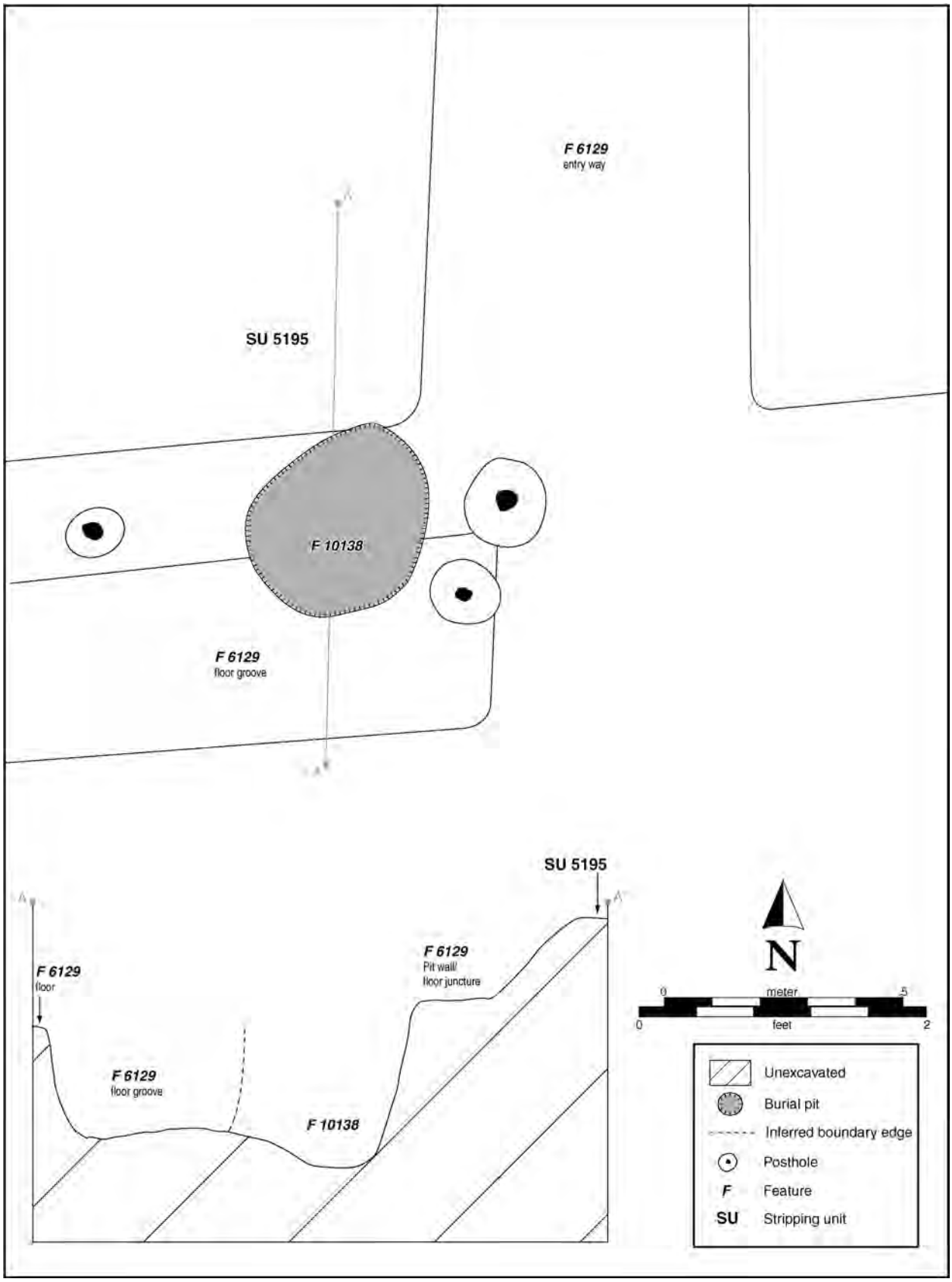

Figure C.19. Plan map and cross section of Feature 10,138, Locus C.

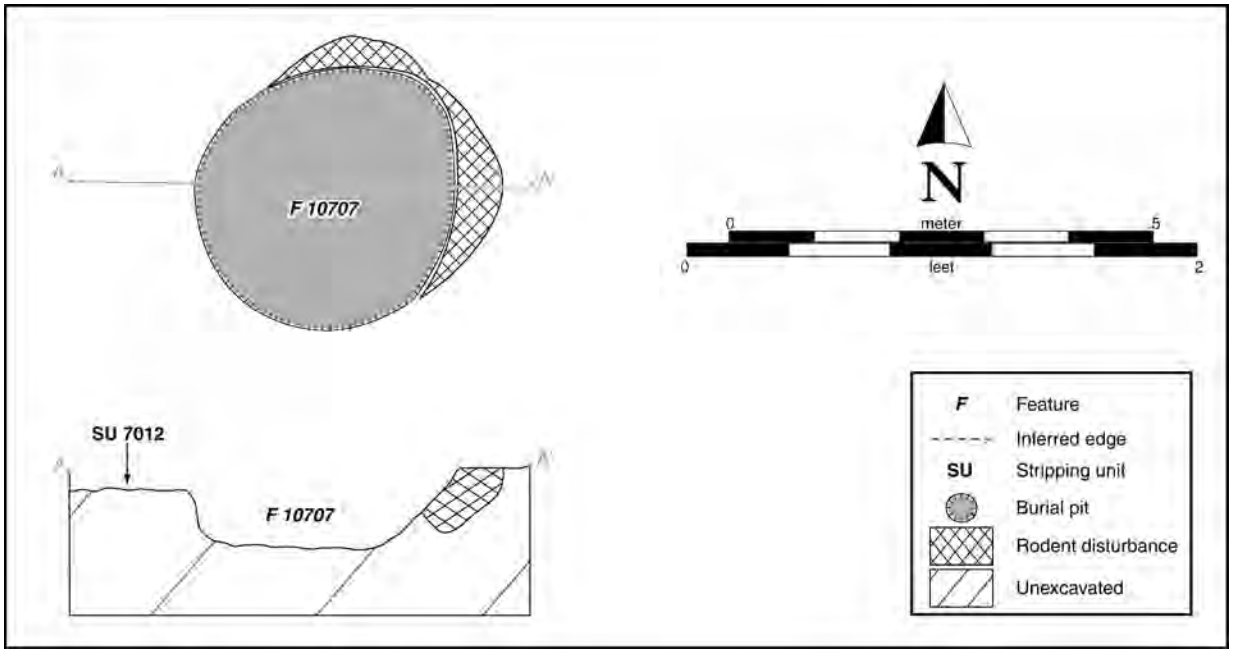

Figure C.20. Plan map and cross section of Feature 10,707, Locus C.

that this was not the primary site of cremation, indicating a secondary deposit. No associated artifacts or other cultural materials were recovered in the burial fill. The total weight of the cremated remains was 153.3 g.

DATING: None

ASSOCIATED FEATURES: None

Locus D

Inhumations

Feature 336

LOCATION: Feature 336 was discovered during the Phase 1 excavation of Trench 145. The trench removed the upper portion of the skeleton and the pit. The base of the pit appears to have been present at an oblique angle, and thus most of the cranium and torso were no longer in situ during the hand excavation. The rest of the feature was later exposed during the Phase 2 mechanical excavation of Stripping Unit 3035 and excavated by hand (see Figure C.1). The top of the feature originated at 17 cm below the surface and was not intrusive on any other features.

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: The feature was exposed during excavation of Trench 145 in Phase 1. During Phase 2, it was relocated and exposed during the excavation of Stripping Unit 3035. The burial pit was excavated in two levels. The overlying fill was removed as Level 1. Level 2 consisted of the remainder of the skeletal remains and any affiliated artifacts and cultural materials. The burial fill and skeletal remains were excavated in accordance with the burial-excavation methods outlined in Chapter 3.

FILL: Level 1 (fill above and surrounding the skeletal remains) consisted of brownish gray, moderately consolidated silty loam. Small pebbles and caliche nodules were also present. Rodent, root, and insect disturbances were observed, primarily in the southwestern portion of the pit. A small amount of calcified bone (human and faunal) was found in one of the rodent burrows. Fewer than 20 lithics and several ceramic sherds were also collected from Level 1, but these probably were not associated with the burial. A small clay ball (slightly larger than a marble) also was recovered from a rodent burrow, but it is unlikely that it was interred with the deceased individual as a mortuary offering. The skeletal remains were removed as a component of the feature matrix (Level 2) distinct from the surrounding fill.

BURIAL PIT DESCRIPTION: The burial pit was subrectangular in plan, with straight to slightly incurving sides and a flat base (Figure C.21). The pit measured 180 by 45 cm on the exposed surface, with a maximum depth

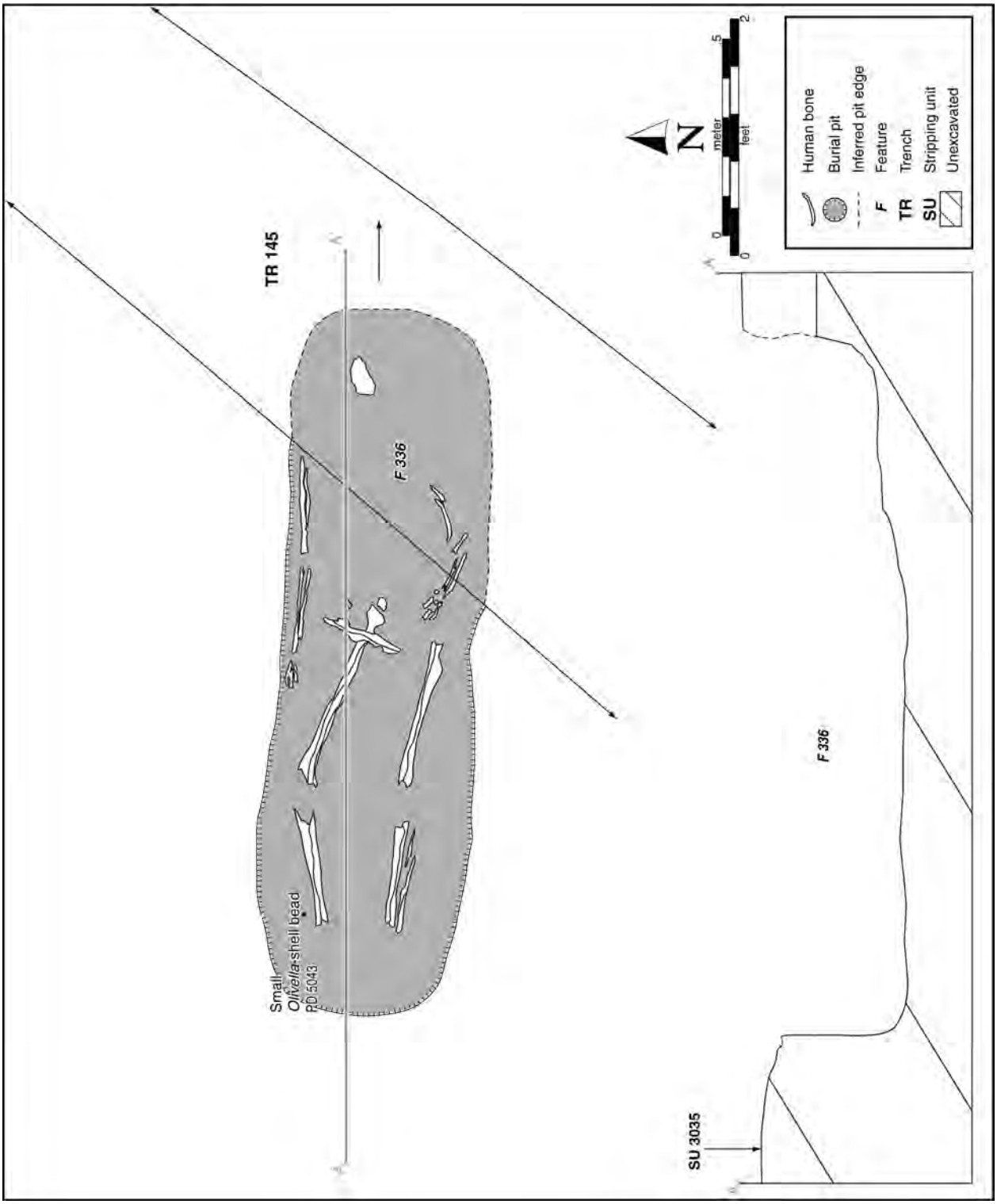

Figure C.21. Plan map and cross section of Feature 336, Locus D.

of 41 cm. The long edge of the burial pit was oriented on an east–west axis, with the head pointing to the east. The upper portion of the burial pit containing the head and upper torso (the eastern side of the pit) was removed by the backhoe during Phase 1 trenching. The western walls and the base of the pit were intact.

BURIAL TREATMENT: The pit contained the articulated elements of an adult female (age range is indeterminate). The individual was interred in an extended, supine position. The position of the body suggests that the head had been facing to the east before the mechanical disturbance. The recovered remains were poorly preserved, and the skeleton was roughly one-quarter complete. Fragmentary skeletal elements recovered included the pelvis, left ribs, right humerus, both radii and ulnae, both femora, tibiae and fibulae, and some hand and feet elements. A small *Olivella*-shell bead (PD 5043) located near the distal end of the right tibia may have been associated with the burial, possibly as part of a shell necklace or bracelet interred with the individual as a mortuary offering.

DATING: As determined from the presence of plain ware ceramic sherds discovered in the pit fill, this burial dates to 200 B.C. or later.

ASSOCIATED FEATURES: None

Feature 2679

LOCATION: Feature 2679 was identified in Phase 2 during the excavation of a pit structure (Feature 3817). The structure was situated in the center of Stripping Unit 3006 in the east-central area of the locus (see Figure C.1). It was located 11.4 m north and 9.4 m east of the southwest corner of the stripping unit. The origination of Feature 2679 is unclear because of another pit (Feature 5647), which is intrusive to both the burial and the structure. The base of Feature 2679 intruded on an earlier roasting pit (Feature 5612), which may originally have been a subfeature in the floor of the structure.

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: The burial was removed in a single level, as defined by the intact burial pit. Separate feature and PD numbers were assigned to the burial pit and the surrounding feature. The burial fill and skeletal remains were excavated in accordance with the burial-excavation methods outlined in Chapter 3.

FILL: The fill consisted of brown silty loam with large inclusions of reddish brown calcic/argillic soil. Charcoal flecks were scattered throughout the fill. Also present were small pebbles, several fist-sized rocks, and caliche nodules. Some root disturbance was noted, as well as moderate rodent damage. Abundant sherds and flaked stone artifacts were recovered in the burial fill, but these probably were unrelated to the mortuary interment. It is more likely that these artifacts were associated with the later structure and/or the earlier roasting pit.

BURIAL PIT DESCRIPTION: The burial pit was roughly rectangular in plan (Figure C.22). The intact portion measured 95 by 53 cm at the exposed surface, with a maximum depth of 34 cm. In cross section, the west wall was straight, whereas the east wall was completely destroyed by Feature 5647. The base of the pit appears to have been flat. The long axis of the pit was oriented on a slightly northwest–southeast angle, with the head pointing to the southeast.

BURIAL TREATMENT: Feature 2679 contained the incomplete yet articulated remains of an adult female (age range is indeterminate) placed within the pit in an extended and supine position. Fragmentary skeletal elements were recovered, including the pelvis, patellae, femora, and tibiae. The body was oriented with the head pointing to the east. Because of the disturbance from later construction, however, the direction in which the head was facing could not be determined. The placement of the arms also is unknown. No artifacts were recovered in direct association with the burial.

DATING: Feature 2679 intruded on an earlier roasting pit (Feature 5612), which contained temporally diagnostic painted pottery sherds assigned to the Middle Formative A period, suggesting a date range of A.D. 750–950. This evidence suggests a date of interment for Feature 2679 of no earlier than A.D. 750. Intrusive pit Feature 5647 was dated to A.D. 700–1450 and therefore did not help construct a terminal date range for Feature 2679.

ASSOCIATED FEATURES: Feature 2679 was intrusive to Feature 5612, the earlier roasting pit, which may have been a subfeature in the floor of the structure (Feature 3817). The association between the structure and the burial was obscured by another intrusive pit, Feature 5647.

Feature 3528

LOCATION: Feature 3528 was identified during Phase 2 in Stripping Unit 1759. It was located in the eastern portion of the stripping unit (see Figure C.1), approximately 6.4 m north and 18.2 m east of the southwest corner. The top of the feature originated approximately 16 cm below the ground surface and did not overlap any features.

MODE OF INTERMENT: Inhumation

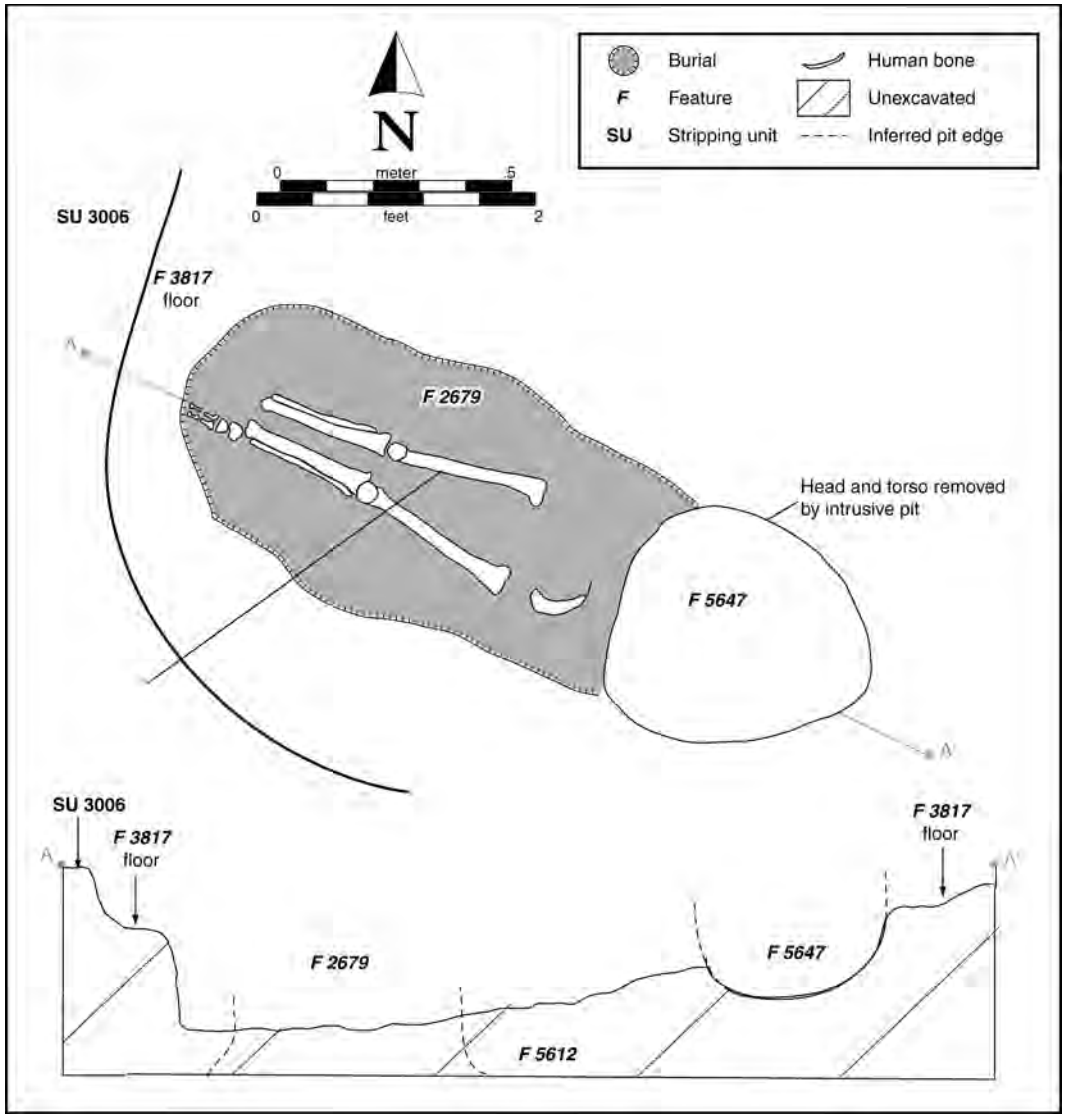

Figure C.22. Plan map and cross section of Feature 2679, Locus D.

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The entire burial pit and its contents were excavated as a single unit, as defined by the outline of burial pit.

FILL: The fill, a simple redeposit, consisted of fine silty loam with charcoal-fleck inclusions. Rodent activity, which was extensive, resulted in the removal of nearly all of the skeletal elements from the burial. A few sherds were recovered from the fill; they were unlikely to have been associated with the mortuary deposit.

BURIAL PIT DESCRIPTION: The burial pit was roughly rectangular in plan, with well-defined straight side walls and a flat base. The dimensions were 42 by 26 cm in plan, with a depth of 37 cm. The pit was oriented on a roughly east–west alignment. Although the burial contents were heavily disturbed as a result of rodent activity, the sides and base of the pit were largely intact and did not exhibit evidence of collapse or disturbance.

BURIAL TREATMENT: The pit contained the incomplete and heavily disturbed remains of an infant. Only the cranium, which was situated near the east end of the pit, was recovered in the fill (Figure C.23). Consequently, the postcranial position and layout of original interment could not be inferred. The placement of the cranium suggests that the head had been facing to the east. No mortuary artifacts were recovered in association with this burial.

DATING: A Cañada del Oro Red-on-brown sherd (ca. A.D. 750–850) was recovered in the burial fill, but its relationship with the interment was ambiguous. It was also located adjacent to structure Feature 3868, which was assigned a date range of A.D. 500–865 based on the presence

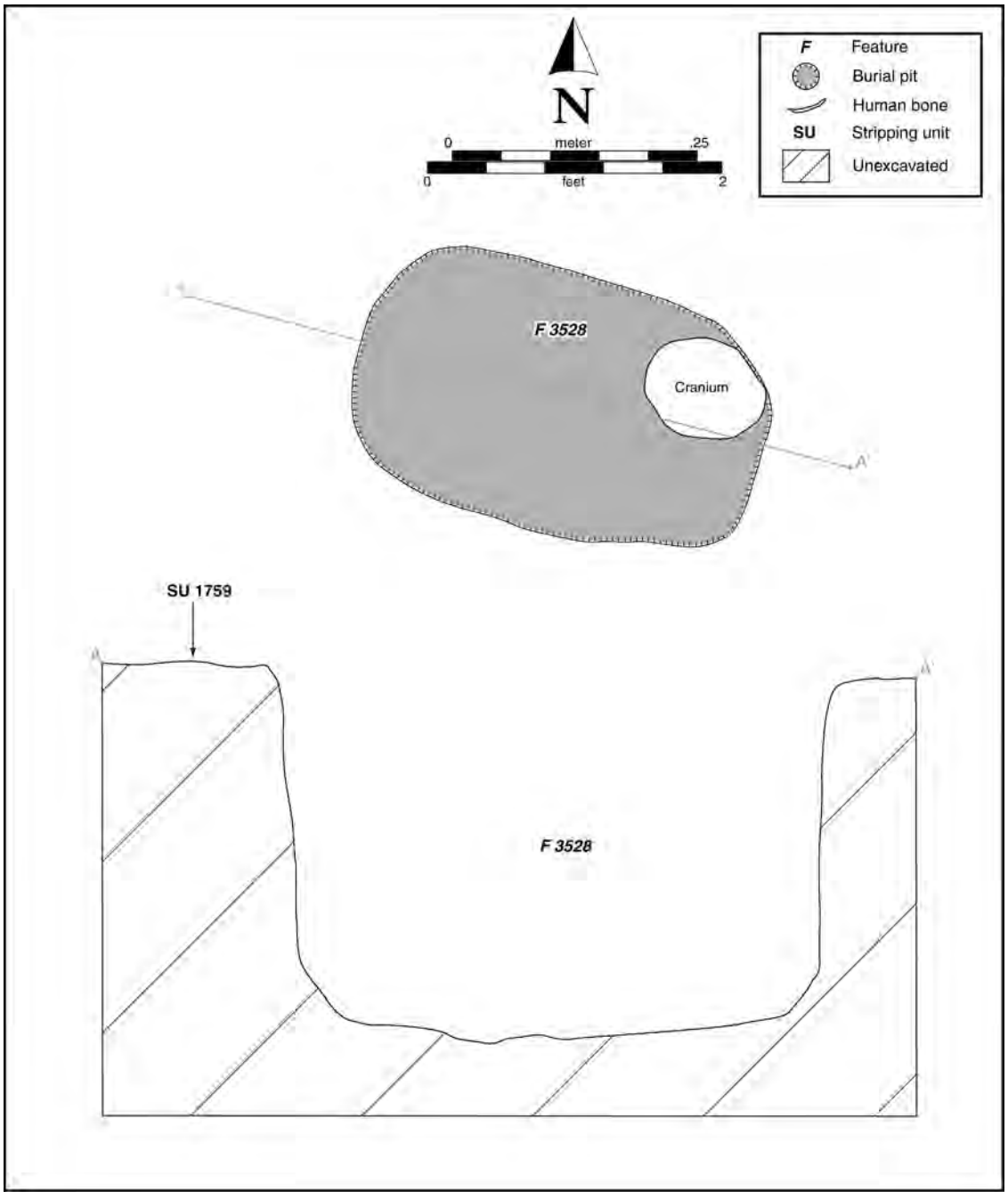

Figure C.23. Plan map and cross section of Feature 3528, Locus D.

of various time-sensitive artifacts. Again, however, the burial's temporal relationship with this feature is indeterminate. The date of interment for Feature 3528 is therefore considered indeterminate.

ASSOCIATED FEATURES: Feature 3528 was located adjacent to a structure (Feature 3868) but did not overlap with the structure footprint.

Feature 3564

LOCATION: Feature 3564 was identified during Phase 2 stripping excavations in the north-central portion of Stripping Unit 3008 (see Figure C.1). It was located 12.3 m north and 8.7 m east of the southwest corner of the stripping unit. The top of the feature originated at approximately 26 cm below the ground surface and did not intrude on any other features.

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The feature was removed in a single level, as defined by the presence of the burial pit. No cross-sectional map was generated for this feature.

FILL: The burial fill was a simple redeposit of very fine, silty sediment, with small pebble, caliche, and rock inclusions. Ceramic sherds and lithic materials were recovered in the fill but probably were not part of the mortuary deposit. A virtually intact painted bowl (see below) was recovered adjacent to the skull on the left side; this vessel presumably was buried as part of the mortuary deposit. Charcoal was observed in the fill, although the human remains showed no evidence of burning. Moderate root and rodent disturbances were evident throughout.

BURIAL PIT DESCRIPTION: The burial pit measured 200 by 60 cm in plan, but the edges were obscured in some places as a result of bioturbation (Figure C.24). The discernible portion of burial fill was roughly ovoid in plan during excavation, but it may have been more subrectangular at the time of the interment. The remaining pit depth was 19 cm, suggesting a shallow burial. The pit was oriented on a northwest–southeast axis, with the head pointing to the southeast.

BURIAL TREATMENT: This feature contained the poorly preserved remains of an adult male, 30–40 years of age. The skeleton was roughly one-quarter complete. Fragmentary skeletal elements recovered included the cranium, clavicles, scapulae, manubrium, left ilium, right patella, ribs, humeri, right radius, ulnae, femora, tibiae, left fibula, and foot. The individual was interred in an extended and supine position, with the cranium oriented to the southeast and the head facing upward. The arms were placed parallel to the body on the side of the torso. The Dragoon Red-on-brown bowl with elaborated decoration was interred to the left of the cranium, probably as a mortuary offering (possibly as a container for a perishable substance) at the time of the interment. A possible Empire projectile point was found near the left hand.

DATING: Empire points are assigned to the Archaic period, but the presence of a Dragoon Red-on-brown bowl with elaborated design suggests a later date of interment, during the Middle Formative period (A.D. 950–1150; Heckman 2000). Most of the features subjected to chronometric dating in Locus D also were assigned to the Middle Formative period, underscoring a date of interment during this span. The Empire point may not have been intentionally interred with the individual as an offering; it could have been unintentionally placed in the fill during interment or could have entered the feature matrix as a result of bioturbation.

ASSOCIATED FEATURES: None

Feature 3943

LOCATION: Feature 3943, which was heavily disturbed, was identified during Phase 2 mechanical stripping in the southwest corner of Stripping Unit 2493 (see Figure C.1). It was located 3.8 m north and 12.7 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 29 cm below the ground surface and was not intrusive on any other features.

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The feature was removed in a single level, as defined by the presence of the human remains. No cross-sectional map was generated for this feature.

FILL: The fill was a simple redeposit that consisted of a light brown silty loam. Within the burial pit, the fill was loosely consolidated and contained a small number of sherds, numerous lithics, calcined faunal bone, caliche nodules, and several medium-sized rocks; none of these were likely to have been interred as part of the mortuary deposit. Extreme rodent disturbances were observed throughout the fill. Sherds and debitage were recovered in the upper fill; these were probably unrelated to the mortuary interment.

BURIAL PIT DESCRIPTION: The burial pit was circular in plan, but the base and lower walls were indistinct

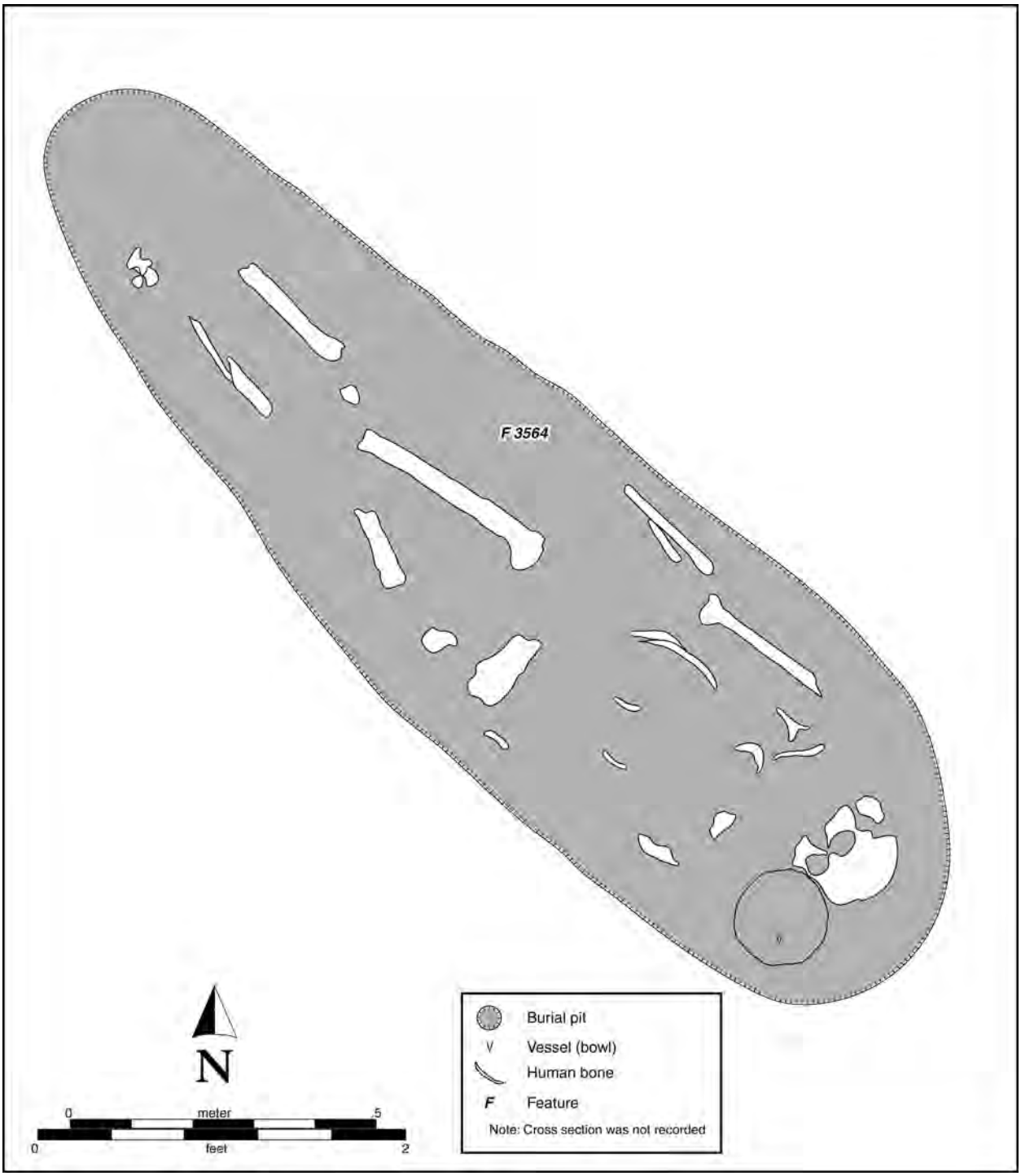

Figure C.24. Plan map of Feature 3564, Locus D.

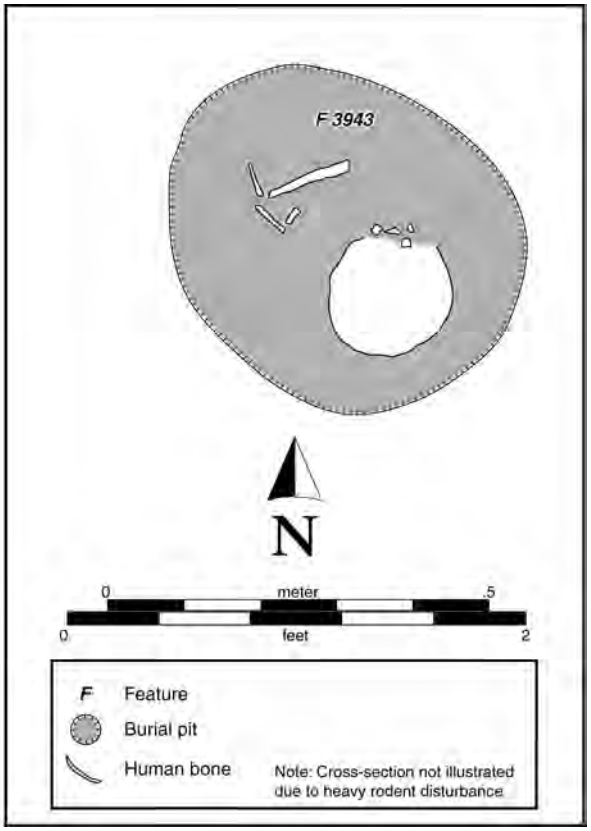

Figure C.25. Plan map of Feature 3943, Locus D.

because of heavy rodent disturbance (Figure C.25). The top of the pit, which was discernible, measured 50 by 40 cm in plan. The depth of the burial pit is indeterminate; however, the human remains were located within 15 cm of vertical space.

BURIAL TREATMENT: This feature contained the disarticulated remains of a child approximately 6 years of age and of unknown sex. Skeletal material recovered consisted of complete, partial, and fragmentary elements of the cranium, clavicles, scapulae, humeri, radii, ulnae, femora, tibiae, and fibulae. The remains were too disturbed and disarticulated to allow determination of the original position of the individual within the pit. As determined from the inferred size of the pit and the arrangement of bone elements, however, it is possible that the individual was placed in a seated and tightly flexed position. No mortuary offerings were recovered in association with this burial.

DATING: None

ASSOCIATED FEATURES: None

Feature 4740

LOCATION: Feature 4740 was discovered during the Phase 2 excavation beneath two overlapping structures (Features 3545 and 5518) located in Stripping Unit 1759 (see Figure C.1). A portion of the feature was removed during construction of an intramural pit (Subfeature 53) associated with Feature 3545. The structures were located 2.3 m north and 9.1 m east of the southwest corner of the stripping unit. The inhumation was located beneath the east side of these features. The remaining portion of the feature originated approximately 22 cm below the ground surface.

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The feature was removed in a single level, as defined by the presence of the burial pit.

FILL: The fill within the burial pit was a simple redeposit containing a mixture of loosely consolidated grayish brown and reddish brown silt. The fill soil was mottled, possibly as a result of recent rains or root disturbances or of disturbances related to the overlying pit house. Some small and medium-sized cobbles were distributed on the bottom and sides of the pit. Sherds and faunal bone were recovered in the fill; these were probably unrelated to the mortuary interment. These artifacts probably were translocated into the burial fill during construction of the later structure and its subfeatures. Bioturbation is also probably responsible for translocating artifacts into the burial-feature matrix. The abovementioned intramural pit removed the portion of the burial on the western edge.

BURIAL PIT DESCRIPTION: The undisturbed portion of the feature suggests that the burial pit was ovoid in plan but somewhat belled in the southern edge (Figure C.26). The pit was oriented on an east–west axis. Also, the pit appears to have been basin shaped in profile, with inward-sloping walls and a flat base, but root disturbances appear to have altered the edges of the pit. Small and medium-sized cobbles were recovered in the base of the pit, suggesting that the pit had been formally prepared and lined with rock. The intact portion of the burial pit measured 90 by 55 cm, with a maximum depth of 55 cm.

BURIAL TREATMENT: The burial contained the partial remains of an adult male, 50 years of age or older. Skeletal elements consisted of the cranium, both clavicles, left scapula, right ribs, patellae, humeri, femora, tibiae,

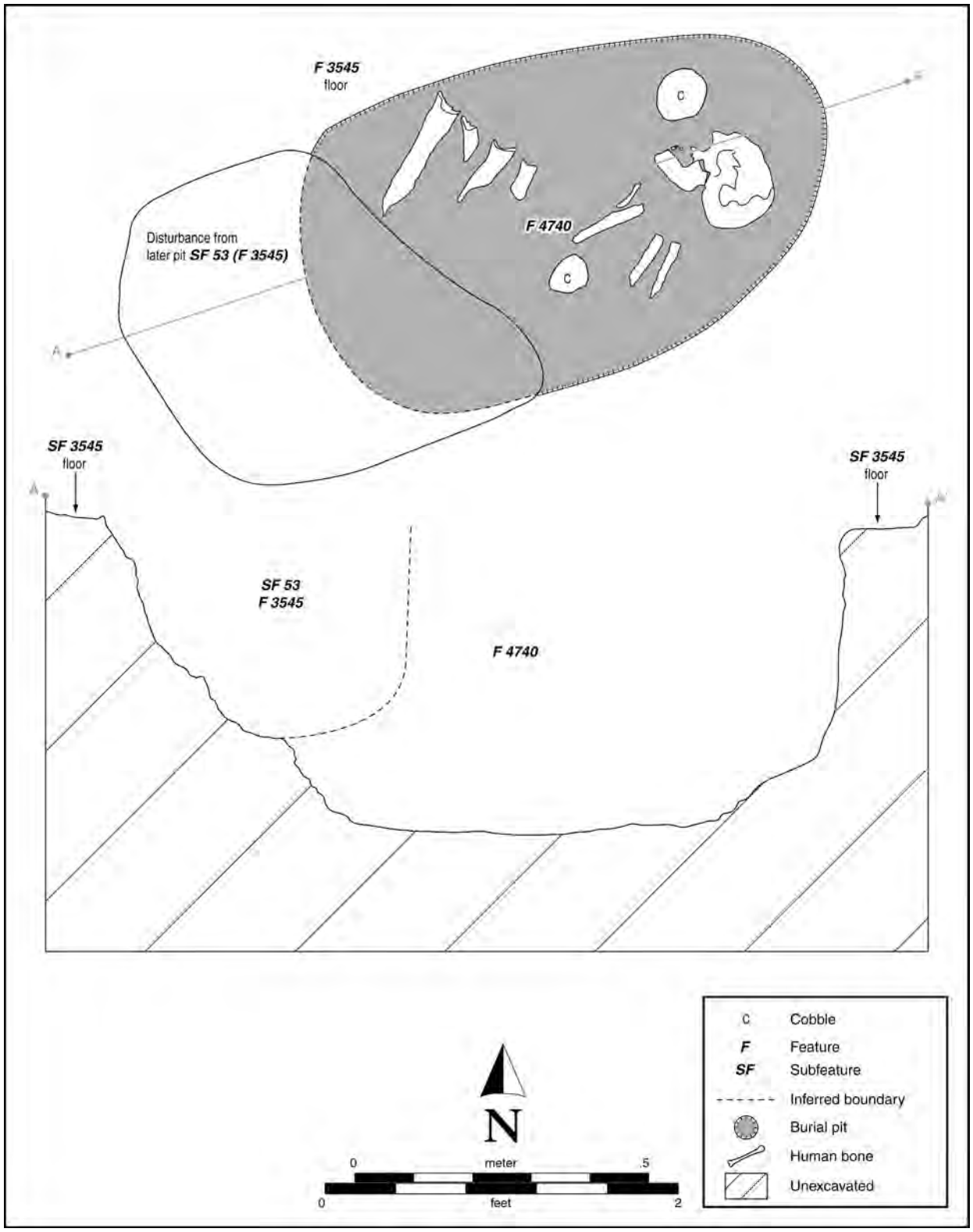

Figure C.26. Plan map and cross section of Feature 4740, Locus D.

and fibulae. The individual was placed in a tightly flexed position on the right side, with the head facing to the east. No mortuary artifacts were recovered in association with the buried individual, although the cobbles in the base of the pit appear to have been deliberately interred with the deceased individual.

DATING: Archaeomagnetic evidence and time-sensitive artifacts from structure Feature 3545 indicate a date range of A.D. 860–1015. As determined from the burial feature's stratigraphic relationship beneath Feature 3545, the individual in Feature 4740 had to have been interred earlier than A.D. 1015.

ASSOCIATED FEATURES: Feature 4740 was found beneath two overlapping structures (Features 3545 and 5518). An intramural nonthermal pit (Subfeature 53) in Feature 3545 intruded on and partially removed the burial contents.

Feature 4886

LOCATION: Feature 4886 was identified during Phase 2 mechanical stripping of the southwest portion of Stripping Unit 3035 (see Figure C.1). It was located 5.3 m north and 6.2 m east of the southwest corner of the stripping unit. The inhumation was situated adjacent to cremation Feature 4850. The top of the feature originated about 10 cm below the ground surface. It was also located near the edge of an ADOT borrow pit.
MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The feature was removed in a single level, as defined by the presence of the burial pit. This feature was excavated and recorded separately from the adjacent and partially overlapping cremation.

FILL: The fill was a simple redeposit consisting of fine silty loam with small caliche nodules and flecks of charcoal. Minimal disturbance from rodent activity was observed throughout the fill. Two bone awls were recovered near the right hand. No additional artifacts were recovered within the feature matrix.

BURIAL PIT DESCRIPTION: The burial pit was subrectangular in plan, with its long axis oriented east–west (Figure C.27). The pit measured 180 by 55 cm, with a maximum depth of 43 cm. The walls of the pit were vertical, with a flat base. Feature 4850, an intrusive secondary urn cremation, was located in the southwest corner near the left foot. This adjacent feature was a semicircular extension of the pit outline. A small alcove, into which the deceased individual's feet extended, was evident in the west edge of the burial pit. The presence of well-executed straight walls and an alcove suggests a formally prepared burial pit.

BURIAL TREATMENT: This feature contained the articulated remains an adult male, 45 years of age or older. Partial skeletal elements consisted of the cranium, both clavicles, humeri, radii, ulnae, femora, tibiae, and fibulae. The individual was interred in an extended, supine position, with the head facing east. Arms were parallel to the body and placed to the sides of the torso. Two bone awls were found near the right hand; these appear to have been interred as offerings with the deceased individual.

DATING: None

ASSOCIATED FEATURES: Feature 4886 was partially overlapped by a secondary urn cremation (Feature 4850; see below) in the southwestern edge of the pit. The cremation burial pit appears to have intruded on (and thus postdates) the earlier inhumation.

Feature 5512

LOCATION: Feature 5512 was identified during Phase 2 stripping excavations near the south-central portion of Stripping Unit 6801 (see Figure C.1). The backhoe removed a small portion of the cranium along the northern edge of the pit. The burial pit was dug into the southern edge of an earlier structure (Feature 7880) and was originally identified as a circular area of compacted caliche fill. It was located 3 m north and 10 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 28 cm below the surface.

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The feature was removed in a single level, as defined by the burial pit.

FILL: The burial fill was a simple redeposit with very compact calcic soil in the south, west, and east edges of the pit. Pebbles and small cobbles were intentionally placed within the pit, primarily on the postcranial skeletal elements. The soil became less consolidated in the deeper portions of the burial pit, where root disturbance was prevalent. Open pockets within the silt were noted near the bottom of the inhumation. A large plain ware neckless-jar fragment was recovered near the skeletal remains; this fragment probably was associated with the earlier structure and is assumed to have been unrelated to the mortuary interment. Sherds, debitage, and faunal bone also were recovered in the burial fill but, likewise, probably were not associated with the interred

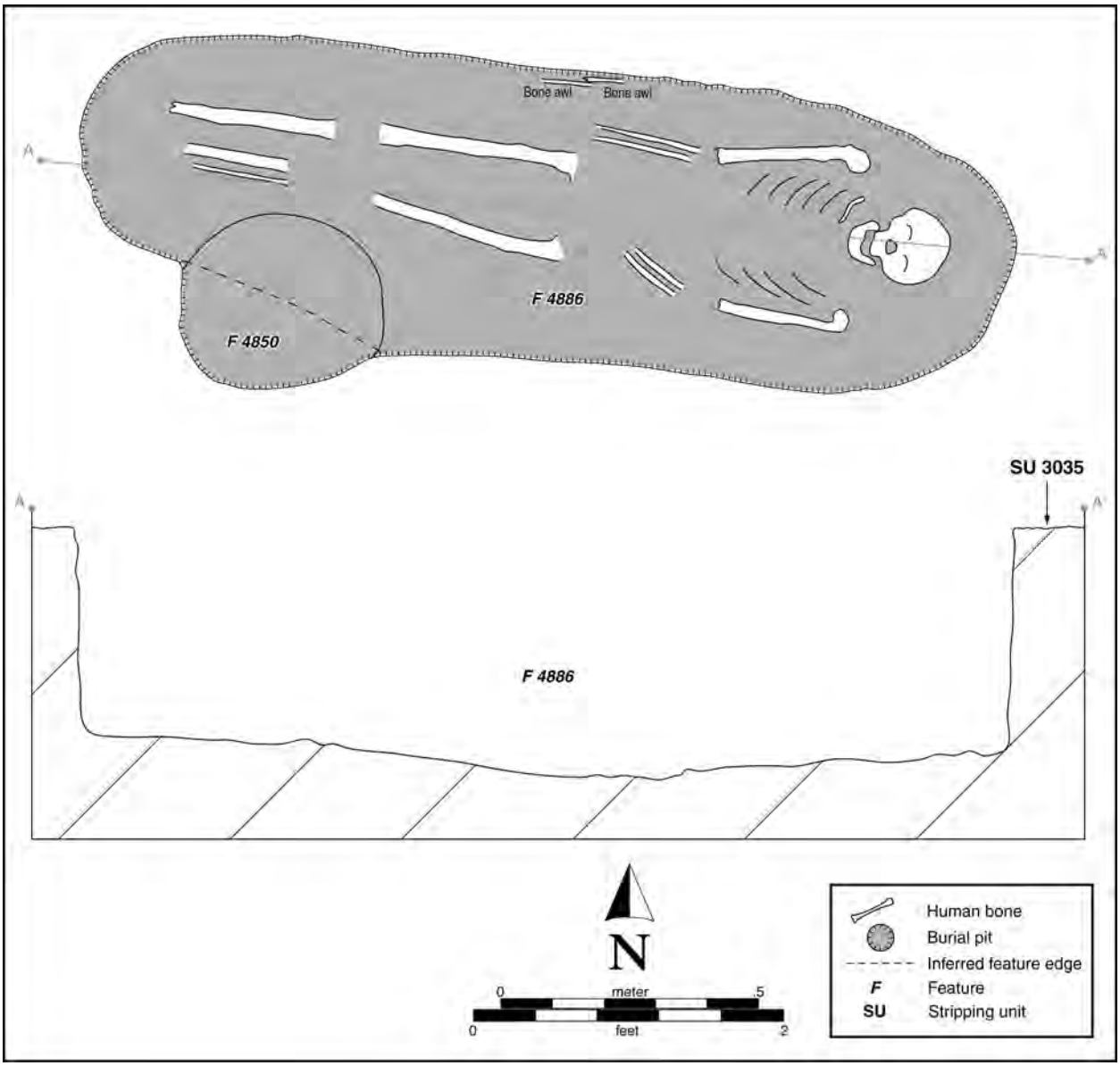

Figure C.27. Plan map and cross section of Feature 4886, Locus D.

individual. Some root and possible rodent disturbances were present. Skeletal remains from quail and rabbit were recovered in the fill.

BURIAL PIT DESCRIPTION: Despite the minor mechanical disturbance, the shape attributes of the pit were readily apparent (Figure C.28). The burial pit was ovoid in plan, with slight elongation along the northwest–southeast axis. The walls ranged from straight, to slightly inward-sloping, to slightly belled along the southeast portion of the pit. The base of the pit was relatively flat. The pit measured 75 by 53 cm, with maximum depth of 57 cm. The pit clearly originated in the fill of the structure and extended through the floor, indicating a date of interment that postdated the structure abandonment.

BURIAL TREATMENT: This burial pit contained a primary inhumation of an adult male, 35 to 49 years of age. Recovered skeletal remains consisted of the cranium, clavicles, scapulae, patellae, humeri, radii, ulnae, femora, tibiae, fibulae, and hand. The individual was placed in a seated, semiflexed position in a slightly ovoid pit. The cranium was oriented to the northwest and rested on the left side at nearly a 45° angle from the postcranial elements. The arms were bent so that the hands were in front of the individual's face. Pebbles and small cobbles were deliberately placed over portions of the skeleton after it was placed in the pit. The purpose and meaning of this practice are unclear, however. A bone awl was recovered from beneath the left foot; this object was probably interred with the deceased individual at the time of the interment.

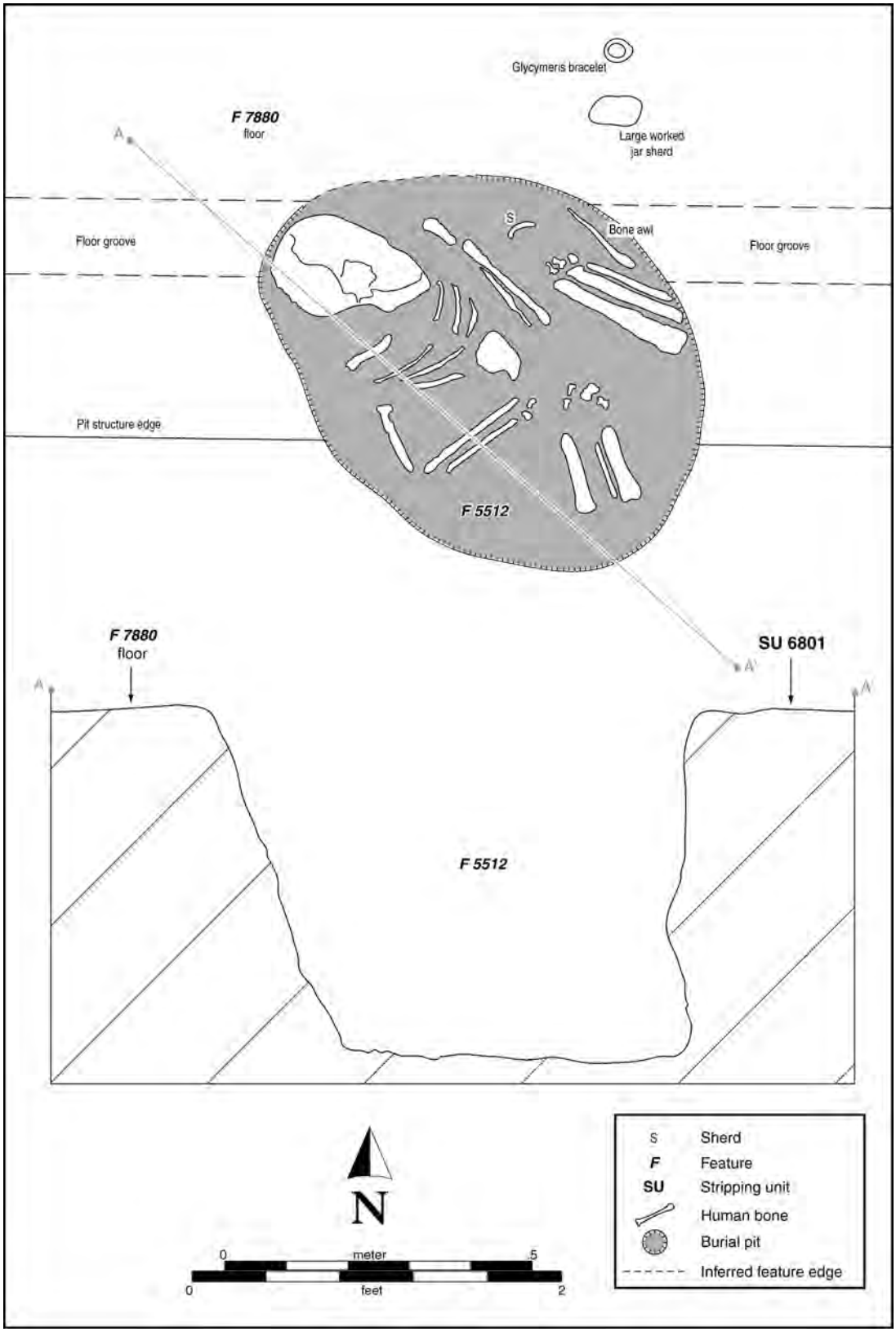

Figure C.28. Plan map and cross section of Feature 5512, Locus D.

DATING: As noted, the burial pit of Feature 5512 originated in the fill above Feature 7880 and thus clearly postdates the structure. Archaeomagnetic evidence indicates a date range of A.D. 735–865 for the earlier structure, indicating a date of interment of A.D. 735 or later.

ASSOCIATED FEATURES: Feature 5512 is intrusive to the southern edge of a structure (Feature 7880). The burial pit originated in the fill overlying the floor of the structure and extended through the structure's floor level.

Feature 7833

LOCATION: Feature 7833 was identified during the Phase 2 excavation of a structure (Feature 834) in the east-central portion of Stripping Unit 6795 (see Figure C.1). The skeletal remains were recovered near the southeastern edge of the structure footprint. Feature 7833 was located 10.2 m south and 18.6 m east of the northwest corner of the stripping unit. The top of the inhumation (no pit was identified) originated approximately 22 cm below datum.

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The feature was removed in a single level. No burial pit could be discerned, and thus the feature matrix was defined as the area that encompassed the skeletal remains.

FILL: The pit fill consisted of very loosely consolidated brown silt with a few caliche nodules. Artifacts related to the structure, including sherds, debitage, and small faunal bones, were also present in the fill. Roots and insect and rodent activity, which removed some of the skeletal elements, were observed around the skeletal remains.

BURIAL PIT DESCRIPTION: No burial pit was discernible (Figure C.29). The skeletal remains were recovered at roughly the floor level of the structure, suggesting the possibility that the deceased individual had been placed on the floor of the structure rather than interred in a burial pit. The area containing the remains was 130 by 40 cm, with a depth of 19 cm. The cross section of the feature was recorded as a slightly sloping indentation in the structure floor, although a formal pit was not discernible.

BURIAL TREATMENT: The feature matrix contained the primary inhumation of a child (6–7 years of age) of indeterminate sex. The skeleton was roughly one-third complete. Partial and fragmentary skeletal elements recovered were the cranium, both clavicles and scapulae, right ilium, cervical vertebrae, both humeri and radii, left ulna, both femora, tibiae, and fibulae. The remains were articulated and in good preservation. The individual was placed in an extended supine position with the head facing to the southeast. The soil was sterile beneath the inhumation, and the remains were at the same elevation as the floor surface in the northwest corner of the structure. Thus, it is likely that the burial was placed on the floor of the pit house. Although artifacts were frequent in the floor level of the structure, it is not clear that any of them had been deliberately placed with the deceased individual.

DATING: The inferred date range for the associated Feature 834 is A.D. 685–915, based on archaeomagnetic evidence and the presence of temporally diagnostic painted ceramics. Feature 7833 also is assigned a date range of A.D. 685–915 based on its recovery in the floor level of the structure. We cannot rule out the possibility, however, that the interment occurred after the structure abandonment; however, no burial pit was discernible.

ASSOCIATED FEATURES: Feature 7833 was recovered at the floor level in the southeastern edge of structure Feature 834.

Feature 10,645

LOCATION: Feature 10,645 was identified during the Phase 2 excavation of two superimposed structures (Features 3679 and 3868) in Stripping Unit 1759 (see Figure C.1). The inhumation was located beneath the floor of the entryway of Feature 3868. A roasting pit (Feature 4702) was intrusive to the burial pit. Feature 10,645 was located 14.8 m north and 3.1 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 26 cm below the ground surface.

MODE OF INTERMENT: Inhumation

EXCAVATION METHODS: Once Feature 10,645 was discovered in the floor level of Feature 3868, the excavation crew cleared the area to expose the pit outline. The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The feature was defined by the pit outline and was excavated in two arbitrary levels. A cross-sectional illustration was not generated for this feature.

FILL: The pit fill consisted of silty loam with charcoal inclusions, medium-sized to large cobbles, and small pebbles. It also contained bone fragments from the interred individual, which were scattered as a result of rodent activity. Compaction of the soil was loose to medium. Flaked stone artifacts were recovered in the fill but probably were not associated with the mortuary interment. These materials presumably entered the feature matrix as a result of bioturbation or from deposition episodes related to the

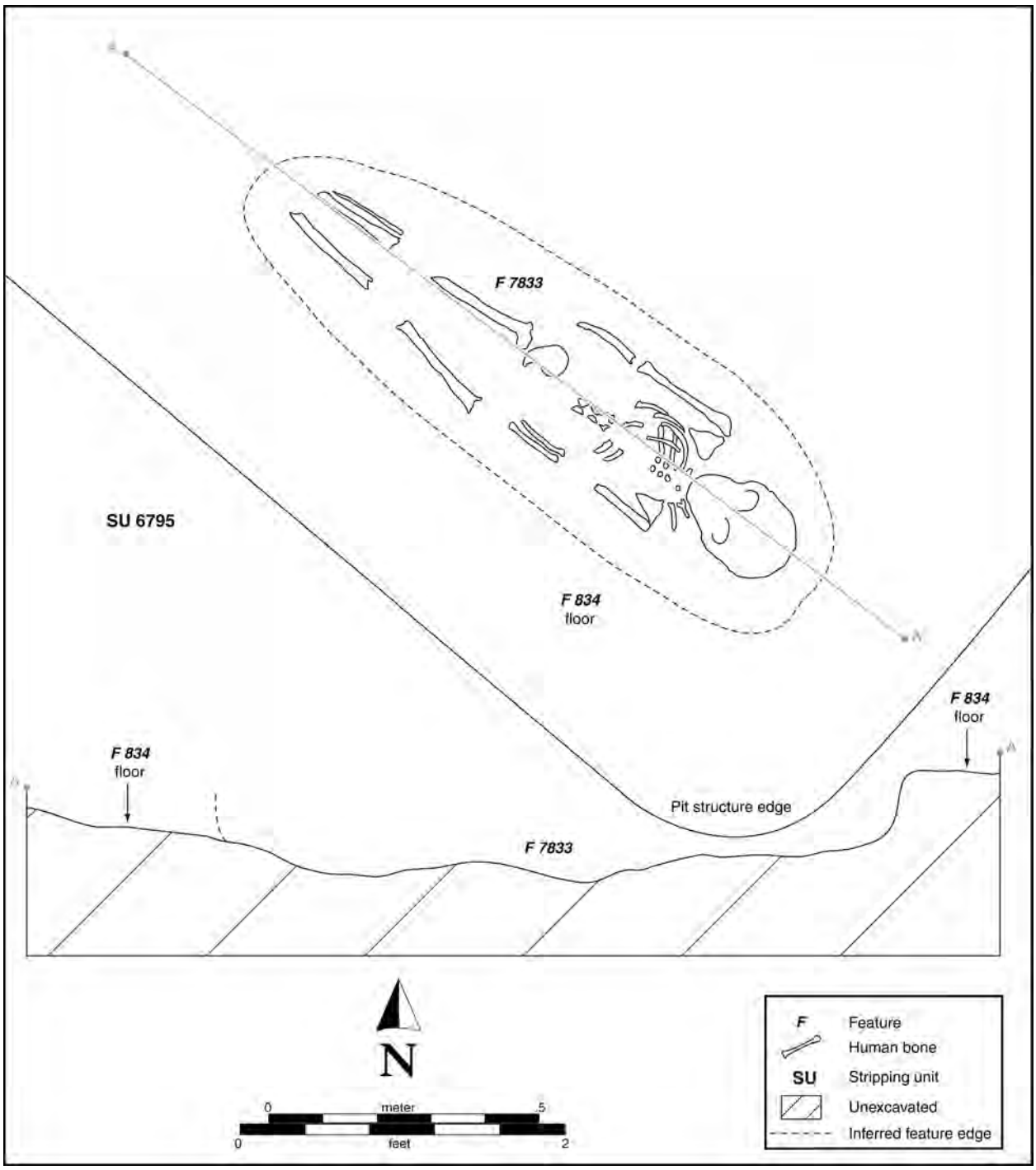

Figure C.29. Plan map and cross section of Feature 7833, Locus D.

overlying structure and roasting pit. Large rocks were present both above and below the inhumation, including a metate that was placed in an inverted position over the skull. The metate exhibited red stains, possibly indicating ocher. A piece of crystal recovered in the fill could have been associated with the burial, given its probable ritual significance, but we are unable to corroborate this possibility. Other disturbances included root and rodent activity, as indicated by gnawing and scattering or absence of small bones, primarily hands and feet.

BURIAL PIT DESCRIPTION: The pit was slightly ovoid and semicircular in plan, measuring 95 by 60 cm on the surface, with a depth of 24 cm (Figure C.30). A roasting pit (Feature 4702) intruded into the north edge of the burial and partially removed the northern portion of the burial pit. Medium-sized and large rocks were recovered both below and above the skeletal remains, indicating a formally prepared, rock-lined burial pit. Rocks, including those observed in the floor of Feature 3868 when the burial pit was first detected, also were recovered above the skeletal remains (see below).

BURIAL TREATMENT: This feature contained the primary inhumation of an adult male (age range is indeterminate). The remains were incomplete, but the recovered skeletal elements were in articulation, with the head pointing to the east. Partial and fragmentary skeletal elements recovered consisted of the cranium, left clavicle, right scapula, both radii and ulnae, left femur, and both tibiae and fibulae. The individual was interred in a supine, tightly flexed position, but leaning slightly to the left. The head was facing to the east. The right innominate was exposed in the wall of the overlying roasting pit (Feature 4702). The inverted metate appears to have been deliberately placed over the deceased individual's head at the time of the interment, although we cannot rule out the possibility that it was moved into that location in the postdepositional context. Additional rocks appear to have been deliberately placed on portions of the skeleton, a pattern also observed in Feature 5512 in Locus D (see above). We hypothesize above that a piece of crystal recovered in the fill also may have been interred with the deceased individual. The possible ocher stains observed on the inverted metate might have been deposited in the mortuary remains at the time of the interment.

DATING: Feature 10,645 was not directly subjected to chronometric dating, but its stratigraphic relationships with chronometrically dated features provide some chronological insights. The burial pit was situated below the floor of Feature 3868, which was assigned a date of A.D. 600–865 based on stratigraphic information, but it is not clear whether the interment was coeval with the structure. The interment episode may have predated the structure. The overlying roasting pit (Feature 4702), which intruded on and partially removed the burial pit, was assigned the same

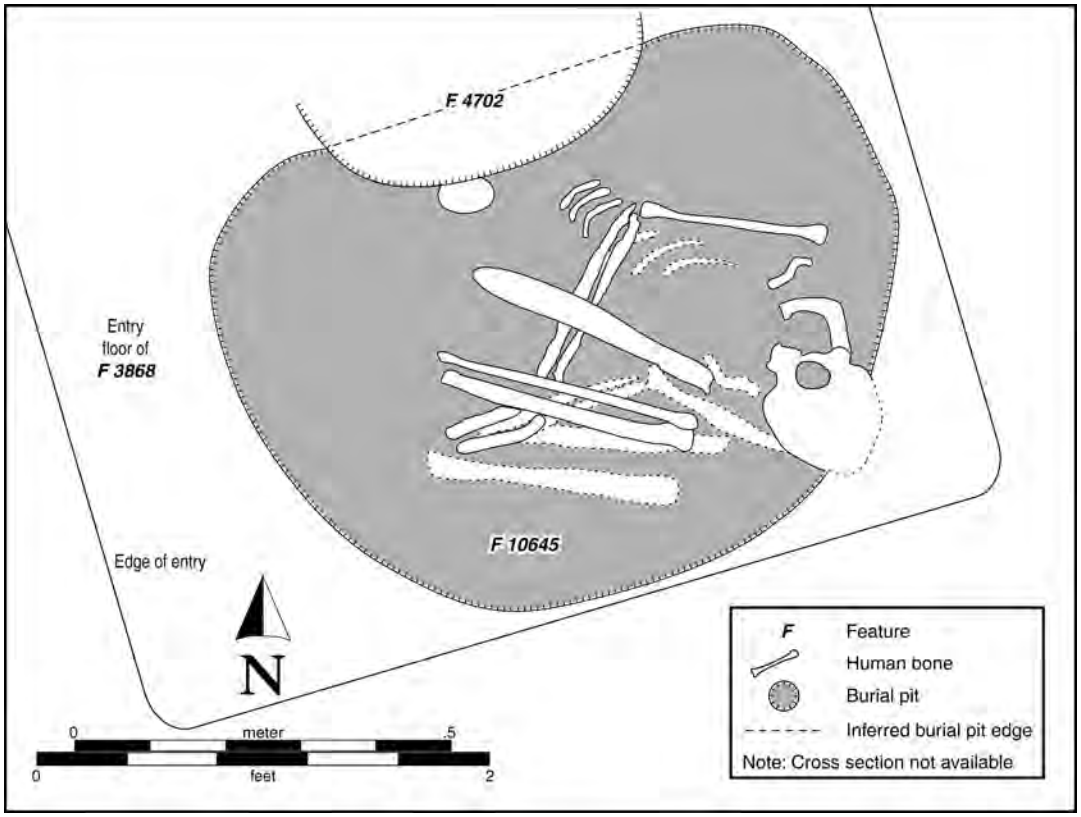

Figure C.30. Plan map of Feature 10,645, Locus D.

date range as Feature 3868 based on archaeomagnetic evidence (see Volume 2, Chapter 2). These stratigraphic relationships, at a minimum, indicate a date rage earlier than A.D. 865 for Feature 10,645.

It is plausible that the interment episode substantially predates this date range, however. Garraty et al. (see Volume 2, Chapter 11) speculated a Late Archaic or Early Formative period date of interment. The individual was placed in a flexed position in a circular pit, which is consistent with burial practices reported in other sites in southern and central Arizona during the Late Archaic and Early Formative period (Mabry 1998). Both Late Archaic and Early Formative period components have been documented in Locus D.

ASSOCIATED FEATURES: Feature 10,645 overlapped with two other features. It was located within the footprint of pit house Feature 3868, beneath the floor level of the structure in the protruding entryway. A later roasting pit (Feature 4702) intruded on—and partially removed—the northern edge of the burial pit.

Cremations

Feature 464

LOCATION: Feature 464 was discovered during Phase 1 trench excavations when skeletal material was exposed in the east wall of Trench 161. The backhoe removed a small area in the west edge of the burial pit, but most of the burial pit remained intact. The top of the feature originated 42 cm below the ground surface (see Figure C.1).

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: Upon discovery of the deposit, a 1-by-1-m test pit (Test Pit 467) was placed directly over the remains and abutting the east wall of Trench 161. The uppermost stratum of the test pit was entirely removed, but only the half of the second stratum that was adjacent to the trench—the area directly above the top of the feature—was excavated in order to expose the burial pit in plan. Once the pit boundaries were exposed, a plan-view map was drawn to illustrate the size and shape of the pit. The feature was then excavated as a single unit, as defined by the outline of the burial pit. All of the feature fill was collected for repatriation. The weight of the cremation was not recorded. For additional excavation details, see the discussion of burial-excavation methods in Chapter 3.

FILL: The fill consisted of brown silty sand, with a soft consistency and pea-sized gravel inclusions, flecks of charcoal, and vertical carbonate inclusions. Numerous fine and small rootlets also were observed. Six ceramic sherds and three flakes were collected from the test pit fill overlying the feature. One sherd was recovered in the feature fill, but it probably was not associated with the interment episode. Approximately 200 fragments of human bone were recovered in the pit fill.

BURIAL PIT DESCRIPTION: This pit was circular in plan, with slightly inward-sloping walls and a flat base (Figure C.31). The pit measured 19 cm in diameter, with a depth of 18 cm.

BURIAL TREATMENT: The pit contained the secondary deposit of cremated remains of an individual of unknown age and sex. The cremated remains were placed in the base of the pit and covered with fill. The absence of burning on the pit walls or base suggests that this was not the primary site of cremation, indicating a secondary deposit. No mortuary goods were recovered in association with this burial.

DATING: None

ASSOCIATED FEATURES: None

Feature 561

LOCATION: Feature 561 was identified during the Phase 1 excavation of Stripping Unit 500 (see Figure C.1). The backhoe exposed (and fragmented and partially removed) an inverted vessel placed at the opening of the burial pit (see below). It was located 8 m north and 3.6 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 15 cm below the ground surface and was not intrusive on any other features, although it abutted Feature 562, another secondary cremation.

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: The feature was completely excavated as a single level, as defined by the outline of the burial pit. The fill was collected but not screened. The weight of the cremation was not recorded. For additional excavation details, see the discussion of burial-excavation methods in Chapter 3.

FILL: The upper levels of the pit fill consisted of a gray, ashy, fine silt, as well as the fragments of the partial vessel recovered in the uppermost portion of the pit. Darker brown soil increased in the deeper portion of the pit. Small bone and charcoal fragments were intermixed with the fill. A few small roots were intrusive around the edges of the pit. Sherds and debitage were recovered in the fill but probably were not interred as part of the mortuary episode.

BURIAL PIT DESCRIPTION: The pit was circular, with a diameter of approximately 28 cm and a minimum depth of 13 cm (Figure C.32). The pit had convex walls

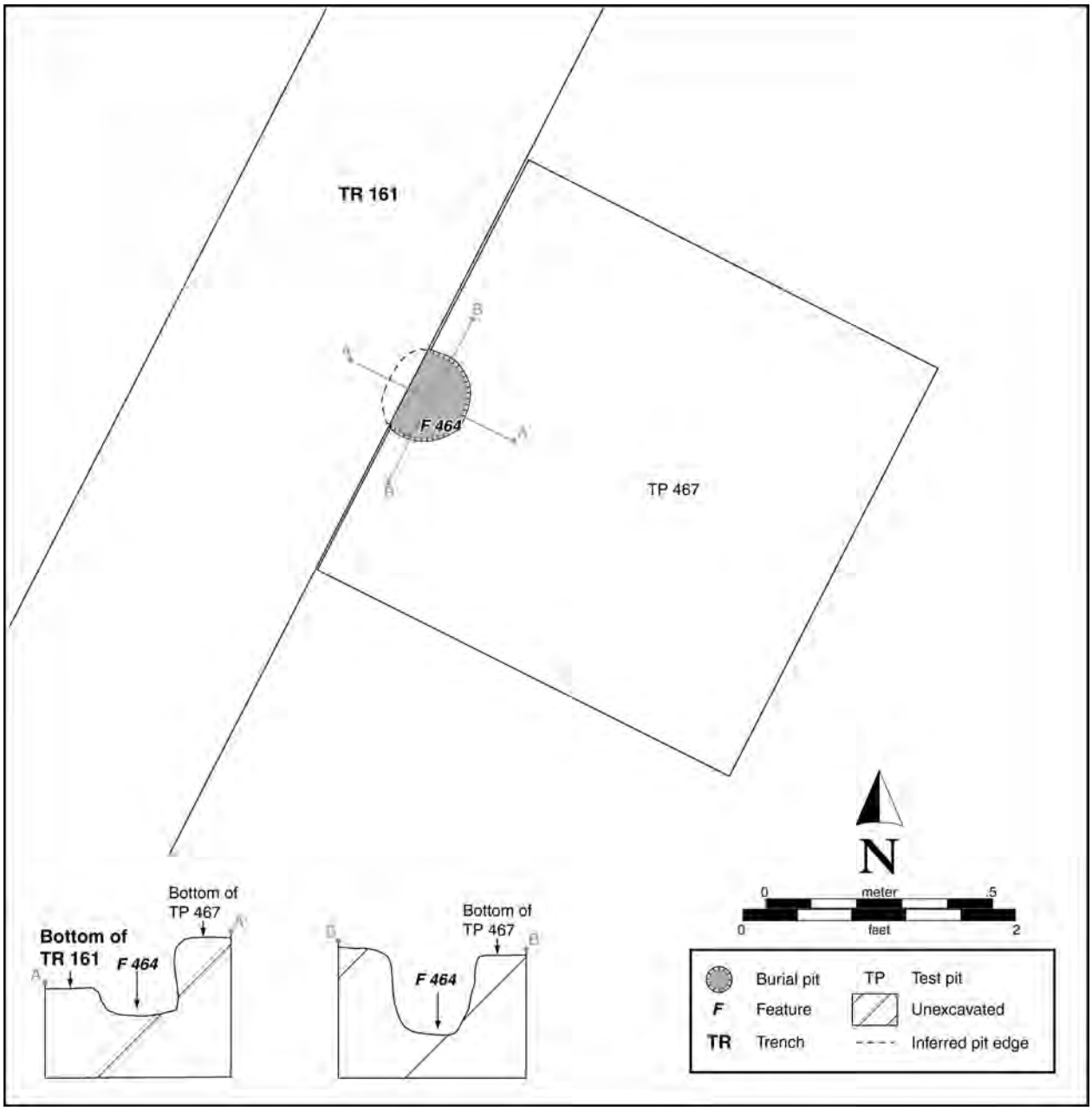

Figure C.31. Plan map and two cross-sectional views of Feature 464, Locus D.

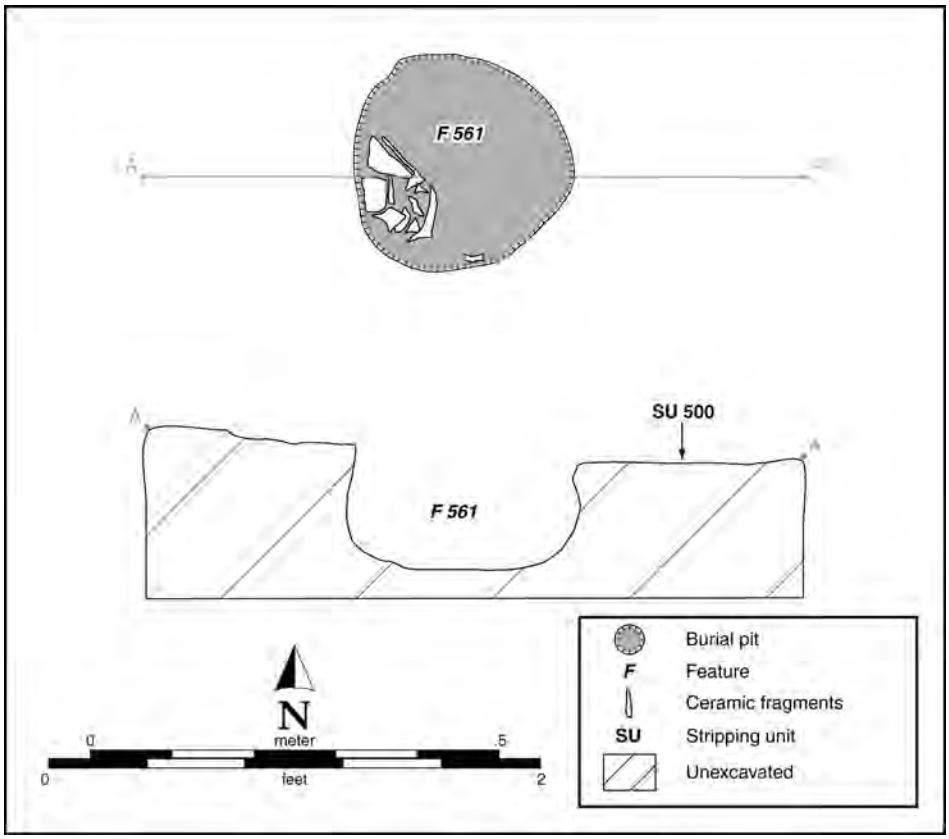

Figure C.32. Plan map and cross section of Feature 561, Locus D.

and a relatively flat base, creating a pronounced bell shape in cross section.

BURIAL TREATMENT: The burial pit contained a secondary deposit of cremated remains of an individual of unknown age or sex. The cremated remains were placed in the base of the pit and covered with fill. An inverted red ware bowl appears to have been placed as a cap in the opening of the pit, well above the cremated remains. The absence of burning on the pit walls and base suggests that this was not the primary site of cremation, indicating a secondary deposit.

DATING: None
ASSOCIATED FEATURES: Feature 561 was situated adjacent to Feature 562, another secondary pit cremation. It abutted Feature 562 along the north edge of the pit.

Feature 562

LOCATION: Feature 562 was identified during the Phase 1 excavation of Stripping Unit 500 (see Figure C.1). It was located 8.6 m north and 3.8 m east of the southwest corner of the stripping unit. It originated approximately 10 cm below the ground surface and was not intrusive on any other feature, although it abutted another cremation (Feature 561).

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: The feature was completely excavated as a single level, as defined by the outline of the burial pit. The fill was collected but not screened. The weight of the cremation was not recorded. For additional excavation details, see the discussion of burial-excavation methods in Chapter 3.
FILL: The fill consisted of fine, ashy silt, giving way to darker brown, more compact soil near the bottom of the pit. Several small bone fragments, pieces of charcoal, and patches of oxidized dirt were collected. Minor root inclusions were observed. Sherds and flakes were collected from the fill but probably were not associated with the interment of the cremated remains.

BURIAL PIT DESCRIPTION: The pit was circular in plan, measuring 32 by 28 cm on the surface, with a depth of 15 cm (Figure C.33). In cross section, the pit exhibited straight to slightly inward-sloping side walls and a flat base.

BURIAL TREATMENT: The burial pit contained a secondary deposit of cremated remains from an individual of unknown age or sex. The cremated remains were placed

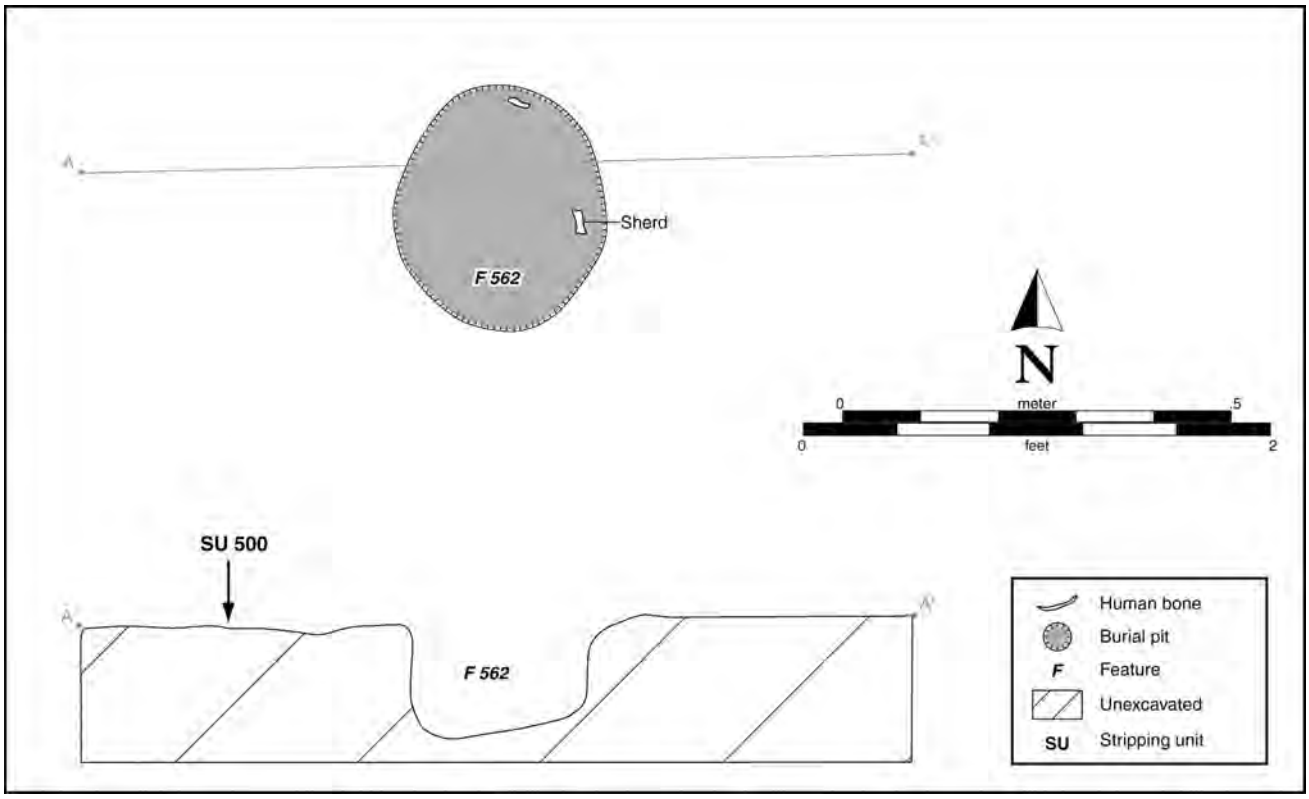

Figure C.33. Plan map and cross section of Feature 562, Locus D.

in the base of the pit and covered with fill. The absence of burning on the pit walls or base suggests that this was not the primary site of cremation, indicating a secondary deposit. No mortuary goods were recovered in association with cremated remains.

DATING: None

ASSOCIATED FEATURES: Feature 562 was situated adjacent to Feature 561, another secondary pit cremation. It abutted Feature 561 along the south edge of the pit.

Feature 3604

LOCATION: Feature 3604 was identified during Phase 2 in the northeast corner of Stripping Unit 1881(see Figure C.1). It was located 8.5 m north and 6.6 m east of the southwest corner of the stripping unit. It originated approximately 8 cm below the exposed ground surface and was not intrusive on any other feature.

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The feature was removed in a single level, as defined by the outline of the burial pit. The weight of the cremation was not recorded.

FILL: The pit fill consisted of grayish brown silty loam with ash, occasional fine gravels, and charcoal flecks. Most of the human remains were concentrated in a 20–25-cm area beneath one of two partial ceramic vessels. Additional sherds and debitage were recovered in the fill but probably were not interred as part of the mortuary deposit. Moderate disturbance resulting from rodent, insect, and root activity was observed throughout the fill.
BURIAL PIT DESCRIPTION: The burial pit was circular in plan, with a rounded, basin-shaped cross section (Figure C.34). The pit measured 65 by 54 cm, with a depth of 12 cm. The cremated bones encompassed only a small portion (approximately 25 percent) near the western edge of a much larger pit, suggesting that the previous pit had been used for a different (nonthermal) function. It is unlikely that such a large pit would have been specifically constructed as a container for the cremated remains.

BURIAL TREATMENT: The burial pit contained a secondary deposit of cremated remains of an individual of unknown sex and age. A complete, small Dragoon Red-on-brown bowl with fine-line decoration was placed in an upright position over top of the calcined bone deposit. A second fragmented Dragoon Red-on-brown bowl with fine-line

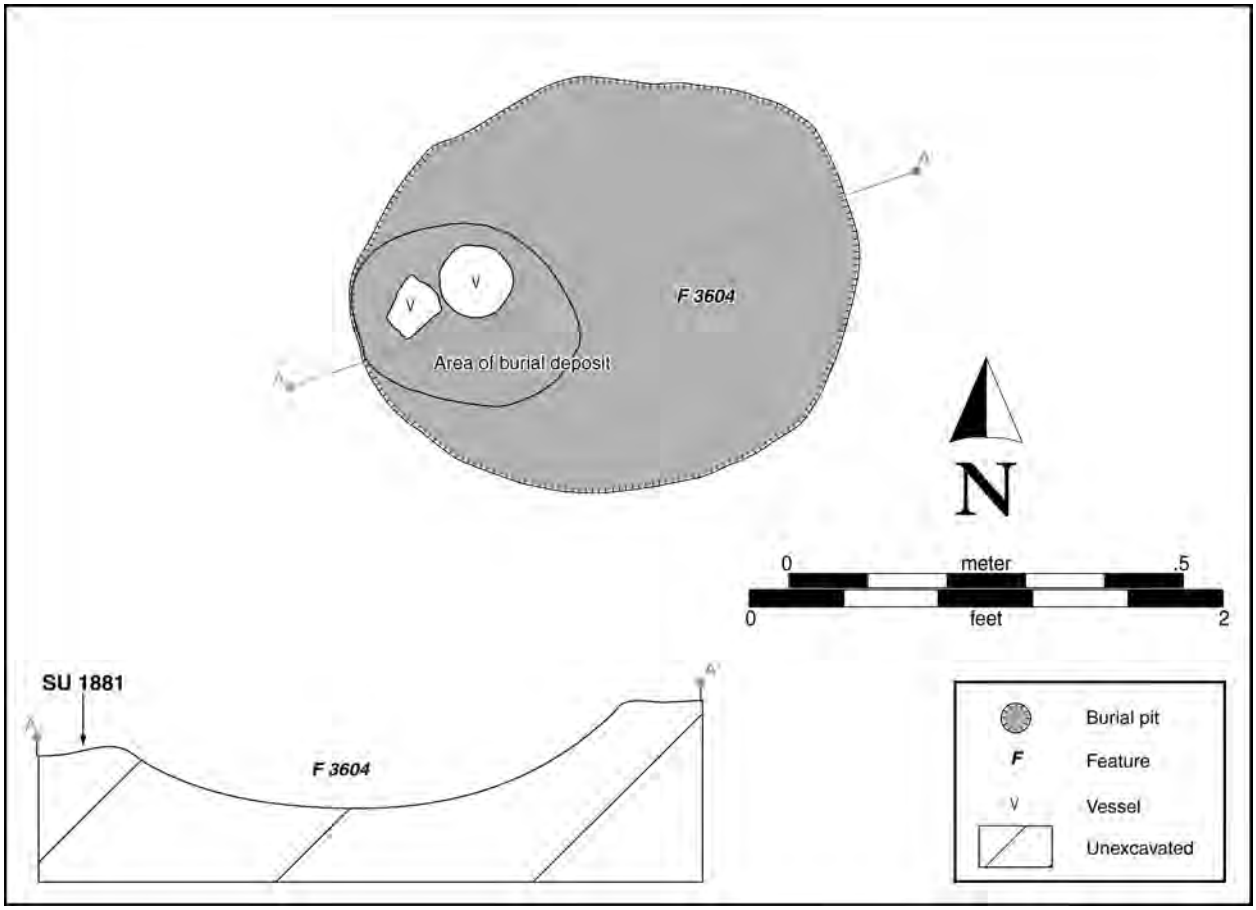

Figure C.34. Plan map and cross section of Feature 3604, Locus D.

decoration was also recovered in the fill above the bone deposit. These vessels do not appear to have functioned as burial urns, given that they were placed in an upright position on top of the cremated remains. It is more likely that they were placed in the burial pit as a mortuary offering (possibly as containers for perishable substances) as part of the interment episode. The absence of burning on the pit walls or base suggests that this was not the primary site of cremation, indicating a secondary deposit. The cremated remains appear to have been placed in an extramural nonthermal pit—possibly a former storage pit—that far exceeded the size required for containing the remains.

DATING: This feature was not subjected to chronometric analysis. However, the presence of two Dragoon Red-on-brown bowls with fine-line decoration suggests a date range of A.D. 700–950 (Heckman 2000). This evidence indicates a date of interment during the Middle Formative A period.

ASSOCIATED FEATURES: None

Feature 3704

LOCATION: Feature 3704 was identified during the Phase 2 excavation of Stripping Unit 3035 (see Figure C.1). It was located 2.7 m north and 2.7 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 22 cm below the ground surface and was not intrusive on any other features.

MODE OF INTERMENT: Primary cremation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The feature was removed in a single level, as defined by the outline of the shallow pit area with burned soil, ash, and charcoal flecks.

FILL: The pit fill consisted of finely textured, ashy, gray sediment with small caliche nodules and pebble-sized inclusions. Flecks of charcoal also were observed

throughout the fill area. A small number of human bone fragments were observed in the fill, suggesting fairly complete and effective gleaning of the cremated remains following the burning episodes. Approximately 5 unburned sherds and 15 flakes were recovered in the fill, but these items probably were not associated with the mortuary function of the feature. These items probably entered the feature matrix as a result of bioturbation or some other postdepositional disturbance. Moderate rodent disturbance was observed near the northwest corner on the pit.

BURIAL PIT DESCRIPTION: The burial pit was rectangular in plan, with dimensions of 170 by 80 cm and an east–west orientation (Figure C.35). In cross section, the pit extended to a depth of 8 cm, with inward-sloping side walls and a flat base. The sides and base of the pit were completely oxidized, probably as result of repeated exposure to high-temperature fires.

Four definite postholes (Subfeatures 1, 4, 5, and 7) and three possible postholes (Subfeature 2, 3, and 6) were uncovered in the base of the pit. Each one measured 20–30 cm in diameter; they were placed along the northern and southern edges of the pit. One of the four definite postholes was placed in each of the four corners of the pit. The three possible postholes were situated between the corners along the southern (Subfeature 6) and northern (Subfeatures 2 and 3) edges. The northwestern posthole was widened as a result of rodent activity and probably was originally of the same diameter as the others. Large chunks of charcoal were recovered in the bases of the postholes in the northern and southeastern corners.

BURIAL TREATMENT: This feature contained heavily burned soil, oxidized walls, and a small number of primary cremated human remains from one or more individuals of unknown age or sex. This feature is inferred to have functioned as a primary cremation pit in which the human remains were incinerated and which presumably was used on multiple occasions over time. However, the dearth of burned or oxidized bone or other burned artifacts in the fill indicates that the cremated remains had been thoroughly gleaned from the pit and interred in secondary locations. The postholes probably supported wooden posts for a funerary pyre. The large chunks of charcoal recovered in two of the corner postholes may be the residues of ancient posts used to construct the pyres.

DATING: None

ASSOCIATED FEATURES: None

Feature 3875

LOCATION: Feature 3875 was identified during Phase 2 in the fill of a structure (Feature 3679) (see Figure C.1). It was located 6.28 m north and 12.4 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 33 cm below the ground surface.

MODE OF INTERMENT: Secondary pit cremation

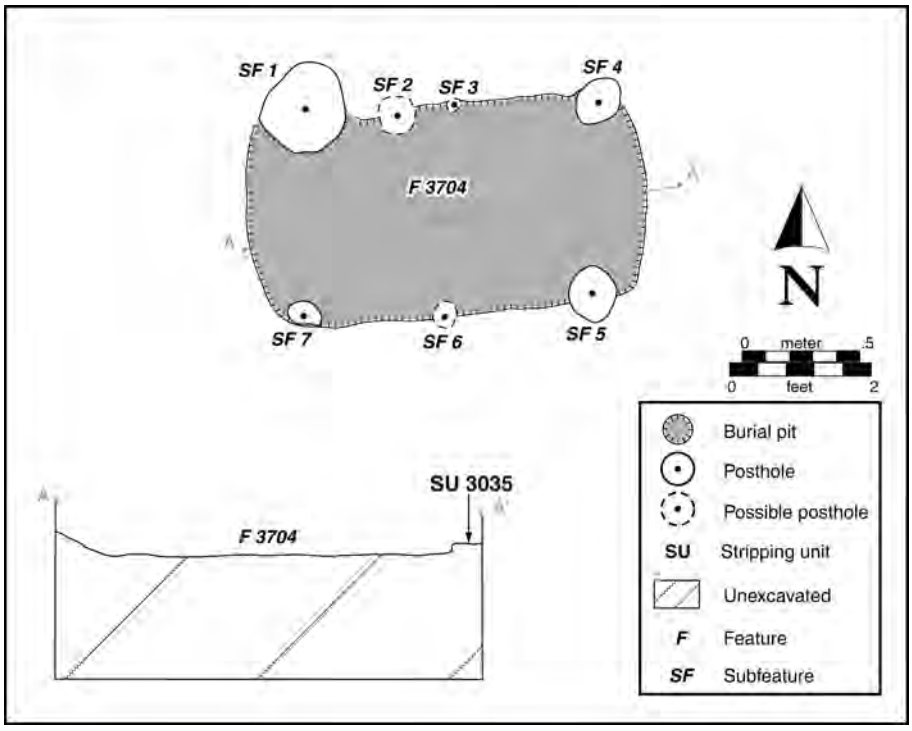

Figure C.35. Plan map and cross section of Feature 3704, Locus D.

EXCAVATION METHODS: This burial was exposed during the excavation of the fill stratum of two superimposed structures (Features 3679 and 3868). Once the pit outline was defined, the feature matrix was removed in a single level, as defined by the pit outline. The feature was excavated in accordance with the burial-excavation methods outlined in Chapter 3.

FILL: The pit fill consisted of a moderately compact, simple redeposit of dark brown silt with pebble inclusions and burned human bone fragments. Moderate root disturbances were observed in the fill. Sherds and debitage were recovered in the fill but probably were not deposited in association with the mortuary interment. These materials probably were associated with the structure into which the burial intruded.

BURIAL PIT DESCRIPTION: The burial pit was circular in plan and measured roughly 44 cm in diameter, with a maximum depth of 15 cm. It exhibited straight to inward-sloping walls and a flat base (Figure C.36). The inward-sloping angle of the wall was more pronounced on the southern edge of the pit. Medium-sized to large rocks were recovered in the base of the pit, beneath the cremated remains, indicating a formally prepared and rock-lined burial pit. The walls were intact with root disturbances, with patches of oxidized soil. No evidence of oxidation or heat exposure was observed in the soil or rocks in the base of the pit, however.

BURIAL TREATMENT: The burial pit contained a secondary deposit of cremated human remains of an individual of unknown age and sex. The burial appears to have been formally prepared with a rock-lined base. Although patches of oxidized soil were observed in the pit walls, the overall small amount of oxidized soil and the absence of evidence for heat exposure in the base of the pit suggest that it was not the primary location of

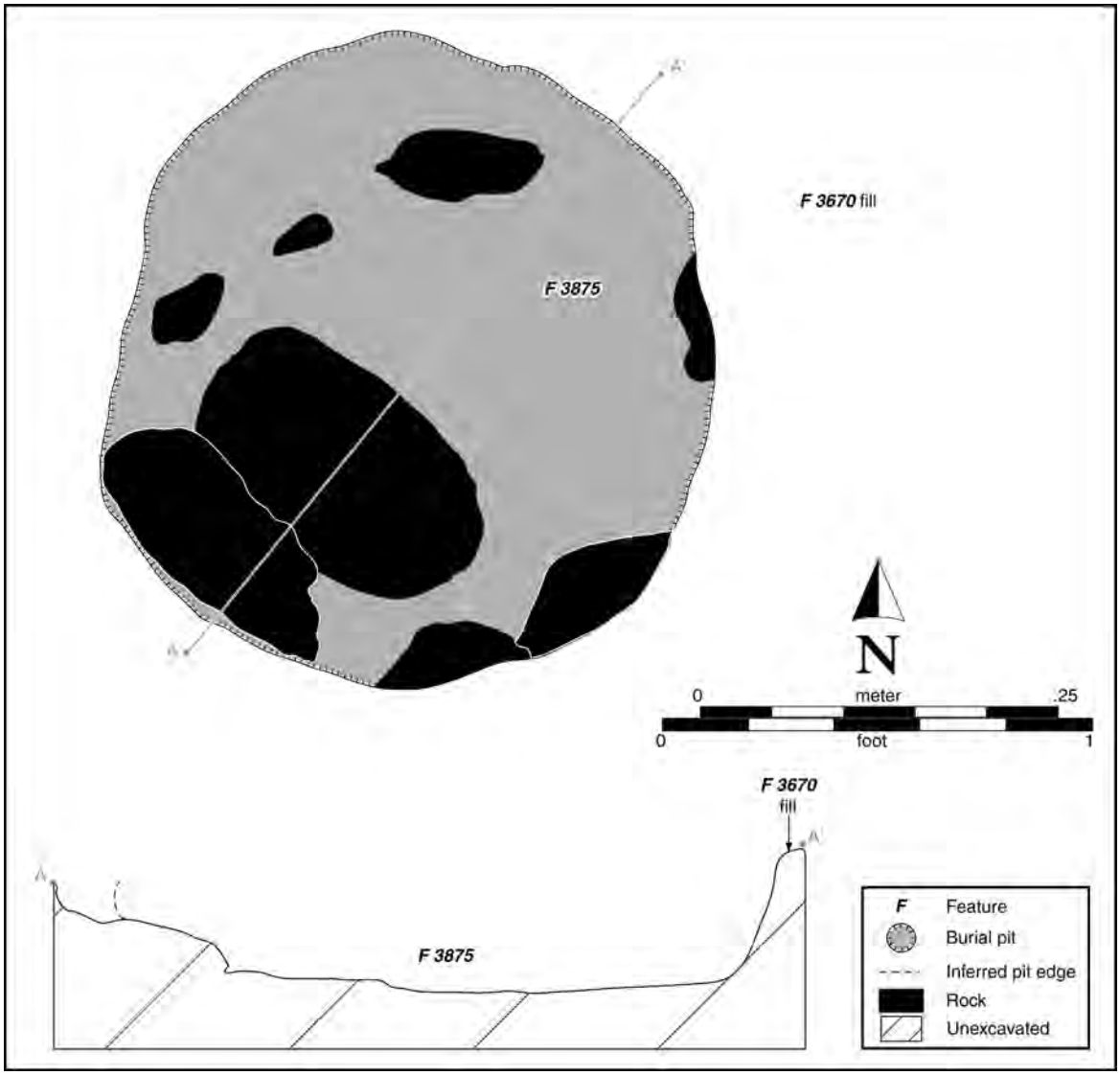

Figure C.36. Plan map and cross section of Feature 3875, Locus D.

incineration, indicating a secondary deposit of the cremated remains. The cremated remains were incinerated elsewhere and placed in the base of the pit (on top of the rocks) and covered with fill. The top of the burial pit originated in the fill above the floor of Feature 3679 and extended through the structure floor, which may indicate deliberate placement of the burial in the footprint of the abandoned structure. The total weight of the cremated remains was 889.0 g.

DATING: Feature 3875 was not subjected to chronometric analysis. However, the feature's association with an earlier structure (Feature 3679) provides insight into its age. As noted, the burial pit originated in the fill of the structure, indicating that it was constructed after a period following the structure abandonment. Feature 3679 was assigned a date range of A.D. 835–865 based on archaeomagnetic evidence. Consequently, the interment date of the individual in Feature 3875 postdated A.D. 835. Given the prevalence of features assigned to the Middle Formative A period near the burial, we suspect a date of interment during the latter half of this period (ca. A.D. 835–950).

ASSOCIATED FEATURES: Feature 3875 originated in the fill of structure Feature 3679, in the northwestern quadrant of the structure footprint, and extended through the structure's floor. Feature 3679 was constructed over the footprint of an older structure (Feature 3868), but it is not clear whether the burial pit of Feature 3875 extended deep enough to penetrate the floor of Feature 3868.

Feature 4057

LOCATION: Feature 4057 was identified during Phase 2 mechanical stripping in the southwest corner of Stripping Unit 3035 (see Figure C.1). During the stripping excavation, the backhoe impacted and fractured the base of the inverted urn, which was placed above the cremated remains. The feature was located 3.4 m north and 15.5 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 45 cm below the ground surface and was not intrusive on any other features.

MODE OF INTERMENT: Secondary urn cremation (inverted vessel)

EXCAVATION METHODS: Once the inverted vessel was exposed during stripping, the remaining fragments of the urn and its contents were collected, and the remainder of the feature fill was excavated as a single unit. The fragmented vessel and cremated remains were separately collected. The remainder of the burial put was defined and excavated in accordance with the burial-excavation methods outlined in Chapter 3.

FILL: The burial fill was composed of a fine silty loam with small pebble inclusions and flecks of charcoal. A plain ware jar was inverted over the cremated remains in the southern portion of the burial pit. Two pieces of burned shell were recovered near the cremated remains; these artifacts may have been part of a shell bracelet interred along with the cremated remains as part of the mortuary deposit. In addition to the urn, a few sherds were recovered in the fill above the cremated remains; these sherds probably were not deposited in association with the burial. Disturbances from roots or rodents appear to have been minimal.

BURIAL PIT DESCRIPTION: The burial pit was ovoid in plan, with an area of elongation in the southern portion of the pit (Figure C.37). In cross section, the pit exhibited straight to inward-sloping walls and a relatively flat base. The cremated remains and inverted urn were placed within the elongated area in the southern edge of the pit. The pit measured 60 by 45 cm, with a minimum depth of 11 cm. The cremated remains and associated artifacts were concentrated in a small area of a larger pit.

BURIAL TREATMENT: The pit contained a plain ware jar with a carinated shape and no neck, which was inverted over the cremated remains of a child (age range and sex are indeterminate). The cremated remains appear to have been situated in the base of the pit, with the inverted urn placed over them, and then covered with fill. In addition to the inverted vessel, two pieces from a burned shell bracelet were recovered in association with the remains. The absence of burning on the pit walls or base suggests that it was not the primary site of cremation, indicating a secondary deposit of the cremated remains. The evidence of burning on the shell pieces suggests that they had been included in the crematory fire along with the body of the deceased individual.

As noted, the mortuary deposit was placed in the southern edge of a larger pit, which implies the *possibility* that the pit had been previously used for a different, nonmortuary (and nonthermal) function. Most of the other pits with secondary cremations in the site generally appear to have been constructed with ample space to contain only the mortuary deposit, with little excess space. The extra, unused space implies that it was constructed for a purpose other than being a container for the mortuary deposit. The total weight of the cremated remains was 49 g.

DATING: Feature 4057 was not subjected to chronometric analysis. However, the presence of a plain ware vessel suggests a date range of at least 200 B.C. or later. It is highly unlikely that an earlier burial would contain a ceramic vessel. We suspect an age of interment during the Middle Formative period, however, given the prevalence of nearby features assigned to this period.

ASSOCIATED FEATURES: None

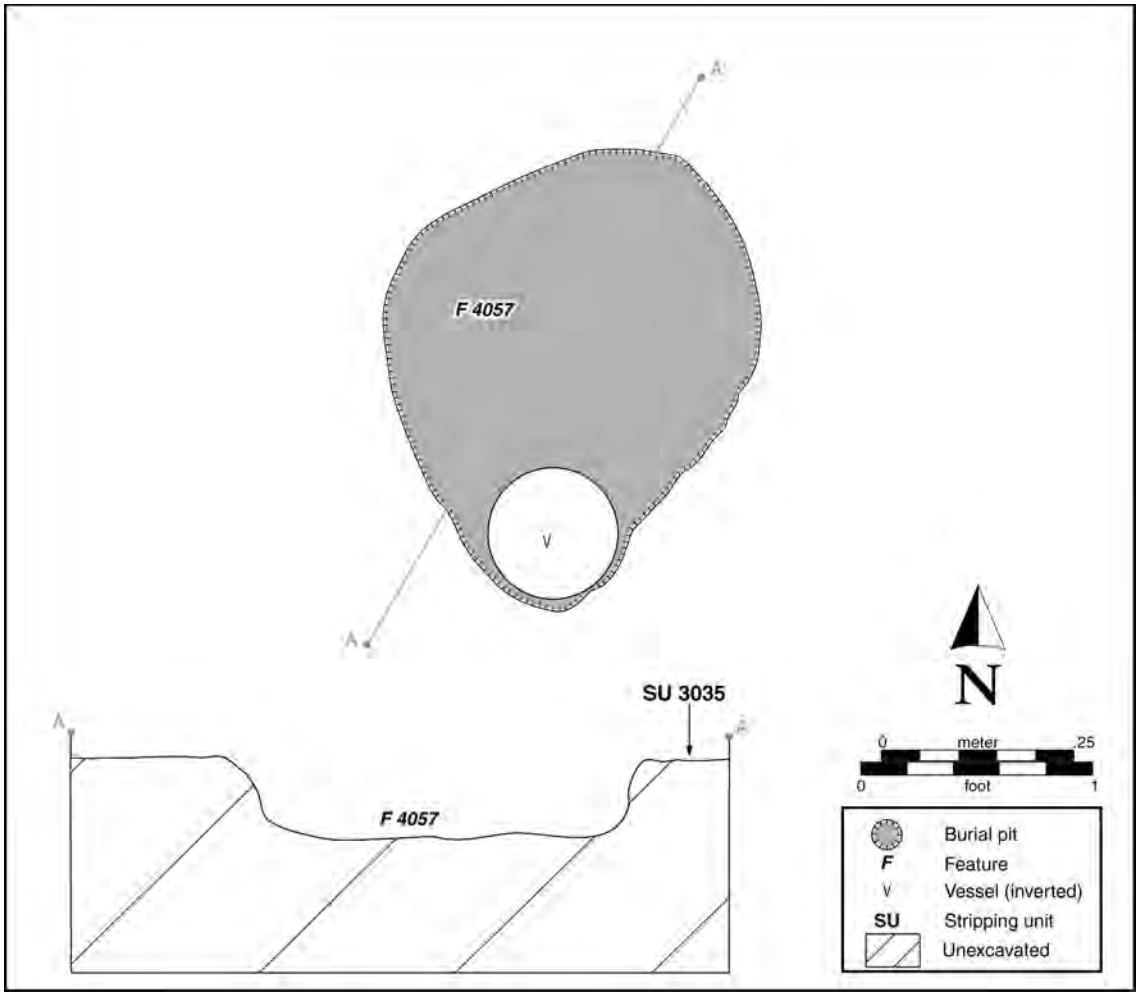

Figure C.37. Plan map and cross section of Feature 4057, Locus D.

Feature 4069

LOCATION: Feature 4069 was identified during Phase 2 mechanical stripping in the south-central portion of Stripping Unit 3035 (see Figure C.1). It was located 2.2 m north and 9.7 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 10 cm below the ground surface and was not intrusive on any other features.

MODE OF INTERMENT: Primary cremation

EXCAVATION METHODS: The pit boundary was defined as a subrectangular outline of ashy silt in the soil. The main portion of the feature (i.e., excluding the subfeatures) was excavated in two levels based on changes in soil color and contents. Level 1 (approximately the upper 10 cm) contained burned and ashy soil matrix, with occasional pieces of charcoal and cremated human bone. This level was terminated when a partial vessel was exposed near the western edge of the feature. Level 2 (ranging in depth from 1 to 7 cm) was distinguished by ashier soil and denser inclusions of cremated bone and charcoal. In both levels, the coarse fraction of the feature fill (human bone and artifacts) was removed and collected with trowels and brushes, and the remainder of the fill was sifted through screens with $^1/_8$-inch mesh.

Two subfeatures were excavated in the base of the main portion of the feature; these were interpreted as a posthole (Subfeature 1) and a subfloor burial pit with cremated remains (Subfeature 2). Both subfeatures were excavated as a single level and were sifted through screens with $^1/_8$-inch mesh. For additional excavation details, see the discussion of burial-excavation methods in Chapter 3.

FILL: Level 1 of the feature fill consisted of ashy brown to dark ashy brown sandy silt with pea-sized to medium-sized gravels and charcoal flecks. Level 2 contained a higher frequency of human bone fragments and charcoal than did Level 1. The soil in Level 2 was generally less compacted and more friable than in Level 1. Evidence of disturbance from bioturbation was extensive. The base and sides of the main feature area were heavily oxidized. The

fill in both subfeatures closely resembled that observed in Level 2 of the main feature. In Subfeature 2, only the upper portion of the side walls was oxidized; the lower walls consisted of native soils.

Artifacts and cremated bone were recovered throughout the feature and subfeature fill. Two large occipital bones (from different individuals) were recovered in the base of the feature near the eastern side. Pieces of cremated human bone and charcoal were recovered throughout the fill but were generally more frequent in Level 2 and in Subfeature 2. A calcined bone awl recovered in the fill of the main feature probably was subjected to intense heat and left in the fill following a crematory episode, possibly as a result of incomplete gleaning. As noted, several fragments of a plain ware vessel (with micaceous paste inclusions) also were recovered in the main feature, near the eastern edge, but the rim was missing, which prevented identification of the vessel form. A carved ground stone censer was recovered in Subfeature 2 in association with cremated remains. Notably, the exterior of the censer was burned and entirely covered in ocher.

Numerous sherds and flakes and four deer cranial bones also were recovered in the fill, but none of these items exhibited evidence of heat exposure and, therefore, probably none was deposited within the feature matrix in association with mortuary activities. A piece of hematite-like material also was recovered in the main feature area; this material may have been deposited in connection with the mortuary activities, given its inferred ritual significance.

BURIAL PIT DESCRIPTION: The main pit of the feature consisted of a shallow, subrectangular pit, with sloping side walls and a relatively flat but uneven base (Figure C.38). When it was first exposed, the pit had a visible margin in plan, which was readily distinguished by a darkened subrectangular deposit of ash and bone. The main feature measured 161 by 75 cm in plan, with an east–west orientation on the long axis. The maximum depth of the main feature was 15 cm. The bottom and sides of the pit were highly oxidized, and all human bone fragments and the bone awl were calcined. The total weight of the cremated remains from the entire feature (including subfeatures) was 1,096 g.

Subfeature 1, located near the west-central edge of the feature, was circular in plan, with slightly incurving walls and a rounded base, resulting in a conical shape in cross section. This subfeature measured 10 cm in diameter, with a maximum depth of 13 cm, and probably functioned as a posthole for a funerary pyre. Subfeature 2 was a subfloor pit placed in the base of the main feature near the northeastern corner, roughly 15 cm to the east of Subfeature 1. This subfeature was roughly circular in plan, with straight side walls and a flat base. It measured 44 cm in diameter, with a maximum depth of 24 cm. The base of Subfeature 2 contained a discrete concentration of cremated remains, along with the aforementioned ground stone censer. The censer does not appear to have functioned as an urn for the cremated remains.

BURIAL TREATMENT: This feature contained burned and oxidized soil, along with the primary deposit of cremated remains of at least two adults (age range is unknown) of indeterminate sex. SRI bioarchaeologists inferred the presence of two different individuals based on differing thicknesses of recovered cranial elements. These cranial fragments were recovered in the base of the pit on the east side of the main feature. Their presence in this area suggests that the deceased individuals were oriented with the heads pointing to the east during the cremation episode (or episodes). The presence of more than one individual also implies that the location was used for multiple cremation episodes, assuming that each episode focused on a single individual.

The presence of burned bone throughout the feature matrix suggests that the pit had not been completely or thoroughly gleaned of cremated remains after its final use. The calcined awl and partial vessel probably were included in one or more of the cremation episodes and, like the human bone, were not gleaned and buried in a secondary location. The chunk of hematite-like substance also could have been used as part of the mortuary ritual during a cremation episode. As noted above, the posthole (Subfeature 1) probably held a post for a funerary pyre. It is curious, however, that only one posthole was observed in the feature, given that a pyre built to support one or more individuals during a crematory episode probably would require multiple supports. It is possible that rodent activity and other postdepositional disturbances had obscured additional postholes.

Subfeature 2 appears to have been a subfloor burial pit placed in the base of the feature for one of the individuals whose remains were cremated in the overlying cremation area. Presumably, it contained the remains of individuals who had been cremated in situ; after a period of cooling, these remains were gleaned and interred within a subfloor pit in the base of the cremation area. The ocher-stained, carved ground stone censer presumably was also placed in the subfloor burial pit along with the cremated remains and covered with fill. The censer was placed adjacent to the remains but does not appear to have functioned as an urn or container for them. Probably it was placed in the subfloor pit with the remains as a mortuary offering.

The accumulated evidence from this feature suggests that one or more deceased individuals were placed on a pyre and set aflame in this location, along with mortuary offerings (e.g., the calcined awl), after which the cremated remains were gleaned (although not thoroughly) and interred in a secondary location. The cremated remains may have been interred in one of the many secondary cremation pits in the vicinity, including the one recorded in the base of the feature.

DATING: Feature 4069 was not subjected to chronometric analysis. However, the presence of a plain ware vessel

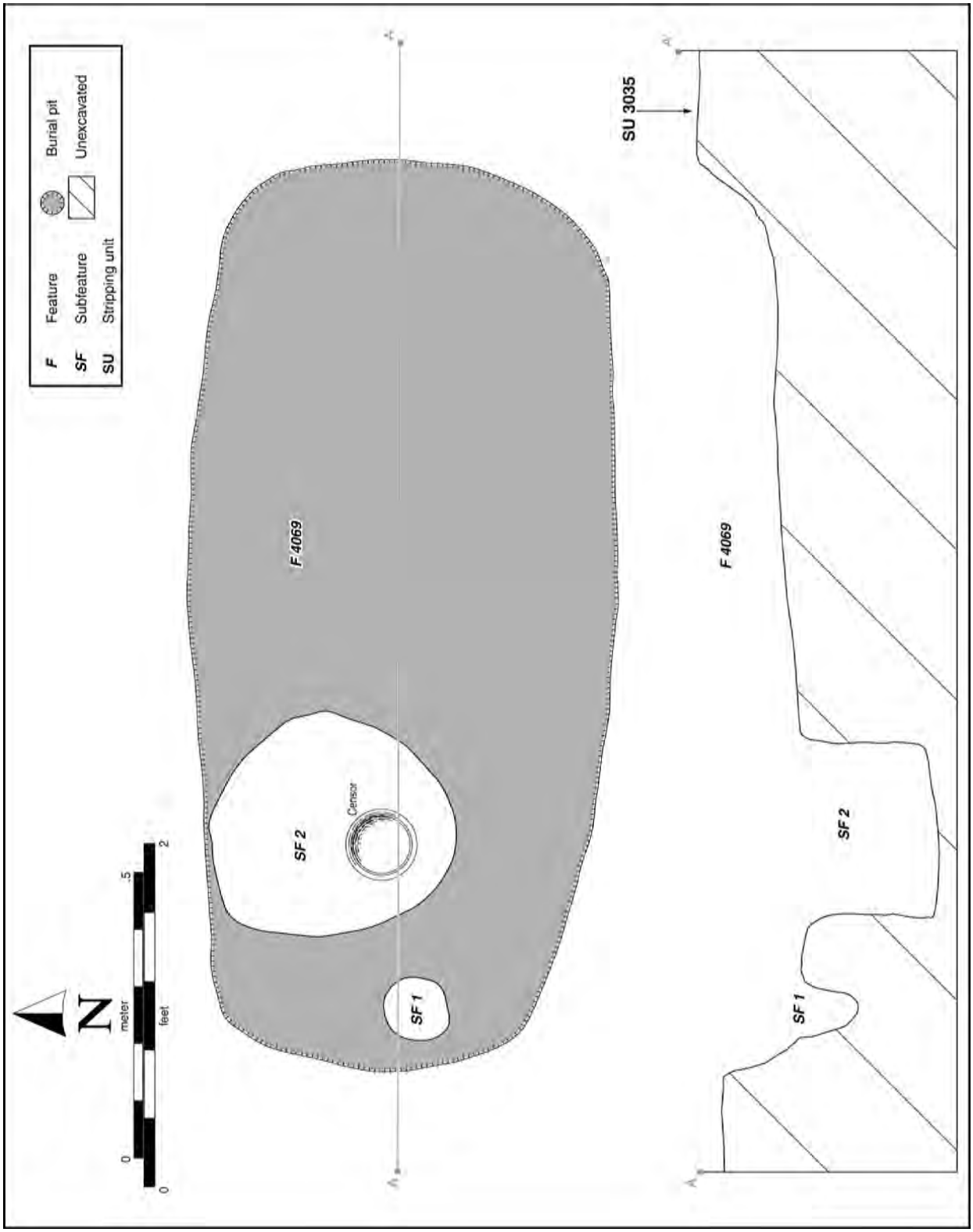

Figure C.38. Plan map and cross section of Feature 4069, Locus D.

in the fill suggests a date range of at least 200 B.C. or later. It is highly unlikely that an earlier burial would contain a ceramic vessel. We suspect an age of interment during the Middle Formative period, however, given the prevalence of nearby features assigned to this period.

ASSOCIATED FEATURES: None

Feature 4221

LOCATION: Feature 4221 was identified during Phase 2 mechanical stripping in the southeast corner of Stripping Unit 3033 (see Figure C.1). It was located 2 m north and 16.4 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 20 cm below the ground surface and was not intrusive on any other features.

MODE OF INTERMENT: Primary cremation

EXCAVATION METHODS: The pit boundary was defined as a subrectangular outline of ashy silt in the soil. The feature was excavated in two levels. Level 1 encompassed the upper portion of the feature fill and was arbitrarily terminated at 15 cm to achieve better control over the vertical dimension (e.g., to detect possible differences in densities of artifacts and natural inclusions). Level 2 encompassed the lower 5 cm of the fill and terminated at the sterile base of the pit. The soil color, texture, and contents of the two levels were similar (see below). The fill from Level 1 was sifted using a 1/8-inch-mesh screen. The fill from Level 2 was screened using 1/4-inch mesh and then collected (i.e., as screened fill) in total (10 bags) for further inspection. Seven subfeatures (Subfeatures 2–8) were identified and excavated by the same method described for Level 2. Unfortunately, no cross-sectional illustration was generated for this feature. For additional excavation details, see the discussion of burial-excavation methods in Chapter 3.

FILL: The burial fill consisted of moderately compacted, homogeneous, dark grayish brown silty loam with abundant ash, charcoal, oxidized soil, gravels, and calcic inclusions. Calcined bone fragments were observed throughout the feature matrix. Salient concentrations of oxidized soil and charcoal were present in the northwestern and southwestern corners. Root and rodent activities were prevalent and probably have extensively altered the feature dimensions and contents. The fill attributes and contents were roughly the same in the two levels and in the subfeatures, except for a higher concentration of calcined bone in Level 2.

The density of artifacts was fairly high and consisted of sherds, debitage, a burned bone awl, a biface fragment, and a faunal bone. A dense concentration near the eastern edge of the pit in Level 2 consisted of sherds, oxidized soil, and charcoal. Some of the sherds were warped and blackened, indicating in situ thermal exposure. The sherds in this concentration derived from two partial vessels: a plain ware hemispherical bowl and a plain ware jar with a high, outflaring neck (both sand tempered). A second concentration of sherds (not part of any reconstructible vessels) was recorded in the central portion of the feature. However, this concentration was recovered within a depression (originally labeled Subfeature 1) that was later determined to be a rodent burrow. Hence, it is unclear whether these sherds entered the feature matrix as part of the mortuary deposit.

BURIAL PIT DESCRIPTION: When it was first exposed, the pit exhibited a visible margin, which was readily distinguished by a darkened subrectangular deposit of ash and bone (Figure C.39). The feature was subrectangular in plan, with an east–west orientation on the long axis. The pit exhibited inward-sloping side walls and a relatively flat base. The cross-sectional shape had been obscured, however, as a result of bioturbation. The pit measured approximately 223 by 83 cm in plan, with a maximum depth of 21 cm.

Seven subfeatures were observed in the base of the main feature (excluding Subfeature 1, a probable rodent burrow). Subfeatures 2–8 all appear to have functioned as postholes that supported a funerary pyre, although one of these (Subfeature 8) may have been part of a postdepositional root or rodent disturbance. These subfeatures were all circular in plan and conical to cylindrical in cross section, with diameters ranging from 12 to 18 cm and depths between 46 and 55 cm (from the base of the pit). The consistency of these dimensions suggests a consistency in the size of the posts used in the pyre.

Notably, the six definite postholes (Subfeatures 2–7) all were located in the eastern half of the feature. Two rows of three postholes were located roughly 15–20 cm from the northern and southern edges of the feature. Moreover, the postholes in the two rows were roughly aligned on a north–south axis; for example, the two easternmost postholes (Subfeatures 5 and 6) were aligned (albeit imperfectly) north–south within a few centimeters. This alignment may suggest two rows of post supports for a pyre. In both rows, the two postholes on the east side (Subfeatures 4 and 5 in the northern row and Subfeatures 6 and 7 in the southern row) were smaller in diameter (12–14 cm) than the two westernmost postholes (Subfeatures 2 and 3; 15–16 cm in diameter), suggesting a specific pattern of pyre construction. No definite postholes were recorded in the western half of the feature. Only Subfeature 8—a questionable cultural feature situated adjacent to a prominent root or rodent disturbance—was recorded in this area. It is thus possible that the presumed pyre encompassed only the eastern portion of the feature.

BURIAL TREATMENT: This feature consisted of a subrectangular deposit of burned and oxidized soil, along with

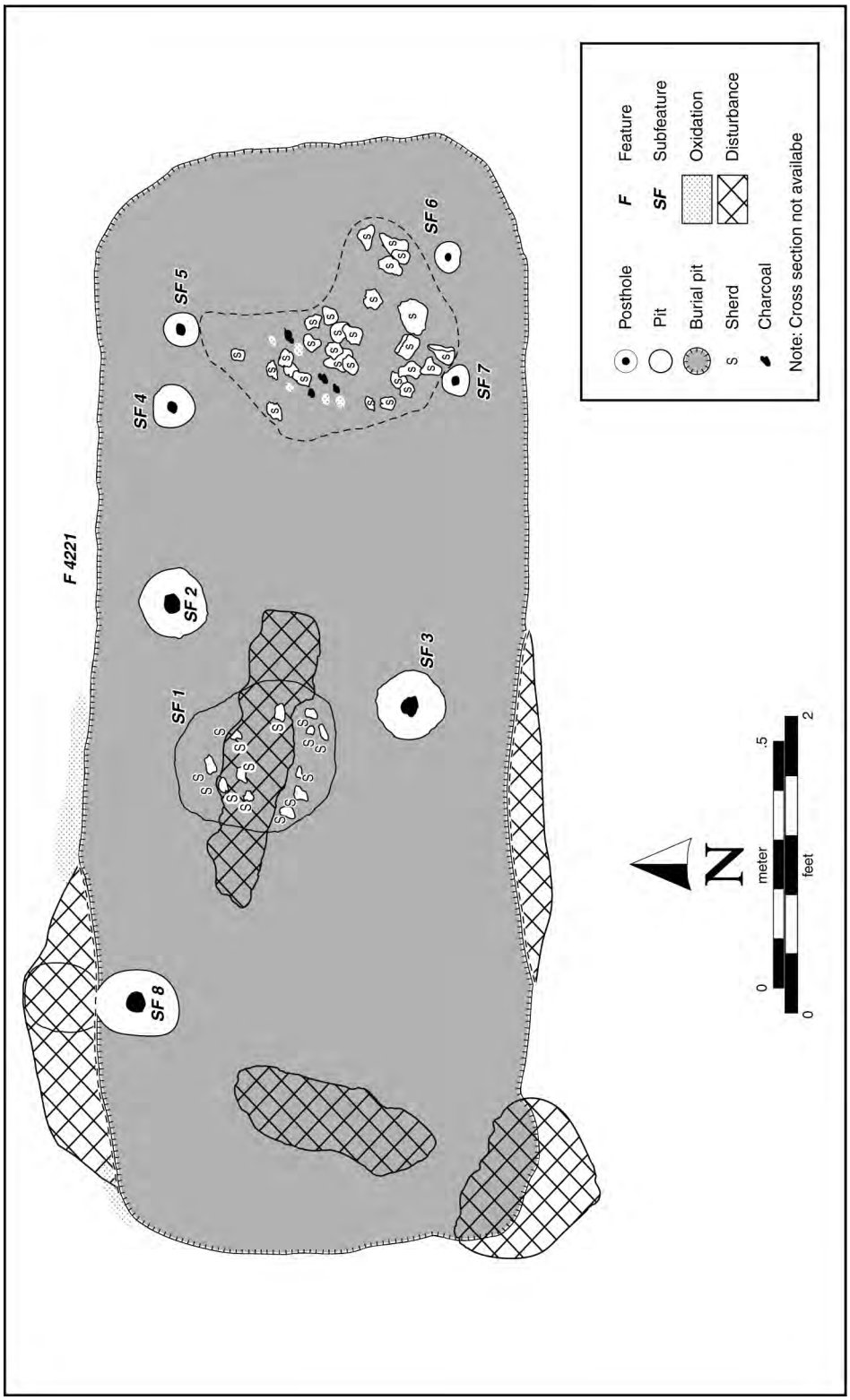

Figure C.39. Plan map of Feature 4221, Locus D.

155 g of cremated human bones from at least one adult (age range is unknown) of indeterminate sex. However, the scattered bone deposit probably derived from the cremation of multiple individuals, assuming that the cremation area had been used on more than one occasion. The presence of oxidized fill and burned bone suggests that this was a primary location of crematory activities. The scattered bone fragments within the feature matrix further suggest that the area had not been completely or thoroughly gleaned after its final use.

The burned awl, as well as the two burned and fragmented plain ware pots recovered in the base of the pit, was probably included in the crematory fire as mortuary offerings. The pots may have contained perishable contents, such as ritually significant food or beverages.

The area probably supported a funerary pyre, as evidenced by the two rows of postholes in the eastern half of the feature. The location of the postholes may suggest that the pyre was constructed on the eastern side of the cremation area, which complements the frequent eastern orientations of the burials at the site (see Volume 2, Chapter 11). However, additional postholes could have been present in the western half of the feature (e.g., Subfeature 8) but could have been obscured by postdepositional disturbances, such as bioturbation from roots and rodents. The prevalence of bioturbation is best evidenced by the large depression originally classified as Subfeature 1 in the central portion of the feature.

The accumulated evidence from this feature suggests that one or more deceased individuals were placed on a pyre (possibly constructed in the eastern half) and set aflame in this location, along with mortuary offerings, after which the cremated remains were gleaned (although not thoroughly) and interred in a secondary location. The cremated remains may have been interred in one of the many secondary cremation pits in the vicinity. Mortuary offerings probably included in the crematory were the two partial vessels and an awl. The recovered biface, a chunk of hematite-like substance, and other materials in the fill also might have been mortuary offerings, but many of the sherds and debitage pieces probably entered the feature matrix as a result of postdepositional disturbances.

DATING: Archaeomagnetic evidence from Feature 4221 indicates multiple possible date ranges of A.D. 585–790, 835–1015, and 1385–1815. Given the presence of many features assigned to Middle Formative period A in Locus D, we suspect that one of the two earlier date ranges is applicable.

ASSOCIATED FEATURES: None

Feature 4739

LOCATION: Feature 4739 was identified during Phase 2 mechanical stripping in the center of Stripping Unit 8665 (see Figure C.1). It was located 6.2 m south and 12.2 m east of the northwest corner of the stripping unit. The top of the feature originated approximately 31 cm below the ground surface and was not intrusive on any other feature.

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The feature was removed in a single level, as defined by the outline of the burial pit. Any observed differences in the content or soil color at varying depths were recorded, however.

FILL: The fill in approximately the upper 10 cm of the pit consisted of dark gray and ashy soil as well as calcined human bone fragments from an infant. Below approximately 10 cm, the fill was a darker shade of gray, with an increase in charcoal fragments and less human bone. The side walls in the lower portion of the pit were heavily blackened (but not visibly oxidized), with a hard rind. No postdepositional disturbances were noted. No artifacts were recovered in the feature fill.

BURIAL PIT DESCRIPTION: The burial pit was circular, with straight to slightly inward-sloping sides and a flat base (Figure C.40). The pit measured 40 cm in diameter, with a maximum depth of 24 cm. The pit walls were more heavily charred and darkened below the human bone deposit, with a harder rind. This evidence, along with the discrete spatial extent of the human bone within the upper portion of the fill, suggests that the cremated bone had been placed within a preexisting thermal feature, possibly a roasting pit.

BURIAL TREATMENT: The burial pit contained a secondary deposit of cremated remains of an infant of unknown sex and age. No artifacts or mortuary goods were recovered within the outline of the pit. As noted, the cremated remains appear to have been placed in the upper portion of a previously abandoned roasting pit. The thick, hardened side walls are characteristic of roasting pits. Also, the pit probably was not the primary location of the cremation. More likely, the human remains were incinerated elsewhere and interred in this location. The location of the remains in approximately the upper 10 cm suggests that postdepositional fill had accumulated in the pit for some time before the interment episode. The total cremated remains recovered within the pit weighed 14.5 grams.

DATING: None

ASSOCIATED FEATURES: None

Feature 4794

LOCATION: Feature 4794 was identified during Phase 2 mechanical stripping in the southwest corner of Stripping

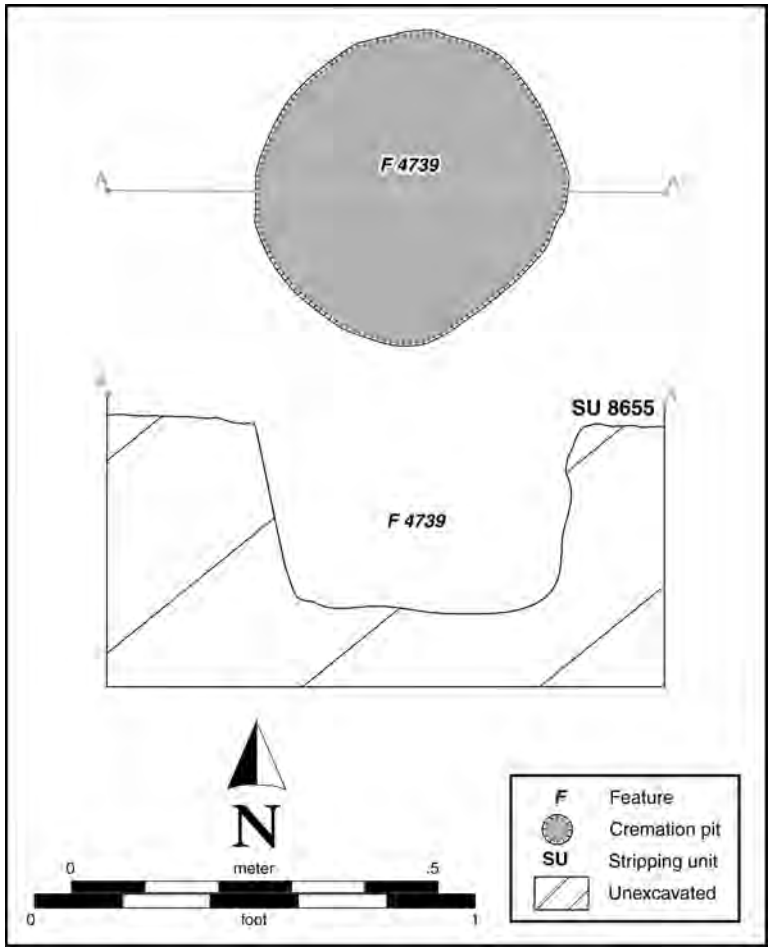

Figure C.40. Plan map and cross section of Feature 4739, Locus D.

Unit 6795 (see Figure C.1). The feature consisted of a patch of burned, ashy, gray soil, with several distinct concentrations of oxidized soil and burned bone. One of the concentrations near the east edge of the burned-soil area consisted of a small pit with ash and cremated bone, indicating a secondary cremation. Three additional depressions also were observed in the vicinity but were too shallow to have been secondary cremation pits. Feature 4794 encompassed the entire burned-soil area, but the main part of the feature was the secondary cremation pit. It was located 6.3 m north and 5.5 m east of the southwest corner of the stripping unit. The exposed top of the feature originated approximately 12 cm below the ground surface and was not intrusive on any other feature.

MODE OF INTERMENT: Secondary pit cremation (or possible disturbed primary cremation)

EXCAVATION METHODS: The main part of the feature (i.e., the secondary cremation pit) was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The burial pit was removed in a single level, as defined by the outline of the burial pit. The ashy, gray soil surrounding the secondary cremation pit was investigated by hand, including the three nonpit depressions, which were hand excavated with a trowel to expose the sterile soil below. This area was recorded separately from the main burial pit, and all collected materials were collected with a different PD number.

FILL: The burned-soil area surrounding the cremation pit consisted of dark grayish brown salty clay, with abundant ash and concentrations of burned bone and oxidized soil. The sheer abundance of ash created the grayish soil color. The fill of the main burial pit below the burden-soil area was similar in color, but somewhat siltier. However, very little soil was present below approximately the upper 5 cm of the pit. The lower fill consisted almost entirely of ash and calcined bone. Caliche nodules were present throughout the fill in both the burned-soil area and the pit. Minimal to moderate disturbance from root and rodent activity was noted throughout the fill. A burned shell fragment was recovered near the cremated remains within the burial pit.

BURIAL PIT DESCRIPTION: The burial pit containing the secondary cremation was circular, with straight side walls and a flat base (Figure C.41). The pit measured 16 cm in diameter, with a maximum depth of 24 cm. The burned and ashy soil surrounding the pit encompassed an irregular-shaped area in plan, which measured roughly 150 by 100 cm and extended to a maximum depth of about 5 cm. The longer axis of the feature was oriented east-to-west.

BURIAL TREATMENT: This main part of the feature consisted of a secondary burial pit containing the cremated remains of a young adult (age range is indeterminate) of unknown sex. The cremated remains were placed in the base of the pit and covered with fill. A burned shell fragment associated with the cremated remains probably was included in the crematory fire and interred in the burial pit with the human remains. It may have been part of a shell bracelet or necklace cremated with the deceased individual as a mortuary offering. Within the burial pit, the absence of burning on the pit walls or base suggests that this was not the primary site of the cremation, indicating a secondary mortuary deposit. The total weight of the cremated bone—including both the burial pit and the surrounding burned-soil area—was 143.5 g.

The feature also encompassed a thin stratum of ashy, brownish gray soil with patches of burned bone and oxidization from heat exposure. This stratum of burned fill surrounding the burial pit might mark the remnants of a primary cremation area. The thin layer of burned, ashy, oxidized soil and scattered burned bone was consistent with the appearance of other primary cremation feature in Locus D. Moreover, this area was located in the immediate vicinity of Feature 4798, a primary cremation. A closely spaced group of primary cremations was present elsewhere in Locus D (Features 3704, 4069, and 4221, roughly 30–40 m to the east of Feature 4794), suggesting possible concentrations of primary cremation features in different areas of the locus.

In light of the evidence, we can reasonably hypothesize that Feature 4794 encompassed the remnants of a heavily disturbed primary cremation area. (Possible disturbances included bioturbation or mechanical disturbance during the stripping excavation.) If this were true, the main part of the feature would have been a subfloor secondary cremation burial—a pattern observed in one of the primary cremation features in Locus D (Feature 4069). We are unable to firmly corroborate this hypothesis, however. Therefore, Feature 4794 is formally classified as a secondary pit cremation.

DATING: None

ASSOCIATED FEATURES: None

Feature 4798

LOCATION: Feature 4798 was identified during Phase 2 mechanical excavation along the west-central edge of Stripping Unit 6795. Most of the feature is located within this stripping unit, but the western edge slightly overlaps with Stripping Unit 6801 (see Figure C.1). This feature was readily recognized as an elongated, rectangular area

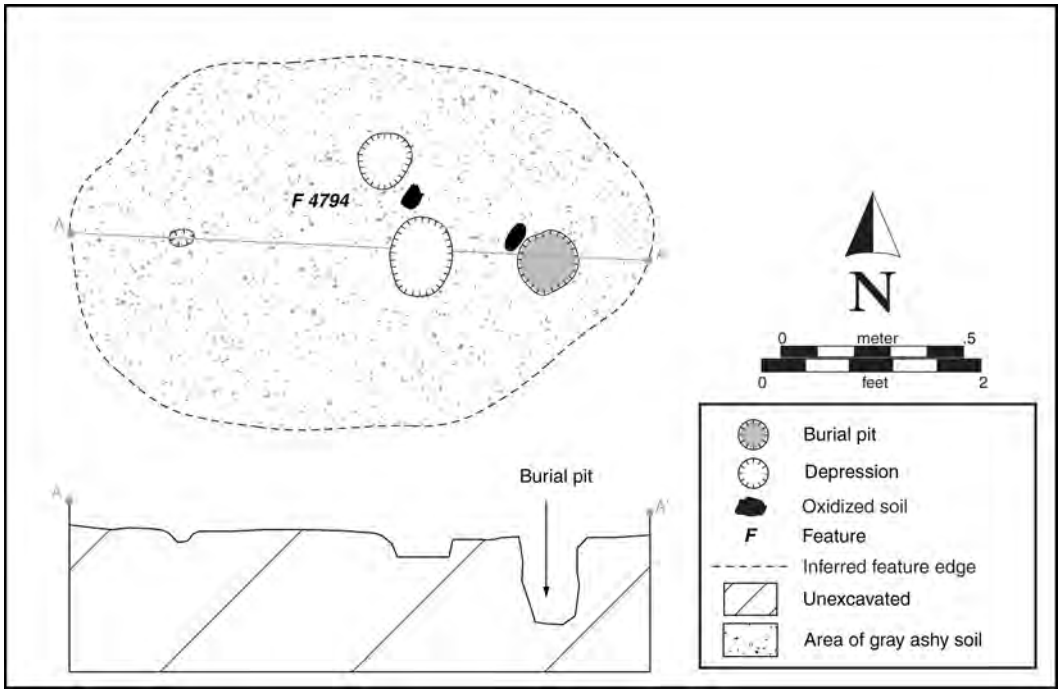

Figure C.41. Plan map and cross section of Feature 4794, Locus D, showing surrounding area with ashy soil.

of darkened soil and ash. The backhoe removed the upper portion of the fill in the western half of the feature during stripping excavations, although the base remained largely intact. It was located 6.2 m north of the southwest corner of the stripping unit. The top of the feature originated approximately 24 cm below the ground surface and was not intrusive on any other features.

MODE OF INTERMENT: Primary cremation

EXCAVATION METHODS: This feature consisted of a main feature—a shallow, rectangular pit containing darkened soil, ash, and burned bone—and two subfeatures, both pits extended beneath the base of the main pit. The main feature was excavated as a single level in accordance with the burial-excavation methods outlined in Chapter 3. The subfeatures were excavated using the same methods but were separately recorded; the materials collected from the main feature and the subfeatures were assigned different PD numbers. The weight of the cremated remains was not recorded.

FILL: The fill of the main feature area consisted of a gray-brown silty clay with charcoal and a small number of calcined bone inclusions. Subfeature 1 contained primarily ash, with a small amount of bone and little soil. Subfeature 2 contained dark gray-brown silty clay with charcoal and bone inclusions, identical to that of the primary feature. No disturbances from root or rodent activity were noted. No artifacts were recovered.

BURIAL PIT DESCRIPTION: Feature 4798 was subrectangular in plan, with a flat base and inward-sloping side walls on the eastern edge (Figure C.42). As noted, much of the western half of the feature, including the side walls, was removed by the backhoe. Even so, a fairly accurate outline of the feature plan was inferable from the intact floor. As determined from the inferred plan, the main feature measured roughly 150 by 80 cm, with the long edge oriented on an east–west axis. The depth in the main feature was 10 cm on the eastern side, but, as stated above, much of the upper portion had been removed during mechanical stripping. The walls (in the eastern half) and base were heavily burned and blackened, but not oxidized. Presumably, the walls removed by the backhoe also had been blackened.

Both subfeatures were circular in plan. Subfeature 1 exhibited straight side walls and a flat base. It measured 28 cm in diameter, with a maximum depth of 50 cm. Subfeature 2 was shallow and basin shaped, with inward-sloping side walls and a rounded base. It measured 21 cm in diameter, with a maximum depth of 10 cm. The fill of Subfeature 2 was the same as that of the primary feature. Both features probably functioned as postholes. A small amount of calcined bone was recovered in Subfeature 1, but the quantity was too small to indicate a subfloor burial pit.

BURIAL TREATMENT: This feature consisted of a subrectangular deposit of blackened soil and ash that probably marked the location of a primary cremation area. The presence of a small amount of calcined human bone, along with evidence of exposure to high temperatures in the side walls and base, supports the interpretation of a primary location of cremation. The calcined bone, which was recovered in Subfeature 1, could not be identified as to the age or sex of the deceased individual. Those remains presumably resulted from incomplete gleaning of the human remains after one or multiple cremation episodes.

Subfeature 1 and 2 probably functioned as postholes that presumably supported a funerary pyre. The two subfeatures were located in the eastern half of the feature, possible suggesting the placement of the pyre in that portion of the cremation area. It is possible, however, that additional postholes had been present in the western portion of the feature but were later removed or obscured as a result of bioturbation or mechanical disturbance.

Overall, the accumulated evidence from this feature suggests that one or more deceased individuals were placed on a pyre (possibly constructed in the eastern half) and set aflame in this location, along with mortuary offerings, after which the cremated remains were gleaned and interred in a secondary location. The cremated remains may have been interred in one of the many secondary cremation pits in the vicinity. The low frequency of burned bone and artifacts suggests that the primary cremation pit had been thoroughly gleaned after its final use.

DATING: None

ASSOCIATED FEATURES: None

Feature 4850

LOCATION: Feature 4850 was identified during Phase 2 mechanical stripping in the southwest portion of Stripping Unit 3035 (see Figure C.1). The backhoe scraped and fractured the base of the inverted vessel overlying the cremated remains during the stripping excavations. This feature, which abutted an inhumation (Feature 4886) on the north side, was located 4.5 m north and 5.5 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 11 cm below the ground surface. It was located near the edge of an ADOT borrow pit.

MODE OF INTERMENT: Secondary urn cremation (inverted vessel)

EXCAVATION METHODS: Once the inverted vessel was exposed during stripping, the remaining fragments of the urn and its contents were collected, and the remainder of the feature fill was excavated as a single unit. The fragmented vessel and the cremated remains were separately

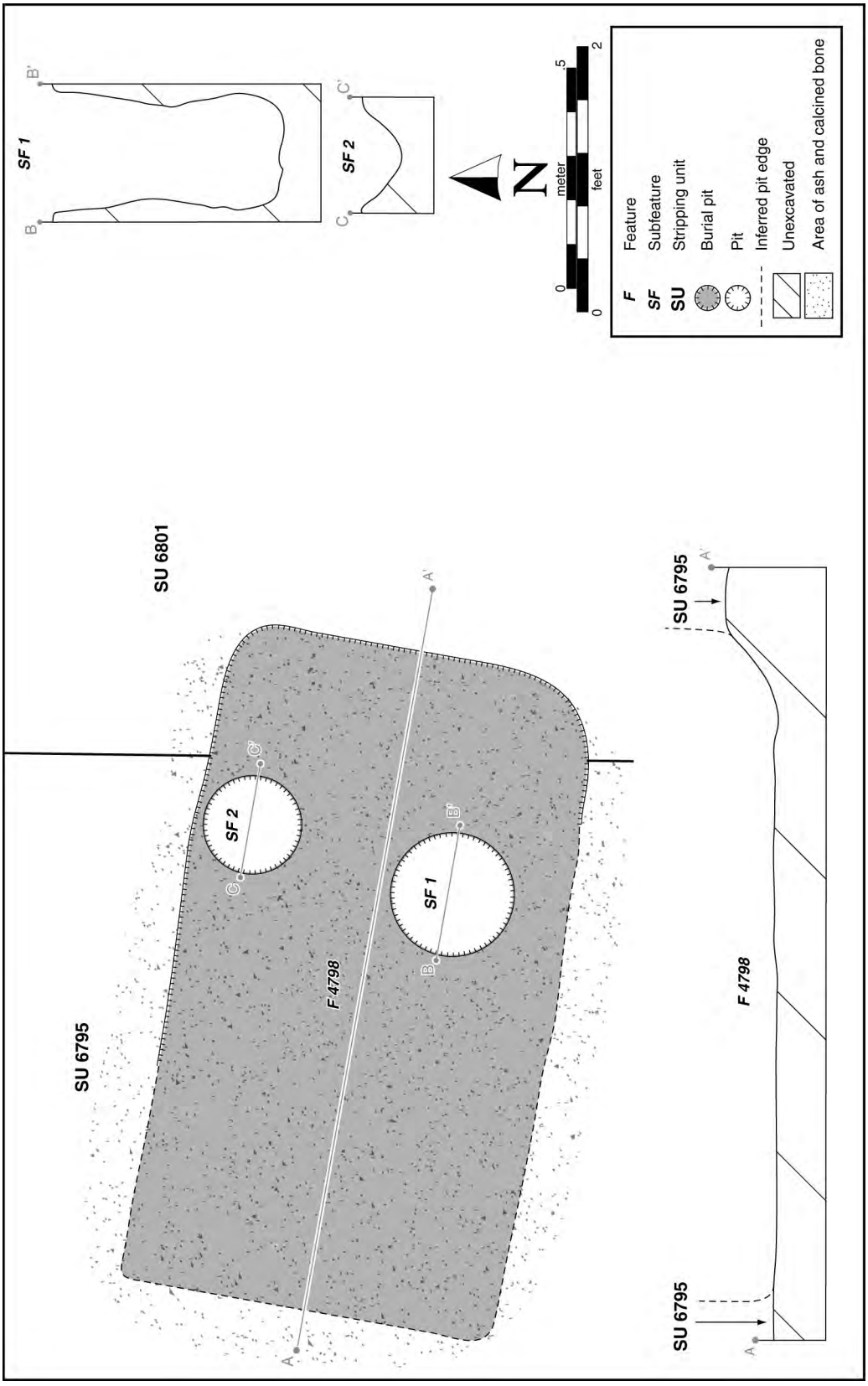

Figure C.42. Plan map and cross section of Feature 4798, Locus D, along with cross section of Subfeatures 1 and 2.

collected. The remainder of the burial put was defined and excavated in accordance with the burial-excavation methods outlined in Chapter 3.

FILL: The fill consisted of loose, brown sandy loam with a few gravel inclusions. Moderate disturbances from root, insect, and rodent activity were observed. No artifacts were recovered in the fill, other than the cremation urn.

BURIAL PIT DESCRIPTION: The burial pit was circular, with variably straight to slightly inward-sloping walls and a relatively flat base (Figure C.43). The pit measured 38 by 32 cm in plan, with a minimum depth of 19 cm.

BURIAL TREATMENT: The pit contained a secondary urn cremation of an adult female. The urn, a plain ware jar with a low neck and micaceous paste, was placed in an inverted position over the cremated remains in the base of the pit and covered with fill. The absence of burning on the pit walls or base suggests that this was not the primary site of cremation, indicating a secondary mortuary deposit. The total weight of the cremation remains was 554 g.

DATING: None
ASSOCIATED FEATURES: The feature abutted an inhumation, Feature 4886.

Feature 5992

LOCATION: Feature 5992 was identified during Phase 2 mechanical stripping in the west-central portion of Stripping Unit 6795 (see Figure C.1). The backhoe truncated the upper portion of the feature during stripping. It was located 8.8 m north and 4.7 m east of the southwest corner of the stripping unit. The top of the feature

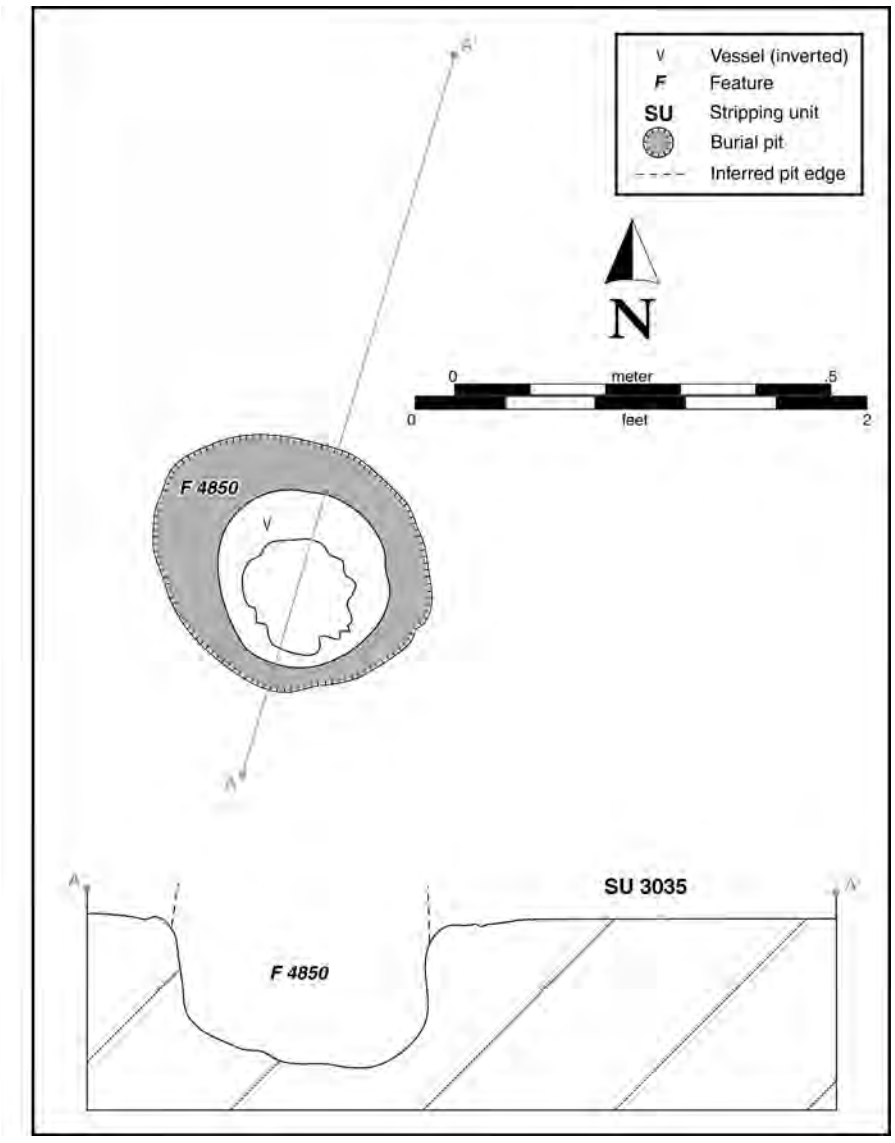

Figure C.43. Plan map and cross section of Feature 4850, Locus D.

originated approximately 14 cm below the ground surface and was not intrusive on any other features.

MODE OF INTERMENT: Secondary pit cremation
EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The feature was removed in a single level, as defined by the outline of the burial pit. The weight of the cremated remains was not recorded.

FILL: The burial fill consisted of dark silty loam with ash and charcoal flecks. The base of the pit exhibited evidence of burning, but the quantity of burned soil present was not sufficient for inferring in situ incineration of the cremated remains. Minor disturbances from root and insect activity were observed. No artifacts were recovered in the fill.

BURIAL PIT DESCRIPTION: The burial pit was slightly ovoid in plan, with a northwest–southeast orientation (Figure C.44). The remaining portion of the pit exhibited straight side walls and a flat base, although the upper walls were removed before the feature excavation. The pit measured 56 by 45 cm in plan, with a minimum depth of 4 cm.

BURIAL TREATMENT: The burial contained a secondary deposit of cremated remains of an individual of unknown age or sex. The cremated remains were placed in the base of the pit and filled in with soil. The base of the pit exhibited burning, but it is unlikely that the initial cremation of the individual occurred in this location. If the cremated remains were deposited in the pit soon after their incineration, the heat exposure may have caused some burning of the soil.

DATING: None

ASSOCIATED FEATURES: None

Feature 7847

LOCATION: Feature 7847 was identified during Phase 2 mechanical stripping near the northeastern edge of Stripping Unit 6799 (see Figure C.1). It was located 14.9 m northwest and 6.75 m northeast of the southernmost corner of the stripping unit. The top of the feature originated approximately 20 cm below the ground surface and was not intrusive on any other features.

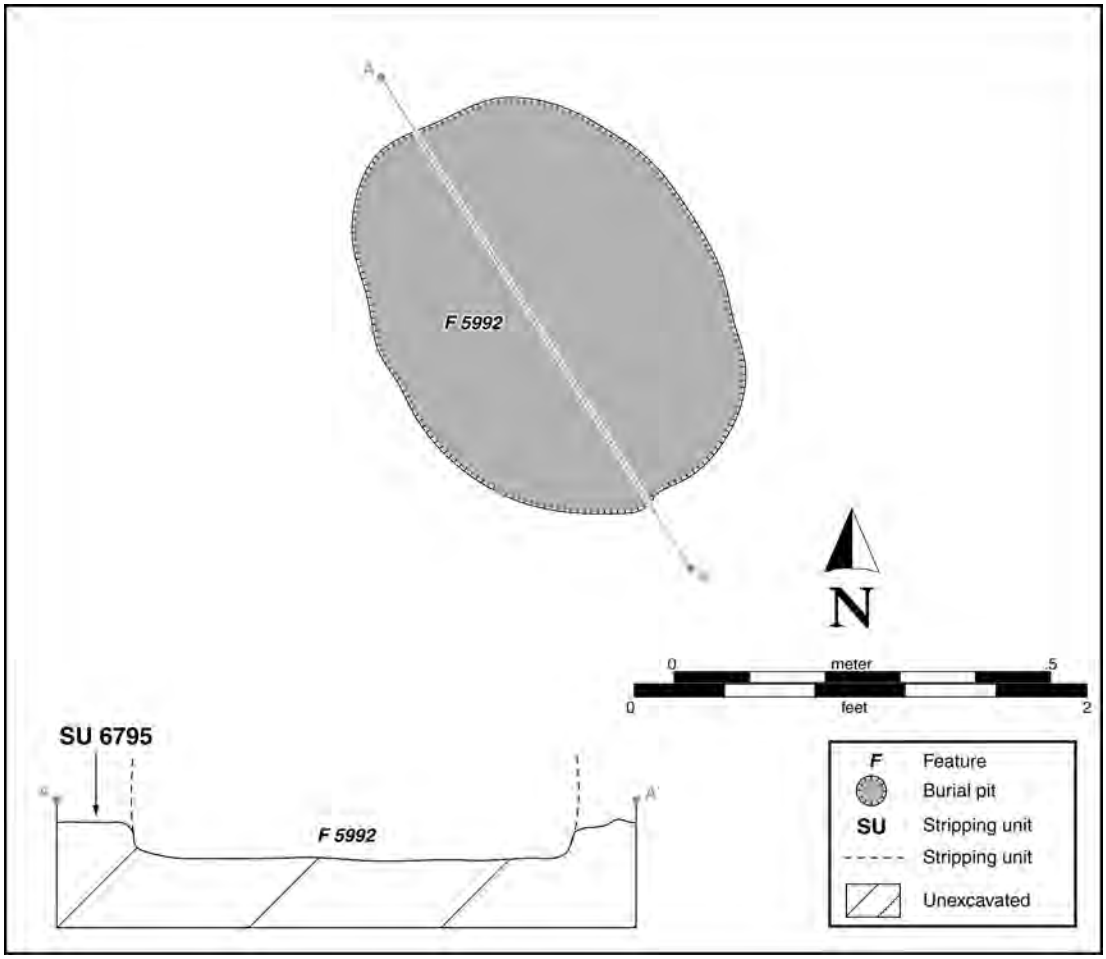

Figure C.44. Plan map and cross section of Feature 5992, Locus D.

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The feature was removed in a single level, as defined by the outline of the burial pit. The weight of the cremated remains was not recorded.

FILL: The fill consisted of dark brown, very compact, hard silty clay. Charcoal flecks were present in the fill. The cremated bone was heavily pulverized, and only a small amount of bone was recovered. No disturbance from root or rodent activity was observed, and no artifacts were recovered in the fill.

BURIAL PIT DESCRIPTION: The pit was ovoid and elongated in plan, with an east–west orientation and a shallow, basin-shaped cross section, i.e., inward-sloping sides and a rounded base (Figure C.45). The pit measured 35 by 20 cm, with a depth of 8 cm.

BURIAL TREATMENT: This feature contained a secondary deposit of cremated remains of an individual of unknown age or sex. The absence of burning in the pit walls or base suggests that this was not the primary site of cremation, indicating a secondary deposit. The cremated remains were placed in the base of the pit and covered with fill.

DATING: None

ASSOCIATED FEATURES: None

Feature 10,674

LOCATION: Feature 10,674 was identified during Phase 2 mechanical stripping near the center of Stripping Unit 6795 (see Figure C.1). It was located 10 m north and 9.5 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 18 cm below the ground surface and was not intrusive on any other features.

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The feature was removed in a single level, as defined by the outline of the burial pit.

FILL: The fill consisted of moderately consolidated, brownish red silty sand. Human remains consisted of a substantial amount of mostly incompletely incinerated bone. A burned bone awl was recovered in the vicinity of the remains. No charcoal or other inclusions were observed in the feature fill. No bioturbation from root or rodent activity was observed.

BURIAL PIT DESCRIPTION: The burial pit was circular in plan, with straight to slightly inward-sloping walls and a flat base (Figure C.46). The pit measured roughly 30 cm in diameter, with a depth of 13 cm.

BURIAL TREATMENT: The pit contained a secondary deposit of cremated remains of a middle-aged adult (age range is indeterminate) of unknown sex. The absence of burning on the pit walls or base suggests that this was not the primary site of cremation, indicating a secondary mortuary deposit. The burned awl was probably included in the crematory fire and interred in the base of the pit with the cremated remains. The total weight of the cremated remains was 817.8 g.

DATING: None

ASSOCIATED FEATURES: None

Feature 10,711

LOCATION: Feature 10,711 was identified during Phase 2 mechanical stripping in the south-central portion of Stripping Unit 6789 (see Figure C.1). It was located 1.4 m north and 8.2 m east of the southwest corner of the stripping unit. The top of the feature originated approximately 20 cm below the ground surface and was not intrusive on any other features.

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: The feature matrix was excavated in accordance with the burial-excavation methods outlined in Chapter 3. The feature was removed in a single level, as defined by the outline of the burial pit.

FILL: The fill consisted of loosely consolidated, reddish brown sandy silt. No artifacts, charcoal, or other inclusions were recovered in the feature fill. Evidence of moderate insect disturbance was observed in the base of the pit.

BURIAL PIT DESCRIPTION: The burial pit was circular in plan, with slightly inward-sloping walls and a rounded base (Figure C.47). The pit measured 23 by 28 cm in plan, with a depth of 13 cm.

BURIAL TREATMENT: This feature contained a small secondary deposit of partially cremated remains of an individual of unknown age and sex. The cremated remains were placed in the base of the pit and covered with fill. The absence of burning in the pit indicates that the pit was not the primary location of cremation, indicating a secondary mortuary deposit. The total weight of the cremated remains was 64 g.

DATING: None

ASSOCIATED FEATURES: None

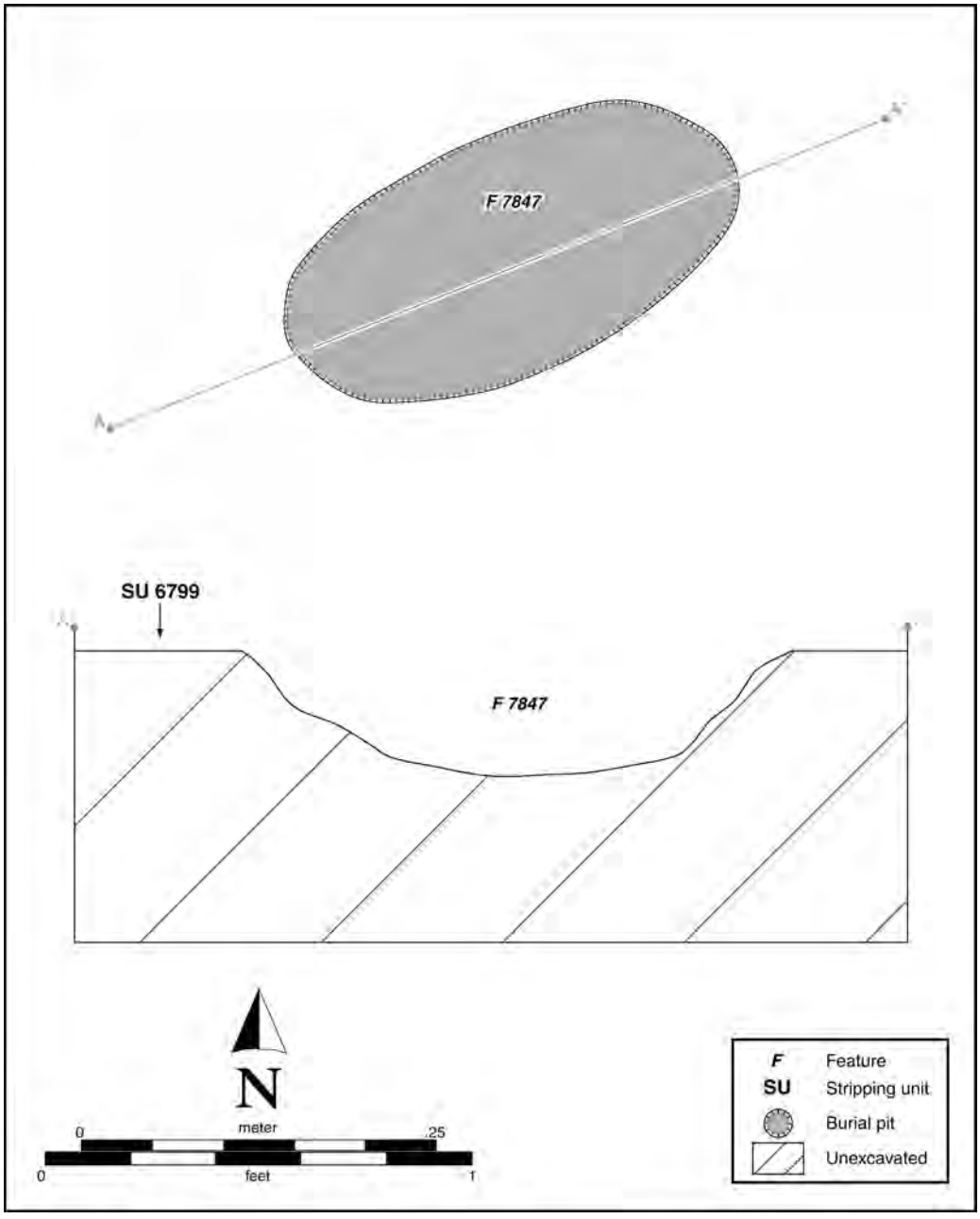

Figure C.45. Plan map and cross section of Feature 7847, Locus D.

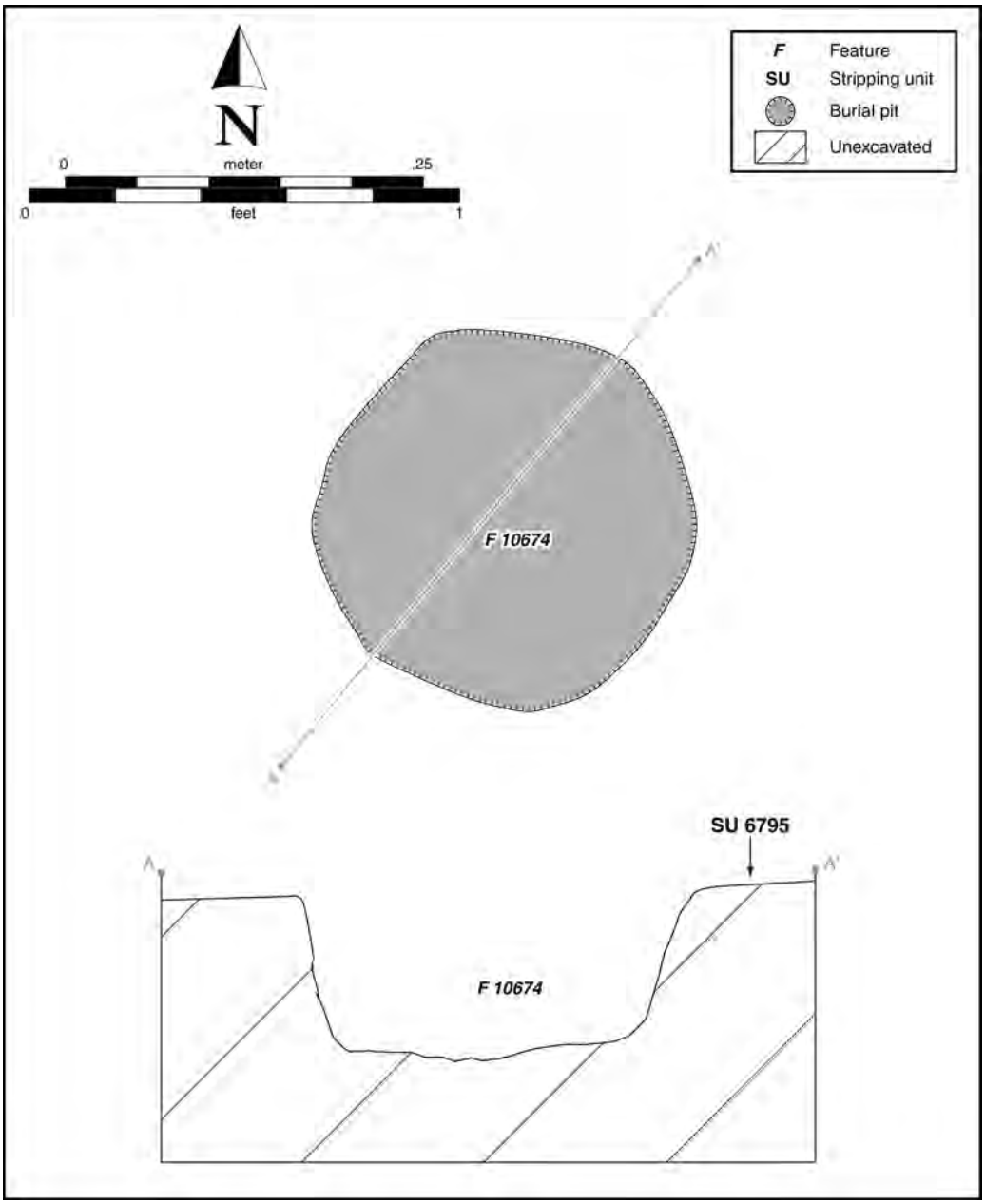

Figure C.46. Plan map and cross section of Feature 10,674, Locus D.

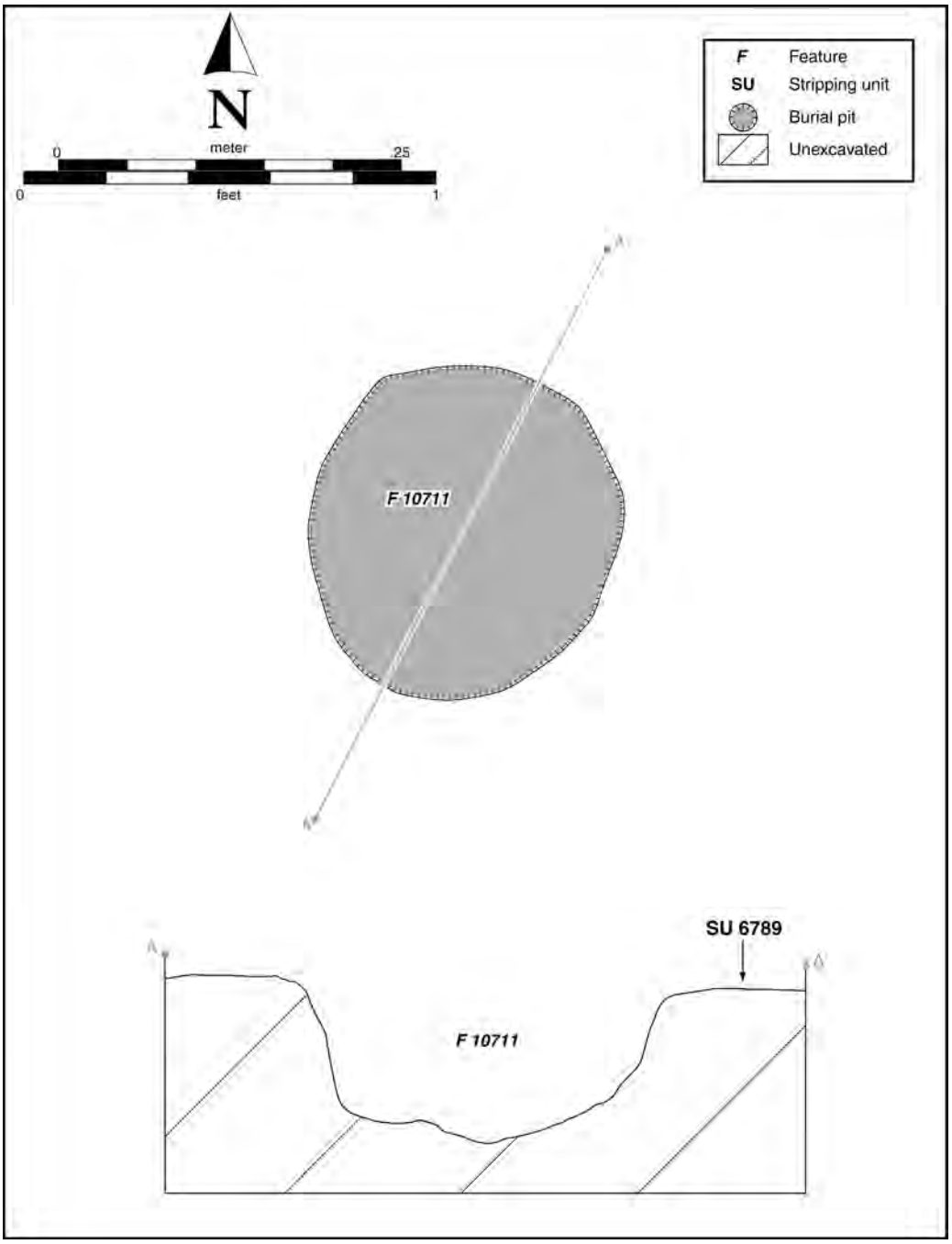

Figure C.47. Plan map and cross section of Feature 10,711, Locus D.

Locus E

Cremations

Feature 380

LOCATION: Feature 380 was identified during Phase 1 during trench excavation near the southern end of Trench 375, less than 1 m north of another secondary pit cremation (Feature 381; see Figure C.1). The backhoe cut through the feature and exposed it in the west wall of the trench; an estimated one-third to one-half of the burial pit was removed during the trench excavation. The top of the feature originated at 20 cm below the site surface and was not intrusive on any other features.

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: Once the feature was identified in the western wall of Trench 375, all loose sediment that had accumulated in the trench near the feature was screened with a 1/8-inch screen. In order to expose the burial pit in plan, a 1-by-2-m test pit (Test Pit 396) was then placed directly over the remains in the west wall of the trench; i.e., the eastern wall of the unit corresponded to the western wall of the trench. The unit was oriented north–south to match the orientation of the trench and was extended to 2 m in length to encompass both Feature 380 and nearby Feature 381. The roughly 40 cm of fill overlying the feature within the test pit was removed without screening. Once the top of the burial pit had been exposed, the feature was fully excavated and collected as a single level, as defined by the pit outline. Because discovery of this feature occurred during the Phase 1 stage of this project, a bioarchaeologist was not present during the excavation to oversee the burial removal or in-field recording. The weight of the cremated remains was not recorded. For additional excavation details, see the discussion of burial-excavation methods in Chapter 3.

FILL: The fill consisted of grayish brown, ash-laden, silty sand with a loose consistency. The few inclusions observed in the feature matrix included pea-sized, subrounded gravels and flecks of charcoal. Bioturbation was evidenced by the presence of a rodent hole and many fine rootlets (from a mesquite tree above the feature). Calcined bone was recovered in the base of the burial pit, including cranial and long-bone fragments. A plain ware rim sherd and body sherd also were recovered; these may have part of the mortuary deposit.

BURIAL PIT DESCRIPTION: The feature consisted of a small, discrete pit that was readily defined by the presence of ash and calcined bone, a portion of which was removed (Figure C.48). The remaining portion of the pit indicates that it was circular in plan, with an estimated diameter of 33 cm, based on the visible portion. The maximum depth of the pit was 22 cm, with a rounded, basin-shaped profile in cross section.

BURIAL TREATMENT: This feature contained the secondary deposit of cremated remains of an adult (age range is unknown) of indeterminate sex. The cremated remains were placed in the base of the pit and covered with fill. The absence of burning on the pit walls or base suggests that this was not the primary site of cremation, indicating a secondary mortuary deposit. Two plain ware jar sherds (a rim and a body sherd) also were recovered, but it is not clear whether they derived from the same vessel. These sherds may have derived from one or two jars interred with the human remains as part of the mortuary deposit, although we are unable to infer this with certainty, given the high level of bioturbation and mechanical disturbance. Given the close spatial association, this feature and Feature 381 may have been interred at the same time or within a short period. The two interred individuals may have been part of the same kin group or other social group.

DATING: None

ASSOCIATED FEATURES: Another secondary pit cremation, Feature 381, was located 92 cm southeast of Feature 380.

Feature 381

LOCATION: Feature 381was exposed during Phase 1 trench excavation near the southern end of Trench 375 less than 1 m south of Feature 380, another secondary pit cremation (see Figure C.1). The backhoe cut through the feature and exposed it in the west wall of the trench; an estimated one-third to one-half of the burial pit was removed during the trench excavation (see Figure C.1). The top of the feature originated 24 cm below the surface and was not intrusive on any other features.

MODE OF INTERMENT: Secondary pit cremation

EXCAVATION METHODS: The same burial procedures outlined above for Feature 380 were used to expose and remove Feature 381. The same 1-by-2-m test pit (Test Pit 396) was excavated into the western wall of Trench 375 to expose both of these features. The weight of the cremated remains was not recorded. For additional excavation details, see the discussion of burial-excavation methods in Chapter 3.

FILL: The fill consisted of grayish brown, ash-laden, silty sand with a loose consistency. Pea-sized, subrounded gravels, flecks of charcoal, and several fragments of human bone were included in the feature fill. Many fine to large

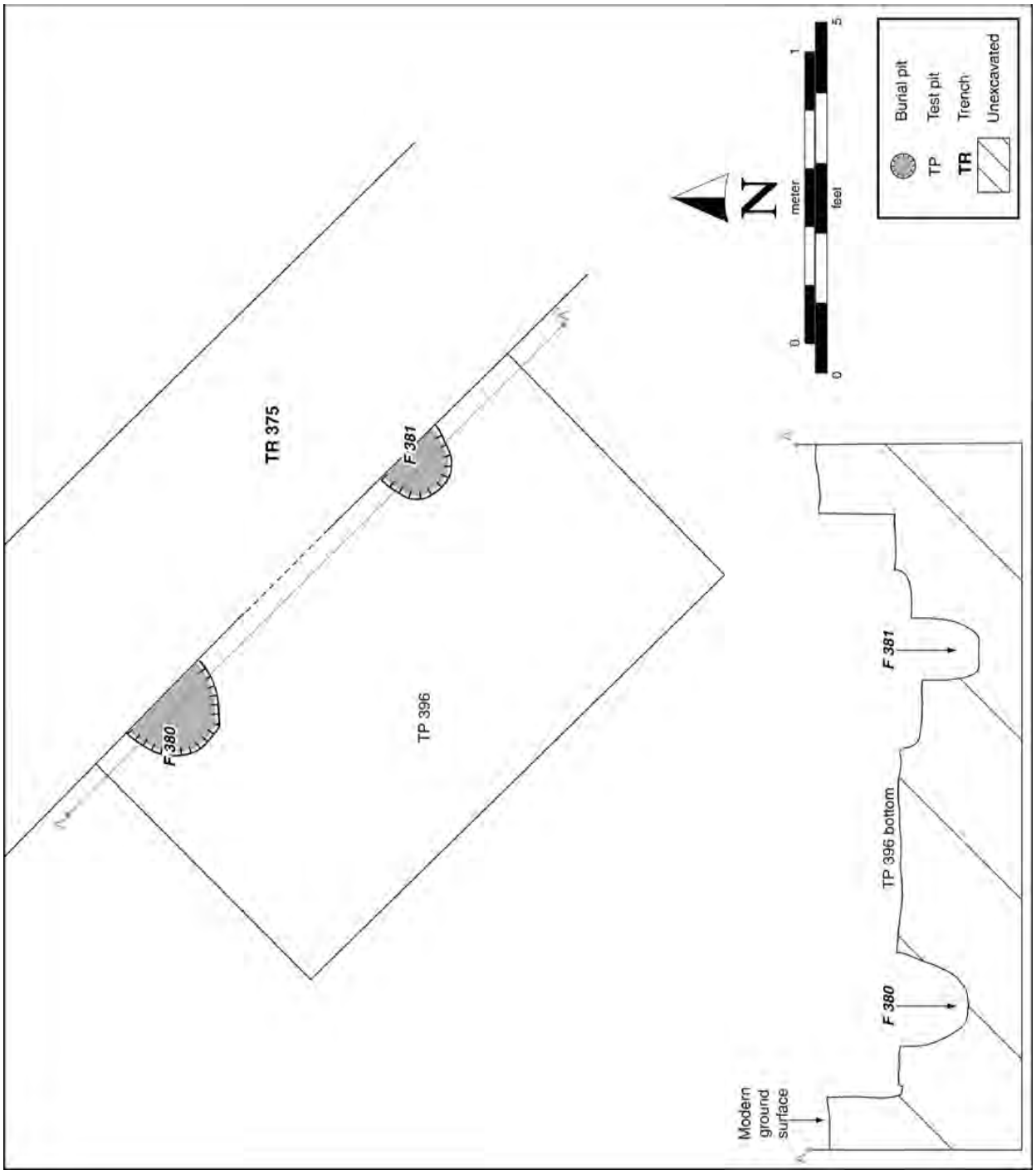

Figure C.48. Plan map and cross section of Features 380 and 381, Locus E.

rootlets (from a mesquite tree immediately above the feature) and a few rodent holes were observed. No artifacts were recovered in the feature matrix.

BURIAL PIT DESCRIPTION: The feature consisted of a discrete pit that was readily defined by the presence of ash and calcined bone, a portion of which was removed during the excavation of Trench 375 (see Figure C.48). The remaining portion of the burial pit indicated a circular pit in plan, with an inferred diameter of 24 cm. The pit, which had a maximum depth of 23 cm, had straight to slightly inward-sloping side walls and a flat base.

BURIAL TREATMENT: This feature contained a secondary deposit of cremated remains of a child (age range is unknown) of indeterminate sex. The cremated remains were placed in the base of the pit and covered with fill. The absence of burning on the pit walls or base suggests that this was not the primary site of cremation, indicating a secondary mortuary deposit. Given the close spatial association, this feature and Feature 380 may have been interred at the same time or within a short period. The two interred individuals may have been part of the same kin group or social group.

DATING: None

ASSOCIATED FEATURES: Another secondary pit cremation, Feature 380, was located 92 cm northwest of Feature 381.

APPENDIX D

The Historical Period at Mescal Wash: Linear Sites in the Project Area

Rein Vanderpot

The Cienega Creek and Mescal Wash confluence area was not only a favored locale during prehistory but also part of a busy transportation and communication conduit during the historical period; it still is so now. Cienega Creek was known as Ciénega de los Pimas during the Spanish period. At that time, the point where the creek turns to the west near the southern foothills of the Rincon Mountains (i.e., the greater site area) was used as a camping and watering stop for soldiers and settlers alike (Dobyns 1981:18; Officer 1987:15: Wagoner 1975:151). Widespread Apache hostilities in the 1830s curtailed travel through the area, but people continued to use Cienega Creek as a watering and rest stop during the Euroamerican period. The Mormon Battalion passed by the creek in 1846, building the first real wagon road across southern Arizona (Dobyns 1981:18). In 1855, Lieutenant Parke identified Ciénega de los Pimas as a dependable source of water between Tucson and the San Pedro River (Albright 1921). In 1857, the Butterfield Overland Mail Company built a station at Cienega Creek, named Cienega or, alternatively, Seneca Springs or Senicky. The Southern Pacific Railroad (SPRR) reached this station in 1880, establishing the Pantano railroad stop, less than1.5 mile northwest of (downstream from) the Mescal Wash site (Myrick 1975). In the early 1900s, through use of segments of older trails and roads, the Dixie Overland Highway was mapped through the area. Facilitating automobile travel from coast to coast, the road was eventually designated U.S. Highway 80. In 1946, the El Paso Natural Gas Company installed a high-pressure gas line, following much of the same route between Texas and California.

None of the historical-period activities has left archaeological traces behind, except for the railroad, the highway, and the gas line, which are briefly discussed in the following sections.

AZ CC:16:24 (ASM) (El Paso Natural Gas Line 1100)

The El Paso Natural Gas (EPNG) Line 1100 pipeline was constructed in 1946 and was the first pipeline to distribute natural gas from Texas to California (Baker and Jones 2004). The pipeline is depicted running parallel to Interstate 10 (I-10) and through the Mescal Wash site area on the U.S. Geological Survey (USGS) 7.5-minute The Narrows, Arizona, quadrangle (1981). Western Cultural Resource Management, Inc. (WCRM) recorded the pipeline segment in Arizona as historical-period site AZ CC:16:24 (ASM) during the Ingress/Egress Routes (I/E) road survey conducted in 2001 for the AT&T NexGen/ Core Project (Baker and Jones 2004; Jones 2008). The site was considered in excellent condition as it was still a functional gas line.

AZ FF:9:17 (ASM) (State Route 80 [U.S. Highway 80/Dixie Overland Highway-)

AZ FF:9:17 (ASM) is the site designation (as consolidated by the Arizona State Museum [ASM] in 2001) for all in-use and abandoned portions of Historic U.S. 80 and the Dixie Overland Highway within southeastern Arizona.

Phase 1 trenching and Phase 2 backhoe stripping in Locus A exposed the remnants of a paved road paralleling I-10. The abandoned roadbed was mapped over approximately a 200-m length (see Figure 3.1). Partially buried, it consisted of an elevated asphalt road bed (designated Feature 8205), extending roughly from east to west through much of Locus A. It continued west of the locus, connecting with Marsh Station Road (itself an in-use portion of AZ FF:9:17 [ASM]). The asphalt bed of the mapped segment was poorly preserved and had largely been removed in the 1960s when I-10 replaced the road. The portion of the road crossing through the Mescal Wash site was built sometime during the mid-1920s to the early 1930s (ASM Site Card, AZ FF:9:17). U.S. Highway 80 (later State Route 80) began its existence in the early 1900s as the Dixie Overland Highway (Keane and Bruder 2004). Conceived by the Automobile Club of Savannah in 1914, and plotted to the Pacific by 1917, the Dixie Overland Highway stretched coast to coast from Georgia to California. Within southeastern Arizona, the highway followed the same general direction as the Mormon Battalion's 1846–1847 route, incorporating many segments of older trails, roads, and highways. In 1925, the Dixie Overland Highway alignment was designated U.S. 80 (Weingroff 2004). In the 1930s, the U.S. 80 portion through Empire Valley was realigned and, for the first time, paved. The realignment in the vicinity of the project area was much straightened in comparison to the older, meandering alignment. The Locus A segment (as well as four other abandoned segments recorded in the site vicinity [Kwiatkowski 1996:6–8; Strohmayer et al. 2005:14–25]) and the Marsh Station Road were associated with this 1930s alignment. Between 1958 and 1964, U.S. 80 was converted into a four-lane divided highway, which eventually became I-10.

AZ Z:2:40 (ASM) (Southern Pacific Railroad Alignment)

AZ Z:2:40 (ASM) is the designation for all historical-period segments of the SPRR alignment in Arizona. One in-use segment of the line (now the Union Pacific Railroad [UPRR]) crossed northwest–southeast through the Mescal Wash site. The railroad passed between Loci F and G on the north side and through Loci D and E in the southern portion (see Figure 3.1). The SPRR alignment through southeastern Arizona was constructed during the first half of 1880, utilizing the naturally elevated grade between the San Pedro and Santa Cruz Valleys (Myrick 1975:57–58). Stations were established at Pantano and Mescal, approximately 1.5 miles northwest and 7 miles northeast of the Mescal Wash site, respectively. Between 1880 and 1892, the SPRR alignment was immediately north of Mescal Wash and roughly parallel to it. After severe floods during the 1880s, the route was realigned in 1892, acquiring the pronounced southern loop that is the current alignment of the UPRR (Myrick 1975; Janus Associates, Inc. 1989). This 1892 realignment crossed through the Mescal Wash site.

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