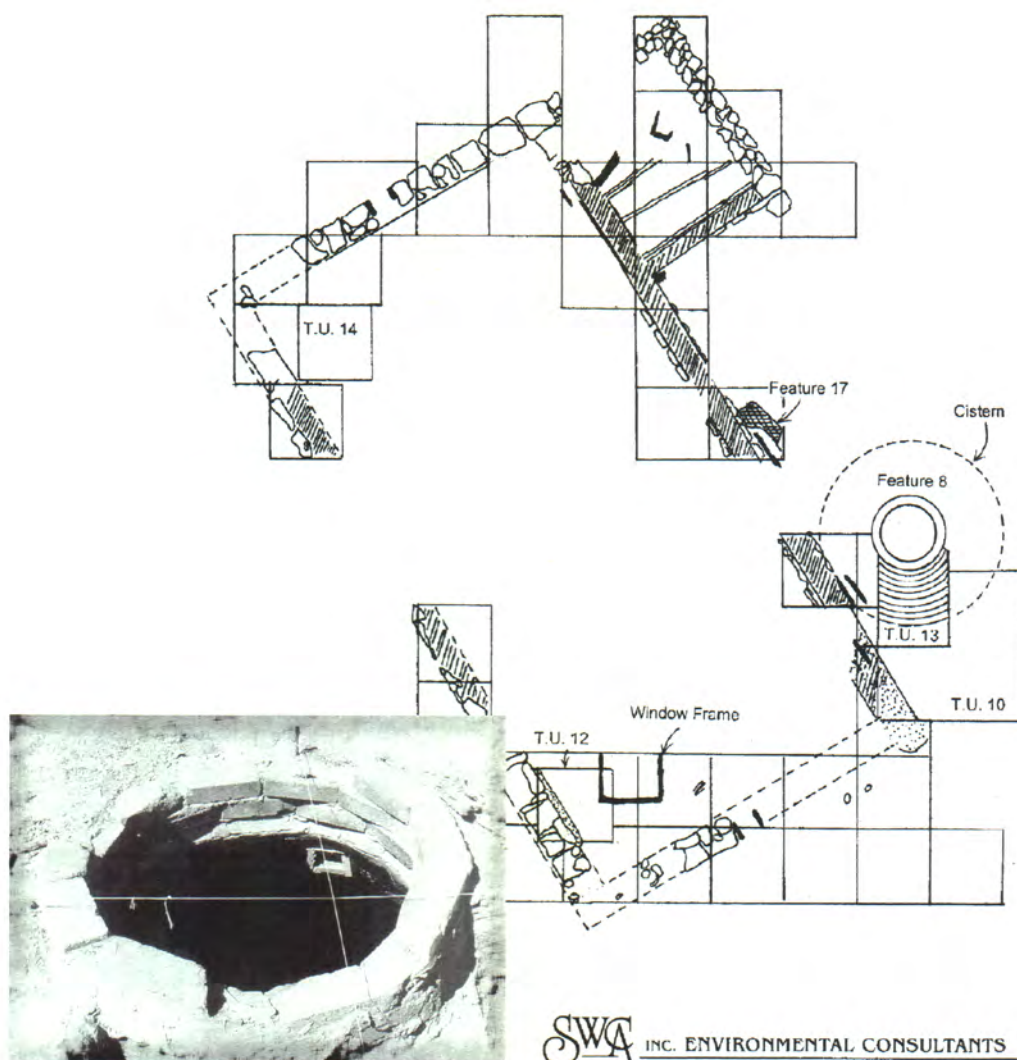


TECHNICAL SERIES
2000-2

Data Recovery Excavation of LA 66922 at Alamogordo, Otero County, New Mexico



SWA INC. ENVIRONMENTAL CONSULTANTS

New Mexico State Highway and Transportation Department





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**Data Recovery Excavation of LA 66922
At Alamogordo, Otero County, New Mexico**

SP-4916(202), CN 3650

Prepared for the New Mexico State Highway and
Transportation Department by

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Performed under
CPRC Excavation Permit No. SE-141

NMCRIS No. 70082

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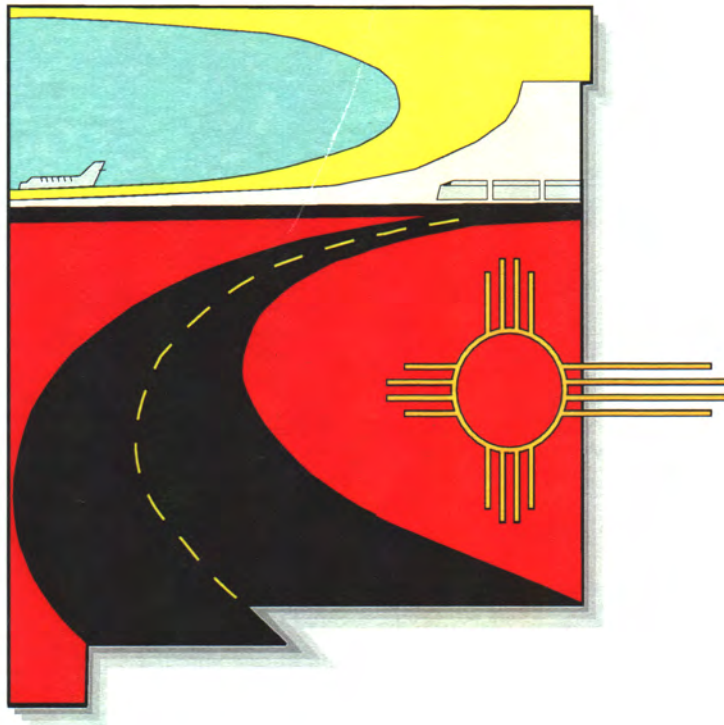
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Abstract

In 1998, SWCA, Inc. conducted data recovery investigations at LA 66922, a large multiple homestead site north of Alamogordo in Otero County, New Mexico. The investigation was completed at the request of the New Mexico State Highway and Transportation Department, prior to construction of the Alamogordo Relief Route.

Investigations at LA 66922 consisted of a program of surface collection, shovel scraping, hand excavation of units, and backhoe trenches. Seven surface collection units were defined at artifact concentrations and covered 51 sq. m. Shovel scraping was conducted in a number of areas but primarily to define the extent of a house foundation. A total of 47.5 sq. m was shovel scraped. Nineteen units were hand excavated, covering 25.5 sq. m. Five backhoe trenches, each 60 cm wide, were excavated (for a total trench length of 55 m). Thirty-nine features were recorded (as opposed to seven features identified during the survey and testing phases of the project). The features included house foundations, cisterns, roads, fence lines, trash dumps, artifact clusters, rectangular berms, ash stains, rock alignments, a diversion dam, a culvert, a dugout, a privy, a pump house, and a water tank foundation. Many historic artifacts were recovered but they represent a small fraction of the total site assemblage. A few prehistoric sherds and flaked stone artifacts were also recovered.

The excavations and archival historic research for LA 66922 identified three homesteads occupied during the early 1900s. A fourth homestead, though nearby, did not fall within the site boundaries. Three of the homesteads in the section were established at a time when Alamogordo's economy had been hurt by loss of railroad and lumber jobs, causing city leaders to encourage other types of economic activity. The fourth homestead predated the town's economic downturns. Thus, the homesteads lend support to the theory that farming was part of a deliberate attempt to diversify

the local economy - but also support the notion that farmers were interested in the area before the local economic downturns of 1905 and 1907.

The study revealed that substantial amounts of labor had been devoted to the homesteads, creating permanent homes, and that the homesteading was not merely for land speculation. The artifact assemblage suggests that the occupants of the homesteads were solidly middle class and had ready access to a variety of goods, but that life on the "frontier" still required a degree of self-reliance. Shared construction attributes suggest that the same person or persons may have built two of the houses and the two cisterns. One of the homesteads may have been abandoned as early as 1910. The others may have been reoccupied by new owners or by squatters, but were probably abandoned by the mid-1920s. Cartographic evidence indicates that no structures were present in this area in 1950 (suggesting, in two cases, that the houses may have been moved from this location or the materials totally salvaged).

NMSHTD Project No. SP-4916 (202), CN 3650

Excavation Permit No. SE-141

SWCA Project No. 3007-8324

Introduction

Between March 17 and April 15, 1998, SWCA, Inc. Environmental Consultants conducted data recovery at LA 66922 north of Alamogordo, Otero County, New Mexico (Figures 1.1 and 1.2). The project was completed at the request of Mr. Craig Conley of the New Mexico State Highway and Transportation Department (NMSHTD), prior to construction of the Alamogordo Relief Route. The project number for the relief route is SP-4916(202); the control number is CN 3650. The study took place under NMSHTD Contract No. 03790-2 and Cultural Properties Review Committee excavation permit No. SE-141. At the time of the excavation, the portion of the LA 66922 within the relief route right-of-way was owned by the NMSHTD (except for the crossing of the Union Pacific Railroad). The portion of the site within adjacent parcels (and within the right-of-way for the Union Pacific Railroad) was privately owned.

PROJECT PERSONNEL

At the NMSHTD, Mr. Steven Koczan served as point of contact. Mr. Steve Turner of the NMSHTD Tularosa office provided engineering plans and other field assistance, and Mr. Jim Starcher and his crew, of the NMSHTD Roswell office, assisted in defining the right-of-way during the field studies. SWCA staff included David Phillips as principal investigator, Harding Polk as project director and field supervisor, and Stanley Brown, Alison Hancock, Jean Ann Mercer, Trace Stuart, and Bob Swain as crew members. Thomas Morales and Tod Roberts processed the artifacts. Keith Vlastos and William Crews prepared the illustrations for the report, Margaret Ozolins and Laura Paskus produced the draft report, and Brett Houk and Albuquerque Reprographics produced the final report.

GENERAL SITE DESCRIPTION

LA 66922 is northwest of the city limits of Alamogordo, southwest of the intersection of US 54/70 and US 82. The site measures 540 m (northeast-southwest) by 270 m (northwest-southeast), covering about 11.4 ha (28.3 acres). The site consists of a large historical artifact scatter with 39 identified features, the latter including house foundations, a root cellar, fence lines, gravel roads, a privy, artifact clusters, cisterns, ash stains, rock alignments, a well and pump house, earthen stock tanks, water control features, and bridges. The area is undeveloped but is used as an illegal trash dumping area. A Union Pacific Railroad right-of-way, including a single track and maintenance road and bounded by fence lines, cuts northwest-southeast through the northeast portion of the site. A power line easement cuts north-south through the center of the site. A buried telephone line cuts north-south through the northeast end of the site.

PREVIOUS RESEARCH AT LA 66922

LA 66922 was first recorded by Regge Wiseman and Steve Hoagland of the Museum of New Mexico during a 8.2 km (5.1 mi) long by 60 m (200 ft) wide survey of the Alamogordo Relief Route (Wiseman 1988). They described the site as a possible two-generation homestead or settlement with two closely dated components. The first component consisted of an Anglo or Hispanic, Territorial period farmstead consisting of two dugouts and associated trash. Wiseman and Hoagland indicated that this component dated about 1900. The second component consisted of an Anglo or Hispanic, Statehood period farmstead or residence, indicated by a rock foundation for a rectangular house, and associated trash. This component dated to the first half of the 1900s. Including the features noted above, Wiseman and Hoagland identified two dugouts, a cobble foundation for a house, a gravel and adobe foundation (?), two

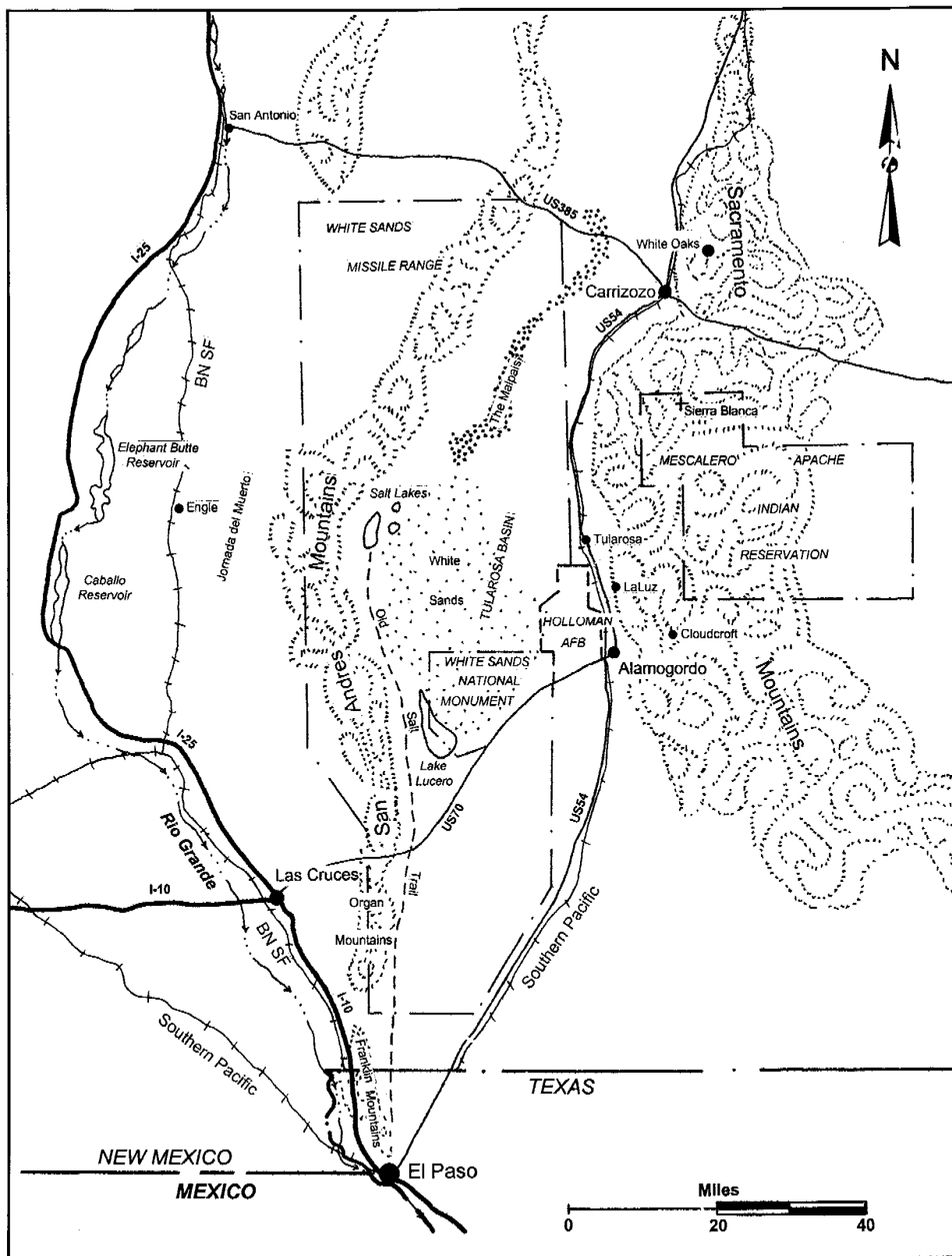


Figure 1.1. The vicinity of Alamogordo, New Mexico.

cement and brick cisterns, a concrete "shop" (possibly a one-stall auto mechanic's garage), an earthen reservoir, and at least five trash accumulations. Wiseman and Hoagland also noted two additional earthen reservoirs, about 500 m to the southwest of LA 66922, that might be related to the occupation of the site. They indicated that hundreds of surface artifacts were present.

In 1992, a survey by Human Systems Research (HSR) examined additional 30 m (100 foot) wide strips of land on either side of the previous survey corridor (Shields 1992). Helen Shields concluded that LA 66922 was eligible for inclusion to the National Register of Historic Places under criterion (d), due to its potential to yield important data on the history of Alamogordo and south-central New Mexico. HSR also conducted test excavations of seven sites along the Alamogordo Relief Route (Webb et al. 1995). LA 66922 was not tested because access was denied by the landowner, but HSR conducted archival research on the site. In 1996, Richard Wessel of HSR developed a data recovery plan for LA 66922, outlining research questions, the historical context of the site, proposed excavation procedures, laboratory and analytical techniques, planned archival research, and the application of the project results toward answering the research questions (Wessel 1996).

NATURAL SETTING

LA 66922 is at an elevation of 1,355 m (4,440 feet) at the east edge of the Tularosa Basin, in the Mexican Highland Section of the Basin and Range Province (NMGS 1996). The Tularosa Basin is a bolson (inward-draining valley). The basin is flanked by the San Andres Mountains to the west and the Sacramento Mountains to the east (Chronic 1997). The surface of the basin consists of alluvium and sand dunes and is underlain by the Quaternary Camp Rice formation. The site is on the bajada (alluvial apron) below and west of Horse Ridge, part of Alamo Peak. The site surface slopes very gently to the southwest. Red Arroyo courses past the northwest edge of the site.

Soils in the area consist of the Tome series, which consists of silty loam soils found on nearly level valley floors (Derr 1981:47). The soils tend to be pale brown

and less than 13 cm (5 inches) thick. Below that, the silt loam is weakly stratified to a depth of 152 cm (60 inches). Derr (1981:48) further describes the soil as "strongly calcareous throughout and moderately alkaline. Permeability is moderately slow, and available water capacity is high."

Soils vary over the site. The area southwest of the railroad tracks consists mostly of the Aztec-Alamogordo complex. Aztec soils are deep, well-drained soils containing gravelly, fine, sandy loam about 13 cm (5 inches) thick (Derr 1981:53); they tend to become more gravelly with depth. Derr (1981:53) notes, "This soil is high in gypsum and is strongly calcareous throughout. Permeability is moderately rapid below a depth of 17 inches [43 cm], and available water capacity is low." Alamogordo soils are similar but slightly deeper, with a high gypsum content. Derr (1981:53) notes,

This complex has low potential for farming. These soils have been used for irrigated crops in some areas, but production of all crops grown was very low. The amount of gypsum limits the selection of crops to those that are very salt tolerant. The gypsum also acts as a barrier to roots, limiting effective rooting depth. The available water is low, and these soils are very droughty. The soils in this complex are unsuitable for any type of water holding structure, such as pit tanks, storage reservoirs, and dams.

In the northeastern portion of the site the soils consist of well-drained silt loam up to 15 cm (6 inches) thick, with pockets of very fine silt loam of the same depth. Derr (1981:69-70) notes,

This soil is moderately alkaline. Permeability is moderately slow, and available water capacity is high. Tilth is good, and the soil can be worked over a reasonably wide range of moisture conditions. The root zone is deep and is easily penetrated by plant roots ... This soil has medium potential for row crops and small grains, and moderate to moderately high yields can be obtained under good management. Irrigation is necessary for row

crops, small grains, pasture or hay ... The potential for wildlife habitat is moderate. This soil produces ... crops that provide food and some cover for a variety of wildlife.

Surface water is rare in the Tularosa Basin, but ground water is fairly close to the surface. Hawthorne-Tagg (1997:17) notes that in 1918, "Wells with good quality and quantity of water averaged from 50 to 100 feet [15 to 30 m] near the base of the Sacramento Mountains. Further out in the basin, the water table was thought to be only 25 feet [8 m] from the surface." The same author also cites early descriptions of underground "rivers" from 1 to 15 m (3 to 50 feet) below the surface. However, this water was often unfit for humans because of its mineral content (Hawthorne-Tagg 1997:18).

The local biotic community is Chihuahuan desert scrub (Brown 1994; Brown and Lowe 1984). Local vegetation includes creosotebush, mesquite, four-wing saltbush, alkali sacaton, greasewood, tansy mustard, bladderpod, devil's claw, yucca, and prickly pear, cholla, and hedgehog cactus. There is evidence that the creosotebush and mesquite have become dominant since the middle 1800s due to overgrazing, droughts, and erosion. Prior to that time, the local biotic community probably was characterized by a grama-tobosa shrubsteppe, including black grama grass, tobosa, and creosotebush (Kuchler 1964). The Sacramento Mountains east of Alamogordo have been important to that city's economy, because of the Montane and Subalpine Conifer biotic communities that have yielded a large supply of timber.

Wildlife in the area includes a variety of birds, reptiles, and mammals. Since the second half of the 1800s, however, cattle and horses have been the economically important species.

The local climate is typical of the Chihuahuan desert, which is characterized by hot summers and mild winters. The region experiences extremely variable precipitation, low humidity, rapid evaporation, broad diurnal-nocturnal temperature range, and abundant sunshine. The Tularosa Basin averages 200 frost-free days per year; local rainfall averages 280 mm (11.3

inches) a year (Beck and Hasse 1969; Tuan et al. 1973; Williams 1986). Slightly over half the precipitation is in July, August, and September as localized, often violent, thunderstorms. The months of March, April, and May are the driest (Williams 1986:45). During the spring, particularly in April, sustained southwesterly winds are common. At present, local farming depends on irrigation.

CULTURAL CONTEXT

The Tularosa Basin was abandoned by prehistoric peoples by A.D. 1450, but the Apache arrived in the area as early as the 1500s. The Mescalero Apaches were an identifiable group by 1700, and effectively controlled the Tularosa Basin, also ranging eastward of the Pecos River and westward to the Rio Grande (Opler 1983). From the late 1600s through the late 1800s, the nomadic Mescalero raided Pueblo, Spanish, Mexican, and Anglo settlements. The Apaches' mobility allowed them to escape mostly unpunished. The Spanish military rarely entered the Tularosa Basin because of their focus on protecting settlements and trade routes along the Rio Grande. There is some evidence that the Franciscans were doing missionary work in the La Luz area as early as 1680 (Anonymous n.d.); in 1719 the mission of Nuestra Señora de la Luz was founded by two Franciscan friars (Julyan 1996:191). Under Mexican rule the Tularosa Basin continued to be an Apache province. In 1873 a reservation was established for the Mescalero near Fort Stanton; the present Mescalero reservation was established in 1883 (Fugate and Fugate 1989:319; Noble 1994:120). It was not until the mid-1880s that the danger of Mescalero raiding came to an end.

After the seizure of New Mexico in 1846 and the discovery of gold in California three years later, the United States sought to explore its new territories and build at least one transcontinental railroad. In 1849, Lt. William F. Smith was ordered to find potential wagon routes across the Sacramento Mountains; he reported that there was no suitable route (Schneider-Hector 1993:41). Non-Native American activity increased in the second half of the 1800s. Williams (1986:112) indicates that from 1855 onward a military road extended through the La Luz-Tularosa area, connecting Fort Stanton to the Doña Ana Post near

Las Cruces. A stage line is also shown along roughly the same route, connecting Mesilla to Las Vegas with stage stops at La Luz and Tularosa (Williams 1986:118). A smaller freight/stage line from Tularosa to Engle dates from 1879.

La Luz was settled in 1860 by Hispanic transplants from the Mesilla valley, who had been displaced by flooding along the Rio Grande (Julyan 1996:191). Tularosa was established in 1862 and flourished with ranching and orchards. By the late 1800s the valley had a substantial population. In the early 1900s a commercial pottery was established in La Luz and gained a national reputation (Fugate and Fugate 1989:326).

After the discovery of gold at White Oaks in 1879, various proposals were floated for a rail line through the Tularosa Basin. In 1895 Charles Eddy organized such a line, leading north from El Paso. Local opposition forced the line to go around La Luz and Tularosa. The line bypassed White Oaks as well, dooming that town to eventual extinction. Instead, Alamo Springs (as Alamogordo was then known) was chosen as the site of the headquarters, repair shop, lumber mill, and tie treating plant for the newly created El Paso and Northeastern (EPNE) Railway. As of early 1898 the settlement consisted of three tents and a handful of inhabitants, but Charles Eddy and his brother John then bought 40 acres (including the spring) from the notorious rancher Oliver Lee. The town site was quickly laid; by June 1898, when the railroad arrived, the population was up to 1,000. The Eddy brothers also built the steep and winding Alamogordo and Sacramento Railway to Cloudcroft, in order to take advantage of the timber in the Sacramento Mountains and of a tourist and health-seeker boom that continued to the 1940s. In 1899 the Tularosa Basin had enough settlers to justify the creation of a new county, which was named after Governor Miguel Otero. By this time Alamogordo had grown to 3,000 residents, but the population then began to level off (Townsend 1998). The Phelps Dodge mining company bought the EPNE in 1905 and moved most of its facilities to other towns, devastating Alamogordo's economy (Myrick 1990). The EPNE was sold to the Southern Pacific Railroad Company in

1924; the Southern Pacific was absorbed by the Union Pacific in 1996.

Alamogordo took another tumble in 1907, the same year Lincoln National Forest was created, when a federal court handed down an injunction against the Alamogordo Lumber Company. Controlled by the Eddy brothers, the company had been cutting timber illegally on Lincoln National Forest lands. When the supply of free lumber dried up, the lumber mill in Alamogordo closed. Local civic leaders tried to encourage diversification of the town's economic base to prevent future collapses of this kind. They promoted agricultural and ranching opportunities by extolling the abundant and cheap land and the shallow aquifer.

Agriculture was nothing new for the area. From the beginning, the Hispanic communities of Tularosa and La Luz had developed extensive acequia systems and had focused on raising fruits and vegetables. The Anglos who arrived in the late 1800s and early 1900s tended to prefer ranching, but a number of farms and orchards sprung up around Alamogordo, taking advantage of the Homestead Act of 1862. Using mostly dry farming methods, these farms and orchards provided fresh fruit and vegetables for the community (Hawthorne-Tagg 1997). Hawthorne notes the existence of two communities, probably comprised of clusters of farming families, in 1909: Fruitvale, about 6 km (4 miles) northwest of Alamogordo, and Farmer's Flats, the same distance west of town along Red Arroyo (1994:20). Unfortunately, a drought hit the area in 1909-1910 (Schneider-Hector 1993:51), hurting the incipient farming enterprises. The drought prompted greater efforts to develop individual and collective irrigation projects. Nevertheless, throughout New Mexico there was a 75 percent failure rate for homesteads as a result of the drought. The rate was even higher in the Holloman Air Force Base area (Hawthorne-Tagg 1997:26).

By the 1920s, farmers had shifted from food products to cash crops such as cotton and alfalfa. Droughts in 1922 and 1934 undoubtedly further hurt agricultural production and the survival rate for homesteads.

By the early 1900s, capitalizing on a health-seeker boom and tuberculosis epidemics (as well as on the

new national railroad grid), sanatoriums sprang up throughout the Southwest. The Fraternal City Sanatorium was built in Alamogordo in 1907 and a second sanatorium was built at Mountainair in 1919 (Williams 1986:130; Hawthorne 1994:19). The Alamogordo sanatorium claimed to be the largest in the United States (Sholly 1971:155). The New Mexico School for the Blind was operating in Alamogordo by 1910, adding a measure of economic stability.

In 1932 the road from Las Cruces past the White Sands to Alamogordo (part of the Southern National Highway) was paved, opening up other economic opportunities. White Sands National Monument was established in 1933, encouraging tourist use of the newly paved road. By 1940, however, the population of Alamogordo was only 3,950 (Williams 1986:137).

In 1942, Alamogordo Army Air Field was established for bombing and gunnery training. B-17, B-24, B-29, and British Royal Air Force planes trained in the desolate and expansive Tularosa Basin (Sale 1997:29; Schneider-Hector 1993). The base was deactivated immediately after World War II, but was resurrected in 1948 as Holloman Air Force Base. The growth of the base in the 1950s and 1960s quadrupled the size of Alamogordo, to over 25,000. The base has been under various commands including the Strategic and Tactical Air Commands and the Research and Development Command. Today, Holloman hosts F-117A "stealth" fighters and is a training base for the German Air Force.

On July 16, 1945, the first nuclear explosion took place at the Trinity Site, at the base of the Sierra Oscura northwest of Alamogordo. The White Sands Proving Ground (later the White Sands Missile Range) has dominated the Tularosa Basin since 1945, including as a missile development and testing facility. The valley's role in the Space Race is reflected in an Alamogordo museum, the International Space Hall of Fame. By 1981 a branch of New Mexico State University had been established in Alamogordo, reflecting the city's continued growth. Although farming, ranching, and timber harvesting continue in the Alamogordo area, the core of the local economy is the extensive military presence in the Tularosa Valley.

Data Recovery Plan and Procedures

RESEARCH ORIENTATION

The basic objective of the studies at LA 66922 was to obtain data from within the right-of-way for the Alamogordo Relief Route, in order to understand the occupation of the site and the lives of the inhabitants. In preparing for the studies, SWCA adopted the "Research Orientation and Data-Recovery Plan" developed for the site by HSR (Wessel 1996:12-13). HSR's plan is reproduced below, with minor editorial changes.

LA 66922 is in an important location with reference to both time and space. Patent records place the initial occupation [of the site] from the first five years of the town of Alamogordo through the boom and decline in 1907 and the recovery years past World War I. These were the formative years of the community, which witnessed a variety of economic adaptations. For the first 10 years the community rode the economic boom of Eddy's entrepreneurial success. It then weathered the crash following Eddy's withdrawal and that of the timber industry and the struggle to recover through the pre-war years.

The site is outside the original town limits by 1 mile (1.6 km). The location offers a different set of opportunities than the town site proper. The early economy of Alamogordo was dependent on the railroad in a manner unlike most of the railroad towns of New Mexico. Where other communities developed as exchange network hubs for surrounding production (e.g., agriculture, minerals, and livestock), Alamogordo was dependent on revenue from the railroad labor force. Local production was minimally developed and was

largely restricted to raising livestock and most assuredly took second place to other economic pursuits of the town. After the crash of 1907, however, agriculture attained a new importance. By the turn of the century, business opportunities were largely [taken] in town, and a call for people who would support the businesses (ranchers, farmers, and miners) began to surface in the editorial pages of newspapers (Sholly 1971:39). The timing and intensity of agricultural development at LA 66922 can be compared to the economic trajectory of the town site to determine the role [the site] played in the historical developments of Alamogordo, as well as to define the economic character of the region.

Another research question may be addressed at LA 66922: the changing perceptions of land as a resource. Given this site's proximity to the border of the Alamogordo township, this and other land in [the area] may be perceived as a commodity rather than as a means of production. Certainly, lands such as this would be subject to land speculation in the hope that an ever-expanding community would increase land values in its periphery. This [trend] is evident for the patented parcels to the south of LA 66922, where the patentees are such civic luminaries as John A. Eddy and William A. Hawkins. John A. Eddy, a long-term partner in the entrepreneurial efforts of this brother Charles, and also general manager of the railroad, and William Hawkins, a respected and accomplished councilor, were unlikely farmers and ranchers. It is probable that they patented the land in a land-speculation enterprise. James Dunn may have done the same for the patent that includes Site LA 66922. He and the other land speculators may

have brought in tenants to provide the labor to "prove up" their patent applications.

The question, then, is to what degree the occupation and economic activities carried out at LA 66922 mirror the patterns of economic development for the town of Alamogordo. This site can [be used to test assumptions about] community and economic development in Alamogordo and its unique development style in the American West.

The question can be addressed through the use of archival and archaeological data. [The model would be supported if one sees] minimal production activities at the site, or only those necessary to prove up the patent. We may also expect a rapid succession of deed exchanges and parcel subdivision as prospects for growth in Alamogordo continued to rise. After 1906, we should see an increase in production activities as the economic [worth] of agrarian production increases with [the loss of importance of] the railway.

Target data from archival sources include the patent and proofs of labor records to determine the nature of the original patent, Grantor/Grantee records to establish the chronology and chain of title, and [data on] land values. Tax records will help develop a picture of the chronology of land improvement. Census data will help determine the occupancy of the site.

Archaeological data will serve to ground truth and refine the documentary record. Economic and domestic activities can be defined over time through the artifact assemblages associated with each feature. These activities are necessary to [establish] whether agricultural production [took place] or the site merely served as a residence. The demographic character of the site through time can also be [examined] through archaeological data. Household composition by gender and age, some indication of ethnicity, and the economic standing of the site occupants can be established from the site assemblage.

Finally, changes in these dimensions can be determined through the occupation history of the site. It is important to compare these data with the historical record, for seldom do historical documents accurately depict the mundane realities of a population. The archaeological record can yield an accurate depiction of these activities and serve to test the accuracy of the historical record or add to that record.

Together, these data, both archival and archaeological, will [illuminate] the economic character of [the occupants'] adaptation to changing economic conditions at the periphery of the town of Alamogordo, during a significant and formative period of [the town's] development.

FIELD METHODS

The field methods utilized at LA 66922 were based on those proposed by HSR (Wessel 1996) but were modified to reflect in-field discoveries and a more precise definition of the right-of-way for the project. The fieldwork included mapping, surface collection, hand excavation, and mechanical excavation. Surface collection and ground disturbing activities were confined to the right-of-way.

The LA 66922 survey datum (a piece of 3/4 inch rebar with aluminized tag) was used as the main mapping datum for data recovery. This datum was tied to a number of permanent survey monuments, include a section center monument and NMSHTD right-of-way monuments. A grid system aligned to magnetic north was imposed over the site and the main mapping datum was designated N500/E500, elevation 100 m. The crew used a K&E optical transit to prepare the site map, which included archaeological information (the locations of features, excavation units, and site boundaries), modern cultural features (roads, the railroad, power lines, etc.), and topographic and drainage information.

The crew began by pinflagging surface artifacts in order to determine their locations and distribution. It quickly became apparent that thousands of artifacts

were present within the right-of-way, so a surface sample was defined and collected. Piece plotting and individual collection was reserved for artifacts likely to provide specific information on date of manufacture, artifact function, or the ethnicity, gender, or status of site inhabitants. In order to sample the remaining artifacts, the field crew established seven judgmental collection units in areas of particularly high artifact density. The units ranged from 2 by 2 m to 4 by 3 m, for a total of 47 sq m. In the area defined as Locus 2 during the survey, and at Features 21 and 22 (two trash dumps), only diagnostic artifacts were collected.

The distribution of hand excavation units was based on criteria such as surface staining, the presence of particularly dense concentrations of artifacts, or the presence of diagnostic items. Thirteen of the hand excavation units measured 1 by 1 m, two units measured 2 by 1 m, two units measured 2 by 2 m, one measured 1.8 by 0.45 m, and one measured 2 by 0.28 m. In addition, two small areas were shovel scraped just north and south of Unit 11, exposing 6.2 sq m, and 38 sq m were shovel scraped at Feature 2. All units were oriented to magnetic north and were excavated by hand, using trowel, shovel, mattock, and dust pan. Unit fill was screened through quarter-inch mesh. Excavation was conducted in 10 cm levels except where natural strata were clearly discernable, and usually continued until no cultural materials were present. When an archaeological feature was encountered, the crew attempted to define the feature and the feature fill was excavated separately. Seven units were cored with a 6.5 cm diameter auger to ensure that no cultural deposits were present at a deeper level. The auger holes ranged from 12 to 64 cm deep. Excavation unit records included excavation unit level forms, soil descriptions, a profile of at least one face in each unit, and photographs.

Backhoe trenching at the site utilized a 70 cm wide toothed bucket. All backhoe excavation was monitored by project personnel, including examination of trench fill for the presence of artifacts or cultural staining. Trench walls were thoroughly inspected for the presence of stratigraphic breaks, exposed features, and artifacts. A representative profile was drawn and the soils were described.

As features were identified, they were assigned feature numbers and recorded on feature summary forms. The form included basic data on feature dimensions, feature matrix, artifacts present, and other characteristics. The feature was also photographed. Features with subsurface deposits were either wholly excavated or sampled.

Collections were bagged by material type, were given a discrete bag number, and were logged onto a bag sheet. Materials from hand excavated units were also bagged by unit number, stratum (if defined), level, beginning and ending elevations, and feature number (if assigned).

Field photographs included duplicate views using black and white print film and color slide film. All photographs were documented using a field photo log.

Safety procedures followed SWCA's *Safety Manual* (Feb. 1998 edition) and OSHA 2226, *Excavating and Trenching Operations*. Trench depth did not exceed 5 feet (1.5 m). Trenches were not left unattended and were refilled on the same day they were opened. A hard hat was worn by the archaeological monitor and other personnel working next to the backhoe. The site is bisected by an active Union Pacific railroad line, so crossing the tracks on foot was prohibited and surface examination of the railroad right-of-way was limited to times when trains were neither visible or audible.

LABORATORY METHODS

Recovered artifacts were processed at the Albuquerque office of SWCA, Inc. Processing involved individually washing artifacts to remove adhering dirt, air drying, and bagging the artifacts in archival polyethylene bags. At this stage, artifacts were checked to ensure that they had been sorted properly. Fragile artifacts were packed with acid-free tissue paper, cotton batting, or both. An acid-free label with provenience data was included in each storage bag. The same information was written in waterproof ink on the bag. The label area from the original field bag was retained in the storage bag, for future reference.

Historical artifacts were divided into ceramics, glass, metal, and "other," and were analyzed at SWCA's Albuquerque office. General analysis included a determination of material type and function. The historical ceramics were analyzed for ware type, decoration, vessel form, paste, glaze, color, part, maker's mark, and function. The glass was analyzed for color, part, vessel form, makers' marks, and function. The metal artifacts were analyzed for type of metal, part, and function. The "other" category includes a variety of materials including leather, plastics, rubber, shell, coal, and brick. Data from the analyses were incorporated into unit and feature descriptions.

The fieldwork yielded faunal material and macrobotanical samples that were conducted by specialists working under subcontracts. The faunal material was analyzed for species, element, presence or absence of burning, presence or absence of butchering, and quantity. The macrobotanical samples were the only non-artifactual samples collected. The macrobotanical analysis included an identification of seeds and wood types.

A few pieces of flaked stone were collected; these were analyzed to determine material type, morphological type, level of reduction, platform type, tool condition, use wear, weight, and other attributes such as heat treatment and evidence for bipolar reduction.

Artifacts were entered into a computerized database (using Microsoft Excel 97) for tracking and analysis. Artifacts and field records from the project will be submitted to the Museum of New Mexico, Santa Fe, for permanent curation.

Data Recovery Units and Features

INTRODUCTION

Figure 3.1 is the general excavation map for LA 66922; Figures 3.2-3.6 are more detailed maps keyed to portions of Figure 3.1. Wiseman (1988) identified five artifact concentrations at LA 66922; the concentrations are shown on his site map. Wessel (1996) numbered the concentrations as Locus 1 through Locus 5, to make it easier to discuss those concentrations individually. Wessel's convention was maintained for Locus 1 and Locus 2, within the right-of-way, but the other artifact concentrations were more clearly defined and were assigned feature numbers during data recovery.

DEFINITION OF LOCUS 1 AND LOCUS 2

Wiseman (1988:24) originally identified Wessel's (1996:8) Locus 1 as a small trash scatter south and east of Feature 2. During data recovery, Locus 1 was expanded to encompass the artifact scatter associated with Feature 2 (Figure 3.2). A low to moderate density of surface artifacts extended 40 m east, 20 m south, 10 m west, and 35 m north of Feature 2. Excluding the excavation units in or next to Feature 2, five units were excavated in Locus 1 (Units 15-19). Two units yielded artifacts in the first 10 cm level only. A third unit exposed the western portion of Feature 15 and a fourth unit was placed over the eastern portion of the same feature. The fifth unit was excavated into Feature 16. Two surface collection units (20 and 26) were established in Locus 1, totaling 21 sq m.

Wiseman (1988:24) originally identified Wessel's (1996:8) Locus 2 as a roughly 50 by 30 m trash scatter southwest of Feature 5. During data recovery, Locus 1 was expanded to encompass the area within the right-of-way south of Feature 5 and east of Feature 6 (Figure 3.5). Under this definition, Locus 2 covered an area of about 70 by 60 m. The density of artifacts within the

locus ranged from low to very high. Five excavation units were placed in Locus 2. One unit was placed over the stump of a fence post to determine the depth of the post and to see if datable artifacts were present in the posthole. The vast majority of the artifacts from the Locus 2 units were recovered in the top 10 cm of fill.

The high artifact densities in portions of Locus 2 suggested the possibility of surface structures in this area. None were positively identified, but storage buildings or other outbuildings may have been indicated by concentrations of nails and other architectural debris (such as concrete rubble, brickbats, metal hardware, and electrical insulators). Five surface collection areas (Units 21-25), totaling 30 sq m, were placed in areas of high artifact density that might be building locations.

SURFACE COLLECTIONS

Seven surface collection units were included in the same number sequence as the hand excavation units. Surface collection units 20 and 26 were placed in Locus 1; surface collection units 21 through 25 were placed in Locus 2. The surface collections also included general and point provenience collections, as described below.

Locus 1

Unit 20, a 4 by 3 m unit, was 36 m northeast of Feature 2 and contained 59 ceramic sherds, 44 fragments of glass, 32 pieces of coal, and 34 pieces of metal. One of the metal items was of a 20 gauge shotgun shell. Other metal items included a screw, a bolt, a light bulb base, a toy part, six nails, a tack, two can lids, a clothespin spring, and a baling wire tie.

Unit 26, a 3 by 3 m unit, was 29 m east of Feature 2 and contained 28 pieces of metal, 24 ceramic sherds, 4 fragments of glass, and 3 pieces of coal. One of the metal items was a 12 gauge shotgun shell. Other metal items included nail, screw, and wire fragments.

Locus 2

Units 21 to 25 were placed in Locus 2, in the middle of a triangle whose apices were Features 5, 6, and 7. The units were either 2 by 2 m or 3 by 3 m and were placed over dense clusters of artifacts.

Unit 21 was 2 by 2 m and contained 63 pieces of metal, 11 ceramic sherds, 4 fragments of clear bottle glass, and one peach pit. The glass probably represents four pieces of the same bottle.

Unit 22 was 2 by 2 m and contained 42 ceramic sherds, 24 fragments of glass, 18 pieces of metal, and 4 pieces of burned bone from a very large mammal. The glass included one tumbler fragment, three bottle fragments, and two milk glass fragments.

Unit 23 was 2 by 2 m and contained 70 pieces of metal, 10 fragments of glass, and one fossil shell. The identifiable glass included two canning jar fragments, a bottle stopper, and a drawer pull. Six of the glass items were melted.

Unit 24 was 3 by 3 m and contained 69 fragments of glass, 25 ceramic sherds, and 16 pieces of metal. The glass included five tumbler fragments (including one with an acid-etched design), one piece of windshield, nine identifiable bottle fragments, a possible milk bottle, and an H. J. Heinz condiment bottle fragment.

Unit 25 was 3 by 3 m and contained 80 ceramic sherds, 48 fragments of glass, 16 pieces of metal, and one brick fragment. Identifiable glass included four tumbler fragments, four bottle fragments, a pickle jar fragment, two Horse Shoe Bitters bottle fragments, and an H. J. Heinz condiment bottle fragment.

In addition, the crew collected a sample of diagnostic artifacts from the general Locus 2 area. Twenty-nine

metal artifacts, 27 ceramic sherds, 25 glass fragments, and one shell button were recovered from this area.

Feature 21-22 Area

Selected artifacts were also collected from Features 21 and 22, two refuse deposits that may postdate the homesteads at LA 66922.

Artifacts from Feature 21 include 16 glass fragments, 11 pieces of metal, five ceramic sherds, and five prehistoric sherds. The prehistoric sherds are St. Johns Black-on-red bowl fragments (see Appendix D). Considering their presence in a 1900s refuse deposit, the sherds were most likely collected as a souvenir somewhere closer to the Four Corners.

Artifacts from Feature 22 included 48 glass fragments, 26 pieces of metal, and 22 ceramic sherds.

Point Provenienced Items

Four sets of artifacts were point provenienced and recovered at LA 66922: a dime, fragments of two glass insulators, a hammer-like object, and a nail.

The dime is a 1903 Liberty dime. It was recovered just south of the southwest corner of Feature 2 and most likely is a coin lost by one of the occupants of that structure.

Three fragments of two glass electrical insulators were recovered near Feature 20, a small wooden bridge along the railroad tracks. Two of the fragments conjoin and probably represent a double petticoat style, comparing favorably to a Hemingray 20 (Schroders 1971:33). The third fragment is similar to a transposition type insulator (Cleland 1984:160, after Berge 1980). Several stumps of probable utility poles were observed along the west side of the railroad tracks and may represent an early utility line (possibly predating the ones on the east side of the tracks).

A possible hammer was recovered 5 m east of Subdatum D and Feature 6. It consists of a fist-sized cobble wrapped with barbed wire, with more of the wire extending to form a "handle." The ends of the

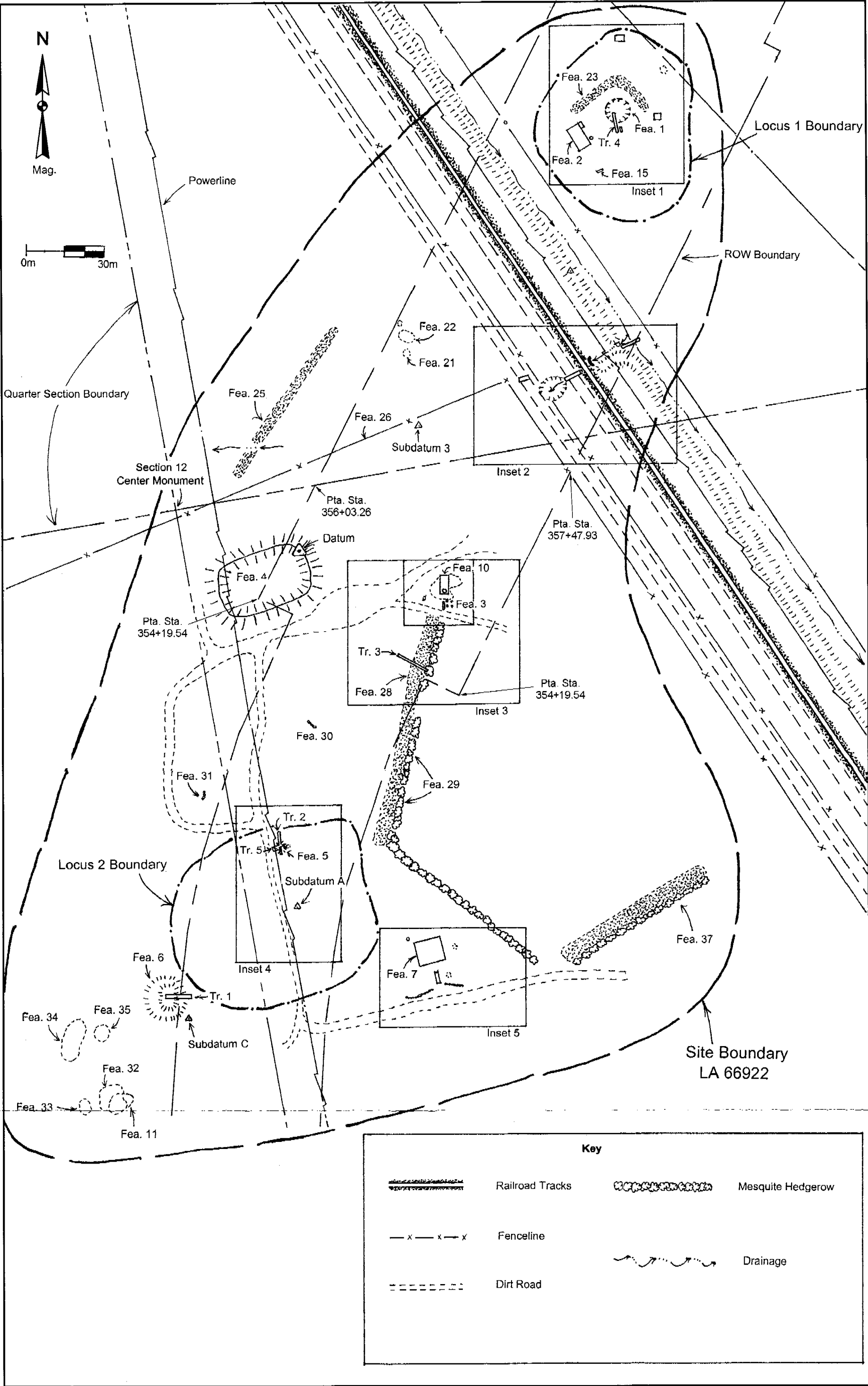


Figure 3.1. LA 66922, general site map.

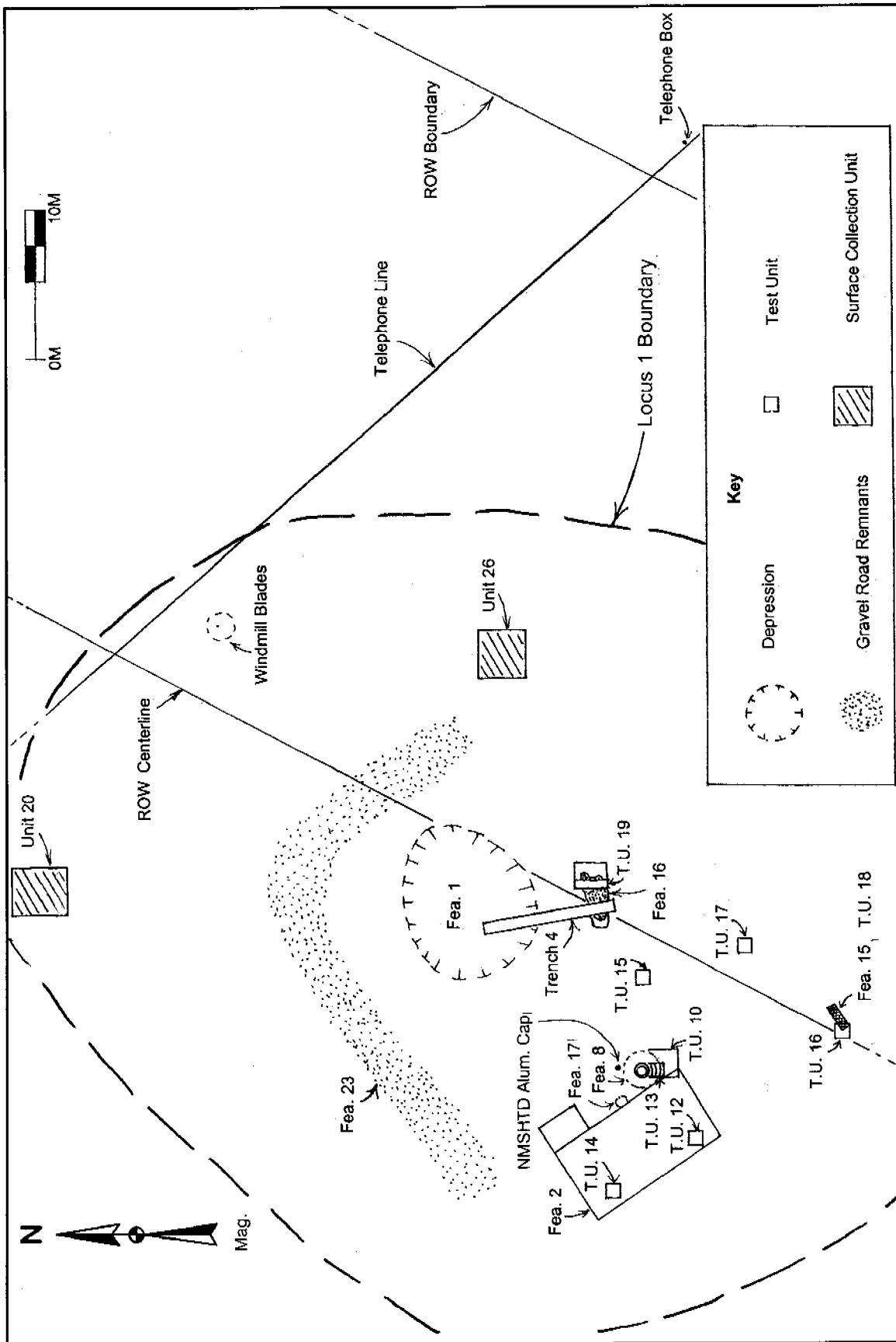


Figure 3.2. Inset Map 1, showing Locus 1 area.

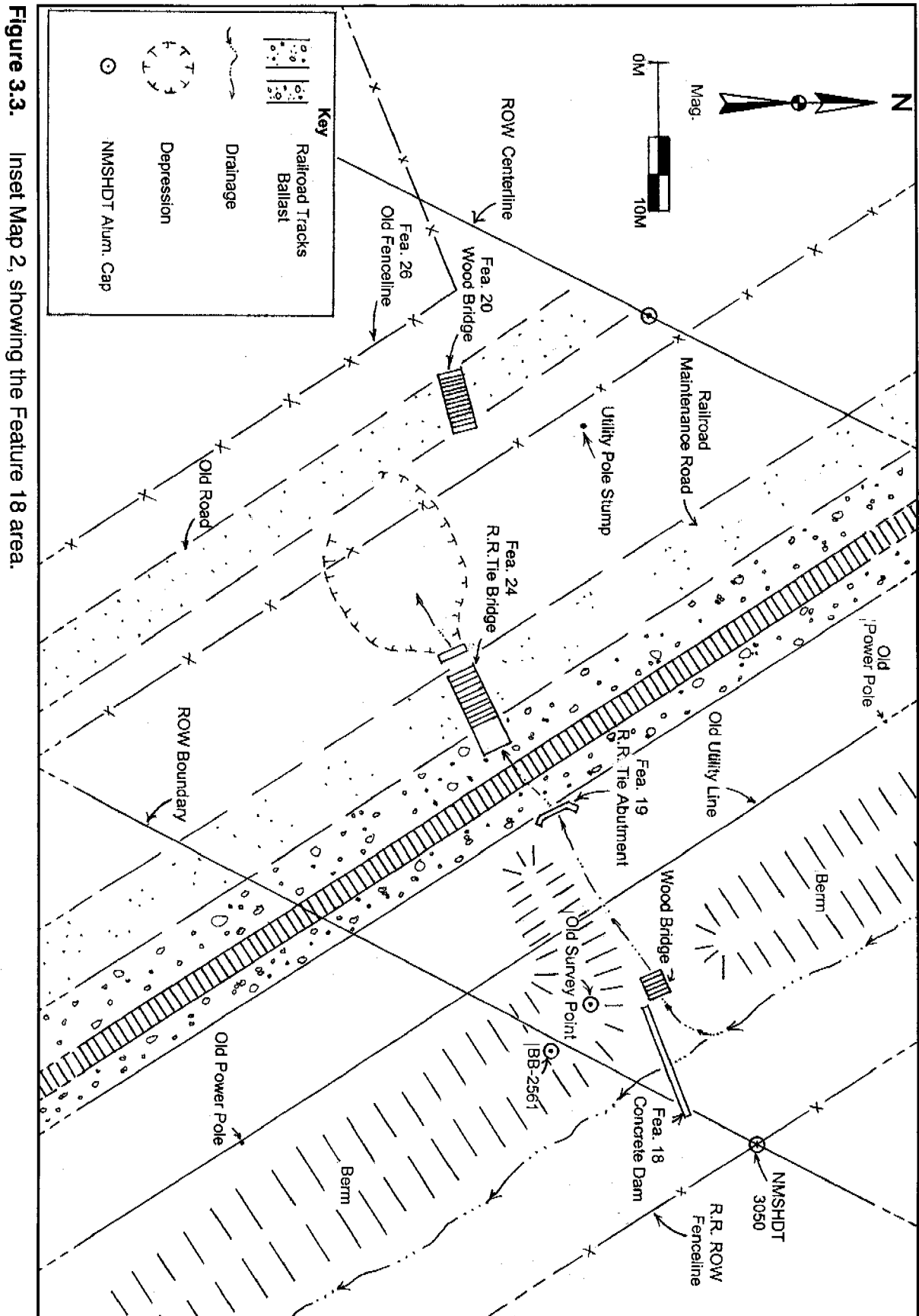


Figure 3.3. Inset Map 2, showing the Feature 18 area.

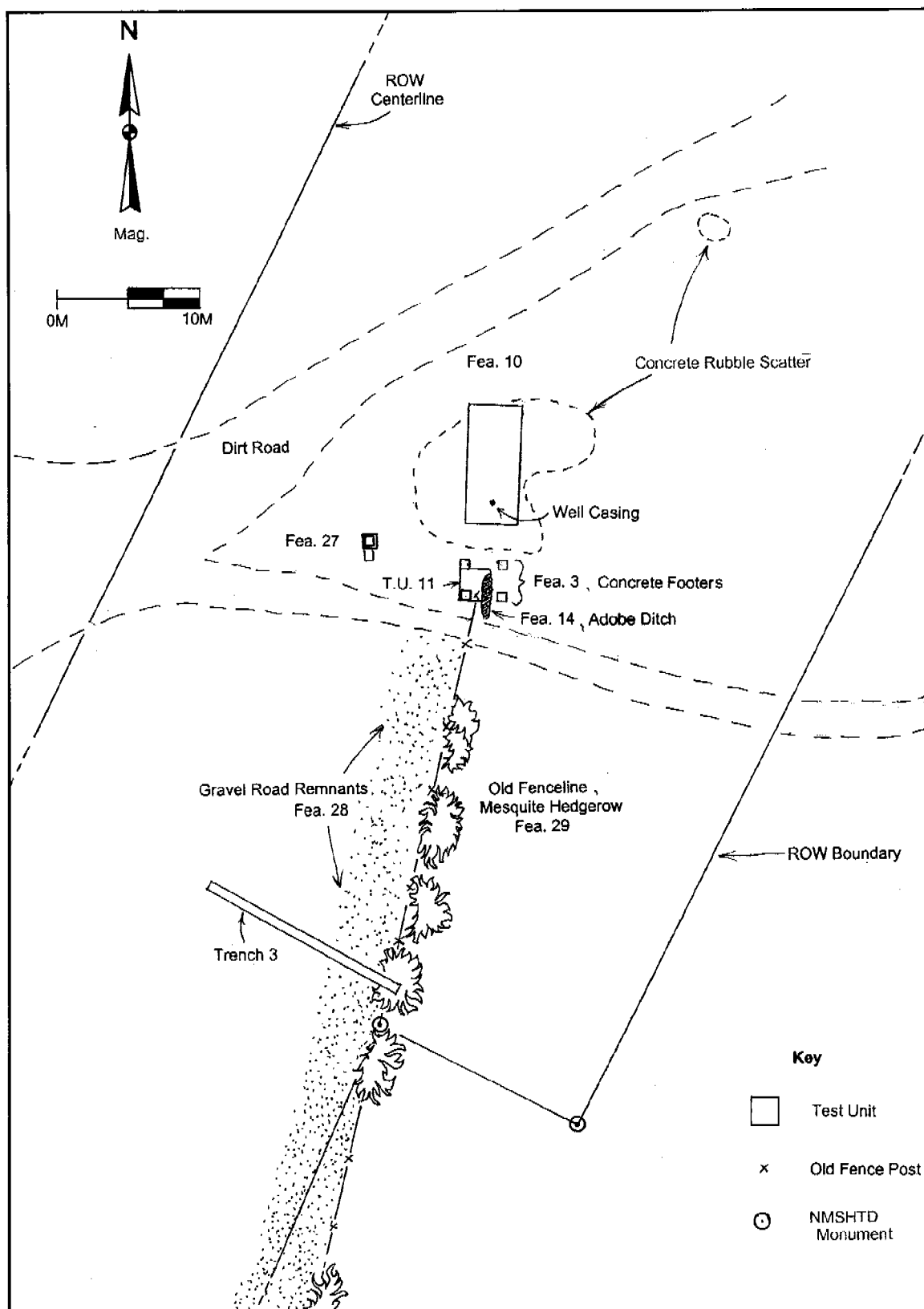


Figure 3.4. Inset Map 3, showing the Feature 3 area.

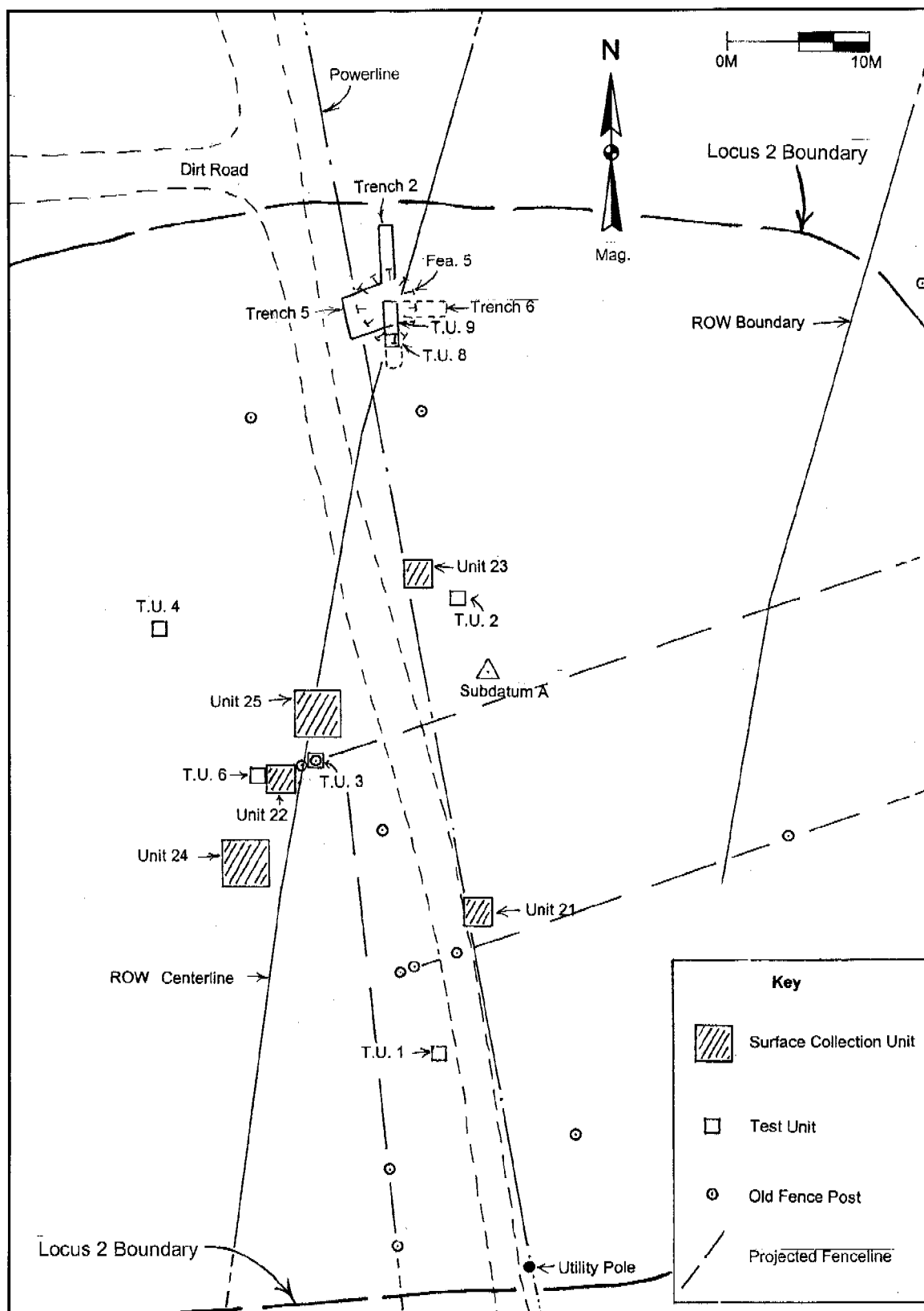


Figure 3.5. Inset Map 4, showing details of Locus 2.

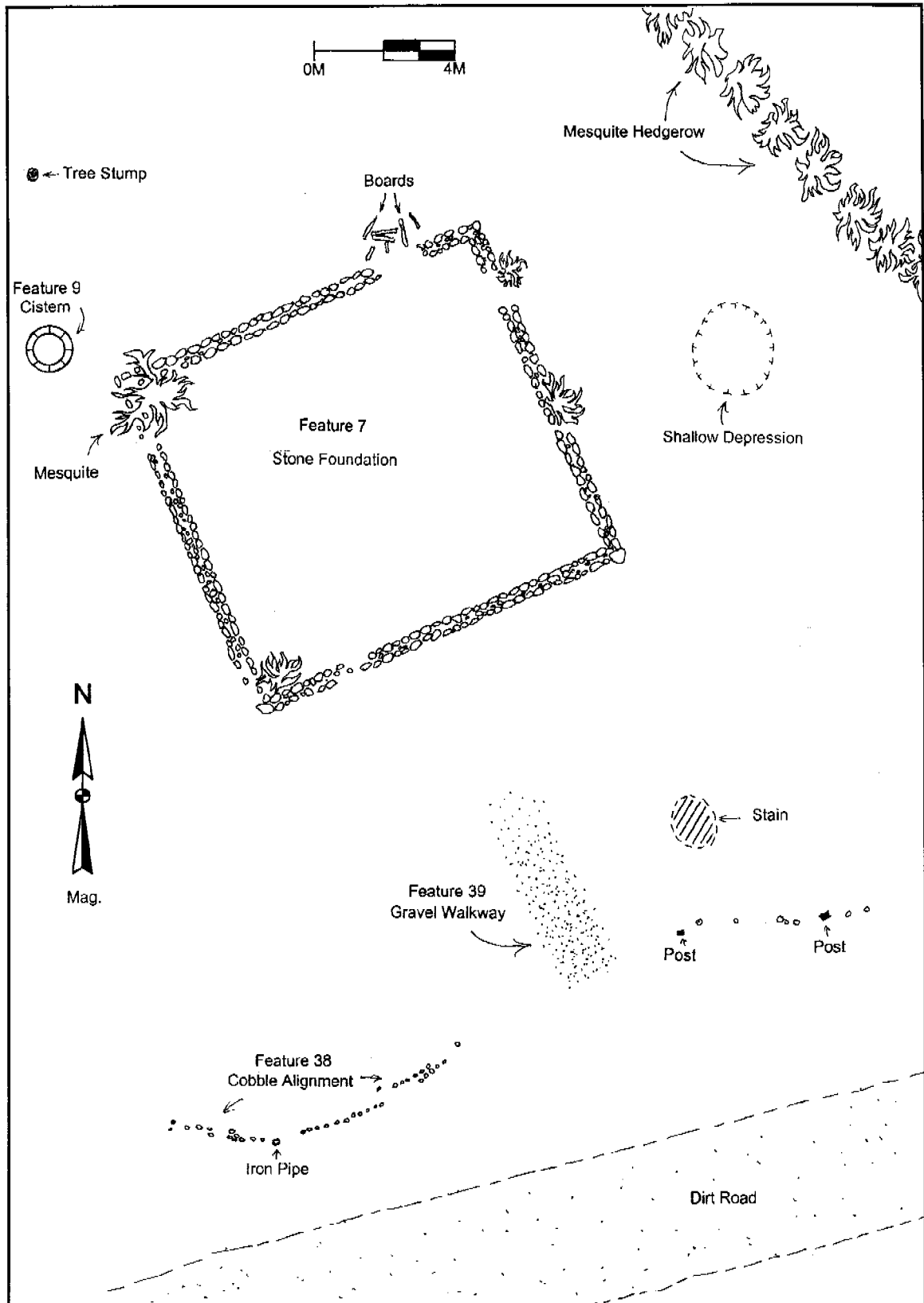


Figure 3.6. Inset Map 5, showing details of the Feature 7 area.

cobble are battered. If this is not a crude hammer it may be a fence weight, used to help close a gap under a barbed wire fence. The artifact does seem to be heavy enough for a fence weight, however, and there are no locations nearby where it could have been used.

A railroad tie date nail was recovered from the backdirt at Feature 2. The head of the nail is stamped "07," for 1907. The recovery of this nail is not surprising, considering the proximity of the railroad tracks; it is not possible to say whether the nail was in some way associated with the structure. Such nails were hammered into the ends of railroad ties to indicate the year in which the tie was installed. The local railroad line was built in 1898, so the nail indicates that replacement of the ties had begun within nine years of the original construction.

SHOVEL SCRAPING

The crew completed a shovel scrape at Feature 2, primarily to expose the limestone foundation. To provide horizontal control, the shovel scrape was completed as a series of 1 by 1 m units. In most units the shovel scrape was 10 cm or less deep. The crew also completed two small shovel scrapes at Unit 11; those are described in the unit description.

HAND EXCAVATION UNITS

Nineteen hand excavation units were completed at LA 66922: 13 1 by 1 m units, two 2 by 1 m units, two 2 by 2 m units, one 1.8 by 0.45 m unit, and one 2 by 0.28 m unit. Most of the units were excavated into features, but a few were excavated into dense clusters of artifacts in anticipation of encountering subsurface deposits. The placement of the units was determined on a judgmental basis to recover a maximum amount of information.

Unit 1

Unit 1 was a 1 by 1 m unit placed at N323.27/E495.96 in Locus 2. Unit 1 was excavated three 10 cm levels to a culturally sterile stratum (Table 3.1, Figure 3.7). The bones in Level 1 were concentrated northeast of the center of the unit and included jackrabbit, pig, and unidentified large mammal. A rodent burrow with abundant charcoal flecking extended through the northeast quadrant of Level 3. After Level 3 was completed, an auger hole was bored an additional 34 cm from the center of the unit. The auger hole yielded unstained sediment without artifacts.

Unit 2

Unit 2 was a 1 by 1 m unit placed at N354.53/E497.25 in Locus 2. The unit was placed within an artifact

Table 3.1. Unit 1 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
1	N323.27/E495.96	1X1 m	3	30 cm	34 cm

Level	Soil Type	Color	Cultural Materials
0	Surface		10 glass, 5 sherds, 4 metal
1	Stratum 1: pebbly sandy loam	7.5YR5/4, moist	27 glass, 25 metal, 18 bone, 10 sherds, 1 coal
	Stratum 2: compact pebbly sandy loam with carbonate filaments	7.5YR5/4, dry	
2	Stratum 2 continues		1 metal
	Stratum 3: reddish loamy sand	7.5 YR 5/4, dry	
3	Stratum 3 continues		

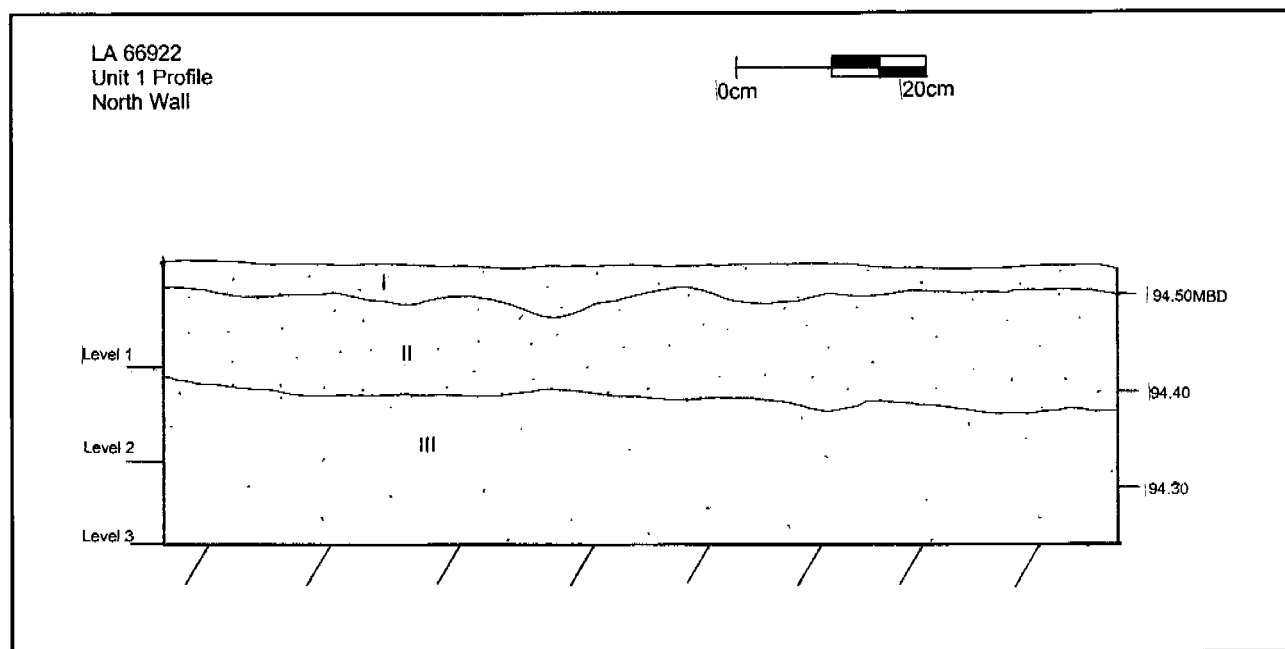


Figure 3.7 Unit 1 profile.

concentration to determine whether a structure had been present at this location. Unit 2 was excavated in three 10 cm levels to culturally sterile sediment (Table 3.2, Figure 3.8). The flaked stone could indicate a buried prehistoric component at this site, but it may also represent naturally redeposited prehistoric materials. Out-of-context flaked stone has been found in similar alluvial settings in the Alamogordo area (David Phillips, 2000 personal communication). After Level 3 was completed, an auger hole was bored an

additional 17 cm from the center of the unit. The auger fill was unstained sediment without artifacts.

Unit 3

Unit 3 was a 1 by 1 m unit placed at N343.49/E487.45 in Locus 2. One of a pair of wood fence posts was present in the south-central portion of the unit, which was excavated to see whether datable artifacts were included in the posthole matrix. Surface collection

Table 3.2. Unit 2 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
2	N354.53/E497.25	1X1 m	3	30 cm	34 cm

Level	Soil Type	Color	Cultural Materials
0	Surface		5 sherds, 1 metal, 2 nails, 1 glass
1	Stratum 1: reddish brown silty sand with gravels	5YR5/3	>50 metal, 17 glass, 4 sherds, 1 lithic flake
2	Stratum 1 continues Stratum 2: reddish brown silty sand with gravels	5YR5/4	3 metal, 1 lithic core
3	Stratum 2 continues Stratum 3: light brown calcic sand with gravels	7.5YR6/4	

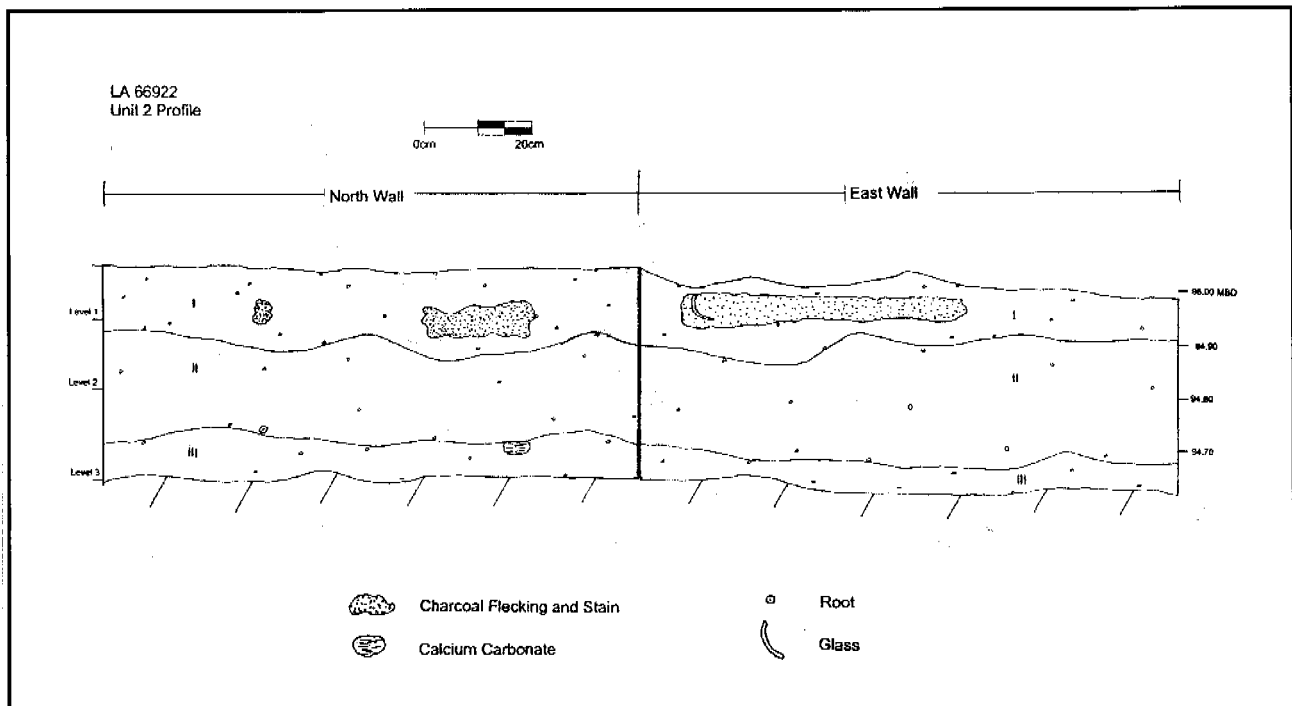


Figure 3.8. Unit 2 profile.

Units 22 and 25 were placed 1 m west and north, respectively, of this unit. Unit 2 was excavated in five 10 cm levels to culturally sterile sediment (Table 3.3, Figure 3.9). The bone in Level 1 is from a large mammal. The nails from Level 2 were found next to the post; the bones from the level are from a medium-

sized mammal and a large mammal. Level 3 contained one nail recovered next to the post. After Level 5 was completed, an auger hole was bored an additional 19 cm from the center of the unit. The fill from the auger hole was unstained sediment without artifacts. The fence post stump was 13 cm in diameter and the total

Table 3.3. Unit 3 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
3	N343.49/E487.45	1X1 m	5	50 cm	19 cm

Level	Soil Type	Color	Cultural Materials
0	Surface		34 metal, 9 sherds, 9 glass
1	Stratum 1: reddish brown sandy loam	5YR6/4, moist	>50 metal, 17 glass, 4 sherds, 1 lithic flake
	Stratum 2: tan sandy loam	7.5YR5/4, dry	17 metal, 16 glass, 9 peach pits, 6 bone, 6 sherds, 2 coal
2	Stratum 2 continues		7 coal clinkers, 4 peach pits, 2 bone, 2 nails
3	Stratum 2 continues		1 nail
4	Stratum 2 continues		
	Stratum 3: reddish brown sandy loam with gravels	5YR5/4	
5	Stratum 3 continues		
	Stratum 4: light brown sandy loam with gravels and cobbles	7.5YR6/4	(fence post stump)

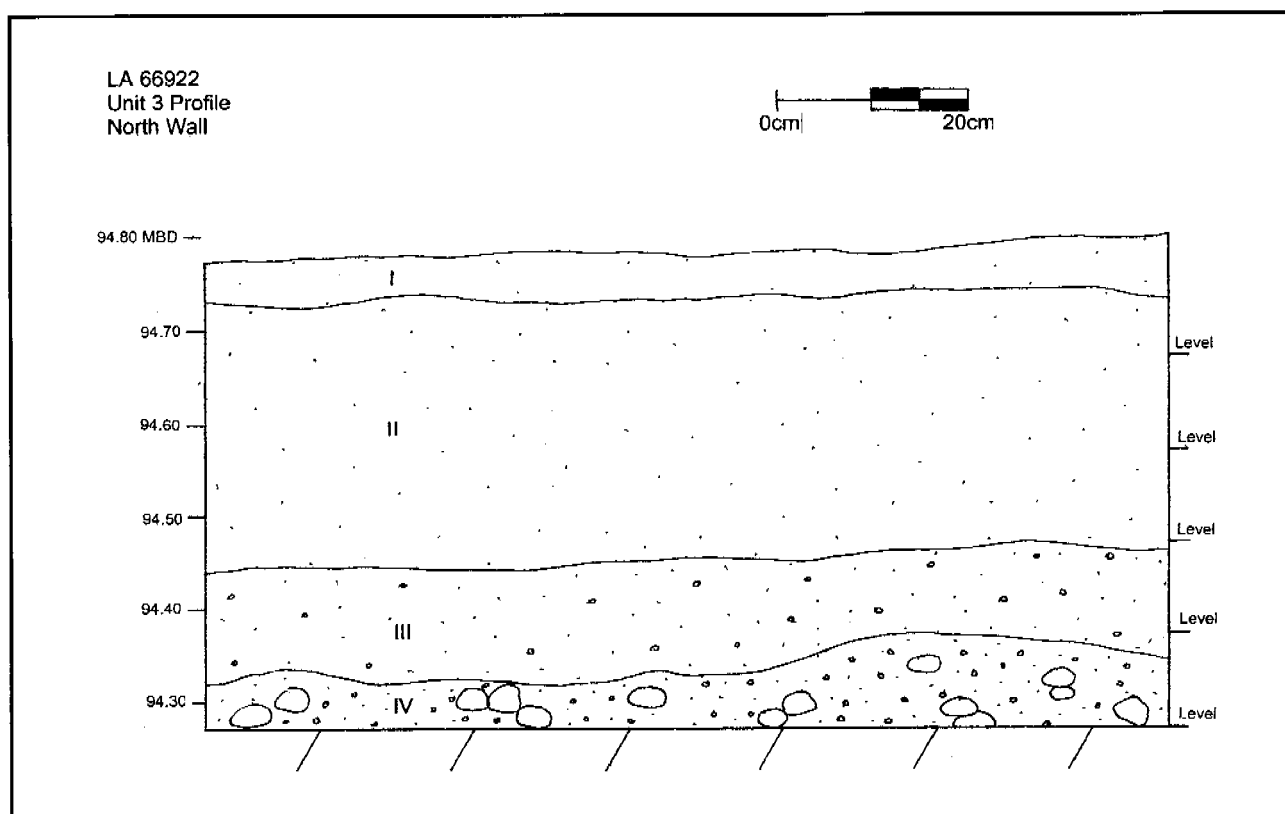


Figure 3.9. Unit 3 profile.

subsurface depth of the post was 63 cm. The wood type could not be determined but may have been juniper.

Unit 4

Unit 4 was a 1 by 1 m unit placed at N352.18/E476.70, in a gravelly area in Locus 2. Unit 4 was excavated in three 10 cm levels to culturally sterile sediment (Table 3.4; Figure 3.10). The fill in the western three-quarters of Level 2 was the same as in Level 1, but the rest of Level 2 contained dense gravels. The east half of Level 3 also contained dense gravels. After Level 3 was completed, an auger hole was bored an additional 39 cm from the center of the unit. The fill from the auger hole was unstained and contained no artifacts.

Unit 5

Unit 5 was a 2 by 1 m unit oriented east-west and placed at N307.65/E448.33. The unit was positioned to

straddle a low berm forming the east edge of Feature 6. The berm was originally identified as a stone and adobe foundation. Unit 5 was excavated in 10 cm levels; the western portion was excavated for five levels and the eastern portion was excavated for six levels (Table 3.5; Figure 3.11). About half of the fill of Level 1 consisted of gravel and cobbles. The lower levels also contained dense deposits of gravels and cobbles; at the east end of the unit the gravel deposits showed bedding. An auger hole was cored an additional 16 cm from the northeast corner of the unit (base of Level 5). The auger hole fill was unstained sediment without artifacts. Based on the excavation of Unit 5, no cultural feature was present at this location.

Unit 6

Unit 6 was a 1 by 1 m unit placed at N342.39/E483.15 in Locus 2. The unit was placed within an artifact concentration to determine whether a structure had been present at this location. Surface collection Unit 22 was just east of this unit. Unit 6 was excavated in

Table 3.4. Unit 4 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
4	N352.18/E476.70	1X1 m	3	31 cm	39 cm

Level	Soil Type	Color	Cultural Materials
0	Surface		29 metal, 15 glass, 6 sherds, 1 plastic, 1 flaked stone
1	Stratum 1: brown sandy silty loam	7.5YR4/4	19 metal, 10 glass, 2 sherds
2	Stratum 1 continues		
	Stratum 2: reddish brown silty sand	5YR5/4	
	Stratum 3: yellowish red silty sand	5YR5/6	
	Stratum 4: reddish brown silty sand with large cobbles and mixed gravels	5YR4/4	
3	Strata 2-4 continue		

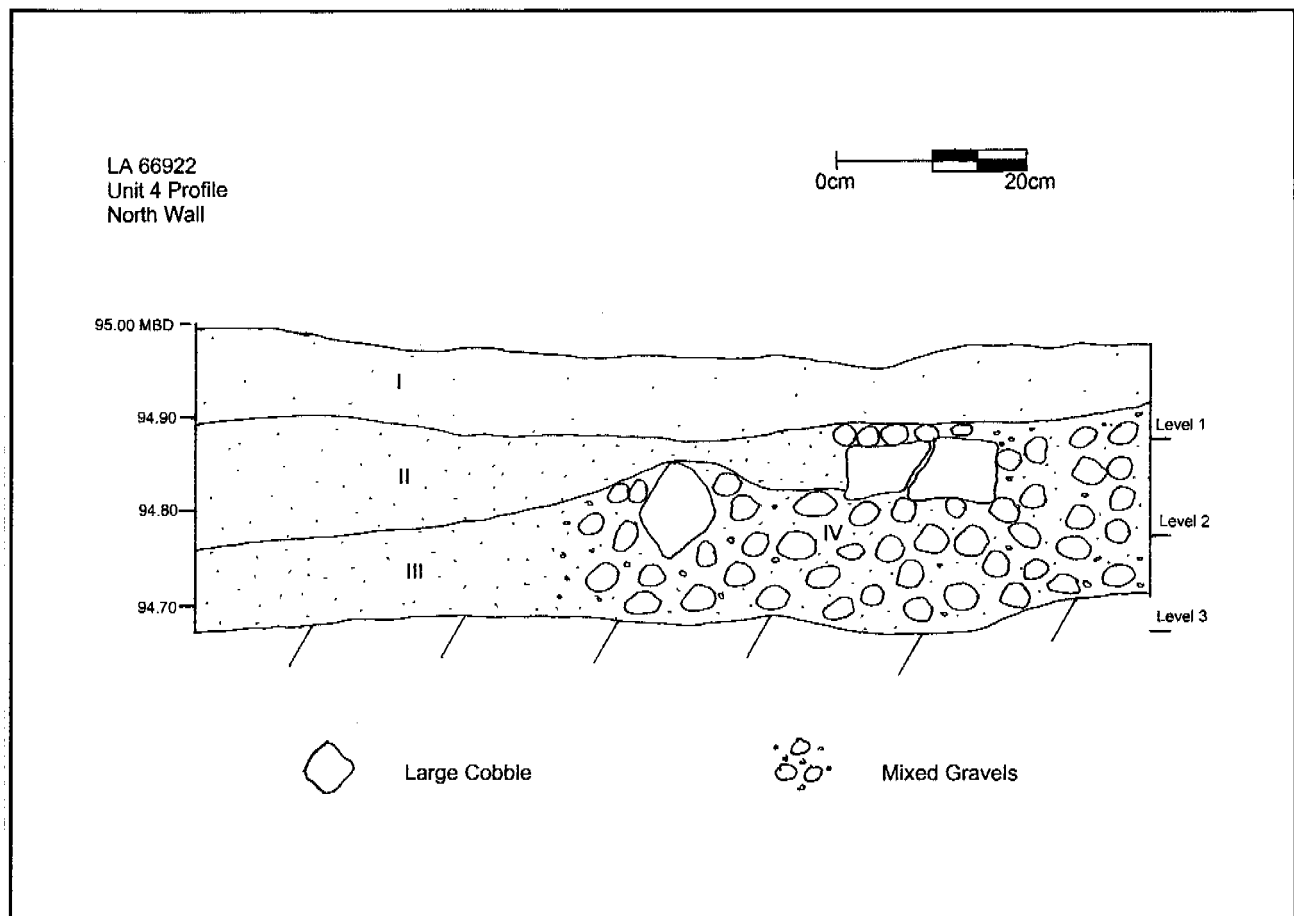


Figure 3.10. Unit 4 profile.

Table 3.5. Unit 5 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
5	N307.65/E448.33	1X2 m	6	55 cm	16 cm

Level	Soil Type	Color	Cultural Materials
1	Stratum 1: reddish brown sandy loam with gravels	5YR5/4	1 metal
2	Stratum 1 continues Stratum 2: reddish brown sandy loam with gravels and cobbles	5YR5/4	
3	Stratum 2 continues Stratum 3: brown sandy loam with occasional gravel	7.5YR5/4	
4	Strata 2 and 3 continue		
5	Strata 2 and 3 continue		
6	Strata 2 and 3 continue		

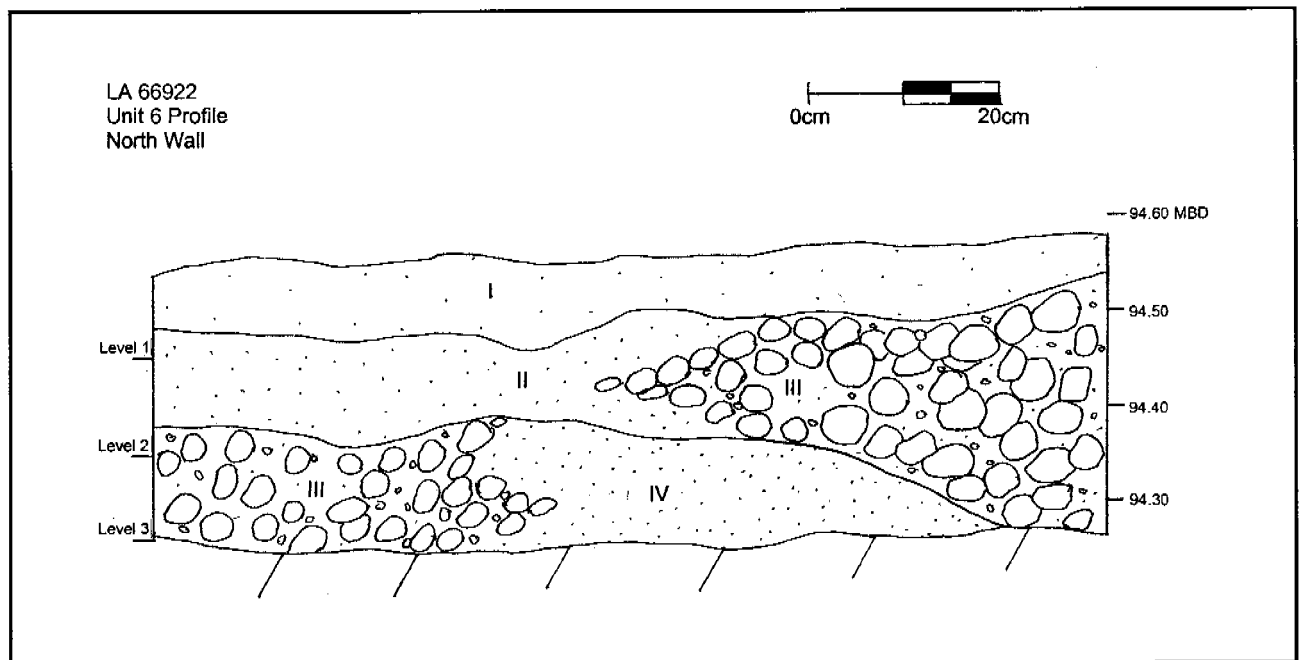


Figure 3.11. Unit 5 profile.

three 10 cm levels to culturally sterile sediment (Table 3.6; Figure 3.12). The soil in Level 1 was especially gravelly along the east edge of the unit. Level 3 contained localized pockets of dense gravel, particularly in the west half of the unit. After Level 3 was completed, an auger hole was bored an additional 12 cm from the center of the unit. The auger hole fill was unstained sediment without artifacts.

Unit 7

Unit 7 was a 1 by 1 m unit placed at N315.32/E447.77, in the north-central portion of Feature 6, thought to be a stone and adobe foundation. The unit was excavated to expose the floor of the structure. Unit 7 was excavated three 10 cm levels to culturally sterile sediment (Table 3.7, Figure 3.13). The fill was the same

Table 3.6. Unit 6 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
6	N342.39/E483.15	1X1 m	3	29 cm	12 cm

Level	Soil Type	Color	Cultural Materials
0	Surface		20 glass, 1 slate, 7 sherds, 4 metal, 1 brick bat
1	Stratum 1: brown silty sand	7.5YR5/4	9 metal, 9 glass
	Stratum 2: reddish brown silty sandy loam	5YR5/4	
	Stratum 3: reddish brown silty sand with dense gravels	5YR4/4	
2	Strata 2 and 3 continue		1 lithic core
	Stratum 4: brown silty sandy loam	7.5YR5/4	
3	Strata 3 and 4 continue		

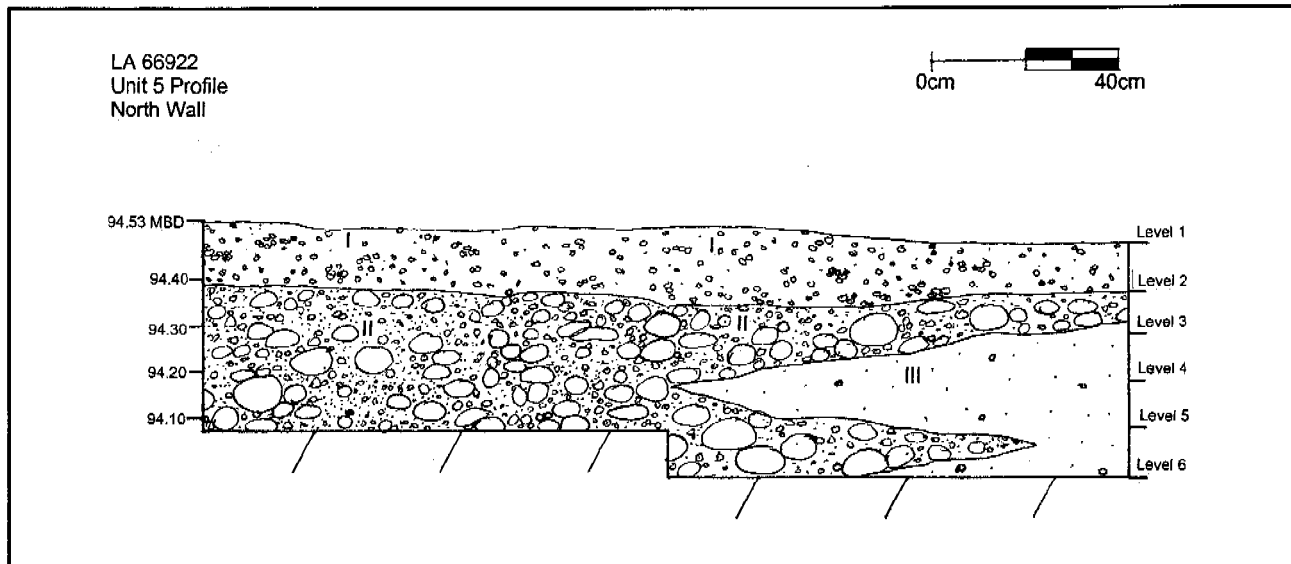


Figure 3.12. Unit 6 profile.

Table 3.7. Unit 7 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
7	N315.32/E447.77	1X1 m	3	31 cm	N/A

Level	Soil Type	Color	Cultural Materials
0	Surface		1 metal
1	Stratum 1: reddish brown sandy loam with dense cobbles and gravels	5YR5/3	
2	Stratum 1 continues		
3	Stratum 1 continues		

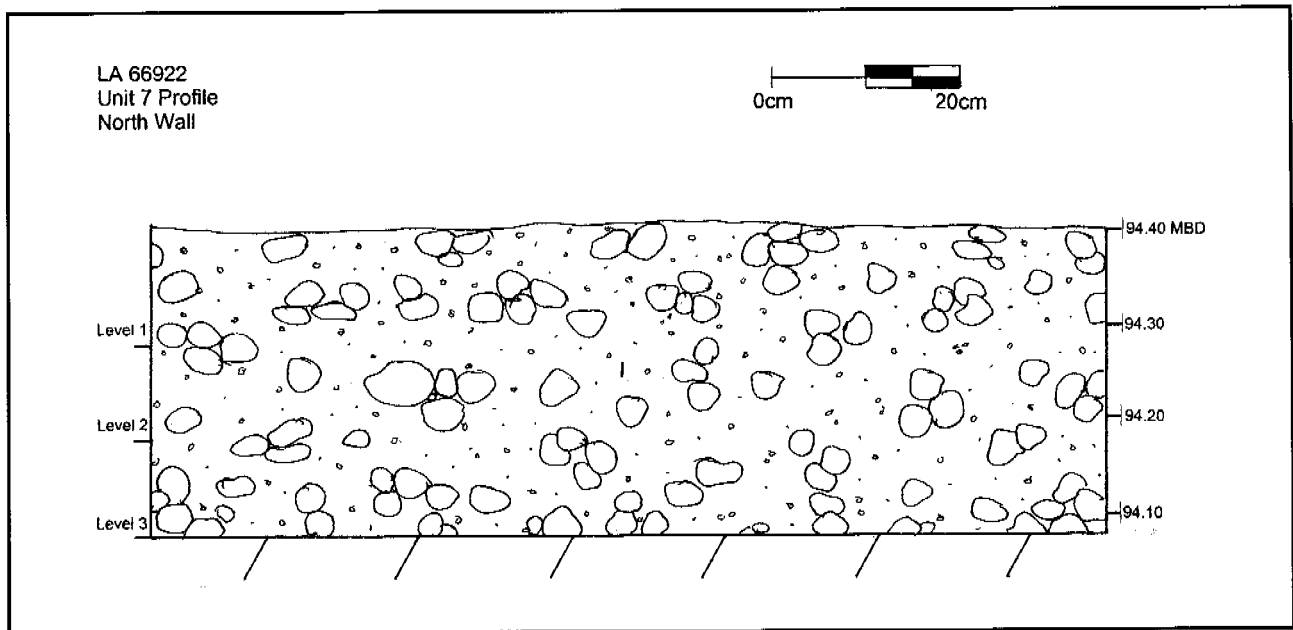


Figure 3.13. Unit 7 profile.

through all three levels and included large amounts of rounded gravel and cobbles. The excavation did not expose a floor, suggesting that Feature 6 was not the remains of a structure.

Unit 8

Unit 8 was a 2 by 1 m unit placed at N372.26/E494.88, along the berm that forms the south edge of Feature 5, a possible dugout. The unit was excavated to expose a profile of the edge of the dugout pit. Unit 8 was excavated in ten 10 cm levels (Table 3.8, Figure 3.14). Because of the slope of the ground surface within the unit, Levels 1 through 6 occupied only part of the unit.

Several rodent burrows were noted along the eastern edge of the unit. This may represent the level of the roof of the dugout. The soil stratigraphy varied from the east to the west ends of the unit. The east wall profile showed two strata; the west wall profile showed five strata. The dips in Strata 1 and 2 represent slumping of material into Feature 5. Charcoal flecking was noted in Levels 7 and 9. From Level 6 down most of the artifacts were recovered from the north half of the unit.

Unit 9

Unit 9 was a 1 by 1 m unit placed at N374.26/E494.88; it extended north from Unit 8. The unit was excavated to recover a sample of artifacts from Feature 5, to determine the depth of the deposits, and to expose structural details of the feature. Unit 9 was placed in the center of the depression that defined Feature 5, which had been severely disturbed by animal burrowing. Unit 9 was excavated in sixteen 10 cm levels (Table 3.9). The Unit 9 profile was drawn as part of the composite profile for Backhoe Trench 2 (see below). Because of the slope of the ground surface, Levels 1 through 3 occupied only a portion of the unit.

The bones from Levels 3, 4, and 8 were cottontail rabbit. The bones from Level 9 included jackrabbit, cow, and unidentified large mammal. The bones from Level 10 included chicken, cottontail rabbit, jackrabbit, and unidentified large and very large mammal. The bones from Level 11 included cottontail rabbit, prairie dog, jackrabbit, cow, and unidentified small and very large mammal. The bones from Level 12 included prairie dog and cow. The Level 13 bones were mostly cottontail rabbit but also included pocket gopher, woodrat, cow, and unidentified very small, small, and very large mammal. The bones from Level 14 included cottontail rabbit, pocket mouse, and pocket gopher. The

Table 3.8. Unit 8 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
8	N372.26/E494.88	1X2 m	10	115 cm	N/A

Level	Soil Type	Color	Cultural Materials
1	Stratum 1: light reddish brown clayey silt	5YR6/4	
2	Stratum 1 continues		
3	Stratum 1 continues		9 glass
4	Stratum 1 continues		19 glass, 13 metal, 2 sherds
	Stratum 2: reddish brown silty clay with roots, gravel	5YR5/4	
	Stratum 3: reddish brown clayey silt, gravels, mixed cultural and natural fill	5YR5/4	
5	Strata 2 and 3 continue		31 metal, 15 glass, 3 sherds
6	Stratum 2 and 3 continue		2 rubber, 1 glass, 1 metal, 1 sherd
	Stratum 4: light reddish brown silty clay, occasional gravel	5YR6/4	
7	Stratum 2 and 4 continue		5 glass, 1 metal, 1 rubber
	Stratum 5: yellowish red clayey silt, occasional gravel	5YR5/6	
8	Stratum 2, 4, and 5 continue		3 glass
9	Stratum 2 and 5 continue		3 metal, 1 glass
10	Stratum 5 continues		3 metal, 1 glass

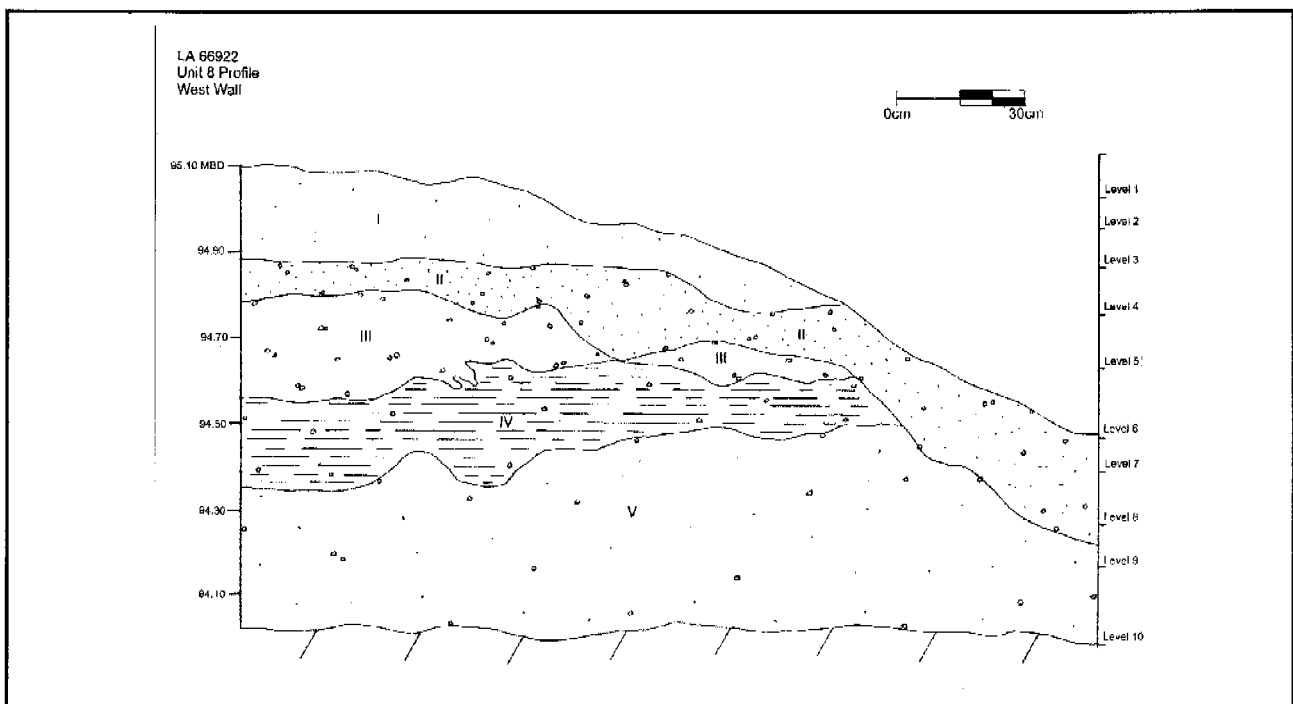


Figure 3.14. Unit 8 profile.

Table 3.9. Unit 9 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
9	N374.26/E494.88	1X1 m	16	152 cm	N/A

Level	Soil Type	Color	Cultural Materials
1	Stratum 1: reddish brown loam with gravels and organic matter	5YR4/4	
2	Stratum 1 continues	5YR4/4	
3	Stratum 1 continues	5YR4/4	3 metal, 2 bone, 1 glass
4	Stratum 1 continues	5YR4/4	28 metal, 5 bone, 1 glass
	Stratum 1 continues	5YR4/4	2 glass, 2metal
5	Stratum 5: yellowish red stratified silty clay with occasional pieces of gravel	5YR4/6	
6	Stratum 5 continues		74 metal
7	Stratum 5 continues		2 glass, 100 metal, 1 carbon battery, 1 battery fragment
8	Stratum 5 continues		200+ metal, 2 glass, 1 bone (mandible)
9	Stratum 5 continues		>300 metal, 2 dry cell batteries, 1 glass
10	Stratum 5 continues		>300 metal, 20 bone, 9 burdock seed pods, 6 sherds, 3 glass, 2 batteries, 2 bottles, fragments of wood
11	Stratum 5 continues		20 burdock seed pods, 7 glass, 7 metal, 6 sherds, 4 batteries & parts of others, 3 bottles
12	Stratum 5 continues		>50 pieces of metal, 7 bone, 1 glass
	Stratum 5 continues		50 metal, 30 bone, 6 glass
13	Stratum 6: yellowish red dense clay with gravel	5YR4/6	
14	Stratum 5 continues		20+ seeds, 15 bone fragments, 14 metal, 2 glass, 1 lithic angular debris
	Stratum 6 continues		
15	Stratum 6 continues		15 glass, 13 metal, 12 bone, 2 rubber
16	Stratum 6 continues		11 bone, 3 shell

Level 14 seeds appeared to be from cucurbit (melon or gourd) and were found in a mass suggestive of a rodent's seed cache. The Level 15 bone included cottontail rabbit, jackrabbit, pocket gopher, woodrat, kangaroo rat, and very large mammal. The bone fragments were clustered in a small area in the west-central portion of the unit, suggesting a burrow used in turn by a number of animals. The Level 16 bone included cottontail rabbit, jackrabbit, toad/frog, and small mammal.

Levels 8 through 12 contained numerous artifacts protruding from the walls of the unit, particularly the north and east walls. Most of these artifacts were metal and included a large, heavy gear fragment, a spoked (bicycle?) wheel, sheet metal of various thicknesses, a stove pipe elbow, corrugated metal roofing (?), and dry cell batteries. Levels 13 through 16 contained a fine brown sand in the northwest corner of the unit, probably from animal burrowing.

Charcoal flecks were noted in Levels 3 through 9, 11, 13, and 15. The stratigraphic break between the roof and floor of the feature was not clear. The presence or absence of certain artifacts suggested the locations of the roof and floor. Level 7 most likely represents the collapsed roof of the dugout, based on the presence of corrugated sheet metal. Level 14 most likely represents the floor of the dugout.

Unit 10

Unit 10 was a 2 by 2 m L-shaped unit placed at N665.39/E622.33; the excavated portion of the unit included 3 sq m next to Unit 13 and Feature 8 (Table 3.10; Figure 3.15). Unit 10 was excavated to expose the outer edge of the hole excavated for the cistern defined as Feature 8, and to expose structural remains next to the house remains defined as Feature 2. The unit was excavated in three 10 cm levels (Table 3.10; Figure 3.16). Two of the metal items in Level 1 were .22 caliber cartridges, one short, one long. Other metal included an 8 d nail, a 12 d nail, and an iron rivet. The bones from the unit were jackrabbit. The level also yielded hundreds of pieces of plaster ranging from 0.5 to 6 cm across. Five of the metal items from Level 2 were .22 caliber cartridges, two short, three long. Nails recovered from Level 2 included single examples of 2 d, 4 d, 6 d, 8 d, and 12 d nails and two 10 d penny nails. The single bone from Level 2 was a foot bone from a northern harrier hawk, also known as a marsh hawk. A 20-30 cm diameter deposit of ash and coal was noted in the southeast quadrant of the unit; a rodent

hole was identified directly beneath the ash and coal deposit.

Fragments of two wood boards, oriented southwest-northeast, were noted in the center and north-central portion of the unit (Figures 3.15 and 3.16). The boards may have been stringers for a porch extending from the east side of the house, or boards laid down to provide dry footing around the mouth of the cistern. The southwest corner of the unit contained the concrete footer for the southeast corner of Feature 2.

Unit 11

Unit 11 was a 2 by 2 m unit placed at N473.29/E558.08, over the southwest concrete pylon at Feature 3 (Figure 3.17). The unit was excavated in order to expose the pylon and any associated subsurface deposits. The pylon was 40 cm square and 33 cm tall, with an iron bolt extending vertically from the top. The unit was excavated in two levels (Table 3.11). Most of the Level 1 artifacts were recovered from the top 5 cm of fill. The metal from Level 1 includes chicken wire, fence staples, and .22 caliber cartridges. Most of the Level 1 glass is from recent beverage bottles, which were probably left there by users of the adjacent two-track dirt road. A deposit of very hard, light brown soil, similar to caliche, was noted along the east edge of the unit. The deposit was designated Feature 14. Level 2 was excavated in the northeast quadrant of Unit 11 to further expose Feature 14. One piece of metal and three chunks of adobe (?) were recovered.

Table 3.10. Unit 10 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
10	N665.39/E622.33	2X2 m (3m ²)	3	30 cm	N/A

Level	Soil Type	Color	Cultural Materials
1	Stratum 1: brown silty sandy loam	7.5YR5/4	39 glass, 22 metal, 2 bone, 4 peach pits, 100s plaster, 5 coal, 1 slag
2	Stratum 1 continues		
3	Stratum 2: reddish brown, compact silty sandy loam	5YR5/4	108 metal, 30 glass, 4 sherds, 1 bone, 2 peach pits
	Stratum 3: compact silty sandy loam	7.5YR5/4	Concrete footer for house foundation

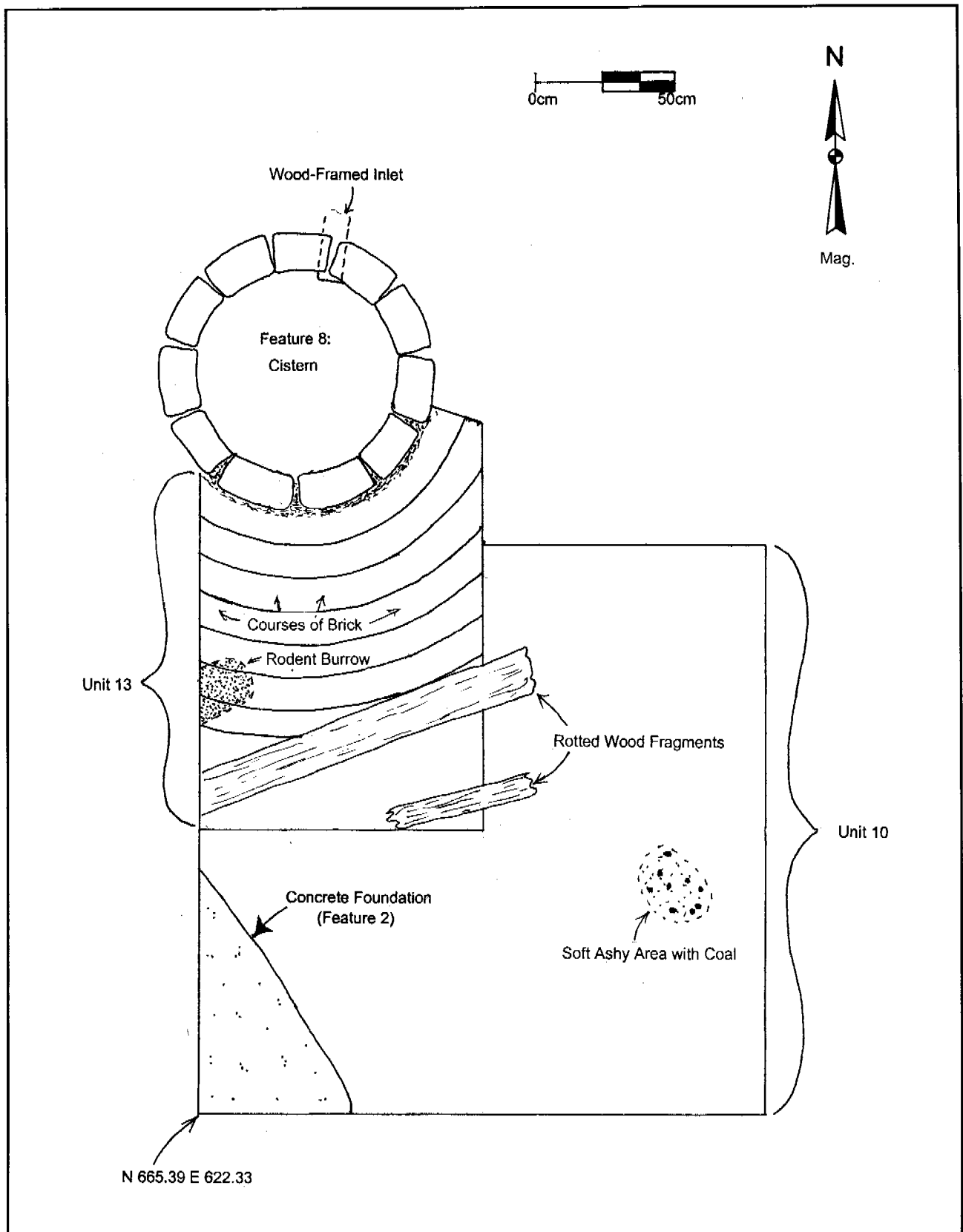


Figure 3.15. Unit 10 and Unit 13, plan view.

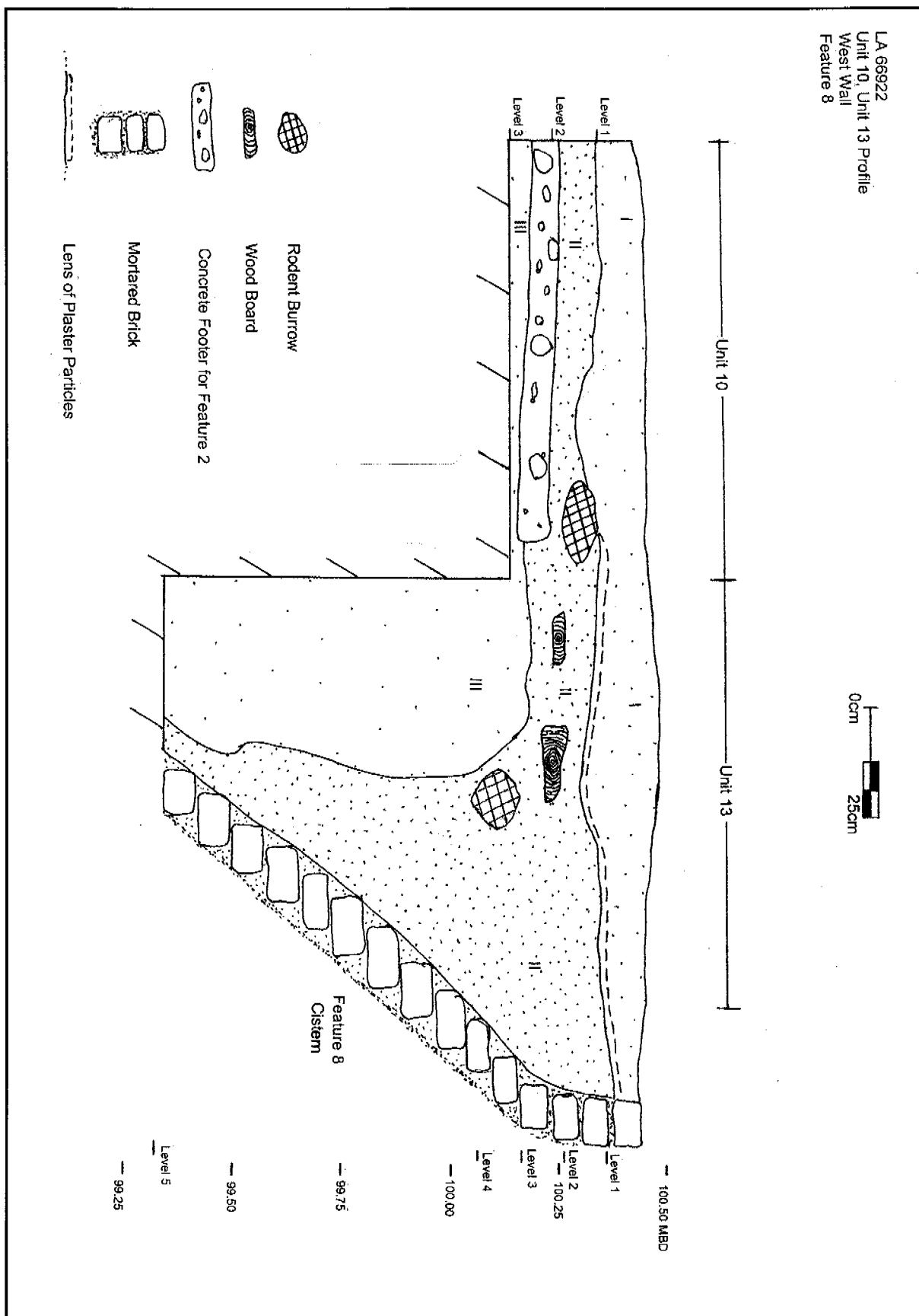


Figure 3.16. Unit 10 and Unit 13 profile.

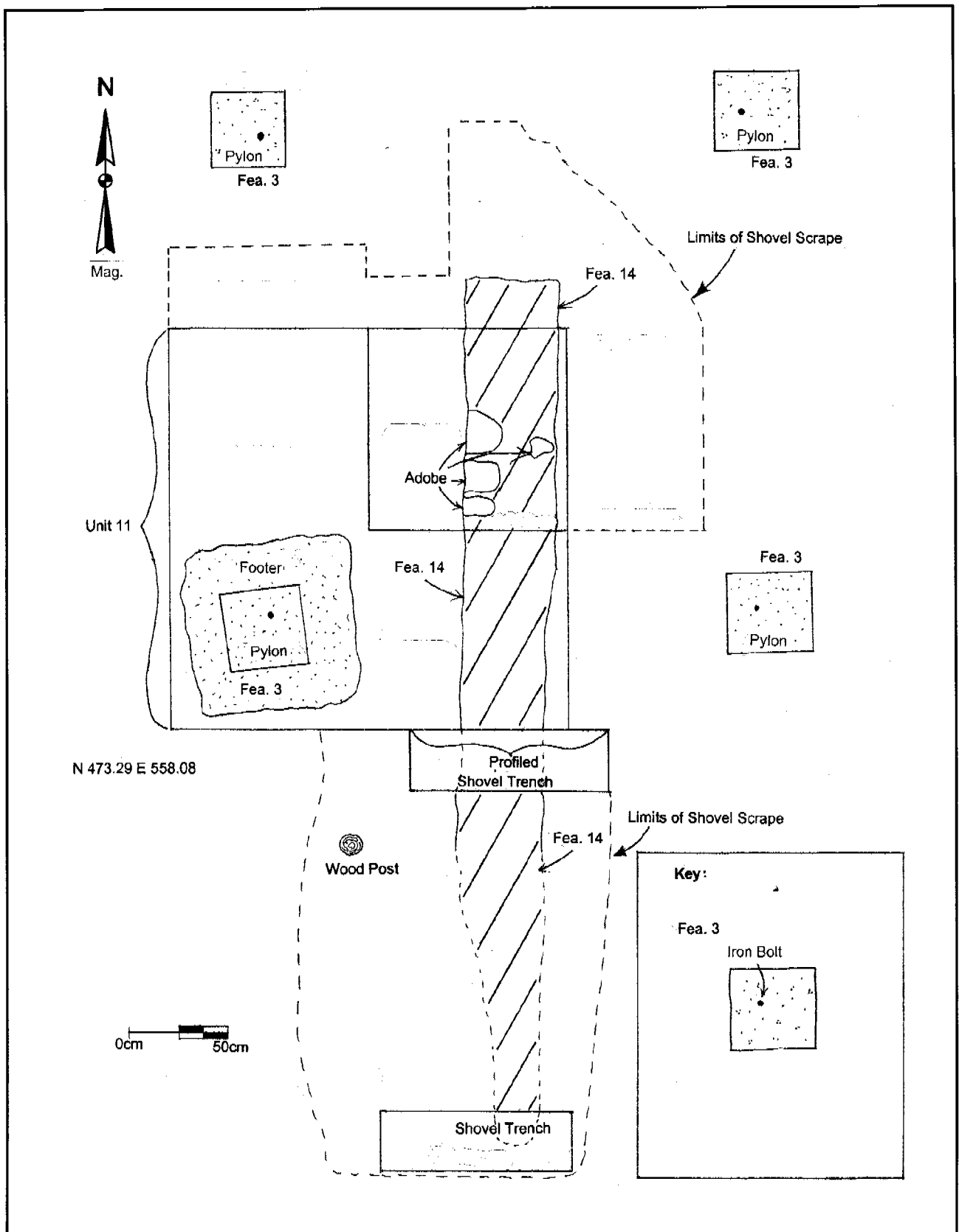


Figure 3.17. Plan view of Unit 11 and Features 3 and 4.

Table 3.11. Unit 11 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
11	N473.29/E558.08	2X2 m	2	28 cm	N/A

Level	Soil Type	Color	Cultural Materials
0			12 nails, fencing staples, and bolts
1	Stratum 1: brown sandy loam	7YR5/4	100 metal, 22 glass, 13 adobe (?) chunks, 2 peach pits
2	Stratum 1 continues		1 metal, 3 adobe (?) chunks
	Stratum 2: light brown hard calcified soil ("caliche")	7YR5/4	

Two shovel scrape areas, one extending north and east from Unit 11 and the other extending south from Unit 11, were excavated to expose the extent of Feature 14. The northern scrape was more or less T-shaped, with maximum dimensions of 2.7 m (E-W) by 2.05 m (N-S). The southern scrape was more or less rectangular and measured 2.2 m (N-S) by 1.5 m (E-W). In the southern shovel scrape, the remains of a wood fence post were exposed south of the southwest pylon of

Feature 3. The fence post was at the north end of Feature 29.

Two shovel trenches were excavated across Feature 14 to expose cross-sections of the feature. One of the shovel trenches was excavated along the south edge of Unit 11 and revealed the extent of the caliche-like deposit (Figure 3.18). In the other shovel trench, at the south end of Feature 14, nothing could be discerned in profile.

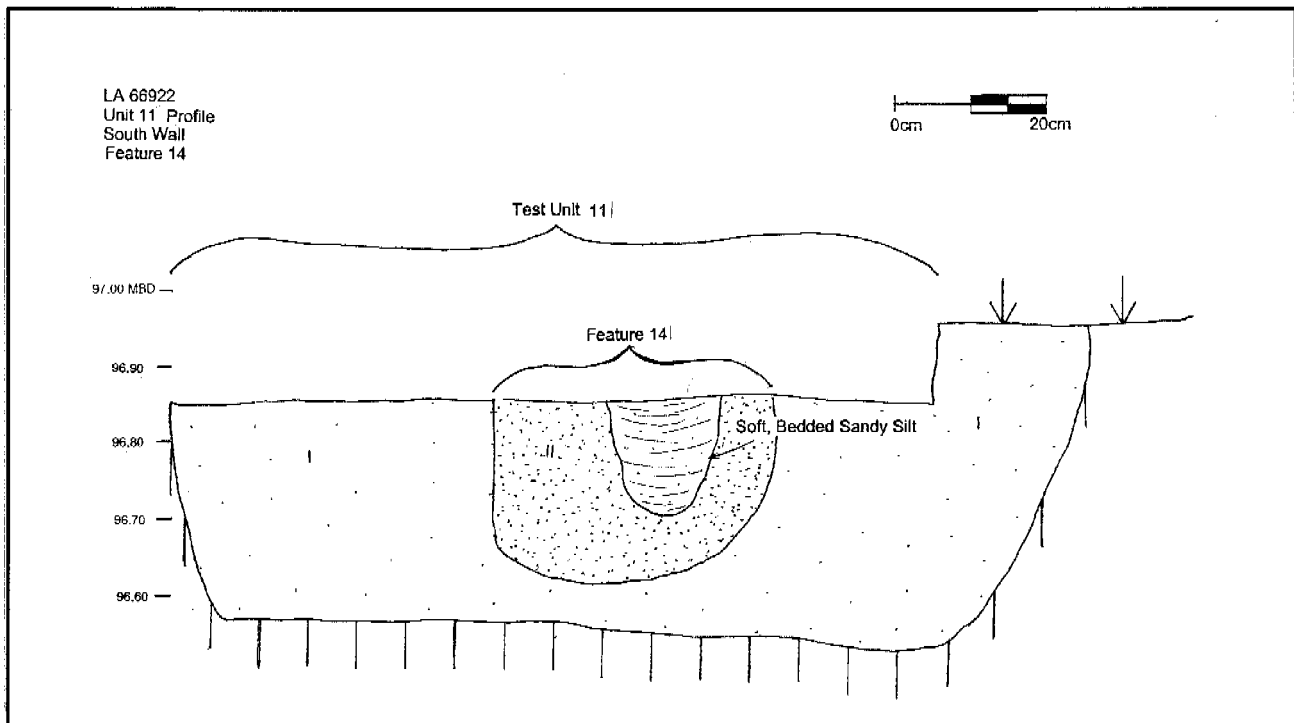


Figure 3.18. Unit 12 profile.

Unit 12

Unit 12 was a 1 by 1 m unit placed at N663.82/E617.72, at the southwest corner of Feature 2, a stone foundation for a house. The unit was excavated in order to expose the interior of the southwest portion of the foundation and to expose any floor remains. The unit was excavated in five 10 cm levels (Table 3.12; Figure 3.19).

Portions of a shaped limestone foundation were visible in the southwest corner of the unit. In Level 1, disintegrating plaster chips and plaster powder were noted along the interior edge of the limestone foundation. An east-west line of very fragmentary wood extended toward the center of the unit.

The limestone foundation was well defined in Level 2, with more fragments of plaster lying inside the foundation. The wood seen in Level 1 was more intact in Level 2 and proved to be a window frame.

The bones from Level 3 include cottontail rabbit, jackrabbit, pocket gopher, rat, and unidentified rodent. A piece of heavy gauge wire extended into the unit

from the south wall of the unit. More plaster was found along the inside of the limestone foundation.

The metal from Level 4 includes one .50 caliber bullet, 22 wood screws, and 19 nails ranging from 1 d to 6 d. Several cobbles, 5 to 15 cm across, were in present in the level fill. The bones from Level 4 included bat, cottontail rabbit, jackrabbit, woodrat, kangaroo rat, and pocket gopher.

Two 10 d nails and one sawed cow rib were recovered from Level 5. A 8 to 10 cm thick cement footer for the limestone foundation was exposed in this level. Plaster fragments were recovered throughout the level.

The Unit 12 excavation revealed that a concrete footer underlay the shaped limestone foundation. The interior of the house had been plastered. The window frame appeared to have fallen inward from the south wall of the house. The high incidence of rodent bones suggests that the house became infested after abandonment. The rodents most likely burrowed under the floor, as they were recovered from the lower levels of the unit. No evidence of the floor could be seen in the profiles of the unit.

Table 3.12. Unit 12 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
12	N663.82/E617.72	1X1 m	5	55 cm	N/A

Level	Soil Type	Color	Cultural Materials
1	Stratum 1: dark brown silty clay, layered	7YR3/4	1 nail
2	Stratum 1 continues		1 metal, portion of wood window frame, limestone foundation
	Stratum 2: reddish brown dense clay (adobe melt)	5YR4/4	
	Stratum 2 continues		11 bone, 3 metal, portion of wood window frame, limestone foundation
3	Stratum 3: fragments of plaster mixed with clay and crumbled concrete	Not recorded	
4	Stratum 4: dark brown dense clay	7.5YR4/6	22 bone, 14 metal, 5 mortar and plaster, 2 glass, limestone foundation
5	Stratum 4 continues		2 metal, 1 bone, concrete footer

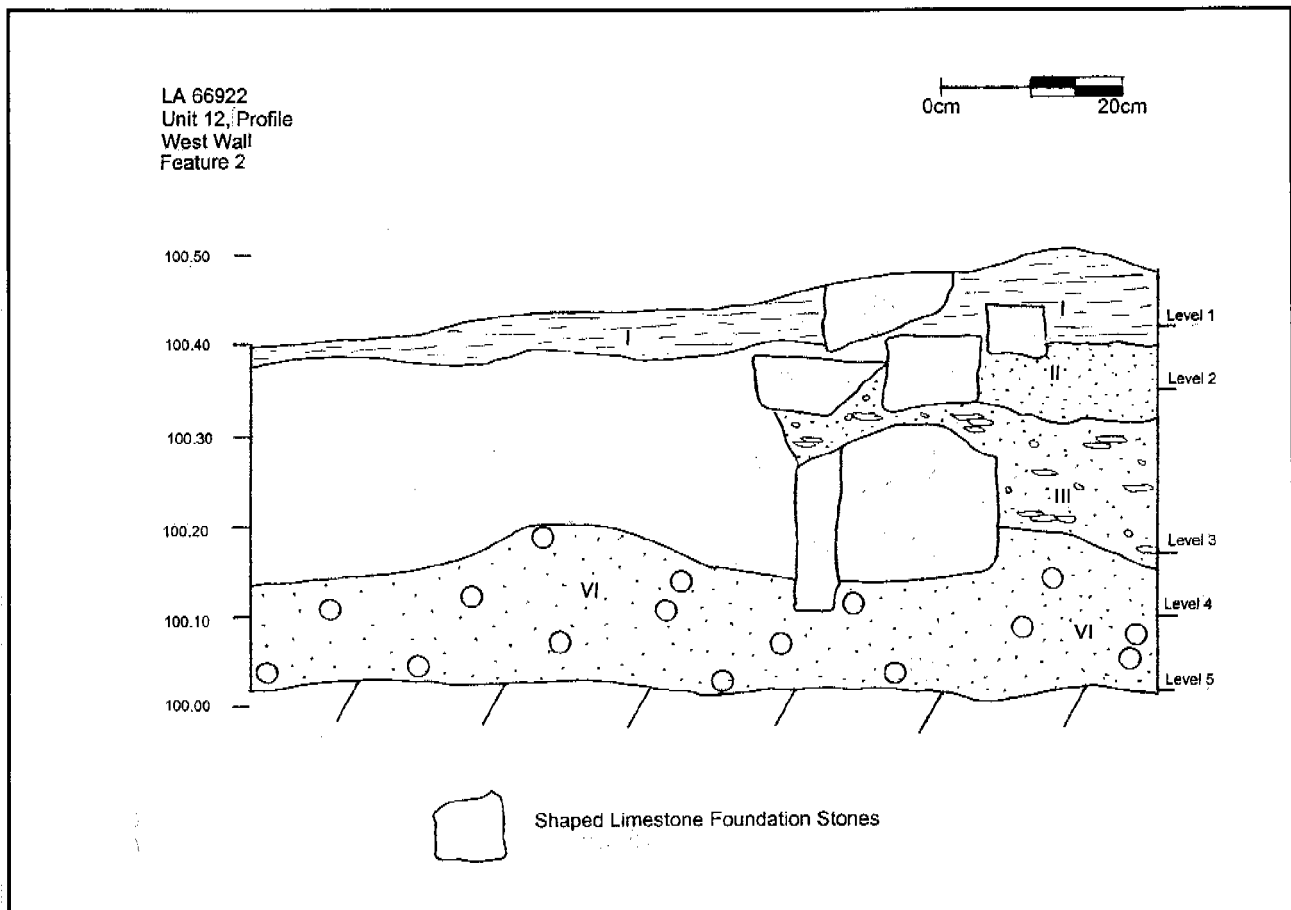


Figure 3.19. Unit 12 profile.

Unit 13

Unit 13 was a 1 by 1 m unit placed at N666.39/E622.33, along the south edge of Feature 8, a cistern (Figures 3.15 and 3.16 and Table 3.13). The unit was excavated to expose construction details of the exterior of the cistern. Level 1 contained 15 small pieces of plaster that were noted but not collected. The Level 2 window glass included 18 pieces of 3/16 inch glass. A rodent burrow was noted in the west wall of the unit. A decomposed board extended across the south half of the level (this board was also noted in the Unit 10 description). One piece of glass from Level 3 appears to be part of a thermometer. A second deteriorated wood board was found in the southeast corner of the level. In Level 4, a considerable amount of rodent burrowing was noted in the west half of the unit. At this depth, the edge of the cistern began to intrude into the unit. Level 5 was excavated about 75 cm (without

screening, as no artifacts were anticipated) in order to expose the sloping exterior of the cistern.

The excavation of Unit 13 exposed corbeled brickwork forming the constricting neck of the cistern. Cement mortar was used to bond the bricks; no attempt was made to trim the excess mortar. As was noted in the Unit 10 description, the fragmentary wood boards suggest a porch at Feature 2, or else boards laid down around the mouth of the cistern. The quantity of window glass recovered from this unit suggests a possible window in the east wall of the house at Feature 2. The peach pits are not surprising; archival research indicated that the owners had an orchard.

Unit 14

Unit 14 was a 1 by 1 m unit at N669.39/E614.20, in the northwestern portion of Feature 2, a house

Table 3.13. Unit 13 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
13	N666.39/E622.33	1X1 m	5	112 cm	N/A

Level	Soil Type	Color	Cultural Materials
1	Stratum 1: silty sandy loam	7.5YR5/4	9 bottle glass, 5 metal (incl. 2 .22 cal. cartridges, 1 nail, 1 buckle), 4 peach pits
2	Stratum 1 continues	5YR5/4	33 glass (27 window), 12 metal, 4 peach pits
	Stratum 2: reddish brown compact silty sandy loam		
3	Stratum 2 continues		2 glass, 1 nail
4	Stratum 2 continues	7.5YR5/4	
	Stratum 3: compact silty sandy loam		
5	Strata 2 and 3 continue		

foundation. The unit was placed within the foundation to expose interior construction features and recover artifacts associated with the occupation of the house. The unit was excavated in five 10 cm intervals (Table 3.14; Figure 3.20).

Because of the slope within the unit, Level 1 included only the east half of the unit. Bits of plaster and mortar were present throughout Level 1.

In Level 2 the plaster and mortar continued, particularly in the northwest corner of the unit. The bone from Level 2 is prairie dog.

In Level 3, the plaster and mortar were most common in the western third of the unit. Some very deteriorated wood was noted in the northeast corner of the level, and a fragment of leather was exposed in the east wall of the level.

Table 3.14. Unit 14 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
14	N669.39/E614.20	1X1 m	5	49 cm	64 cm

Level	Soil Type	Color	Cultural Materials
1	Stratum 1: reddish brown silty clay	7.5YR5/4	plaster and mortar
2	Stratum 1 continues		1 bone, plaster and mortar
	Stratum 2: structural (plaster/mortar)		
3	Strata 1 and 2 continue		10 metal, plaster and mortar
	Stratum 3: structural (plaster/mortar)		
4	Strata 1-3 continue	5YR5/4	17 bone, 10 metal, 2 glass, plaster and mortar, wood fragments, brick fragment
	Stratum 4: reddish brown silty clay		
5	Strata 1, 3 and 4 continue		5 metal

LA 66922
Unit 14 Profile
Feature 2

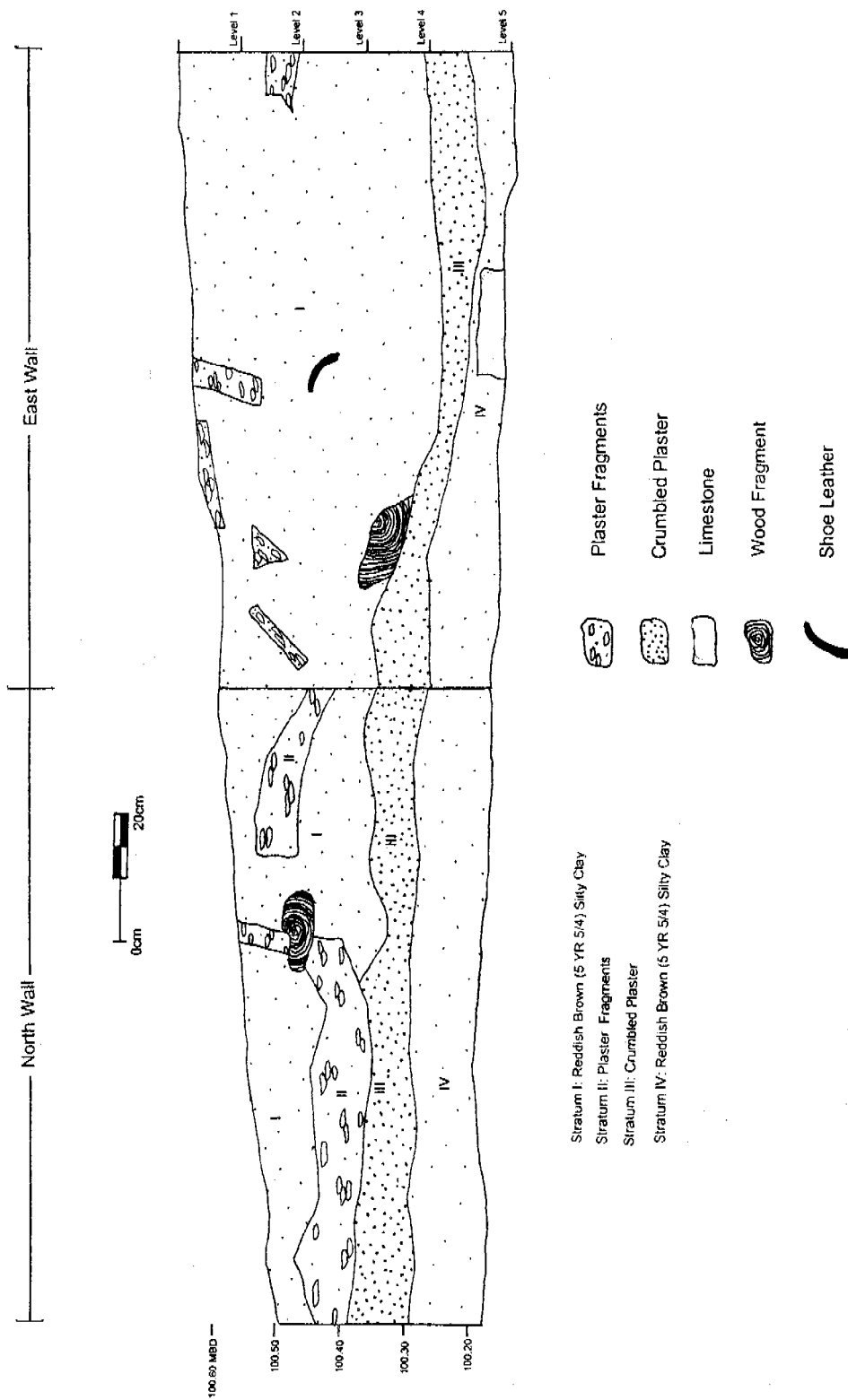


Figure 3.20. Unit 14 profiles.

The Level 4 metal includes two .22 caliber long cartridges. The bones from the level include cottontail rabbit, jackrabbit, woodrat, kangaroo rat, dog/coyote, and small and medium-sized mammal. Plaster and mortar fragments and bits of deteriorated wood were noted throughout Level 4, especially in the southeast corner of the level. A fragment of red brick was noted in the west wall of the level. Small rounded cobbles were noted in the matrix.

A large limestone rock was noted in the east wall of Level 5. After Level 5 was completed, an auger hole was cored 64 cm from the center of the unit. The auger fill was unstained and yielded no artifacts.

Although no evidence for a floor was observed, the floor most likely underlay the layers of decomposed plaster. The absence of floor elements suggests that the floor was scavenged after the structure was abandoned. The brick in the fill of Feature 2 may indicate the presence of a chimney.

Unit 15

Unit 15 was a 1 by 1 m unit at N667.29/E628.46, 10 m east of Features 2 and 8. The unit was placed within an artifact cluster in Locus 1 to recover a sample of artifacts and to determine whether subsurface remains were present. The unit was excavated in one 10 cm level (Table 3.15). The Level 1 glass included one piece of 7/16 inch window glass, one bottle base, and one bottle body shard. Excavation was discontinued because of the lack of artifacts in the lower portion of the level.

Unit 16

Unit 16 was a 1 by 1 m unit at N653.65/E624.89, 12 m south of Feature 8, in a small cluster of artifacts within Locus 1. The area was moderately disturbed by vehicular traffic; the original ground surface appears to have been lowered by blading. The unit was excavated in two levels; Level 1 was a standard 10 cm level but Level 2 was defined as the fill of Feature 15, a privy (Table 3.16, Figure 3.21). Four of the glass fragments from the unit surface are window glass, all of different thicknesses. Most of the bones are large mammal, including one element with a sawed end. One bone is from a chicken-sized bird.

Most of the Level 1 glass is bottle and canning jar fragments. The glass includes 44 pieces of window glass, which ranges in thickness from 1/4 to 7/16 inches (1/4 inch and 3/16 inch glass are most common). A metal and red fabric button, possibly for furniture, was recovered. The metal also includes four cartridges (three .22 caliber short and one .22 caliber long). The bone includes cow (sawed), turkey (wing), and unidentified small and very large mammal. Halfway through Level 1 an ashy area (which contained most of the artifacts) was exposed and designated as Feature 15. Feature 15 began in the southwest corner of the unit and extended northeastward out of the unit, into Unit 18 (see below).

Excavation of Level 2 was limited to Feature 15 but included the portions of that feature within Unit 18. Level 2 continued to the bottom of the feature. The Level 2 glass includes 61 pieces of window glass, which ranges in thickness from 1/4 to 7/16 inch. About

Table 3.15. Unit 15 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
15	N667.29/E628.46	1X1 m	1	10 cm	N/A

Level	Soil Type	Color	Cultural Materials
1	Stratum 1: silty loam with small gravels	Not recorded	4 sherds, 3 glass

Table 3.16. Unit 16 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
16	N653.65/E6243.89	1X1 m	2	26 cm	N/A

Level	Soil Type	Color	Cultural Materials
0			15 glass, 7 sherds, 7 bone, 5 metal
1	Stratum 1: dark reddish brown sandy silty loam	5YR4/6	248 glass, 67 metal, 50 sherds, 12 bone, 84 peach pits, 4 pieces of shell, 1 brick fragment, 1 coal, 2 pieces of leather
2*	Stratum 2: light brown silty loam with pebbles	5YR3/4	139 peach pits, 121 glass, 120 metal, 49 sherds, 3 bone, 2 pieces of shell including a button, 1 plastic

* Also includes Level 2 of Unit 18.

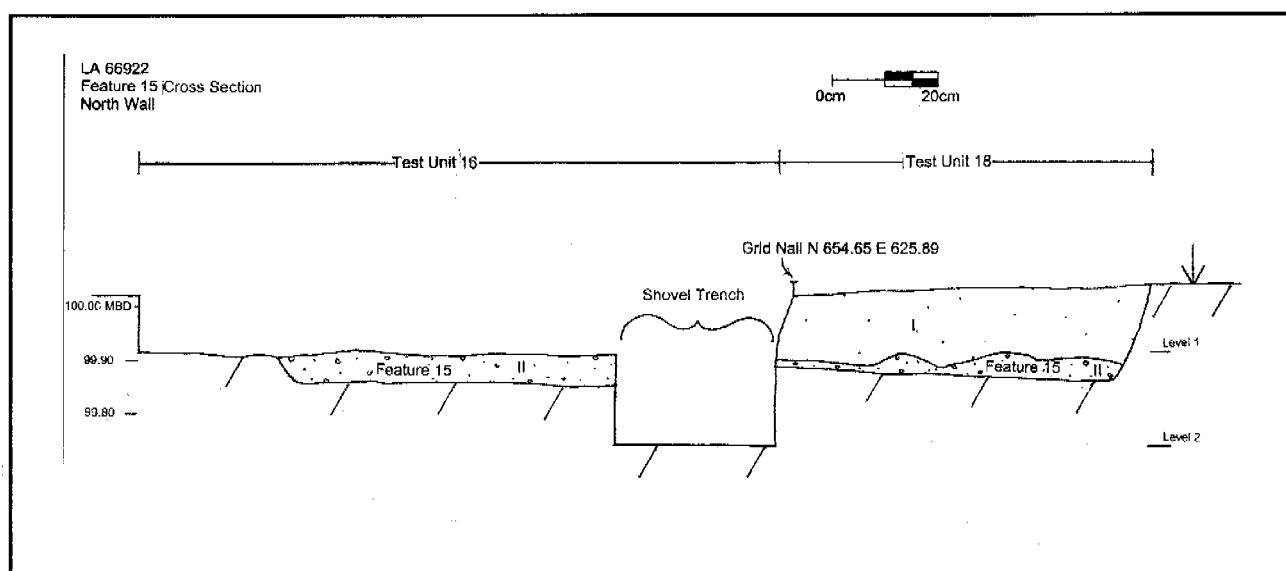


Figure 3.21. Units 16 and 18, combined profile.

one-third of the window glass is 1/4 inch; 5/16 and 3/16 inch are the next most common types. A faceted glass bead with a metal fastener was also recovered. The bead may have come from a necklace or dangle earring. The Level 2 metal includes six cartridges (three .22 caliber short, two .22 caliber long, and one .44 caliber) and two shotgun shells (one 12 gauge and one 410 gauge). The bone includes cow and small and large-sized mammals.

After Feature 15 was excavated, a 30 cm wide, 9 cm deep shovel trench was excavated along the base of the west side of Unit 16, in order to expose a cross-section of the feature and to ensure that no other

cultural deposits lay below it (Figure 3.22). Based on the shape of the feature and the dense concentration of artifacts within it, Feature 15 was determined to be a privy later partly filled with refuse. Blading of the area appears to have truncated the privy pit.

Unit 17

Unit 17 was a 1 by 1 m unit at N660.45/E632.64, 10 m southeast of Feature 8, in Locus 1 (an artifact cluster identified during survey). Like Unit 16, Unit 17 had been moderately disturbed by vehicular traffic and may have been graded. The unit was excavated in one 10

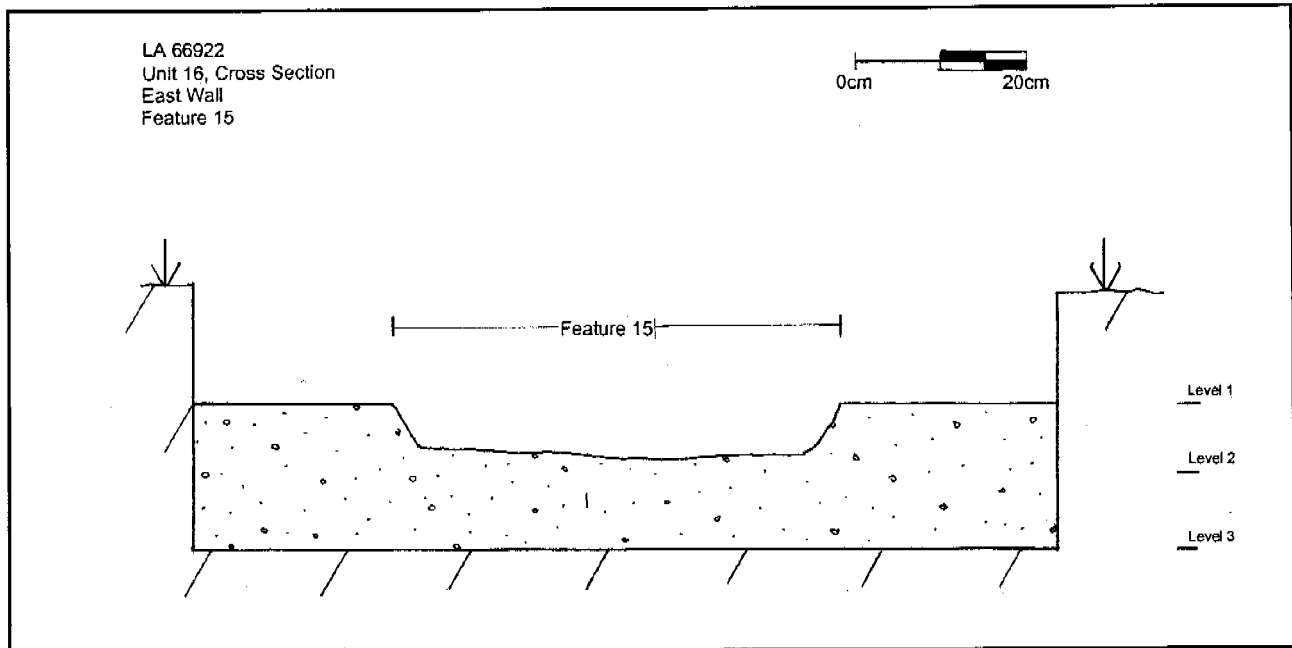


Figure 3.22. Unit 16, cross-section of Feature 15.

cm level (Table 3.17). The artifacts from Level 1 included a fragment of a carpenter's rule with metric divisions. The glass included three pieces of window glass of different thicknesses. A number of glass fragments cross-mended with bottle fragments from Feature 15 to form a nearly complete champagne type mineral water bottle with crown closure. The metal included five nails and two screws. Most of the artifacts were recovered from the upper 5 cm of Level 1, so excavation was stopped after the level was completed. The cross-mending of artifacts from different units supports the argument that this portion of the site had been disturbed.

Unit 18

Unit 18 was a 1.8 by 0.45 m unit at N653.65/E625.89 and was excavated to expose the east end of Feature 15. The unit was excavated in two levels. Level 1 was a conventional 10 cm level but Level 2 was the 7 cm of fill in Feature 15 (Table 3.18, Figure 3.21).

The cloth item from Level 1 is a cloth-covered furniture button. The metal includes five cartridges (one .22 caliber short, three .22 caliber long, and one .32 caliber). The bone includes mostly very large mammal, but also cottontail rabbit, cat, and cow. The cow bone

Table 3.17. Unit 17 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
17	N660.45/E632.64	1X1 m	1	10 cm	N/A

Level	Soil Type	Color	Cultural Materials
0			21 sherds, 5 glass
1	Stratum 1: sandy loam with small gravel	Not recorded	37 glass, 25 sherds, 12 metal, 2 coal clinkers, 1 piece of wood

Table 3.18. Unit 18 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
18	N653.65/E625.89	.45X1.8 m	2	26 cm	N/A

Level	Soil Type	Color	Cultural Materials
1	Stratum 1: dark reddish brown sandy silty loam	5YR4/6	124 glass, 95 metal, 90 peach pits, 57 sherds, 22 bone, 1 piece of shell, 3 coal, 2 pieces of rubber, 1 piece of plaster, 1 piece of cloth
2*	Stratum 2: light brown silty loam with pebbles	5YR3/4	139 peach pits, 121 glass, 120 metal, 49 sherds, 3 bone, 2 pieces of shell including a button, 1 plastic

* Also includes Level 2 of Unit 16.

is from a fetal or neonatal calf. The Level 2 artifacts were included with those from Level 2 of Unit 16. A large chunk of mortar was noted in the northeast corner of the feature. A small vertical wood post of unknown function was noted 25 cm west of the same corner.

shallow, and because most of the artifacts were recovered in the upper portion of Level 1, work was halted after that level was completed.

BACKHOE TRENCHES

Unit 19

Unit 19 was a 0.28 by 2.00 m unit at N670.10/E635.02, 12 m east-northeast of Feature 8. The unit was a north-south, 10 cm deep shovel trench through Feature 16, an ashy stain (Table 3.19, Figure 3.23). The Level 1 metal includes one .22 caliber long cartridge and nail and screw fragments. The upper 3 cm of Level 1 was very ashy and contained numerous small pieces of coal and coal clinkers. Rodent burrowing had occurred throughout the level. Because the ash stain was so

Five backhoe trenches were excavated at LA 66922. The trenches were excavated into various features to explore their depth and the surrounding subsurface deposits. The backhoe had a 70 cm wide toothed bucket.

Trench 1

Trench 1 was 15 m long and was oriented east-west. It was placed in the southern portion of Feature 6, which

Table 3.19. Unit 19 Summary.

Unit	Coordinates	Size	No. Of Levels	Total Depth (BPGS)	Auger Depth
19	N660.45/E632.64	.28X2.00 m	1	10 cm	N/A

Level	Soil Type	Color	Cultural Materials
1	Stratum 1: light gray to gray soft ashy stain with pieces of coal (Feature 16)	5YR6/1	26 metal, 9 peach pits, 2 glass, 1 sherd, 1 leather
	Stratum 2: yellowish red disturbed silty loam with faint laminations	5YR5/6	
	Stratum 3: yellowish red moderately compacted silty loam with occasional gravel	5YR4/6	

LA 68922
Unit 19 Profile
West Wall

0cm 25cm

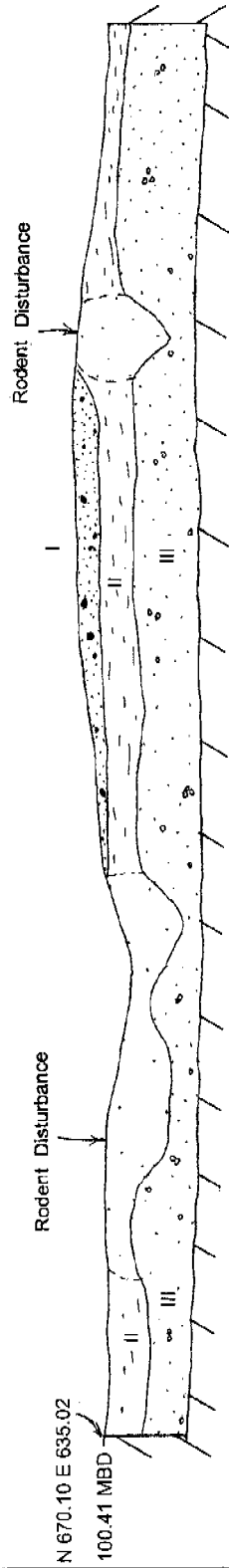


Figure 3.23. Unit 19 profile.

had been identified during survey as a possible stone and adobe foundation. Trench 1 extended from inside the western portion of the berm through the eastern portion of the berm, and revealed that the berm was not structural. The berm was underlain by a deep, dense natural deposit of rounded gravel and cobbles, that extended for 6 m through the central portion of the trench (Figure 3.24). The cobble deposit ended abruptly in either direction; the adjacent sediment was reddish brown sandy loam with little or no gravel. A few flecks of charcoal were seen in the profile. Thin lenses of ash and charcoal were noted in the north and south walls of the trench and were designated Features 12 and 13. No artifacts were associated with the features and their age could not be determined. In light of a few pieces of flaked stone recovered from other subsurface contexts, there is a slight possibility that Features 12 and 13 are traces of a prehistoric occupation. They could also be natural deposits, however.

Trench 2

Trench 2 was 5 m long and was oriented north-south. It was excavated as a northward extension of Units 8 and 9, through the north edge of Feature 5. The trench was up to 1.4 m deep. Animal burrows had severely disturbed the feature and were particularly noticeable in the south end of the trench, making it difficult to define strata in that portion of the trench. Six strata were identified in the trench wall (Figure 3.25). Stratum 1, which was 20 to 40 cm thick, extended the length of the trench and into Units 8 and 9. Stratum 1 dipped into Feature 5 and may represent soil piled up around the feature (the soil later washing back into the hole). Stratum 2 was up to 110 cm thick. Stratum 3 cut into Stratum 2 and was very similar to it, except that Stratum 3 contained a large amount of rounded gravel (up to 1 cm in diameter). Stratum 4 may represent a filled animal burrow or intentional fill next to Feature 5. Stratum 5 was only seen in the south half of the trench and most likely represents fill in the dugout structure. Stratum 6 was a natural deposit. The Stratum 5-6 contact most likely represents the floor of Feature 5.

Trench 3

Trench 3 was excavated south of a well complex (Features 3, 10, 14, and 27), through a gravel road (Feature 28) and a possible irrigation ditch (Figure 3.26). The trench was 15 m long and was oriented east-west. Maximum trench depth was 1.35 m. The gravel road connected the area around a stone foundation, Feature 7, and the well complex. The possible irrigation ditch was in line with a low concrete trough (Feature 27) and paralleled the gravel road. A stump of a deciduous tree (possibly fruit) was found next to Feature 7, supporting the notion that an irrigation ditch had been present. However, the existence of the irrigation ditch could not be confirmed in the Trench 3 profiles. The cross-section of the gravel road revealed a thin lens of gravel, indicating that roadbed preparation was limited to laying down gravel on the existing ground surface.

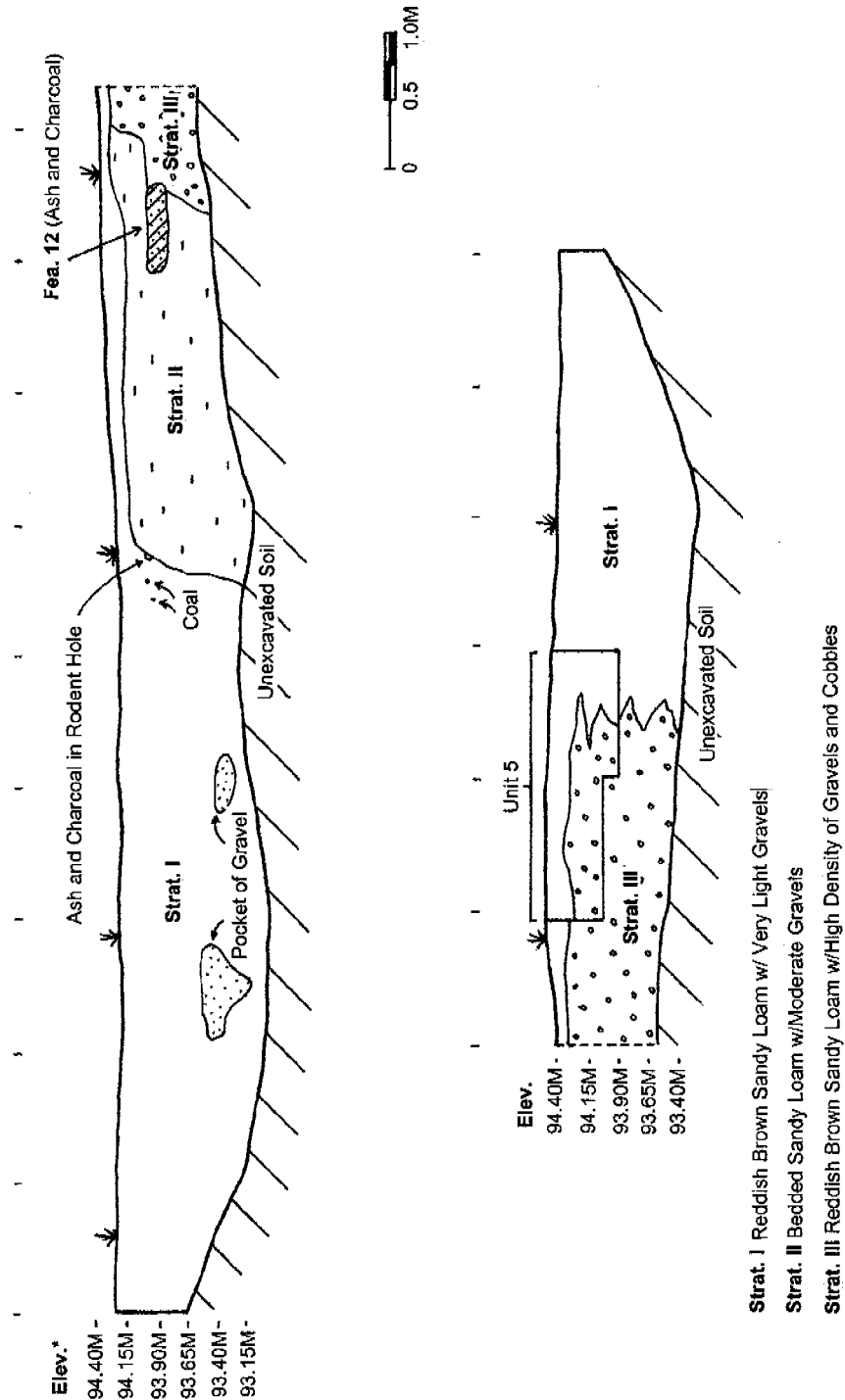
Trench 4

Trench 4 was 9 m long and was oriented north-south. The northern 3 m of the trench were excavated into the south half of Feature 1, a large, deep depression. Maximum depth of the trench was 1.15 m. Three strata were identified in the trench (Figure 3.27). Stratum 1 was present in the southern 5.5 m of the trench. Feature 16 was found in the upper portion of Stratum 1, at the south end of the trench. Much of Stratum 1 and Stratum 2 was material washed into Feature 1. The south edge of Feature 1 was defined as being 5.75 to 6.25 m north of the south end of Trench 4.

Trench 5

"Trench" 5 was a mechanically excavated area west of Trench 2 and Units 8 and 9. The excavation area was about 3 by 3 m and just over 1 m deep. This area was excavated to remove overburden from Feature 5 and to expose the spatial extent of the feature. The excavation revealed that Feature 5 measured about 3 by 3.5 m. A large quantity of artifacts was exposed and a representative sample was recovered (see Feature 5 description).

Backhoe Trench 1 North Profile



*Elevations are arbitrary with datum set at 100.00M

Figure 3.24. Trench 1 profile.

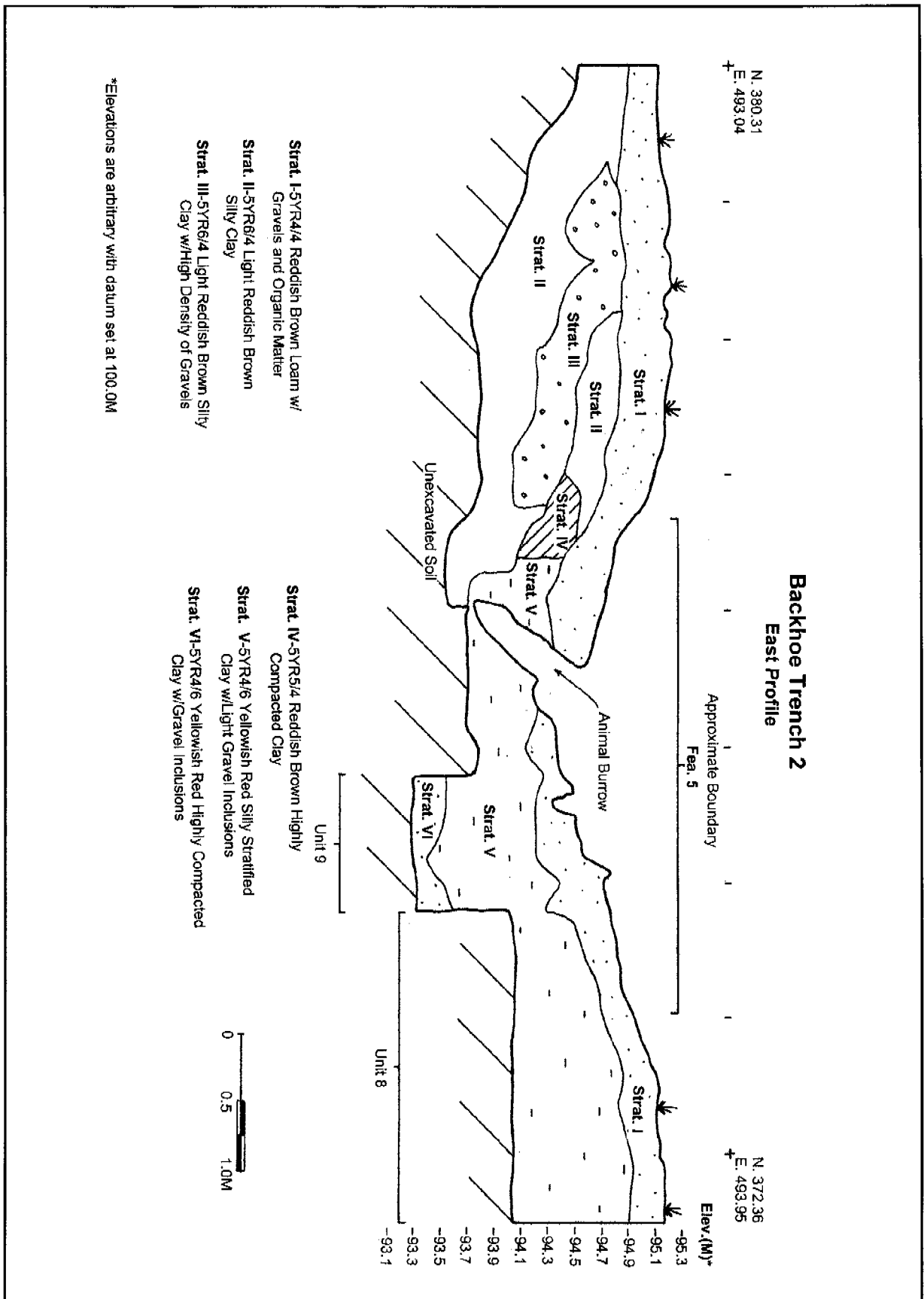
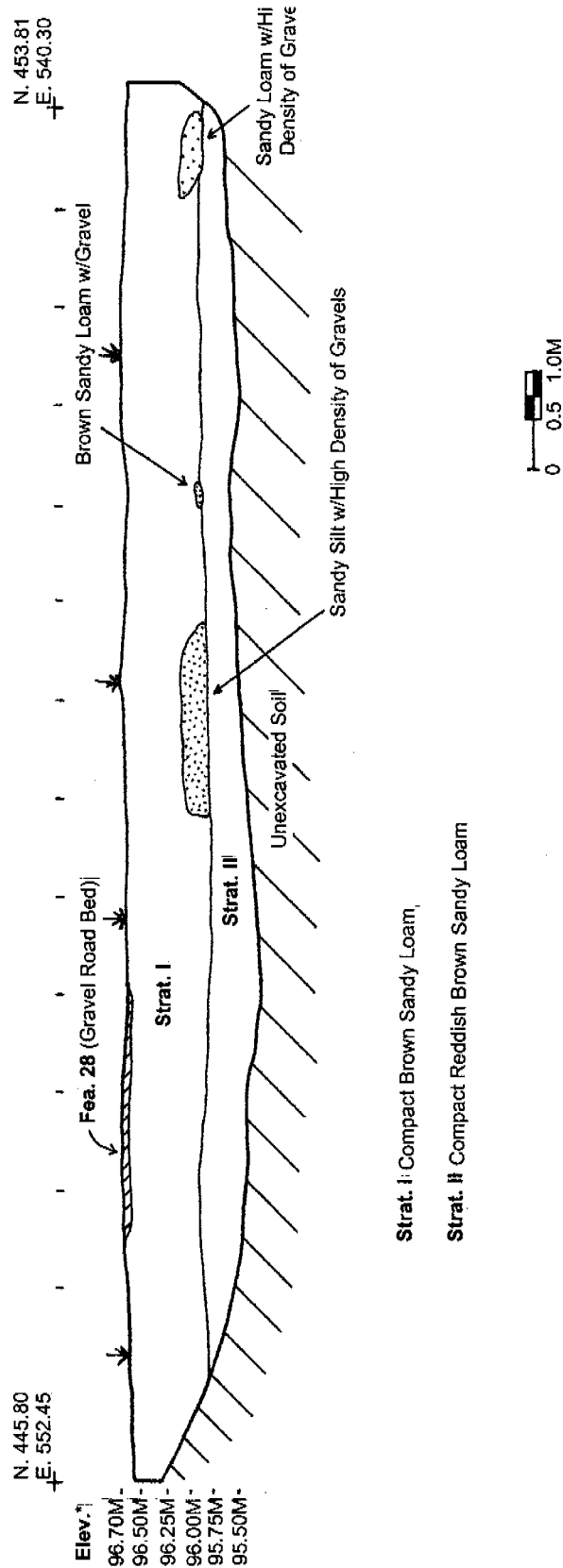


Figure 3.25. Trench 2 profile.

Backhoe Trench 3 South Profile



*Elevations are arbitrary with datum set at 100.00M

Figure 3.26. Trench 3 profile.

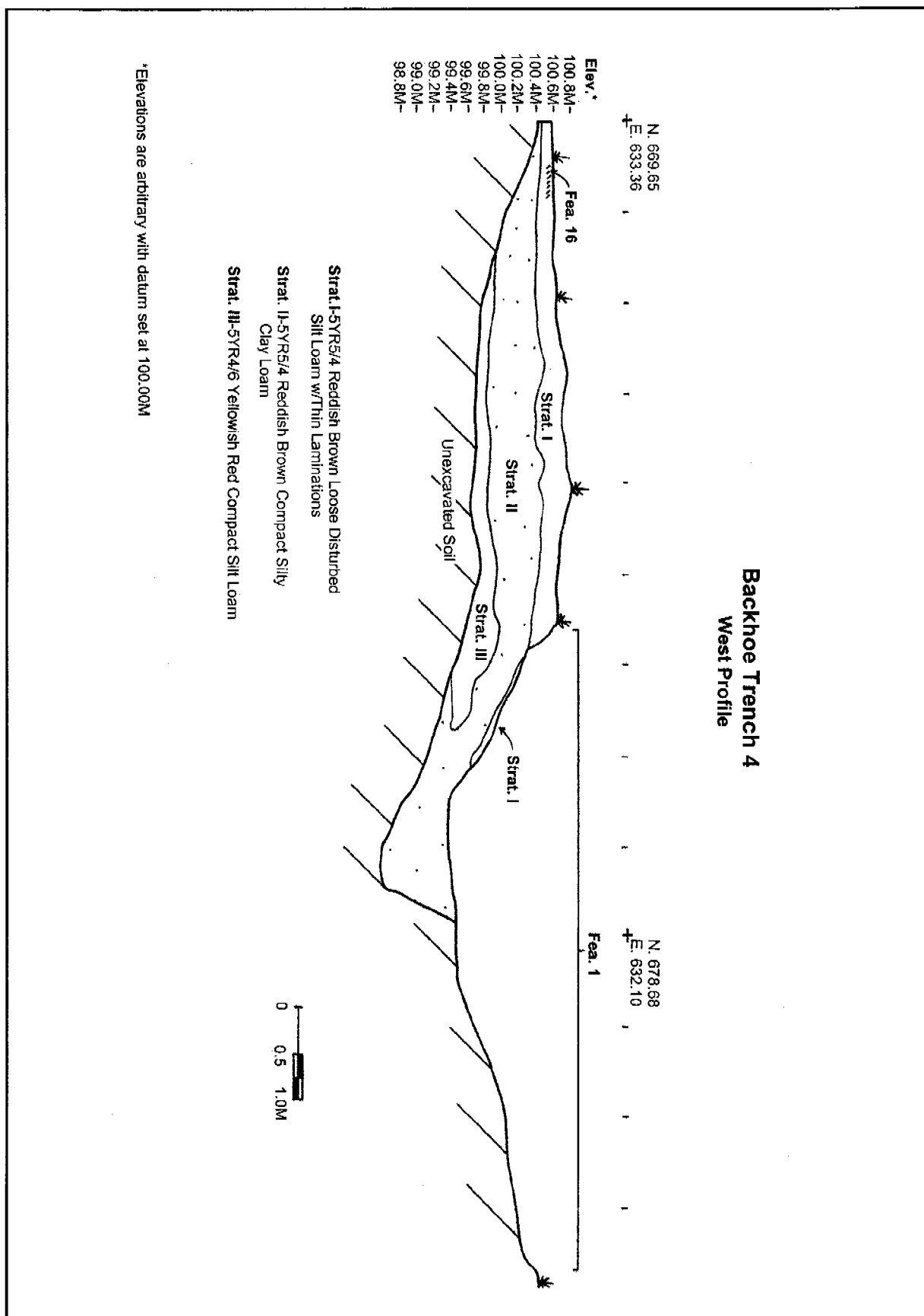


Figure 3.27. Trench 4 profile.

Trench 6

Trench 6 was a 3 m long trench extending east from Unit 9. The trench was about 1.5 m deep. The trench was excavated to determine the eastward extent of Feature 5, and to expose construction details of that feature. No artifacts were observed in Trench 6; Feature 5 did not appear to extend east of Unit 9.

FEATURE DESCRIPTIONS

Feature 1

Feature 1 was identified during the survey as a dugout east of, and associated with, Feature 2, an adobe building mound (Figure 3.2). The feature was a large depression that dipped up to 1.3 m below the surrounding ground surface. Trench 4 was excavated from the center of the feature through its south edge. The trench wall was profiled but no other work was done at this feature. Other than the depression itself, there was no evidence to suggest that this feature was a formal structure such as a dugout or root cellar. Numerous artifacts contemporaneous with Feature 2 were noted on the ground surface around the depression (see descriptions for Feature 2, Units 15, 17, and 19, and Surface Collection Units 20 and 26). Only two artifacts were noted in the trench wall: a wire nail in good condition and a Styrofoam cup.

It is unlikely that Feature 1 was contemporaneous with the house at Feature 2. An apparent ramp into the depression faced away from the house, but farmsteads are typically arranged so that outbuildings were oriented toward the back of the house. In William Ricketts's patent application for the northeast quarter of Section 12, there is no mention of any large subterranean structure (it does mention a barn, however. The location of the barn was never identified).

Feature 2

Feature 2 was identified during the survey as an adobe house mound and adjacent cistern. During data recovery the cistern was designated as Feature 8 (described separately below). Excavations revealed a

foundation measuring 10.00 by 5.35 m, with a 2.8 by 2.1 m addition extending eastward from the northeast corner of the main structure (Figures 3.28-3.30). Two 1 by 1 m units were excavated in the vicinity of the southwest and northwest corners of the structure (Units 12 and 14). Thirty-eight 1 by 1 m shovel scrape units were also excavated to more fully expose the foundation. Most of the scrapes were less than 10 cm deep, but a few were 20 cm deep to fully expose the top of the foundation. Thirty of the shovel scrapes were screened.

A variety of items was found in the excavation and shovel scrape units. The artifacts included 20 cartridges and shells, including thirteen .22 caliber short and long but also including .25 caliber, .32 caliber, .50 caliber, and 12 gauge (shotgun). Five buttons and one rivet were recovered. One of the buttons, recovered from the northeast room, had a cloisonne-type decoration. The buttons appear to represent shirts, coats, or jackets. A suspender (?) strap adjuster was also recovered.

Documents filed with the patent application for this parcel, submitted by William C. and Lillian Ricketts, note that they began construction of a five room, two story adobe house in December 1907. The records indicate they moved into the house on April 1, 1908. The patent application further indicates that it is an "extra good house ... that can't be built for \$1000." This valuation is higher than those for houses in the other quarter sections of Section 12.

Main Building

The wall construction sequence included a concrete footer, an ashlar limestone foundation, and adobe brick walls. The poured concrete footer was 8 to 10 cm thick and was several centimeters wider than the foundation. The limestone foundation was 25-30 cm tall and 40 cm thick. The limestone blocks were carefully shaped. Half-inch-wide drill holes were noted on the surfaces of several of the limestone blocks. These holes resulted from the quarrying process. The walls were one and one-half adobe bricks wide. The half brick width was obtained by turning the interior bricks on edge. The bricks averaged 40 cm long by 25 cm wide. No more than one course of adobe bricks remained.

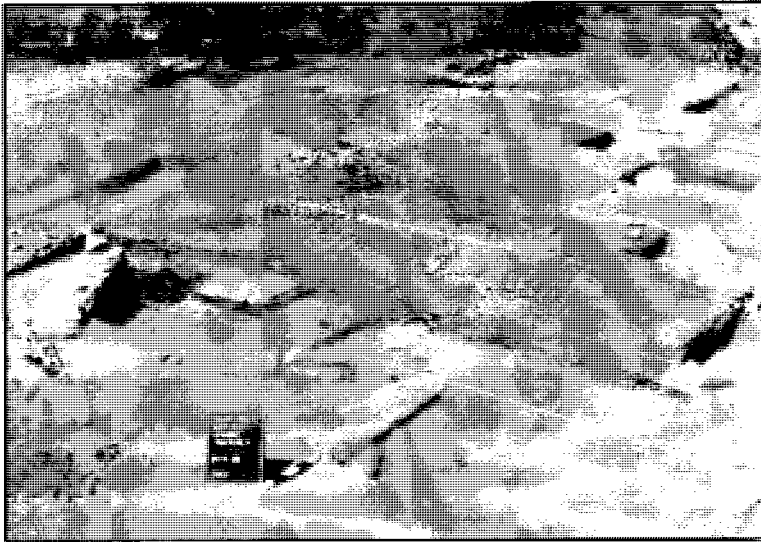


Figure 3.29. General view of foundation at Feature 2. View to NW.



Figure 3.30. South end of foundation at Feature 2. Note Feature 8 in background. View to ENE.

The interior walls were covered with a initial layer of stucco on split wood lath, and were finished with a layer of plaster. Vast quantities of stucco, plaster, and layered stucco and plaster were noted inside the foundation. Some of the stucco preserved impressions of the lath. No evidence of paint was noted on the plaster. In some units, stucco was also found outside the lines of the walls. The western adobe wall appears to have collapsed inward; part of the south wall collapsed outward.

The nearly intact remains of a wood window frame were exposed in the southwest corner of the foundation (in Unit 12; Figures 3.31 and 3.32). The frame was built of two layers of 2.5 cm (1 inch) boards with a 2.5 cm gap between them. The pane area was about 75 cm wide and was more than 60 cm tall. The frame's corner joinery suggested that it may have been installed in the south wall. This notion is supported by the recovery of over 200 window glass shards from two 1 by 1 m shovel scrape units overlapping the center of the south wall.

Other window glass fragments were recovered from various locations along the foundation, particularly along the east wall. No more than 27 shards were recovered from any one shovel scrape or excavation unit along the east wall, so the placement of the east elevation windows could not be accurately determined. Window glass fragments in Units 10 and 13 suggest that there was a window in the southern part of the east wall. The locations of doorways could not be determined.

Subfloor ventilation holes were located at the north and south ends of the house (Figures 3.33 and 3.34). The ventilation holes were indicated by 27 cm (10 inch) gaps in the limestone block foundation. The gaps were framed with 22 by 4 cm (8.5 by 1.5 inch) vertical boards that were in very poor condition. It was not possible to determine whether screens or louvers covered the holes to prevent animals from

going under the house.

The house had a wood floor. A small quantity of highly deteriorated wood in the northeast corner of the main building was the only trace of the floor. The wood fragments were oriented north-south; given their size, they were stringers. The flooring would have been perpendicular to the stringers and oriented to the short axis of the house (east-west). Excavation in Units 12 and 14 did not reveal any remains of the floor, which

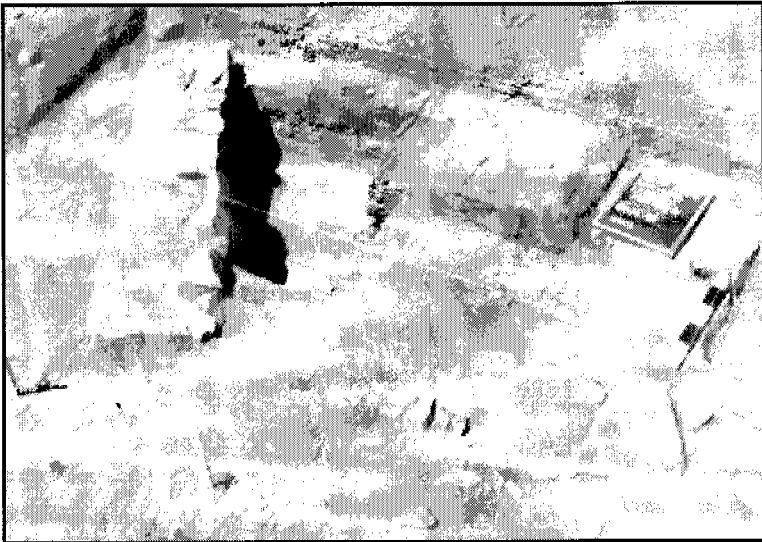


Figure 3.31. Feature 2, southwest corner with window frame.

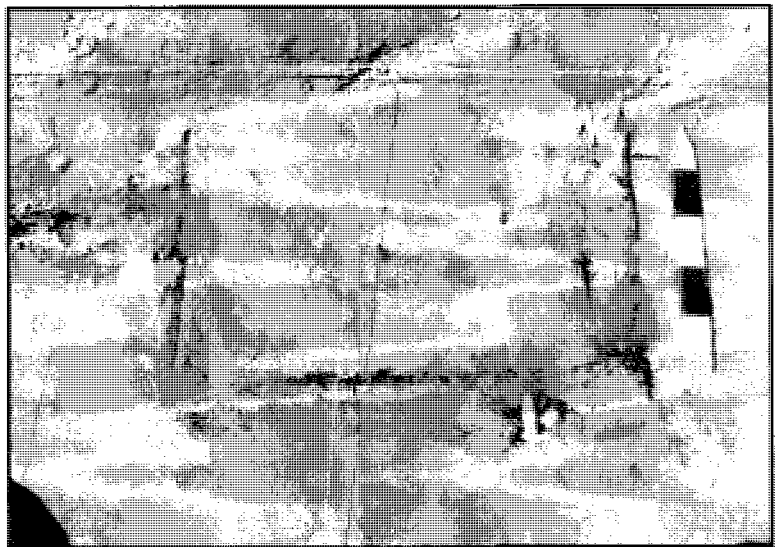


Figure 3.32. Feature 2, detail of window frame.

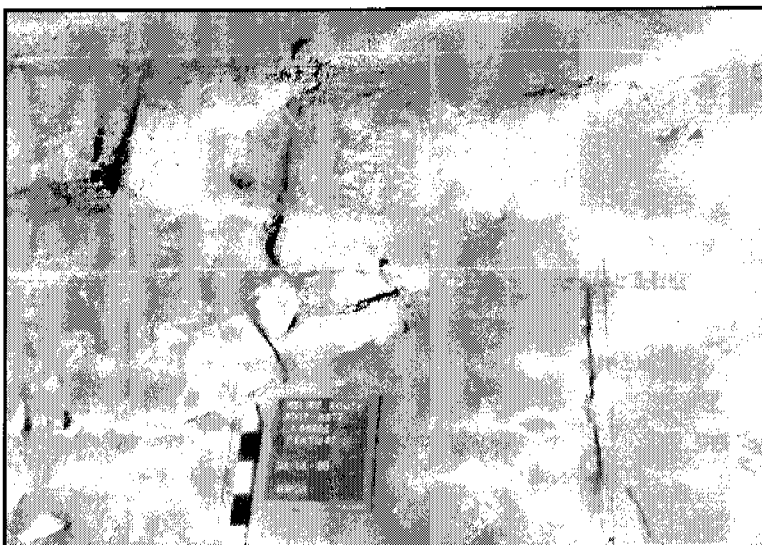


Figure 3.33. Feature 2, south end subfloor vent (circled).



Figure 3.34. Feature 2, closeup of south end subfloor vent, with remains of wood frame outlined.

most likely was scavenged after the building was abandoned. In the few areas where excavation extended below the apparent floor level, very few artifacts were recovered.

Based on the presence of numerous small animal bones, the house may have stood for some time after abandonment, or perhaps some animals gained access to the space below the floor by means of the ventilation holes. The 49 bones found at Feature 2 included cottontail rabbit, jackrabbit, pocket gopher, cotton rat, bat, woodrat, kangaroo rat, prairie dog, dog/coyote, cow, and unidentified small and medium-sized mammal. Carnivores had been present, as evidenced by punctures and gnaw marks on some of the bone. Rabbits apparently used the house for a burrow, as fetal/neonatal and very young bones were found.

Northeast Addition

A small room, 2.8 by 2.1 m, extended eastward from the northeast corner of the main building (Figures 3.35 and 3.36). Shovel scrapes were conducted across the entire room to define the location of the walls and to see whether other additions were present beyond this room. No other extensions were found.

The patent records indicate a five room, two storey house. The main building probably included four

rooms (two above, two below), so this addition was the fifth room. As for the main building, there was a great quantity of plaster within the foundations, indicating plastered walls. No evidence of exterior plaster was noted. Over 50 window glass shards were recovered from seven 1 by 1 m shovel scrape units overlapping the room, suggesting that one or more windows were present in the addition. The highest quantity of window glass came from the center of the east wall of the room.

Differences in construction details indicated that the room was an addition. The extension lacked a concrete footer. Smaller, less carefully shaped stones were used in the foundation, and the masonry did not bond with that of the main building. The

addition walls were only one adobe brick wide. The very deteriorated remains of the wood floor stringers were perpendicular to the ones in the main building. (The stringers in the addition were on 45 cm [18 inch] centers.) The addition was made less than two years after construction of the main building: the patent records state that the house was built between November 1907 and April 1908, while testimony dated June 1909 states that there were five rooms in the house.

The function of the room could not be determined, but it may have been a storage room. The location of the doorway could not be determined. The most likely locations were an interior door through the adjoining wall of the main building, or an exterior door through the south wall of the room.

A large quantity of animal bone (222 items, or 44 percent of the total faunal assemblage from the site) was collected from this room. The assemblage includes cottontail rabbit, jackrabbit, cat, bat, pocket gopher, woodrat, cow, and unidentified small, large, and very large mammal. The larger taxa comprise 14 bones, of which the identifiable ones are foot bones. Most of the bones are from bat, cottontail, and cat. The cat remains consisted of an articulated, almost complete skeleton. Perpendicular wood fragments around the cat skeleton suggested that it was inside a box, which it



Figure 3.35. Feature 2, northeast addition. View to SE.



Figure 3.36. Feature 2, northeast extension. View to SW.

possibly used a den. It was not clear whether the cat had been present during or after the occupation of the house. Some of the other bone from this room shows evidence of gnawing, possibly by the cat. Some of the cottontail and jackrabbit bones represent fetal, neonatal, or very young individuals, indicating the presence of burrows. The bones suggest post-abandonment occupation of the structure by small burrowing animals.

Possible Porch

Some evidence was found for a porch off the east side of the main building. Fragments of wood were noted in Units 11 and 13 and in several of the shovel scrape units along the east wall. If there was only exterior access between the main building and the addition, this porch would have acted as the connecting passage. The crawlspace under a porch is an inviting location for small animals to burrow or nest. Feature 17 may represent such a burrow. Nine bones, including cottontail, pocket gopher and woodrat, were recovered from this area. The cottontail bones included one fetal/neonatal bone, suggesting that a burrow had been present.

Feature 3

Feature 3 was a well complex (Figures 3.37-3.39). The survey had depicted this feature as lying outside the right-of-way, but it proved to be inside the right-of-way. The survey records described an iron well casing, a concrete pad, four concrete pylons, and large pieces of concrete rubble. During data recovery, Feature 3 was redefined to include only the four pylons. The other elements at this location were given separate feature numbers (10, 14, and 27) and are described below.

The four poured concrete pylons are 40 cm square and 40 cm tall. The threaded end of an iron bolt protrudes from the top of each pylon. The pylons are arranged in a square, 2.1 m apart. The pylons have footers that extend 20 to 25 cm from their base; each pylon-footer was poured in one piece. The pylons and footers probably supported a water tank on a tower.

A 2 by 2 m unit was placed over the southwest pylon (Unit 11) and encompassed most of the space between the other pylons, in order to explore for a possible second well casing and other structural remains related to the pylons. A linear, north-south, adobe-like feature was exposed just below the surface, near the center of

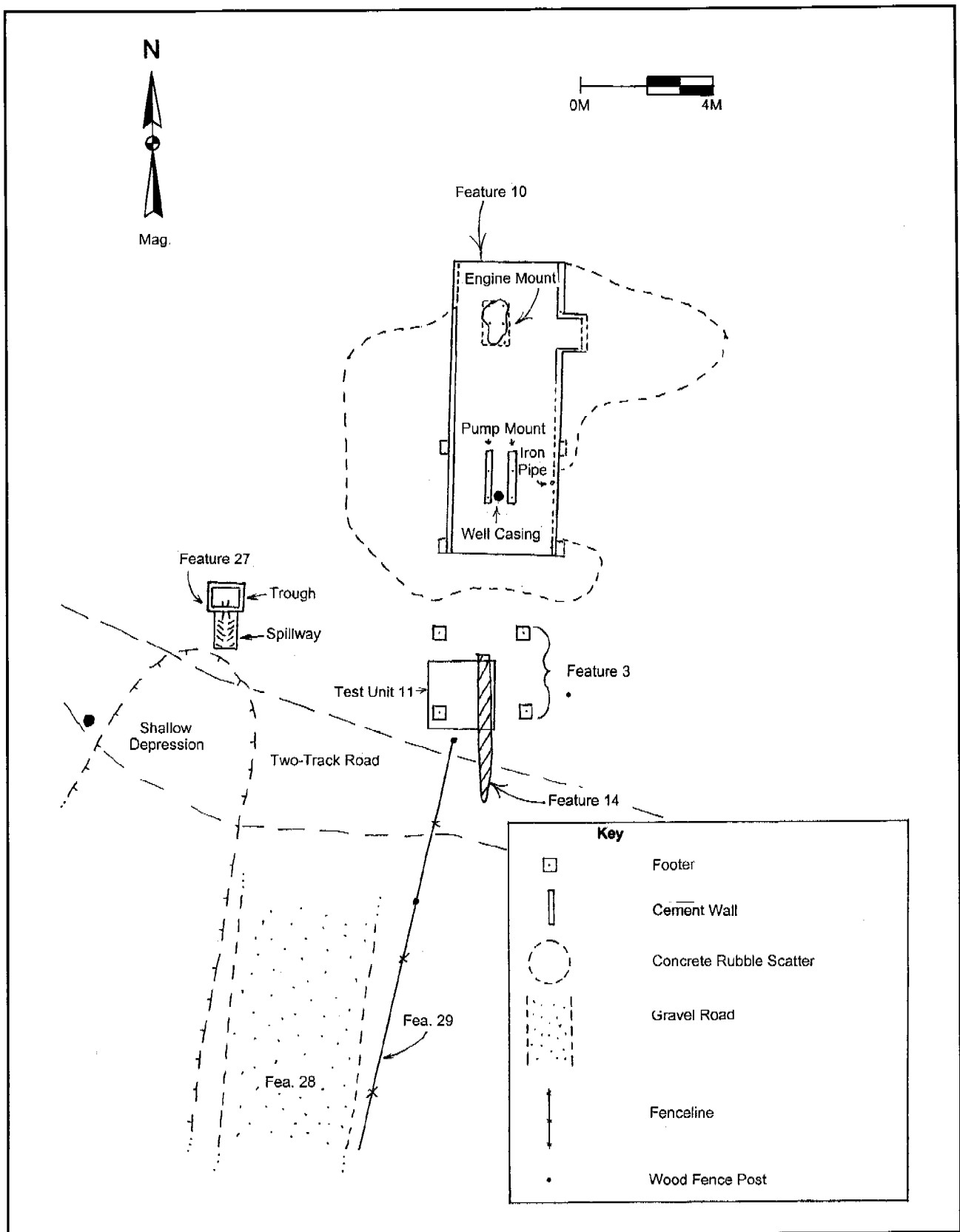


Figure 3.37. Well complex (Features 3, 10, 11, 14, and 27-29).



Figure 3.38. Feature 3 prior to excavation. View to NE.



Figure 3.39. Feature 10, well casing and pump pylons. View to N.

Unit 11, and was designated Feature 14 (see below). A small quantity of artifacts was recovered from the top layer of the unit. The artifacts consisted mostly of metal and glass but also included a piece of leather, a peach pit, and a piece of coal. Several wire nails were found but most of the metal was unidentifiable. Much of the glass resulted from recent refuse disposal. A wood post 0.5 m southeast of the southwest pylon formed the north end of Feature 29, a fence line used to control access to the water by livestock.

The three other features associated with Feature 3 are described below. Briefly, however, Feature 10 is the remains of the well and pump house used to fill the water tank, Feature 14 may represent water seepage from the water tank, and Feature 27 is a low cement trough about 1 m square, 6 m west of Feature 3.

Feature 4

Feature 4 was identified during the survey as a reservoir. The exterior dimensions of the feature were 45 by 35 m, with the long axis oriented east-west. Height from the bottom of the central depression to the top of the berm was 1.7 m. A narrow gap in the berm was present on the east side of the feature, possibly to allow water to flow in. The feature contained (and was surrounded by) piles and clusters of recent refuse, including furniture, clothing, household goods, and building debris. The feature is bisected by the edge of the right-of-way, at a point where the right-of-way width changes from 30 to 45 m from the centerline.

Archival research prior to and after fieldwork located maps and aerial photographs of this area dating to 1950, 1959, and 1976. A 1950 15 minute quadrangle map shows no feature at this location. A less detailed 1959 planimetric aerial quadrangle does not depict this feature either. Feature 4 is clearly visible

on a 1976 7.5 minute orthophoto quadrangle and a 1981 7.5 minute topographic quadrangle (the latter was based on aerial photographs taken in 1972). Based on these maps, Feature 4 dates between 1959 and 1972, well after the main site occupation. As a consequence, Feature 4 was not further studied in the field.

Feature 5

Feature 5 was identified during the survey as a dugout. The feature was indicated by a roughly rectangular

depression that measured 5.0 m across and 1.0 m deep. During data recovery the crew noted that the feature had been heavily disturbed by burrowing (by fox- or coyote-sized mammals). A 2 by 1 m unit (Unit 8) was hand excavated along the south edge of the depression, to a depth of 1.0 m. Few artifacts were recovered from the unit. Unit 9, measuring 1 by 1 m, was excavated just north of Unit 8, at the center of the depression. At a slightly greater depth than was reached in Unit 8, 1.5 m below the surrounding ground surface, a dense artifact layer, about 50 cm thick, was encountered (Figures 3.40 and 3.41). A 5 m long backhoe trench (Trench 2) was excavated northward from this unit to define the northern limit of the deposit and to expose a continuous 8 m long profile. Although dug deeper than 2 m, Trench 2 did not encounter the artifact layer, possibly because of the intense animal burrowing. Additional backhoe trenches (5 and 6) were excavated to remove overburden and to expose the limits of the feature.

The amount of disturbance precluded an accurate definition of the limits of the dugout. Based on the extent of the artifact deposit, the dugout measured 2.75 m square. The dugout may have had a sheet metal roof supported by 2 inch iron pipe (see Figure 3.41). The location of the entrance could not be determined but it was most likely to the south, to provide the most direct access from the house.

Hundreds of artifacts were recovered from the various excavations in this feature, including numerous dry cell batteries (some in pairs), about a half-dozen whole bottles and fragments of many others, crockery and other ceramics, miscellaneous bicycle parts, shoes, assorted heavy machine parts, stove pipe, unidentifiable pieces of sheet metal, and peach pits, melon or squash seeds, and cockleburrs. Feature 5 may have initially functioned as a root cellar and/or storm cellar, then as a storage place for odds and ends, finally as a refuse pit. One of the batteries retained an intact label with a 1920

patent date, indicating that items were still being added to the feature at least until that year.

Feature 6

Feature 6 was identified during survey as a gravel and adobe foundation. The feature was a gravel berm that was roughly 12.5 m square and up to 50 cm tall. The feature interior was roughly level with the surrounding area. The survey report and data recovery plan showed the east half of this feature as being within the right-of-way. Data recovery excavations were therefore limited to the east half of the feature. Unit 5, a 2 by 1



Figure 3.40. Feature 5, Unit 9, Level 12.



Figure 3.41. Feature 5, Unit 9, Level 16.

m unit, was excavated across the eastern berm of the feature. Unit 7, a 1 by 1 m unit, was excavated in the eastern portion of the depression. Neither unit yielded any artifacts or exhibited structural remains. Unit 5 exposed dense deposits of rounded gravel, uncharacteristic of melted adobe walls. To further define Feature 6, a 13 m backhoe trench (Trench 1) extended the excavations 9 m west and 2 m east from Unit 5. Two ash lenses were exposed in the trench walls west of Unit 5 and were designated Features 12 and 13 (see below). After questions were raised about the accuracy of the right-of-way limits shown in the earlier report, NMSHTD surveyors determined that almost all of the feature (including both units and most of the trench) were outside the right-of-way.

In the final proof of John Minns's patent for the southwest quarter of Section 12, a neighbor noted that a barn was one of the improvements to the land. Although there was no structural, artifactual, or other evidence to suggest it, Feature 6 may represent the location of that barn.

Feature 7

Feature 7 was previously identified as a rock foundation and cistern. Both are east of the right-of-way, at the south end of the site. The cistern was redesignated Feature 9 and is described below. Feature 7 consisted of an 11.1 by 9.3 m limestone foundation similar to that at Feature 2 (Figures 3.42 and 3.43). The limestone was a similar white to very pale green, suggesting that the rock came from the same quarry. Similar shaping and workmanship may suggest the same builder. Boards scattered near the northeast corner of Feature 7 suggested a possible doorway. There may have been a porch on the south (front) side of the structure, with a short gravel path centered on (and leading southward from) the structure. The gravel path was designated Feature 39. A chicken wire fence with metal posts (Feature 38) defined the front yard for the house. A shallow, 2 m wide depression 4 m



Figure 3.42. Feature 7. View to NE



Figure 3.43. Feature 7, detail of southeast corner. View to N.

east of the house may have been a privy location. A 1 m wide stain was noted 7 m south of the southeast corner of the foundation. The function of this stain could not be determined. Numerous domestic artifacts lay scattered around the house.

Patent records indicate James C. Dunn built the house in April 1900 and patented the land on October 1, 1903.

The surface artifacts included the feet of a small porcelain doll, noted south of the house. A maker's

mark of "O'Neill" (in stylized, elongated letters) indicates that this was a Kewpie doll designed by Rose O'Neill after 1913 and possibly made by J. D. Kestner in Germany (Foulke1997:127). The presence of this artifact is intriguing, as the Dunns had no children. However, Kewpie dolls were sometimes collected by adults, just as Beanie Babies are today. James Dunn died in early 1914, so the Kewpie doll may have belonged to the child of a family that later occupied the Dunn homestead. No Dunns are noted in Alamogordo in the 1920 U.S. Census.

As Feature 7 was outside the right-of-way, it was not further investigated.



Figure 3.44. Feature 8, south side after excavation.

Feature 8

In the survey report, Feature 8 was included with Feature 2. Feature 8 is a "bottle-necked" cistern (see Figures 3.44 and 3.45). The cistern was built of fired red clay brick with a interior parge coating of cement. The cistern was more than 5 m deep, with an exterior diameter of just over 2.5 m. The "bottle neck" constriction began 1.0 m below the present ground surface and sloped inward at an roughly 55 degree angle before returning to vertical at the present ground surface. Only two courses of brick remain of the collar. A small (10 cm or 4 inch) square wooden inlet was present on the north side of the cistern, just below the collar (Figure 3.45). No trace was found of the cover for the cistern. A small quantity of recent refuse was present in the bottom of the cistern.

A rough calculation indicates that the cistern had a capacity of over 6,000 gallons (1,360 l). Patent records for the northwest quarter of Section 12 (filed by Oscar Carroll in 1908) note a cemented cistern with a capacity of 200 barrels. Liquid capacity of a standard barrel is 31.5 gallons; Carroll's cistern thus held 6,300 gallons. Given the similarities in capacity, Carroll's cistern may have resembled the one found at Feature 8.

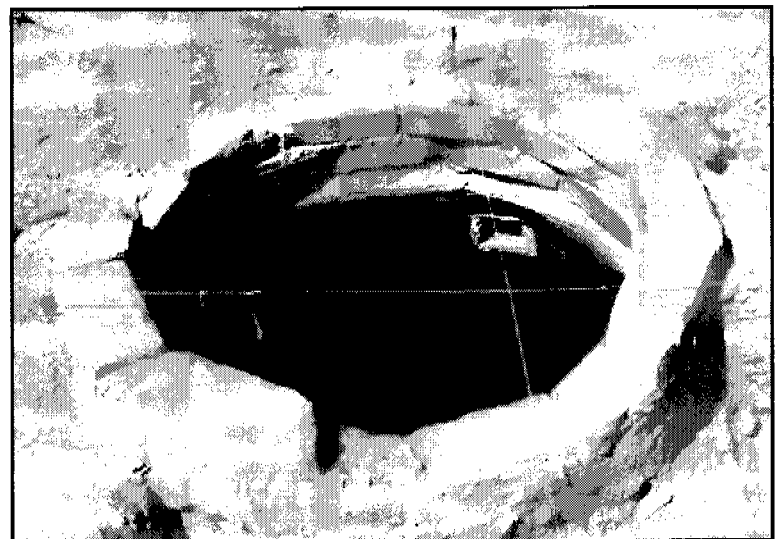


Figure 3.45. Feature 8, showing wood inlet.

Work at Feature 8 included Unit 10, a 2 by 2 m excavated to expose details of the construction of the cistern and of the hole dug to hold the cistern. The unit was reduced to a 1 by 1 m unit (Unit 13) after three levels, when the edge of the cistern excavation hole was defined. Artifacts recovered from the fill around the cistern included 44 pieces of glass, 18 pieces of metal, eight peach pits, one undecorated whiteware sherd, and one piece of coal. The metal included four .22 caliber short and four .22 caliber long cartridges. Fragments of very decayed wood planks 10-20 cm wide were noted in both units, and may be the remains of a

platform around the mouth of the cistern (or simply of boards laid down around the cistern, to keep the users from getting muddy). The radius of the hole for the cistern was less than 10 cm greater than that for the cistern itself. The hole may have undercut the southeast corner of Feature 2 by 10 to 20 cm, suggesting that the cistern was built before the house. If the cistern had been built first, it would have provided a water supply for mixing the mortar and adobe for the house.

Feature 9

During the survey, Feature 9 was recorded as part of Feature 7. Feature 9 is also a "bottle-necked" cistern. This feature was not excavated as it is outside the right-of-way. The cistern is filled with garbage and sediment to within 2 m of the collar, so accurate measurements could not be made. However the cistern appears to be identical to Feature 8 and presumably had a similar capacity. Unlike Feature 8, Feature 9 does not undercut the foundation for the adjacent house.

Feature 10

Feature 10 is the remains of a rectangular structure with poured concrete floor and walls. During survey Feature 10 was recorded as part of Feature 3 (which is immediately to the south). The survey and data recovery maps showed Feature 10 outside the right-of-way, but during data recovery the feature proved to be within the right-of-way.

The structure measured 9.15 by 3.10 m. The walls had fallen and had shattered; pieces were scattered around the foundation. The walls were 3 m (10 ft) tall and had four exterior buttresses (one at the southeast corner, one at the southwest corner, and one 2.5 m north of each of those corners). A small alcove extended from the east side of the building, for purposes unknown. Access was gained through the north elevation of the building, through a doorway as wide as the structure itself. A vertical 20 cm (8 in) diameter iron pipe was present near the center of the south half of the building. The pipe was probably a well casing. Straddling the well casing were two concrete pylons. Three meters north of the pipe was a low concrete platform that measured 1.3 by 0.7 m.

Fieldwork at Feature 10 consisted of mapping and photographing the feature and mechanical removal of the concrete wall rubble. The rubble was moved to see whether other elements of the building were buried by the rubble, and to flip over the larger chunks of concrete rubble in order to expose any construction details. No excavations were conducted at the feature. No evidence of the roof was noted. Wessel (1996:7) speculated that Feature 10 may have been a one-car garage, but based on the data recovery studies it was a well and pump house. The two pylons flanking the well probably supported the pump, while the low platform to the north supported the motor or engine that drove the pump. The pump was probably used to fill the adjacent water tank (Feature 3) and to supply water for irrigation, possibly for Dunn's orchard and garden.

Feature 11

Feature 11 was defined during data recovery and encompassed the areas defined as Locus 4 and Locus 5 during the survey. Feature 11 was west of the right-of-way and was a level area with an east-west alignment of four well-shaped limestone boulders, which were up to 50 cm across. A fifth boulder lay 4 m south of the others. Feature 11 may have been the location of a structure. Two dense scatters of artifacts (Features 32 and 33) lay to the west of Feature 11.

John C. Minns patented the southwest quarter of Section 12 on December 21, 1922. The improvements cited in the patent proof include a four-room wood and box house built between May 1917 and June 1921. A cursory examination of the artifacts at this location indicates an occupation earlier than that date. Ironically, an unidentified circular brass object had the inscription "J. C. Dunn," the name of the patentee of the quarter section to the east. Two other dense artifact concentrations (Features 34 and 35) were noted less than 20 m northwest of Feature 11 and may represent additional structures. The artifacts found – corset stays and jewelry – do not seem typical of a single man, and suggest that a family later occupied the Minns homestead. Although Minns and a presumed sister are listed in the 1910 Census for Alamogordo, no Minns is listed in the 1920 Census records for Alamogordo.

Feature 12

Feature 12 was an 80 cm long by 15 cm thick ash lens exposed in the wall of Trench 1, which was excavated in Feature 6. No artifacts were associated with the feature, whose function and period of use could not be determined. The feature proved to be just outside the right-of-way and was not investigated further.

Feature 13

Feature 13 was an 90 cm long by 20 cm thick ash lens also exposed in the wall of Trench 1. No artifacts were associated with the feature, whose function and period of use could not be determined. The feature proved to be outside the right-of-way and was not investigated further.

Feature 14

Feature 14 was a linear deposit of dense, adobe-like sediment found between the concrete water tank footers of Feature 3 (Figures 3.46 and 3.47). Feature 14 was over 4 m long and 36 cm wide at its widest point (at its north end). The feature was discovered in Unit 11, which was excavated around a portion of Feature 3. An additional 2 sq. m area was shovel scraped to determine the extent of the feature. Two short shovel trenches were excavated through the feature, revealing a trough-like subfeature (filled with soft sediment) in the upper part of the adobe-like material (Figure 3.18). Artifacts associated with Feature 14 include those noted for Feature 3, plus one wire nail.

The function of Feature 14 could not be determined, but it may have channeled leakage away from the area. The water in the Alamogordo area has a high dissolved mineral content, particularly carbonates. Minerals in the water would have concentrated in the soil next to the channel,

forming the adobe-like component of Feature 14.

Feature 15

Feature 15 was a possible privy and trash deposit in Locus 1 and associated with Feature 2. The feature was rectangular and measured 180 by 48 cm (Figure 3.48). A 1 by 1 m unit in Locus 1 (Unit 16) exposed the west half of the feature, and shovel scraping (Unit 18) revealed its eastern extent. The shape of Feature



Figure 3.46. Feature 14, soil feature, next to footer for water tank (Feature 3).



Figure 3.47. Shovel trench showing Feature 14 in cross-section.

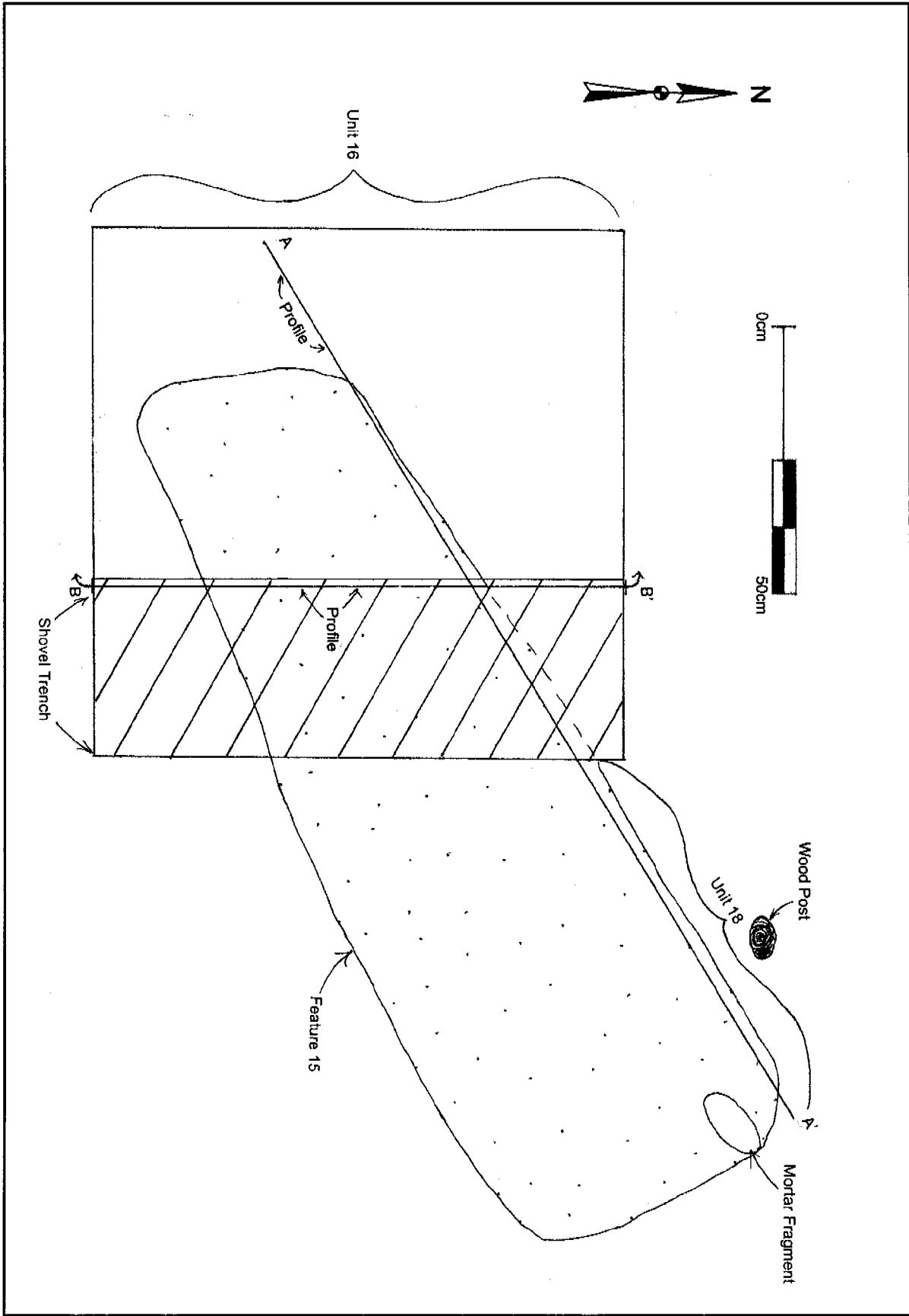


Figure 3.48. Feature 15, plan view. See Figure 3.21 for the A-A' profile and Figure 3.22 for the B-B' profile.

15, its location 11 m south of Feature 2, and the dense fill of artifacts suggests that Feature 15 was a privy. However, its shallow (17 cm) depth is uncharacteristic of privies. Heavy equipment may have truncated the feature in the recent past.

Within the feature, artifact density was extremely high. The artifacts include 508 fragments of glass, 313 peach pits, 287 pieces of metal, 160 sherds, 37 bones, and fewer than 10 items each of shell, coal, leather, rubber, cloth, plaster, plastic, and brick. The glass included fragments of window panes, bottles, canning jars and lids, a thermometer, and a light bulb. Window pane shards account for 157 of the glass fragments, and range from 1/16 to 9/16 inch thick in 1/16 inch increments. The most common window glass thickness is 1/4 inch. Identifiable containers include Kerr Self Sealing canning jars and Hero Fruit Jar Company jars. The metal items include cartridges in a variety of calibers (six .22 short, seven .22 long, one .32, and one .44) as well as three 12 gauge shotgun shells and one 410 gauge shotgun shell. Two cloth-covered furniture (?) buttons were recovered. The bone includes cow, turkey, cottontail rabbit, cat, unidentified medium-

sized bird, and small, large, and very large mammal. All but five of the bones are large mammal bone from high meat value cuts. These, along with the bird bones, indicate that the bones derive from consumption of meat and poultry. The ceramics include mostly white earthenwares, but a few fragments of porcelain (13) and stoneware (3) were also recovered. Five of the porcelain sherds are Chinese and one is a small drawer knob. Almost all of the whitewares are tablewares of unidentified form. Only three ceramic makers' marks are present; all three are probably for Homer Laughlin and date after 1901. One of the three was made no later than 1915. Some of the sherds are decorated, primarily with a geometric floral motif.

Feature 16

Feature 16 was a broad, thin, ash stain exposed in the south end of Trench 4, which was excavated into Feature 1. An area covering 4.5 sq. m was shovel scraped to fully expose Feature 16, which was immediately south of Feature 1 (Figure 3.49). The feature was covered with less than 5 cm of overburden.

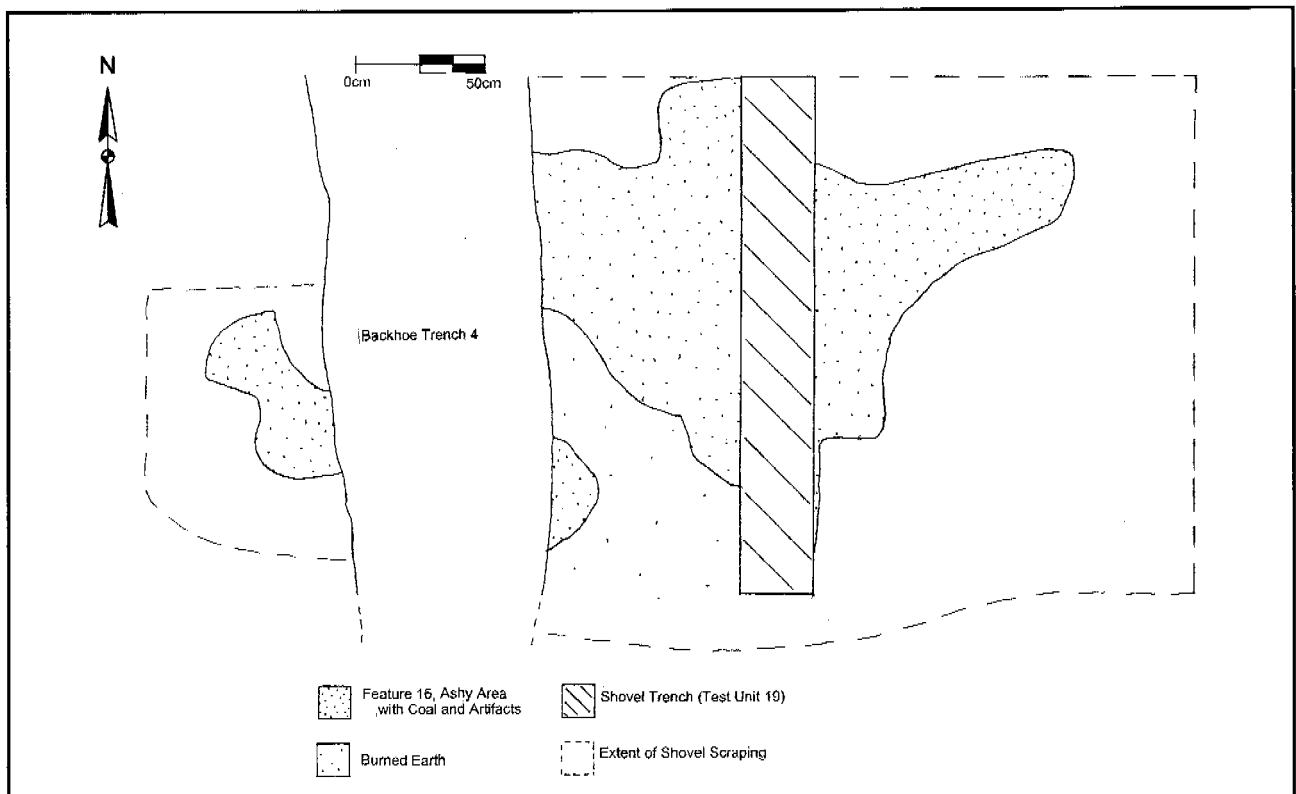


Figure 3.49. Feature 16, plan view.

The irregular stain was 3 cm thick and measured 3.40 by 1.85 m. Artifacts contemporaneous with Feature 2 were found in the overburden and include 12 pieces of metal, nine peach pits, two pieces of glass, and one sherd. No artifacts were recovered from the feature fill, so a temporal association could not be established for Feature 16 and Feature 2.

Feature 17

Feature 17 was an ash and charcoal deposit next to Feature 2. The feature was exposed in one of the 1 by 1 m shovel scrapes excavated to expose the stone foundation at Feature 2. The fill of Feature 17 contained three pieces of window glass as well as eggshell fragments, charcoal, and bone. The feature was most likely a rodent burrow.

Feature 18

Feature 18 was a sandstone and concrete diversion dam in the right-of-way. The feature was mapped, recorded, and photographed (Figures 3.50 and 3.51). The dam was 8.1 m wide, 49 cm thick, and at least 70 cm tall, with a slight dip in the middle for overflow. The dam was built along a large ditch that paralleled the east side of the Union Pacific Railroad tracks and diverted water flowing southeastward toward a culvert (Feature 19) that passed under the railroad tracks. The age of the dam could not be determined, but it may have been contemporaneous with the homesteads on the west side of the tracks. The railroad tracks were built in 1898 (Myrick 1990:77-78).

The dimensions of the dam indicate that the associated ditch was less than 8 m wide and at least 70 cm deep. When the ditch was first excavated, the spoil was piled to the west side to form a berm about 1.5 m tall, between the ditch and the railroad tracks. The berm and ditch extended at least 95 m to the northwest of the dam; beyond that

point they became indistinct. The berm and ditch extended at least 40 m southeast of the dam, and the ditch was deeper and much more distinct below the dam. The ditch it may have originated at Red Arroyo but, due to severe erosion in the 1900s, Red Arroyo is now about 4 m deep. After abandonment, the upper end of the ditch may have filled in or washed away so that the diversion point is no longer apparent.

A survey marker found near the dam may have been related to it. The survey marker consisted of a very weathered wood survey hub with a brass disk inscribed



Figure 3.50. Feature 18, diversion dam. View to NNE.



Figure 3.51. View from behind Feature 18, along irrigation ditch. View to SE.

"PT-C" (Point C?) nailed to the top. The stake was found 3.5 m south of the west end of the dam, on top of the berm between the ditch and the railroad tracks.

Feature 19

Feature 19 was a headframe and culvert through which the water diverted by Feature 18 flowed under the Union Pacific Railroad tracks (Figures 3.52 and 3.53). The entire feature was within both the relief route right-of-way and the railroad right-of-way. The feature was mapped, recorded, and photographed. The headframe, on the east side of the tracks, was built of railroad ties. The ties forming the wings of the headframe were set on end and bound with steel cable. The ties making up the opening for the culvert were stacked horizontally, at least seven high. The culvert pipe under the railroad tracks had filled with sediment. The culvert and headframe appeared to be recent and most likely reflect the rebuilding of a structure contemporaneous with the homesteads at LA 66922 (and specifically with the Dunn homestead in the southeast quarter of Section 12).

Feature 20

Feature 20 was a small wood bridge in the relief route right-of-way. The bridge was built of dimensional lumber, not railroad ties; it was 15 m west of Feature 24 but did not line up with that ditch. The bridge served an abandoned road between the railroad right-of-way fence and a fence line for the Dunn homestead. Wood utility pole stumps and glass insulators were noted along the edge of the abandoned road, possibly indicating early 1900s usage. The abandoned road paralleled and was west of the existing railroad maintenance road, and may have been the precursor to the existing road.

Feature 21

Feature 21 was a small, superficial trash deposit within the right-of-way, in the northern portion of the site, west of the railroad tracks. Feature 21 measured 8 by 5 m, with a 3 m diameter central concentration that contained artifacts, rounded gravel, and coal slag and

clinkers. The artifacts numbered fewer than 500; they included shards of glass, a small quantity of ceramics and cans, various automobile parts, and building materials. Only diagnostic artifacts were collected; these include 16 glass fragments, 11 pieces of metal, five ceramic sherds, and five prehistoric sherds. The glass artifacts include bottle and jar fragments (for Fletcher's Castoria, Squibb Products, Boyds Genuine, and a Kerr Self Sealing canning jar). The small size of the artifact concentration and the limited number of artifacts suggest that Feature 21 resulted from a single dumping episode no earlier than the mid-1920s. One fluted glass tumbler fragment yielded an anomalous post-1944 date. Feature 21 could not be associated with any of the homesteads.

Feature 22

Feature 22 was a superficial trash deposit within the right-of-way, in the northern portion of the site, west of the railroad tracks, just north of Feature 21. Feature 22 measured 21 by 8 m 21 m, with a 7 by 4 m central concentration that contained artifacts, also small pieces of crushed limestone, and a large amount of coal slag and clinkers. Only diagnostic artifacts were collected; these include 48 fragments of glass, 26 pieces of metal, and 22 ceramic sherds. The glass artifacts include bottles and jar fragments (for H. J. Heinz, Tra[pp]ey's Tabasco and Pepper Sauce, Hinds Honey and Almond Cream, O Cedar, Hellman's, Foley's patent medicine, and California Conserve Company). Artifacts numbered in the thousands and included numerous glass shards, a small quantity of ceramics and cans, building materials, clothing fasteners, shoes, steamer trunk parts, enamelware pans, and dry cell battery parts. The size of the artifact concentration suggests either one large dumping episode or several smaller ones. The artifacts suggest that the dumping occurred no earlier than the mid-1920s (or about the same time as at Feature 21). In this case as well, the feature could not be associated with any of the homesteads.

Feature 23

Feature 23 was a possible gravel road, indicated by an area of rounded cobbles and gravel that was 40 m long and 2.5 m wide. The cobbles and gravel were up to 6

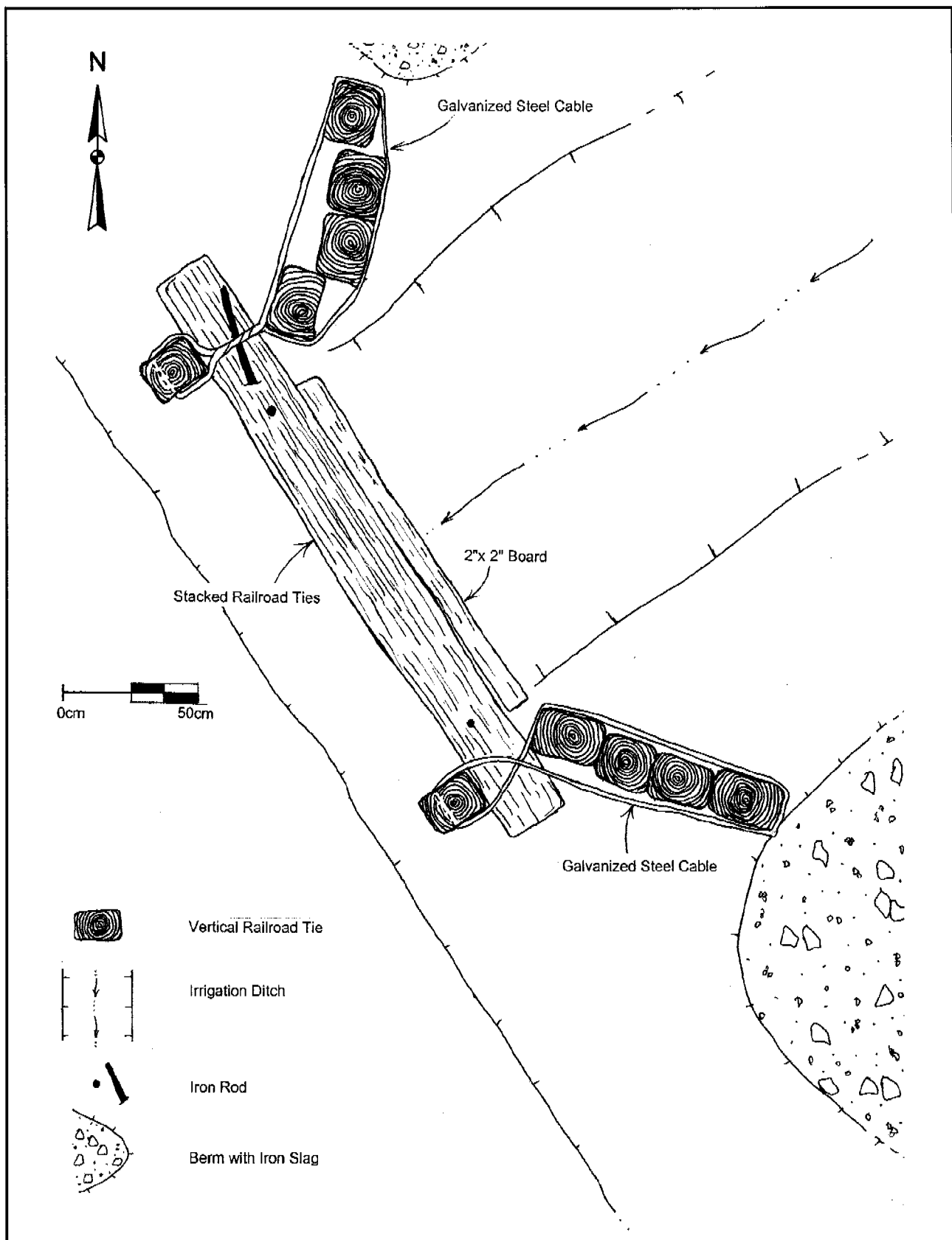


Figure 3.52. Feature 19, culvert headframe, plan view.

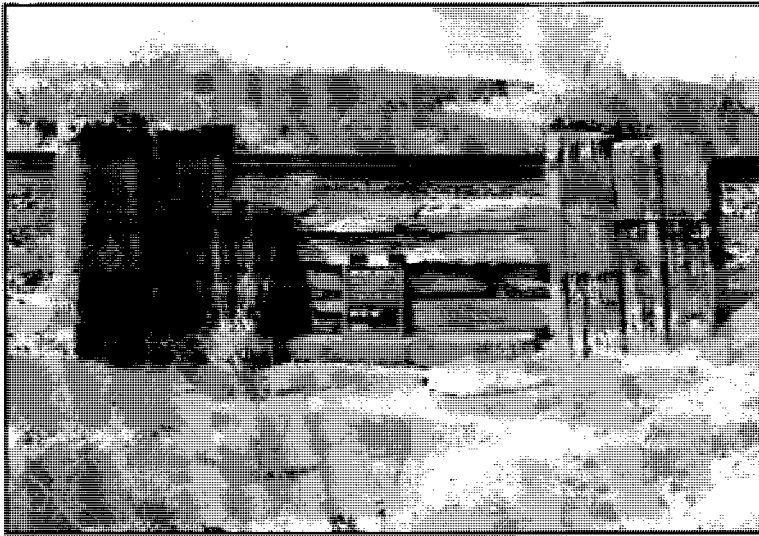


Figure 3.53. Feature 19, culvert headframe, with railroad tracks in background. View to W.

cm in diameter. The road rose no more than 10 cm above the surrounding terrain. The road was L-shaped and bounded the northwest and northeast sides of Feature 2. The road did not appear to connect any features or structures. The western portion of the road may have been aligned with another possible gravel road segment (Feature 25) 130 m away. It is possible that Feature 23 actually represented a melted adobe wall or berm. If so, the wall may have functioned to divert sheet erosion from the house and outbuildings at Feature 2.

Feature 24

Feature 24 was a small wooden bridge serving the maintenance road that extends along and west of the Union Pacific railroad line. The bridge was built of old railroad ties and was 4.5 m wide, with a span of 2.4 m (Figures 3.54 and 3.55). The ties were laid side by side, parallel to the maintenance road. The supporting structure was not visible but given the alignment of the railroad ties, the ties served as spanning elements as well as deck elements. The east end of the feature was covered with silt and with slag ballast from the railroad bed. Most of the west half was covered with the same materials. The bridge crossed the irrigation

ditch that was diverted under the railroad by Feature 18 (through the culvert recorded as Feature 19). After emerging from under the railroad bed, the ditch passed under this bridge. No evidence was found to directly date the bridge.

Feature 25

Feature 25 was a possible gravel road. The road was 2.5 to 3.0 m wide and at least 75 m long; it was indicated by a 15 to 20 cm thick raised bed of earth and gravel. The gravel was less than 3 cm in diameter. The road bed may have been thicker in the past. The road did not begin or end at a feature or structure, but the north end may have once extended farther, toward Feature 23.

The south end may have extended toward the intersection of Feature 26, a fence line, and the section center monument. At that location the road may have extended through a gate to similar gravel features noted west of Feature 6 and north of Feature 11.

Other functions can be suggested for this feature. John Minns's 1921 application for a reduction of required area of cultivation notes that the land is generally level, with a few gravelly ridges. Feature 25 may have been one of those gravelly ridges, probable former stream

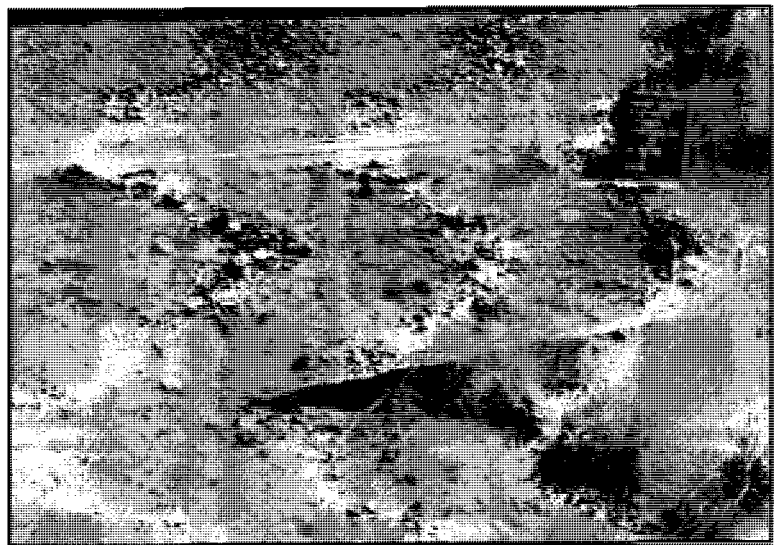


Figure 3.54. Feature 24, bridge over irrigation ditch. View to SE.

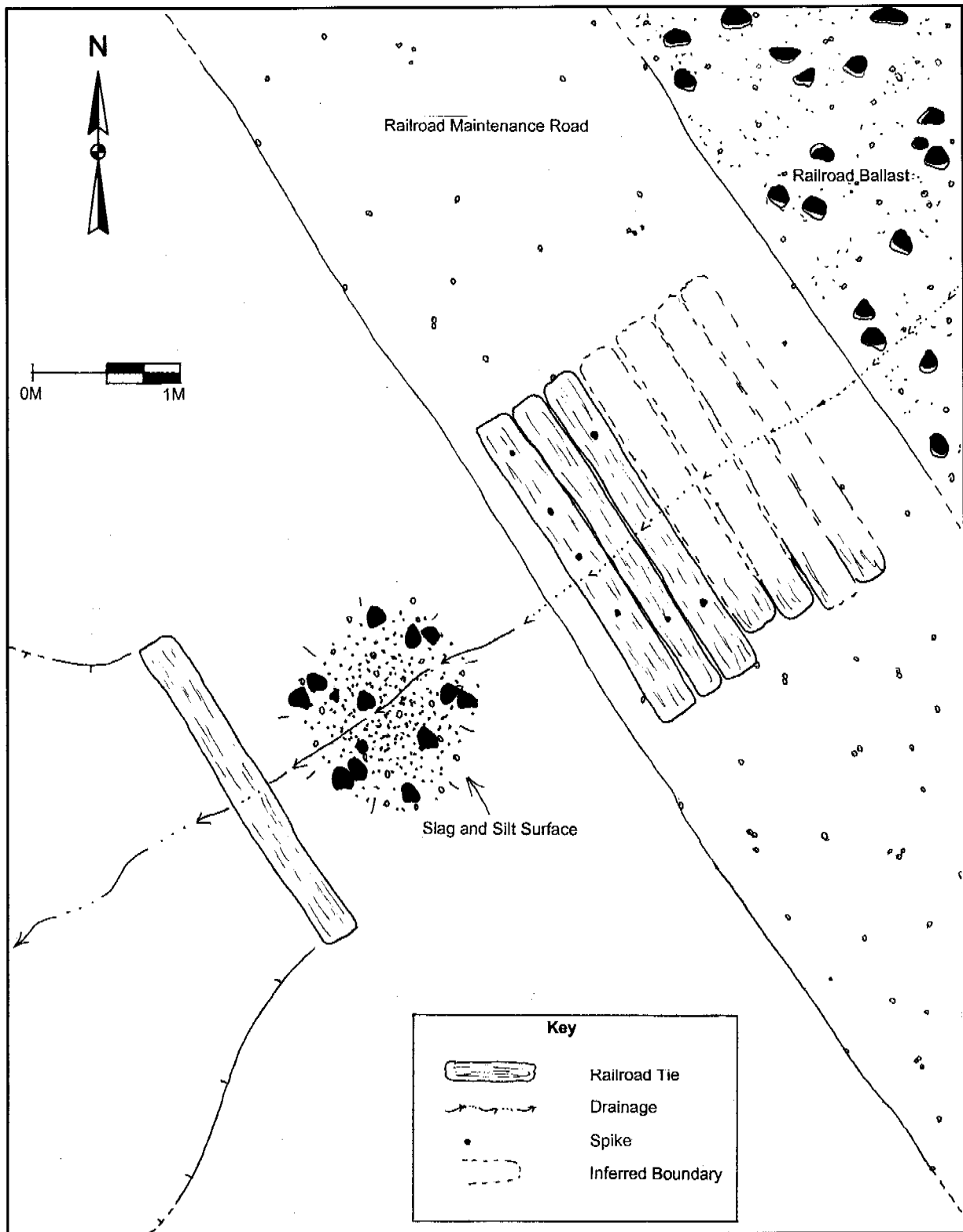


Figure 3.55. Feature 24, a bridge made with railroad ties.

beds that paralleled Red Arroyo. Or, as was suggested for Feature 23, this may have been the melted remains of an earthen or adobe wall. Finally, John Minns's 1921 proof of patent for the southwest quarter of Section 12 mentioned an 0.8 km (0.5 mile) long floodwater ditch. The spoil from the ditch would have formed a berm, and Feature 25 may have been the remnants of such a berm.

Feature 26

Feature 26 was a fence line indicated by a row of wood fence post stumps with strands of barbed and chicken wire. The chicken wire was apparently used on the lower portion of the fence, to keep out rabbits and other "varmints," while at least one strand of barbed wire topped the fence to discourage larger animals. The posts may have been spaced about 7 m apart. The barbed wire compares to Baker's Barb, Perfect Variation, a modification of the design patented by George C. Baker in 1883 (Clifton 1970:90). From the section center the fence line extended for 135 m on a bearing of 79 degrees E/N, then turned to 158 degrees E/N and continued for at least 70 m to a two-post brace (possibly indicating the location of another corner or of a gate).

From the two-post brace the fence may have continued for another 150 m. At this point, we conjecture, it intersected a fence line extending eastward along a mesquite hedgerow from Feature 7. This portion of the fence line defined the edge of a 100 foot (30 m) right-of-way as measured from the center of the railroad tracks. A parallel (newer, but also deteriorated) fence line extended 10.5 m east of this fence. An overgrown and abandoned road lay between the two fence lines (see Feature 20).

Feature 27

Feature 27 was a small trough and spillway. The feature was built of poured concrete and measured 100 by 80 cm by 30 cm deep. It was not clear whether the concrete trough was built where it was found, or was moved there. At the base of the south wall of the trough was a 10 cm (4 inch) drain hole. Extending 1.0 m southward from the hole was a 70 cm wide spillway, which led to

a low spot in the local terrain. The trough may have been fed from the water tank (Feature 3) by a pipe. Feature 27 may have been the head of an irrigation ditch or similar water control feature.

Feature 28

Feature 28 was a gravel road that was 3.0 m wide, 100 m long, and oriented 24 degrees E/N. The road was built with rounded gravel that was less than 2 cm in diameter. The surface of road was 10 to 20 cm above the surrounding terrain. The gravel may have been exposed by erosion. The road extended from Feature 3, the water tank, to a probable gate for the Feature 7 residential complex. Feature 29, a fence line, extended along the east side of Feature 28.

Feature 29

Feature 29 was a fence line that extended along the east side of Feature 28, a gravel road. The fence was built with wood posts and barbed wire. The fence line was 103 m long and extended from the center of Feature 3, a water tank, south to a pair of railroad tie brace posts which probably defined a former gate and fence corner. The fence posts were indicated by short stumps. Spacing between the posts was about 3 m (10 ft). The barbed wire compares to Baker's Barb, Perfect Variation, a modification of the Baker's Barb patented by George C. Baker in 1883 (Clifton 1970:90). A hedgerow of mesquite paralleled and sometimes overgrew all but the northern 5 m of the fence line.

Feature 30

Feature 30 was a 2.3 m long rock alignment that was oriented northwest-southeast. The alignment consisted of water-worn cobbles about 25 cm in diameter. No artifacts were present at the feature, whose function and age could not be determined. The feature may conceivably be a toe line for skeet shooting or other recreational target practice. Recreational shooting has been common on and near the site, as shown by small piles of brass cartridges and shotgun shells of various calibers. The same activity was observed and heard during the fieldwork.

Feature 31

Feature 31 was a 2.3 m long rock alignment that was oriented northwest-southeast. The alignment consisted of water-worn cobbles about 25 cm in diameter. No artifacts were present at the feature, which was 50 m southwest of Feature 30. As with Feature 30, the age and function of the rock alignment are unknown, but it may have served as a toe line for skeet shooting or other recreational target practice.

Feature 32

Feature 32 was a 10 m diameter cluster of historical artifacts. The artifact cluster partly overlapped the southern and western portions of Feature 11, a rock alignment that probably derived from a house foundation. Feature 32 was dominated by whiteware ceramics, but porcelain and glazed earthenware were also present. Other artifacts (such as glass and metal) were much less common. The artifacts date from the late 1800s to about 1925. The feature was outside the right-of-way and therefore was not investigated further.

Feature 33

Feature 33 was a 3 m diameter cluster of historical artifacts. The cluster was on the west edge of the platform where Feature 11 was located. The artifact cluster included whiteware ceramics, porcelain, glazed earthenware, glass, metal, fragments of oyster shell, shell buttons, a small gold-tone crucifix, and a curved piece of flat brass with "J. C. Dunn" inscribed on it. The presence of the brass item is curious, as the Dunn homestead was located to the east at Feature 7. The artifacts date from the late 1800s to about 1925. The feature was outside the right-of-way and therefore was not investigated further.

Feature 34

Feature 34 was a 15 by 5 m cluster of historical artifacts that may have marked the location of an outbuilding. Feature 34 was 25 m northwest of Feature 11. The artifact cluster included ceramics, glass, and metal. Noteworthy items include over a dozen metal barrel

hoops, metal corset stays, and other clothing-related items. The presence of the corset stays conflicts with records that indicate that John Minns, the patentee of this quarter of Section 12, was a single man. The artifacts date from the late 1800s to about 1925. The feature was outside the right-of-way and therefore was not investigated further.

Feature 35

Feature 35 was a 7 m diameter cluster of historical artifacts that may have marked the location of an outbuilding. Feature 35 was 25 m north of Feature 11. The scatter included ceramics, glass, and metal. Noteworthy items include a number of probably conjoinable sherds (of blue-edged transfer-printed ware) and a number of brick fragments. The artifacts date from the late 1800s to about 1925. The feature was outside the right-of-way and therefore was not investigated further.

Feature 36

Feature 36 was a fence line built with wood posts and barbed wire. The fence was oriented 88 degrees E/N. Only stumps remained of the posts, except for the westernmost post (a standing railroad tie). The east end of the fence line could not be defined but the fence was at least 120 m long. At the east end of the known portion of the fence, a gravel road (Feature 37) and a mesquite hedgerow began and may have indicated an extension of the fence line. A parallel fence line (Feature 38) may have been present 5 to 7 m north of this one. The railroad tie at the west end of this fence line may have anchored other fence lines extending to the north and west.

Feature 37

Feature 37 was a gravel road that was 3.0 m wide and more than 95 m long. The road bed was built with rounded cobbles and gravel (less than 10 cm in diameter) and rose 10 to 20 cm above the surrounding terrain. A mesquite hedgerow paralleled the south edge of the road. The exposed gravel may have resulted from erosion of the road. The road extended east-northeast

from the intersection of two hedgerows and a fence line (Feature 36). The eastern extent of the road was poorly defined. A fence line may have extended along the north edge of the road, but the only evidence of such a fence was a single wood post at the west end of the road.

Feature 38

Feature 38 was a fence line marked by two rock alignments extending from a probable gate at the end of a walkway (Feature 39), which in turn extended south from a house (Feature 7). The rounded quartzite cobbles that defined the fence line were 10 to 25 cm in diameter. The two alignments flared out from the gate towards the edge of the adjacent dirt road (see Figure 3.1). The western alignment was 8.5 m long. A metal pipe fence post (about 6 cm [2 inches] in diameter) was present along this alignment. The eastern alignment was 5.5 m long and less distinct than the western alignment. The stumps of two wooden fence posts were visible along the eastern alignment. The fence line presumably enclosed the yard around the house. Although no fencing was seen at the rock alignments, chicken wire was present elsewhere around the house and was probably used in the fence.

Feature 39

Feature 39 was a short gravel walkway extending south from Feature 7, a house. The walkway was 5.2 m long and 1.8 m wide and consisted of rounded gravel (less than 2 cm in diameter). The walkway began 3.5 m south of the side of the house foundation, indicating that a porch had been present at the front of the house. The walkway extended to a gate next to a dirt road (see Feature 38).

Discussion

The location of irrigation-related Features 18-20 and 24 (Figure 3.3) leads to questions about the boundaries of the homesteads in Section 12. The center of the section was known point marked by a survey monument. If one overlays the quarter-section lines on the site map (Figure 3.1), all of these features are

near the south boundary of the northeast quarter section. That spot is almost the lowest one in that quarter section and thus would be of little use for irrigating in the northeast quarter section. However, the location of those features is ideal for irrigating land in the southeast quarter section. If the quarter section lines are rotated 11 degrees W/N from the section center, they line up with a fence line, Feature 26. In turn, if the alignment of Feature 26 is extended eastward across the railroad tracks, Features 18-20 and 24 would lie south of that alignment.

Eleven degrees is the local declination for magnetic north, but in the opposite direction. Despite the existence of known property lines within the study area, none of the documented fence lines had a true east-west orientation (a few fence posts were found, however, on the boundary between the southwest and southeast quarter sections). It is possible that in laying out Feature 26 and other boundary markers, local property owners made the common mistake of correcting for magnetic declination in the wrong direction, and that Features 18-20 and 24 were thought to lie in the southeast quarter of Section 12. However, the location of these features could also have been a conscious accommodation among the land owners; diverting irrigation water in the northeast quarter section would have made it practical to irrigate more of the southeast quarter section.

Historic Artifact Analysis

by Roni H. Polk

The artifacts analyzed in this chapter are items of historical manufacture. A total of 4,986 historical artifacts was recovered from LA 66922. These include ceramics, glass, metal, and other historical materials. The category "historical other" includes a variety of organic and inorganic materials. Selected artifacts are illustrated in Appendix A.

METHODS

During fieldwork, artifacts were sorted into glass, ceramics, metal, and other materials. In some cases, surface collections were limited to diagnostic artifacts (i.e., items having a maker's mark, mark, or head stamp). As artifacts were processed in the laboratory, field counts for the artifacts were verified or revised. Artifacts were then washed and, in the case of ceramics and glass, sorted based on color. At that time, the stability of the artifacts (metal artifacts in particular) was noted. One complicating factor in any archaeological analysis is breakage of items, which can inflate the counts of artifact types. As much as possible, fragments of single items were identified while analysis took place. In a few cases, items were reconstructed.

The main sources used for identification and dating of artifacts were Cleeland (1984), Cunningham (1998), Deats (1998), Gillio et al. (1980), Goodman (1998), Levine and Abbink (1987), the Imacs Users' Guide (1984), and Rock (1981, 1987). Supplemental sources included Alther (1970), Barnes (1997), Berge (1968, 1980), Blumenstein (1972), Carlson (1984), Fike (1987), Florence (1994), Fontana (1968), Fontana and Greenleaf (1962), Gates and Ormerod (1982), Herskovitz (1978), Kovel and Kovel (1986), Jones and Sullivan (1985), Lief (1965), Morris et al. (1994), Periodical Publishers Association (1934), the Sears

And Roebuck Catalogue, 1902 Edition (1986), Toulouse (1969, 1972), and Wilson (1981).

Information about each artifact was recorded into a Microsoft Excel database. The codes and procedures used during the project were adapted from ones developed by the Office of Contract Archaeology, University of New Mexico for the Transwestern Pipeline Expansion Project and by the Archeological Research Laboratory, Texas A&M University for the W. Jarvis Henderson Farmstead. All of the ceramics and glass were analyzed, but only a portion of the metal and other materials was analyzed.

The entire glass assemblage was analyzed and formed the most common category of artifacts in the database. Coded glass artifact attributes included: color, type (bottle, jar, tableware, flat), shape, part of vessel, mold type, manufacturing method, whole dimensions, finish (neck type and base form), closure, function (tableware, kitchenware, etc.), contents, label, and any other relevant information. Window glass was measured in fractions of inches, consistent with standard commercial practice. While chronologically sensitive technological indicators (mold marks, seams, etc.) were recorded for bottle and jar fragments, time constraints did not allow for detailed study of these data. The presence of purple glass (a result of solarization of manganese oxide used in otherwise clear glass) was computer-coded but not considered as a precise indicator of site chronology. Following the procedures used by the Office of Contract Archaeology, some glass was designated as "turned pink" to indicate incomplete solarization of manganese oxide to purple color. Glass color is useful primarily as a comparative category for assessing similarities and differences among contemporaneous historical sites in the region (e.g., Gerow 1994).

All of the ceramic artifacts were analyzed. Coded ceramic artifact attributes included: type (earthenware,

porcelain, stoneware, etc.), function (tableware, kitchenware, etc.), form (plate, bowl, cup, etc.), paste, slip/glaze, decoration type and technique, color, vessel part, whole dimensions, and comments about the maker's mark and other relevant information. By and large, sherds with makers' marks were disappointing as a source of chronological data, especially given the emphasis placed on them in the field. On the other hand, a great deal of information was derived by coding and analyses of other ceramic attributes. Criteria for identifying ceramic vessel forms included: diameter, cross-section curvature, rim orientation (everted or inverted), base size, and presence or absence of foot, wall thickness, paste composition, and surface treatment (including glaze, color, and decorative elements such as paint, gilt, decal, transfer-print, mold blank, or combinations of these techniques). No attempt to identify specific design patterns was made, but types of design elements (floral, geometric, concentric machine-applied lines, etc.) were noted¹.

Some ceramic fragments represented a single form and were easily separated into different sets based on surface decoration, but most ceramic fragments were assumed to be from a single set of white hotel ware after comparing cross-sections, rim and foot characteristics, and paste similarities. Furthermore, cross-mends within and between proveniences could sometimes be used to define dinnerware sets by consulting *The Sears, Roebuck Catalogue 1902 Edition* (1986:788-798). These sets were recorded in the database comments. In this manner, some sense of ceramic patterns across the site was gained. Ceramic fragments found in specific proveniences, but that did not appear to be similar to those from associated proveniences, were assumed to represent a different form. The resulting estimated numbers of vessels from various proveniences are believed to be conservative yet workable.

The metal artifacts, in particular, were sampled because they include a large quantity of unidentifiable small

fragments, for which some counts were only estimates. Generally these fragments derived from sheet metal; most were not temporally diagnostic. The analyzed sample of metal artifacts includes items from Features 2, 8, 15, and 16 of Locus 1. Selected metal artifacts from other portions of the site were considered when they were readily identifiable. Metal artifact attributes included type of metal, function, part, whole dimensions, and other relevant information. Metal artifacts were further subdivided into nails, bullets and cartridges, and general metal.

Like the metal, the analyzed "other" materials are from Locus 1. This category included many items collected in field despite their marginal potential for in-depth analysis (e.g., coal, adobe, and plaster samples). Historical other artifact attributes included material (rubber, wood, cloth or other fiber, leather, shell, coal, stucco and plaster, brick, and composite materials), function, whole dimensions, and comments about the maker's mark and any other relevant information.

The artifact functional codes from the Transwestern Pipeline Extension Project (Morris et al. 1994) proved to be too narrow to be useful during the present study. Instead, the analysis turned to the broad functional categories defined by Stone (1974) as "contexts of utilization," i.e., structural, household, craft/activity, and personal. Stone's classification system was chosen over Sprague's (1980) more recent classification for 1900s artifacts in order to afford comparisons between the assemblages at the Dunn and Ricketts homesteads and that of the contemporaneous Henderson homestead in central Texas (Carlson 1984). Although Sprague's categories include all of Stone's categories, his scheme (like OCA's) has additional ones that proved to be unnecessary to the analysis.

Stone's "structural" context of utilization represents all artifacts used in construction (primarily nails, screws, window glass, adobe and clay, and plaster; also nuts, washers, cotter pins, lead grommets,

¹The reader is referred to Cunningham (1998) for a look at marketing trends by the Homer Laughlin Company in the western United States during the time when LA 66922 was occupied. Ceramic paste type, combined with decorative elements, often allows the determination of a manufacturer and assignment of a date range for production in the absence of a maker's mark. Although paste type is relatively easy to describe, decorative elements take the form of mold blank style, technique of application for patterns, and pattern color components. According to the marketing strategy of a particular manufacturer, a pattern name can be assigned to decorative elements listed above or to various combinations of the same. While these marketing trends afford the archeologist a means to seriate early 1900s ceramics, such an analysis was beyond the present project's goals.

miscellaneous electrical items including light bulbs, latches, bolts, and locks). The "household" context of utilization includes everything used primarily within the household (mostly ceramic and glass tableware, bottles, and jars; also metal cooking utensils, decorative items, metal cans, can lids, and rubber sealing gaskets for canning jars, curtain rods and hooks, cloth for curtains or upholstery, and carpet tacks). The "craft/activity" category generally represents items that are unique to a particular activity. In this case, the OCA coding system was maintained, including activities such as communication (paper fasteners) and transportation (harness fastenings, horse shoe nails, railroad nails). Coal, coke, and slag usually indicate a "mining" category of usage but their presence at a homestead suggests activities such as heating or cooking. Cartridges, shotgun shells, and bullets are usually placed in a miscellaneous use category as indicators of hunting and protection activities. For the present study, however, gun hardware and carpentry tools were placed in the "craft/activity" category. The "personal" context of utilization includes anything that belongs to one individual at a time. These are primarily clothing accessories such as buttons, fasteners, strap adjusters, and shoes and shoe eyelets. This category also includes jewelry, picture or mirror frames, precision instruments, musical instruments, toys, pocket watches, coins, and tobacco tins.

Once artifact classification was completed, the analysis took three perspectives: (1) descriptive analysis, (2) functional analysis, and (3) use of artifact patterning to infer behavior. Finally, the results of the descriptive and functional analyses were synthesized and compared to a contemporaneous homestead site from central Texas in order to formulate hypotheses about

artifact assemblage patterning specific to early 1900s homestead sites in the southwest United States.

RESULTS: SITEWIDE

A total of 4,986 artifacts was recovered from investigations at LA 66922, which included partial excavation of features associated with two 1900s homesteads. At the Dunn homestead, historical artifacts were obtained from three features, five test units, and surface collections (Table 4.1). At the Ricketts homestead, historical artifacts were recovered from a house foundation and an adjacent cistern, from the yard and a nearby privy, and from a possible additional outbuilding, an undefined burn feature, two associated test units, and surface collections (Table 4.2). In addition, two trash dumps probably unrelated to the homesteads also yielded historical artifacts (Table 4.3).

Metal artifacts, the largest category, accounted for 2,588 items or 52 percent of the total site assemblage. One-third (33 percent, n=851) of the metal artifacts came from Ricketts homestead proveniences. Of this sample, 278 were associated with building/construction. Two-thirds (67 percent) of the metal artifacts were not analyzed, of which 98 percent came from features and areas associated with the Dunn homestead. Most of these artifacts were small unidentifiable fragments (possibly from cans or other sheet metal items).

Glass artifacts numbered 1,574 and represented 32 percent of the site assemblage. Window glass was the most common functional type, making up 25 percent of identifiable glass (n=390). Other categories of

Table 4.1. Historic Artifacts from the Dunn Homestead.

Type	Provenience										Total	
	Feature 3		Feature 5		Fea. 6	Fea. 14	Excavation Units		Surface Collections			
	#	%	#	%	#	#	#	%	#	%	#	%
Ceramics	-	0.00%	23	1.61%	-	-	52	12.41%	144	28.86%	219	8.78%
Glass	22	15.07%	113	7.93%	-	-	117	27.92%	169	33.87%	421	16.87%
Metal	112	76.71%	1,166	81.82%	2	1	236	56.32%	183	36.67%	1,700	68.14%
Other	12	8.22%	123	8.63%	-	3	14	3.34%	3	0.60%	155	6.21%
Total	146	100.00%	1,425	100.00%	2	4	419	100.00%	499	100.00%	2,495	100.00%

Table 4.2. Historic Artifacts from the Ricketts Homestead.

Type	Provenience												Total	
	Feature 2		Feature 8		Feature 15		Fea. 16	Unit 15	Unit 17		Surface			
	#	%	#	%	#	%	#	#	#	%	#	%	#	%
Ceramics	5	0.64%	5	1.88%	164	17.03%	1	4	47	46.08%	84	34.85%	310	13.04%
Glass	393	50.13%	108	40.60%	493	51.19%	2	3	43	42.16%	60	24.90%	1102	46.34%
Metal	333	42.47%	148	55.64%	287	29.80%	12	-	9	8.82%	62	25.73%	851	35.79%
Other	53	6.76%	5	1.88%	19	1.97%	-	-	3	2.94%	35	14.52%	115	4.84%
Total	784	100.00%	266	100.00%	963	100.00%	15	7	102	100.00%	241	100.00%	2,378	100.00%

Table 4.3. Historic Artifacts from the Dumps at LA 66922.

Type	Provenience				Total	
	Feature 21		Feature 22			
	#	%	#	%	#	%
Ceramics	5	16.67%	20	24.10%	25	22.12%
Glass	14	46.67%	37	44.58%	51	45.13%
Metal	11	36.67%	26	31.33%	37	32.74%
Other	0	0.00%	0	0.00%	0	0.00%
Total	30	100.00%	83	100.00%	113	100.00%

identifiable glass included food and beverage containers (9 percent; n=144), tableware (2 percent, n=35), and other identifiable forms (7 percent, n=113). By and large, the glass fragments were non-diagnostic in terms of both function and age. Seventy percent of the glass was from features at the Ricketts homestead; 27 percent of the glass came from Dunn homestead proveniences. The two dumps, Features 21 and 22, were treated as unrelated episodes of trash disposal (possibly by the same individual), thus accounting for the remaining 3 percent of the glass assemblage.

Ceramic vessel fragments numbered 554, or 11 percent of the site assemblage. Fifty-six percent of the ceramic assemblage came from Ricketts homestead; 40 percent came from the Dunn homestead. The remaining 4 percent derived from collections at Features 21 and 22.

Other materials included 270 items, or 5 percent of the total site assemblage. This category included:

whole batteries, battery fragments, and carbon battery cores; slag, coke, coal, and coal clinkers; milled wood, leather, twine, cloth, rubber, and enamel; egg shell, freshwater shell, and fossil shell; and samples of adobe, clay, plaster, mortar, concrete, cement, brick, and slate. The analyzed sample included items from the Ricketts homestead only.

RESULTS: DUNN HOMESTEAD

Several features and artifact concentrations at LA 66922 were associated with the Dunn homestead. Locus 2, a widespread low- to high-density artifact scatter, contained five surface collection units ranging from 2 by 2 m to 3 by 3 m, and five non-feature excavation units. Locus 2 also included Feature 5, which was excavated and may have served as a root cellar. A total of 2,495 artifacts was collected from Dunn homestead proveniences: 1,700 metal artifacts (68 percent), 421 glass artifacts (17 percent), 219 ceramic artifacts (9 percent), and 155 assorted other artifacts (6 percent). Only glass and ceramic artifacts were subjected to systematic analysis, but noteworthy metal and other artifacts will be discussed below.

Glass

The glass assemblage from the Dunn homestead is summarized in Tables 4.4 and 4.5. Twenty-nine percent of the glass is identifiable by form. Glass from surface contexts accounts for 40 percent of the assemblage (169 items); 60 percent is from subsurface contexts (252 items).

Table 4.4. Identifiable Glass Forms from the Dunn Homestead.

Form	Number	Percent
<i>Bottles</i>		
Bitters	5	4.85%
Condiment	8	7.77%
Cream	1	0.97%
Dye	1	0.97%
Extract Finish	1	0.97%
Indeterminate	8	7.77%
Medicine	10	9.71%
Milk	1	0.97%
Modern Beer	2	1.94%
Oil Finish	3	2.91%
Patent	1	0.97%
Polish	2	1.94%
Soda	2	1.94%
Stopper	1	0.97%
Subtotal	46	44.66%
<i>Jars</i>		
Canning	14	13.59%
Condiment	2	1.94%
Fancy	1	0.97%
Fruit	3	2.91%
Indeterminate	1	0.97%
Lid Inserts	1	0.97%
Subtotal	22	21.36%
<i>Tableware</i>		
Bowl	1	0.97%
Comport	1	0.97%
Goblet	1	0.97%
Indeterminate	5	4.85%
Tumbler	16	15.53%
Subtotal	24	23.30%
<i>Other</i>		
Knob	1	3.23%
Light Bulb	1	3.23%
Windshield	1	3.23%
Window	28	90.32%
Subtotal	31	100.00%
Total	123	119.42%

Locus 2 General Surface Collection

Glass from the Locus 2 general surface collection totals 26 pieces or 6 percent of the assemblage. Ten fragments are clear, seven fragments are purple, four fragments are "turned" pink, three fragments are aqua, one

Table 4.5. Glass Colors from the Dunn Homestead.

Color	Number	Percent
Aqua	42	9.98%
Brown	45	10.69%
Clear	195	46.32%
Green	2	0.48%
Pink	1	0.24%
Purple	40	9.50%
Red	4	0.95%
Smokey	8	1.90%
Turned Pink	78	18.53%
White Milk	6	1.43%
Total	421	100.00%

fragment is brown, and one fragment is white milk glass. Twenty-two Locus 2 glass fragments are from bottles and jars and four are from tableware. No window glass came from the surface Locus 2 surface collection.

A bottle base has embossed print reading "IPCCo," which is the manufacturing mark for Illinois Pacific Glass Company. This mark dates 1902-1930 (Toulouse 1972:268-271).

An identifiable manufacturing mark is present on two jar bases: one read "SAND" below an embossed square and block print reading "PATD."; the second read "-R GLASS MFG C-." The Alexander H. Kerr Glass Co, Sand Springs, Oklahoma plant was in operation from 1912 "to date" (Toulouse 1972:306).

Two fluted bottle fragments have embossed block print reading "Heinz." The company's manufacturing mark dates from 1888. (Toulouse 1972:393-397) while the embossed symbol on the bottle bases is for the Owens Glass Company and has a date range of 1910-1929. (Toulouse 1972:393-397). One of the bases also has a serial number below the manufacturing mark, which identifies the location of the plant producing the bottle as Evansville, Indiana. The end date for this plant's operation is 1940 (Toulouse 1972:393-397).

A jar base fragment has three lines of embossed block print. The top line reads "PAT.PENDING"; the second line includes the number "1" below the "E" of the first

line; the third line reads "VAN CAMP'S." Van Camp's was first used as a brand name in 1861 for canned beans (Brand Names Foundation Incorporated 1947). We could not determine when Van Camp's changed from canning beans in glass to canning beans in metal cans.

One bottle base had two embossed, overlapping block print letters, "M" and "V." This indicates an import, probably beer, from border glass manufacturer, Cartel Vidriera, Monterrey, Mexico, in operation from 1909 to the present (Cruz and Escoto 1952, in Fontana 1968:48).

Three partial manufacturing marks were given tentative product or company names. One bottle base had a manufacturing mark which is possibly that of the Buck Glass Company of Baltimore, in operation from 1901 to 1961 (Toulouse 1972:57-58). On a tumbler base the manufacturing mark centered in the basal circle was an embossed oval with block letters inside reading "K-G." This may indicate the Kearns, Gorsuch Bottle Company, in operation from 1910 to 1937. Finally, another bottle base had a embossed manufacturing mark at the bottom of the heel which read "C-1," possibly attributable to Cunninghams & Co. Manufacturing in Pittsburgh, Pennsylvania between 1879 and 1909 (Toulouse 1972:99).

Dates could not be found for three marks. One was "RED RAVEN," which was also unidentifiable at a contemporaneous site located during the Transwestern Pipeline Extension Project in Arizona (Morris et al. 1994:B-226, FS# 450-1). Another was an embossed horseshoe on a container base. A published bottle with a horseshoe on the base was marked "HORSE SHOE BITTERS, COLLINSVILLE, ILLS." (Sellari 1977:342). A bottle body fragment had embossed print letters reading "JE-."

A single fragment of pressed glass was tentatively identified as the "Poinsettia" pattern manufactured by Jeannette Glass Company between 1931 to 1935 (Florence 1994:80-81).

Locus 2, Surface Collection Unit 21

Surface Collection Unit 21 contained four fragments of clear glass, less than 1 percent of the Dunn homestead glass assemblage. Two body fragments cross-mended; these and a base fragment are probably from a single container. The fourth fragment had a geometric acid-etched design on the exterior only and was made of very thin glass. This fragment matched the pattern on another fragment from Collection Unit 24 but did not cross-mend.

Locus 2, Surface Collection Unit 22

Surface Collection Unit 22 contained nine fragments of glass or 2 percent of the Dunn homestead glass assemblage. Three fragments of aqua glass represented one bottle. Two fragments of white milk glass canning jar inserts were also recovered. Two fragments of clear glass yielded evidence of a tableware vessel with a starburst pattern pressed into its base. Two fragments of curved "turned" pink glass were also present. An unidentifiable partial manufacturing mark was recorded for an aqua base.

Locus 2, Surface Collection Unit 23

Surface Collection Unit 23 contained nine fragments of glass or 2 percent of the Dunn homestead glass assemblage. Three fragments of brown glass represented three bottles. Two fragments of white milk glass canning jar inserts were also recovered. Three fragments of clear glass included a stem from a pressed glass tableware vessel (of indeterminate pattern), a possible glass foot from a furniture leg, and a complete glass stopper. One fragment of "turned" pink glass from a paneled rectangular base was also present. A zero or "O" was present on the head of the stopper but could not be traced to any manufacturer. Partial manufacturing marks were recorded for both canning jar inserts, one of which reads "-ASON JAR" (probably a Mason Jar). Six glass fragments were pocked or melted beyond recognition due to burning.

Locus 2, Surface Collection Unit 24

The glass from Surface Collection Unit 24 totals 75 pieces, or 17 percent of the Dunn homestead glass assemblage. Twenty-nine fragments are aqua, 19 fragments are "turned" pink, 23 fragments are clear, three fragments are purple, and one fragment is brown. Twenty fragments come from window glass, 17 fragments are from bottles and jars, and four fragments are from tableware; the rest are from items of unknown form. Window glass is represented by 17 fragments in six thicknesses, from 5/16 inch to 5/8 inch. The mean is 36/100 inch and the mode is 1/2 inch. Collection Unit 24 was the only provenience within Locus 2 in which window glass was surface collected. One purple fragment is from either a milk bottle or a wide-mouth packer.

One bottle base fragment had a manufacturing mark on its exterior, in embossed block print and numbers. The top line reads "H.J. HEINZ CO."; the next line reads "57"; a square is present just below the number and contains an "o"; the number "31" is present to the right of the square; below the square, on the bottom line is "PATD." This bottle was made by the Owens Bottle Company; the date range is 1910-1929 (Toulouse 1972:393-397).

Two types of decoration seen on tableware fragments at other Dunn homestead proveniences were also seen on glass fragments from this unit: a geometric acid-etched design on the exterior of a clear fragment of thin glass, and a "turned pink" base fragment with a pressed embossed diamond design on its exterior.

Locus 2, Surface Collection Unit 25

Surface Collection Unit 25 yielded 47 fragments of glass, or 11 percent of the Dunn homestead glass assemblage. Twenty-four fragments are "turned pink" glass, 12 fragments are clear, seven fragments are purple, two fragments are aqua-colored, and two fragments are light green. Eleven fragments are from tableware, 10 fragments are from bottles and jars, three fragments represent a single clear goblet, and one fragment is from a tumbler; the form of the remaining fragments could not be determined. A tableware rim fragment (from an item of unknown form) is beaded

and has an exterior pattern of oval facets alternating with modified sunbursts.

One bottle base fragment has a manufacturing mark in embossed block print and numbers. The top line reads "H.J. HEINZ CO."; the second line reads "57"; a square is present just below the number and contains an "o"; the number "31" is present to the right of the square; below the square on the bottom line is "PATD." The bottle was made by the Owens Bottle Company; the date range is 1910-1929 (Toulouse 1972:393-397).

Two clear cylindrical bottle bases had a manufacturing mark noted in the Locus 2 general surface collection, an embossed horseshoe. These bottles may have been for Horse Shoe Bitters (Sellari 1977:342). No date of manufacture was found for this product.

Excavation Unit 1

Excavation Unit 1 accounted for 30 fragments of glass, or 7 percent of the glass assemblage at the Dunn homestead. The fragments included 17 pieces of purple glass, 10 pieces of clear glass, four pieces of brown glass, two pieces of aqua glass, and one piece of "turned pink" glass. Nine fragments of purple glass appear to derive from one container, while four fragments of clear glass derive from one wide mouth packer. The brown glass probably derives from a recent beer bottle. One fragment of window glass (with a thickness of 1/8 inch) was recovered from this unit. No chronologically diagnostic glass artifacts came from Excavation Unit 1.

Excavation Unit 2

Eleven fragments of glass (3 percent of the Dunn homestead glass assemblage) was recovered from Unit 2. Ten fragments are clear glass and one fragment is "turned pink."

Seven clear fragments rejoined to form an almost complete octagonal fluted condiment bottle (Appendix A, Fig. A.4). On the base of this bottle is a horizontally aligned embossed manufacturing mark, "9, G, 4." This mark may indicate production at the Gayner Glass

Works, with a date range of 1898-1925 (Toulouse 1972:216-219).

A bottle neck with an oil finish represents a second container. One fragment was possibly molded into a starburst pattern prior but melted during refuse burning. One unmelted clear fragment is window glass with a thickness of 7/16 inch.

Excavation Unit 3

Twenty-four fragments of glass, or 6 percent of the total glass assemblage for the Dunn homestead, were recovered from Excavation Unit 3. Eighteen fragments are "turned pink" glass, six fragments are clear glass, one fragment is purple glass, and one fragment is white milk glass. One clear fragment represents a jar and the milk glass fragment is from a canning jar lid insert. The "turned pink" fragments appear to be from a cylindrical tumbler and two bottle bases.

The two bottle bases just mentioned resemble others from the Dunn homestead in having an embossed horseshoe inside the basal circle; as was noted, the bottles may have been for Horse Shoe Bitters (Sellari 1977:342). No date of manufacture was found for this product.

Two other partial manufacturing marks were present on other glass fragments but were unidentifiable.

Excavation Unit 4

Twenty-two fragments of glass, or 5 percent of the total glass assemblage for the Dunn homestead, were recovered from Excavation Unit 4. Thirteen fragments are clear glass, four are red glass, three are aqua glass, one fragment is "turned pink" glass, and one fragment is white milk glass. One fragment derives from a light bulb; a second fragment appears to be from a bottle lid; two fragments are from jars.

One jar base has a partial manufacturing mark in embossed block print letters; the first line of the mark reads "-TE-" and the second line reads "-OV-." This mark may be "MASON'S PATENT, NOV.30, 1858,"

which also provides the starting date for this type of jar (Berge 1968:299).

The milk glass fragment is from a canning jar lid insert; it is embossed with block print that reads "-YAIN LINED CAP" which was unidentifiable to manufacturer.

The "turned pink" and red fragments, which are melted from burning, come from pressed glass tableware. One fragment of red glass has a possible starburst pattern. One fragment of aqua glass comes from a jar with a Giles closure.

Excavation Unit 6

Excavation Unit 6 yielded 28 fragments, or 7 percent of the glass assemblage at the Dunn Homestead. Twenty-one of the fragments are clear glass, five fragments are purple glass, and two fragments are "turned pink." The clear and "turned pink" glass derives from four possible bottles and one jar base; the purple glass could not be identified by form. One fragment of window glass having a thickness of 3/8 inch was also recovered.

Two of the possible bottles are polygonal and probably contained catsup. One base fragment has a manufacturing mark in embossed block print and numbers. The top line reads "H.J. -EINZ CO."; the next line reads "57"; a square is present below the number and contains an "o"; the number "31" is present to the right of the square; the bottom line reads "PATD." This container was made by the Owens Bottle Company; the date range is 1910-1929 (Toulouse 1972:393-397).

The jar base was marked "VAN CAMP'S." The Van Camp's company began using this trademark in 1861 for canned beans (Brand Names Foundation, Inc. 1947) but we could not learn when canning beans in glass was replaced by canning in metal.

Feature 3

Feature 3 glass artifacts totaled 22, or 5 percent of the Dunn Homestead glass assemblage. Eleven fragments

were brown glass and 11 were clear glass. The brown glass was from a recent Miller Lite beer bottle; the clear glass included three fragments of window glass and eight fragments of unknown form. The three fragments of window glass ranged in thickness from 3/16 inch to 11/32 inch; the mean was 26/100 inch and the mode was 5/16 inch. The beer bottle was the only datable artifact and was probably dropped at Feature 3 long after deposition of the rest of the assemblage.

Feature 5

The glass recovered from Feature 5 totals 113 fragments, or 27 percent of the Dunn homestead glass assemblage. Most (74) fragments are clear glass, 25 are brown glass, eight are smoke-colored glass, six fragments are "turned pink" glass, and one is aqua glass. Seventy-nine fragments are from containers (bottles, jars, and canning jar lid inserts), five are from a pressed glass goblet base, and two are window glass; the remainder are of unknown form. One fragment of window glass came from Level 3 and the other from Level 5. Both window glass fragments had a thickness of 1/16 inch.

Feature 5 glass fragments provided five different manufacturing marks with date ranges: the Hazel-Atlas Glass Company of Wheeling, West Virginia (1902-1964); the Illinois Glass Company of Alton, Illinois (1890-1910); Kerr Glass Manufacturing Company of Portland, Oregon (1903-1912); Alexander H. Kerr Glass Company of Sand Springs, Oklahoma (1912-1946); Owens Illinois Pacific Glass Company (1932-1943); and the Owens Bottle Company of Toledo, Ohio (1911-1918; Toulouse 1972).

One whole clear bottle for Hind's Honey and Almond Cream was found. The bottle and its marks are illustrated in Appendix A. Aurelius S. Hinds of Portland, Maine had a manufacturing range of 1870 to 1925 (Toulouse 1972:54). A bottle for this same product was found at the Feature 22 dump.

One restored bottle could have contained a variety of liquids including mineral water. Two clear bottle fragments were cross-mended and matched to a third, revealing an embossed print trade name that reads, in

part, "GLY-CO-THY-MOLINE." The cross-mended partial bottle compares favorably to a photograph of a complete clear liniment bottle with the trade name 'GLYCO-THYMOLINE' (Blumenstein 1972:105-106). Glyco-Thymoline was first made by Kress and Owens of New York between 1896 and 1897 (Fike 1987:163). An advertisement for this product was recently seen in the Association for Research and Enlightenment Catalog (2000), which describes it as "A unique, versatile product for the entire family ... Glyco-Thymoline is a pleasant-tasting, alkalizing mouth-wash that also makes an excellent nasal spray and throat gargle. Its all-natural ingredients include sodium bicarbonate, eucalyptol, menthol, pine oil, and thymol."

An almost complete clear bottle has a partial trade name reading "CARDUI, THE W-." Cardui, the Woman's Tonic, was introduced by Reverend R. I. McElree in 1879 to relieve menstrual pain. In 1882 McElree sold the brand to the Chattanooga Medicine Company of Tennessee. As an adolescent, Dolly Parton sang the Cardui jingle on "The Cash Walker Radio Show" (Parton 1994). The Chattanooga Medicine Company later became Chattem Labs, which discontinued making Cardui in 1982. The bottle provides evidence for a post-pubescent female at the Dunn homestead.

One partial clear bottle with a prescription lip finish has the following embossed on its base: "BARTON'S"/"DYANSHINE" (Dye and Shine?) (Appendix A, Figs. A.4 and A.13). In silhouette this bottle is similar to both a pomade/morphine bottle and a shoe polish bottle found at Fort Laramie, Wyoming, which date to the late 1800s (Wilson 1981:110). Given the name of the product, the bottle most likely contained colored shoe polish.

A whole brown tall oval bottle has six horizontal lines of print that read: "NOBLE'S"/"STANDARD"/"POLISH"/"PRODUCTS"/"DETROIT"/"U.S.A." (Appendix A, Fig. A.5). While this bottle provides a place of manufacture, we found no information on date of manufacture or uses for the product.

Two similar medicine bottles (Oriental-type oval) were recovered (Appendix A, Fig. A.3, A.5). One has a rusty

but stable screw-on cap adhered to its lip; the bottle and its markings are shown in Appendix A. The front panels of the bottles are marked with a vertical line, with ticks for every half fluid ounce to the left and for every 10 ml to the right. Additional marks to the left are "3," "2," and "1"; additional marks to the right are "cc," "100," "80," "60," "40," "20." Two manufacturing marks from these bottles proved to be unidentifiable: "MB" and "LY RIC." The bottles compare favorably to a photo of a Dr. Pitcher's Castoria laxative bottle in Blumenstein (1965:72). Another brand of castor oil laxative was contained in bottles from Feature 21 dump.

One whole container from Feature 5 is a patent medicine vial or Bayard Prescription vial; it has a one-half ounce volume and a Gothic front panel (Alther 1970:10, 46).

A fragment of a Boston Round Shoulder prescription bottle or a syrup bottle (Alther 1970: 23, 54) was found.

Two identical partial bottles are embossed with the words "NYAL QUALITY" (Appendix A, Fig. A.2). Nyal's Compound Larkspur Lotion was "for destroying Parasites which infest the Hair" and was produced from 1906 to 1962 (Fike 1987:161).

Four "turned pink" pressed glass fragments of a compote base have a hobnail variant pattern on them. These fragments did not cross-mend but appear to come from a single piece of tableware.

Four fragments of smoky-colored glass have yellowish-silver exfoliation on their interior and exterior surfaces, which may indicate selenium deterioration in the glass. These fragments did not cross-mend but are very thin-walled (1/4 inch thick) and probably came from one fancy jar with a finial. The surfaces of these fragments have scratches characteristic of the dip and turn mold process with a sheared finish. These characteristics hint at a date between the 1870s and the 1920s (Rock 1981:3).

Five fragments of canning jars were collected. Two are from a Brandy-type fruit jar (Alther 1970:56). One is from a polygonal bottle that probably contained catsup. The final two are from a jar with a

manufacturing mark for the Hazel-Atlas Glass Company, which made fruit jars between 1902 and 1962 (Toulouse 1972:239-242).

Discussion

As Table 4.2 shows, almost half of the glass from the Dunn Homestead was clear; it outnumbered the purple, "turned pink," and aqua glass combined. None of the identified bottles were for alcoholic beverages, but many of the patent remedies of the time did contain alcohol and these types of bottles were identified. One fragment of a light bulb provides support for use of such in lighting at the Dunn homestead. One possible windshield fragment alludes to the presence of a vehicle of some type. The acid-etched glass fragments suggest an unusual and perhaps expensive possession, thereby hinting at a higher-status household at the Dunn homestead. The bottle containing a remedy for menstrual cramps suggests the presence of a post-pubescent woman at the Dunn homestead. Not much window glass was collected from Dunn homestead proveniences, but enough was present to indicate a possible outbuilding in the project area. Most of the identifiable glass from the Dunn homestead proveniences resulted from household use.

Ceramics

Ceramics from the Dunn Homestead are summarized in Tables 4.6 through 4.8.

Surface Contexts

Surface contexts in Locus 2 yielded 144 ceramic fragments, or 66 percent of the Dunn homestead's ceramic assemblage. Items represented by nonporous earthenware sherds were two plates, one dinner plate, one soup plate, one butter plate, four saucers, one cup, one serving dish, three bowls, and one individual bowl. The coarse earthenware sherds were from one flower pot/planter, one jug, and one bottle. Euroamerican utility stoneware sherds were from one exterior-slipped jug, one plate, and one saucer. Euroamerican porcelain sherds accounted for one cup, two plates, and one saucer. A small bowl of Chinese polychrome porcelain

Table 4.6. Ceramic Vessel Types from the Dunn Homestead at LA 66922.

Description	Provenience						Total	
	Feature 5		Excavation Units		Surface			
	#	%	#	%	#	%	#	%
Bottle	-	0.00%	-	0.00%	2	1.39%	2	0.91%
Bowl	-	0.00%	4	7.69%	18	12.50%	22	10.05%
Butter Plate	-	0.00%	-	0.00%	1	0.69%	1	0.46%
Crock	-	0.00%	14	26.92%	3	2.08%	17	7.76%
Cup	-	0.00%	-	0.00%	2	1.39%	2	0.91%
Flatware	6	26.09%	1	1.92%	53	36.81%	60	27.40%
Fusc	-	0.00%	-	0.00%	1	0.69%	1	0.46%
Flower Pot	-	0.00%	-	0.00%	2	1.39%	2	0.91%
Hollowware	-	0.00%	4	7.69%	30	20.83%	34	15.53%
Insulator	-	0.00%	-	0.00%	1	0.69%	1	0.46%
Jug	-	0.00%	1	1.92%	-	0.00%	1	0.46%
Lid/top	8	34.78%	-	0.00%	-	0.00%	8	3.65%
Mixing Bowl	-	0.00%	1	1.92%	-	0.00%	1	0.46%
Plate	1	4.35%	22	42.31%	20	13.89%	43	19.63%
Platter	7	30.43%	2	3.85%	-	0.00%	9	4.11%
Saucer	-	0.00%	-	0.00%	4	2.78%	4	1.83%
Soup Plate	-	0.00%	-	0.00%	1	0.69%	1	0.46%
Other/unknown	1	4.35%	3	5.77%	6	4.17%	10	4.57%
Total	23	100.00%	52	100.00%	144	100.00%	219	100.00%

Table 4.7. Ceramic Pastes from the Dunn Homestead at LA 66922. (E = earthenware; S = stoneware; P = porcelain)

Paste	Provenience						Total	
	Feature 5		Excavation Units		Surface			
	#	%	#	%	#	%	#	%
E-coarse	-	0.00%	-	0.00%	4	2.78%	4	1.83%
E-porous	-	0.00%	-	0.00%	-	0.00%	-	0.00%
E-nonporous	22	95.65%	36	69.23%	124	86.11%	182	83.11%
S-coarse	-	0.00%	14	26.92%	3	2.08%	17	7.76%
S-fine	1	4.35%	2	3.85%	1	0.69%	4	1.83%
P-Euro-Amer.	-	0.00%	-	0.00%	10	6.94%	10	4.57%
P-Chinese	-	0.00%	-	0.00%	2	1.39%	2	0.91%
Total	23	100.00%	52	100.00%	144	100.00%	219	100.00%

(with exterior hand-painted decoration) was also recovered.

The single identified maker's mark from surface collections is from Surface Collection Unit 25. This

mark was a circle with the words "CHESTER HOTEL CHINA" within the circle and "MADE IN U.S.-." below the circle (Appendix A, Fig. A.46). A second line of print below the circle may be a serial number. Gates and Ormerod (1982:268, Figure 245d) assign an approximate date range of 1908 to this clear white hotel ware, which was made by the C. C. Thompson Pottery Company.

Two Euroamerican porcelain electrical parts were collected. A bar-shaped insulator had "FAIENCE" impressed in its surface (Appendix A, Fig. A.26). A 15 amp screw type electrical fuse had a brass base and a maker's mark (the letter "X" topped by an anchor).

Several forms of ceramic decoration were identified from surface contexts at the Dunn Homestead. Surface Collection Units 22 and 25 yielded two machine-applied interior patterns: one with two concentric green lines just below the rim and the other with two parallel blue concentric lines just below the rim. A purple-on-white floral transfer-

print sherd and decorated green and orange hand-painted Chinese porcelain sherds with abstract design came from Collection Unit 24. Mold blank styles from surface proveniences included (1) exterior molded

Table 4.8. Ceramic Decorations from the Dunn Homestead at LA 66922.**Excavation Unit 3**

Decoration Technique	Provenience				Total	
	Feature 5	Excavation Units	Surface			
	#	#	#	%	#	%
Banded	-	1	-	0.00%	1	1.82%
Combination	1	-	-	0.00%	1	1.82%
Decal	1	-	-	0.00%	1	1.82%
Gilt	1	-	1	2.63%	2	3.64%
Hand-painted	2	-	1	2.63%	3	5.45%
Machine-painted	-	-	10	26.32%	10	18.18%
Molded	5	3	22	57.89%	30	54.55%
Transferprint	2	1	4	10.53%	7	12.73%
Total	12	5	38	100.00%	55	100.00%

bands below rims, (2) an interior line of tiny concentric embossed beads (one example), and (3) an interior line of tiny concentric embossed beads combined with a scallop motif (in Surface Collection Unit 22 only).

Excavation Unit 1

Fifteen sherds were recovered from Excavation Unit 1, or 7 percent of the Dunn homestead ceramic assemblage. Thirteen fragments are Euroamerican utility stoneware, one fragment is Euroamerican fine stoneware, and one fragment is nonporous earthenware from a flatware form (it also has an unidentifiable maker's mark). The 13 stoneware sherds are from one crock, while the fine stoneware sherd is derived from a jug.

Excavation Unit 2

Nine sherds were recovered from Excavation Unit 2, or 4 percent of the Dunn homestead ceramic assemblage. Eight sherds are white nonporous earthenware from one plate and one bowl. One Euroamerican utility stoneware sherd from a mixing bowl was also collected. Ceramic fragments from Excavation Unit 2 show evidence of burning and vitrification of glazed surfaces.

Excavation Unit 3 yielded 15 sherds, or 7 percent of the Dunn homestead ceramic assemblage. Twelve sherds are white nonporous earthenware and are from one plate, one bowl, and one unknown form. Two of these sherds have exterior painted bands next to the rim while a third has an interior mold blank scalloped pattern. One sherd appears to be burned. One nonporous earthenware sherd is from a plate decorated on the upper side only, just below the rim, with a single machine-

Excavation Unit 4

applied blue line. A second nonporous earthenware sherd, also from a plate, is decorated on the upper side, just below the rim, with two machine-applied concentric green lines. One sherd of Euroamerican salt-glazed fine stoneware came from a crock.

Six sherds of nonporous white earthenware were collected from Excavation Unit 4, or 3 percent of the Dunn homestead ceramic assemblage. Five of the sherds are from one dinner plate, one platter, and one covered container. The sixth sherd is from a piece of hollowware.

Feature 5, Excavation 8 and 9, and Trench 5

The sherds bagged from Feature 5 also include those excavated in Excavation Units 8 and 9 and Trench 5. The 23 sherds are 11 percent of the Dunn homestead ceramic assemblage. Twenty-two of the sherds are white nonporous earthenware; one sherd is Chinese porcelain. Sixteen of the nonporous earthenware sherds are derived from one plate, one platter, and a lid to a large storage jar (with a center knob on top of the lid; Appendix A, Fig. A.17). The other six nonporous earthenware sherds are flatware. Six sherds appear to be burned; three of these sherds are also discolored from contact with rusting metal.

One earthenware sherd has a purple-on-white floral transfer-print design on its interior. Another has a floral decal decoration on its molded relief interior, just below the rim, which was hand-gilded. A third earthenware sherd has possible hand-applied gilt on its interior surface. The Chinese porcelain sherd could not be identified to vessel form; the interior is hand-painted with a two-tone green leaf motif.

Two base sherds have maker's marks but only one was discernable. This is a partial mark reading "-ER LAUGHLIN" over "EMPRESS." Empress semi-vitreous ware was made by the Homer Laughlin Company between 1920 to 1929 (Gates and Ormerod 1982:136, Figure 116b).

Discussion

Porous earthenware was the only ceramic paste type not present at the Dunn homestead. Eight surface decoration techniques were present on sherds collected at the Dunn homestead with molding predominant. Thirteen vessel forms were identified at the Dunn homestead; 54 sherds of flatware were identified compared to 34 sherds of hollowware. With the exception of the porcelain fuse fragment and the porcelain insulator fragment (which had structural functions), the ceramic assemblage from the Dunn homestead can be assigned to household utilization contexts (209 identifiable artifacts or 95 percent of the assemblage).

Metal

As was mentioned previously, 1,700 fragments of metal artifacts were recovered from Dunn homestead proveniences. Most are highly decomposed, yielding little information.

Surface contexts yielded 183 metal artifacts, or 11 percent of the Dunn homestead metal assemblage. Surface Collection Unit 23 yielded the most metal (70 items; 38 percent of the surface collection of metal), followed by Surface Collection Units 21 (63 items; 34 percent), 22 (18 items; 9 percent), and 24 and 25 (16 items or 9 percent each).

Non-feature excavation units at the Dunn homestead yielded 236 metal artifacts or 14 percent of the Dunn Homestead metal assemblage. Excavation Unit 1 yielded 79 metal (33 percent of the metal from non-feature excavation units), followed by Excavation Units 2 (56 items; 24 percent), 3 (54 items; 23 percent), 4 (40 items; 17 percent), and 6 (seven items; 3 percent).

Metal artifacts were also recovered at Features 3, 5, and 14, totaling 1,281 or 75 percent of the metal assemblage at the Dunn homestead. Feature 5 contained 1,168 metal artifacts (91 percent of the metal from excavated features), followed by Feature 3 (112 items; 9 percent) and Feature 14 (1 metal artifact; less than 1 percent). Nineteen metal artifacts from Feature 5 could be identified, providing functional contexts of utilization for a small (1 percent) non-random sample of the total metal assemblage for the Dunn homestead. The household context of utilization was represented by eight items: an enamel pot lid, an enamel pan, an enamel pot, a stove top part, and four can lids. The structural context of utilization was derived from two latches. The personal context of utilization was represented by six items: two bicycle parts, two bicycle wheel fragments with spokes, and two bicycle wheel rims. The craft/activity context of utilization was evidenced in three items: a shovel head, a possible expedient hammer (a stone with a barbed wire handle), and a cable grip (see Appendix A, Figs. 35, 38, 44, and 45 for illustrations of several of these artifacts.)

Other Materials

At the Dunn homestead, 155 artifacts (9 percent of the total assemblage) were classified as being made of other materials. Feature 5 yielded 123 "other" artifacts (79 percent of other artifacts from the homestead), followed by Feature 3 (12 items; 8 percent), Excavation Unit 3 (10 items; 6 percent), Feature 14 and Excavation Unit 6 (three items or 2 percent each), and Excavation Unit 1, Collection Units 23 and 25, and the Locus 2 General Surface Collection (one item or <1 percent each). Household use was represented by 11 items: five fragments of rubber, four pieces of coal, and two fragments of wood. The structural context of utilization was represented by 16 items: eight pieces of unworked clay, four fragments of adobe, two fragments of red brick, one fragment of cement, and one fragment of

slate. The personal context of utilization was evidenced by seven items: five fragments of unworked freshwater shell, a shell button, and a fossil shell preserved in limestone. The craft/activity context of utilization was represented by 121 items: 106 battery fragments (Appendix A, Figs. A.28 and A.29); eight pieces of clinker, six fragments of leather (Appendix A, Figs. A.30 and A.31), and the carbon core from a battery.

RESULTS: RICKETTS HOMESTEAD

Several features and concentrations of artifacts at LA 66922 are associated with the Ricketts homestead. Feature 2 was a foundation of an adobe house, while Feature 8 was its adjacent cistern. Feature 15 was a nearby privy and Feature 16 was an amorphous area which showed evidence of burning. These features were partially excavated or trenched. Excavation Units 15 and 17 also yielded a significant quantity of artifacts. A total of 2,378 artifacts were collected from Ricketts homestead proveniences: 1,102 glass artifacts (46 percent of the total assemblage); 851 metal artifacts (36 percent); 310 ceramic artifacts (13 percent); and 115 assorted other artifacts (5 percent) (Table 4.2). All glass, ceramic, and metal artifacts were analyzed in detail.

A 26 percent non-random sample of artifacts of other materials was also analyzed in detail.

Glass

The glass assemblage from the Ricketts homestead is summarized in Tables 4.9 and 4.10. Sixty-two percent of the glass is identifiable by form, primarily due to the high proportion of window glass. Glass from surface contexts accounts for 5 percent of the assemblage (60 items); 95 percent is from subsurface contexts (1,042 items).

Surface Collection Unit 20

Surface Collection Unit 20 yielded 41 fragments of glass or 4 percent of the Dunn homestead glass assemblage. Twenty-four fragments are "turned pink" glass, six fragments are clear glass, six fragments are

Table 4.9. Identifiable Glass Forms from the Ricketts Homestead.

Form	Number	Percent
<i>Bottles</i>		
Brandy Finish	2	8.33%
Champagne Finish*	2	8.33%
Indeterminate	11	45.83%
Medicine	4	16.67%
Oil Finish	2	8.33%
Polish	1	4.17%
Soda	1	4.17%
Stopper	1	4.17%
Subtotal	24	100.00%
*Two obelisk champagne finish bottles restored to almost complete.		
<i>Jars</i>		
Canning	14	56.00%
Fancy	1	4.00%
Packer	2	8.00%
Indeterminate	2	8.00%
Lid Inserts	6	24.00%
Subtotal	25	100.00%
<i>Tableware</i>		
Cruet	3	60.00%
Handle	1	20.00%
Indeterminate	1	20.00%
Subtotal	5	100.00%
<i>Other</i>		
Bead	1	0.16%
Perfume Bottle	1	0.16%
Lamp Chimney	78	12.38%
Thermometer	4	0.63%
Window	546	86.67%
Subtotal	630	100.00%
Total	685	100.00%

brown glass, three fragments are aqua glass, one fragment is white milk glass, and one fragment is deep green glass. Eleven fragments are from bottles and jars and three fragments are from tableware; for the remainder, the forms are unknown. The identified fragments include a possible lip of a perfume bottle (one fragment of clear glass), a possible cruet bottle (three fragments of clear glass with chased rouletting on the rim exterior), and a whole ground glass stopper (of "turned pink" glass).

Table 4.10. Glass Colors from the Ricketts Homestead.

Color	Number	Percent
Aqua	81	7.35%
Black	1	0.09%
Brown	30	2.72%
Clear	794	72.05%
Green	9	0.82%
Green Milk Glass	2	0.18%
Purple	115	10.44%
Straw	13	1.18%
Turned Pink	48	4.36%
White Milk Glass	9	0.82%
Total	1102	100.00%

One "turned pink" bottle base had embossed block print inside the basal circle reading "WF &-" This may be the manufacturing mark "WF & SONS," for William Frank and Sons, a glass manufacturer in operation from 1866 to 1876 (Toulouse 1972:193-195).

Surface Collection Unit 26

Collection Unit 26 contained 16 fragments of glass or 2 percent of the Ricketts homestead glass assemblage. Twelve fragments are clear glass, three are purple glass, and one is white milk glass. Eight clear glass fragments are from bottles, one of which was fluted and had a concave base. One clear glass fragment is 1/8 inch thick window glass.

The fragment of white milk glass is a canning jar insert with a manufacturing mark in embossed block print. The mark reads "-D'S GEN-" and "-ELAI-" and may be from a Boyd's product dating no earlier than 1896 (Toulouse 1969:350).

Excavation Unit 15

Excavation Unit 15 yielded three fragments of glass, or less than 1 percent of the glass assemblage. Two fragments are clear and one is "turned pink." One clear fragment is from a base made by an automatic bottle machine (post-1925) and the other is window glass with a thickness of 7/16 inch.

Excavation Unit 17

Excavation Unit 17 yielded 43 fragments of glass, or 4 percent of the glass assemblage at the Ricketts homestead. About half of the glass from this provenience is aqua (22 fragments); all but three pieces of the aqua glass are probably from one bottle with a champagne finish. These fragments cross-mend with fragments from Feature 15. The remaining pieces of glass include 18 clear fragments, two brown fragments, and one fragment of purple glass.

Including 19 pieces of the aqua glass, 38 glass fragments are from bottles. One fragment of very thin curved clear glass may be from the exterior of a floating dairy thermometer or from a veterinary syringe. An identical fragment of glass is present in the assemblage from Feature 15. Three clear fragments are from window glass of three different thicknesses: 3/16, 3/8, and 1/2 inch (mean, 35/100 inch; mode, 3/8 inch). The purple glass fragment is a pressed exterior tableware pattern variously identified as Coronation, Banded Rib, and Saxon; this pattern was produced by the Hocking Glass Company between 1936 and 1940 (Florence 1994:48-49).

Feature 2

Feature 2 yielded 393 glass fragments, or 36 percent of the Ricketts homestead glass assemblage. Clear glass dominates the Feature 2 assemblage (340 fragments). Other colors include brown (12 fragments), aqua (10 fragments), "turned pink" and straw-colored (nine fragments each), white milk glass (six fragments), purple (five fragments), and green (two fragments). Most of the Feature 2 glass is window glass (303 fragments; range of 1/16 to 9/16 inch; mean is 32/100 inch; mode is 1/4 inch). Thirty-three fragments are from containers (bottles, jars, and canning jar lid inserts). The remainder is unidentifiable fragments (59 fragments). Seventeen fragments of a possible kerosene lamp chimney were recovered; the fragments come in two colors (straw and clear), which may reflect differential exposure of the fragments to solarization or differential decomposition of glass containing selenium. One straw-colored fragment had a sheared finish on its cylindrical base and cross-mended to a clear fragment from Feature 15.

A complete octagonal aqua pickle jar with a liquid volume of 8 ounces was collected from the surface of Feature 2 (Appendix A, Fig. A.7). Unfortunately, it has no trade name or manufacturing marks. The lack of a wandering ghost and vertical seams suggests pre-1925 manufacture by an automatic bottle machine.

Feature 8

Feature 8 yielded 108 fragments, or 10 percent of the Ricketts homestead glass assemblage. Most are clear glass (66 fragments). Other colors include purple (33 fragments), aqua and green (four fragments each), and brown (one fragment). Fifty-one fragments are window glass (range of 1/16 to 1/2 inch; mean of 30/100 inch; mode of 5/16 inch). Sixteen fragments are from bottles and jars, two fragments are either from a thermometer tube (red inside white) or from decorative glass, and 39 fragments are unidentifiable. No glass with manufacturing marks was recovered in Unit 8.

Feature 15

Feature 15 had more glass than any other provenience at the Ricketts homestead: 493 fragments or 45 percent of the Ricketts homestead glass assemblage.

Seventy-one percent of the assemblage is clear glass (349 fragments), more than half of which is window glass (187 fragments). The window glass ranges from 1/16 to 9/16 inch thick (mean of 24/100 inch; mode of 1/4 inch). The clear glass also includes 59 fragments of containers and 22 fragments of lamp chimneys; the remainder of the glass could not be identified by form.

Four clear glass container fragments cross-mended to fragments from Excavation Unit 17 to restore a partial bottle with a champagne finish. This type of finish does not necessarily indicate alcoholic beverages; such bottles were used for a variety of liquid refreshments including mineral water. Four fragments of possible clear glass medicine bottles were identified by the demarcated raised ticking on their front panels. One fragment of very thin curved clear glass may be from the exterior of a floating dairy thermometer or from a veterinary syringe, and was almost identical to a fragment from Excavation Unit 17. Two fragments of

clear glass with chased rouletting duplicated the pattern found on a possible cruet from Surface Collection Unit 20.

Six clear jar bases have partial marks identifiable as the "KERR SELF SEALING" registered trademark, with a date range of 1915 to the present (Toulouse 1972:306-308).

The next most common color of glass is purple (70 fragments; 14 percent of the Feature 15 glass assemblage). Thirty-three purple glass fragments are from a kerosene lamp chimney. Nine purple glass fragments show a pressed exterior pattern identified as a fan. One purple glass fragment is a partial molded mug (?) handle.

Forty-one fragments are aqua glass (8 percent of the Feature 15 glass assemblage). Twenty-five of these were mended to restore an almost complete obelisk bottle with a champagne finish (Appendix A, Fig. A.6). The embossed block print on the base of the bottle reads "A B Co," with a zero beneath that text. This is the mark for the American Bottle Company, a subsidiary of Owens-Illinois Pacific Coast Company of San Francisco between 1916 and 1929 (Toulouse 1972:30-32).

"Turned pink" glass includes 14 fragments (3 percent of the Feature 15 glass assemblage). Three of the fragments are from lamp chimneys.

Nine fragments of brown glass were recovered at Feature 15 (two percent of the Feature 15 glass assemblage). Two of these fragments have a brandy finish but, like champagne finishes, this finish was also used for non-alcoholic beverages. A bulbous neck fragment of brown glass was also recorded and this is a more reliable indicator of the presence of a beer bottle.

The other colors of glass each account for less than 1 percent of the Feature 15 glass assemblage. The four pieces of straw-colored glass include one fragment with a brandy finish. The two fragments of green glass include one piece that appears to be from the same dark green container as a fragment from Surface Collection Unit 20. The two pieces of green milk glass

include one with an embossed Maltese cross, a mark used by the Hero Fruit Jar Company of Philadelphia from 1882 to 1884 (Toulouse 1972:249). One multi-faceted black glass bead dangle with a metal loop mount was the only definitive artifactual indicator of a woman's presence at the Ricketts homestead.

The assemblage just described includes 58 fragments of kerosene lamp chimneys that range from clear (22) to "turned pink" (three) to purple (33). These colors may be due to different degrees of solarization. One clear fragment with a sheared finish cross-mended to a straw-colored fragment from Feature 2, indicating another possible color change in this type of glass.

Feature 16

Two glass fragments of unknown form (one aqua and one clear) were recovered from Feature 16.

Discussion

Clear glass makes up almost three-quarters of the glass assemblage from the Ricketts homestead. Purple, "turned pink," and aqua glass account for 22 percent of the assemblage, a lower proportion than at the Dunn homestead. All but three of the aqua glass fragments were mended into one bottle. Window glass is the most common form, followed by lamp chimney fragments, canning jars, and bottles. None of the identified bottles

are undeniably for alcoholic beverages, but some bottles have champagne and brandy finishes. In addition (as was stated for the Dunn homestead), many medicinal remedies of the time contained alcohol and these types of bottles were identified in the assemblage. Fragments of a chased rouletted pattern on a piece of tableware may indicate a scarce and perhaps expensive possession, thereby providing some indication of a higher-status household at the Ricketts homestead. The multi-faceted black glass bead implies the presence of a woman. Most of the glass artifacts recovered at the Ricketts homestead indicate the structural context of utilization followed closely by those associated with the household context of utilization.

Ceramics

Ceramics from the Ricketts homestead are summarized in Tables 4.11 through 4.13.

Surface Contexts

The 84 sherds from surface contexts are 26 percent of the Ricketts homestead ceramic assemblage. Eighty-one are nonporous Euroamerican earthenware, two are fine stoneware, and one is Euroamerican porcelain. Fifty-four sherds are flatware of some kind, 12 sherds are derived from one plate, and one sherd is derived from a serving dish. The remaining 17 sherds are not identifiable by vessel form.

Table 4.11. Identified Ceramic Vessel Types from the Ricketts Homestead.

Type	Provenience								Total	
	Feature 2	Feature 8	Feature 15		Unit 17		Surface			
	#	#	#	%	#	%	#	%	#	%
Bowl	-	-	-	0.00%	2	6.90%	-	0.00%	2	1.03%
Cup	-	-	-	0.00%	6	20.69%	-	0.00%	6	3.08%
Drawer Knob	-	-	1	1.10%	-	0.00%	-	0.00%	1	0.51%
Flatware	1	4	87	95.60%	16	55.17%	54	80.60%	162	83.08%
Hollow Ware	-	-	-	0.00%	5	17.24%	-	0.00%	5	2.56%
Plate	2	-	1	1.10%	-	0.00%	12	17.91%	15	7.69%
Saucer	-	-	1	1.10%	-	0.00%	-	0.00%	1	0.51%
Serving Dish	-	-	1	1.10%	-	0.00%	-	0.00%	1	0.51%
Soup Plate	-	-	-	0.00%	-	0.00%	1	1.49%	1	0.51%
Teapot	1	-	-	0.00%	-	0.00%	-	0.00%	1	0.51%
Totals	4	4	91	100.00%	29	100.00%	67	100.00%	195	100.00%

Table 4.12. Ceramic Pastes from the Ricketts Homestead.
(E = earthenware; S = stoneware; P = porcelain)

Paste	Provenience										Total	
	Fea. 2	Fea. 8	Feature 15		Fea. 16	Unit 15	Unit 17		Surface			
	#	#	#	%	#	#	#	%	#	%	#	%
E-coarse	-	-	-	0.00%	-	-	-	0.00%	-	0.00%	-	0.00%
E-porous	-	-	-	0.00%	-	-	-	0.00%	-	0.00%	-	0.00%
E-nonporous	4	4	147	89.63%	1	4	41	87.23%	81	96.43%	282	90.97%
S-coarse	-	-	-	0.00%	-	-	-	0.00%	-	0.00%	-	0.00%
S-fine	-	-	3	1.83%	-	-	6	12.77%	2	2.38%	11	3.55%
P-Euroamer.	1	1	9	5.49%	-	-	-	0.00%	1	1.19%	12	3.87%
P-Chinese	-	-	5	3.05%	-	-	-	0.00%	-	0.00%	5	1.61%
Totals	5	5	164	100.00%	1	4	47	100.00%	84	100.00%	310	100.00%

Table 4.13. Ceramic Decorations from the Ricketts Homestead.

Decoration	Provenience								Total	
	Feature 2	Feature 8	Feature 15		Unit 17		Surface			
	#	#	#	%	#	%	#	%	#	%
Banded	-	-	-	0.00%	-	0.00%	-	0.00%	-	0.00%
Combination	-	-	1	1.67%	4	18.18%	-	0.00%	5	4.59%
Decal	2	2	23	38.33%	6	27.27%	11	52.38%	44	40.37%
Gilt	1	1	8	13.33%	-	0.00%	-	0.00%	10	9.17%
Hand-painted	-	-	8	13.33%	2	9.09%	1	4.76%	11	10.09%
Machine Painted	-	-	9	15.00%	-	0.00%	-	0.00%	9	8.26%
Molded	-	-	11	18.33%	10	45.45%	9	42.86%	30	27.52%
Transferprint	-	-	-	0.00%	-	0.00%	-	0.00%	-	0.00%
Total	3	3	60	100.00%	22	100.00%	21	100.00%	109	100.00%

Three of the sherds have maker's marks. Two surface sherds mended to yield an almost complete maker's mark, a bow with a fletched arrow pointing up towards print that reads "SEMIPORCELAIN." This print overlaps with the script initials "HP". This mark is for Harker Pottery Company semi-vitreous ware that dates from 1890 to about 1950 (Kovel and Kovel 1986:170). A third has a maker's mark similar to that found at another Ricketts homestead provenience; based on that resemblance, the sherd is Homer Laughlin Company semi-vitreous hotel ware roughly dating from 1901 to 1915 (Kovel and Kovel 1986:42d).

Twenty-one sherds from surface contexts are decorated (25 percent of the surface ceramic assemblage from the Ricketts homestead). Most of the sherds are from

what was probably one set of nonporous earthenware decorated with an interior floral decal pattern of pink rosebuds interspersed with green ribbons, with gray garlands beneath. This decal pattern is repeated on many sherds from other Ricketts homestead contexts (see below). One Euroamerican stoneware sherd has blue hand-painted leaves and possibly a number on the exterior. The Euroamerican porcelain sherd is decorated with hand-painted pink, orange, green, purple, and brown floral pattern on its exterior.

Two mold blank patterns were identified from surface sherds. Six sherds have interior embossed beads in a line plus scallops at the rims. Three sherds have an interior embossed bead-festoon-bead pattern.

Excavation Unit 15

The four white nonporous earthenware sherds from Excavation Unit 15 are 1 percent of the Ricketts homestead ceramic assemblage. Three sherds are from ceramics of unknown form; the fourth is from a flatware vessel. One sherd base has an partial maker's mark; that mark resembles one identified from Feature 15 as being for Homer Laughlin Company semi-vitreous hotel ware illustrated in Kovel and Kovel (1986:42d) and roughly dating from 1901 to 1915.

Excavation Unit 17

The 47 sherds from Excavation Unit 17 are 15 percent of the Ricketts homestead ceramic assemblage. Forty-one sherds are nonporous earthenwares and six are Euroamerican utility stoneware. Eighteen sherds could not be identified by vessel form, 16 are flatware of some kind, six are from an earthenware cup, five are hollowware of some kind, and two are from a bowl. One base sherd has the remnants of a maker's mark that could not be identified.

Twenty-two sherds were decorated using hand-painted, decal, molded, and combination techniques. Several sherds have an interior decal pattern of pink rosebuds interspersed with green ribbon and grey garlands just below the rim. One sherd has fugitive gilt applied over an interior floral decal pattern. Four sherds exhibit an interior relief mold blank pattern with an overlying floral decal pattern. One sherd has the same exterior relief mold blank pattern and interior floral decal pattern as a sherd from a nearby dump, Feature 22. Five sherds have an interior embossed mold blank pattern near the base of the vessel, consisting of small circles connected by a line.

Feature 2

The five sherds from Feature 2 are 2 percent of the Ricketts homestead ceramic assemblage. They include four sherds of nonporous earthenware and one fragment of Euroamerican porcelain. The three identified nonporous earthenware sherds are from one plate and one other piece of tableware. The Euroamerican porcelain fragment is from a teapot.

Two decorative styles were seen on three of the earthenware sherds. Two sherds have the rosebud-ribbon-garland decal pattern just described for Excavation Unit 17. The third sherd has an exterior embossed mold blank just below the vessel shoulder; green overglaze and gilt were applied to the surface over the embossed design. This sherd also has a bisque finish at the rim and may be a fragment of a second teapot.

Feature 8

Like Feature 2, Feature 8 yielded five sherds (2 percent of the Ricketts ceramic homestead), including four nonporous earthenware sherds and one fragment of Euroamerican porcelain. In this case, the four identified sherds are all flatware. Two of the five sherds from this context are decorated, both with decal overglaze designs. One has the rosebud-ribbon-garland pattern described earlier, though the decal design was fugitive.

Feature 15

The 164 sherds from Feature 15 are 53 percent of the Ricketts homestead ceramic assemblage. Most of the Feature 15 sherds are nonporous earthenware (147 items); nine sherds are Euroamerican porcelain, five sherds are Chinese porcelain, and three sherds are fine stoneware. Ninety-one sherds (55 percent of the assemblage) are identifiable by form; 87 are from flatware of some kind, one is from a plate, one is from a saucer, one is from a serving dish, and one is a complete white porcelain drawer knob. Two earthenware sherds from the surface of Feature 15 are burned. Sixty sherds (37 percent of the assemblage) are decorated.

Twenty-three sherds have a fugitive geometric floral overglaze decal decoration on their interiors. On close examination, this decoration proved to be the rosebud-ribbon-garland pattern described from other Ricketts household contexts. These sherds probably represent a single set of decorated earthenware.

Nine sherds were classified as machine-painted. Three sherds have a single blue machine-applied interior line just below their rims. Two other sherds are similar,

except that one has a brown line and the other has a black line. Four machine-painted sherds combine the blue line with a hatched band and dot motif. A tenth sherd combines a machine-painted red line with a hand-painted floral and green leaf pattern.

Eight sherds were classified as hand-painted. The interior of one sherd of Chinese porcelain is hand-painted with a polychrome overglaze floral pattern in red, brown, and green. Four earthenware sherds also have overglaze hand-painted floral patterns on their interiors. Three gilt designs were seen on earthenwares, including on one relief mold sherd.

Eight earthenware mold blank sherds classified as gilt have that decoration applied over a floral decal pattern.

Eleven additional earthenware mold blank sherds were noted. Combining the painted and unpainted mold blank earthenwares, the mold blank patterns include an exterior angular scallop pattern, an interior scallop band and dot pattern, an embossed bead pattern, and an interior scallop and fleur de lis pattern.

Three base sherds have maker's marks, all for the Homer Laughlin Company. Two of the three marks are partial but identifiable as the mark for semi-vitreous hotel ware illustrated in Kovel and Kovel (1986:42d) and roughly dating from 1901 to 1915. The third mark is probably for Niagara semi-vitreous tablewares dating roughly from 1907 to 1915 (Gates and Ormerod 1982:134, Figure 114c).

Feature 16

Feature 16 yielded one burned sherd of Chinese utility stoneware. This sherd is from a hollowware form and has a slipped exterior.

Discussion

Three categories of ceramic paste were not present at the Ricketts homestead: coarse and porous earthenware, and coarse stoneware. Seven specific vessel forms were identified at the Ricketts homestead: bowl, cup, plate, saucer, serving dish, soup plate, and teapot. For less precisely defined forms, there were

162 sherds of flatware versus five sherds of hollowware. In addition, a complete porcelain drawer knob was recovered. No banded or transferprint decorations were present on sherds from the Ricketts homestead. The ceramic assemblage from this homestead is representative of the household context of functional utilization, based on 195 identified artifacts identified or 63 percent of the ceramic assemblage.

Metal

The 851 metal artifacts from the Ricketts homestead are 36 percent of the artifact assemblage for that homestead, and one-third of the metal recovered from LA 66922. Sixty-two metal items came from the surface of the Ricketts homestead (7 percent of the metal assemblage), while 789 items came from subsurface contexts (93 percent of the assemblage). Many of the unidentifiable metal artifacts may be highly rusted nails.

Surface Collection Unit 20

Thirty metal artifacts came from Surface Collection Unit 20.

Nails include 20 examples of various pennyweights (d): one 2d iron common nail, three 3d iron common nails, three 8d iron common nails, one 8d steel common nail, one 12d steel common nail, and one 12d iron finishing nail. Other fastening hardware includes a slotted iron 10 gauge machine screw and a square-head, threaded iron 3 inch long iron bolt.

Canning-related items include three rusted jar lid inserts and five rusted jar lids.

A brass hinge fragment from a carpenter's rule has a circular joint and two segments incised with metric measurement in centimeters (on both edges of one side).

A brass 20 gauge shotgun shell base has a ring around the primer and three lines of block print on the exterior: "1901," "No." [primer] "20," and "NEW RIVAL." This Winchester Company head stamp dates from 1921

(however, Goodman [1998:246] claims that it dates from around 1900).

An outdoor light bulb base fragment of black porcelain and brass has the incandescent apparatus of wire and glass still attached to the base (Appendix A, Fig. A.41). The maximum height of the base and the globe base were both two inches. Given the orientation of the incised print on the brass portion of the base, the light bulb was probably meant to hang upside-down. The four lines of print read "PAT.," "-Nov.8,1908," "Nov.22, 1908-," and "42."

A small precision-cast machine part includes a rod, piston, and fly wheel. This mechanism is similar to those found inside music boxes.

Other metal includes one fragment of thin wire (19 gauge or greater), three fragments of medium wire (11-18 gauge), and two fragments of thick wire (10 gauge or less). Fifty percent of the metal artifacts from Surface Collection Unit 20 are from a structural context of utilization (50 percent), followed by the household context of utilization (27 percent) and the craft/activity context of utilization (23 percent).

Surface Collection Unit 26

The 24 metal artifacts from Surface Collection Unit 26 are 3 percent of the Ricketts homestead metal assemblage.

Nails include 12 examples of various pennyweights: one 4d iron nail, two 4d iron common nails, one 4d steel common nail, four 6d iron common nails, one 8d steel common nail, one 10d iron common nail, and, one 10d iron finishing nail. Other fastening hardware includes two box staples, two fencing staples, and a possible bale tie (made of sheet metal with two machine-drilled perforations; wire is twisted through one of the perforations; Appendix A, Fig. A.42).

Other metal includes one iron door pull, an iron clothespin spring (Appendix A, Fig. A.42), a rectangular tobacco can lid, a rusted metal lid of unknown type, two fragments of medium wire (11-18 gauge), and one fragment of an iron item of unknown

type. Fifty percent of the metal artifacts from Collection Unit 26 are indicative of the structural context of utilization; artifacts indicative of the craft/activity context of utilization are also common (33 percent).

Excavation Unit 17

Excavation Unit 17 yielded 11 metal artifacts, or 1 percent of the metal assemblage from the Ricketts homestead. Four wire nails of various pennyweights were recovered. One is a fragment; a second is a 3d iron common nail, a third is a 6d iron common nail, and the fourth is a 12d iron nail. Other fastening hardware includes two fragmentary iron screws and one 9 gauge iron screw with a slotted head. Other metal from this context includes three canning jar liners and a fragment of medium gauge wire (11-18 gauge). Eight of the 11 metal artifacts from Excavation Unit 17 are from the structural context of utilization.

Feature 2

Feature 2 yielded 333 metal artifacts, or 39 percent of the metal assemblage from the Ricketts Homestead.

Fifty-five wire nails were recovered from Feature 2; they include 26 iron common nails, 14 iron finishing nails, 12 iron wire nails, and 3 iron nails of unknown size. The range of nail sizes is 2d to 16d with a mode of 8d. Other structural fasteners include four iron square nuts, three iron hex nuts, two perforated disks of pressed aluminum used (with common nails) to hold tar paper in place, and an iron screw. In addition, an iron railroad tie date nail with a common head stamped "07" (abbreviation for 1907) was presumably scavenged from the adjacent railroad.

Ammunition of various types accounts for 35 items. The most numerous ammunition type is brass rimfire cartridges for .22 caliber long rifle bullets (16 items). Nine Winchester Repeating Arms cartridges have date ranges of either 1917 or 1945 to present (Berge 1980:227-228). Another four cartridges are Super X, made by the Western Cartridge Company, with three possible date ranges (1898 to present, 1900 to present,

or 1908 to present; Goodman 1998:241). Two of the cartridges are not identifiable by manufacturer.

Twelve brass rimfire .22 cal short rifle cartridges have three different headstamps, Super X, UMC, and WRA (four each). Goodman (1998:241) gives three dates for Western Cartridge Company's Super X head stamp: 1898 to present, 1900 to present, and 1908 to present. He dates the Union Metallic Cartridge Company's head stamp "U.M.C." from 1867 to 1902 and the Winchester Repeating Arms Company's head stamp from 1857 or 1866 to the present.

A brass centerfire rifle cartridge with a head stamp reading "25-20 WCF" was not identifiable by manufacturer.

A rimfire .32 caliber Peters S&W (Smith and Wesson) brass cartridge, for rifles and pistols, has a date range of 1887 to 1934 (Goodman 1998:241).

A Winchester "New Rival" centerfire 12 gauge shotgun shell and a Winchester 12 gauge rimfire shotgun shell were found at Feature 2. The former has a date range of 1920 to 1924 (Goodman 1998: 241) while the latter has a date range of 1901-present (Berge 1980:232).

A modern Western 410 field shotgun shell was recovered from the surface of Feature 2. Barnes (1997:406) indicates that it dates before 1965; Goodman indicates that the .410 shell dates as early as 1900 (1998:247).

One spent lead bullet and two spent copper-jacketed bullets were also found.

A United States' Barber (the designer) or Liberty Head silver dime dated 1903 was found on the surface of Feature 2.

A precision-cast piece of nickel may be part of a drafting arm or similar device. It has two flattened areas on the exterior (for ease in gripping?) and a hollow circular interior (for mounting on the drafting arm?). It has incised block print which reads "YALE BD & CO." This manufacturer could not be identified.

Sixty-seven rusted cans and 41 rusted can lids make up 32 percent of the metal from Feature 2. Other items found include seven fragments of medium gauge iron wire (11-18 gauge), seven rusted fragments of wrought iron, four rusty buttons, three cut tacks, two carpet tacks, two fragments of tinned sheet metal, two iron curtain rod fragments, two rusted fragments of a harmonica, a pressed brass wick guide for a kerosene lamp, a brass furniture button with a deteriorated covering of machine-woven red cloth, a rusty crown bottle cap with deteriorated cork lining, a steel wire ring paper clip, a brass paper fastener, a fragment of twisted iron wire, a fragment of a rusty coping saw blade, and a four-part iron overall fastener.

Fifty percent of the identified items (including the cans and can lids) derive from the household context of functional utilization; 28 percent fall in the structural context, and 22 percent (including the ammunition) fall within the craft/activity context.

Feature 8

Feature 8 yielded 148 metal artifacts or 17 percent of the Ricketts homestead metal assemblage, including the 42 identified items described below.

Fourteen wire nails were collected from Feature 8; they include seven iron common nails, one steel common nail, four iron finishing nails, one steel finishing nail, and one iron wire nail. The range of nail sizes (in pennyweights) is 2d to 12d with a mode of 3d. Eight iron screws were recovered, four with flat heads and four fragmentary. The whole screws include one each of 6, 7, 8, and 9 gauge. Other structural fasteners include an iron washer and a lead grommet.

Fifteen pieces of ammunition were recovered (Appendix A, Fig. A.43). Eight of these are brass rimfire cartridges for .22 caliber short bullets. Seven of the cartridges were made by the Winchester Repeating Arms Company and date from either 1917 or 1945 onward (Berge 1980:227-228). The eighth cartridge was made by Union Metallic Cartridge Company and dates from 1890 onward (Berge 1980:227-228).

Three brass rimfire .22 caliber long rifle cartridges include two different headstamps. Two of the cartridges have a "SUPER X" headstamp; Berge (1980:227-228) dates this Western Cartridge Company's cartridge from 1900 onward. The third cartridge has a "U.S." headstamp; Morris et al. (1994) assign a date range of 1869 to 1945 for this United State Cartridge Company product.

A brass .32 caliber rimfire cartridge was made by the Winchester Repeating Arms Company for rifles and pistols and has a date range of 1917 or 1945 forward (Berge 1980:227-228).

A .44-40 external centerfire brass rifle cartridge dates from 1873 onward, according to Herskovitz (1978:48). This cartridge type was "of great importance to market hunters, farmers, trappers, and match shooters in the early days" (Barnes 1965:301, in Berge 1980:226; see also Barnes 1997:84).

One Winchester "Repeater" centerfire 12 gauge shotgun shell and one UMC Nitro Club 12 gauge centerfire shotgun shell were found at Feature 8. The former has a date range of 1896 to 1937 while the latter has a date range of 1892 to 1910 (Goodman 1998:241).

A rectangular die-cut brass seal that resembles a pet license tag was also found. It is perforated at the top and has two lines of curved stylized print and numbers. The print reads "WATCH," with the number "42" beneath that word.

Seven fragments of cast pewter from an oval frame have an embossed Art Nouveau floral pattern (Appendix A, Fig. A.32). The back of the frame was crimped inward to hold fragments of a thin gray cardboard backing. This artifact could be a picture frame or a mirror that has lost its reflecting surface. The fragments are very fragile.

A brass furniture button with the remnants of a machine-woven red cloth covering resembles another furniture button found at Feature 2.

Other metal items from Feature 2 include two fragments of a brass harness fitting, the brass stem from

a drawer knob, a brass paper fastener, and a rusted steel harmonica fragment.

Twenty-four items (mostly nails) were classified as being from the structural context of utilization, 20 items (mostly ammunition) were classified as being from craft/activity context, the seven fragments of the oval frame were classified as being from the personal context, and the furniture button and drawer nob stem were classified as being from the household context.

Feature 15

Feature 15 yielded 287 metal artifacts, or 34 percent of the Ricketts household metal assemblage.

The 132 wire nails found are almost half of the metal artifacts from Feature 15. They include 116 iron common nails, nine iron wire nails, and seven iron finishing nails, in the following pennyweight sizes: 2d (six examples), 3d (22 examples), 4d (22 examples), 6d (33 examples; the modal size), 8d (19 examples), 9d (one example), 10d (19 examples), 12d (four examples), 14d (one example), 16d gutter spike (two examples), 18d (one example), and 60d (one example).

Seven iron screws were collected at Feature 15. One screw has a flat head; four have round heads. One screw is 6 gauge and two are 8 gauge; the gauges for the other four screws could not be determined. Other metal structural fasteners include four fence staples, an iron cotter pin, an iron washer, and an iron square nut.

Four pieces of ammunition were recovered. Two are brass .22 caliber rimfire long cartridges made by the Winchester Repeating Arms Company. The cartridges date from either 1917 or 1945 onward (Berge 1980:227-228). Two are centerfire brass 12 gauge shotgun shells made by the same company. One is a New Rival shell with a date range of 1905 to 1921 (Morris et al. 1994:B-215, FS 114-2). The other is a Nublack shell with a date range of 1905 to 1938 (Goodman 1998:241).

Five metal artifacts are horse trappings. Four are fragments of decorative copper harness studs missing

their settings; one is an iron horseshoe nail two inches long.

One large but fragmentary cast iron machinery part has an embossed block print letter "B" or perhaps a number "8" on one surface. Its function is unknown.

Several artifacts found at Feature 15 are clothing fasteners (Appendix A, Fig. A.33). Two are buttons. One is size 30 ligne, is made of iron, and was probably used on pants. The second button has an iron wire loop fastener on an iron backing and is size 14 ligne. On the front of this button is an embossed decorative garland pattern surrounding an enamel hand-painted floral motif (in white, pink, dark blue, and pale green on a sky blue ground; Appendix A, Fig. A.33). This button's decorative technique emulates the cloisonne technique and is clearly from a female's garment. According to Gillio et al. (1980:22), wire loop button backs postdate 1830.

The other clothing fasteners include three iron strap adjusters, two brass strap adjusters, two multi-part brass fasteners, and a brass shoe eyelet. Levine and Abbink (1987:257) date strap adjusters to after 1830, but Morris et al. (1994) date them from 1898 onward. One brass strap adjuster had an incised decoration on its outer surface, which may indicate use in a female's garment.

Other identified metal from Feature 15 includes 16 fragments of medium iron wire (11-18 gauge), 12 fragments of twisted iron wire (five of which may be chicken wire), 13 scraps of tinned metal, 11 can lids, two fragments of thick iron wire (10 gauge or thicker), seven can fragments, seven canning jar lid insert fragments, three paper fasteners (two brass and one iron), a "J"-shaped iron curtain hook, an iron clothespin spring, an iron box staple, and a brass gear that may be part of a pocket watch or other precision mechanism.

The identified artifacts include 155 items from the structural context of utilization (mostly nails, screws, and scraps of tinned metal), 48 items from the craft/activity context (including wire, ammunition, and horse trappings), 27 items from the household context (mostly can lids, can fragments, and canning jar lid insert fragments), and 11 items from the personal

context of utilization (including the buttons and strap adjusters).

Feature 16

Feature 16 yielded 10 metal artifacts, or 1 percent of the metal assemblage from the Ricketts homestead. Two artifacts are identifiable. One is a 6 gauge iron flat-headed screw (from the structural context of utilization). The other is a brass clothing fastener (from the personal context of utilization).

Other Materials

The 115 artifacts of other materials are 5 percent of the total assemblage from the Ricketts homestead. Feature 2 yielded almost half of these artifacts (53 items; 46 percent of the assemblage of other materials). The remainder came from surface contexts (35 artifacts; 30 percent), from Excavation Unit 17 (3 artifacts; 3 percent), and from Feature 2 (53 artifacts; 46 percent), Feature 8 (five artifacts; 4 percent), and Feature 15 (19 artifacts, 17 percent). In this case, the analysis of the assemblage was based on the descriptions and tallies in the field catalogue. A sample of 31 of these "other" artifacts was then selected for detailed analysis; the sample was non-random but was intended to represent the variation in the 115 artifacts as a group. The selected items are from Features 2, 8, and 15.

The items identified from the field catalogue descriptions include 48 pieces of coal, 24 fragments of stucco (Appendix A, Fig. A.36), six fragments of concrete, six fragments of unworked freshwater shell, five fragments of rubber, four fragment of adobe, three fragments of leather, three fragments of mortar, three pieces of slag, three fragments of light brown eggshell, two battery fragments, two pieces of twine, two wood fragments, a piece of coke, a fragment of red brick, a shell button, and a tiny fragment of blue enamel. Of these artifacts, almost half (54 items, or 46 percent) were classified as derived from the household context of utilization. The rest were classified as 38 (33 percent) structural context, 16 (14 percent) craft/activity context, and seven (6 percent) personal context.

In the sample subjected to detailed analysis, four items are remnants of clothing; they include a shell button and three fragments of a brown leather shoe upper. The shoe fragments have buttonholes made by a machine that came into use in 1881 (Levine and Abbink 1987:257). The other items analyzed in detail include nine stucco fragments (with lath impressions on one side and plaster on the other), five fragments of rubber canning jar lid gaskets, three fragments of light brown chicken eggshell, two fragments of unworked freshwater shell, two pieces of "s"-twist jute twine, two pieces of slag (which may have come from the nearby railroad tracks), a piece of anthracite coal, a piece of coke, a fragment of a sawed cedar shingle, and a tiny fragment of blue enamel from an enamelware pan.

DUMPS

Features 21 and 22 consisted of dense artifact scatters not associated with either homestead. Both features represent isolated instances of refuse disposal, in each case possibly as a single event. At both dumps, artifacts were surface collected selectively in order to obtain chronologically diagnostic items. No artifacts of "other" materials were collected. Only the ceramic and glass artifacts were subjected to detailed analysis.

Feature 21

Thirty artifacts were collected from Feature 21, which is less than 1 percent of the total site assemblage. The collected items include 14 glass artifacts (47 percent of the feature assemblage), 11 metal artifacts (37 percent), and 5 ceramic artifacts (16 percent).

Glass

Feature 21 yielded 14 fragments of glass. Five are "turned pink" glass, four fragments are clear glass, four are white milk glass, and one fragment is aqua glass. Four fragments are from bottles, four are from jars, one is from a drinking glass, and five could not be identified by form.

A polygonal fluted "turned pink" tumbler base has an exterior embossed maker's mark; when viewed from the inside of the tumbler, this mark is a shield containing the letter "F" (Appendix A, Fig. A.11). This mark is for the Federal Glass Company of Columbus, Ohio which advertised paste mold tumblers "from circa 1944" (Toulouse 1972:192-193).

Three non-mending "turned pink" bottle fragments together provided the trade name "SQUIBB" (Appendix A, Fig. A.14). According to (Toulouse 1972:481-483), the E. R. Squibb Company of Maryland produced non-prescription medications, such as cough syrup and mouthwash, from 1858 until 1895. However, manufacturing marks on these bottle fragments are from machine technology that postdates Toulouse's date range. As the Squibb company is still in business, Toulouse's date range must be incorrect.

The base of a "turned pink" bottle fragment has embossed block print in two lines (Appendix A, Fig. A.10). The top line reads "I" and the bottom line reads "PAT JUNE 30, 192- MADE IN U.S.A-." This bottle may be from Owen's Illinois Company's first plant in Toledo, Ohio, which began operation in 1929 (Toulouse 1972:403).

A "turned pink" jar body fragment has an embossed mark (Appendix A, Fig. A.8). The top line reads "KERR" in script next to "SELF SEALING" in block print. The second line reads, in smaller block print, "TRADEMARK REG." The script "Kerr" dates from 1915 onward (Toulouse 1972:306).

Three clear bottle fragments which did not mend together yielded the trade name "FLETCHER'S CASTORIA" (Appendix A, Fig. A.9), which is a laxative made "for infants and children" from the 1890s until at least 1985 (Fike 1987:162-163).

A clear jar base has a mark consisting of an embossed block-print "G" and a square. This mark resembles one adopted by the Glenshaw Glass Company of Glenshaw, Pennsylvania in 1932 (Toulouse 1972:211).

The four fragments of white milk glass are canning jar lid inserts, all with the same mark, "BOYD'S PORCELAIN LINED." This trademark came into use

in 1896; the print type used on the fragments dates to 1915 (Toulouse 1969:92, 350).

Ceramics

Five sherds were recovered from Feature 21; four are white nonporous earthenwares and the fifth is Euroamerican porcelain. The four earthenware sherds are from one pale yellow glazed saucer with a molded shell exterior; the Euroamerican porcelain fragment is a piece of electrical hardware.

The four saucer sherds mended to reveal a leaf-shaped maker's mark on the base (Appendix A, Figs. A.20 and 21). The mark includes the words "LIMOGES CHINA CO." over "USA" over "SEBRING, OHIO." with "U.S.A." Below the mark are additional lines of print that name the pattern: "KOKUS GOLDEN GLOW"/"PAT. APPLIED FOR." This semi-vitreous dinnerware has a date range of 1910 to circa 1930 (Gates and Ormerod 1982:173, Figure 151b).

Feature 22

Eighty-three artifacts (2 percent of the total site assemblage) were collected from Feature 22. These items include 37 glass artifacts (45 percent); 26 metal artifacts (31 percent); and 20 ceramic artifacts (24 percent).

Glass

The Feature 22 collection includes 37 fragments of glass: 20 "turned pink," six fragments clear, three aqua, two green, and one each of white milk, bottle green, light green, purple, red, and ivory (a complete button). Fourteen fragments are from bottles, seven are from tableware, four are from jars, one is a size 14 ligne button with two holes, and 11 could not be identified by form.

Containers

One almost complete aqua container has "PUTNAM" embossed in block print on the base, with the serial number "3 2 44" below it. On the bottle body a partial

maker's mark in embossed print reads "-HTN-." This is the rarely seen "PUTNAM LIGHTNING" packer produced by Henry W. Putnam of Bennington, Virginia, with a tight date range of 1875 to 1886 (Toulouse 1972:330-331).

An almost complete aqua jar has a manufacturing mark for the Kerr Glass Manufacturing Company of Sand Springs, Oklahoma, and dates between 1912 and 1946 (Toulouse 1972:307). A clear jar fragment is from the same manufacturer. A "turned pink" jar fragment has a partial manufacturing mark in embossed block print reading "-ERR" and may also be a Kerr product.

An aqua-colored bottle fragment has a patent or extract finish and may be a medicine bottle.

A "turned pink" jar fragment has a basal mark of "57," identifying the jar as one made for the H. J. Heinz Company. "The 57 trade-mark has been used since 1898" (Periodical Publishers Association 1934:46). This jar was made by the Owens Bottle Company (prior to its merger with Illinois Pacific Coast) and has a date range of 1911 to 1929. A second container made by the same glass company, a "turned pink" fluted polygonal catsup bottle, dates between 1906 and 1912 (Toulouse 1972:393).

A "turned pink," round-cornered Blake four panel bottle has a mark that identifies its producer as the Illinois Glass Company plant at Gas City, Indiana, prior to merger with Owens. The date range for this bottle is 1916 to 1929 (Toulouse 1972:264-265).

One "turned pink" jar base was melted but its manufacturing mark is identifiable. The jar was made by the Southern Glass Company of Richmond, Virginia, which was in operation until 1908 (Toulouse 1972:22).

A complete "turned pink" rectangular panel bottle had eight lines of embossed print on its front panel: "HINDS"/"HONEY"/"AND"/"ALMOND"/"CREAM"/"A.S. HINDS CO."/"BLOOM-FIELD, N.J. U.S.A." Based on advertisements, this product dates between 1907 and 1948 (Fike 1987:92). A clear bottle with the same product name but a different

manufacturing location was recovered from Feature 5 at the Dunn homestead.

A "turned pink" jar base has embossed block print reading "HELLMANN'S, BLUE RIBBON, REGISTERED" This jar may have contained mayonnaise or salad dressing; the "Blue Ribbon" trade name was used between 1914 and 1932.

A "turned pink" bottle base fragment reads "O Cedar, MADE IN U S A." The O Cedar trademark was adopted in 1908 (Periodical Publishers Association 1934:65) and is still in use.

A "turned pink" rectangular panel bottle fragment has horizontally aligned embossed block print reading "FOLEY & -". This refers to patent medicines made by Foley and Company from 1890 to at least 1948 (Fike 1987:59-60). Foley and Company advertised products such as a combination laxative/cough remedy and a wide variety of kidney/bladder remedies (Fike 1987:59-60).

A "turned pink" container has embossed demarcations on either side of a line down the front of its body. Numbers in script correspond to each demarcation and indicate "16 oz" and "12 oz". This bottle fragment closely resembles that of a Sterilizer Nursing bottle illustrated in the Robert J. Alther glassware catalog first published in 1909. This artifact provides evidence for an infant or unweaned child.

The lip of a "turned pink" milk jar was also recovered at Feature 22.

A clear jar fragment has the Heinz basal maker's mark of "57." The jar fragment's serial number identifies the glass maker as the Owens-Illinois Pacific Coast Company, which was in operation from 1932 to 1943 (Toulouse 1972:406).

A clear bottle base has a manufacturing mark for the Three Rivers Glass Company of Three Rivers, Texas, in operation from 1925 to 1937 (Toulouse 1972:494-495).

A clear bottle base resembles that of an artifact from the Transwestern Pipeline Expansion Project (Morris

et al. 1994, Appendix B-56, B-135-136, FS #2274-1). The Transwestern example was identified as having been made by the California Conserve Company, for which dates of operation are not known.

Two clear non-mending fragments of one bottle with a molded exterior decoration read "TRA-PEY'S" above "TABASC- & PEPPE-." Based on an example from Gold Road, Arizona (Morris et al. 1994:B-53), the product is Trappey's Tabasco sauce, made by B. F. Trappey and Sons since 1898.

A green bottle fragment has a concave fluted base with chamfered corners and the word "MEDICINE" in embossed raised print on a side panel. This was probably a bottle for a patent medicine.

A thick-walled, white milk glass fragment from a square jar with ribbed molded body has embossed script on the base's exterior reading "MELL-". This mark could not be identified but milk glass containers for most items date from the 1890s to the 1960s (Fike 1987:13).

Tableware

A purple glass fragment appears to be from a vase. The exterior of the fragment is molded with polygonal flutes overlapped by an embossed leaf and floral pattern just below the shoulder. This pattern was tentatively identified as one marketed under various names, including "Dogwood," "Apple Blossom," and "Wild Rose" between 1929 and 1932 (Florence 1994:68-69).

A "turned pink" tumbler fragment has a basal manufacturing mark for the Capstan Glass Company of Connelsville, Pennsylvania, with a production date range of 1918 to 1938 (Toulouse 1972:548-549).

A "turned pink" tumbler fragment with molded, narrow, vertically fluted ribs on its exterior has a manufacturing mark on its base identifying the Hazel-Atlas Glass Company of Wheeling, West Virginia. The company used this mark for tableware alone beginning in 1920 through the early 1960s (Toulouse 1972:242).

A "turned pink" fragment with molded exterior may be from a cruet. The fragment has vertical fluting topped with scallops, with fine rouletting above the scallops. The design is reminiscent of those on glass fragments from the Ricketts homestead.

A green tableware fragment with molded polygonal fluting sides and a flat foot, resembling a jelly jar or dessert glass, may be an "Aurora" pattern glass produced by Hazel Atlas Company during the late 1930s (Florence 1994:18).

Two non-mending fragments of a green glass finger bowl base with exterior molded starburst pattern were also identified.

A fragment of light green glass with a knobbed decoration on its rim was also recovered. The original form for this item could not be determined.

A red fragment molded into an abstract shape proved to be totally unidentifiable.

Ceramics

Twenty sherds were collected from Feature 22. Fourteen of the Feature 22 ceramics are white nonporous earthenware, four are Euroamerican porcelain, and two were white porous earthenware. These few sherds are from a surprising number and types of vessel forms. The earthenware sherds are from one plate, one soup plate, one saucer, one sugar bowl (Appendix A, Fig. A.24), one mixing bowl, one vase, and one chamber pot. The Euroamerican porcelain sherds are from three pieces of a set of miniature play "China," including a teapot, a sugar bowl, and a creamer (Appendix A, Fig. A.27). These sherds imply the presence of a child at the household where the Feature 22 refuse originated. Unfortunately, no date could be assigned to the toy artifacts.

Nine sherds are decorated. Six different patterns are present on the earthenwares; they were hand-painted or applied by transfer-print, decal, or machine techniques. The interior of one sherd has a hand-painted green line. The interior of a second sherd has hand-applied dot stippling applied over a floral wreath

decal pattern. One sherd of Euroamerican porcelain has fugitive over-paint streaks. The only example of an identifiable transfer-print pattern from LA 66922 was found at Feature 22. This Blue Willow Ware sherd dates between 1949 and 1960, and is a Royal China Company underglaze semi-vitreous earthenware (Kovel and Kovel 1986:124m).

Five different mold blank patterns were noted on the earthenwares, including an angular pattern, an interior relief pattern with fugitive machine-applied blue line, an exterior geometric pattern, an interior scalloped pattern with green floral transfer-print (Appendix A, Fig. A.25), and a relief pattern with interior floral decal design. The last pattern, on one sherd, was also found on a sherd from Unit 17 at the Ricketts homestead. One of the molded sherds is Fiesta ware.

Two sherds have partial marks reading "TH-" and "TH-M-" respectively (Appendix A, Fig. A.46); the sherds are from the same set of earthenware and the fragmentary marks can be attributed to C. C. Thompson Pottery Co. This semi-vitreous tableware dates from roughly 1916 to 1938 (Kovel and Kovel 1986:214f).

One sherd has the serial number "12 28 A," which corresponds to a manufacture range of 1920 to 1929 in the Homer Laughlin Ware dating system (Gates and Ormerod 1982:129, Table 2).

The mark on one sherd reads "-T. & K." over "V," for Knowles, Taylor and Knowles semi-vitreous dinnerware dating roughly to 1925, or possibly between 1905 and 1929 (Gates and Ormerod 1982:126, Figure 108a-d).

One sherd has the maker's mark "IVORY" over the serial number "4 6 30." The manufacturer and date range for this sherd could not be identified.

One mark has a "T" over-lapping an "R" (in a foreign script), with a "u" to the right of the "T." This is the mark for the Homer Laughlin China Company's "Tudor Rose" trade name and dates from 1877 to the present (Kovel and Kovel 1986:215m).

The final mark seen reads "C.P. Co." over the serial number "S24."

COMPARISONS TO OTHER SITE ASSEMBLAGES

In order to better understand the behavioral patterning in artifacts collected at LA 66922, the analysis included a review of three recent reports on historical archaeological sites in the Southwest.

LA 67759

The nearest site is LA 67759, near Alamogordo, where Gerow (1994:188-193) directed test excavations. The historical component of LA 67759 provides a good comparison to Features 21 and 22 at LA 66922. Tables 22, 23, and 24 in Gerow's report indicate a remarkable similarity in terms of glass colors, bottle dates, and ceramics (for example, she found four fragments of a porcelain child's tea set, a ceramic button, and a shell button). LA 67759 differs from the dumps at LA 66922 primarily in having window glass and barbed wire. However, these items occur in the trash scatter associated with the Dunn homestead. Gerow (1994:193) writes, "The historical trash scatter [at LA 67759] indicates multiple dumping episodes, dating primarily from the late nineteenth and early twentieth centuries. The context under which this trash was deposited remains unclear, however." Based on the similarities between the trash at LA 67759 and at Features 21 and 22 of LA 66922, the trash was created and disposed of under similar circumstances.

Sites 423-157 and 442-128

The second publication examined for comparative purposes was written by Morris et al. (1994, Volume 19). The report examines Euroamerican and Navajo historical sites on the Colorado Plateau that were located through archaeological survey and selectively test excavated. The sites include two comparable homestead sites (one near Flagstaff, Arizona and one near Bloomfield, New Mexico). Site 423-157 near Bloomfield predates the homestead sites at LA 66922; the study included examination of documentary information for the homestead and functional analyses of the artifact assemblage (Kimball 1994:418-419, Tables 34-35). According to Kimball (1994:421), "The variety of artifacts indicates that the site was a

homestead ... There are only three datable artifacts, ... Fletcher's Castoria bottle fragments. The Castoria [brand] dates between 1890 and 1923." Fletcher's Castoria bottle fragments were recovered from Feature 22 of LA 66922 and Pitcher's Castoria bottle fragments were found at the Dunn homestead. Many items in the Site 423-157 assemblage resemble ones found at the Dunn homestead: brick fragments, metal that is mostly "small, very corroded, or heat deteriorated" pieces of iron, mostly clear glass fragments, purple glass lamp chimney rim fragments, an etched drinking glass rim, stoneware crockery sherds, and mostly plain white tableware sherds (one with gilt decoration; Kimball 1994:421).

Site 442-128, near Flagstaff, was recorded as a historical trash scatter with a depression. Documentary evidence indicates that this site was probably a two generation family homestead occupied between 1915 and 1950 (Messerli and Morris 1994:431-433). This site was disturbed by "relic hunters" but the subsurface artifacts bear some resemblance to those from the Dunn homestead and from Features 21 and 22 at LA 66922. Relative percentages of glass and ceramics are similar (Messerli and Morris 1994:439, Table 38). Specific parallels in the Site 442-128 assemblage include a brick fragment, earthenware flowerpot sherds, batteries, glass condiment bottles, canning jar fragments, and "bottle glass...with bubbles and markings usually connected with mold-constructed bottles" (Messerli and Morris 1994:438). Some artifacts from Site 442-128 are similar to those from the Ricketts homestead: a horseshoe nail, fragments of rusted cans, .22 caliber long rimfire cartridges, milled wood, a porcelain light bulb fixture fragment, a metal toy fragment, eggshell fragments, and the ubiquitous glass canning jar and bottle fragments. The summary for site 442-128 indicates that farming and related activities were followed by trash dumping.

Henderson Site (41BL273)

In 1984, detailed archaeological studies were conducted at a 1900s rural farmstead in central Texas, the W. Jarvis Henderson Site (41BL273) at Fort Hood in Bell County, Texas. The total artifact count for the Henderson farmstead is 6,322, compared to 2,378 for the Ricketts homestead. The Henderson farmstead

"ceramics" category is identical to that category as defined for LA 66922, and the Henderson "miscellaneous" category is similar to the LA 66922 "other materials" category. The Henderson "glass" category excludes window glass, however, and the Henderson "metal" category excludes nails and screws. The excluded items were placed in a fifth category, "building materials." The following comparison focuses on three critical and comparable classes of artifacts, glass, ceramics, and building materials.

Glass

The Henderson Site analysis excluded window glass from this category, while the current study included it, so comparing percentages from each analysis could be misleading. At the Henderson Site the most abundant form of container glass was bottle fragments, but canning jars and lamp glass were also important. In the Dunn homestead sample, excluding window glass, bottles are also the most common form and jars are again important, but no lamp glass was identified. The Dunn homestead assemblage includes one light bulb fragment, which may indicate why lamp glass was not found. In the Ricketts homestead sample, excluding window glass, lamp glass is the most common form but bottle fragments and canning jars are also important.

A few particular forms, though uncommon, are worth comparing. The Henderson Site yielded a bottle fragment with a brandy/whiskey finish and a beer bottle fragment, compared to two bottle fragments with brandy finishes and two restored bottles with champagne finishes from the Ricketts homestead. (No possible liquor bottle fragments were found at the Dunn homestead.) Glass forms present at LA 66922 but absent from the Henderson Site include oil finish bottle, polish bottle, cruet, bead, and thermometer. Glass forms present at the Henderson Site but absent at LA 66922 include eyeglass lens, fruit jar lid, lamp body, pitcher, plate, saucer, snuff bottle, sugar/cream service, syrup pitcher, and teacup.

Turning to the window glass, the Henderson Site yielded 347 fragments of this form. This is 0.7 percent of the total artifact assemblage, compared to 1 percent for the Dunn homestead and 23 percent for the Ricketts

homestead. Clearly, something happened at the Ricketts homestead that did not happen at the Henderson Site or at the Dunn Homestead. The range of window glass thicknesses for the Henderson site is 1/16 to 1/8 inch, whereas the range at the Dunn homestead is 1/16 to 5/8 inch and at the Ricketts homestead it is 1/16 in to 1/2 inch. At all three locations, window glass was recovered that falls outside both ends of the range in Munro's 1924 specifications for single and double strength window glass (3/32 in to 1/8 in).

For the Henderson Site, the common colors of glass are clear (70 percent), brown (9 percent), and aqua (6 percent). For the Dunn homestead, common colors are clear (46 percent), "turned pink" (19 percent), brown (11 percent), purple (10 percent), and aqua (10 percent). For the Ricketts homestead, the common colors are clear (72 percent), purple (10 percent), and aqua (7.35 percent).

Ceramics

The Henderson and Dunn-Ricketts ceramic assemblages are similar. The 288 sherds from the Henderson Site are 5 percent of the total assemblage, compared to 9 percent for the Dunn homestead and 13 percent for the Ricketts homestead. The two sherds of coarse paste earthenware account for less than 1 percent of the Henderson Site ceramic assemblage, compared to 2 percent for the Dunn homestead and no examples from the Ricketts homestead. The 252 refined or nonporous earthenware paste sherds at the Henderson Site are 88 percent of the ceramic assemblage, versus 83 percent for the Dunn homestead assemblage and 91 percent at the Ricketts homestead. The 24 stoneware paste sherds at the Henderson Site are 8 percent of the ceramic assemblage, versus 10 percent for the Dunn Homestead and 4 percent for the Ricketts homestead. Four sherds from the Henderson site are classified as semi-porcelain; this is 1 percent of the total, compared to 5 percent for the Dunn homestead and 4 percent for the Ricketts homestead. Six Chinese porcelain paste sherds were found at the Henderson Site; this is 2 percent of the total, versus slightly under 1 percent for the Dunn homestead and 2 percent for the Ricketts homestead.

The sites also show similarities in terms of ceramic decorations, though the categories used in each study are not entirely comparable and the Henderson site sample is small. At that site, the 33 decorated sherds include 14 molded sherds, seven painted sherds, four decal decorated sherds, and one banded sherd. For the Dunn homestead, molded sherds are also the most common type of decorated sherd. For the Ricketts homestead, molded sherds are common but they are outnumbered by decal decorated sherds.

The six most common identified forms at the Henderson Site include plates (54 sherds), flatware (26 sherds), bowls (24 sherds), hollowware (19 sherds), teacups (14 sherds), and saucers. The six most common forms at the Dunn homestead are flatware (60 sherds), plates (43 sherds), hollowware (34 sherds), bowls (22 sherds), crocks (17 sherds), and platters (nine sherds). Only four forms are common at the Ricketts homestead: flatware (162 sherds), plates (15 sherds), cups (six sherds), and hollowware (five sherds). Allowing for differences in analytical methodology, the assemblages from the Texas site and the New Mexico site are broadly similar.

Building Materials

At the Henderson Site both cut and wire nails were recovered, though the latter were much more common than the former. The 1,082 wire nails at the Henderson site are 17 percent of the total assemblage, compared to 10 percent for the Ricketts homestead. The eight screws from the Henderson Site are 0.2 percent of the total assemblage, compared to 0.1 percent for the Ricketts homestead (in other words, screws were uncommon at both sites). The 17 staples at the Henderson Site are 0.5 percent of the total assemblage, compared to 0.4 percent at the Ricketts homestead. In other words, each of the compared sites has basically similar sets of structural fasteners. Mortar, concrete, and brick were present at both sites, but adobe was found only at LA 66922.

Functional Contexts of Utilization

The functional contexts of utilization were then compared for the Ricketts homestead and the

Henderson Site. (Much of the Dunn homestead is outside the project corridor so the artifact sample from that homestead may be somewhat skewed, and thus inappropriate for such comparisons.) The craft/activity context of utilization accounts for 9 percent of the artifact assemblage at the Ricketts homestead and 13 percent of the assemblage at the Henderson Site. The household context of utilization accounts for 38 percent of the artifact assemblage at the Ricketts homestead and 46 percent of the assemblage at the Henderson Site. The personal context of utilization accounts for 2 percent of the artifact assemblage at the Ricketts homestead and 2 percent of the assemblage at the Henderson Site. The structural context of utilization accounts for 51 percent of the artifact assemblage at the Ricketts homestead and 39 percent of the assemblage at the Henderson farmstead. Thus, the Ricketts homestead and Henderson Site are broadly similar. The observed differences may be due to the Henderson family having several children while the Ricketts were childless.

SUMMARY AND CONCLUSIONS

Most of the analyzed artifacts from LA 66922 were glass. Window glass was the dominant form at the Ricketts homestead and was found near the foundation of the home. At the Dunn homestead, container glass was the dominant form; the largest accumulation of window glass was found on the site surface in Collection Unit 24. No window glass was collected at either of the dumps (Features 21 and 22).

According to Roenke (1978:116), the thickness of window glass tends to increase through time. Although Roenke focused on the Pacific Northwest during the 1800s, his conclusion may apply elsewhere. Carlson and Carlson (1984) suggest that while glass tended to get thicker until about 1900, the trend then reversed itself. However, the data from LA 66922 seem to indicate that the trend towards thicker window glass continued during the first half of the 1900s.

While some bottles from LA 66922 may have held alcoholic beverages, none of the bottles was clearly made for that purpose. The lack of obvious beer bottles is noteworthy. It may be that the Dunn and Ricketts households were part of the temperance movement that

was so prominent in the United States in the early 1900s, culminating in the prohibition of alcohol between 1920 and 1933.

Many of the identified bottles were for medicinal liquids, or at least for concoctions claiming to have medicinal value. The identified patent medicines include a laxative preparation for children and an analgesic for menstrual cramps. A glass sterilizer bottle fragment also provides evidence for a nursing infant.

The makers' marks identified during the study indicate that the container glass and ceramics were derived from across the country, reflecting the national market created by railroads. Alamogordo was itself a product of the same technology, having sprung up to serve a local branch of the national railroad grid. On the whole, the Dunn and Ricketts homesteads appear to have been at least modestly prosperous establishments that could take advantage of a railroad-based economic and social network that reached far beyond Alamogordo. One item found illustrates this fact particularly well: a possibly mouth-blown tube of thin, clear glass from a dairy thermometer, identified from fragments. Visits to antique stores in Grants, New Mexico by the author yielded two complete dairy thermometers with glass highly similar to that found at LA 66922. Both thermometers were made by companies in Germany and date to the last decade of the 1800s, according to information printed on the calibration card inside the sealed tube. Within this sealed tube, a second, thinner glass tube holds the mercury. The thermometers were suspended in milk as it was being pasteurized. Such thermometers were advertised in The Sears, Roebuck Catalogue 1902 Edition, reminding us that if families of that time had the necessary cash, they also had a way to buy almost anything they wanted. Other items, such as pressed glass tableware, also indicate that the Dunn and Ricketts homesteads were part of a middle class that could afford a variety of consumer goods.

Archaeofaunal Analysis

by Marie E. Brown

INTRODUCTION

The vertebrate faunal assemblage recovered from LA 66922 consists of 507 specimens that occurred in four features and in non-feature contexts (Table 5.1). Most (n = 431, 85.0 percent) are associated with Feature 2, a limestone house foundation (n = 293, 57.8 percent), and with Feature 5, a dugout (n = 138, 27.2 percent). As the following discussion and analysis indicate, few of the faunal remains represent human activity such as ranching, butchering, and consumption. Much of the assemblage consists of the remains of prey caught by cats.

RESEARCH METHODS

The faunal identifications were made by the author with the aid of comparative specimens either in her possession or curated in the Museum of Southwestern Biology, University of New Mexico. Occasionally, published osteological references were consulted. All of the vertebrate faunal remains recovered from LA 66922 were examined. Refits were determined whenever possible. In addition, all freshly broken fragments from the same bone in a single provenience (i.e., with the same bag number) were counted as one specimen. Finally, all teeth, whether isolated or in a maxilla/mandible, were recorded separately. Although this inflates specimen counts, the data provide useful information concerning age and for determining the minimum numbers of individuals (MNIs). Basic information recorded for each specimen - complete bone or tooth or a fragment thereof - included the taxon, element, laterality, fragmentation and portion, weathering, burning, gnawing, and evidence for butchering.

Taxonomic identifications were made to the level of specificity (order, family, genus, or species) warranted

by each specimen. As a result, many specimens were identified only to a size category (c.g., medium bird, large mammal; Table 5.1). As used here, medium birds are chicken-size. Very small mammals are mouse-size, small mammals are rabbit-size, medium mammal are coyote-size, large mammals are deer-size, and very large mammals are cattle-size. Placement of a specimen into an animal size category was somewhat subjective, based primarily on the thickness of the compact (cortical) bone, the size of the specimen, and the possible element represented. In one case, species identification was uncertain because of the presence of two osteologically similar species in the project area. The taxonomic identification of this specimen, therefore, is listed as *Canis latrans/C. familiaris* (coyote/dog; Table 5.1). In several instances the taxonomic identification was not entirely certain. In such cases, the modifier cf. (compares favorably) was used (Table 5.1).

After the variables were recorded and entered into a computer, the number of identified specimens (NISP) and MNIs were calculated. In the MNI calculations the assemblage of each feature was considered as a whole, regardless of horizontal and vertical provenience, and all specimens of a specific taxon within each feature were assumed to represent the same individual. As a result, the calculation on MNIs only considered feature, taxon, element, side, portion, and age (which was based on the degree of bone fusion, tooth eruption and wear, and porosity or overall ossification of specimens. The bones of very young mammals are distinctly spongier, i.e., less dense, than those of adults). The calculation of MNIs also helps to offset inflated NISPs caused by the recording of teeth.

NATURAL HISTORY

The following are brief presentations of the natural history or historical background of identified faunal genera and species.

Table 5.1. Identified Taxa from LA 66922.

Taxon	Common Name	Features										Totals	
		Non-feature Contexts		Ricketts Homestead						Dunn Hmstd.			
				2		8		15		5			
		#	MNI	#	MNI	#	MNI	#	MNI	#	MNI	#	MNI
Anura	Toads and Frogs									1	1	1	1
cf. <i>Circus cyaneus</i>	?Northern Harrier					1	1					1	1
<i>Gallus gallus</i>	Domestic Chicken									4	1	4	1
cf. <i>Meleagris gallopovo</i>	?Turkey							1	1			1	1
Indet. Medium Bird	Chicken-size							1	1			1	1
<i>Antrozous pallidus</i>	Pallid Bat			42	3							42	3
Leporidae	Rabbits, Hares			1	-							1	-
<i>Sylvilagus audubonii</i>	Desert Cottontail			100	8			1	1	58	3	159	12
<i>Lepus californicus</i>	Black-tailed Jackrabbit	2	1	18	3	2	1			9	2	31	7
Rodentia	Rodents			1	-							1	-
<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog			1	1					12	1	13	2
Geomyidae	Pocket Gophers			10	1					4	1	14	2
<i>Perognathus</i> sp.	Pocket Mouse									4	1	4	1
<i>Dipodomys</i> sp.	Kangaroo Rat			2	1					1	1	3	2
<i>Sigmodon hispidus</i>	Hispid Cotton Rat			5	1							5	1
<i>Neotoma</i> sp.	Woodrat			12	2					7	2	19	4
<i>Canis latrans</i> / <i>C. familiaris</i>	Coyote/Dog			1	1							1	1
<i>Felis domesticus</i>	Cat			73	1			1	1			74	2
cf. <i>Sus scrofa</i>	?Pig	2	1									2	1
<i>Bos taurus</i>	Cattle			7	1			4	2	12	1	23	4
Indet. very small mammal	mouse-size									1	-	1	-
Indet. small mammal	rabbit-size			2	-			2	-	7	-	11	-
Indet. medium mammal	coyote-size	1	-	2	-							3	-
Indet. large mammal	deer-size	30	-	2	-			7	-	6	-	45	-
Indet. very large mammal	cattle-size	1	-	14	-			20	-	12	-	47	-
Totals		36	2	293	23	3	2	37	6	138	14	507	47

Aves (Birds)

Family Accipitridae (Kites, Eagles, Hawks, Harriers)

Cf. *Circus cyaneus* (Northern Harrier): a wing element, tentatively identified as northern harrier (*Circus cyaneus*), was recovered from Feature 8, a cistern. LA 66922 is within the winter range of the northern harrier. This raptor's habitat consists of marshes, prairies, and fields. It "is frequently found near weedy borders and ditch banks surrounding agricultural fields" (Emslie 1981:318). Nests constructed of sticks, twigs, and grasses are located in grassy vegetation in uplands and wetlands. Four to six eggs are laid. The northern harrier subsists on small rodents, small waterfowl, and the young of other birds (Johnsgard 1979:92-93; Peterson 1990:170, Map 71).

Family Phasianidae (Fowl-like Birds)

Gallus gallus (Chicken): The Spanish colonists of the Oñate expedition in 1598 probably introduced the domestic chicken (*Gallus gallus*) to New Mexico. All breeds of domestic fowl are descended from the red junglefowl of Southeast Asia (Jull 1927:382-383; Zeuner 1963:443). Although the exact date of domestication is unknown, by ca. 2500 B.C. it was known as a domestic fowl in the Indus Valley of India (Hargrave 1972:5; Zeuner 1963:443-444). "From India it moved northward and westward and reached Persia at a very early date, but its time of arrival in the Mediterranean area is uncertain" (Wood-Gush 1959:321). Its spread into the Mediterranean area was probably the result of military and commercial activities (Smith and Daniel 1975:13).

The domestication and subsequent distribution of the fowl was probably related more to the sport of cockfighting (one of the oldest spectator sports) rather than to its potential as a food resource (Jull 1927:383; Wood-Gush 1959:323). Along with the chicken, cockfighting spread from India to other areas (Jull 1927:383, 385; Smith and Daniel 1975:13). "The breeding of fighting birds is highly specialized and the feeding of those intended for the pit is considered extremely important" (Jull 1927:383). The conscious selection for traits considered essential for good

fighting birds (e.g., body size, lack of molting, comb size) probably also influenced the development of the food potential of the chicken (Wood-Gush 1959:323, 325). Although cockfighting has been banned in many countries (including 41 states in the United States, as of 1975), it is popular and continues illegally (Smith and Daniel 1975:69-124).

Today's domestic fowl are descended from two distinct races. The Asiatic races - large-bodied, heavy-boned chickens with heavily feathered shanks - were bred primarily for their flesh. The early Mediterranean races were about half the size of the Asiatic fowl, were small-boned, and had less dietary potential (Jull 1927:385). "From these two basic races each poultry-raising country has developed its own fowls, establishing fairly well-defined standards for the various groups of birds that came to be known as breeds" (Jull 1927:385).

Chicken is represented in the archaeofaunal assemblage by the presence of several foot elements that articulate. The specimens, indicative of butchering refuse, were found in Feature 5, a dugout.

Cf. *Meleagris gallopavo* (Turkey): a coracoid fragment, tentatively identified as turkey (*Meleagris gallopavo*), was recovered from Feature 15, a possible privy. Both domestic and wild turkey were probably available to the inhabitants of LA 66922. Merriam's wild turkey (*M. g. merriami*) occurs in the Transition and Upper Sonoran zones of the mountains of New Mexico. The current permanent range of this bird (Peterson 1990, Map 99) includes the mountains east of the site. It has been extirpated, however, throughout much of its former range. The wild turkey is the largest upland game bird in the country. Merriam's wild turkey inhabits mountain forests and woodlands of the Southwest. It primarily dwells at elevations between 6000 and 12,000 ft, rarely occurring below 6000 ft (Bailey 1928:231-233; Ligon 1946:1-3). "The yellow, or Ponderosa pine, a source of mast, and its favorite roosting tree, is an essential component of its permanent habitat, while living surface water is a range requirement" (Ligon 1946:2). Dense, brushy habitats are avoided. Although not technically a migratory bird, it has distinct summer and winter ranges. Oak mast (acorns), piñon nuts, and juniper berries are important components of the turkey's diet (Bailey 1928:231-237;

Lignon 1946, 1961:102-104; Martin et al. 1951:107-108; Schorger 1966). The taste of its flesh is affected by the type of food it consumes. In the Southwest, turkeys that eat quantities of piñon nuts are said to have a delicate flavor (Schorger 1966:372).

Mammalia - Mammals

Family Vespertilionidae (Vespertilionid Bats)

Antrozous pallidus (Pallid Bat): pallid bat remains were only identified in the assemblage from Feature 2, a limestone house foundation. Although this bat occurs throughout New Mexico, it is essentially a desert species. It can be found in deserts and grasslands, even if water is scarce. Its kidneys, which have been specially modified for life in arid areas, conserve water. This species is not thought to be migratory in New Mexico, but winter records are unknown. Young are born in early summer. During the day, the pallid bat roosts in natural crevices or in man-made structures such as houses and barns. It emerges in early evening to feed (Findley 1987:48; Findley et al. 1975:63-65). These bats "often fly near the ground. In desert regions they are especially prone to hawk back and forth in an arroyo below the level of the surrounding desert floor. Occasionally they alight and feed on ground-dwelling insects and ... have actually been taken by collectors' mouse traps" (Hall and Kelson 1959, Vol. 1:202). Its main diet consists of large insects (e.g., beetles and crickets) but it also eats terrestrial invertebrates (e.g., scorpions), small vertebrates (e.g., pocket mice, lizards), and cactus fruits and seeds. Because the pallid bat does most of its feeding on the ground, it is preyed on by snakes and owls (Findley 1987:48; Zeveloff 1988:74-75).

Family Leporidae (Rabbits, Hares)

Sylvilagus audubonii (Desert Cottontail): desert cottontail remains were recovered from Features 2 (a limestone house foundation), 5 (a dugout), and 15 (a possible privy). Of the three cottontail species known in New Mexico, the desert cottontail is the most widespread, occurring throughout the state (Bailey 1931:54; Findley et al. 1975:89) and it is the only one in the vicinity of LA 66922. It is found primarily at

elevations below the coniferous forests, in the Lower and Upper Sonoran zones (Bailey 1931:18, 33, 1931:54). It inhabits deserts, grasslands, brushy areas, piñon-juniper woodlands, and riparian zones. The desert cottontail also frequents cultivated fields and the dense vegetation adjoining such fields. Brush or shrubs are necessary for resting and hiding (Bailey 1931:54-60; Chapman and Willner 1978:2-3; Clark and Stromberg 1987:80; Findley 1987:57; Zeveloff 1988:92). This cottontail subsists mainly on grasses, forbs, cacti, and shrubs (Bailey 1931:55-56; Chapman et al. 1982:102; Chapman and Willner 1978:3). Cultivated plants, including corn, are also eaten (Bailey 1931:55-56; Chapman et al. 1982:101). Much of the cottontail's water requirements are provided by its food (Bailey 1923:71-72; Chapman et al. 1982:102; Findley 1987:57; Zeveloff 1988:92).

Predation by a variety of animals - bobcats, coyotes, foxes, raccoons, skunks, raptors, snakes - is the major cause of cottontail deaths and the primary regulator of cottontail abundance (Chapman et al. 1982:106-107; Clark and Stromberg 1987:78-79; Ingles 1941:236; Zeveloff 1988:88, 92). Its high mortality rate is offset by a high reproductive rate. Breeding generally occurs from mid- or late winter through late summer. A single female may have as many as six litters (Chapman et al. 1982:94; Clark and Stromberg 1987:78, 81; Findley 1987:57-58; Hoffmeister 1986:131, 137; Zeveloff 1988: 93).

Lepus californicus (Black-tailed Jackrabbit): black-tailed jackrabbit remains occur among the non-feature specimens and in the assemblages from Features 2 (a limestone house foundation), 5 (a dugout), and 8 (a cistern). The black-tailed jackrabbit is the only jackrabbit that occurs in the project area. It is also the most common jackrabbit in New Mexico, occurring throughout the state below the ponderosa forest zone (Findley 1987:55; Findley et al. 1975:93-94). This leporid is usually found at elevations below 6,000 ft (1,800 m), in the Lower and Upper Sonoran zones (Bailey 1931:18, 33, 1931:48). It inhabits deserts and open shortgrass prairies with scattered shrubs. In addition, this jackrabbit is very adaptable to agricultural conditions. Areas of heavy brush or woods are avoided (Dunn et al. 1982:133; Findley 1987:54-55; Findley et al. 1975:93-94; Hoffmeister 1986:140-141; Zeveloff

1988:98). "They are found in mesquite, sagebrush, desertscrub, into open pinyon-juniper " (Hoffmeister 1986:141). The black-tailed jackrabbit is most common, however, in open, treeless habitats (Findley 1987:55).

The jackrabbit usually feeds at night on grasses, mesquite, and herbs. Cultivated crops are also consumed. This leporid, like the cottontail, depends on succulent or green vegetation for water. Surface water, however, is drunk when available. The breeding season extends from mid- or late winter to late summer. A single female may have as many as seven litters. The yearly number and size of litters per breeding female help to offset the high mortality rates. Jackrabbit predators include snakes, eagles, hawks, owls, coyotes, foxes, bobcats, and skunks (Clark and Stromberg 1987:87; Dunn et al. 1982; Findley 1987:56; Hoffmeister 1986:141-142; Zeveloff 1988:99-100).

Family Sciuridae (Squirrels and Allies)

Cynomys ludovicianus (Black-tailed Prairie Dog): black-tailed prairie dog remains were found in Features 2 (a limestone house foundation) and 5 (a dugout). Today this prairie dog is found in the eastern half of New Mexico, but its range formerly extended to the southwestern portion of the state (Bailey 1931:120; Findley 1987:67; Findley et al. 1975:130-131). The black-tailed prairie dog is primarily an Upper Sonoran species (Bailey 1913:32, 1931:120, 123) that inhabits semi-arid shortgrass prairies, avoiding stands of tall grass. It is a highly social animal that lives in very large colonies that can extend over large expanses of plains. Family groups retain some cohesion and independence within the well-organized colonies. Communication among colony members is both vocal and visual. A dome- or doughnut-shaped mound surrounds the entrance to the burrow which may extend almost vertically to a depth of 5 m before leveling off. The entrance mound prevents water from entering the burrow. The burrow system is extensive and permanent, with the nest located in the deeper portions of the burrow. Much of the winter is spent in the burrow. Breeding occurs in late winter and a single litter of about four young is born in late March or early April. This prairie dog consumes the stems, leaves, and seeds of a variety of grasses, weeds, and shrubs.

The black-footed ferret (*Mustela nigripes*), an endangered species, was the most specialized predator of the black-tailed prairie dog. Formerly, both species had nearly identical distributions. Other predators include hawks, coyotes, foxes, bobcats, badgers, and snakes (Findley 1987:67-68; Hoffmeister 1986:194-196; Zeveloff 1988:145, 147).

Because prairie dogs consume grass and a variety of annual weeds, they are considered food competitors of domestic livestock. Consequently, much effort has been devoted to eradicating them from rangelands. Such programs have primarily used poisons. As a result, prairie dogs are extinct within many parts of their former range (Findley 1987:68).

Family Heteromyidae (Kangaroo Rats, Pocket Mice)

Perognathus sp. (Pocket Mouse): remains of a pocket mouse (*Perognathus* sp.) were recovered from Feature 5, a dugout. The ranges of five pocket mouse species include the project area. The silky pocket mouse (*P. flavus*) occurs throughout New Mexico (Findley et al. 1975:160). It inhabits plains and semidesert grasslands and is found in sagebrush-cactus associations. Dry, sandy to loamy soils are preferred for the shallow burrow system, which consists of various tunnels and side chambers. Females have one or two litters a year. Seeds compose almost its entire diet. Predators include foxes, coyotes, weasels, owls, and snakes (Bee et al. 1981:113-114; Clark and Stromberg 1987:131-132; Findley et al. 1975:159-160; Hoffmeister 1986:271-272).

The Plains pocket mouse (*P. flavescens*) lives in sandy deserts and grasslands (Findley et al. 1975:164-165; Zeveloff 1988:169). It also occurs along the margins of grainfields. Burrows are shallow, paralleling the surface at a depth of 15 to 20 cm, and contain nesting sites and seed caches. Females have two litters, late spring and summer, yearly. Although its diet consists primarily of seeds, insects and cultivated grain (wheat, oats) are also eaten. Major predators include snakes, owls, weasels, foxes, coyotes, and skunks (Bee et al. 1981:111-112; Jones and Birney 1988:180; Zeveloff 1988:169-170).

The hispid pocket mouse (*P. hispidus*), a typical Great Plains species also occurring in southern New Mexico, is found in the moderately high, dense grasses of desert grasslands (Findley 1987:85; Findley et al. 1975:166-167; Hoffmeister 1986:297). It is usually associated with the silky pocket mouse. Seeds are stored in the burrow (Hoffmeister 1986:297).

The rock pocket mouse (*P. intermedius*) "is strongly restricted to rocks and rocky habitats, mostly in the creosote bush-saltbush desertscrub" (Hoffmeister 1986:281). Its burrow provides insulation from the desert heat. A single litter is born in May or June. This rodent's diet consists primarily of seeds but insects are also consumed. It is preyed upon by owls, snakes, and carnivores (Hoffmeister 1986:282-284; Zeveloff 1988:176-177).

The desert pocket mouse (*P. penicillatus*) inhabits sandy, open deserts with sparse vegetation. Young are born between May and September. Seeds constitute the major portion of its diet (Hoffmeister 1986:287, 289-290; Zeveloff 1988:176).

All pocket mice are nocturnal. "They construct complex burrows with separate chambers for nesting, sleeping, rearing of the young, and food storage. Frequently, the stored seeds are neatly sorted according to species" (Zeveloff 1988:167). In addition, these rodents plug their burrows when they are occupied (Zeveloff 1988:167).

Dipodomys sp. (Kangaroo Rat): kangaroo rat remains were identified in the assemblages from Features 2 (a limestone house foundation) and 5 (a dugout). LA 66922 occurs within the ranges of two kangaroo rat species. The Ord's kangaroo rat (*D. ordii*) is found throughout New Mexico (Findley et al. 1975:175). It is a solitary, nocturnal, desert-dwelling burrower that lives in grasslands. In the northern portion of the Southwest, it lives in open pinyon-juniper areas and in areas just below this zone. It occurs on alluvial fans, on flats, and in shifting sands. This rodent prefers friable soils, especially sand. Deep, cool underground burrows provide protection from heat and predators. One or two litters per female are born from February through July. Its diet consists mainly of seeds, but green leaves, buds, tubers, and insects are also consumed.

Predators include owls, snakes, foxes, weasels, badgers, and bobcats (Bec et al. 1981:117-118; Clark and Stromberg 1987:137-139; Findley 1987:82-83; Findley et al. 1975:174; Hoffmeister 1986:298-299; Zeveloff 1988:181-182).

Merriam's kangaroo rat (*D. merriami*) lives in sandy soil in desertscrub and is commonly found in low deserts with scattered vegetation. "In areas where *D. ordii* is found, *D. merriami* is usually excluded from the more friable soils and is most common on desert pavements" (Findley et al. 1975:183). Burrows are usually simple and shallow. One or two litters are born in spring and fall. The main diet of this rodent consists of a variety of seeds, but forbs and shrubs are also eaten. Major predators are owls, snakes, coyotes, foxes, and badgers (Cockrum 1982:100-101; Hoffmeister 1986:311-312; Zeveloff 1988:186-188).

Family Muridae (Mice, Rats)

Sigmodon hispidus (Hispid Cotton Rat): remains of a single hispid cotton rat (*Sigmodon hispidus*) were recovered from Feature 2, a limestone house foundation. This cotton rat is a grassland species of southern and eastern New Mexico. It prefers tall grasses but can also be found in degraded grassland. It makes runways through the grass and digs burrows. A grass nest may be constructed under dead vegetation or in burrows. A female may have six or more litters a year. This rodent is active day and night. Often feeding during the day, it mainly eats the stems and new growth of grasses and weeds (Cockrum and Petryszyn 1992:90-91; Findley 1987:96-97; Findley et al. 1975:233-234).

Neotoma sp. (Woodrat): woodrat remains were found in Features 2 (a limestone house foundation) and 5 (a dugout). LA 66922 is located within the ranges of two woodrat species. The southern plains woodrat (*N. micropus*) is primarily a Lower Sonoran species in New Mexico (Bailey 1931:171) and prefers xeric or semi-arid grasslands with thickets of cacti, mesquite, or thornbush. It also inhabits crevices in rocky outcrops. Bulky, conspicuous houses are commonly constructed of sticks, cactus joints, and thorns. These houses are located at the base of shrubs and cacti or in rock outcrops. Protected within the house, the nest consists

of dry grasses and fine plant fibers. Within the structure, tunnels are used for food, resting chambers, and escape routes. In addition, an underground burrow system may be present. Two or more litters, usually of two or three young, are born from early spring until August. A variety of plant materials is consumed, including leaves, seeds, roots, berries, and nuts. Prickly pear blades and various cactus fruits are favored foods. Major predators include snakes, owls, hawks, coyotes, foxes, and bobcats (Bailey 1931:171-174; Bee et al. 1981:140-141; Davis 1974:218-219; Findley 1987:97-100; Findley et al. 1975:238-240).

The white-throated woodrat (*N. albigula*), primarily an Upper Sonoran species (Bailey 1913:32, 1931:175), occurs in a variety of habitats, usually below the conifer zone. It is frequently found in pinyon-juniper and it is common in extensive cholla, prickly pear cactus, and sagebrush areas. Cacti provide food and water, protection for the nest, and function as anchors for the houses. Rocky areas are also selected as house sites. Cactus joints, sticks, thorns, and other available materials are used to construct the houses, which average about 2.5 m in diameter and about 1 m high. The nest, which is partially dug into the ground below the house, is usually constructed of grasses and is about 20 cm in diameter. It is used as a daytime retreat and to raise the young. A female may have more than one litter, usually consisting of two young, per year. Cacti, mesquite beans, juniper berries, herbs, and shrubby vegetation serve as food. Water is obtained from food. Major predators include owls, snakes, ringtails, coyotes, badgers, bobcats, and weasels (Bailey 1931:175-180; Cockrum 1982:114-115; Davis 1974:221; Findley 1987:97-100; Findley et al. 1975:241-242; Hoffmeister 1986:406-407; Zeveloff 1988:209-210).

Family Canidae (Dogs, Coyotes, Wolves, Foxes)

Canis latrans/C. familiaris (Coyote/Dog): a single coyote/dog specimen was recovered from Feature 2, a limestone house foundation. Because of similarities in size and osteology between coyotes and dogs, the canid specimen could not be confidently identified as one or the other. The coyote (*C. latrans*) is found throughout the Southwest, where it occupies a wide range of habitats. "Broken country, interrupted by

rocks, brush, clumps of pinyon-juniper or other vegetation, makes excellent habitat for coyotes" (Hoffmeister 1986:462). Dens are usually dug into the ground. Brush-covered slopes, riverbanks, and rock ledges also serve as den sites. Unlike wolves, coyotes normally do not mate for life. A single litter, averaging five or six pups, is born in the spring. Hybrids have been reported between the coyote and the domestic dog. Much of the coyote diet consists of rabbits, rodents, and carrion, but birds, deer, sheep, juniper berries, cactus fruit, and insects are also eaten. In an effort to protect their livestock, ranchers have killed thousands of coyotes, but programs to eradicate them have generally been ineffective. It is also hunted for its valuable pelt. Major nonhuman predators of the coyote are cougars and wolves (Bee et al. 1981:165; Cockrum 1982:24; Findley et al. 1975:281-282; Hoffmeister 1986:462-464; Zeveloff 1988:248-249).

The dog (*C. familiaris*) is closely associated with humans. Based on a radiocarbon date of about 8400 B.C., the earliest known domestic dog remains in North America are from Jaguar Cave, Lemhi County, Idaho (Lawrence 1967:44, 1968:43). "Since dogs were domesticated from an Old World, not a New World stock, and since the remains discussed are of a small animal with typical dog characters, domestication must have taken place at a considerably earlier date" (Lawrence 1967:44). When humans entered North America by way of the Bering Strait, therefore, they were accompanied by their dogs which were probably the first domesticated animals. The domestic dog probably descended from the wolf (*C. lupus*). As stated by Olsen (1985:xi):

The wolf has perfected hunting habits that would not have been lost on early hunters who observed their game-getting practices. Both wolves and humans were pack, or team, hunters early on, and it is likely that these similar tactics for obtaining prey were influential in bringing about the initial stages of association between the two species. This hunting association and the fact that both hominids and large canids have mutually compatible social organizations eventually led to taming and, ultimately, to domestication.

When Spanish explorers first entered the American Southwest, they were accompanied by Spanish greyhounds. These dogs were larger than coyotes or large Pueblo dogs but smaller than the local wolf (Olsen 1978:19; Winship 1990:34). On several occasions, the greyhounds of Coronado's expedition (1540-1542) were used in man-baiting episodes. In an effort to force Bigotes and Cacique to reveal the whereabouts of a supposed golden bracelet, dogs were set upon them. The victims, however, were not seriously injured (Bolton 1990:200, 203). In an incident that occurred either during the siege or after the fall of Moho in early 1541, some Indians who had been set free, were chased and bitten by a Spanish dog. As in the previous incident, no one died (Bolton 1990:228). During De Soto's expedition into what is now the southeastern United States, Spanish dogs served similar functions. Bloodhounds were used "in tracking down Indians, retrieving those who tried to escape and tearing in pieces guides who misled" (Swanton 1939:92). Later, as settlers moved into New Mexico, so did various breeds of domestic dog.

Family Felidae (Cats)

Felis domesticus (Cat): a partial cat (*Felis domesticus*) skeleton was recovered from the limestone house foundation (Feature 2) and a single cat specimen was associated with Feature 15 (a possible privy). Although the records are silent, the domestic cat was probably introduced into New Mexico by Spanish colonists or missionaries in the late 1500s or early 1600s. The cat remains from the Pueblo V level at Awatovi are the earliest known domestic cat remains from the Southwest (Olsen 1978:19). The earliest unambiguous evidence for the domestic cat is from the New Kingdom (ca. 1600 B.C.) in Egypt. The progenitor of the domestic cat is the wild cat (*F. silvestris*) of Europe and Africa (Clutton-Brock 1981:107-108, 111; Zeuner 1963:387-388, 390). "The cat is strongly territorial in its behaviour and it is a solitary, and at least partly nocturnal, hunter. By these characteristics it is set apart from all other fully domestic animals, but on the other hand it is its territorial instincts that keep this carnivore close to man" (Clutton-Brock 1981:106). The domestic cat, however, can survive in a half wild or feral state with limited or no reliance on humans. Although many breeds of cat exist, there are only four main groups:

the striped tabby, the blotched tabby, the single-colored black or white, and the sex-linked orange (Clutton-Brock 1981:109).

There is little historical information regarding the keeping and raising of domestic cats by the Spanish colonists. Cats were presumably kept for the same reasons they are kept today in rural areas, to eradicate rats and mice and to serve as pets.

Family Suidae (Pigs)

Cf. *Sus scrofa* (Pig): two tentatively identified pig (*Sus scrofa*) specimens occurred in a non-feature context. The domestic pig was first introduced into New Mexico by Spanish explorers in the 1500s. It was the favorite food and a primary protein source of the Spaniards (Bennett 1970:231-232; Gade 1987:36; Towne and Wentworth 1950:70-71, 149). There is no record, however, that any of these pigs survived the expeditions. "Pigs moved northward with the colonizers and reached present-day New Mexico with the relief expedition to Oñate in the summer of 1600" (Towne and Wentworth 1950:71).

The pig was domesticated during the Neolithic, possibly in Mesopotamia and Egypt (Towne and Wentworth 1950:58). Discrepancies exist among researchers concerning pig types (e.g., Bennett 1970:232-233; Gade 1987:36-37; Towne and Wentworth 1950:165-167). In the present discussion, the designations used by Gade (1987) are generally followed. The pigs introduced into the New World by the Spaniards were of two types. The Iberian pig was a small, lean, agile pig with long legs; a long, narrow snout; flat neck; and straight back; it resembled the medieval European pig. The Iberian pig had heavy shoulders and weighed between 110 and 330 pounds. This is the type of swine that Columbus brought on his second voyage in 1493. A second type was the Chinese pig, which was brought from the Philippines. The Chinese type was described as weighing 125 to 150 pounds (which seems low) and having a swayback, short legs, flat feet, and wide-spread toes. The European or Celtic pig, introduced to the New World by English colonists in Virginia, was leaner and had longer legs. By 1800, admixture of these types produced modern forms that have short legs, heavy bodies, thick and

powerful shoulders, and short necks (Bennett 1970:224, 232-233; Gade 1987:35-37).

Although the pig is omnivorous, it is basically a woods mammal that prefers forests where mast (acorns and nuts) is available. In addition, it consumes a variety of wastes and requires less care than cattle or sheep. It uses its nose, the end of which has a tough cartilaginous disc, to root for food. The pig can survive in deserts only if food and water are available (Bennett 1970:224-225, 228, 230; Gade 1987:39; Skaggs 1986:15). Because adequate food was not generally available or abundant, pigs were scarce in the Spanish Southwest and they were raised primarily for lard (Crass and Wallsmith 1992:12; Towne and Wentworth 1950:72, 155-156). Besides being used in cooking, lard was made into soap and candles and was used in lamps and as a lubricant (Gade 1987:39).

Hogs are an important meat resource. Although cattle and sheep normally have single births each year, sows have a gestation period of four months and can produce seven or eight offspring per litter. Among farm animals, it is the most efficient food producer, storing 35 percent of the food energy it consumes. Cattle and sheep only store 11 percent of the food energy they consume (Gade 1987:39; Towne and Wentworth 1950:7, 210).

A hog's carcass yields from 65 to 80 per cent in dressed meat, compared with 50 to 60 per cent for cattle, and 45 to 55 per cent for sheep and lambs. As for fattening, a pig will gain a pound in weight for every three to five pounds of feed, according to age, while a calf needs five pounds of concentrate and five more of roughage. Older cattle require additional feed [Towne and Wentworth 1950:7-8].

Although pork has traditionally been regarded as the "poor man's or working man's meat," nutritionally the flesh of the pig is exceptional. "[I]t contains the finest quality of protein and provides the greatest energy value of all meats" (Towne and Wentworth 1950:8). Its flesh is very digestible. In addition, it contains more unsaturated fats and more thiamin than other meats. Because the calories in a pound of fatty pork produce more energy than the calories in a pound of beef or mutton (Gade 1987:39; Towne and Wentworth 1950:8,

247-251), the energy obtained by consuming pork (or by cooking with lard) was important to people in the New Mexico of the 1600s to late 1800s.

Family Bovidae (Cattle, Sheep, and Relatives)

Bos taurus (Cattle) cattle (*Bos taurus*) remains occurred in Features 2 (a limestone house foundation), 5 (a dugout), and 15 (a possible privy). Domestic cattle were first introduced into New Mexico in 1540 by Coronado's expedition. Although some writers believe that Coronado left behind cattle that formed wild herds (e.g., Skaggs 1986:30-31), there is no evidence to substantiate this assertion and it is highly unlikely that any survived in New Mexico. Don Juan de Oñate and his colonists brought the first breeding cattle herd to New Mexico in 1598 (Rouse 1977:54, 79-80; Simmons 1988:5).

Most of the cattle brought into New Mexico by Spanish explorers and colonists came from the part of Mexico known as Nueva Vizcaya. According to one school of thought, the Mexican herds, bred from cattle introduced to Mexico from Cuba about 1521, were in turn the descendants of range cattle transplanted from Spain (Brand 1961:132):

The complex had evolved under the subhumid to arid conditions of the Spanish Meseta and had moved with the *reconquista* into New Castile, Extremadura, and Andalucia. Basic to the complex were two strains of cattle: the piebald, markedly feral range animal, which was the ordinary all-purpose Castilian ranching cow, and the ancient black cattle (*ganado prieto*), commonly known as the Andalusian fighting bulls or *toros de lidia*.

This view of a single Iberian cattle-raising system as the precursor of cattle ranching in Spain's New World colonies was suggested earlier by Bishko (1952). It is, however, oversimplified and overlooks regional contrasts. Recent research indicates "at least two distinct range-cattle complexes existed by 1500, one based in the western part of the interior plateau, or Meseta, of Spain and the other in the Andalusian coastal lowland" (Jordan 1993:19). The early New Mexican herds were descendants of cattle from

Andalucia, but also from the Canary Islands. These cattle had large, widespread, upturned horns; a narrow head; and a solid, or nearly solid, hair color (Rouse 1977:vii-viii, 18-19). In Texas, Andalusian cattle that escaped into the wild eventually "mutated into Longhorns - skinny, blue-horned, mealy-nosed, motley brown beasts" (Skaggs 1986:25). The longhorn played an important role in the expanding New Mexico cattle industry of the late 1800s. During the same period, the introduction of British bulls produced herds of Shorthorn, Hereford, and Angus cattle (Rouse 1977:ix).

Cattle ranching techniques introduced into the New World by Spain included use of the open range, use of the horse for herding, the employment of "cowboys," periodic round-ups, branding, and overland drives (Bishko 1952:498). As early as 1529 or 1530, brands were registered in Mexico City (Bishko 1952:510; Brand 1961:133). Unlike Texas and California, large-scale cattle ranching did not develop in New Mexico during the Spanish and Mexican periods. Cattle had secondary or minor importance in an economy that was increasingly dominated by sheep raising. Little beef was consumed. The New Mexicans tended to view cattle primarily as work animals (Frazer 1983:8-9; Miller 1989:175; Rouse 1977:81; Simmons 1988:5-6).

The establishment of U.S. military posts in New Mexico, beginning in 1846, and their concomitant demand for fresh beef provided the impetus for cattle ranching throughout New Mexico and the rest of the Southwest (Frazer 1983:1-2; Miller 1989:212). After the Civil War, Texas cattlemen such as Charles Goodnight, Oliver Loving, John Dawson, and John Chisum trailed cattle to military forts, mining camps, and railroad towns in Colorado, New Mexico, and Arizona. Initially, New Mexico primarily functioned as a route for moving herds from southern Texas to markets in Colorado and other states. The earliest trail in New Mexico was up the Pecos Valley. As the threat of Indian raids decreased, the cattlemen began to accumulate and winter herds in eastern New Mexico, especially along the lower Pecos River. These herds were driven north and west (Williams 1986:120-121). "The largest single cattle drive through New Mexico occurred in 1874, when 110,000 head were trailed north from Roswell to Colorado" (Williams 1986:120).

Railroads were vital to the development of the cattle industry throughout the West. In addition to expanding production, they "also permitted the large-scale development of the complex breeding, grazing, and fattening regional specializations that characterize the modern livestock industry" (Strickon 1965:237). The first railroad entered New Mexico at Raton Pass in 1878. The coming of the railroad sparked the development of major cattle towns and shipping points in the state.

In the 1880s, huge cattle empires were formed on the open range in eastern New Mexico. Chisum's, in southeastern New Mexico, was one of the largest. It was south of Fort Sumner, between the Pecos River and the Texas border. In the northeastern portion of the state, Hispanic land grants formed the basis of cattle empires (such as the Maxwell Cattle Company, on the Beaubien and Miranda Grant; Baydo 1970; Williams 1986:122). With the creation of large cattle ranches, however, came problems, the most serious of which were overgrazing, cattle rustling, and range wars.

By 1900, cattle ranching in New Mexico was changing. The open range was converted to ranches bounded by barbed wire fences. Windmills provided water for the pastures formed by the fences. Although these changes helped bring an end to the huge cattle empires of the 1800s, the changes also contributed to the development of stock farming. Today, the cattle industry is a significant component of New Mexico's economy (Jordan 1993:236-240; Simmons 1988:12-13; Williams 1986:122).

THE ARCHAEOFAUNAL ASSEMBLAGE

The archaeofaunal assemblage consists of 507 specimens recovered from nonfeature and feature contexts at LA 66922. The site includes parts of three homesteads but vertebrate faunal remains were recovered from only two. Features 2, 8, and 15 are associated with the Ricketts homestead east of the railroad tracks, while Feature 5 is associated with the Dunn homestead west of the tracks.

Nonfeature Contexts

Few faunal remains were recovered from nonfeature contexts ($n = 36$, 7.1 percent) and most of those are deer-size remains ($n = 30$, 83.3 percent). Identified specimens consist of jackrabbit scapula and ulna fragments ($n = 2$, MNI = 1) and radius and ulna fragments ($n = 2$, MNI = 1) of a tentative pig. Although the inhabitants may have occasionally eaten rabbits, the jackrabbit specimens are considered non-cultural. Evidence for butchering consists of a chopmark on a coyote-size specimen and a sawed cattle-size specimen. Except for one specimen, the entire assemblage exhibits some degree of weathering (exfoliation, longitudinal cracks, erosion, or combinations thereof). The incidence of burning is low ($n = 3$, 8.3 percent) and one deer-size specimen exhibits carnivore gnawing. Although the assemblage is small, the taxonomic composition of the remains, primarily pig and deer- and cattle-size, suggests butchering and/or food refuse is represented. The paucity and highly weathered condition of the faunal remains suggest they were not recovered from primary or secondary refuse contexts. The observance of carnivore gnawing on at

least one specimen indicates that scavenging, possibly by dogs, has altered the assemblage's context.

Ricketts Homestead

Feature 2 (House Foundation)

Most of the LA 66922 archaeofaunal assemblage was recovered from Feature 2, a limestone house foundation ($n = 293$, 57.8 percent). Examination of Table 5.1 indicates that the assemblage is taxonomically diverse. Closer inspection, however, shows that few of the items reflect human consumption. Most represent the remains of cat prey and this portion of the Feature 2 assemblage will be examined first.

A partial cat skeleton, accounting for all of the cat remains ($n = 73$, MNI = 1), was recovered from the northeast room addition. The presence of this individual and the associated remains of various small mammals and rodents suggests a non-human predator-prey assemblage. The cat remains consist of most of the anterior portion cat skeleton (Figure 5.1). The left

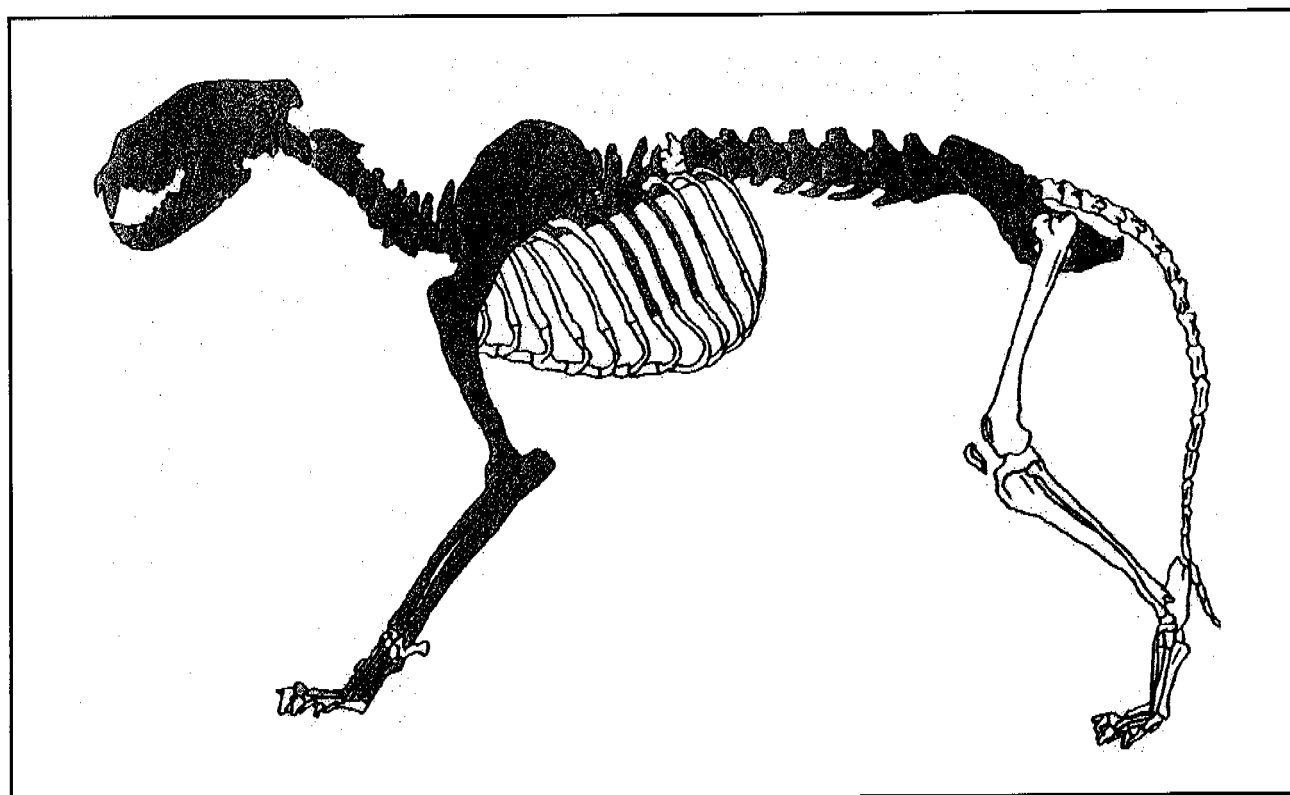


Figure 5.1. Cat skeletal elements from Feature 2. The shaded elements were found.

scapula, most of the ribs and front foot elements, and the hind legs are missing and were probably scavenged by another carnivore prior to complete decomposition of the body. The location of the remains suggests that the cat died under the wood floor of the addition.

The associated rodent and other small mammal remains indicate the area under the floor was one of the places where the cat (or cats) brought prey to eat. The pallid bat ($n = 42$, MNI = 3) is represented by three skulls and two lower jaws, all with teeth. As was indicated in the Natural History section, this bat flies close to the ground and generally feeds on the ground. In addition, it has been caught in mouse traps. It was probably easy for the cat to hunt this bat species.

The most common prey remains are those of the desert cottontail ($n = 100$, MNI = 8) and consist of the entire skeleton except for cervical and thoracic vertebrae, ribs, the sacrum, and most foot elements - carpals, tarsals, metacarpals, phalanges. Very young, including fetal/neonatal, cottontail are represented. The high incidence of cottontail remains is not surprising. Cottontails usually do not venture far from cover and when alarmed, they seek shelter in brush or in burrows. Other escape behaviors consist of "freezing" (remaining motionless), running, and dodging (Ingles 1941:237-238, 249). In addition, because cottontails "travel along open, well-defined routes" (Chapman et al. 1982:116), "wearing trails or runways in the vegetation, snow, or under brush piles" (Schwartz and Schwartz 1981:104), they are easy to find. These leporids do not run as fast as far as jackrabbits. All of these factors make it easier for predators such as cats to catch cottontails.

Few jackrabbit remains ($n = 18$, MNI = 3) are present. Specimens include skull fragments, teeth, forelimb elements, innominate fragments, a distal femur, and metatarsals. The ages represented by the three jackrabbit individuals consist of fetal/neonatal, very young, and young. The relative lack of jackrabbit remains reflects the fact that predators such as cats would have greater difficulty in catching them. When alarmed, jackrabbits may remain motionless or run away slowly, but they can also move rapidly, attaining speeds of 30-35 mi (48-56 km) per hour over short distances. Normally, a jump covers 5-10 ft (1.5-3 m)

but the distance increases to 15-20 ft (4.6-6 m) when the animal is speeding. It can also leap as high as 5.5 ft (1.7 m; Dunn et al. 1982:134; Findley 1987:56; Schwartz and Schwartz 1981:119). As a result, older jackrabbits probably have few problems eluding cats. Young individuals, however, are undoubtedly easier to procure.

The unidentified rodent is represented by an incisor. The prairie dog specimen (MNI = 1) is a lumbar vertebra and the pocket gopher specimens ($n = 10$, MNI = 1) consist of mandibles, teeth, ulna and femur shafts, an innominate fragment, and a distal tibia. Represented elements of the kangaroo rat ($n = 2$, MNI = 1) are the sacrum and tibia. The cotton rat ($n = 5$, MNI = 1) specimens are a mandible fragment with teeth. The woodrat remains ($n = 12$, MNI = 2) include a skull fragment, mandibles, teeth, and humerus, innominate, femur, and tibia fragments. The indeterminate rabbit-size remains probably represent cat prey.

Of the 192 specimens considered the remains of cat prey, 91 (47.4 percent) are teeth. The remaining 101 specimens (52.6 percent) consist of the various skeletal elements indicated above. Of these, 55 (54.5 percent) are eroded by root etching, which has obscured the natural bone surfaces to varying degrees. In spite of this, clear evidence of carnivore gnawing was observed on three cottontail and three jackrabbit specimens. The evidence includes punctures (circular to subcircular holes that tend to occur through the thin cortical bone covering cancellous [trabecular] bone) and tooth pitting (which is much less conspicuous than punctures and is usually shallow, faint, and isolated). The cottontail specimens consist of an innominate fragment, a proximal femur with puncture marks, and a complete tibia with puncture marks on the proximal end. In addition, a tibia shaft may exhibit tooth marks. The jackrabbit specimens consist of two humerus shaft fragments with tooth pitting and an innominate fragment with puncture marks.

Although use of quarter-inch screens during data recovery has undoubtedly biased the prey assemblage against bats and small rodents, another factor is probably also responsible for the observed assemblage. This is the bone destruction capacity of domestic cats. As observed by Stallibrass (1990:158), "kittens of only

two months of age are capable of consuming whole long bones of juvenile chickens ... and complete chicken carcasses can be consumed by adult cats."

Most of the rest of the Feature 2 archaeofaunal assemblage derives from the diet of the human occupants of the homestead. The cattle remains ($n = 7$, MNI = 1) consist of a rib shaft sawed on both ends, a proximal rib sawed on its anterior edge, a sawed scapula fragment, two sawed innominate fragments, the distal shaft of a canid-gnawed metatarsal, and a rodent-gnawed second phalange fragment. Several retail cuts of meat - a short rib (rib), a chuck roast (scapula), and two sirloin roasts (innominates) - are represented among the butchered specimens. In addition, two indeterminate cattle-size specimens ($n = 14$) exhibit butchering marks. An indeterminate vertebra fragment sawed on both sides represents an 8.6 mm thick short loin or rib steak. The other specimen is a neural arch fragment of a cervical vertebra that is sawed on its anterior side. The saw marks on six of the seven butchered bones were produced by a handsaw. The type of saw for the seventh is indeterminate as the result of weathering, but it is probably also a handsaw. In addition, at least four butchered specimens represent calves. The butchering data are indicative of the purchase of retail cuts of beef. Although home butchering is not evident in the cuts just described, the cattle metatarsal and phalange fragments may represent refuse resulting from home butchering.

The cattle and probable cattle bones are not likely to be the result of human disposal patterns. On the contrary, the identification of canid gnawing on the cattle metatarsal and of carnivore gnawing (probably by a canid) on a cattle-size rib fragment suggests that the elements were introduced to the Feature 2 assemblage by dogs and cats. In other words, the entire assemblage at Feature 2 reflects dog and cat scavenging.

Feature 8 (Cistern)

The faunal assemblage from the matrix around Feature 8, a cistern, is very small ($n = 3$, 0.6 percent). A northern harrier ($n = 1$, MNI = 1) is tentatively represented by a complete carpometacarpus, a wing element. The

jackrabbit remains ($n = 2$, MNI = 1) consist of a distal humerus and a proximal radius. These specimens are not likely to be the result of cultural activity. Raptors are not a game bird and the presence of rabbit bones does not necessarily mean it was hunted and consumed by humans. The recovery of a partial cat skeleton and its associated prey remains from Feature 2 suggests the Feature 8 assemblage may be related to domestic feline predator activities. Although none of the specimens exhibits carnivore gnawing, evidence of cat tooth marks may be subtle and masked by erosion.

Feature 15 (Possible Privy)

Few faunal remains were associated with Feature 15, a possible privy ($n = 37$, 7.3 percent). The majority consist of deer- and cattle-size specimens ($n = 27$, 73 percent). Turkey ($n = 1$, MNI = 1) is tentatively represented by a coracoid fragment. The chicken-size specimen ($n = 1$, MNI = 1) is a scapula fragment. These bird specimens are high meat value elements that probably reflect human consumption. The cottontail remain ($n = 1$, MNI = 1) is a distal tibia of a young individual and the cat bone ($n = 1$, MNI = 1) is a distal femur that exhibits carnivore gnawing. Neither is considered human food refuse. One cattle-size element has been burned. Weathering is very common ($n = 34$, 91.9 percent) and consists of exfoliation, longitudinal cracks, erosion, or combinations thereof.

The cattle remains ($n = 4$, MNI = 2) are indicative of human consumption and consist of a metapodial condyle, a distal metacarpal shaft sawed on both ends, a distal femur shaft sawed on both ends, and a distal femur shaft of a very young (possibly fetal/neonatal) calf. The distal metacarpal specimen is 72.4 mm long and probably represents a soup bone. It has a low meat value but a high marrow content. The sawed distal femur is a wedge bone representing an 11.7 mm thick round steak. Butchery evidence was also noted on deer- and cattle-size remains. One deer-size specimen has been sawed on one end, as has a cattle-size bone. Another cattle-size specimen has been sawed on both ends and appears to represent a 17.9 mm thick steak. All of the butchering marks were produced by saws. At least three of the butchered specimens ($n = 6$) represent retail cuts - two steaks and a soup bone. The

fragmentary and weathered condition of the other butchered bones preclude determination of meat cuts.

The archaeofaunal assemblage from Feature 15 overwhelmingly represents refuse resulting from human consumption of beef and probably turkey and chicken. The steaks are higher value cuts of beef. The soup bone is a low value beef cut. The limited data suggest that the occupants of this homestead were able to purchase a variety of meat cuts. Home butchering for household consumption is not indicated. The presence of food refuse in association with a privy is not unexpected. Privies were commonly used for trash disposal.

Discussion

The archaeofaunal assemblage from the Ricketts homestead is taxonomically and functionally varied. The diets of humans and cats are represented. Taxa undoubtedly indicative of human consumption include turkey, pig, cattle, and chicken-, deer-, and cattle-size animals and are primarily associated with the possible privy (Feature 15). Butchering marks are present on 12 specimens (3.6 percent) identified as cattle ($n = 7$), deer-size ($n = 1$), and cattle-size ($n = 4$). The cattle-size specimens are probably cattle. The observed butchering patterns suggest that some if not all of the butchering was done professionally. All of the marks were produced by saws, a practice that was probably introduced after the American invasion of New Mexico in 1846. For nine specimens (75 percent), the saw marks were identified as coming from handsaws. "Complete cuts with handsaws have a flat face showing multiple and irregular heavy striations with finer striations between, all parallel to the cutting edge" (Gust 1983:343). For the remaining three specimens (25 percent), the type of saw used to produce the marks was not determinable due to the small size of the specimens or their weathered condition (or both), but it was probably a handsaw.

This conclusion is further supported by documentary information on the development and use of bandsaws. Although the bandsaw, a type of power saw, was invented in 1808, it was not successful until durable steel bands were developed about 1850 (Gust 1983:344). These saws, powered by steam, were used

by some packing houses, such as Plankinton & Armour of Kansas City, in the 1870s (McCoy 1874:304, 313). Generally, however, large packing houses such as those in California and Nevada did not use bandsaws until the 1900s and small retail butchers did not employ them until much later (Gust 1983:344). The specimens from LA 66922 were probably butchered locally by a small retail butcher using handsaws.

Of the specimens exhibiting butchering marks, nine were identified as specific elements of cattle ($n = 7$) or cattle-size mammals ($n = 2$). Of these, six plus two cattle-size fragments represent major retail cuts. Although the data are limited, the ranking of these cuts of beef according to late 1800s retail values (Schulz and Gust 1983:13) may possibly indicate the socioeconomic status of the homestead occupants. As indicated by Figure 5.2, higher value cuts of beef in the butchered assemblage consist of the sirloin ($n = 2$) and round ($n = 1$). In addition, one cattle-size vertebral fragment (not shown) represents either a short loin or a rib cut, both of which are high value cuts. The sirloin cuts are roasts and the round is a retail cut known as the round steak. The short loin or rib cut represents an 8.6 mm thick steak. Another probable steak, 17.9 mm thick, is suggested by an indeterminate cattle-size fragment sawed on both surfaces (not shown). The presence of medium value cuts of beef is indicated by the chuck ($n = 1$) and short rib ($n = 1$). The chuck specimen is a roast. Finally, the lowest value cut is represented by the foreshank ($n = 1$). This specimen, a 72.4 mm long distal metacarpal shaft, is a soup bone. Although the data are limited and thus not conclusive, the slightly incidence of higher value beef cuts suggests that the buying power of the Ricketts homestead was substantial.

Dunn Homestead

Feature 5 (Dugout)

The entire archaeofaunal assemblage from the investigated western homestead ($n = 138$, MNI = 14) was recovered from Feature 5, a dugout. The toad/frog, leporids, and rodents are considered intrusive or noncultural. The toad/frog specimen is a urostyle fused to a sacrum. The cottontail remains ($n = 58$, MNI = 3) include cranial elements ($n = 6$), mandibles ($n = 5$),

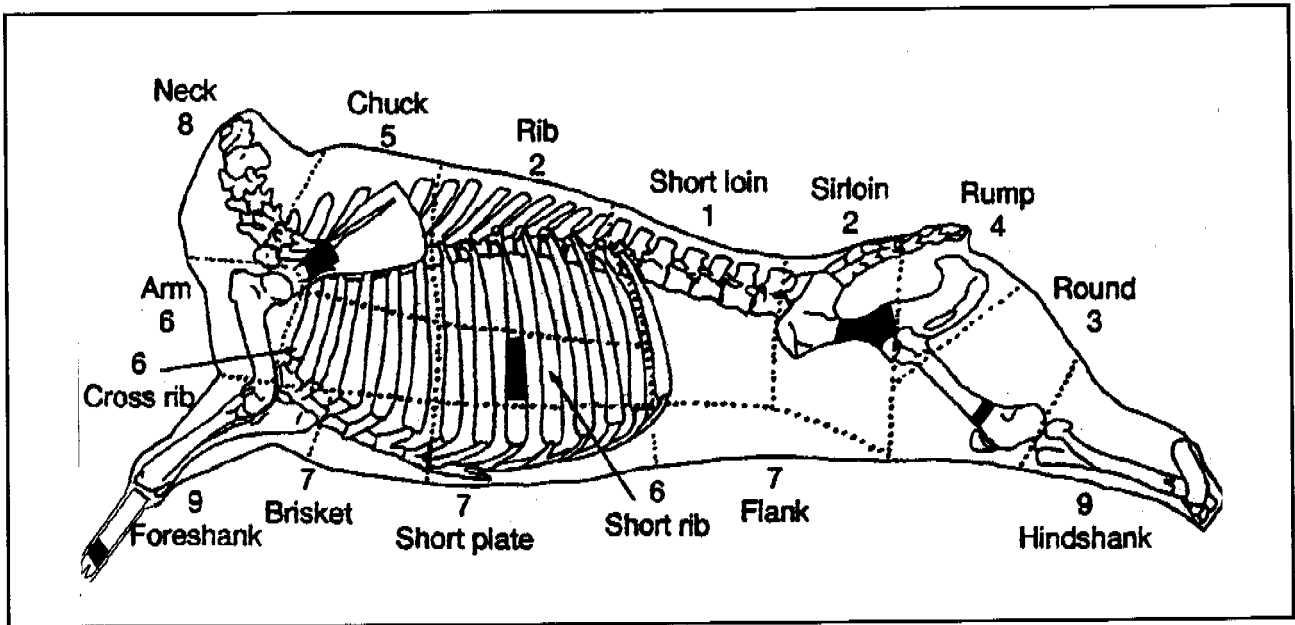


Figure 5.2. Major secondary cuts of beef from the Ricketts homestead. Cuts are ranked according to late 1800s to early 1900s retail values (adapted from Schultz and Gust 1983).

teeth ($n=14$), vertebrae ($n=10$), a rib, scapulae ($n=2$), an innominate, long bones of the forelimbs and hindlimbs ($n=5$ and 10 , respectively), calcanei ($n=3$), and a third metatarsal. A complete humerus, radius, and ulna articulate. Jackrabbit specimens ($n=9$, MNI = 2) consist of humerus and radius shafts, innominate and femur fragments, an astragalus, a fifth metatarsal, and a first phalange. One of the individuals represented is very young. The prairie dog remains ($n=12$, MNI = 1) include seven vertebrae that articulate (second cervical thru first thoracic) and scapula, radius, ulna, and tibia fragments. The pocket gopher ($n=4$, MNI = 1) is represented by two mandible fragments, an incisor, and a sacrum fragment. The pocket mouse ($n=4$, MNI = 1) is represented by cranium fragments and upper incisors. The kangaroo rat specimen is a proximal femur. The woodrat specimens ($n=7$, MNI = 2) consist of mandible, innominate, femur, and tibia fragments. The mouse-size specimen is a skull fragment. The rabbit-size specimens ($n=7$) include a caudal vertebra and a petrous and vertebra fragments. The latter is that of a very young (less than one month old) individual. The specimen, a neural arch, had not yet fused to the centrum at the time of death.

With the possible exception of the toad/frog, all of these specimens probably represent the remains of various cat prey. This portion of the Feature 5 archaeofaunal

assemblage is very similar to that associated with the partial cat skeleton in Feature 2. Evidence of carnivore gnawing (tooth pitting and puncture marks) occurs on four cottontail specimens. Small puncture marks are present on the proximal ends of a femur and two tibiae. In addition, a calcaneum exhibits tooth pitting. This gnawing data is similar to that recorded for the cat prey in Feature 2. Some of the smaller burrowing rodents may be intrusive, however. Intensive burrowing by fox- or coyote-size mammals was noted during excavation of the dugout and had damaged the feature.

Only a small portion of the Feature 5 assemblage is associated with human diet ($n=34$, 24.6 percent). This consists of the chicken ($n=4$, MNI = 1), cattle ($n=12$, MNI = 1), and deer- and cattle-size ($n=6$ and 12 , respectively) remains. The chicken specimens consist of a partly articulated right foot (tarsometatarsus and three phalanges) of a hen. These elements represent primary butchering debris and are indicative of home butchering for household consumption. The cattle specimens include tooth fragments, vertebra fragments, a rib fragment, a complete unciform, a proximal main metacarpal with articulating fifth metacarpal (complete), and a second phalange fragment. All of the vertebral specimens ($n=3$) exhibit saw marks, of which one represents a 1.99 cm thick short loin steak. The other two specimens may also represent steaks.

In addition, one deer-size and three cattle-size remains bear saw marks. Two of the latter are vertebral fragments, of which one may be a steak cut. The type of saw used during butchering could not be determined but it was probably a handsaw (as was explained previously). Although the data are extremely limited, the presence of one to four steak bones suggests that this homestead at least occasionally indulged in more expensive cuts of beef.

SUMMARY AND CONCLUSIONS

The archaeofaunal assemblage from LA 66922 derives from two early 1900s homesteads. Most of the assemblage ($n = 431$, 85.0 percent) is associated with Feature 2, a limestone house foundation ($n = 293$, 57.8 percent) or with Feature 5, a dugout ($n = 138$, 27.2 percent). As the preceding analysis has shown, few of the faunal remains derive from human activities such as ranching, butchering, or food consumption. Much of the assemblage consists of the remains of the prey of carnivores, especially cats.

Because of the small amount of faunal remains associated with human activity, conclusions based on these remains are very tentative. The butchering data for Feature 2 suggests that the inhabitants of the Ricketts homestead had access to the full range of retail cuts of beef but tended to select the more expensive cuts. The data for Feature 5 are even more limited. Only one definite retail cut, a short loin steak, was identified, but three possible steaks are also present, suggesting that the Dunn homestead also preferred the more expensive cuts. The limited data say nothing about the overall importance of purchased meat in the diet, only that such meat was consumed.

Because both features are parts of homesteads, it might be assumed that most of the food consumed at the homesteads was supplied by the crops grown and livestock raised by the occupants. If this was the case, home butchering for household consumption should have been a common activity and the archaeofaunal assemblage should contain butchering debris in addition to food refuse. This, however, is not the case. Of the 23 cattle specimens, only seven may represent primary butchering refuse. Because of the absence of butchering marks, the analysis is inconclusive. Many

specimens may represent animals that died naturally on or near the homesteads and that were subsequently scavenged by domestic and wild carnivores. One of the specimens from Feature 2 exhibits canid gnawing and Feature 5 was damaged by the burrowing of fox- and coyote-size mammals. The presence of a partly articulated chicken foot in Feature 5 indicates that the inhabitants of this homestead (or a nearby one) raised and processed chickens for home consumption. It is interesting to note, however, that no eggshells were recovered from any of the excavations. Chickens are commonly raised for their eggs as well as for their meat.

Home butchering and disposal of food refuse may have occurred in unexcavated or destroyed portions of the homesteads. Although the assemblage from Feature 15 (a possible privy) was small, most of the remains represent food refuse. Privies were commonly used for trash disposal. Unfortunately, much of Feature 15 appears to have been removed by heavy equipment, leaving only the bottom of the privy pit.

Overall, the archaeofaunal assemblage from LA 66922 is intriguing. It contains two sub-assemblages, one associated with a cat or cats and one associated with humans. Cats are often kept on homesteads as pets and to control local rodent populations. The faunal remains associated with the partial cat skeleton in Feature 2 suggest this cat performed its duties well. As was indicated above, the assemblage associated with human activity raises more questions than it answers.

Flotation Sample Analysis

by Pamela J. McBride

INTRODUCTION

LA 66922, just north of Alamogordo, New Mexico, is in the Chihuahuan Desertscrub biotic community as defined by Brown (1994). Large expanses of creosotebush (*Larrea tridentata*) and mesquite (*Prosopis* sp.) often shared with tarbush (*Flourensia cernua*) and whitethorn acacia (*Acacia neovernicosa*) characterize the local vegetation. Ocotillo (*Fouqueria splendens*) and allthorn (*Koeberlinia spinosa*) are other shrubby species that occur. Understory species can include mariola (*Parthenium incanum*), desert zinnias (*Zinnia acerosa*, *Z. grandiflora*), dogweeds (*Dyssodia* spp.) and cacti.

Two features at this early 1900s site were sampled for recovery of macrobotanical remains: the southwest quadrant of Feature 2, a limestone block and adobe house foundation, and Feature 17, an ash and charcoal deposit next to Feature 2 that is probably a rodent burrow. Rodent fecal material was abundant in all three samples, along with roots and insects, indicating a high degree of post-abandonment contamination.

METHODS

Archaeobotanical analysis of material from the project involved flotation processing, full sort analysis, and quantification, as described below.

Flotation Processing

SWCA uses a standard decant flotation system as described by Hammett and McBride (1993). Each of the three flotation samples was poured into a bucket of water, agitated gently until the botanical material floated to the surface, and then decanted onto a clean

piece of chiffon material to dry. The residue at the bottom of the bucket (called the heavy fraction) was rinsed to eliminate soil matrix, dried, and examined by SWCA personnel in order to recover lithic and bone material.

Full Sort Analysis

The floated material was passed through a series of graduated screens (U.S. Standard Sieves with 4mm, 2mm, 1mm, and .5mm mesh sizes). The material from each screen size was then examined using a binocular microscope at a magnification of 0.7x to 4.5x. Normally, charred plant parts like seeds and fruits are identified and counted. However, wood charcoal fragments were the only charred plant remains recovered from the project. All wood charcoal in samples was identified, separated by taxon, counted, and weighed. Wood specimens were placed in polypropylene capsules or plastic bags and labeled for future reference. Uncharred plant parts that were considered to be non-cultural in origin were identified and quantified as an estimate of abundance/liter. An example of each uncharred plant part encountered during analysis was also separated and placed in a polypropylene capsule or plastic bag.

Identification was aided by the use of a modern comparative collection. Scientific nomenclature and common names followed those presented in Martin and Hutchins (1980). Identifications were made to different taxonomic levels: families (e.g., Gymnospermae), genus (e.g., *Amaranthus*), and species (e.g., *Pinus ponderosa*). Plant remains designated as "unknown" indicate remains that might be identified later using a more extensive comparative collection.

Archaeobotanists have struggled with the interpretation of uncharred seeds recovered from subsurface samples.

Because uncharred seeds can be deposited by cultural activity, by rodent and insect activity, and by seed rain, they are difficult to interpret. Minnis (1981) discusses the interpretation of uncharred seeds from open-air sites. He tested a modern facsimile of an archaeological site to compare utilized taxa to contaminants. Three economic taxa were recovered, as well as 16 taxa that had been deposited by non-human processes such as seed rain or rodent movement. Because of the problems with uncharred seeds found in open-air sites, uncharred remains of non-cultigens were recorded but were

considered representative of the local vegetation rather than of cultural activities.

RESULTS

The analysis results are summarized in Table 6.1. A large number of uncharred seeds that closely resemble those of the wild gourd (*Cucurbita foetidissima*) were present in samples and were especially abundant (over 139) in the sample from the southwest quadrant of the house foundation (FS 345). Cucurbit seeds can be

Table 6.1. LA 66922, Flotation Floral Remains.

Notes: cf. = compares favorably, * = charred, + = 1-10/liter, ++ = 11-25/liter.

Bag No. Feature and Provenience	345 Feature 2, N672/E619	347 Feature 2, N673/619	348 Feature 17, N669/E620
<i>Cultural</i>			
cf. <i>Pinus ponderosa</i> , ponderosa pine		2 wood*/<0.1g	
Unknown conifer			4 wood*/<0.1g
<i>Vitis</i> (grape)		1 fragment	
<i>Non-Cultural: Annuals</i>			
<i>Amaranthus</i> (pigweed)	+	+	+
<i>Chenopodium</i> (goosefoot)	+	+	+
<i>Euphorbia glyptosperma</i> (spurge)	+	+	+
<i>Portulaca</i> (purslane)	+	+	
<i>Sporobolus</i> (dropseed grass)			+
<i>Chenopodiaceae</i> (goosefoot family)	+	+	
<i>Compositae</i> (composite family)	+	+	+
<i>Descurainia/Sisymbrium</i> (mustard)	+		
cf. <i>Dithyrea</i> (spectacle pod)		+	+
<i>Helianthus</i> (sunflower)		+	
<i>Solanaceae</i> (nightshade family)	+	+	+
Unknown	+		
<i>Non-cultural: Perennials</i>			
cf. <i>Cucurbita foetidissima</i> (coyote gourd)	++, rind +, cf. peduncle fragment	+	+
<i>Datura</i> (thorn-apple)	+	+	
<i>Echinocereus</i> (hedgehog cactus)	+	+	
<i>Juniperus</i> (juniper)			wood +
<i>Larrea</i> (creosotebush)		leaf +	
<i>Platyopuntia</i> (prickly pear cactus)		embryo +	
cf. <i>Prosopis</i> (mesquite)	leaf +		
cf. <i>Scirpus</i> (bulrush)		+	
<i>Sphaeralcea</i> (globemallow)			+
<i>Talinum</i> (flame flower)	+		
Unknown conifer		wood +	

difficult to identify. Age can degrade features like marginal hairs that, when present, are helpful in species differentiation. The seeds from the current project are smaller than the general size range for the domesticated squash *Cucurbita pepo*. They also lack the wider and more distinct margin present in *C. pepo* seeds and thus are most likely seeds of the wild gourd, which is common throughout New Mexico. Other uncharred non-cultural seeds included weedy annuals like purslane and goosefoot, the nightshade family, mustard, sunflower, and dropseed grass. The presence of rodent feces, insects, and seeds imbedded in feces indicates that a great deal of post-abandonment biological activity took place at the site and that most of the samples reflect this activity.

An uncharred grape seed fragment was identified in the sample from the southwest quadrant of the house foundation (FS 347), representing the only possible evidence of cultigens at the site. Grapes could have grown on the property; the owners maintained an orchard and the neighbors to the southwest had one as well. There is no mention of a grape arbor on the property, but the recovery of the seed fragment suggests that one existed.

Two pieces of conifer wood that compare favorably to ponderosa pine were identified in the FS 347 sample. Uncharred unknown conifer wood was also identified in the sample. Conifer wood, especially ponderosa, must have been imported to the site but could easily have been obtained due to the railroad-based lumbering in the adjacent Sacramento Mountains. The conifer wood could be the remains of the wood floor, window frames, or other structural elements of the house. Four fragments of charred unknown conifer wood were also recovered in the sample examined from Feature 17.

property and conifer wood could represent material imported into the site for construction purposes.

SUMMARY

The analysis of three samples from LA 66922 indicates a large amount of post-occupational rodent activity and disturbance. Uncharred seeds were abundant and included 18 taxa. Fragments of conifer and ponderosa pine-like wood charcoal and a grape seed fragment represent the only remains possibly related to the occupation of the house. A grape arbor could have been part of the orchard maintained by the owners of the

Prehistoric Artifacts

FLAKED STONE ANALYSIS

BY DAWN M. GREENWALD

Five flaked stone artifacts were recovered from Site LA 66922: two cores and three pieces of debitage. All of the artifacts were cherts.

The debitage consisted of a single piece of angular debris, a lateral flake fragment, and a whole flake. The angular debris and whole flake were dark gray cherts, the former measuring a maximum of 2 cm long and the latter measuring between 3 and 4 cm long. The whole flake was a distally expanding tertiary flake with multiple platform scars. The flake fragment was tan chert and was less than 2 cm long.

Both cores were small, complete specimens with multiple, unpatterned platforms. One of the cores was a gray heat-treated chert core that weighed 30.7 g and had no cortical surface remaining. The second core was a dark gray chert core weighing 13.5 g, with cortex on roughly one-third of its surface.

All of the flaked stone was found in subsurface contexts (Table 7.1). Both cores were recovered from Level 2 proveniences.

ANALYSIS OF PREHISTORIC CERAMICS

BY THOMAS M. MORALES

Five of the sherds recovered at LA 66922 are prehistoric and are classified as St. Johns Black-on-red, a White Mountain Redware. The sherds, none of which are conjoinable, are from a single bowl. All are characterized by medium- to coarse-grained temper and a paste with a dark gray core. This dark core is indicative of incomplete oxidation during the firing process. Sherd thickness ranges from 4 to 5.5 mm. Interior and exterior surfaces are slipped and polished, and slip color is 5YR 5/6 yellowish red on the Munsell Soil Color Chart. Both surfaces exhibit a slight crazing but are lustrous. Two of the bowl body sherds are decorated with a black mineral paint that is composed primarily of iron. One of the sherds has a solid design element and the other an oblique hatched element. The designs on St. Johns Black-on-red vessels are reported to be similar to those of Tularosa Black-on-white (Hays-Gilpin and van Hartesveldt 1998:168). No white matte painted designs, characteristic of St. Johns Polychrome, were visible on the exterior surfaces. St. Johns Black-on-red has been traditionally dated to between A.D. 1150 and 1300 (Carlson, 1970; Hays-Gilpin and Hartesveldt 1998:168).

Table 7.1. Flaked Stone Artifacts by Provenience.

Artifact Type	Bag No.	Horizontal Provenience	Vertical Provenience
Flake Fragment	16	N354.53, E497.25, Unit 2	Level 1
Core	17	N354.53, E497.25, Unit 2	Level 2
Core	48	N342.39, E483.15, Unit 6	Level 2
Angular Debris	143	Feature 5, Unit 8	Level 14
Whole Flake	255	Feature 5, Trench 5	Stratum 6

Section 12 Ownership and Owners

LA 66922 is a large site in Section 12 of Township 16 South, Range 9 East. The site extends into all four quarter sections of the section. Historic and archival research on Section 12 included review of Bureau of Land Management land patent records; United States Archives land patent records; Census records for Otero County, New Mexico; Otero County court records for deed transactions; and Alamogordo cemetery records. Patent records for Section 12 indicate only four patentees, each patenting a quarter section of 160 acres. The following discussion present facts about the ownership and owners for each of those quarter sections.

JAMES C. DUNN - SOUTHEAST QUARTER

<i>Year</i>	<i>Event</i>		
1847	(December) Born in Gloucester, Massachusetts, white male, both parents from Ireland (from census)(other information indicates birth in 1845), reared as a fisherman.	1865	served on the <i>Arkansas</i> and <i>North Carolina</i> .
1862	Joined Union Army (12th Massachusetts Light Battery). Transferred to U.S. Navy and served in the West Gulf blockading squadron under Admiral Farragut.	(August 15)	Discharged from U.S. Navy.
1863	(January 13) Mustered into U.S. Navy in Boston, Massachusetts as a landsman for one year. Served on the U.S. Steamer <i>Chocura</i> as well as on the <i>Ohio</i> , <i>Pensacola</i> , <i>Antona</i> , and <i>Augusta Dinsmore</i> .	(Year approximate?)	Entered U.S. Merchant Marine service.
1864	(May 31) Reenlisted as a landsman for one year on the U.S. Steamer <i>Chocura</i> ; also	1874	Married Emily M. [maiden name unknown], who was born in 1856 in Massachusetts; white female, both parents from New Hampshire.
		1882	(Year approximate?) Left U.S. Merchant Marine service.
		1882	Pioneer resident of Long Beach, California; engaged in fruit farming, milling, and contracting.
		1900	Left Long Beach; moved to Alamogordo
		1900	(March 26) Submitted application No. 3264 to homestead the southeast quarter of Section 12.
		1900	(April) Settled on his homestead and built a house.
		1900	Listed on U.S. Census, Precinct 1 (Alamogordo), Otero County, New Mexico as a self-employed farmer who owned his farm free and clear. He could read, write and understand English. Emily was still listed as his wife. They had no children.
		1900	Began farming and orchard business in Alamogordo. Utilized the Campbell system of dry farming for the production

Data Recovery Excavation of LA 66922 at Alamogordo, Otero County, New Mexico

of fruit. Raised 5 acres of fruits (grapes, pears, peaches, plums, prunes, and apricots) and 25 acres of corn, oats, and barley.

The property is now owned by James A. Keller, excluding the portion within the NMSHTD right-of-way for the Alamogordo Relief Route.

1902 Won prize for premium corn at the Territorial fair.

WILLIAM C. AND LILLIAN S. RICKETTS - NORTHEAST QUARTER

1903 (October 1) Patented the southeast quarter of Section 12. Homestead Proof testimonies indicate improvements of a dwelling house, outbuildings and/or barn, fences, and fruit and shade trees valued at \$500. Crops have been raised on 20 to 50 acres.

Date Event

Pre-1886 William Ricketts was born.

1869 Lillian S. Ricketts was born (before June of that year).

1904 Elected Otero County treasurer and collector (Republican) and served two terms of unknown length.

1900 Not listed in the U.S. Census for Precinct 1 (Alamogordo), Otero County, New Mexico.

1905 Raised rye that was 6 feet, 2 inches (1.88 m) high.

1907 (November 15) William Ricketts applied for a homestead in the northeast quarter of Section 12.

1905 Sold his land to Frank A. and Marian Dunn (unknown relationship) for \$1.00.

1907 (November) Ricketts began working on his property.

1907 Recognized as an exemplary member of the Masons.

1907 (December) Construction of two story, five room house and a barn, well, and cistern.

1908 Phone Number was 48-2.

1908 (January) William and Lillian Ricketts settled on the property.

1910 Listed on U.S. Census, Precinct 1 (Alamogordo), Otero County, New Mexico as self-employed general farmer who worked on his own farm (mortgaged) north of Alamogordo. He could read, write and understand English. Emily was still listed as his wife. They had no children.

1908 (April 1) The Ricketts moved into their new house.

1909 The testimony of homestead proof indicates 18 acres of crops grown in 1908 and that number growing for 1909, "extra good" two story adobe house "that can't be built for \$1000," 160 acres enclosed with a four-wire fence, a 150 foot deep well, a large big barn, a cistern, many cross fences for a garden and corral, and a 1 acre orchard, for a total value of \$2,800 to \$3,000 or more.

1914 (March 3) James Dunn died, survived only by his wife.

1920 No Dunn was listed in the U.S. Census for Precinct 1 (Alamogordo), Otero County, New Mexico.

1909 (April 4) William Ricketts died.

1909 (June) The Ricketts also had a furnished house in Alamogordo, which they rented out. They may have lived in this house before building the house in Section 12.

1910 (February 18) The patent for the northeast quarter of Section 12 was finalized.

1910 No Ricketts is listed in the U.S. Census for Precinct 1 (Alamogordo), Otero County, New Mexico (U.S. Census, Otero County, Precinct 1), Precinct 2 (La Luz), or Precinct 3 (Tularosa).

1913 (October 9) James H. Fibley and his wife Grace E. Fibley of Marshall County, Indiana sold the northeast quarter section of Section 12 to Edith Stockberger of Marshall County, Indiana for \$7,000 (Warranty Deed, Otero County, 10/9/1913). It is not known how or when James H. Fibley came into possession of the land.

1916 (January 29) Notice of auction of the northeast quarter section of Section 12, Edith and Clyde Stockberger defendants, for indebtedness (Chancery Deed, Otero County, 6/5/1916).

1916 (May 1) Auction of northeast quarter section of Section 12, at courthouse of Otero County in Alamogordo, to James H. Fibley for \$2,000 (Chancery Deed, Otero County, 6/5/1916).

1963 (November 29) A warranty deed was signed by Mary G. Fibley, Carol F. Riddle, and James E. Fibley of Marshall County, Indiana (possibly children of James and Grace Fibley), transferring the portion of the northeast quarter of Section 12 south of NM 82 and east of NM 54/US70 to W. J. Lenox of Maricopa County, Arizona.

The property is now owned by James A. Keller, excluding that portion within the NMSHTD right-of-way for the Alamogordo Relief Route.

JOHN C. MINNS - SOUTHWEST QUARTER

<i>Year</i>	<i>Event</i>
1882	(April 8) John Minns was born in Medina County, Ohio. He was a white male. The LDS (Mormon) Family History Records (IGI Call # 1985570) indicate that his parents were F. Russel Minns and Helen F. Brown from Harrisville, Medina County, Ohio.
1900	Not listed in the U.S. Census for Precinct 1 (Alamogordo), Otero County, New Mexico.
1905	(April) Built a house and established residence on the southwest quarter of Section 12.
1909	(August 27) Submitted homestead entry No. 03509 for southeast quarter of Section 11. The entry stated that he was acquainted with the land and that it had no mineral, salt, coal, or gravel deposits or timber resources and that no irrigation was possible.
1910	Listed in U.S. Census, Precinct 1 (Alamogordo), Otero County, as a single self-employed general farmer, north of Alamogordo. He owned eight (?) buildings, could read, write, and understand English, and had no children. The Census records also list one Orpha Minns (a sister?), a cook, residing with the Stalcup family on Vermont Ave in Alamogordo. Miss Minns was a single white female born in Ohio in 1877; both parents were from Ohio.

Data Recovery Excavation of LA 66922 at Alamogordo, Otero County, New Mexico

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|------|--|------|--|
| 1915 | (September 25) Minns submitted his application for the southeast quarter of Section 11. It states that he was acquainted with the land and that it had no mineral, salt, coal or gravel deposits or timber resources and that irrigation was not possible. It also stated that a 134 foot deep well was present in the southwest quarter of Section 12 and a 94 ½ foot deep well was present in the southeast quarter of Section 11 but neither was sufficient for irrigation. | | rabbit fence, a well, 70 acres cleared and grubbed, a flood water ditch half a mile long, 20 apricot trees, a corral, a windmill, and remains of house destroyed in the 1917 fire. The improvements were valued at \$500 to \$1,000. Witness Arthur A. McNatt (a rancher who lived on the same road) also mentioned shade trees, a second corral, and a small barn among Minns's Section 11 improvements, and a barn and corrals on the Section 12 property. McNatt stated that sometimes Minns worked off his land in order to earn enough to maintain that land as his home. |
| 1916 | Made proof on the southeast quarter of Section 11. | | |
| 1917 | (March 10) Homestead entry No. 012337 for the southwest quarter of Section 12. | 1921 | (July 14) J. C. Minns files a quitclaim deed to Orpha R. Minns, receiving \$1.00 for his interest in the southwest quarter of Section 2 (immediately northwest of Sect. 12). On the same day, J. C. Minns files a quitclaim deed to one Mamie Osmond, for part of the southeast quarter of Section 2 (Otero County <i>General Index to Deeds</i> Vol. 79, p.204). |
| 1917 | (May) The house on the southeast quarter of Section 11 was destroyed by fire. Minns moved across the street (south?) and continued to live there at least until June 3, 1921, as is stated in final proof. | | |
| 1919 | John Minns and Orpha Minns purchase a lot in Tularosa. | 1921 | (July 15) Minns filed an application for the reduction of the required area of cultivation. In the application he stated that the soil on the property was a red sandy and gravelly loam; that the property was generally level with some gravelly ridges; the property contained one arroyo and no timber; that the vegetation consisted of mesquite, greasewood, sagebrush, and salt grass, and that the elevation was about 4,400 feet. He also noted 25 acres cleared and grubbed, a well, a four-room frame and box house, 2 miles of three and four wire fence, a dirt tank about 110 feet across, and a windmill. The total value of the improvements was \$700 to \$1,000. (A witness, A. A. McNatt, also noted a barn and corrals on this piece of land.) Minns stated that he had about 60 acres in cultivation on the original homestead (the southeast quarter of Section 11) and during favorable seasons raised some crops but that it was generally |
| 1919 | (Year uncertain) John Minns and Orpha Minns purchased an interest in the Buckhorn group of placer mines (Claim Nos. 41-44, 49-83). | | |
| 1920 | Neither Minns is listed in the U.S. Census for Precinct 1 (Alamogordo), Otero County. | | |
| 1921 | (June 3) Minns submitted final proof for the southwest quarter of Section 12 (see next entry for claimed improvements). Minns still listed himself as single. He stated that he had only 30 acres in cultivation in 1917, and only 4 acres in 1918. Since then, he had only tended the few trees and had used the rest for grazing. He also listed his original homestead (southeast quarter of Section 11) improvements as 4 acres enclosed by | | |

too hot and dry to produce crops without irrigation. Since 1917 it had been too hot and dry to grow crops on the southwest quarter of Section 12, and useless to try. There was some forage in the form of native grasses and brush. The entire southeast quarter of Section 11 was fenced, with 4 acres in rabbit fence. Minns also had a well, 70 acres cleared and grubbed, a flood water ditch one-half mile long, 20 apricot trees, a corral, a windmill, and the remains of a house destroyed in 1917.

OSCAR W. CARROLL - NORTHWEST QUARTER

1922 (December 21) Patented the southwest quarter of Section 12. The patent proof indicates one to 20 head of cattle on the property most of the time. Other improvements included 25 acres cleared and grubbed, a well, a four-room frame and box house, 2 miles of three and four wire fence, a dirt tank about 110 feet across, and a windmill. Total value of the improvements was \$1,000. Grazing was accepted in lieu of cultivation, because of the difficulty in raising crops without irrigation.

Ca. 1920 In the early 1920s, Minns appears to have sold land to a female relative in Ohio, and to have acted on her behalf under a power of attorney.

1925 (November 13) J. C. Minns filed a quitclaim deed to Mamie Osmond for the southwest quarter of Section 12 (Book 79, Page 204). On the same day, Orpha Minns filed a quitclaim deed to Mamie Osmond, for the same property (Book 2, Page 277)

1940 Minns appears to have died before this year. He may be buried in the Alamogordo cemetery.

The property is now owned by James A. Keller, excluding the portion within the NMSHTD right-of-way for the Alamogordo Relief Route.

1877 Oscar Carroll, a male, was born in Maine.

1900 Carroll was not listed in the U.S. Census for Precinct 1 (Alamogordo), Otero County.

1908 (January 2) Carroll and his wife established residence in the northwest quarter of Section 12. Their house was built prior to this date.

1908 (September 16) Carroll and his wife made their homestead entry in Las Cruces.

1908 (October 1) The final proof of homestead entry noted that all 160 acres was suitable for cultivation. In the southeast quarter of the northwest quarter, the crops included 2 acres of beets and 13 acres of sorghum and vegetables. These fields yielded 12 tons of sorghum. All improvements were on the quarter-quarter section and included a 21 by 14 foot lumber house with two doors and four windows, an 18 by 16 foot barn, a 10 by 6 foot chicken house, two corrals of lumber and wire, (50 by 50 feet and 30 by 25 feet), 1 mile of three wire fence, 2 acres fenced with rabbit fence, and a cemented cistern with a capacity of 200 bbl. Total value of the improvements was \$500 to \$700. James C. Dunn was one of the witnesses to the proof of homesteading.

1910 (March 10) Carroll's patent was approved.

1910 Carroll was not listed in the U.S. Census for Precinct 1 (Alamogordo), Otero County.

1920 Carroll was not listed in the U.S. Census for Precinct 1 (Alamogordo), Otero County.

Cartographic Research

As part of the data recovery project, historic and recent maps as well as aerial photographs were examined to provide clues to land use and the appearance and disappearance of various features at LA 66922. For this study, six dated maps (1908, 1938, 1950, 1952, 1959, and 1981) were used, along with aerial photographs from 1962 and 1976. The maps vary in detail but each provides important information regarding the study area.

The 1908 *Progressive Military Map of the United States, Sheet 321N - Sacramento Mountains, New Mexico* includes the study area (Figure 9.1). Only a poor copy of the original map was available, obscuring some of the detail. Nevertheless, the only cultural feature shown within the study area is the railroad. The patent records indicate that by this year the Dunn homestead was a fully functioning farm, complete with house outbuildings, orchard and fields. Considering that ranches are depicted as dots on the map, the Dunn homestead should have been similarly depicted.

The small scale of the 1938 *General Highway Map, Otero County, New Mexico* limits its usefulness but does provide important information. The map shows three dots at LA 66922 (Figure 9.2); the legend defines those dots as farm units. The map shows one dot on the east side of the railroad tracks and two dots on the west side of the tracks; the east side dot must be the Ricketts homestead. The two dots on the west side of the tracks are shown one above the other, which is confusing, as this is the location of the Dunn homestead. However, the third dot may represent the Minns homestead immediately to the west². The map also depicts a road paralleling the railroad on the west side.

According to the 1950 USGS *Alamogordo, New Mexico* 15 minute topographic quadrangle, no structures are present at LA 66922 (Figure 9.3). The only cultural features within the study area are the railroad, the adjacent maintenance road, and a power line that passes by the east edge of the site. The lack of structures suggests that by 1950 the structures had collapsed or had been demolished.

The 1952 *General Highway Map, Otero County, New Mexico* (updated 1959) shows no structures at LA 66922 (Figure 9.4). The railroad, the maintenance road, and the power line are still shown. In the vicinity of the former Ricketts homestead. East of the railroad tracks, is a symbol denoting an aerial beacon, most likely for the small airport southeast of the site. The airport and the beacon no longer exist. A small earthen berm noted east of the Ricketts homestead during the project may be the location of the beacon.

The *Lincoln National Forest, New Mexico, Aerial Planimetric Quadrangle* (1959) is similar to (and probably based on) the 1950 USGS map, but without topographic information (Figure 9.5). As on the 1950 map, only the railroad, its maintenance road, and the power line are shown in the study area. Outside Forest Service lands, the cultural information on this map may not have been updated from the 1950 map.

A 1962 aerial photograph of Alamogordo has the most detail of any document used in this study, but unfortunately includes only the southern portion of LA 66922 (Figure 9.6). This aerial photo depicts a number of features, including Features 5-7, 28, 29 and 37. The irrigation ditch on the east side of the railroad tracks is also visible, and the photo clearly shows two

²The principal investigator has worked with the New Mexico historic highway quadrangles on past projects, and has noticed that the depiction of cultural features other than (and away from) roads can be approximate or out of date. New Mexico's highway engineers were trying to create maps of roads and other transportation features, not comprehensive maps like those of the U.S. Geological Survey.



agricultural fields southeast and south of Feature 7. These fields were not discernible from the ground and they were discovered only through this photograph. The fields were probably edged by fences, which may still be indicated by some of the post stumps recorded during data recovery.

Because the 1962 photograph is the earliest known cartographic evidence of agricultural fields at LA 66922, these may not be fields created by the original patentees. There is, however, no better explanation for their origin. A contemporary profile of James Dunn (Anderson 1907:828-829) noted his skills at dry farming. The regrowth of brush on the fields suggests that as of 1962, the fields were already several decades old.

The same photograph depicts four earthen tanks and other cultural features in the southwest quarter of Section 12. These may represent some of the improvements made by John Minns in that quarter section.

The 1976 USGS *Alamogordo, New Mexico* 7.5 minute orthophoto quadrangle is not detailed enough to show most of the individual features at LA 66922, but Feature 4 (a stock tank) can be seen and the locations of Features 2 and 7 are indicated by changes in vegetation (Figure 9.7). The agricultural fields seen in the 1962 aerial photograph are not apparent in the 1976 orthophoto quadrangle, probably because of the smaller scale of the latter. The earthen stock tanks in the southwest quarter of Section 12 are visible on the 1976 map, as is the railroad maintenance road.

The 1981 USGS *Alamogordo, New Mexico* 7.5 minute topographic quadrangle (based on 1972 aerial photographs; field checked in 1975) is the most recent map examined (see Figure 1.2). The map shows no structures at LA 66922. Feature 4 is the only cultural manifestation identified on the 1981 map. The four earthen stock tanks in the southwestern quarter of Section 12 are depicted, however. The railroad maintenance road is not depicted, even though it was shown on earlier maps and photographs and continues in use.

Conclusions

Chapter 2 introduces a number of research issues and questions that will be addressed in this chapter. Five basic objectives were identified: obtaining information about features, defining natural and cultural deposits within the site, defining intra-site relationships between features, identifying the occupants of the site, and considering the portion of the site outside the right-of-way.

The first objective is addressed in Chapter 3, particularly in the second half of the chapter, where the 39 identified features are described. The site map and insets (Figures 3.1-3.6) show the locations of the features, indicating their spatial relationships. The three domestic structures (Features 2, 7, and 11), coupled with historic research, indicate that three different homesteads were included within the site. Patent records at the United States National Archives show that James C. and Emily M. Dunn homesteaded the southeast quarter of Section 12, that William C. and Lillian Ricketts homesteaded the northeast quarter, and that John C. Minns homesteaded the southwest quarter. (A fourth homestead, patented by Oscar W. Carroll, was in the northwest quarter of Section 12 but falls outside LA 66922 as originally defined and is considered only briefly.) Other roughly contemporaneous features at the site are related to irrigation, refuse disposal, transportation and communication, and the operation of the railroad.

Excavation revealed that, with few exceptions, most of the features at the site are quite shallow. The exceptions include deep subsurface structures and cisterns, irrigation features, fence posts, and house foundations.

As was noted above, the remains at the site derive from three different occupations and various other activities. Adams (1990) discusses the need to consider the entire landscape in which a rural occupation occurs (and in

particular, the entire landscape in which a farmstead occurs). He makes the distinction between the affected and the unaffected environment (as he points out, other scholars describe these as the built environment versus the natural environment). A built environment includes obvious manifestations such as buildings, fences, and ditches, but according to Adams the affected environment also takes into account how the natural environment has been altered by human activity. For example, creating an agricultural field or orchard also attracts a different suite of animal and plant species to an area than would be there before human intervention. Similarly, a fence line causes animal and plant species to congregate along that boundary. Using Adams's view of the landscape, it is necessary to view LA 66922 as more than features and scatters of artifacts. Instead, the issues and questions posed in Chapter 2 will be addressed by examining the constituent parts of the site separately, i.e., we will consider how each homestead and each non-homestead feature affected the landscape. By this method related features can be addressed as a group (and, where applicable, compared with other elements of the site). The homesteads are considered in the order in which they were patented.

DUNN HOMESTEAD

The Dunn homestead is the earliest homestead within Section 12. James Dunn and his wife Emily settled here in 1900, only two years after the town of Alamogordo was founded. At this point James was 53 years old and had served in the U.S. Navy during the Civil War, had worked for 17 years as a merchant sailor, and in 1882 had become a pioneer settler in Long Beach, California. In 1874, midway through his merchant marine service, he married Emily, seven years his junior and also from New England. Once in Alamogordo he applied for a homestead patent for 160 acres comprising the southeast quarter of Section 12. He wasted no time in improving the property. He built

a house, barn, outbuildings, and fences, and began establishing orchards and planting various grain crops. His farming experience in Long Beach served him well, and was enhanced by his use of a specialized dry farming technique. Features within the site indicate, however, that Dunn did not put all his trust in dry farming, which in the Alamogordo area was just as well. By the time the land patent was approved in 1903 his farming operation was a success; the year before he had won a prize at the territorial fair for his corn. In 1904 he was elected county treasurer and served two terms.

In 1905 Dunn sold his farm for \$1.00 to a presumed relative, though he continued to live on the land. He was apparently well off enough to have a telephone (1908) and was considered an exemplary member of the local Masons' lodge. A photograph of him at this time appears to show a healthy man of means. In 1914 James Dunn died, survived only by his wife. They never had children. His widow Emily is not listed as a resident of Alamogordo in the 1920 census. Searches of deed records did not reveal the chain of ownership beyond the Dunns.

The Dunn homestead was manifested by a numerous features and an extensive artifact scatter. The Dunn home was represented by Feature 7, a stone foundation, with an adjacent cistern (Feature 9) and a gravel walkway (Feature 39). Gravel roadways, fence lines, and mesquite hedgerows were present around the house. Most of the Dunn homestead features were outside the right-of-way, with the exception of Feature 5, a small, deep depression located on the centerline of the proposed Alamogordo Relief Route. The densest portion of the Dunn Homestead surface artifact scatter was also present within the right-of-way, mostly south of Feature 5 and identified as Locus 2. A second cluster of features north of the Dunn house may also be related to their occupation of the quarter section. This cluster included Features 3, 10, 14, and 27, a pump house complex. The features were related to irrigation and crop raising, but a lack of artifacts in that area made it difficult to say whether the features were contemporaneous with the occupation of the house.

The house foundation consisted of shaped limestone and measured 11.1 by 9.3 m (encompassing 103.3 sq

m). A 1905 map of the Sacramento Mountains depicts a stone quarry west of High Rolls; that quarry may have been the source of the foundation stone. An apparent porch area and walkway suggest that the entrance to the house was in its south elevation, fronting on a dirt or gravel driveway. The porch may have been 3 m wide and may have extended the full length of the south elevation of the house. Unfortunately, little else is known about the house. A cistern was built off the northwest corner of the house and a possible privy was built east of the house. There appears to have been an attempt to enclose and landscape the yard area around the house. On either side of the south end of the front walkway were alignments of rounded cobbles (Feature 38). A tree stump near the northwest corner of the house may have been a fruit tree, providing flowers in the spring and a source of fresh fruit and shade during the hot summer months. These landscaping "touches" are consistent with a female occupant in the house.

The Dunn residence showed no evidence for an adobe or masonry superstructure, suggesting that the house was of frame construction. The house site was remarkably clean of architectural debris, implying that the house was removed from the site. House moving was not uncommon in the 1800s and 1900s, as Adams points out (1990:98-100). Hawthorne (1994) and Hawthorne-Tagg's (1997) studies of Holloman Air Force Base lands identify numerous examples of houses that had been moved.

The most enigmatic feature at the Dunn homestead is Feature 5, identified during the survey as a dugout. "Dugout" is an ambiguous term that only hints at a function. In many traditional scenarios, homesteaders began by creating a dugout as an expedient dwelling. Once the dugout was built, they turned to immediate needs such as establishing their farm. Once the farm was firmly established, the homesteaders built a permanent above-ground home (often turning the dugout into a storage cellar and/or tornado cellar). However, the patent records indicate that Dunn began construction of his house immediately and thus had no need for a dugout dwelling.

At first, we believed that Feature 5 might instead be a root cellar, but several lines of evidence argue against

that interpretation. First; the distance from Feature 5 to the house is over 65 m (213 ft), possibly with two fence lines between them. This seems rather inconvenient. Second, no convincing evidence of structural elements was noted in the fill. Elements of what may have been a roof (corrugated tin resting on a 2 inch iron pipe) were noted, but most of the artifacts recovered from the feature came from above those elements. No support members or walls (such as heavy timbers or wood planking) were observed in the fill, despite the excellent preservation of organic materials. Third, although the artifact assemblage contained some canning jars and other food storage related items, the overall assemblage of artifacts from the feature included a wide variety of items mostly unrelated to food storage. What, then, is Feature 5? Perhaps just a refuse dump. A hole was excavated to receive garbage from the homestead, or even to receive discarded items when the house was removed from the site. The diverse artifact assemblage, the lack of clear structural elements, and the distance between the house and Feature 5 all hint at this function. Locus 2, the artifact scatter south of the feature, may represent an extension of the Feature 5 trash deposit.

The pump house complex was 135 m north-northeast of the house. The complex included a pump house (Feature 10), the footers for a water tower (Feature 3), a probable water drip line from the elevated water tank (Feature 14), and a small trough (Feature 27). At least one fence line (Feature 29) ended at the water tower. The pump house consisted of a concrete building that measured 9.2 by 3.1 m and contained an 8 inch iron pipe wellhead, with mounts for a pump and motor. The building was open to the north and probably had at least one window. The small trough was most likely associated with the pump and water tower, however its exact relationship and function could not be determined and it may have been moved. The complex supplied water for various crops on the homestead. Soil profiles and current vegetation patterns suggest that an orchard or garden (or both) were located southwest of the well complex, just north of the house. Direct evidence for the orchard, such as trees or stumps, was not seen but the vegetation included types that rely on more water than would be encouraged to take hold rainfall alone (for example, cocklebur and alkali sacaton). Numerous apricot pits and cocklebur seed pods were noted in this area and in Feature 5. South

and southeast of the pump house complex was an area bounded on the west and east by fence lines, suggesting a pasture, possibly for horses, milk cows, or oxen.

The patent records for the Dunn homestead indicate a barn and outbuildings. No direct evidence was seen of such buildings, other than the pump house. Locus 2 and Feature 5 contained a variety of architectural materials in sufficient quantities to suggest the location of one or more buildings. There is other evidence supporting Locus 2 as the location of the barn or other farm buildings. This area seems to be the focal point of a number of fence lines. A number of isolated fence posts are present in this area but no particular alignments could be determined. Typically the barn is the focal point of farm activity, consequently the surrounding area would have various fenced enclosures and with other fence lines emanating from it. What appears to be a number of isolated fence posts with no distinguishable patterns or alignments may be the result of numerous fence lines and enclosures converging at the barn. This location is convenient to the house and is at the southern terminus of the gravel road from the pump house complex. Adams (1990:94) cites central place theory and its applicability to a farmstead's layout. He further notes, "The higher human energy expenditures are located closest to the house whenever possible, while the less intensive activities occur farther away. Thus on the most efficient farms, the large pastures would be located furthest from the house, because little energy is invested in it on a daily basis." Adams uses Waugh's (1914) depiction of an idealized progressive farmstead as centered around a quadrangle with the house facing a road on one side and the barn on the other and the sides filled in with smaller utility buildings and an orchard beyond that. The house garden lays adjacent to the house. It would not be hard to envision a similar layout at the Dunn farmstead.

As was noted above, no direct evidence of a barn was seen at this site, even though one would expect remains from a building as substantial as a barn. This leads us to speculate that the barn, like the house, was removed from the site. Any smaller structures may not have been worth the effort to move. Indeed, a number of burned or melted artifacts were seen in Locus 2, suggesting that smaller buildings were burned down. Ironically,

no obvious deposits of ash or charcoal were evident at this location.

The landscape around the house contains a variety of modifications. The house and pump house complexes form the most prominent extant features of the homestead. Although Dunn reportedly built a barn and outbuildings, their locations could not be identified. Less substantial features affecting the landscape are fence lines, hedges, roads, and crop fields. Some of these were identified and others were suggested. Various fence lines are discussed below. Hedgerow-like fence lines are very pronounced statements of maintaining a boundary. As Adams (1993:93) suggests, a fence might become "a new habitat for plants and animals as trees and shrubs grow from seeds left in bird droppings" and that the hedgerows observed at the Dunn homestead resulted from animal behavior. The hedgerows may instead represent mesquite trees deliberately left in place when the land was cleared. Three distinct mesquite hedgerow alignments were observed; two followed barbed wire fence lines but the third one did not. Two of the hedgerows parallel gravel roads.

Evidence for modern utilities (electricity, telephone, gas, water) at the Dunn homestead is scant. The evidence for electrical use consists of a few glass and porcelain electrical insulators, and in fact the Dunns may not have had electrical service. Although the Dunns had a telephone by 1908 (Josephine Anderson, 1999, personal communication), phones of that period had low power requirements. Indeed, the numerous 12 volt dry cell batteries recovered from the possible root cellar (Feature 5) were most likely used to power the Dunns's telephone. One of the batteries retained a partially readable label with the Western Electric brand and a 1910 patent date (Appendix A, Figure A.29). Before the American Telephone and Telegraph Co. was broken up, Western Electric was the brand name for AT&T equipment. Neal Roch, a volunteer at the Telephone Pioneer Museum of New Mexico in Albuquerque and retired telephone worker, has informed us that pairs of these batteries (see Appendix A, Figure A. 28, right) were used to power telephones of this period and that Western Electric brand batteries were used exclusively for telephones. The evidence for a lack of electrical service also includes the

fragments of kerosene lamps. An iron rod driven into the ground near the conjectured southeast corner of the porch suggests an electrical ground, but this may have been attached to a lightning rod on the roof of the house.

Fragments of a wood-burning cook stove attest to the method used to prepare meals and can produce. Alamogordo's climate is warm enough that an additional heat source may have been unnecessary, and no evidence of a separate heating stove was found. No evidence of any gas appliances was seen at the homestead.

The cistern next to the house provided water. If this cistern is similar those at the Ricketts and Carroll homesteads, the Dunns could have stored up to 6,000 gallons of water. A gutter on the edge of a pitched roof would be the most efficient method of collection. It could not be determined whether the Dunns used a bucket or hand pump to retrieve the water.

The depression east of the house suggests the location of a privy. No evidence of sanitary plumbing was seen.

The artifacts recovered from the Dunn homestead represent only a small portion of the artifacts observed on the surface of the homestead. The sample is, however, quite revealing about the status and behavior of the Dunns. The tablewares include imported and domestic porcelains and other fine china. A large diversity of patterns and styles attests to an accumulated collection of ceramic tablewares suggestive of a fairly well-to-do lifestyle. There are few fine glasswares but this may be due to an avoidance of alcohol by the Dunn household. Virtually no alcohol containers (bottles, decanters, etc.) were noted in the assemblage. That is not to say that glass artifacts were not represented in the assemblage. Indeed, the large quantity of glass canning jar fragments indicates an inclination for preserving foods. Further evidence of food preservation and production includes a pickling crock, other storage crockery, and a butter churn.

The Dunn's reliance on commercial foodstuffs appears to have been limited. The large quantity of canning jars contrasts with a low incidence of cans. Clearly,

the Dunns had the means to produce, preserve, and consume their own food.

Despite the assessment that James Dunn looked healthy and fit in his photograph, he and his wife must have suffered some health ailments. A considerable quantity of graduated liquid (patent?) medicine bottles and fragments were recovered from the homestead. Other identifiable health products bottles include Horse Shoe Bitters; Cardui, The Woman's Tonic for menstrual pain; Nyal's Compound Larkspur Lotion for hair parasites; Glyco-thymoline (used as a mouthwash and gargle but also for flu and colds), and Hinds Honey and Almond Cream. James Dunn's need to show a level respectability is shown by two different polish products found at the homestead: Barton's DyanShine, and Noble's Standard Polish.

Evidence of horses or other draft animals is scarce, which seems surprising for this period. The patent records indicate a barn on the Dunn homestead, suggesting the presence of livestock. Virtually no shoes for horses, mules or oxen were seen, however, and the few buckles and leather scraps could only tentatively be identified as coming from animal harnesses. Artifacts derived from wagons or other animal powered machinery are lacking. Scraps of wire are ubiquitous, however, and may possibly represent baling wire from fodder. The use of barbed wire for the fences also provides good evidence for livestock, particularly cattle. The butter churn indicates the presence of at least a one milk cow.

No evidence of an automobile was seen at the homestead. Several pieces of a sprocket-driven bicycle (possibly with hard rubber tires) indicate an interesting alternative mode of transportation at the homestead. Bicycles were expensive but so was maintaining a horse; at the end of the 1800s, before automobiles took hold, many individuals viewed bicycles as the logical replacement for horses. Downtown Alamogordo is just over 3 km (2 miles) away across level ground and would have been an easy trip by bicycle.

A few large machinery parts were noted but could not be identified and do not appear to be from farm machinery of the period. These include a 50 cm diameter gear and a heavy duty cable locking device.

Other items to maintain the farmstead include various tools including a shovel, pliers, and an unusual, highly expedient stone and barbed wire hammer (Appendix A, Fig. A.45).

Cabak et al. (1999) use modernization theory to examine the shift from traditional pre-industrial subsistence farmsteads to scientifically based, machine-powered modern farmsteads at the end of the 1800s and in the early 1900s. One characteristic of the latter part of the transition is the presence of manufactured goods. The young town of Alamogordo was considered a frontier area, but thanks to railroads the residents of Alamogordo had access to goods from across the country and beyond. An examination of the artifacts at the Dunn homestead shows that during the 14 years or more that the Dunns lived there, they accumulated a considerable number of household and other goods appropriate to a middle-class lifestyle.

RICKETTS HOMESTEAD

The Ricketts homestead was the second homestead patented in Section 12. William and Lillian Ricketts applied for a patent of the northeast quarter of Section 12 in November of 1907. They immediately started improving the property by building a two story, five room adobe house, an adjacent cistern, a 150 foot deep well, and a large barn. They moved into their house by April 1908. At the time Lillian was 39 years old and William was of an unknown but similar age. They owned another house in Alamogordo and probably lived there before moving out to this property.

By 1909, the Ricketts had developed a 1 acre orchard, 16 acres of crops, a garden, and a corral. In April of that year, William Ricketts died, survived only by his wife. Lillian Ricketts succeeded in perfecting the homestead claim in February 1910. Curiously, Lillian Ricketts is not listed in the 1910 U.S. Census in Alamogordo, La Luz, or Tularosa, despite the statement in the proof of patent that she had lived on the land continuously since application. Although it could not be determined what happened to Lillian Ricketts or the property after her husband's death, deed records indicate that in October 1913 James and Grace Fribley of Marshall County, Indiana, sold the property to Edith and Clyde Stockberger. In May 1916, the Fribleys

bought back the property at county auction in a foreclosure proceeding. The documents suggest that the Fribleys did not live on the property, but that the Stockbergers may have. If so, the Stockbergers were unable to "make a go" of the homestead.

The Ricketts home is manifested by house foundation covered by a mound of melted adobe (Feature 2), an adjacent cistern (Feature 8), a large depression (Feature 1), a privy (Feature 15), an ash stain (Feature 16), a possible gravel road (Feature 23) and the artifact scatter identified as Locus 1. The homestead is physically separated from the other homesteads in Section 12 by the former El Paso and Northeastern Railway, now the Union Pacific Railroad. The Ricketts homestead was the most thoroughly investigated at LA 66922, as it was fairly compact and located directly in the path of the Alamogordo Relief Route.

The main house foundation consisted of shaped limestone and measured 10.0 by 5.4 m, encompassing 54 sq. m (581.3 square feet). A one-room addition (2.8 by 2.15 m) added 6.0 sq. m (64.8 square feet) to the footprint. The construction sequence for the main portion of the house included a poured concrete footer, the limestone foundation, and walls of adobe brick, one and one-half bricks thick. The limestone and the stonework were virtually identical to that in Feature 7, so we surmise that the stone came from the same quarry and that the same person built both foundations. The added room did not have a concrete footer, used smaller and less well-shaped stone for the foundation, and had walls that were only one adobe brick wide. The patent records indicate that the house had two stories and five rooms. The main part of the house must have had two rooms on each floor, with the addition as the fifth room. Because it is mentioned in the patent records, the fifth room must have been added within three years of construction of the main portion of the house.

The exact placement of windows and doors could not be determined; the orientation of the house suggests a door in the east and west elevations. The east door would have provided access to the cistern and farm structures next to the house; a porch probably spanned the east elevation of the house and covered or bounded the cistern. The west door would have faced the

railroad tracks. The house had wood floors. Brick fragments suggest a chimney in the north part of the house and the probable location of the kitchen on the ground floor. The interior walls were stuccoed and plastered and the exterior walls were probably stuccoed. A gravel road along the east and north sides of the house may have extended westward across the railroad tracks, thus connecting the house to the road along the tracks (and also with Feature 25, a second gravel road).

Based on the patent records, the Ricketts house was a nice one. Until the house was finished, the Ricketts probably lived in another house that they owned in Alamogordo. They later rented the Alamogordo house as a furnished rental.

A probable privy was located 11 m south of the house. At the end of their use cycles, privies often become trash receptacles and this one was no different. The privy contained a wealth of artifacts and provided important information about the Ricketts household. As at the Dunn household, there was almost no evidence of alcohol. A number of types of ammunition suggest a variety of guns at the house. The many .22 caliber shells may represent both rifle and pistol rounds. Others ammunition types include .32 and .44 pistol and 12 gauge shotgun. Shotguns and small caliber weapons were and are common on farms and ranches for "varmint" control. Larger calibers are less often used for this purpose, as the cartridges and shells cost more. Canning jar fragments were recovered from the privy but not in the frequency seen at the Dunn homestead (which may indicate higher reliance on commercially preserved foods). Bone from the privy shows a high percentage of typical food cuts. The species used include cow, turkey, probable chicken, and unidentified large mammal (probably cow). These may be animals raised on the homestead, especially the cow bones that represent a fetal or neonatal individual. A large number of peach pits were recovered, no doubt from the orchard as mentioned in the patent records. The Ricketts household probably canned the produce from the orchard. Various clothing fasteners were noted in the privy including a dainty cloisonne button. Several pieces of coal were recovered; this may have served as fuel for a cookstove, a heating stove, or for a small forge for work such as

horse shoeing. (The coal may also simply be scavenged pieces that had fallen off passing locomotives). Small quantities of brick, mortar, and plaster in the privy possibly suggest that the final filling occurred when the house was abandoned.

Although the patent records cite structures and other improvements to the homestead, little evidence for those improvements has survived. A barn was indicated in the records and may have been at Feature 1, where it would have been surrounded by a gravel road. As was postulated for the Dunn homestead, the barn may have been moved or dismantled, leaving little trace of its existence. The limited building debris in the artifact scatter at Locus 1 may suggest the location of other, smaller structures.

The datable artifacts from the Ricketts homestead are consistent with the occupation period indicated in historic documents (i.e., 1907 to 1910). If the Stockbergers did live on the homestead (between 1913 and 1916), the two occupations would not be distinguishable in the archaeological record. It seems likely that once the Stockbergers were evicted, the house was abandoned but stood until the adobe walls finally melted (the house is depicted on a 1938 map but not on a 1950 map). The rodent and cat burrows within the house support the argument that the house stood empty for some time.

CARROLL HOMESTEAD

The Carroll homestead is the third homestead patented in Section 12. This homestead is outside the site boundaries of LA 66922 and is separated from the others by Red Arroyo, but helps provide some context for the excavated homesteads. In January 1908, at the age of 31, Oscar Carroll (originally from Maine) and his wife (name unknown) established a residence in the northwest quarter of Section 12. The house was most likely built prior to their moving onto the property. Carroll and his wife applied for a patent for the northwest quarter of Section 12 in September 1908. Improvements listed in the proof of patent included a 21 by 14 foot frame house with two doors and four windows, an 18 by 16 foot barn, a 10 by 6 foot chicken house, two corrals, a 200 barrel capacity cemented cistern, and various fences. At the time, Carroll had

been cultivating beets, sorghum, and vegetables on the property. The patent was approved in March 1910. Curiously, the Carrolls are not listed on the 1910 Census or the 1920 Census. It is not clear how long the Carrolls lived on the property, or who owned it afterwards.

MINNS HOMESTEAD

The Minns homestead was the last homestead patented in Section 12. John Minns, originally from Medina County, Ohio, apparently moved to this area between 1900 and 1905. Minns's presumed older sister (by five years) Orpha also moved to Alamogordo before 1910, possibly at the same time as John. In the 1910 U.S. Census Minns is listed as a single self-employed general farmer. Orpha is listed as a single cook boarding in the Stalcup home in Alamogordo. (William Stalcup was a Justice of the Peace in Alamogordo; he and his wife Frances had a five year old daughter.). By April 1905, at the age of 23, John Minns had built a house in the southeast quarter of Section 11 (immediately west of Section 12) in order to establish residence on his homestead. He waited until August 1909 to submit an application for a patent. The patent was not approved until 1916, which is considerably longer than the usual three years. Improvements on that property included a house, a small barn, a well, two corrals, a windmill, an orchard containing at least 20 apricot trees, a half-mile long floodwater ditch, and land cleared and grubbed (i.e., the roots of the brush were also removed).

In March 1917, Minns submitted an application of patent for the southwest quarter of Section 12, which would double the size of his holdings in the area. In May 1917, Minns' house on Section 11 burned down and he moved into a house on the other side of the road (to the south?). He apparently lived in this house until at least June 1921, when he submitted the final proof to patent the southwest quarter of Section 12. Curiously, neither he nor Orpha are listed in the 1920 U.S. Census for Alamogordo, La Luz, or Tularosa. One of Minns's patent witnesses indicated that Minns sometimes worked off the property to support himself; possibly he was away when the census was conducted.

At the time the Section 12 patent was approved in December 1922, the listed improvements included a well, a four-room frame and box house, 2 miles of three and four wire fence, a dirt tank about 110 feet across, and a windmill. Minns applied for an exemption to the cultivation requirements, citing the difficulty of raising crops without irrigation. Instead, he usually grazed cattle on his land, running up to 20 head. It is not clear how long Minns owned the land, but he is known to have died before 1940. Minns was probably buried in Alamogordo (Josephine Anderson, 1999 personal communication).

The remains of John Minns's Section 12 house may be Feature 11. The house site is associated with four dense artifact clusters (Features 32 to 35) within a larger, low-density artifact scatter. Feature 6 is close to the house site but its age and function could not be determined. The cartographic research suggests that it is unrelated to Minns's occupation of the land. Although there is a considerable artifact scatter at and near Feature 11, there is little evidence of outbuildings.

The suggested site of Minns's house is represented only by a number of aligned boulders and a few other materials. In a survey report for Holloman Air Force Base, Hawthorne-Tagg (1997) notes instances of homesteads being moved from their original construction site. This may be what happened with John Minns's house.

In the research design for the project, Wessel (1996:12) wonders whether local homesteaders were merely land speculators. In the case of John Minns, this seems especially unlikely. The historical records indicate that Minns invested considerable effort in making his lands support him. The various ditches, stock tanks, structures, fencing, and other features built over a period of 16 years indicates that he was not trying to make a quick profit from land speculation. Furthermore, his decision to add to his land holdings after his first house burned down shows that he was committed to finding economic success on the land. This is not to say that John and Orpha had no interest in land deals. A number of transactions suggest that they at least dabbled in the real estate and other markets. In the first of these moves, John gained Orpha's power of attorney in 1917. In 1919, the two

bought a lot in Alamogordo and an interest in placer mines, possibly in the vicinity of Oro Grande. In 1921, they were involved in legal transactions for the southeast quarter of Section 2 (immediately north of Section 11). The transactions also included Mamie Osmond, of unknown relationship. In 1925, other transactions involved the same three people.

During the investigations of LA 66922, a brass artifact (possibly a watch part) was found with "J. C. Dunn" engraved on it. Why is the personal property James Dunn, a neighbor, present at the suspected location of John Minns's home? James Dunn was dead by the time Minns was applying for the patent to the southwest quarter section of Section 12 (though Minns had been on the Section 11 property since 1905). We do not know how long Emily Dunn stayed at the Dunn homestead after her husband's death, but she appears to have gone by 1920. As noted in the patent records, Minns lived in a house across the street from his burned house at least until June 1921. Does this one artifact suggest a close relationship between the Dunns household and Minns? In addition, artifacts from Features 32 to 35 (metal corset stays and a small gold-tone Christian cross) suggest the presence of at least one adult female. The quantity and variety of fine ceramics provide additional, albeit less compelling evidence that a female was present. John Minns identified himself as a single male in the 1910 U.S. Census, so what were these items doing on his property? Minns's sister may sometimes have stayed at the homestead, but we suspect instead that the material in Features 32 to 35 was refuse from the Dunn household. These items presumably were carried away from the house and dumped on what was then public land.

NON-HOMESTEAD FEATURES

Dumps

The isolated two trash dumps (Features 21 and 22) are contemporaneous and most likely date to the late 1920s. Although the dumps were found within the Ricketts homestead, they are physically separated from the Ricketts house site by the railroad tracks. As the Ricketts homestead was most likely abandoned by the mid-1910s, these dumps are unrelated to the occupation of that homestead (or, for that matter, to the occupation

of the other homesteads in Section 12). The dumps most likely represent single episodes of refuse dumping. In all likelihood, the person or persons responsible for the trash dumps drove along the railroad maintenance road, and a short distance off the road, in order to dump trash in an isolated area. Presumably that person was driving out from Alamogordo. This pattern has continued; unauthorized dumping is still a common practice in the area, especially around Feature 4 within the site, and in and along Red Arroyo beyond the site boundaries.

Railroad and Associated Features

The Union Pacific Railroad slashes through the northern portion of the site. Within the rail corridor are a number of other cultural manifestations, some of which were recorded as features during this investigation. These included the railroad itself, a railroad maintenance road, a second parallel road, at least three fence lines, at least two utility lines, and an irrigation ditch. The railroad line is actually the earliest historic feature at LA 66922. The line was built in 1898 by the El Paso and Northeastern Railway; the ballast on the railroad bed is primarily slag, mostly likely from smelters in El Paso. Analysis of historic maps indicates that the location of this portion of the line has not changed.

The 1938 general highway map for Otero County is the earliest known depiction of a road along the west side of the railroad tracks. It is not clear from the 1938 map or any subsequent map whether the 1938 road is today's railroad maintenance road or Feature 20, the abandoned road just to the west of the current one. In any case, it is likely that a motor road has paralleled the tracks for many years, ostensibly for railroad maintenance but also to provide access to local properties (an unauthorized function of the current maintenance road). If Feature 20 and a small bridge, Feature 24, are contemporaneous with the homesteads, they are not much altered since that time. Feature 20 extends between two fence lines, one of which (Feature 26) encloses a portion of the Dunn homestead.

Three fence lines were noted along the railroad tracks, one east of the tracks and two to the west. The fence east of the tracks is 30 m (100 ft) from the railroad

bed, while the two fences west of the tracks are 19 and 30 m (62 and 100 ft), respectively. A 1998 right-of-way map for the Alamogordo Relief Route indicates a 60 m (200 ft) right-of-way for the railroad. Based on that map, the two outermost fences mark the railroad right-of-way; one fence and both the roads just mentioned are within it. All of the fence lines are in poor condition, particularly the westernmost one (Feature 26). This fence includes occasional rough fence posts, with lengths of barbed wire lying on the ground along the line of posts. The other two fences are in marginally better condition, with milled square posts and with strands of barbed wire still attached to some of the posts. More of these posts are standing and all four strands of wire are still present, albeit often on ground at the base of the posts. Given the better condition of the fences east of the railroad tracks, they may be more recent than the fence west of the tracks.

A large irrigation ditch extends along the east edge of the railroad right-of-way. The ditch is about 8 m wide and at least 70 cm deep. As was noted in Chapter 3, the ditch probably originated from a diversion point on Red Arroyo. Through time, the bed of Red Arroyo may have become more incised, making it impossible to divert water into the ditch. If this occurred it would partly explain the abandonment of the Section 12 homesteads by the 1920s.

The remains of two utility lines extend along both sides of the railroad tracks, one on either side of the tracks. The line west of the tracks was just inside the fence line closer to the tracks. Very little remains of this utility line, except for an occasional low stump of a pole and an occasional glass insulator. (The one insulator recovered along this line did not provide a precise date.) The second line was between the railroad bed and the irrigation ditch to the east. This line is indicated by standing poles but the wires have been removed. As this line is more intact than the one west of the tracks, it may be a later utility line.

Survey Markers

A number of old survey points were noted while mapping the site. These survey points include iron rods, iron rebar, and a wood stake. The markers may define property corners or other legal points. A piece of rebar

was found 1.45 m west of the present brass monument for the center of Section 12. This rebar may have been a previous section center monument, reflecting a surveying error. A threaded iron rod with a bolt was found 22 m (72 ft) due east of the section monument. Its function is unknown. A piece of rebar was found 81 m (266 ft) east-northeast of the section monument, on a bearing of 75 degrees E/N. Its purpose is unknown but this bearing is nearly identical to the alignment of Feature 26. Another piece of rebar was found 164 m south of the section monument on an almost exact magnetic south bearing. Its purpose is unknown. In all likelihood, the use of iron rebar for survey monuments postdates the homestead occupations at LA 66922.

The wood stake was found on the berm next to the diversion dam on the irrigation ditch. The stake had a brass washer stamped with PT-C, possibly referring to Point C of some survey. Its location within the railroad right-of-way, along the irrigation ditch, suggests some relationship to either the railroad or the ditch; its placement on the berm indicates that it postdated the excavation of the ditch. The wood was very weathered, suggesting considerable age. The use of a brass identifying washer is uncommon in recent surveying.

Fence Lines

Numerous fence lines were identified at LA 66922. The more intact fences were recorded as features; they generally consisted of an alignment of fence post stumps with remnants of wire lying along the alignment. Some fence lines used only barbed wire, while others used both barbed wire and chicken wire. Fence lines strung with barbed wire were used to contain or exclude livestock while those with chicken wire either contained fowl, goats, or pigs or excluded rabbits, coyotes, or other rodents or predators. Furthermore, barbed wire is rarely used where horses would come into regular contact with it, as they have a tendency to injure themselves on barbed wire, while cattle have tougher hides. It was not clear whether the posts were juniper, mesquite, or some other wood. The few standing posts almost always consisted of railroad ties, undoubtedly because of the preservatives with which they were treated.

Features 26, 29, and 36 were the most apparent fence lines and were used to define the property boundaries of the Dunn homestead and also to subdivide the property. Feature 26 appears to define Dunn's northern boundary (from the section center eastward to the railroad) and the boundary along the west edge of the railroad right-of-way. As was noted in Chapter 3, the northern portion of the fence extends onto the Ricketts property. There may have been an informal boundary adjustment due to the irrigation ditch passing under the railroad tracks. Survey error could be another reason for the fence location, or it may reflect an encroachment onto the Ricketts homestead, possibly after that homestead was abandoned. The roles of Features 29 and 36 are much less ambiguous, as they flank the edges of gravel roads. Feature 29 is particularly well defined, following a gravel road and mesquite hedgerow. For Feature 36, there is a corresponding fence line on the opposite side of the road (Feature 38) defining the south edge of the Dunn yard.

The locations of isolated posts were mapped with a transit in an attempt to define other fence lines. Almost all of these fenceposts were in or near Locus 2. None of these fence posts had associated wire to suggest the orientation of the fence line. Unfortunately, the efforts to define additional fences did not pay off. Two pairs of fence posts were found in Locus 2, including one excavated in Unit 3. The fence post pairs represent bracing points typically located at corners or gates. The bracing posts indicated that two parallel east-west trending fences may have been present, but with no definable destination. The two fences were north of the Dunn house. A possible third fence line appeared to be oriented along the quarter section line separating the Dunn and Minns homesteads. As was noted, Locus 2 may have been a barnyard, in which case the posts would have defined a series of small pens rather than series of long fences.

Water Control Features

A number of features related to water control were identified at LA 66922. These include an irrigation ditch, a diversion dam (Feature 18), a culvert (Feature 19), bridges (Features 20 and 24), a well and pump house (Feature 10), pylons for a water tower (Feature

3), and a trough (Feature 27). The irrigation ditch and bridges were discussed in the railroad right-of-way section above. From Red Arroyo it is less than 150 m to the diversion dam. One irrigation issue is the right of access to water control features on another person's property. In the Southwest, on a de facto basis water rights often take precedence over property rights. It is surprising, however, to see a fence line encroaching on another person's property as part of that access, unless it was done with the consent of the property owner.

The age of the ditch, dam, culvert, and bridges remain unknown, but it is likely that they were in use during the occupation of the homesteads, before erosion in Red Arroyo lowered the bed of that stream. Possibly in response to the loss of stream water, or in order to supplement the existing water supply, or to ensure a consistent water supply, James Dunn drilled a well, with a concrete building over the 8 inch wellhead to shelter the water pump and its power source. The pylons show that Dunn built a water tower for storage and to create water pressure. The water from the tower was most likely used to water Dunn's orchard, garden, and other crops. Dunn may also have used the well to supply water to his house, although there was no evidence of water lines between the tower and the house. The pump and power supply were salvaged when the homestead was abandoned. It was not clear whether the pump house was demolished, if it collapsed through deterioration, or if vandals destroyed it.

No direct evidence of an irrigation system or well and pump was noted at the Ricketts homestead. The land patent records indicate the Ricketts had a 150 foot well. The well was not found, but the blades from a windmill turbine were seen 40 m northwest of the house. No evidence was found of the windmill tower itself. Without knowing the location of the well it is difficult to determine whether the well was used for irrigation or a domestic water supply (or both), or whether the windmill turbine blades came from this property.

Red Arroyo cuts across the northwest portion of the homestead and the Ricketts had direct access to irrigation water, either from the arroyo or the ditch that parallels the railroad. It can be assumed, however, that at the time Red Arroyo ran seasonally, as it does

today. The seasonal flow most likely encouraged the Ricketts to drill a well to provide a more consistent water supply for irrigation.

Minns built a variety of structures to control water in the southeast quarter of Section 11 and in the southwest quarter of Section 12. These were not for irrigation farming; in documents dating to 1909 and 1915, Minns advanced the claim that both the land and the wells were unsuited for cultivation. The records indicate that Minns drilled a 134 foot well in Section 12 and a 94.5 foot well in Section 11. Minns made other efforts to utilize what water was available, including a half-mile-long floodwater ditch and at least one dirt tank. (The ditch is visible on mid-1900s aerial photographs, along with at least four earthen tanks. Some of the tanks may postdate Minns's homestead.) A very small portion of the Minns homestead was examined during the current study, and none of the water control features was encountered.

PREHISTORIC OCCUPATION

At LA 6622, evidence for prehistoric activity included five pieces of flaked stone from Feature 5 and from Excavation Units 2 and 6 in Locus 2 (Appendix B). The flaked stone includes two cores, a whole flake, a partial flake, and angular debris. All were recovered from subsurface contexts, within 35 m of each other. The angular debris and the whole flakes from Feature 5 were found in contexts other than their likely original context, but the cores and flake fragment from Unit 6 were from the lowest level yielding artifacts, with no other artifacts being found in that level.

During fieldwork, an ashy, charcoal-flecked lens in Unit 2 was assumed to be a historical feature; although a fragment of glass was noted at the edge of the ash lens, the lens may have been from a prehistoric occupation. Unfortunately, the full extent of the ash lens was not documented, nor was a sample obtained from the lens for radiocarbon analysis.

Other possible prehistoric cultural manifestations are Features 12 and 13, two ash stains noted in Trench 1. The stains contained no artifacts but were found in the same general area as the flaked stone. These two stains are immediately outside the right-of-way and thus

remain available for any future examination of the possible prehistoric component at LA 66922.

In his survey report for the Alamogordo Relief Route, Wiseman (1988) notes that prehistoric remains were typically very low-density, to the point of being isolated occurrences rather than sites. Wiseman (1988:9) further notes the high incidence of cores along the route. Along the east edge of the Tularosa Valley, it is likely that flooding and alluviation by streams emerging from the Sacramento Mountains have reworked prehistoric archaeological deposits, including those found within LA 66922. In such an active environment, features would tend to disappear and concentrations of artifacts would be scattered, with lighter artifacts moving farther than heavier ones. Wiseman's high frequency of cores may be a sign of erosional sorting. The stains just discussed may be the remnants of a series of features once present on the site, or they could reflect natural displacement of archaeological deposits over short distances.

Five St. Johns Black-on-red bowl sherds were also recovered from LA 66922. The sherds were all recovered from Feature 22, a circa 1920s refuse deposit. The sherds are easily attributed to artifact collection by the person who created the dump.

SUMMARY

LA 66922 includes portions of three homesteads from the earliest days of the town of Alamogordo; a fourth homestead lay just outside the defined site. The homesteads reflected a rural, agricultural lifestyle (one deliberately fostered by the homestead laws) despite being at the edge of a railroad boom town. A degree of self-sufficiency was evident at the homesteads, in the sense that the residents labored to improve their lands and grew some of their food, but by the early 1900s subsistence farming was practiced in this country only by the poorest and most marginal farm families. Aside from attempts to "prove up" blocks of public land, the farming efforts at LA 66922 reflected a market economy that demanded cash crops and provided goods once produced within farming households. The town of Alamogordo was one source of demand for crops grown at LA 66922, and the railroad through the Tularosa Valley tied local farmers to other markets

across the country. The material culture found at LA 66922 shows that by the early 1900s, local homesteaders consumed goods that could be found in homes anywhere in the country.

Nonetheless, in the early 1900s Alamogordo was still part of a frontier, one of the last in the 48 contiguous states. For those enterprising enough to accept the risks, and hard-working enough to overcome the limitations of frontier life, opportunities were present that had faded away in most parts of the West. The homesteaders at LA 66922 responded in different ways to those opportunities, but all were part of an American middle class that was creating itself in new lands.

The timing of homesteading in Section 12 may be significant. In 1905, one of the props of the local economy was knocked away when the Southern Pacific Railroad bought the El Paso and Northeastern Railroad and moved the latter's facilities out of Alamogordo. Two years later, the closing of the Alamogordo Lumber Company dealt the town another blow. Civic leaders responded by trying to diversify the town's economic base, including by encouraging farming. Were any of the homesteads in Section 12 a response to this boosterism? Very possibly; the Minns homestead dates from 1905, the Ricketts homestead dates from 1907, and the Carrolls moved onto their land at the start of 1908. However, the Dunn homestead was founded in 1900. Thus, the timing of the four homesteads suggests that boosterism did lead to the creation of new farms, but we can also see that farms were present before the conscious promotions began.

Of the various research issues raised by Wessel, the most important one (in our opinion) is his critique of homesteading laws. According to Wessel (1996:12),

Border lands such as this would be subject to land speculation in the hopes that an ever-expanding community would increase land values along its periphery. This is evident for the patented parcels to the south of LA 66922, where the patentees are civic luminaries such as John A. Eddy and William A. Hawkins ... [who] were unlikely farmers and ranchers. It is most probable that they patented the land in a land-speculation exercise.

This reflects a common opinion that the homesteading process was widely abused. While manipulation of the process undoubtedly occurred, the current study reveals that homesteaders at the north edge of Alamogordo invested substantial amount of labor in their homesteads, that they built and maintained permanent homes, and that the homesteads were not merely for land speculation. In fact, the homesteads at LA 66922 reveal a typically American story: given an opportunity to improve their condition, several individuals did just that, carving a place for themselves in the country's growing middle class.



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Illustrations and Photographs of Artifacts Found at LA 66922



Figure A.1. Bag No. 125, Feature 5, Unit 9, Level 11; Hinds Honey and Almond Cream.

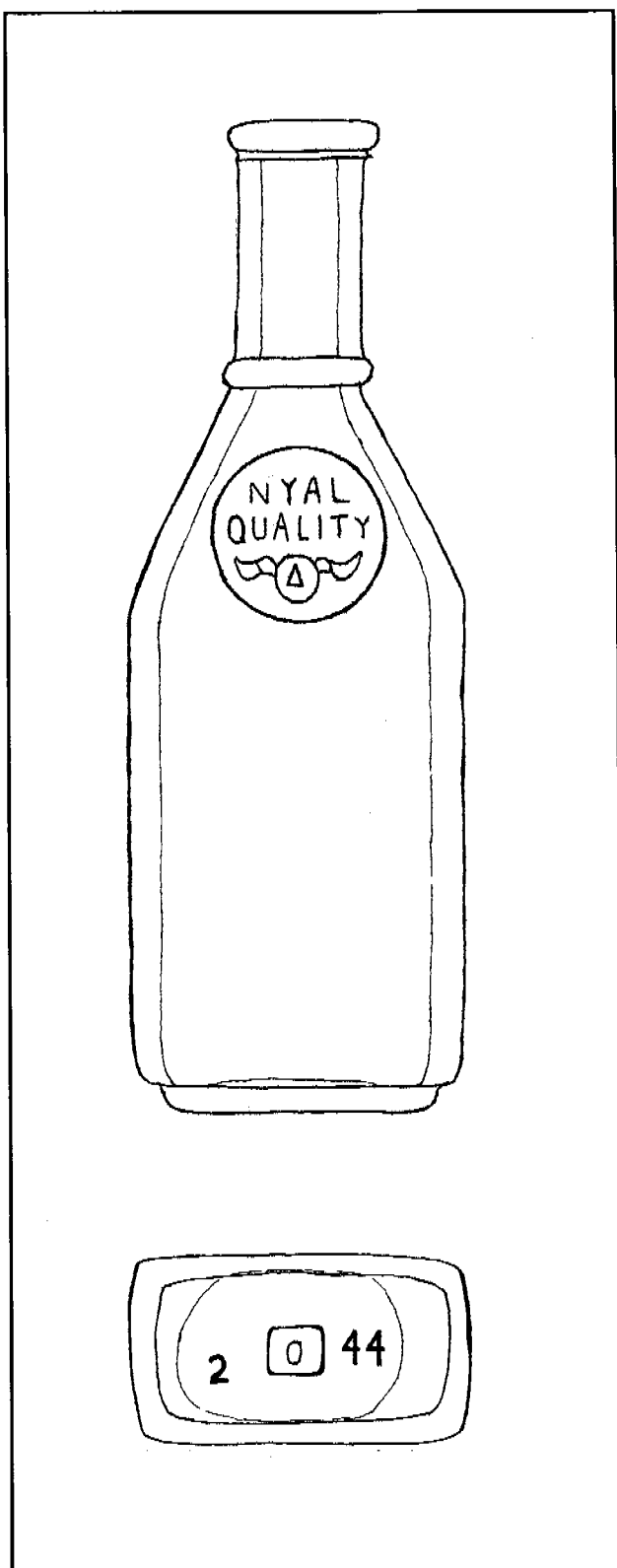


Figure A.2. Bag No. 125, Feature 5, Unit 9, Level 11; Nyal's Compound Larkspur Lotion.

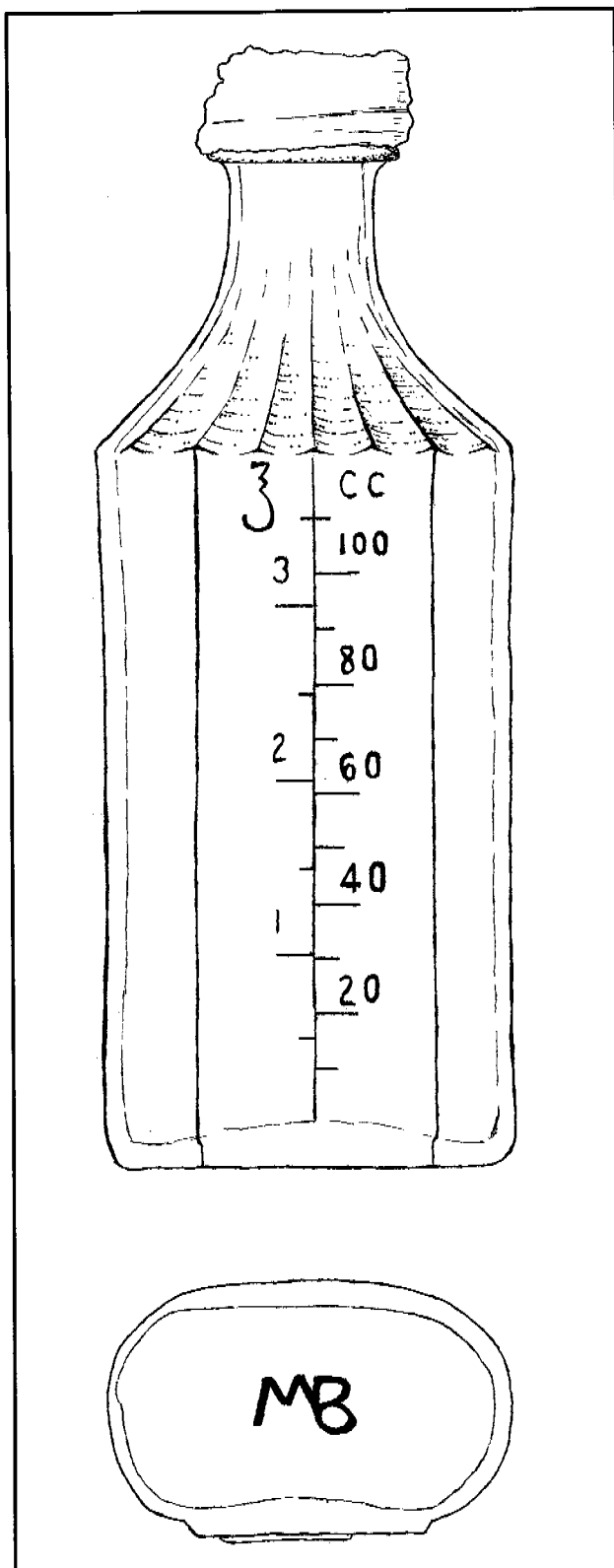


Figure A.3. Bag No. 239, Feature 5, Trench 5; unidentified liquid medicine bottle.



Figure A.4. Bag No. 15, Unit 2, Level 1; Clear Bottle; Bag No. 1134, Feature 5, Unit 9, Level 10; clear DYANSHINE bottle and brown extract bottle.

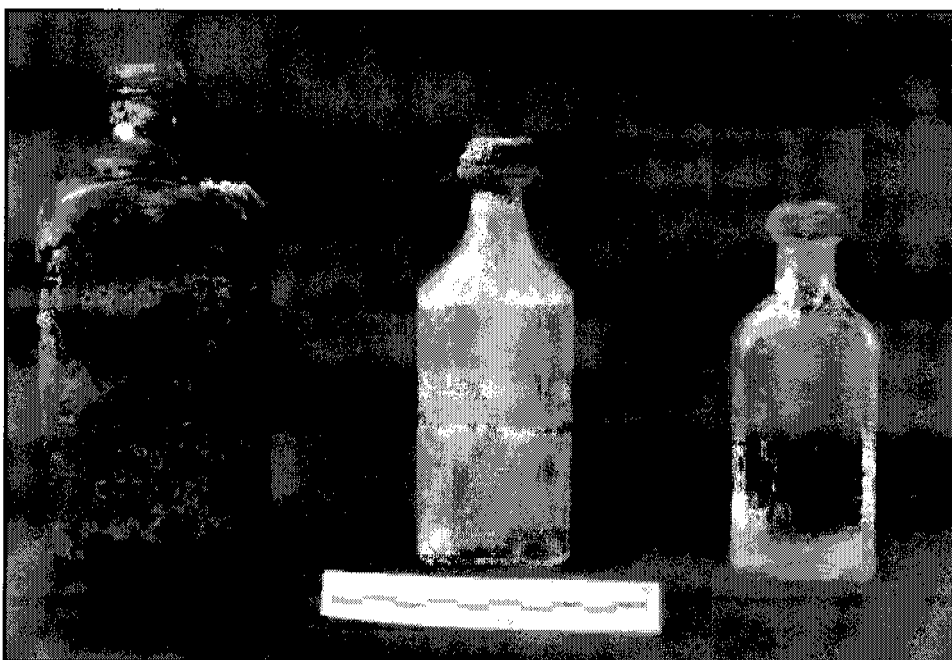


Figure A.5. Bag No. 239, Feature 5, Trench 5; brown NOBLE'S STANDARD POLISH bottle and two clear medicinal bottles with caps.

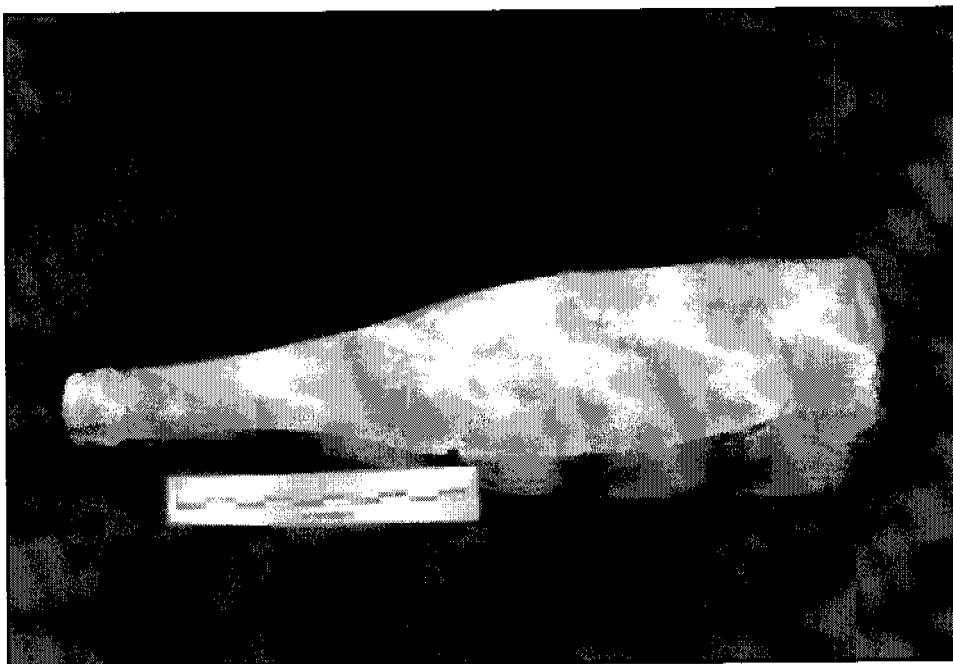


Figure A.6. Bag No. 199, Feature 15, Unit 16, Level 1; aqua champagne finish bottle.



Figure A.7. Bag No. 230, Feature 2, N664/E620, Level 1; aqua condiment bottle.

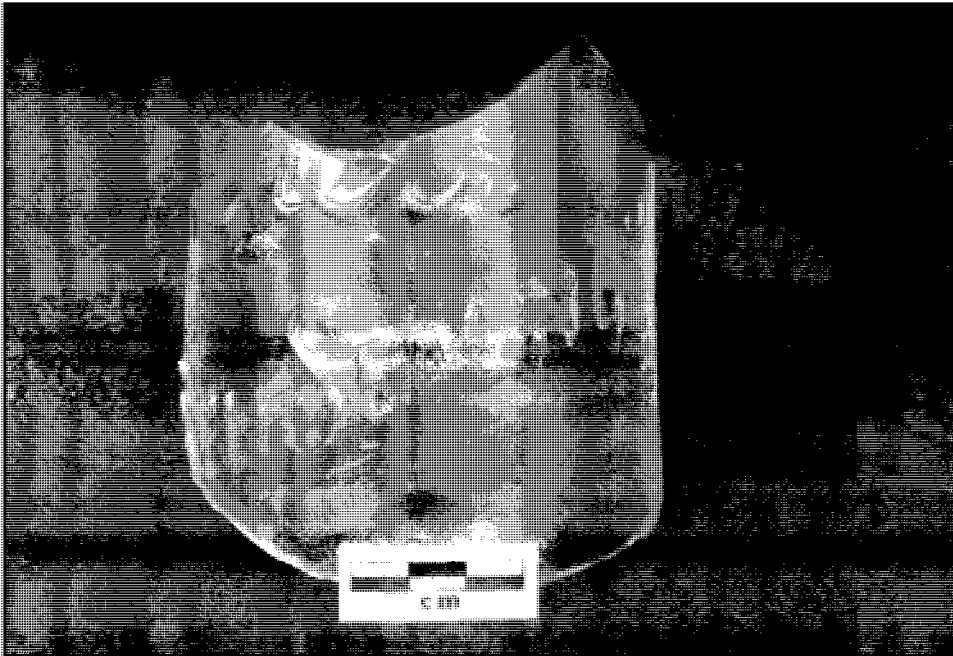


Figure A.8. Bag No. 354, Feature 21; Kerr's Self Sealing canning jar fragment.

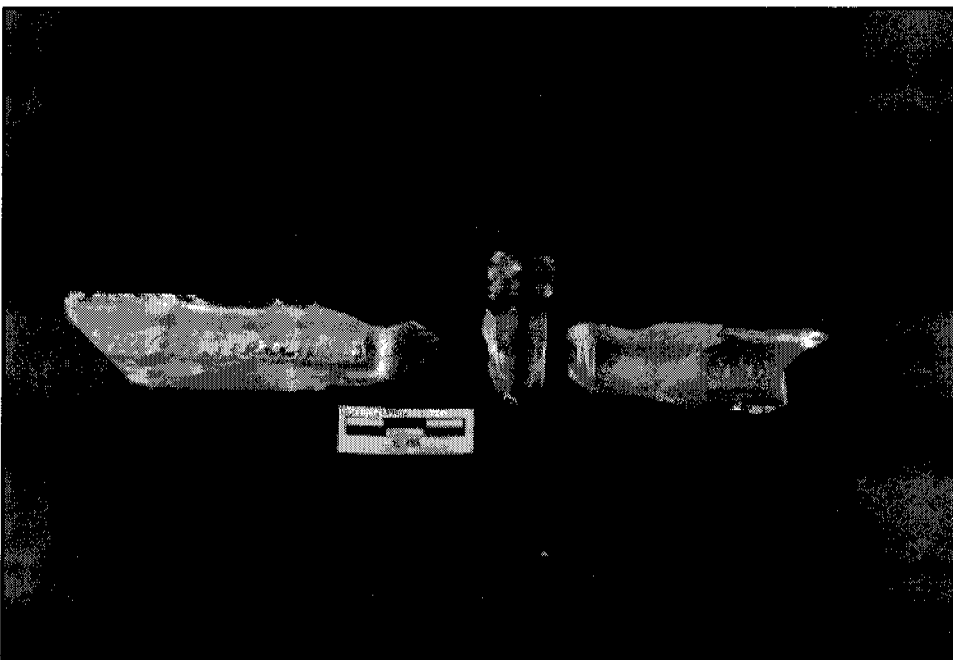


Figure A.9. Bag No. 354, Feature 21; Fletcher's Castoria bottle fragments.

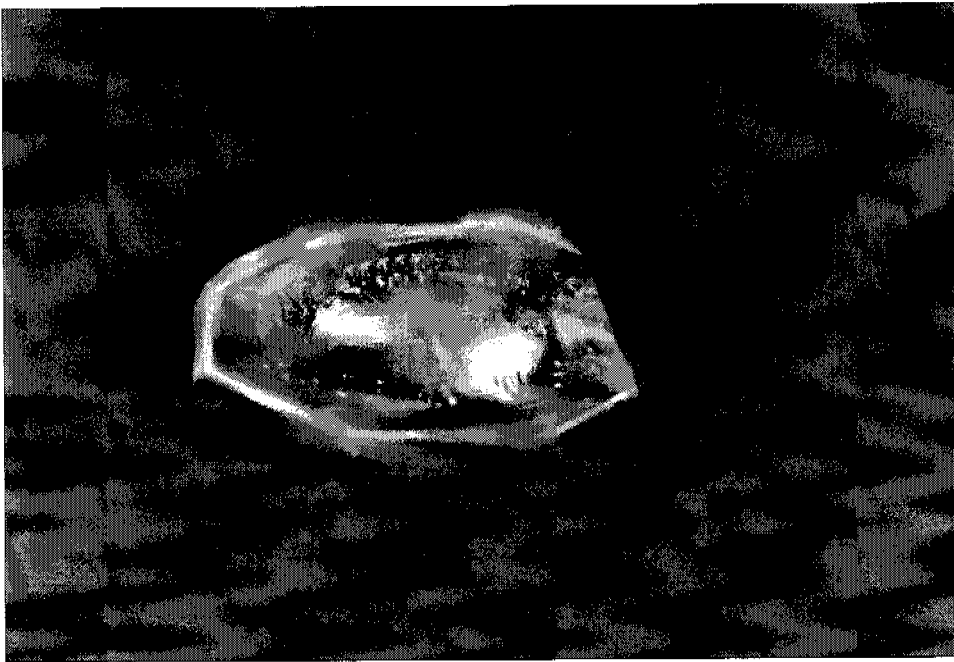


Figure A.10. Bag No. 354, Feature 21; possible Owen's Illinois Co. maker's mark for clear bottle.



Figure A.11. Bag No. 354, Feature 21; Federal Glass Co. maker's mark for faceted tumbler.

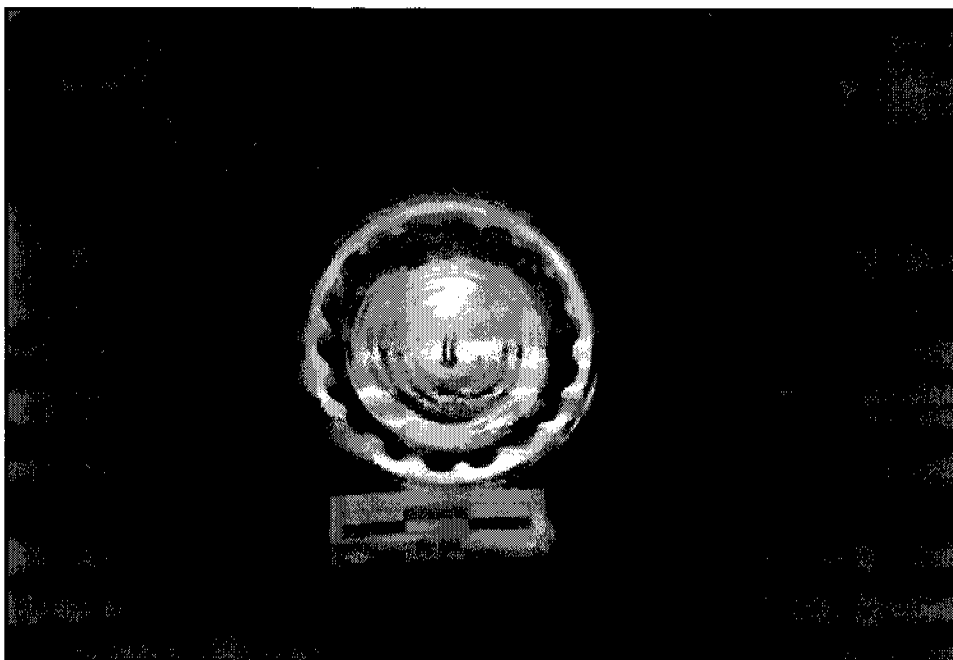


Figure A.12. Bag No. 113, Feature 5, Unit 9, Level 9; unidentified maker's mark for brown extract bottle.

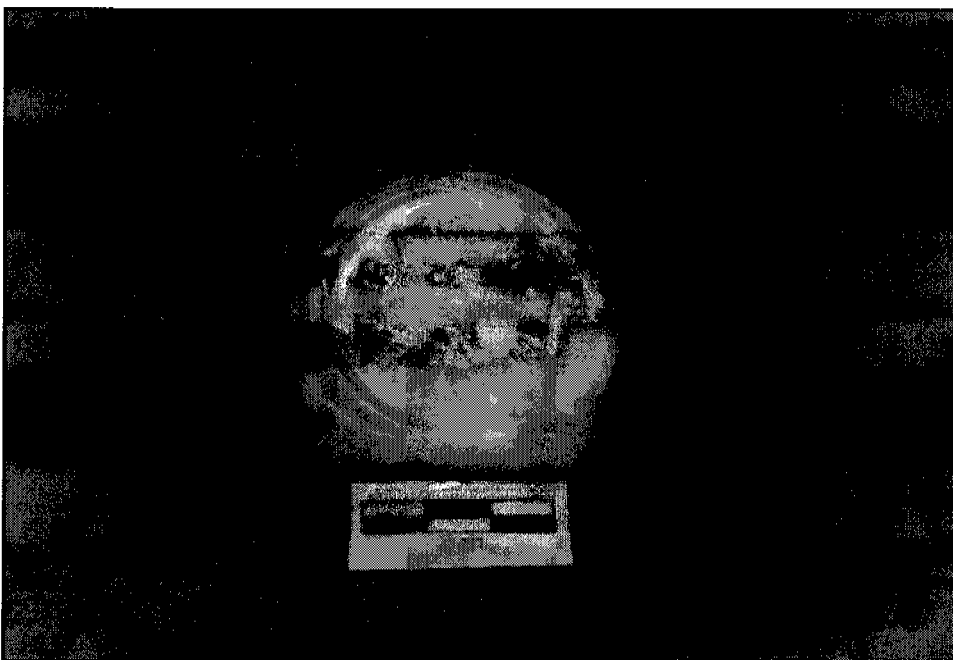


Figure A.13. Bag No. 113, Feature 5, Unit 9, Level 10; maker's mark for BARTON'S DYANSHINE.

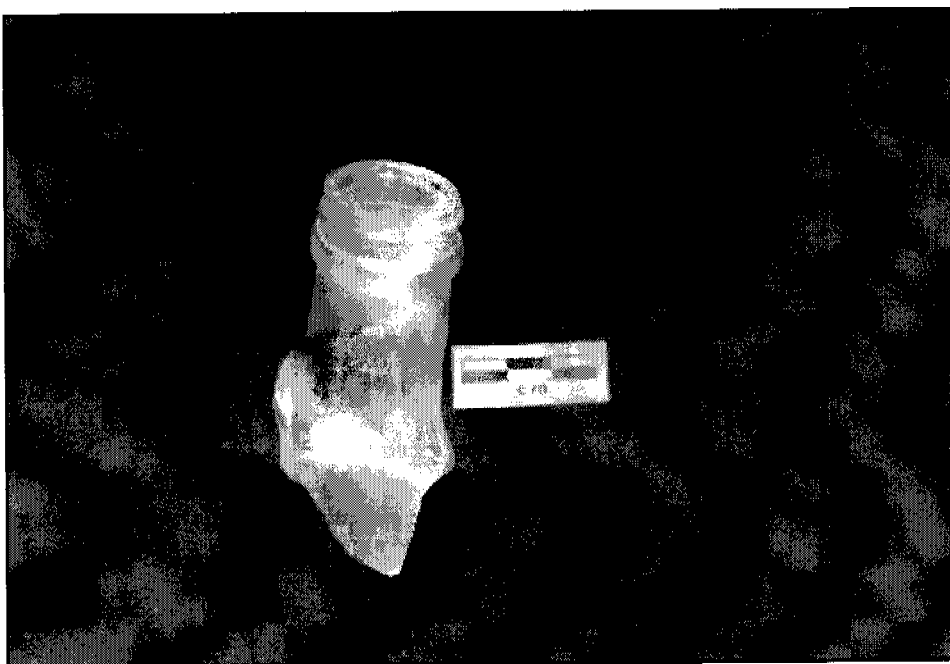


Figure A.14. Bag No. 354, Feature 21; Squibb bottle neck.



Figure A.15. Bag No. 354, Feature 21; square bottle neck.

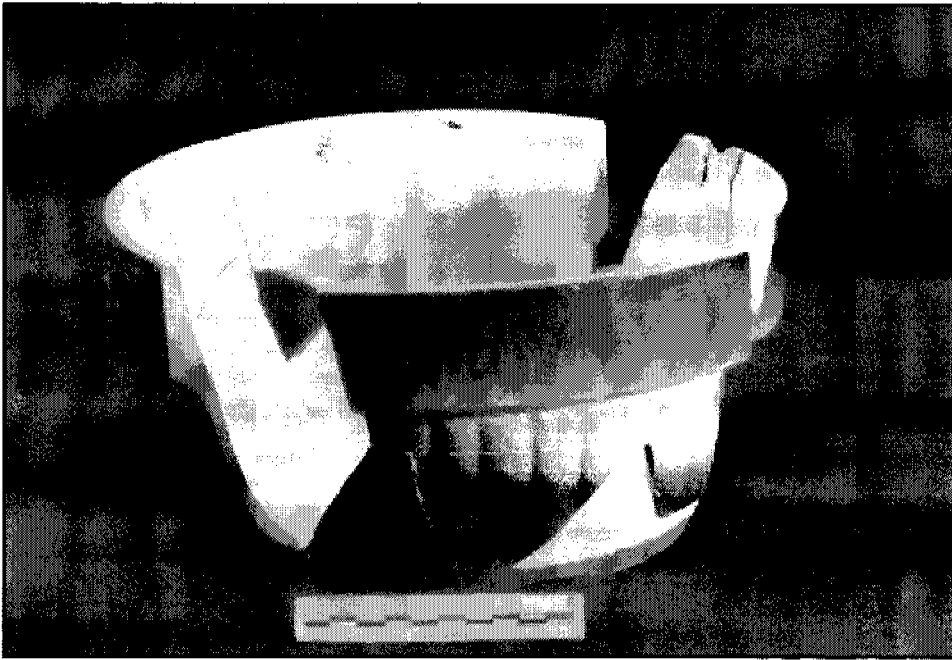


Figure A.16. Bag No. 259, Surface Collection Unit 25; reconstructed mixing bowl.

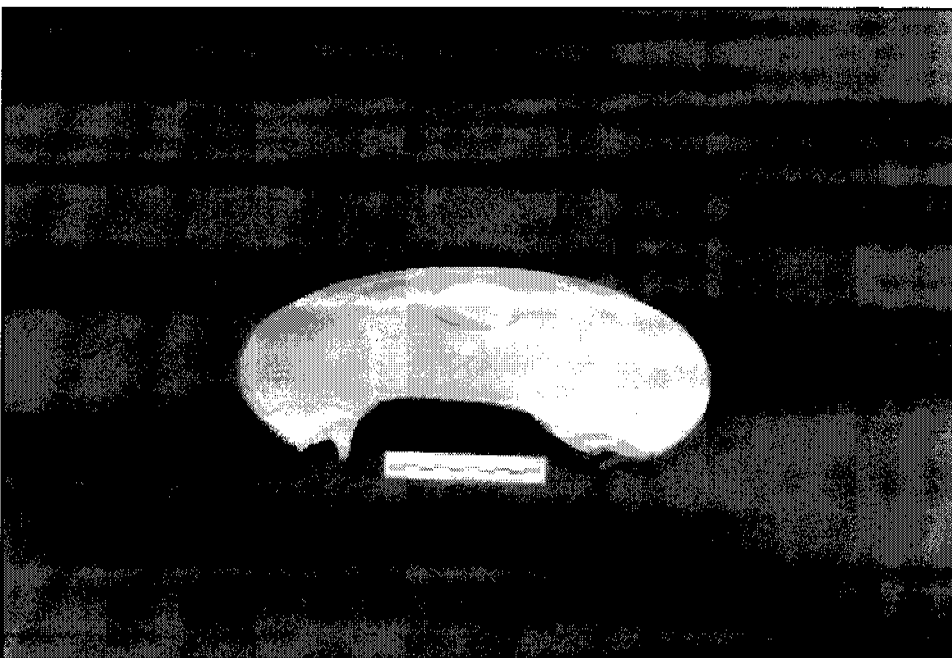


Figure A.17. Bag No. 116, Feature 5, Unit 9, Level 10; large pickling crock lid.

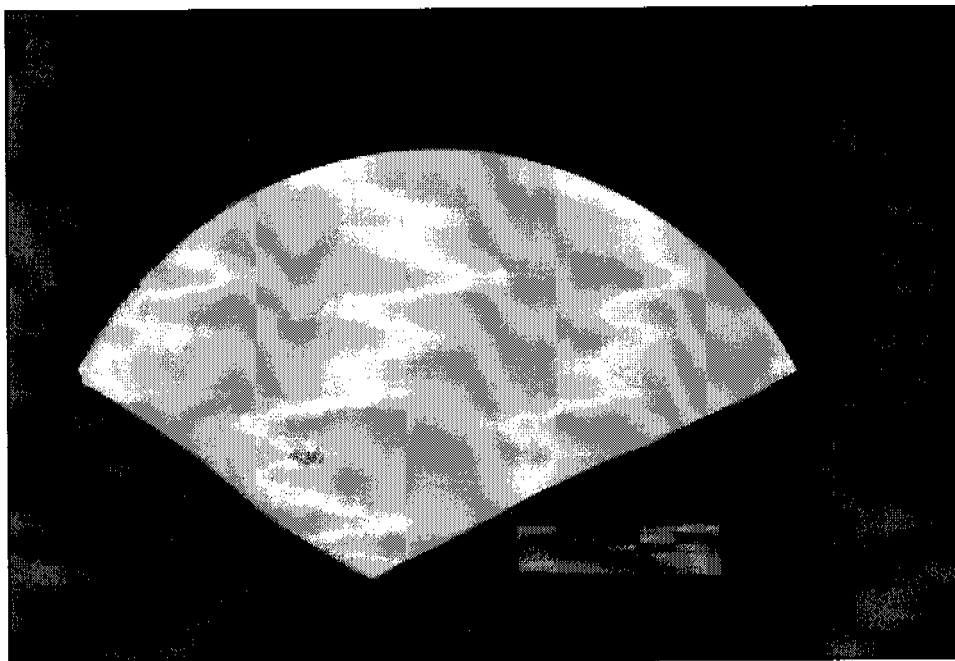


Figure A.18. Bag No. 357, Locus 2; plate fragment of Euroamerican porcelain.

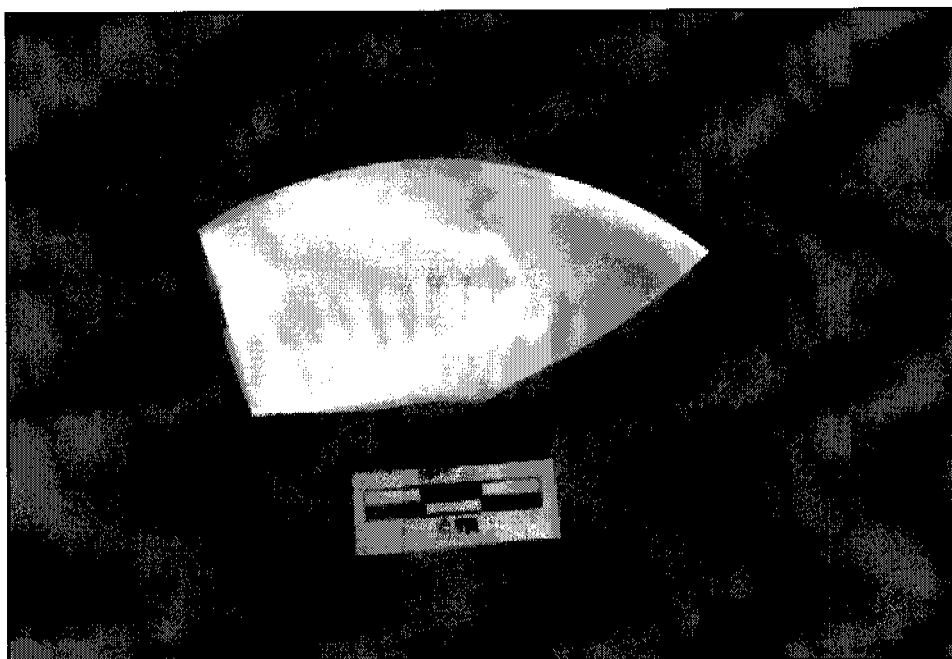


Figure A.19. Bag No. 350, Feature 22; molded whiteware tea plate.

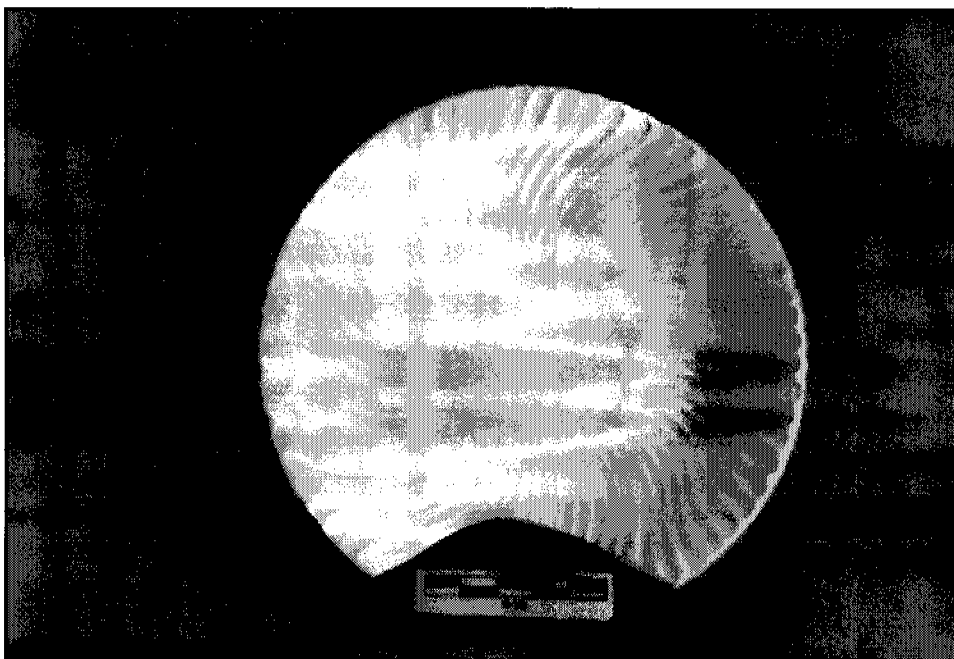


Figure A.20. Bag No. 353, Feature 21; reconstructed saucer with Limoges maker's mark.

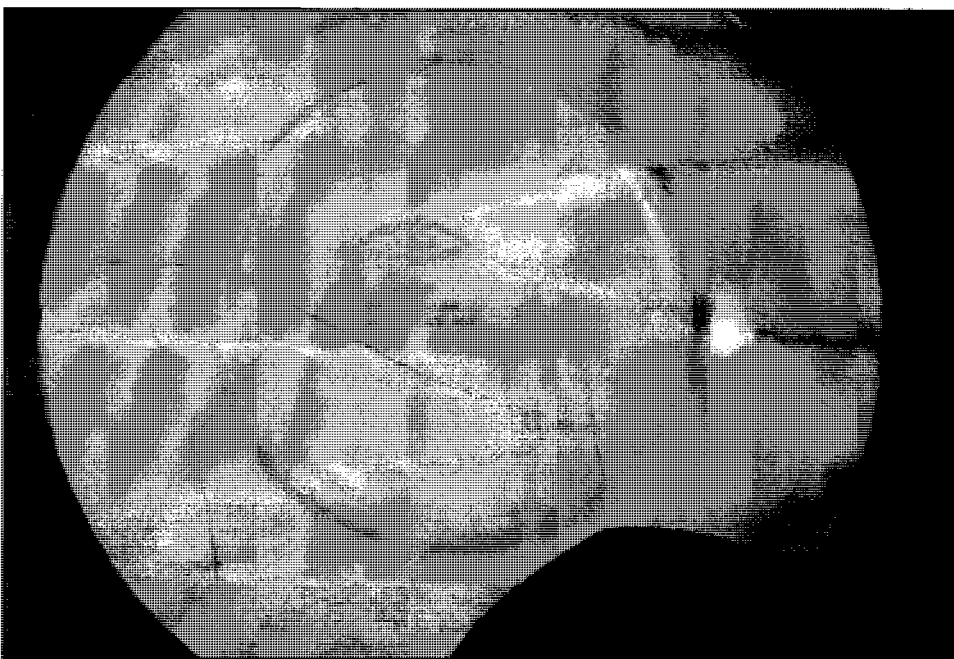


Figure A.21. Bag No. 353, Feature 21; reconstructed saucer with Limoges maker's mark.



Figure A.22. Bag No. 350, Feature 22; green Fiesta ware rim fragment.

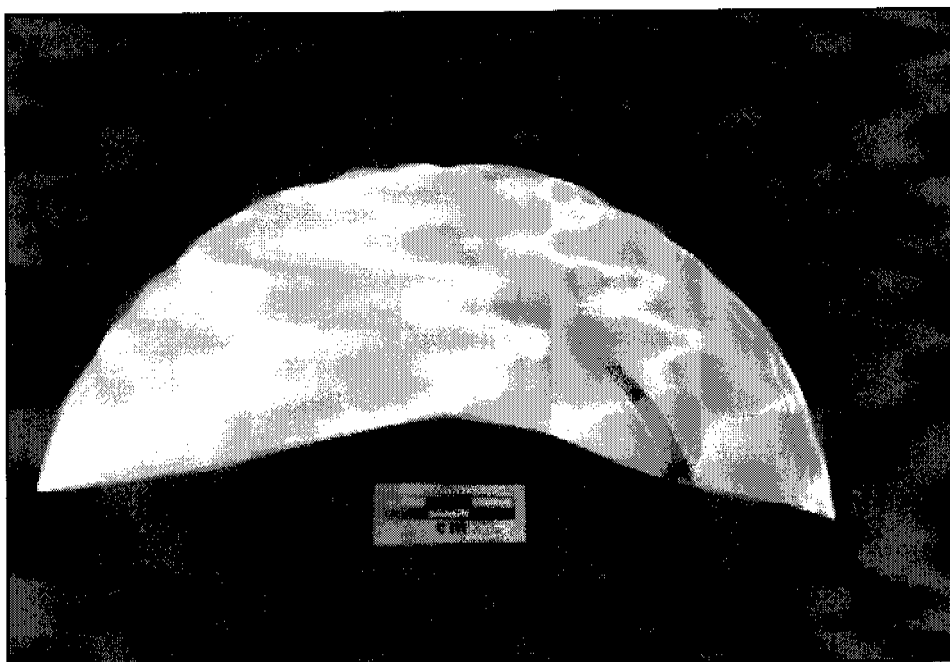


Figure A.23. Bag No. 350, Feature 22; molded pattern white earthenware soup plate.

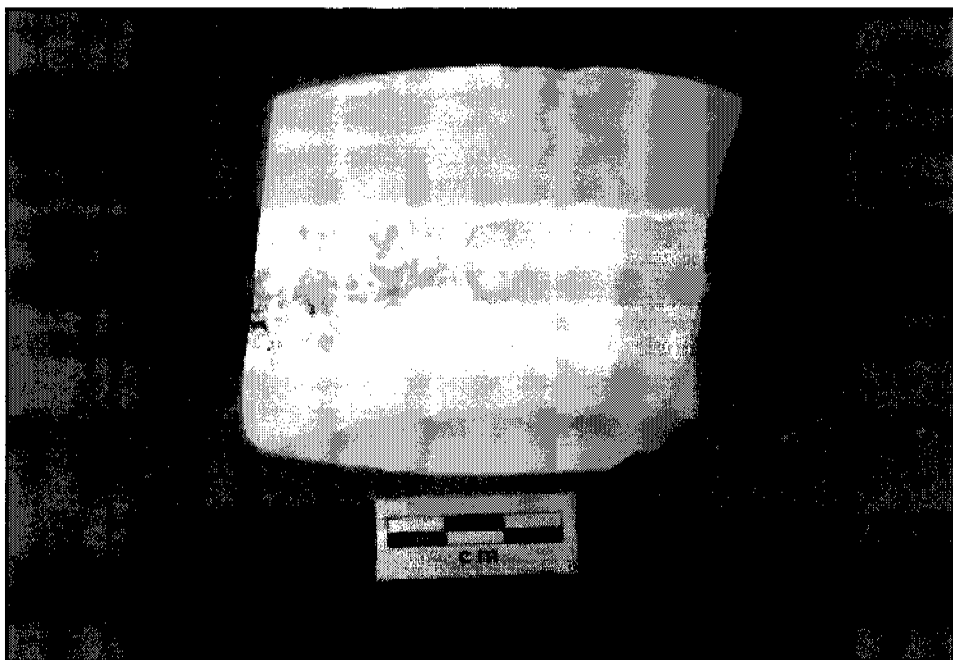


Figure A.24. Bag No. 350, Feature 22; floral decal decorated sugar bowl fragment.

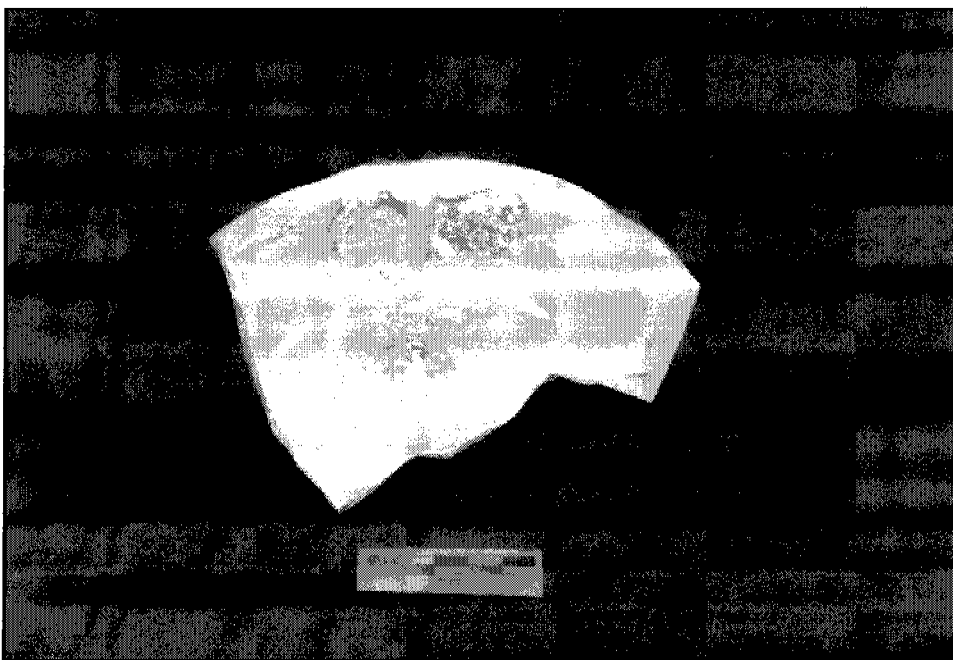


Figure A.25. Bag No. 350, Feature 22; green transfer print, shallow bowl fragment.

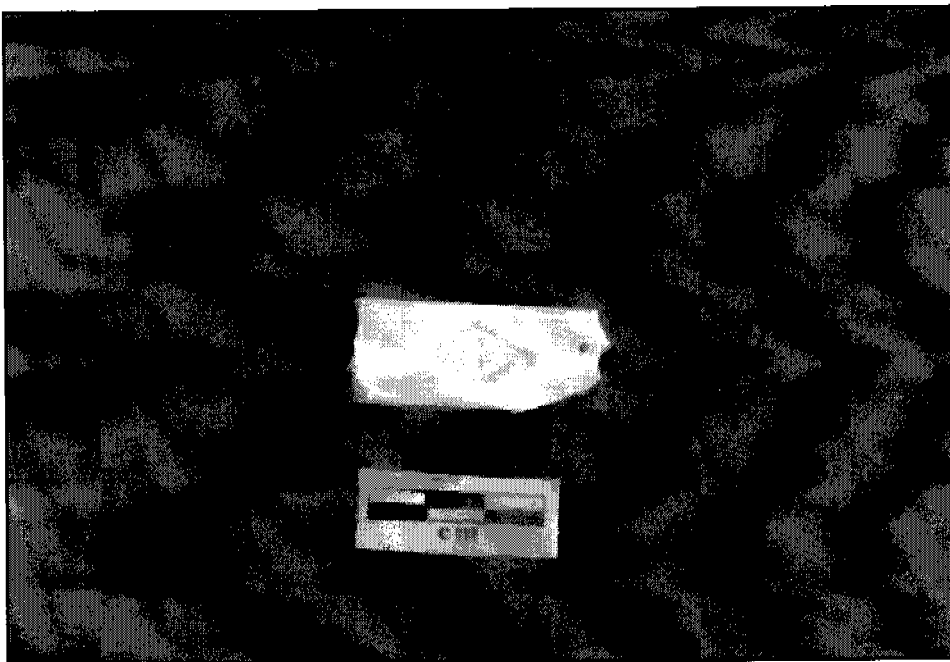


Figure A.26. Bag No. 357, Locus 2; "Faience" porcelain electrical insulator.



Figure A.27. Bag No. 350, Feature 22; fragments of child's tea set.



Figure A.28. Bag No. 14, Feature 5, Unit 9, Level 10; single and paired dry cell batteries.



Figure A.29. Bag No. 120, Feature 5, Unit 9, Level 11; dry cell battery with label "Western Electric Pat. Sept. 6, 1910".

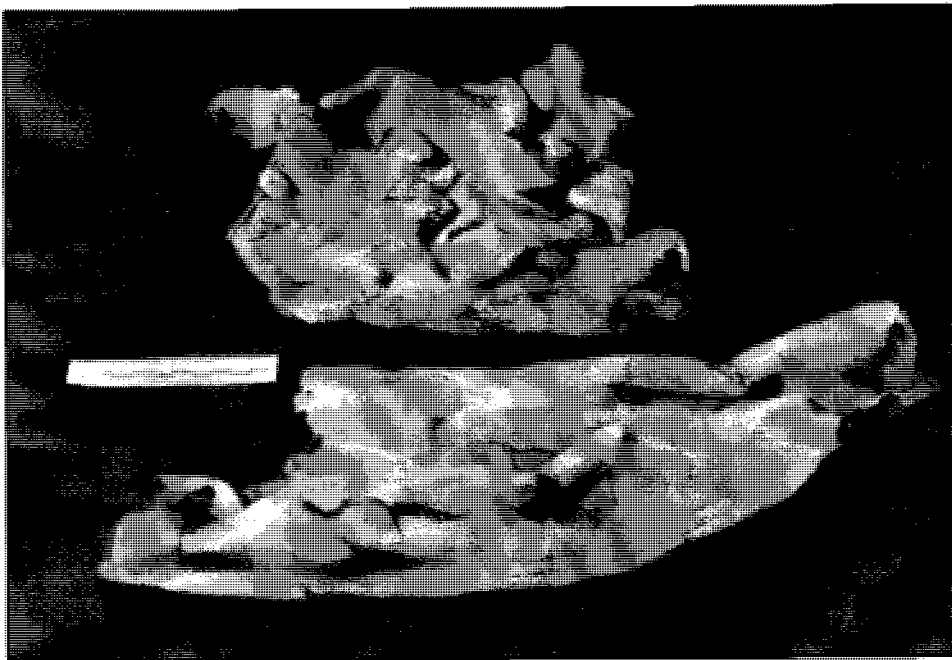


Figure A.30. Bag No. 243, Feature 5, Trench 5; stitched heavy leather, top piece has brass studs.

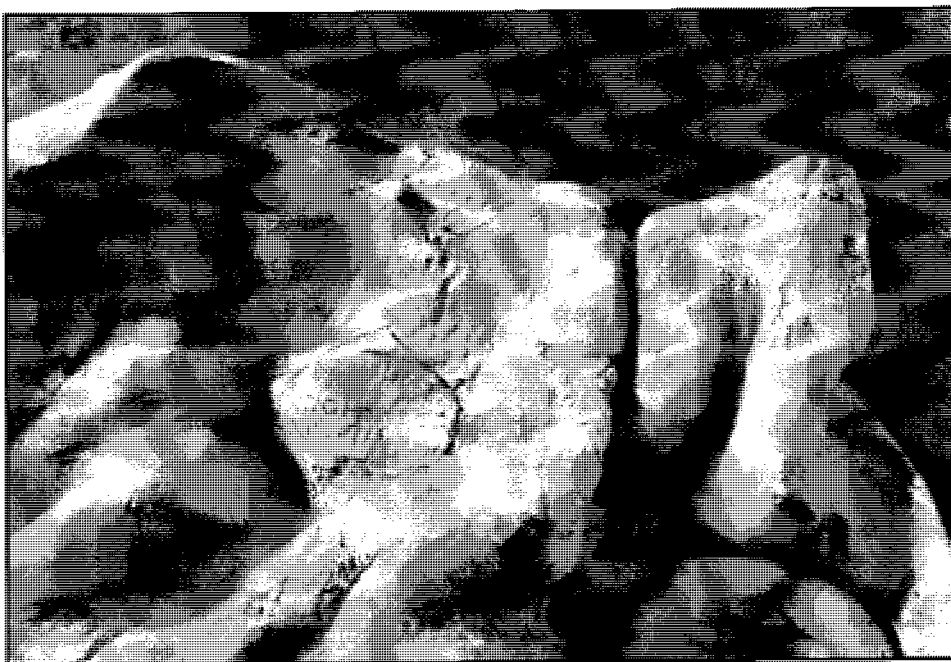


Figure A.31. Bag No. 243, Feature 5, Trench 5; maker's mark on stitched heavy leather "Henry... & Co." "Rochester, New York" "Est. ..."

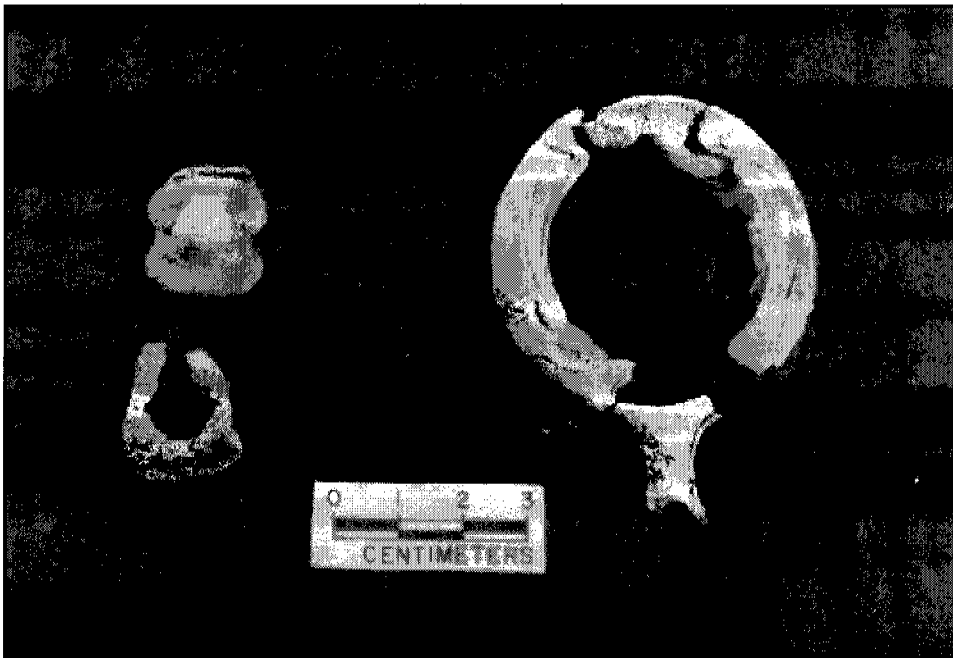


Figure A.32. Bag No. 170, Feature 8, Unit 19, Level 2; Left - clothing fastener with cloth adhering; Right - small art nouveau mirror or picture frame.

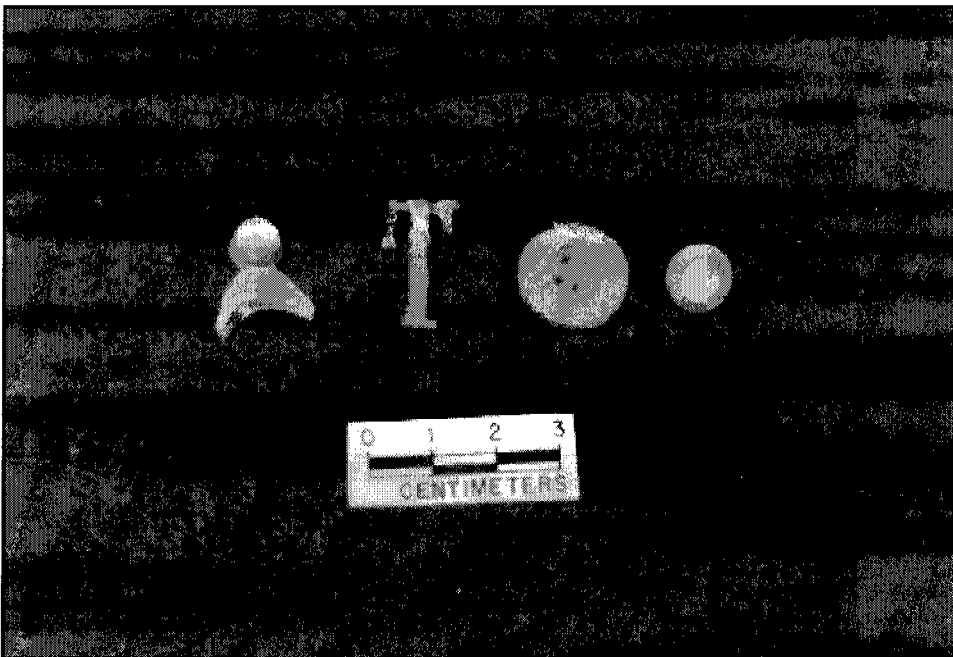


Figure A.33. Bag No. 201, Feature 15, Unit 16, Level 1; various clothing fasteners, including on right cloisonne button.



Figure A.34. Bag No. 59, Feature 5, Unit 8, Level 6; unidentified cylindrical filter screen.

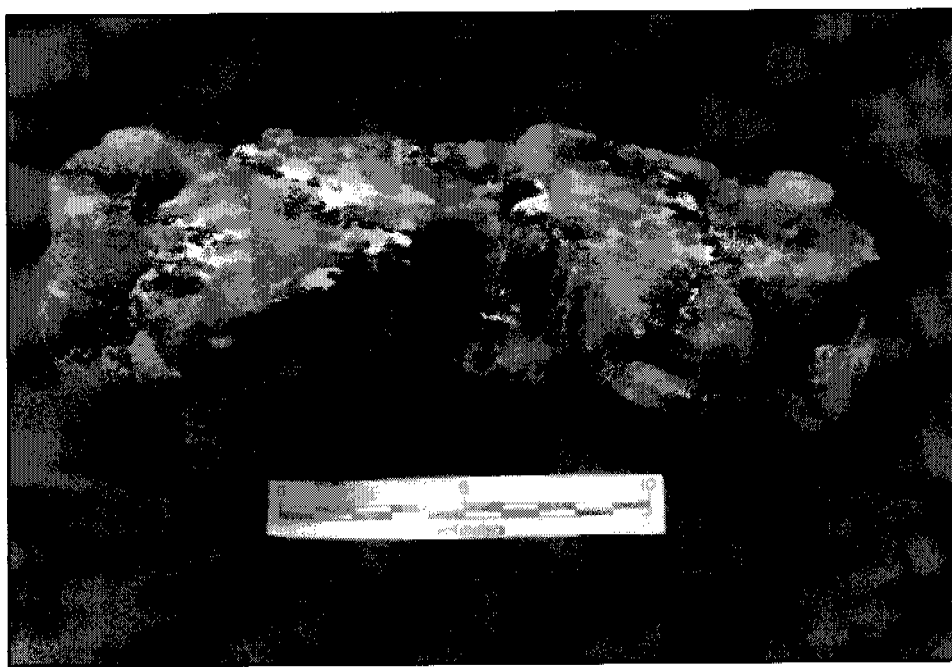


Figure A.35. Bag No. 252, Feature 5, Trench 5; unidentified heavy duty cable locking device.

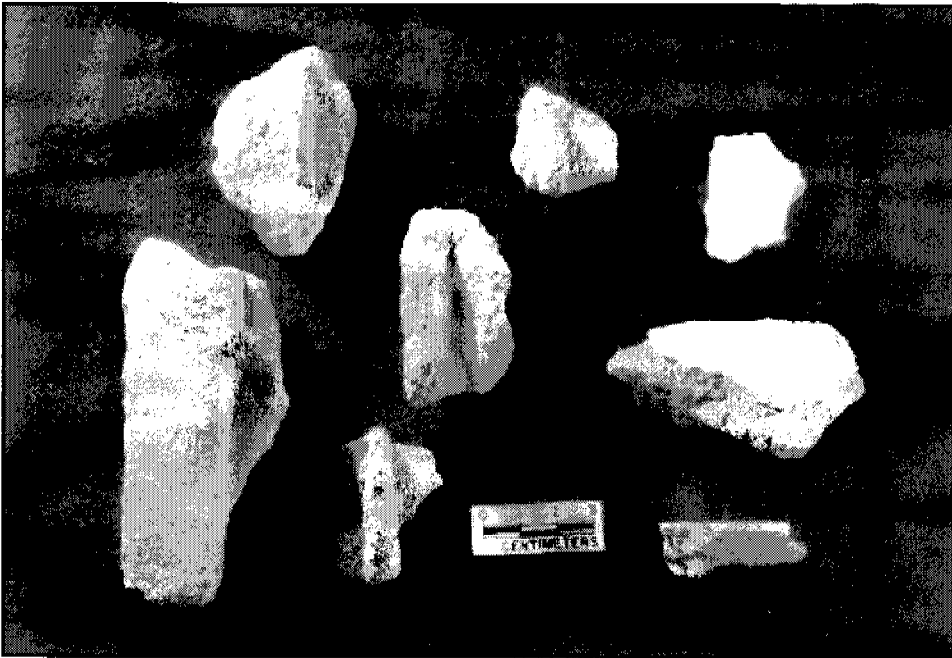


Figure A.36. Bag No. 231, Feature 2, N664/E620; various samples of stucco and plaster, some with impressions of backing material.



Figure A.37. Bag Nos. 8 & 264, Unit 1, Level 1, and Unit 21, surface; nails, screws, staples, rivets, bailing wire.

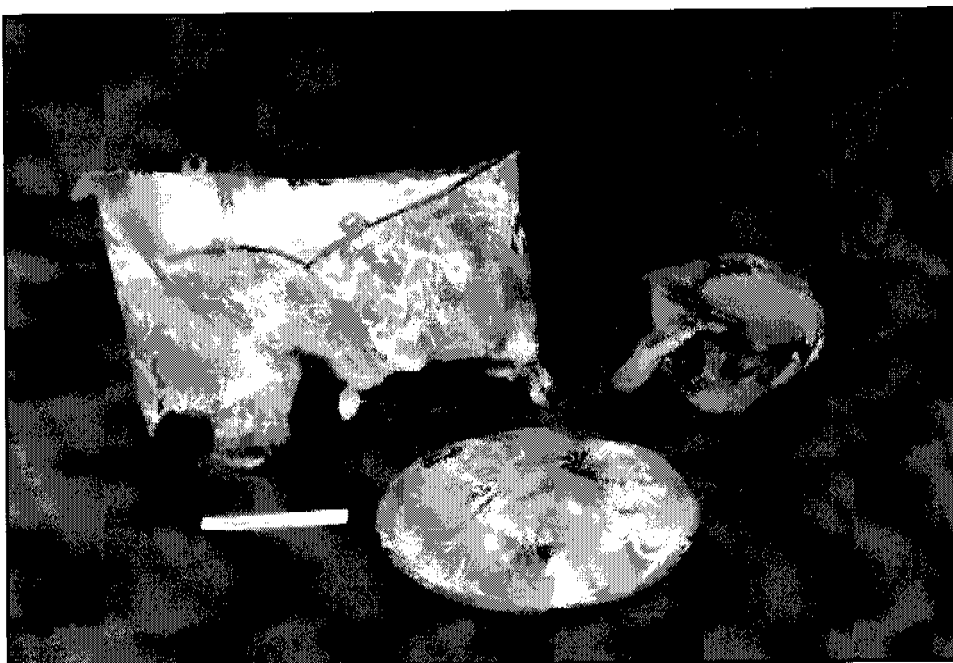


Figure A.38. Bag Nos. 240, 241, 292, Feature 5, Trench 5, and Feature 2, N674/E619; large blue pot, grey 2 qt. pan, large brown pot lid.



Figure A.39. Bag Nos. 130 & 257, Feature 8, Level 1, and Unit 23, surface; brass furniture estucheons.

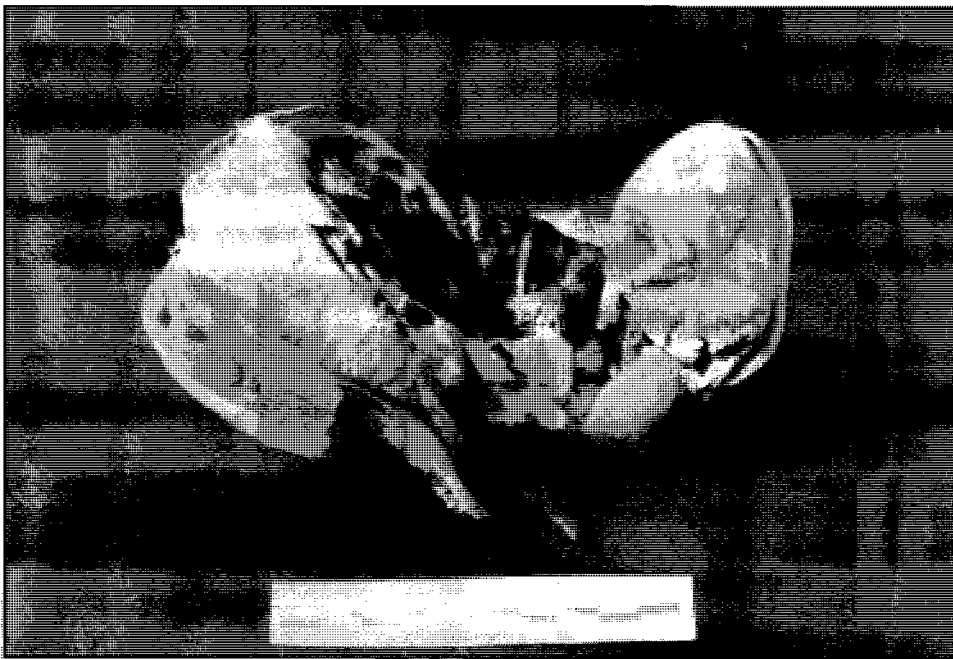


Figure A.40. Bag No. 244, Feature 5, Trench 5; woman's shoe with cross straps and iron shank.

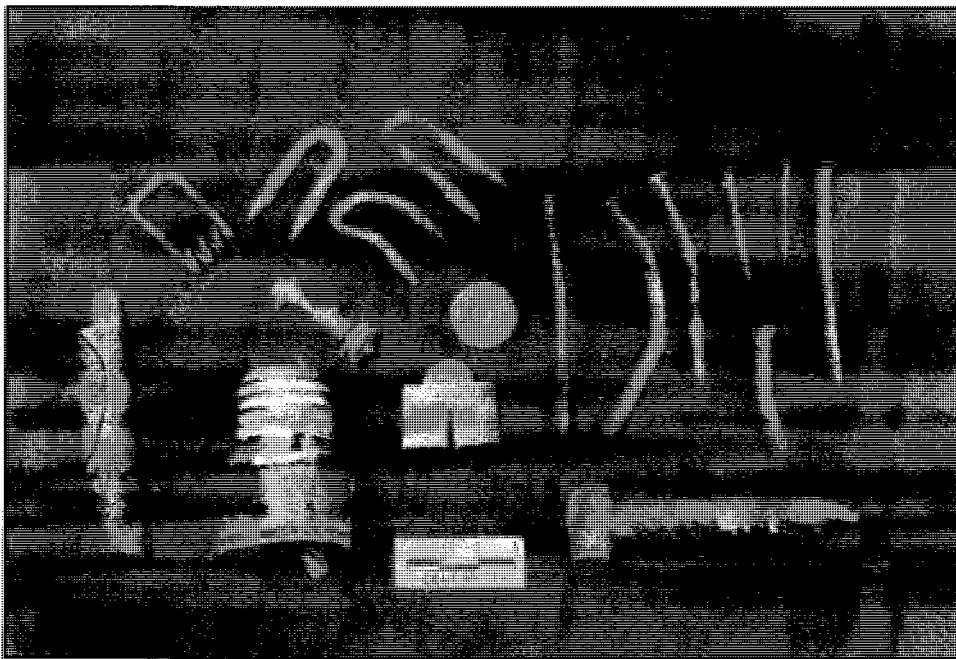


Figure A.41. Bag No. 300, Unit 20, surface; various metal items including wire nails, fence staples, clothespin spring, lag bolt, brass folding rule, toy axle, light bulb base with 1908 patent.

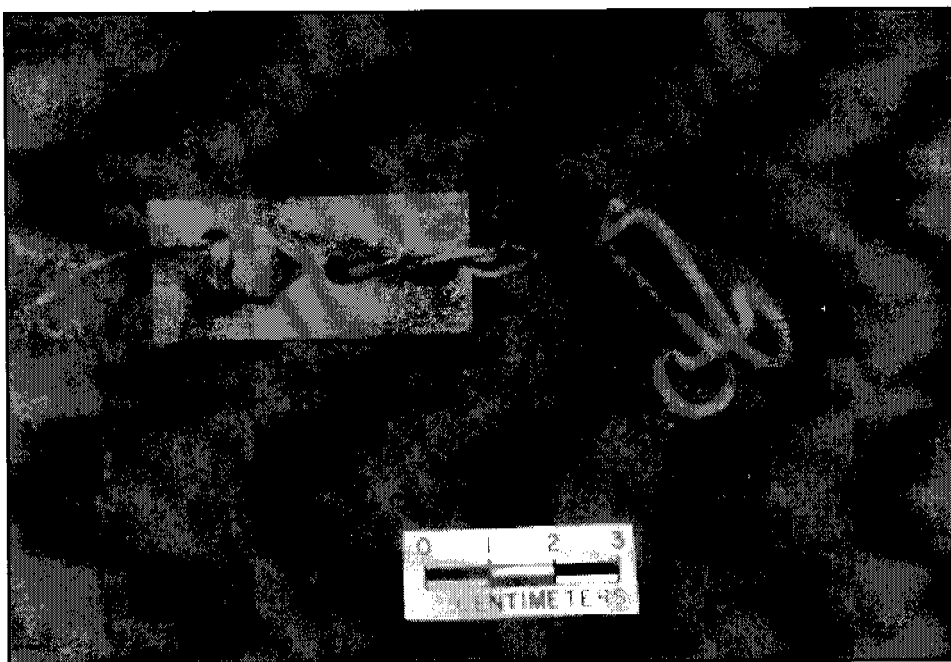


Figure A.42. Bag No. 293, Unit 26, surface; hay bale tie, clothespin spring.

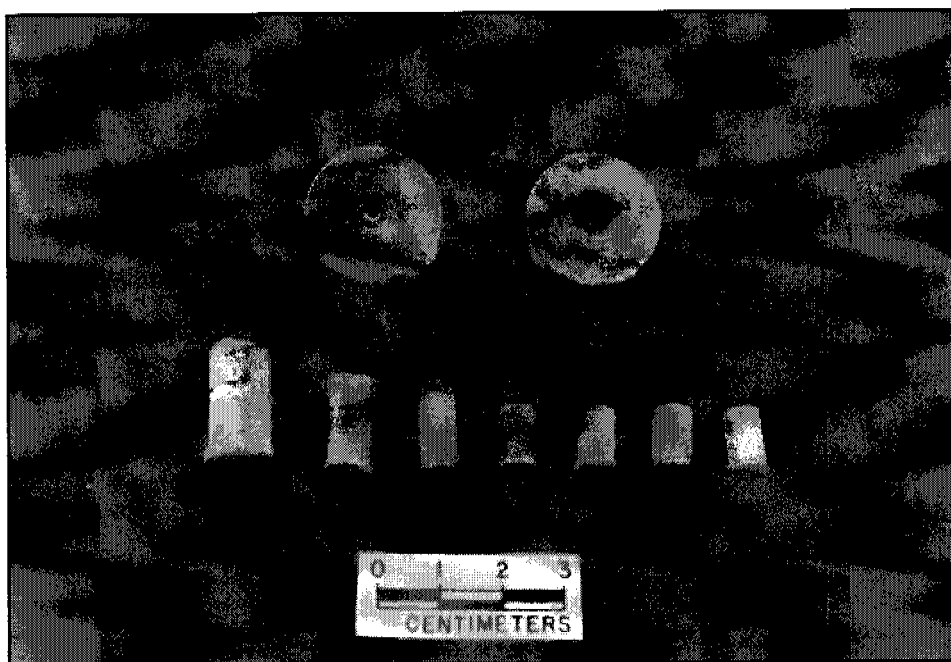


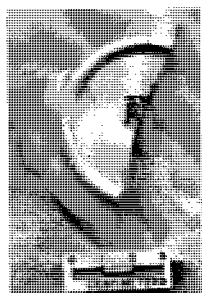
Figure A.43. Bag No. 170, Feature 8, Unit 10, Level 2; various cartridges. Top; 12 g shot gun - OMC & Winchester. Bottom; calibers .38, .25, .22 long, .22 short.



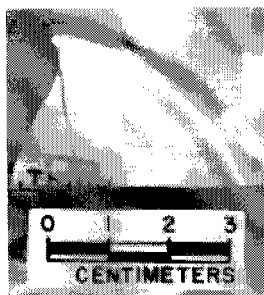
Figure A.44. Bag Nos. 246, 249, 250, Feature 5, Trench 5; various bicycle parts - seats, wheel with hub, pedal crank, wheel rim.



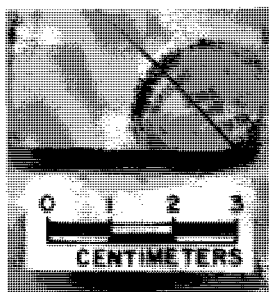
Figure A.45. Bag No. 360, Locus 2, surface; barbed wire and stone hammer.



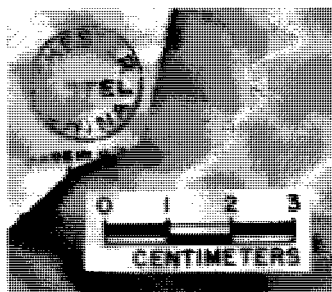
Feature 22, Surface Collection



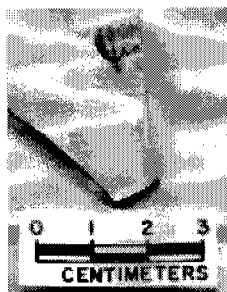
Feature 22, Surface Collection



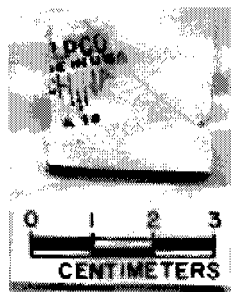
Surface Collection
Unit 22 in Locus 2



Surface Collection
Unit 22 in Locus 2

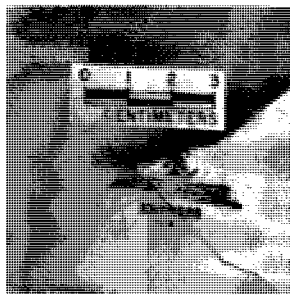


Surface Collection
Unit 22 in Locus 2

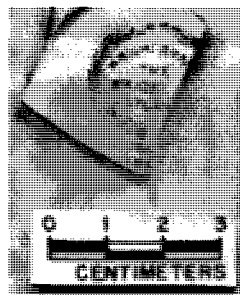


Surface Collection
Unit 22 in Locus 2

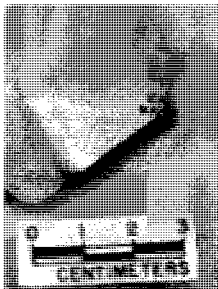
Figure A.46. Various ceramic maker's marks.



Feature 5, Test Unit 9,
Level 11



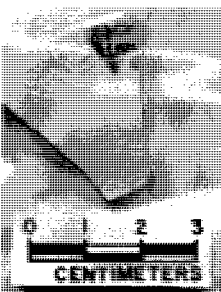
Surface Collection
Unit 24 in Locus 2



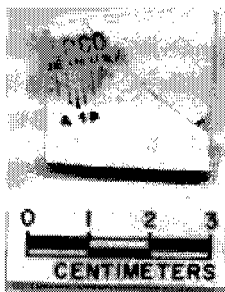
Surface Collection
Unit 25 in Locus 2



Surface Collection
Unit 25 in Locus 2



General Locus 2
Surface Collections



Feature 22, Surface
Collection

Figure A.47. Various ceramic maker's marks.