II. A PRELIMINARY REPORT ON THE ARCHAEOLOGY OF THE RODRIGUEZ SITE (CA-LAS-194), LASSEN COUNTY, CALIFORNIA

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PREFACE

Presented here is a prelimary report on research carried out during July, 1966, at the Rodriguez site (CA-Las-194) in Surprise Valley, California. It details one part of a research project concerned with the archaeology of this area which was sponsored jointly by the Archaeological Research Facility and the Department of Anthropology, University of California, Berkeley.

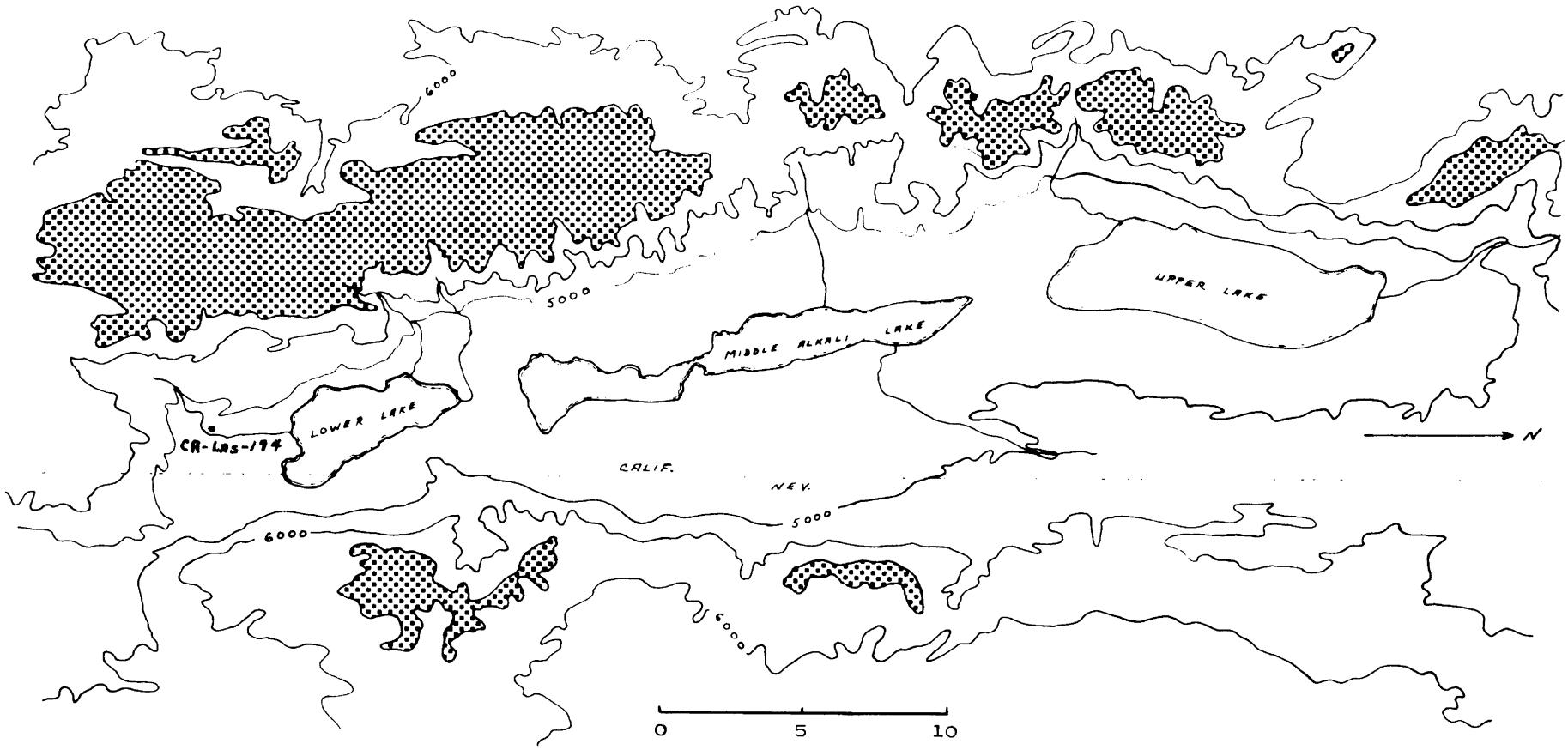
This report is intended as a presentation of excavation data, and practically ignores comparative analysis. Despite this limitation, we believe the information that was secured during our work in Surprise Valley is important and should be made available to interested persons, particularly in view of the scarcity of published archaeological data on northeastern California, as well as on stratified open sites in the Great Basin as a whole. We anticipate that a final report on this research will be prepared upon completion of the project.

Many persons and organizations have contributed in one way or another to the field research and to the completion of the present report. We wish to express our deep appreciation to the following persons.

Mr. Robert R. Rodriguez, owner of the property on which the site is located, who gave permission for the excavation and allowed the field party to camp on his property for the duration of the work. Further, he donated the artifacts collected to the Lowie Museum of Anthropology at Berkeley. We are indeed grateful to Mr. Rodriguez for his cooperation and generous assistance.

Dr. Robert F. Heizer, then Coordinator of the Archaeological Research Facility, provided the funds which enabled us to carry out the research. He further assisted us by his advice and guidance during the analysis of the data and by a critical reading of the completed manuscript.

Dr. Wilbur A. Davis, then of the University of Nevada and the Nevada State Museum, generously informed us of the site and provided initial liason with the owner. He also made available to us the results of his investigation of the site in the late fall of 1965.



Legend

Contour interval 1000 ft.
Checkered elevations 7000+ ft.

Map 1. Surprise Valley

Excavation of the Rodriguez site was carried out by a volunteer student group from the University of California at Berkeley. Included were Noel Baggett, Carolyn Bodley, Gail Gardner, Caroline Hills, Burton Moyer, Pamela Sexton, and the authors. In addition, valuable assistance in the field was provided by personnel of the Lassen and Modoc counties road departments, and by Mr. Bill Reeves and Mr. and Mrs. Dave Grove of Eagleville, California.

Analysis of material in the laboratory, while primarily the responsibility of the authors, was facilitated by the efforts of undergraduate students who volunteered their time for such tasks as weighing and measuring artifacts, and preparing maps and drawings. This group consisted of Pamela Horner, Barry Kales, Kathy Novak, Pamela Sexton, Rochelle Siegel, Mardi Swords, and Hazel Wald.

Dr. Helen Sharsmith of the University of California Herbarium identified the meager botanical specimens collected, and Dr. Robert A. Cockrell of the Department of Forestry was responsible for the identification of wood samples.

Our first radiocarbon date from controlled excavation was provided by Dr. Rainer Berger of the Institute of Geophysics, University of California at Los Angeles. Dr. Theodore D. McCown, Coordinator of the Archaeological Research Facility, made available funds for two additional radiocarbon dates.

Helpful advice on the analysis of bone and shell artifacts was given by Dr. J. A. Bennyhoff. Mr. Eugene Prince of the Lowie Museum of Anthropology was of great assistance in the task of photographing the collection.

Typing of the first draft of the manuscript was done by Barbara Samuels and Evelyn Seelinger.

To all of these persons we wish to express our appreciation for their assistance.

ENVIRONMENT

The Surprise Valley area with which this report is concerned is located in the extreme northeastern corner of California, on the western edge of the Great Basin. Its geography has been described in detail by Russell (1927) and only its more general features will be discussed here. The valley floor is relatively flat; it is long and narrow, measuring 60 miles north to south and averaging 8 miles wide east to west (map 1). The dominant features of the terrain are three playa lakes, remnants of Pleistocene Lake Surprise. All are dry throughout most of the year, but are filled seasonally by melted snow.

To the west the valley is bounded by the sharp rise of the Warner Mountains, whose rugged peaks reach elevations of almost 10,000 a.s.l., more than 5000 feet above the valley floor. To the east are the lower, but no less spectacular, ridges of the Hays Canyon Range, which break down gradually to the rolling New Year Lake country to the north.

Russell (1927:324-325) places Surprise Valley on a climatic border between Cold Steppe (BSk) and Microthermal (Ds) climatic regimes. West of the Warners climate is humid, with warm summers and cold winters. Precipitation occurs primarily in the winter months; little or no rain falls in the summer. To the east temperature conditions are more rigorous and precipitation lessens. Heavy summer thundershowers tend to reduce the contrast in seasonal precipitation.

The average annual temperature at Cedarville, 30 miles north of the Rodriguez site, is about 49 degrees. Summertime highs in excess of 110 degrees, and winter lows of -20 degrees, have been recorded. Precipitation averages 12-13 inches annually, although this may vary considerably.

At the present time, the dominant ground-cover in uncultivated areas of the valley is sagebrush, though a variety of grasses may be found near springs and in marshy areas along the lake shores. Juniper, aspen, and poplar occur in scattered stands, the latter having been introduced by white settlers.

In the past, however, the floral community was apparently somewhat different. Kelly (1932:75) notes that much of the valley was formerly meadowland, but was reduced to its present state through the introduction of sheep and subsequent overgrazing. Long term local residents have mentioned dense stands of willow and shrubs such as wild plum – neither of which is present in any quantity today.

The lower slopes of the Warner Mountains bear juniper and sage, with aspen occurring in sheltered stream canyons. At higher elevations, these species give way to pine and fir forest. The arid ranges to the east of Surprise Valley support only sage and small, scattered stands of juniper.

ARCHAEOLOGICAL INVESTIGATIONS

Research on the archaeology of Surprise Valley has been minimal. Brief site survey operations were conducted by field parties under L. S. Cressman in the 1930's (R. L. Stephenson, personal communication), and by D. W. Lathrop in 1949, and F. A. Riddell in 1957. Apparently little was found, since to date nothing has been published.

More recently, M. A. Baumhoff and W. R. Brown excavated Bare Cave, a rock shelter located about one mile north of the Rodriguez site on the west side of the valley. Results of this work have been reported by Brown (n.d.).

ETHNOGRAPHIC BACKGROUND

In aboriginal times, Surprise Valley was part of the territory occupied by a band of Northern Paiute Indians known as the Gidutikadu (groundhog eaters). Long Valley, just east of Surprise Valley, and the Coleman and Warner valleys to the north, made up the remainder of their range. To the west, across the Warner Mountains, lay the territory of the Achomawi, and to the northwest, that of the Modoc. On the north, south, and east were areas occupied by other Northern Paiute bands (Kelly 1932:70-72).

Ethnographic research among the Surprise Valley Paiute has been reported by de Angulo and Freeland (1929), Kelly (1932), and Stewart (1941). The life-way which these authors have described is generally similar to that of other Great Basin groups, involving seasonal wandering in search of food. Edible plants, which constituted a major portion of the diet, were collected as they became available, and either immediately consumed or stored for later use. Hunting was a year-round occupation, though the species taken often varied on a seasonal basis. Fish were taken in early spring in the Warner Lake area, but not in Surprise Valley (Kelly 1932:95).

The food quest required that band members be scattered over the territory in small groups throughout most of the year. In winter, however, they gathered at fairly permanent camps to subsist on stored foods and the products of the hunt. Such camps tended to be larger than those occupied during the summer, averaging five or six houses. Kelly (1932:77-78) has recorded the locations of winter camps used within the memory of living band members. Of particular interest in terms of the present report is the southernmost site, located near the Bare Ranch and identified by its proximity to the stream called Wigipahuu (sideways-water-running), or, more recently, Bare Creek. It is this camp which we have designated as the Rodriguez site (CA-Las-194).

THE SITE

Bare Creek enters Surprise Valley at its extreme southwestern corner through a small, narrow canyon, forming an alluvial fan at the canyon mouth. From this point the stream turns northward, running along the foot of the Warner Mountains for about two miles before emptying into a broad, shallow

marsh at the southern end of Lower Alkali Lake. The Rodriguez site lies on the northern half of the alluvial fan formed at the canyon mouth, covering a roughly circular area 150 yards in diameter about 50 yards north of the present course of Bare Creek. The site is about 15 to 30 feet above the stream bed, and 100 feet above the level of the lake bed to the north. The surface of the site is covered with occupation refuse, including bone and shell, as well as countless scattered fragments of chipped and ground stone (map 2, pl. 1).

About 150 yards north of the center of the site are the headquarters of the Bare Ranch, established in 1864 by Thomas Bare, an early settler in this part of the valley (Fairfield 1916:341). The ranch is presently owned by Robert R. Rodriguez, after whom the site is named.

Though the site has been well known to amateur collectors in the area for many years, it was not until the late fall of 1965 that it attracted a substantial amount of attention. At that time, the section of the Surprise Valley road which ran through the Bare Ranch headquarters, north of the site, was abandoned, and work on a new section, involving a cut through the site itself, was begun. As bulldozers sliced through the deposit, several burials, house floors, and caches, along with large amounts of general midden refuse, were uncovered and scattered about. Most of this material was either destroyed or removed for fill, and the artifacts were carried off by local residents.

This process of destruction was well under way before professional archaeologists were informed of the situation and were able to visit the site. By the time Dr. W. A. Davis and associates at the Nevada State Museum arrived, the cut had been nearly completed, and there was little they could do beyond recording general data, taking carbon samples, and removing the 17 burials then exposed.

Early in 1966, Dr. Davis spoke with Dr. Robert F. Heizer of the Archaeological Research Facility at Berkeley about the importance of the site. Dr. Heizer in turn dispatched one of the authors (O'Connell) to visit Surprise Valley with Dr. Davis in April. As a result, arrangements were made for a party from Berkeley to conduct excavations the following summer under the field supervision of J. O'Connell.

In July, 1966, when the excavations described in this report were carried out, the situation at site CA-Las-194 was essentially this. Road construction had been completed - a 600 foot long, 30 foot wide swathe had been cut through the site to a depth of 9 feet. Midden deposit at least 5 feet thick was exposed in the walls of the cut. Further, the recent use of the area as a feed lot for cattle had resulted in the removal of plant cover, and subse-

quently, in the loss of the top few inches of midden through wind erosion. Beyond this, however, and with the exception of the immediate area of the road cut, the site was relatively undisturbed.

Excavation Procedure

Several factors influenced the conduct of excavations at CA-Las-194. Time and available resources were limited, tending to preclude the possibility that anything more ambitious than an initial test could be completed. In determining the form such a test would take, we were aided by the fact that the barren, slightly ablated conditions of the surface, as well as the long profile provided by the road cut, gave a good indication of the areal limits, and the depth and stratigraphy of the site. There still remained, however, the problem of the nature of the midden content, cultural sequence, and age of the deposit. We attempted to approach these problems through intensive testing in that area of the site likely to produce the longest sequence.

Initially three pits were dug: Stratigraphic Pits Nos. 1 and 2, and Test Pit No. 1. The deposit was deepest and heaviest in the area of Strat. Pit No. 1, and attention was focused there. A 5 x 5 foot grid system was established; Strat. Pit No. 1 was designated E-3 in the system, and expanded in the form of a short north-south trench, E-1 to E-6. Pits D-0 and F-0 represent the beginning of an east-west cross trench which time limitations prevented from being expanded as planned (fig. 1).

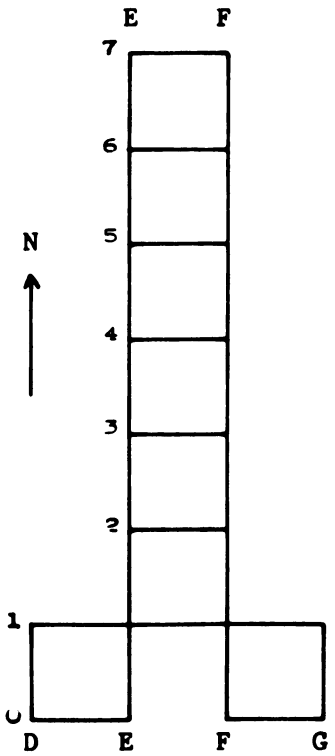


Fig. 1. Schematic diagram of E-trench. Pits are designated by SW corner stake.

Pits were all dug in essentially the same fashion. Fill was removed in 6 inch levels, measured from the ground surface at the southwest corner of each pit, and passed through a one-quarter inch mesh screen. All artifacts and identifiable faunal remains were saved, as well as grab samples of the unidentifiable bone and non-diagnostic chipping refuse. In the stratigraphic pits the procedure differed slightly in that all material which did not pass through the one-quarter mesh screen was retained. Further details on the refuse from these pits are presented in Appendix I.

Stratigraphy

Data on the stratigraphy of the midden and underlying deposits were obtained both from excavations and from the long profile provided by the road cut. Five stratigraphic units were recognized, the latest two of which produced cultural material. Figure 2 is a schematic representation of these strata as they were observed in the area of the road cut nearest the E-trench. Detailed profile drawings with emphasis on the cultural deposits in E-trench are presented in Figures 3 through 7.

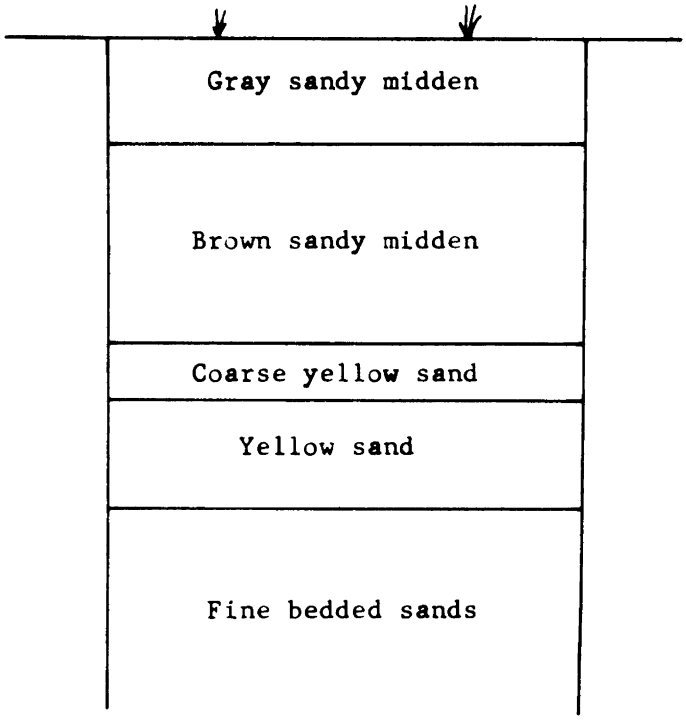


Fig. 2. Schematic diagram of strata in E-trench area.

The topmost stratum of the Rodriguez site is called the gray sandy midden. It rests unconformably on the stratum beneath - the brown sandy midden. In addition to color differences, the middens are distinguished by the relatively coarse sandy soil of the brown as compared with the finer, more heavily ash-laden sand of the gray midden. Both components contain large amounts of occupation debris in the form of stone, bone, and shell artifacts, and refuse. The precise characteristics of these remains are somewhat distinct in each of the strata.

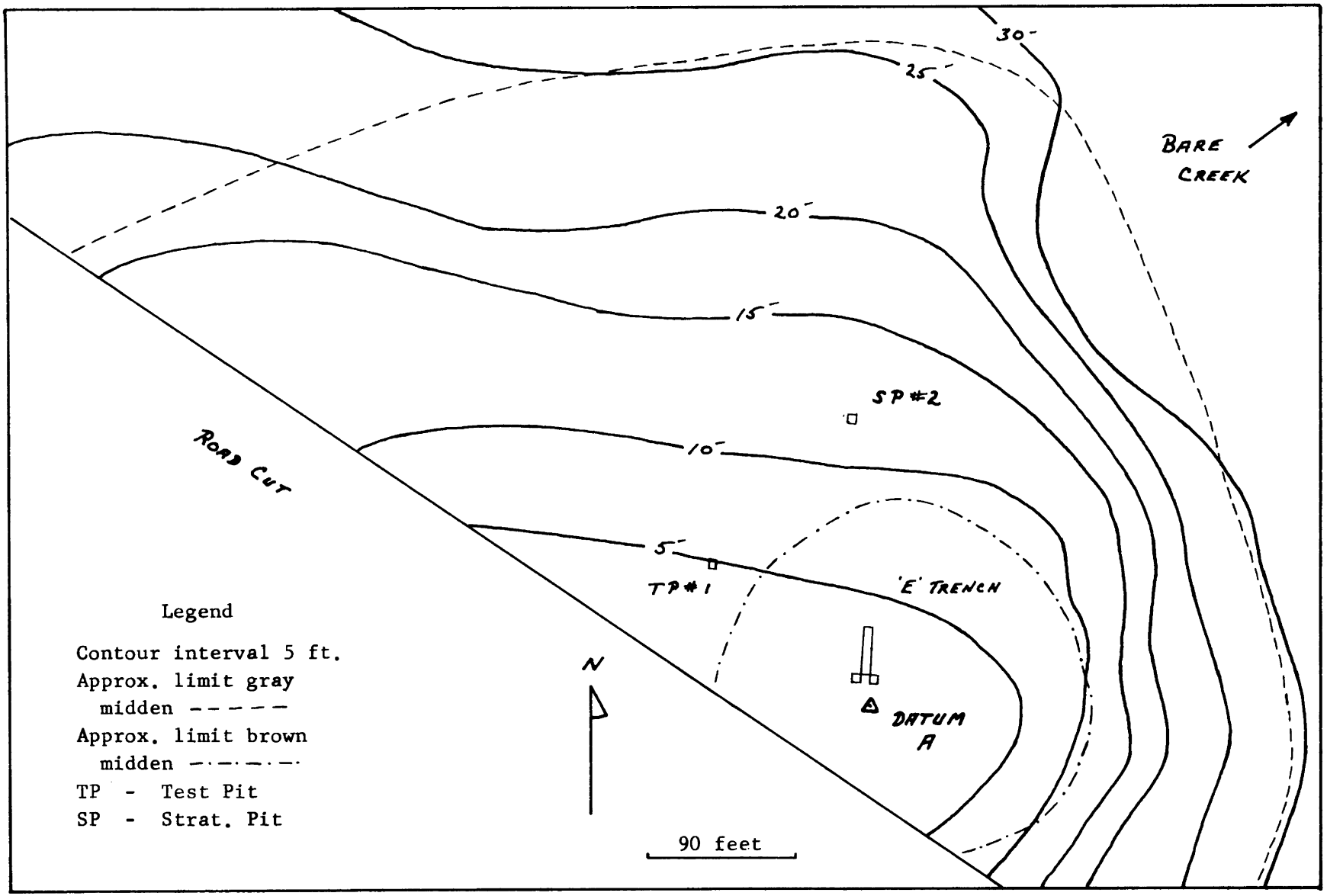
The two middens are further differentiated in that they are markedly unequal in area (map 2). The more extensive gray sandy midden is coterminous with the limits of the cultural refuse on the surface of the alluvial fan. In contrast, the brown sandy midden is more restricted. It appears in the area of the E-trench and in the east end of the north wall of the road cut profile. It could not be traced along the west section of the north cut profile, nor in the profile of Test Pit No. 1 and Strat. Pit No. 2 (fig. 8). In these areas gray sandy midden lay unconformably on the non-cultural deposits beneath. Admittedly, the brown sandy midden may have been present, though markedly reduced in thickness to the point that it was no longer recognizable.

Based on these observations, we surmise that the brown sandy midden is restricted to that part of the fan constituting the highest ground north of the road cut, and that it covers an area of perhaps 50 yards in diameter. The dotted line on Map 2 represents a graphic estimate of its extent.

Gray sandy midden is roughly uniform in thickness over the site, its lower limit ranging from 15 to 40 inches below the present ground surface and averaging 18 to 24 inches in the E-trench area. Brown sandy midden ranges in thickness from 20 to 45 inches in the E-trench area, and averages about 20 inches in the north profile of the road cut.

Beneath the brown sandy midden are three non-cultural strata. Though a few artifacts and bits of refuse were found within these strata, their presence was accounted for by disturbance originating in the overlying midden, primarily in the form of animal burrows.

The uppermost non-cultural stratum is a relatively thin zone (maximum 5-7 inches) consisting of a coarse, brownish-yellow sand containing a large number of stream-rolled cobbles, some the size of a baseball. Beneath this is a thicker layer of well sorted yellow sands, markedly finer than those in the stratum above. The lowest component consists of a series of bedded sands with alternating zones of relatively finer and coarser material. These sands are very well sorted and are markedly finer than those in other strata on the site. The individual bedded layers range from 0.5 to 2 inches in thickness and are generally light in color.



Map 2. Site CA-Las-194

ARTIFACTS COLLECTED

The descriptions and analyses which follow deal with all artifacts recovered at the Rodriguez site, including pieces found on the surface and those encountered in the excavations. The tables which present distribution of artifacts by depth are concerned only with the E-trench area, including Pits D-O and F-O, and the general surface of the site. Artifacts from Strat. Pit No. 2 and Test Pit No. 1 are not presented in such charts because the stratigraphic picture in these areas is somewhat unclear and because very few artifacts were recovered; for example, only two typable projectile points were found in Strat. Pit No. 2 and Test Pit No. 1.

Artifact distributions are presented in terms of 6 inch levels measured from the ground surface at the southwest corner of each pit. It should be noted that the break between the two midden components, gray and brown, tends to fall between 18 and 24 inches below the surface in the E-trench area. We were early aware of the presence of these two components and attempted to keep artifacts separate by natural layer, as well as by 6 inch level. Success was limited by difficulties in recognizing the contact between the zones, particularly when it had been disturbed by the activities of man and/or rodents. Nevertheless, we were able to keep most materials separate by midden component. Though items from 18-24 inches are lumped in distribution charts, they are separated by midden component in discussion when necessary.

In considering the artifact distributions and interpretations drawn from them, it should be noted that the thickness of midden is not uniform, even in the E-trench area. At depths in excess of 48 inches, volume of midden per 6 inch level is reduced, as is the total number of artifacts recovered. This reduction in sample size sharply limits our picture of artifact inventory during the early period of occupation at the site, and lessens the certainty of inference concerning it.

Table 1 summarizes the distribution by general class of all artifacts recovered on the surface and in the E-trench area. In general, little change is represented in artifact inventory through time.

Projectile Points

A total of 235 complete and fragmentary projectile points was recovered from site CA-Las-194. Of these, 228, or about 97 per cent, are of obsidian. The remaining 7 are of non-glassy, silicious material, either chalcedony or chert. The presence of several obsidian sources in the vicinity, notably near Cowhead Lake, at the north end of Surprise Valley, and in the Warner Mountains above Lake City, probably account for the predominance of this material.

TABLE 1

Total Artifact Distribution, E-Trench and Surface
(Depth in inches)

	Sur-face	0-6	6-12	12-18	18-24	24-30	30-36	36-42	42-48	48-54	54-60	60-66	66-72	72-78	78-84
Projectile points	54	25	20	30	12	18	20	16	15	5	1	4	5		
Knives	16	11	9	10	9	8	5	9	9	5	3				
Scrapers	4	11	4	5	3	6	5	4	5	2	1	1			
Drills	2		2	1			1		1						
Gravers		1		1											
Manos		5	5	4	2	5	6	4	4	4	1				
Metates		12	3	7	3	3	3	2	3		1	3			
Pestles			1	2	2			1	1						
Mortars		4	1		1		1								
Hammerstones			1				1	1	1						
Ochre-stained cobble				1											
Bone & antler tools		2	3	1		3	5	2	2	1		1	2		2
Bone beads & tubes		1	2	1	3	10	6	1							
Misc.bone & antler		1	4		1	1	1	1	2		1				
Shell beads					2	1			2						
Items of European manufacture	4														
Totals	80	73	55	63	38	55	54	41	45	17	8	9	7		2
Grand total	547														

The method used in classifying projectile points is essentially the same as that suggested by Krieger (Cressman and Krieger 1940:41) and Heizer and Baumhoff (1961:123). The specimens were spread out on a table and grouped according to size and shape. In general, terminology follows the binomial system employed by Harrington (1957), Heizer and Baumhoff (1961), and Lanning (1963), and discussed in detail by Clewlow (1967). The only exceptions are the numbered categories (Types 1-6) that include projectile points which are not clearly related to previously established types yet which occur in such small numbers that they do not warrant the establishment of new, named types. It is likely that further excavation at site CA-Las-194 or other Surprise Valley sites will produce new data which will either tie these points to already established categories or justify new ones.

Table 2 is a descriptive summary of the metric characteristics of the points. Both this table and the written descriptions that follow refer to all the classifiable projectile points found at CA-Las-194, including those from the surface. Appendix II provides data on provenience and weight of each projectile point recovered.

Bare Creek Eared (7 examples, all obsidian; pl. 2a-f, fig. 9a). Large points, lenticular in cross section, with long, relatively narrow triangular blades and slight, square shoulders. The short stems are straight-sided or slightly tapering with broad, deep basal notches. The "ears" formed by the basal notch are short and stubby. The points are generally well made, the surfaces being covered with roughly parallel oblique flake scars which originate at the edges of the blade and meet along the median line. Blade edges are slightly convex. The edges of the ears are roughened on some specimens, probably by grinding. At least one specimen appears to have been resharpened.

Elko Series. After Heizer and Baumhoff (1961) and Lanning (1963). These are large, triangular points, short-stemmed and broad, with a lenticular to flat appearance in cross section. Blades have straight to slightly convex sides.

Elko Eared (41 examples, 40 obsidian, 1 silicate; pls. 2g-x, 3a-n, fig. 9b-i). This is the most common projectile point type at CA-Las-194, being corner-notched with expanding stems basally-notched to produce a characteristic eared appearance. Some specimens are serrated. Three intergrading subtypes can be distinguished on the basis of shape: (1) both basal and corner notches broad and deep, giving the ears of the point a stubby, nub-like appearance; (2) similar to (1), though ears tend to be shorter, with outside edges more parallel to the axis of the point; (3) corner notches very narrow and deep, basal notches relatively shallow and V-shaped, and ears tend to be relatively long and pointed. These subtypes are distinguished for descriptive purposes only, they appear to have no temporal or stratigraphic significance.

TABLE 2

Projectile Points from Site CA-Las-194

	Weight (gr.)			(Length (cm.)			(Width (cm.)		
	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
Bare Creek Eared	13.90	6.75	9.20	9.60	5.40	6.80	2.70	2.00	2.40
Elko Series									
Elko Eared	9.60	2.20	4.04	6.90	3.00	4.60	3.10	1.80	2.45
Elko Corner-notched	5.50	*1.80	3.34	4.80	3.40	4.13	2.70	1.80	2.28
Elko Contracting Stem	-	-	3.10	-	-	4.50	2.10	2.10	2.10
Northern Side-notched	4.00	2.20	2.80	4.90	3.20	3.70	2.40	1.70	2.14
Humboldt Concave Base	-	-	-	-	-	3.60	2.10	1.40	1.70
Little Lake Series									
Pinto Sloping Shoulder	-	-	6.80	-	-	4.10	-	-	2.40
†Pinto Single Shoulder	2.60	1.70	2.15	3.20	2.80	3.00	1.90	1.60	1.75
Willow Leaf	4.70	3.80	4.25	4.90	4.30	4.60	1.80	1.60	1.70
Rose Spring Series									
R.S. Corner-notched	1.90	0.90	1.35	3.30	2.30	2.70	2.70	1.40	1.70
R.S. Contracting Stem	0.50	0.50	0.50	2.10	1.70	1.93	1.30	0.90	1.10
Eastgate Expanding Stem	-	-	1.50	-	-	2.90	2.70	1.70	1.95
Surprise V. Split Stem	1.30	0.40	0.94	2.80	1.80	2.30	1.90	1.30	1.58
Cottonwood Leaf Shaped	1.30	1.00	1.20	3.20	2.50	2.80	1.20	1.10	1.18
Unnamed Types									
No. 1	-	-	2.10	-	-	3.50	-	-	2.20
No. 2	-	-	8.50	-	-	5.30	-	-	2.40
No. 3	0.60	0.60	0.60	2.00	1.80	1.90	1.00	0.90	0.95
No. 4	-	-	5.90	-	-	6.00	-	-	1.80
No. 5	0.90	0.80	0.85	2.60	2.40	2.50	1.40	1.00	1.20
No. 6	-	-	-	-	-	-	-	-	2.50

* ECN No. 14, 1.80 gr., next lightest ECN 2.70 gr.

† Low average weight probably due to small sample. The 1.70 gr. piece is worn and abraded. It may have been larger at one time, or may be a reject.

Elko Corner-notched (14 examples, all obsidian; pl. 3o-y, fig. 9k-m). Similar in general form to the Elko Eared, this point is distinguished from the latter by the shape of the base. Corner-notched forms have straight or slightly convex bases, while the eared forms are concave.

Elko Contracting Stem (2 obsidian; pl. 3z, fig. 9n). Corner-notched, with a narrow, tapering stem. The tangs may be broader and more pronounced in this form than in others of the Elko series. The stem on one specimen is convex, the other is bifurcate.

Northern Side-notched (6 examples, all obsidian; pl. 4a-f). After Grunn (1961:129-131). [Riddell (1960:18) uses the term Madeline Dunes Side-notched to refer to the same type.] Large triangular points, side-notched, with straight to convex sides, lenticular in cross section. The notches begin low on the side of the point rather than at the corner, and extend straight or diagonally upward into the body of the point. These points may intergrade with the Elko Corner-notched.

Humboldt Concave Base (9 examples, all obsidian; pl. 4g-o). Lanceolate points with straight to slightly convex sides and with indented to markedly concave bases; lenticular in cross section. Some examples are diagonally flaked, with the scars meeting along a median ridge. The fact that all examples of this type are incomplete makes separation into sub-categories A and/or B virtually impossible.

Little Lake Series. After Harrington (1957). Large, roughly-made points with straight to convex sides, lenticular to plano-convex in cross section. Both stemmed and unstemmed forms are present.

Pinto Sloping Shoulder (1 obsidian; pl. 4p). A large point, shouldered and stemmed, with a slightly indented base. Shoulders are rounded.

Pinto Single Shoulder (2 obsidian; pl. 4q, fig. 9o). Roughly triangular, single-shouldered, basal-notched points. One of these points is poorly made, the other is well finished.

Willow Leaf (2 obsidian; pl. 4r,s). Large, relatively narrow points with slightly convex sides. Specimens have maximum width midway between tip and base. The base on one example is rounded, that on the other is pointed.

Surprise Valley Split Stem (13 obsidian; pl. 4t-e', fig. 9p). Small points, basically triangular in shape and corner-notched. The stems expand slightly and are notched at the base. Blades have straight to convex edges and are lenticular in cross section. Though these points are similar to Heizer and Baumhoff's Eastgate Split Stem, we note that in describing the latter type the

authors state, "If the stem were not notched, the points would be classed with the Eastgate Expanding Stem points" (Heizer and Baumhoff 1961:128). Were the Surprise Valley Split Stem points in our sample not notched, they would still not fall within the range of points that we classify as Eastgate Expanding Stem at the Rodriguez site. More specifically, Surprise Valley Split Stem points lack the quality of workmanship, the remarkably thin cross section, and the squared tangs of the Eastgate series points. Further, they tend to be corner-notched rather than basal-notched, as are Eastgate type points. However, Heizer and Baumhoff (loc. cit.) also call attention to the similarity between Eastgate Split Stem and Elko Eared points, the former appearing to be simply a smaller variety of the latter. The same relationship is apparent between Surprise Valley Split Stem and Elko Eared points at the Rodriguez site.

Rose Spring Series After Lanning (1963). These small, triangular points are short-stemmed and lenticular to flat in cross section.

Rose Spring Corner-notched (16 examples, 15 obsidian, 1 silicate; pl. 5a-o, fig. 9q). Small triangular points, corner-notched, with rounded, expanding stems. The blades have slightly convex edges. Rose Spring Corner-notched points differ from those of the Eastgate series in that the former are not quite as well made, are thicker in cross section, and do not have the characteristic tanged appearance of the latter.

Rose Spring Contracting Stem (3 examples, all obsidian; pl. 5p-r). Very small, asymetrical triangular points with square shoulders and short, tapering stems. These points are quite poorly made in comparison with the Rose Spring Corner-notched pieces.

Eastgate Expanding Stem (8 examples, 6 obsidian, 2 silicate; pl. 5s-z). After Heizer and Baumhoff (1961). Small, triangular points, with a rather large length:width ratio. Corner or basal notches give the point a tanged appearance. Stems expand slightly; bases may be convex, straight, or slightly notched. Points of this type are characteristically quite thin in cross section. Blades are straight-sided or slightly convex. These points are notable for the care and precision with which they are made.

Cottonwood Leaf Shaped (3 obsidian; pl. 5a'-c'). Small, sub-lanceolate points with convex sides, widest between the base and mid-point Bases are rounded. Points are lenticular in cross section and carefully flaked.

Type No. 1 (1 obsidian; pl. 5d'). Monderately large, triangular point with broad notches on one side and in the base. The point is quite thin, almost flat in cross section, and well made.

Type No. 2 (1 obsidian; pl. 5e'). A large, single-shouldered projectile point with a straight-sided, basally-notched stem. Plano convex in cross section and widest at the mid-point.

Type No. 3 (2 obsidian; pl. 5f',g'). Small triangular points with slightly rounded bases. There is some evidence of side-notching. While these pieces bear a slight resemblance to the Desert Side-notched type, a firm judgment is difficult because of the poor workmanship which they exhibit. Given the fact that no clear Desert Side-notched points were recovered during work at site CA-Las-194, it seems best to leave these specimens unassigned until further information is available.

Type No. 4 (1 obsidian; fig. 9r). A single lanceolate point, lenticular in cross section and basal-notched. The sides are convex, widest between the mid-point and the tip. Along the lower one-third of the blade the edges have been smoothed, probably by grinding. This point is quite similar in appearance to the McKean series, defined by Mulloy (1954)

Type No. 5 (2 obsidian; pl. 5h',i'). Small triangular points with square shoulders and long, straight-sided stems. The bases of the stems are straight. These points are similar in form to the Rose Spring Corner-notched specimens, but the length and squared appearance of the stem set them apart from the latter group.

Type No. 6 (1 obsidian; pl. 5j'). A carefully flaked, triangular point with sloping shoulders and a long, slightly expanding basally-notched stem. The sides of the blade are straight and the tangs have a squared appearance.

Stratigraphic Relationships

In view of their relative abundance in the midden at site CA-Las-194, and their appreciable sensitivity as time-markers in the Great Basin as a whole, projectile points have been a primary factor in the interpretation of stratigraphic relationships at the Rodriguez site. However, the reader is cautioned that the temporal periods inferred from projectile points, as well as other artifact distributions, are provisional and subject to modification based on any new data which may be derived from the site.

Data on the distribution of points recovered from the E-trench and from the general surface of the site have been summarized in Table 3. In reviewing these data, and in the summary below, it should be remembered that the contact between the brown and gray midden components falls in the 18-24 inch level in the E-trench area. Regardless of the fact that specimens are lumped by arbitrary level in Table 3, those from the 18-24 inch level, with few exceptions, can be ascribed with certainty to one or the other midden component.

TABLE 3

Distribution of Points from E-Trench and General Surface of Site
(Depth in inches)

	Sur-face	0-6	6-12	12-18	18-24	24-30	30-36	36-42	42-48	48-54	54-60	60-66	66-72	Total
Bare Creek Eared	1		1						1			2	2	7
Elko Series														
Elko Eared	7	2	2	6	1	3	6	6	8					41
Elko Corner-notched	2	2		3	2		2	2	1					14
Elko Contracting Stem					1				1					2
Northern Side-notched				3			1	1				1		6
Humboldt Concave Base	7					1		1						9
Little Lake Series														
Pinto Sloping Shoulder	1													1
Pinto Single Shoulder													1	1
Willow Leaf									1					1
Surprise V. Split Stem	2	2	2	3	1		2			1				13
Rose Spring Series														
R.S. Corner-notched	5	6	3	2										16
R.S. Contracting Stem	3													3
Eastgate Expanding Stem	4	2	1		1									8
Cottonwood Leaf Shape				1		2								3
Unnamed Types														
No. 1							1							1
No. 2								1						1
No. 3	1				1									2
No. 4												1		1
No. 5	1		1											2
No. 6							1							1
Unclassifiable frags.	20	11	10	12	5	12	7	5	3	4	1		2	92
Totals	54	25	20	30	12	18	20	16	15	5	1	4	5	225

Bare Creek Eared and Type No. 4 (McKean-like) points are restricted to the lower portion of the brown midden. Little Lake and Northern Side-notched forms are found throughout the brown midden, with the latter type apparently persisting in the lower portion of the gray midden. Elko points are found in the upper portion of the brown midden. Humboldt points and unnamed Types Nos. 1, 2, and 6 appear to be restricted to the upper portion of the brown midden, though the small sample makes a firm statement difficult. Also present in the upper part of the brown midden are the first of the small types—the Surprise Valley and Cottonwood Leaf Shape points. These forms persist through the gray midden. The remainder of the small points at the Rodriguez site (Rose Spring, Eastgate Series, and unnamed Types 3 and 5) are restricted to the gray midden.

The only point which is clearly out of place in this sequence is a broken Bare Creek Eared specimen from the 6-12 inch level, whose worn and abraded appearance definitely suggests redeposition.

One further problem is the presence of the Cottonwood Leaf Shape type point in the upper portion of the brown midden, apparently contemporaneous with the earliest of the small projectile points at the Rodriguez site. Data from other sites in the Great Basin, notably Rose Spring, indicate that the Cottonwood Series generally succeeds, rather than precedes, or accompanies the Rose Spring and Eastgate series. Among the explanations which might be offered for its stratigraphic position at CA-Las-194 are: rodent disturbance, incorrect typing of the specimens, and insufficient numbers of specimens to give a clear picture of their temporal distribution. In addition, one might also suggest that the Cottonwood Leaf Shape type represents an intermediate form between the Humboldt Concave Base and the later Cottonwood forms, specifically the Cottonwood Triangular (Clewlow 1967). In this case, Cottonwood Leaf Shape could mark an adaptation of an already existing form (Humboldt Concave Base) for use with the bow and arrow, through a reduction in size and slight modification of the shape of the base. Such a suggestion is, of course, conjectural and subject to future testing.

In view of the above outlined distribution of projectile points, we have defined three successive phases at site CA-Las-194. Distribution of other artifact types will be summarized in terms of these phases. Definition of phases by depth within the brown midden is applicable to the area of the E-trench only, and is subject to modification (as are the phases themselves) should there be further work done at the site. The phases are as follows:

Rodriguez III — The gray midden. Elko, terminal Northern Side-notched, Surprise Valley, Rose Spring Eastgate Series, Cottonwood Leaf Shape, and unnamed Types 3 and 5;

Rodriguez II	The upper portion of the brown midden (to a depth of 54 inches). Elko, Northern Side-notched, Humboldt Concave Base, Little Lake, terminal Bare Creek, Surprise Valley, Cottonwood Leaf Shape, and unnamed Types Nos. 1, 2, and 6;
Rodriguez I	Lower Portion of the brown midden (54 inches to subsoil). Bare Creek, Little Lake, Northern Side-notched, and Type No. 4.

Projectile Point Weights

The problem of "large" versus "small" projectile points, their stratigraphic relationships and functional significance, has been debated at some length by authors involved in Great Basin Research. Because of this interest, we have included the following remarks on pertinent data from site CA-Las-194.

Projectile points from the Rodriguez site fall into two groups or clusters by weight: small, with weights of 1.9 grams or less, and large, with weights in excess of 2.2 grams. No examples of intermediate weight were found, with the exception of the single Type No. 1 point, an apparently aberrant form weighing 2.1 grams.

The remaining point types, established with some attention to size and weight but primarily on the basis of shape, conform quite well to the weight dichotomy. Eastgate, Rose Spring, Surprise Valley. Cottonwood. and Types Nos. 3 and 5, all fall within the small category; while Elko, Little Lake, Northern Side-notched, Bare Creek, and Types Nos. 2, 4, and 6 are clearly large. Humboldt Concave Base cannot be clearly assigned because of a lack of complete specimens.

Two points, defined as large on the basis of shape, fall within the small-by-weight category: one is an Elko Corner-notched (1.8 gr.), and the other a poorly made Pinto Single Shoulder specimen (1.7 gr.). In spite of the fact that these pieces do not conform precisely to the metric definition large, they are considered as such because of their overriding formal similarity to the types with which they are grouped.

Types defined as large occur throughout the midden at the Rodriguez site. Small points make their first appearance in Rodriguez II in limited numbers, but are of increased importance in Rodriguez III, where they make up more than 50 per cent of the total sample of typable points. Clearly the sequence indicates increased popularity of smaller types in the later phases of the site, combined with a corresponding decline in large points.

While there are some problems with distinctions between "large" and "small" in various areas of the Great Basin, a similar shift in popularity from larger to smaller point types has been recorded at several sites; for example, Rose Spring (Lanning 1963), Wagon Jack Shelter (Heizer and Baumhoff 1961), South Fork Shelter (Heizer, Baumhoff and Clewlow 1968), and the Karlo site (Riddell 1960). In their report on Roaring Springs Cave, in the nearby Catlow Valley, Cressman and Krieger (1940:41-47) describe a transition from large to small points which corresponds closely to that at CA-Las-194, even to the metric definition of the terms "large" and "small."

In accounting for this trend, some authors have followed Cressman and Krieger (1940:46-47) in proposing that the large forms are associated with the atlatl, while the small forms are indicative of the use of the bow and arrow. Thus the trend is seen as indicating a gradual shift from atlatl to bow and arrow (cf. Lanning 1963:249; Clewlow 1967:145-146). Granting that this is the case, data from CA-Las-194 can be viewed in support of the trend, showing a period (Rodriguez I) when only the atlatl was in use, followed by the introduction and limited use of the bow and arrow (Rodriguez II), and thereafter a gradual increase in its popularity and a corresponding decline in that of the atlatl (Rodriguez III).

Knives

Ninety-four knives were recovered from the excavation at CA-Las-194. These artifacts are distinguished from projectile points, which they resemble in over-all form, by the fact that they are generally larger and heavier. Sixty-two (66 per cent) of the knives are made of obsidian, while thirty are of siliceous material. Two basalt specimens were found. The greater use of basalts and crypto-crystalline silicates in the manufacture of knives as compared with projectile points may be due to the less brittle character of these non-obsidian materials.

Attempts to categorize knives by type have been hampered by the low number of complete specimens, only four having been recovered. However, a provisional typology has been attempted, using thirty pieces (table 4).

Type 1 (23 specimens, 14 obsidian, 8 silicate, 1 basalt; pl. 6a-f). This type is similar to Lanning's (1963:255) Type 2. Given a greater number of complete specimens, it might have been subdivided. Implements probably ranged in size from 4 to 8 cm. in length, 2 to 4 cm. in width, and 5 to 18 grams in weight. In shape they were probably pointed, with straight or slightly convex sides, and with the greatest breadth either just above the base or at the mid-point. Bases are straight to convex. Most examples are relatively thin in cross section and well made, with a fine edge retouch. It is interesting to note that some of these specimens are broken diagonally

TABLE 4

Depth Distribution of Knives from E-Trench
(Depth in inches)

	Sur-face	0-6	6-12	12-18	18-24	24-30	30-36	36-42	42-48	48-54	54-60	60-66	66-72
Type 1	3	3	1	3	2	4	1	2	2	-	1	1	-
Type 2	-	-	-	-	1	1	-	1	1	1	1	-	-
Type 3	-	-	-	-	-	-	-	1	-	-	-	-	-

across the middle of the blade. This may be indicative of hafting technique, since knives may have tended to break along the margin of the haft if they were accidentally struck or dropped. Knives of this type were found in moderate yet consistent numbers throughout the midden, with smaller specimens tending to occur stratigraphically higher than the larger forms.

Type 2 (6 specimens, 5 obsidian, 1 silicate; pl. 6g,h). These are broad, thick knives, ovoid in shape, with rounded bases and convex sides which taper to a point. Complete specimens probably ranged from 5 to 8 cm. in length, 3 to 6 cm. in width, and weighed from 20 to 30 grams. All are roughly flaked, with some retouch near the tips. They appeared only in the lower component of the site.

Type 3 (1 obsidian specimen; pl. 6i). A thick, parallel-sided blade, with a portion of the striking platform still showing at the base. It has been roughly flaked and shows little evidence of retouch after initial shaping. There is some wear along one edge, and the tip is broken. Original weight was about 16 grams. It measures 2.5 cm. wide and is 6.0 cm. long. This specimen is similar to 34 obsidian knives recovered by an ammateur collector during construction of the county road which cuts through the site.

Drills

Seven stone drills were recovered at the Rodriguez site. Of these, five are made of obsidian and two are of basalt. Only three of the specimens are sufficiently complete to be described and typed on a provisional basis.

Type 1 (2 examples, both obsidian; pl. 6j,k). These are somewhat similar to Lanning's (1963:256) type 4 and Cressman's (1942:85-87) type 3. The pieces have long, tapering bits, with irregularly shaped, crudely flaked bases.

Bits are lenticular to plano-convex in cross section. Both specimens were found on the surface of the site.

Type 2 (1 basalt specimen; pl. 61). This piece resembles Cressman's (1942:85-87) type 5. It is carefully flaked over-all. Both the bit and the base are lenticular in cross section. The base is broad and straight-sided, with a slightly convex butt and shallow side notches. It was found at a depth of 0-6 inches.

Gravers

These two pieces (pl. 7i,j) are sharp-tipped, slightly asymmetrical, triangular points. One example is the reworked tip of a silicate projectile point (probably Rose Spring Corner-notched), while the other is on the edge of a broken obsidian blade fragment. The tip on the former shows some evidence of use, that on the latter, none. Both specimens exhibit wear in the angle at the base of the graver tip. The obsidian specimen is from 0-6 inch depth; the silicate piece, from -12 inches.

Flake Scrapers (pl. 7g,h)

A total of 38 flake scrapers were found at site CA-Las-194. Twenty-seven of these are of obsidian, while the remainder are of silicate. No consistent patterning in size or shape could be discerned. The implements may be distinguished from utilized flakes only in that they have edges which have been purposefully retouched. They occur throughout the midden.

Notched Scrapers (pl. 7a-f)

These implements may be described as flake scrapers which have a concave cutting surface, intentionally shaped. With the exception of this feature, they are irregular in form. Ten examples were recovered, nine of obsidian and one of silicate.

Core Scrapers

Two specimens of this type were found, one of obsidian and one of quartzite. Only the obsidian piece is sufficiently complete to be described. It is roughly discoidal (4.5 x 5.4 cm.) and lenticular in cross section (1.5 cm. maximum thickness). Some cortex remains on both sides of the piece. Each of the scrapers is characterized by broad percussion flaking over-all, with a slight pressure retouch along the edges. The edges are battered from use in such fashion as to indicate that these tools may have been used for light duty cutting or chopping as well as scraping.

TABLE 5

Depth Distribution of Scrapers from E-Trench

	Sur-face	0-6	6-12	12-18	18-24	24-30	30-36	36-42	42-48	48-54	54-60	60-66	66-72
Flake Scrapers	3	7	3	5	1	3	4	3	5	2	1	1	-
Notched Scrapers	1	4	1	-	2	2	-	-	-	-	-	-	-
Core Scrapers	-	-	-	-	1	-	-	1	-	-	-	-	-
Plano-convex Scraper	-		-	-	1	-	-	-	-	-	-	-	-

Plano-convex Scraper

A single example, made of silicate, was found at a depth of 23 inches. It is 7.5 cm. long, 4.2 cm. wide, and 3.0 cm. thick. Roughly percussion flaked over-all, it has a slight retouch on both the plane and convex surfaces.

Utilized Flakes

Flakes that have not been intentionally shaped in accordance with a recognizable pattern, but which exhibit slightly retouched edges, are included in this category. They are distinguished from flake scrapers in that their retouch cannot be definitely called purposeful. Utilized flakes occur throughout the midden and are slightly more frequent at all levels than are flake scrapers.

Grinding Tools

We deal here only with artifacts recovered in the process of excavation. Distribution of tools by level in the E-trench is presented in Table 6. Both complete and fragmentary specimens are counted as whole artifacts.

Manos. Forty-four manos were found in the midden at CA-Las-194. All were made of basalt, a material readily available in stream washes in the immediate vicinity of the site. The classification used here follows that of Harrington (1957:43-44) in distinguishing between shaped and unshaped

manos. We have chosen to use this system because of its simplicity, and because other potential descriptive criteria (e.g. number of grinding surfaces, specific shape, etc.) fail to show any consistent temporal pattern.

Shaped manos (23 examples; pl. 8a,b). These are basalt cobbles with edges carefully shaped by pecking and grinding. They vary in over-all form from squarish to subrectangular, though three specimens are circular or slightly oblong. All are bifacial, with flat to convex grinding surfaces, and all but one are flat to biconvex in cross section. The sole exception is triangular or wedge-shaped. On one piece the grinding surfaces are at right angles to one another. Several of the shaped manos exhibit markedly flattened ends, perhaps through secondary use as pestles. Riddell (1960: 35) attributes a similar wear pattern on manos from the Karlo site to use as hammerstones. Size range: 9.0-15.5 cm. in length, 7.0-9.9 cm. in width, and 2.5-6.0 cm. in thickness.

Unshaped manos (16 examples; pl. 8c,d). These are irregularly shaped basalt cobbles, unmodified except for the presence of one or more grinding surfaces. They vary in form from circular to elongate or subrectangular. Eight specimens are unifacial, the remainder are bifacial. Five pieces show additional flattening at both ends, similar to that found on some of the shaped manos. Size range: 5.8-13.0 cm. long, 5.8-10.5 cm. wide, and 3.6-7.2 cm. thick.

Both shaped and unshaped manos were found throughout the midden at the Rodriguez site. Though the sample is small, there seems to be a tendency for shaped forms to be slightly more popular than unshaped.

Metates

Forty-two metates, whole and fragmentary, were recovered. Description and classification of these pieces are somewhat hampered by the fact that only one complete specimen was found. Nevertheless, they may be grouped according to the system employed by Haury (1950), which distinguishes between slab and block metates. The former have a thickness of less than 5 cm., while the latter are more than 5 cm. thick. Haury's subcategories - shaped and unshaped - have been omitted. Most specimens from site CA-Las-194 are not sufficiently complete to allow this distinction to be made.

Slab metates (22 examples; fig. 10a). All pieces in this category are fragmentary. Two appear to have shaped edges, the others are definitely unshaped. Nine are bifacially ground and 13 are unifacial. Working surfaces appear to be circular or slightly ovoid. One specimen is sufficiently complete to allow measurement: 23 cm. long, 4 cm. thick, 21 cm. wide. It has a grinding surface 18.0 cm. in diameter and 1.2 cm. in maximum depth.

TABLE 6

Depth Distribution of Ground Stone Artifacts from E-Trench
(Depth in inches)

	0-6	6-12	12-18	18-24	24-30	30-36	36-42	42-48	48-54	54-60	60-66
Manos											
Unshaped	3		1	1	2	1	3		3		
Shaped	2	5	2		2	4	1	4		1	
Frag.			1	1	1	1			1		
Metates											
Slab	6	2	4		2	3		3		1	1
Block	5		2	2	1		2				2
Frag.	1	1	1	1							
Pestles		1	2	2			1	1			
Mortars											
Bowl-shaped	2	1				1					
Block	1			1							
Frag.	1										

Block metates (14 examples; fig. 10b). One complete specimen was found, though the remainder are not as fragmented as the slab metates. None bears evidence of shaping or other modification beyond use in grinding. All are unifacial, with roughly circular grinding surfaces varying from 16 to 20 cm. in diameter. These surfaces are flat to slightly concave, with a maximum depth of 2 cm.

Both slab and block metates are found throughout the deposit at the Rodriguez site. While slab metates are the more common type, and therefore apparently the more popular, their numerical superiority might also be accounted for in that the slab metate seems more likely to break in several smaller fragments than does the larger, bulker, and presumably sturdier block form. Thus the presence of a number of slab metate fragments from a given level, each said to represent a separate artifact, may in fact mark the result of the breakage of a single metate and the scattering of its pieces.

A check of both slab and block metate fragments from all levels indicates that the basalts from which they are made are generally quite varied in appearance, and that few fragments are sufficiently similar to others that they could be said to be pieces of the same single artifact. This fact serves

to strengthen the contention that the slab metates are generally more common than block metates at the Rodriguez site.

Pestles (pl. 8e,f)

Seven basalt pestles were recovered at the site. They are cylindrical in shape and round to slightly oblong in cross section. On all but one example the sides of the pieces have been smoothed by grinding. Ends vary from flattened, with well defined edges, to rounded. A single pointed specimen was found at a depth of approximately 42 inches. Complete pieces are worked at both ends. One pestle, from the 43 inch level, clearly served double duty as a mano, exhibiting a single well ground face on its long axis. Size range: 16-19 cm. in length, 5-9 cm. in diameter.

Pestles were present in both the gray midden and the upper portion of the brown midden, being more frequent in the former. They were absent in the lower portion of the brown midden, though given the small number of pestles from the site as a whole, as well as the relatively low artifact yield from the lower brown midden, it may be that they were in use at that time even though they are not present in our sample. However, the absence of stone mortars from the lower portion of the brown midden tends to negate the latter possibility and to lend support to the idea that the mortar/pestle complex is restricted to the upper portion of the brown and to the gray middens; that is, to Rodriguez II and III phases.

Mortars

Eight stone mortars or mortar fragments were found. All are made of basalt, in most cases of a coarsely visicular nature. Mortars fall readily into two categories, based on external shape: bowl-shaped and block.

Bowl-shaped (5 examples; fig. 10c). These are spheroidal or globular mortars with rounded bottoms. Their shape is primarily the result of stream-rolling and/or weathering, with purposeful alteration of the exterior surface at a minimum. Depressions are U-shaped, with rounded bottoms and slightly concave sides. Inside surfaces are quite smooth near the top of the depression, rougher near the bottom. One fragmentary specimen, from the 0-6 inch level, has a depression which appears to be V-shaped. Depression depth varies from 9-13 cm., diameter from 13 to 17 cm.

Block (2 examples; fig. 10d). These pieces may be distinguished from the bowl-shaped mortars in that they are made from markedly flatter rocks, closely resembling those used for block metates. They differ from the latter in that their working surfaces are pecked and roughened rather than ground smooth. Only one specimen is complete; its measurements are 36 cm. in length,

width, 34.0 cm. and thickness 15.0 cm., with a slightly oblong depression 20.0 by 24.0 cm. in diameter and 4.5 cm. deep.

Stone mortars of both types are found in both the upper portion of the brown midden and in the gray midden. Mortars with V-shaped depressions appear to be restricted to the gray midden, though the evidence is admittedly limited. The presence of a pointed pestle – a type presumably associated with the V-shaped mortar – in the upper portion of the brown midden seems to indicate that both were used at the Rodriguez site at that time. As noted above, the fact that neither pestles nor mortars are represented in our sample from the lower portion of the brown midden tends to indicate that this tool complex was not used by the earliest occupants at the Rodriguez site.

Hammerstones

Four hammerstones were recovered at CA-Las-194. Two are quite similar in form, being subrectangular basalt cobbles, biconvex in cross section. Each is battered on one end and one specimen shows additional use on its edges. One measures 13 cm. long, 8 cm. wide, and 5 cm. thick; the other is slightly larger, being 14x8x6 cm. The first is from the 43 inch level, the second from 40 inches.

Of the remaining two pieces, one is a cylindrical basalt cobble, 13.5 cm. long, 5.5 cm. wide, and 5.0 cm. thick. Both ends of the piece are rounded and bear evidence of use. It was found at a depth of 36 inches. The last is a basalt cobble fragment, measuring 4.5x6.7x5.0 cm., and recovered at approximately 7 inches. One end is rounded and heavily scarred by battering.

Ochre-stained Cobble

The concave surface of a fist-sized basalt cobble found at approximately 18 inches is covered with a thin deposit of red ochre. This is the only evidence of the use of ochre at site CA-Las-194.

Bone and Antler Artifacts

Artifacts of bone were not as abundant as stone artifacts at CA-Las-194. In all, 61 complete and fragmentary examples of worked bone and antler were recovered from the midden. The occurrence of these specimens is presented by level in Table 7. Despite the small size of the sample, the fluctuation appears to conform to the curve for total refuse (Appendix I), and to reflect the degree of intensity in occupation. Thus, more artifacts were found in the gray and upper brown midden components than in the lower brown component.

The presence of artifacts in the 78-84 inch level resulted from an intrusive cache deposit.

Any statement concerning the occurrence of bone artifacts would be subject to error due to the small size of the sample and, to an unknown degree, preservation. In general, preservation at the site is fair, bone and antler tending to exhibit only moderate demineralization.

TABLE 7

Occurrence of Bone and Antler Artifacts by Level
(Depth in inches)

No Prov.	Surface	0-6	6-12	12-18	18-24	24-30	30-36	36-42	42-48	48-54	54-60	60-66	66-72	72-78	78-84	Total
1	-	4	9	2	4	14	12	4	4	1	1	1	2	-	2	61

Technology. Working in bone involved several simple techniques: cutting and incision certainly required the use of obsidian and/or siliceous flakes, of which utilized examples abound throughout the midden. Smoothing and polishing involved scraping the surface with a flake or grinding on a stone surface, both methods producing parallel striations. Further smoothing or polishing may have been accomplished by rubbing with leather or, more often, resulted from use.

Bone beads. Twenty-one tubular bone beads and bead fragments were recovered from the midden. All share a common method of manufacture whereby a long-bone of one sort or another was scored with at least two circumferential cutting grooves to facilitate snapping of the bone into sections. Three types of beads can be distinguished.

Type I (7 examples; pl. 9a-c). Tubular beads made from the smaller long-bones of rabbits or rodents. The range in diameter is 0.30-0.40 cm., with an average diameter of 0.36 cm. The range in length is 1.50 to 1.80 cm., with an average length of 1.64 cm. Little or no further modification of the bone tube sections is indicated, as most of the specimens still bear unaltered cutting scars and/or an occasional irregular edge where the cutting process was faulty. Several specimens, however, show varying degrees of rounding and polishing at the edges, although much of this smoothing is probably due to use.

Type IIa (10 examples; pl. 9d-f). Tubular beads manufactured from rabbit tibiae in the same manner as Type I, and with the same range of amount

of further modification of the edges and surfaces. However, polish through use is evident in all specimens, even in the cases of items with irregular edges. The range in maximum diameter is 0.40-0.70 cm., with an average diameter of 0.59 cm. The range in complete lengths is 1.1-4.0 cm., with an average length of 3.0 cm.

Type IIb (4 examples; pl. 9g). Tubular beads of bird bone closely resembling those of Type IIa, with a range in diameter of 0.40-0.60 cm. and an average diameter of 0.48 cm. The two specimens allowing measurement of complete lengths are 1.7 and 2.3 cm. respectively. One specimen exhibits very crude workmanship; while both ends bear marks of attempts to cut a groove, the edges are irregular and unmodified. As no signs of polish or wear are present, it may have been lost or discarded shortly after manufacture.

A rabbit tibia section (LMA 1-169827) 6.5 cm. long and 0.7 cm. in diameter was found in the 24-30 inch level. Both ends are irregular with no signs of cutting grooves. The surface has numerous longitudinal striations and considerable polish, as do the ends, presumably from use. Its dimensions would suggest that it might be placed in Type IIa, but the lack of cutting grooves sets it apart from the other tubular objects under discussion. It may have been an ornament, or even a pipe stem, and is shown in Figure 11a.

Types I, IIa, and IIb have been referred to as tubular beads. This designation is certain for Type I and relatively certain for the others. The longest examples of Type IIa could have served as very short pipe stems, but the range of the rest of the type, along with the absence of pipes from the site, support their being referred to as ornaments, presumably beads.

TABLE 8

Occurrence of Bone Beads by Level
(Depth in inches)

Type	No Prov.	0-6	6-12	12-18	18-24	24-30	30-36	36-42	42-48	48-54	54-60	60-66	66-72	72-78	Total
I				1	2	2	2								7
IIa	1	1			1	4	3								10
IIb						3	1								4
Total															21

It is interesting to note that the bead types cluster in the upper brown midden component (Rodriguez II) and thus may have a limited temporal range. However, it is just in this area that the concentration of bone artifacts is greatest, and thus a sampling error could account for their absence before and after this point in time.

Bone Tubes (fig. 11b-d)

Three fragments of tubes made from the long-bones of animals the size of a bobcat or porcupine were recovered. Their manufacture employed the usual circumferential cutting to produce the tube, which was further modified by scraping and rubbing to round the edges and polish the surface. Their lengths range from 1.9 to 2.0 cm., while estimates of the original diameters of two specimens are 1.2 and 1.5 cm. The remains of a third specimen are only sufficent to suggest a diameter in excess of 1.5 cm.

Two of the three specimens bear incised decoration on their surfaces. Specimen LMA 1-169841 has an incised circumferential groove 0.3 cm. from each edge, with short perpendicular lines about 0.35 cm. apart running from the edge of the tube to the circumferential grooves. The second decorated fragment (LMA 1-169823) has two vertical series of short (0.20-0.25 cm.) diagonal nicks which presumably occurred on the entire surface of the complete tube. The third fragment (LMA 1-169804) is undecorated.

The form, workmanship, and decoration of the bone tubes suggest ornaments of some sort, perhaps large beads.

A poorly preserved fragment of incised mammal bone (LMA 1-169852) which may have been a tube of unknown length, was found in the 42-48 inch level (fig. 11e). It, too, was manufactured from the long-bone of a small mammal about the size of a rabbit or porcupine, and has an estimated original diameter of approximately 0.8-1.0 cm. No original edges of the object remain. Despite the destruction of most of the surface through spalling from the effects of fire, the signs of longitudinal scraping and polishing are unmistakable. A series of short, parallel, incised nicks, perpendicular to the long axis of the fragment, decorate the surface, probably very like the decoration of specimen LMA 1-169823 described above. However, the exact nature and function of the object has not been determined.

Bone "Hooks" (fig. 11h-k, pl. 9h,i)

Riddell (1960:77,fig. 17k) describes a small, sharpened bone object from the Karlo site which he suggests was mounted on a stick and used to hook rodents in their burrows. Cressman (1942:66) suggests that a similar object from Catlow Cave was employed in the ball and pin game.

TABLE 9

Dimensions of Bone Tubes

LMA No.	Length (cm.)	Diameter (cm.)	Decoration
1-169804	2.4	ca. 1.5	
1-169823	2.0	ca. 1.2	Present
1-169841	1.9	1.5+	Present
1-169852	2.2	ca. 0.9	Present

TABLE 10

Depth Distribution of Bone Tubes

LMA No.	6-12	12-18	18-24	24-30	30-36	36-42	42-48	48-54	54-60	60-66	66-72
1-169804	x										
1-169823	x										
1-169841						x					
1-169852							x				

x = present

Bone "Hooks" (cont'd.)

Four similar objects were recovered from site CA-Las-194; two (LMA 1-169824 and LMA 1-169856) were of well sharpened and shaped mammal bone splinters. Specimen LMA 1-169856 has an evenly ground and rounded base, while both show marked polish through use. One of these (LMA 1-169856) bears several grooves across the midsection which might relate to the binding of the point to the stick, as suggested from grooves on the Karlo specimen. Two cruder examples, almost certainly intended and employed in a similar manner, are simply fortuitously sharp mammal (LMA 1-169864) and bird bone (LMA 1-169822) fragments exhibiting clear signs of polish from use.

TABLE 11

Description and Occurrence of Small Bone Hooks

LMA No.	Depth (in.)	Length (cm.)	Width (cm.)	Thickness (cm.)	Material
1-169824	0- 6	4.0	0.35	0.15	Mammal bone
1-169856	60-66	4.0	0.70	0.25	Bird bone
1-169822	30-36	2.9	0.40	0.10	Mammal bone
1-169864	42-48	2.2	0.40	0.15	Mammal bone

Bone Awls

Seventeen complete awls and awl fragments were recovered from the Rodriguez site.

L-shaped scapula awls (pl. 9m,n). One complete specimen and one fragment were recovered. Manufacture involved removal of the blade area and grinding of the spine or medial ridge to smooth it and produce a point. The characteristic "handle" consists of the base of the medial ridge and a carefully shaped remnant of an adjacent blade. Polish through use is present on the handle and body of each specimen. One example (LMA 1-169865) was recovered from the fill of Feature 24.

TABLE 12

Dimensions of L-Shaped Scapula Awls

LMA No.	Length (cm.)	Maximum diameter of Shaft (cm.)	Width at Handle (cm.)
1-169832	13.7	1.5	3.0
1-169865	8.7+	1.2	3.0+

Three awl-tips, concave-convex in section, were recovered; that is, the concave surface represents the internal surface of the bone. These are very similar to the ends of the scapula awls, suggesting that these tips might be tentatively typed as scapula awls.

The two L-shaped awls occurred in the upper component of brown midden and may have been confined to that time period, though the small size of the sample makes this speculative. (See Appendix III.)

Radius awls. Two awls made from the radii of the bobcat (Lynx rufus) were found. Only one specimen (pl. 9o) is complete, measuring 12.8 cm. in length. The tip shows clear evidence of having been ground and scraped to produce the point. Both awls were found in association with Burial 1, and were apparently employed as pins in securing the shroud. Though they were recovered from the 66-72 inch level, their association with Burial 1 indicates that they date from the early upper brown midden.

Rib awl (pl. 9p). A single example (LMA 1-169834) of an awl made from a section of artiodactyl rib was recovered from the 6-12 inch level. Its measurements are 7.3+ cm. in length and 1.6 cm. width at the base. The base was neatly sawed to remove the desired segment from the rib, and the tip bears numerous deep, crossing longitudinal striations caused by grinding and scraping to produce a point. Moderate polish through use is present on the base and body of the awl.

Splinter awls (pl. 9q). Fragments of artiodactyl long-bones, with little or no modification beyond the grinding of the tip to produce a point, were recovered. The four specimens range in length from 7.00-12.00 cm., with an average length of 9.47 cm. The lateral edges and irregular bases or grips show a marked degree of wear and polish through extensive use. Only one example (LMA 1-169816) shows an attempt to modify the base by moderate grinding of the jagged end.

Tips. In addition to the above, five untypeable examples of the ground and polished tips of awls of artiodactyl long-bone were recovered. They are listed in Table 13 along with the three possible scapular awl tips and the typeable awls.

Scapular Saw (pl. 9r)

A single, poorly preserved scapula saw (LMA 1-169866) was recovered from a cache (feature 61) at a depth of 82 inches. It measures 13 cm. in length and 4 cm. in maximum diameter. Manufacture involved breaking off most of the blade areas and spine, as well as the articular end, leaving very irregular edges. Along the edge of one of the blade remnants several polished and well worn teeth are observable. The lower one-third of the articular stem exhibits definite polish on the remnants of the spine and both blade edges, through gripping in use. Heizer and Krieger (1956:16-17) discuss various possible uses of the scapula saw, and conclude that these saws were probably employed in cutting grass and tules.

TABLE 13

Depth Distribution of Awls and Fragments
(inches)

Type	0-6	6-12	12-18	18-24	24-30	30-36	36-42	42-48	48-54	54-60	60-66	66-72	Total
L-shaped scapular awls					1			1					2
Possible scap. awl tips		1	1		1								3
Radius awls												2	2
Rib awls		1											1
Splinter awls	1				1	1	1						4
Untypeable tips		1				3			1				5
Total													17

Rod-like Objects

Five fragments of rod-like antler objects were found. Manufacture involved the abrading of long slivers split or cut from an antler to produce relatively smooth objects, oval in section. Deep longitudinal striations are present on all surfaces. Three of the fragments are tips or ends. Two are bluntly pointed tips (LMA 1-169808c,d) recovered from the 6-12 inch level. Their maximum widths and thicknesses are 0.70 x 0.35 cm. and 0.80 x 0.30 cm., respectively. Since two midsections (LMA 1-169808a,b) with similar dimensions and treatment were also recovered from the same level, and as all four fragments show definite signs of having been subjected to fire, it is quite possible that they represent fragments of the same object. If this is indeed the case, the object can be reconstructed as having been two-ended, with a length in excess of 7.5 cm., the sum of the lengths of the four fragments (fig. 11f).

Similar two-ended bone objects are illustrated and described by Swanson and Sneed (1966:33,fig. 22a,b) for the Shoup Rock Shelters in east central Idaho, with the suggestion that they might have served as blanket pins or gaming pieces. Riddell (1960:65-66,fig. 11d,h) describes and illustrates similar tips as parts of flaking tools. No evidence of wear or striations perpendicular to the long axes of the tips is present on these objects from site CA-Las-194.

The third tip (LMA 1-169815), also of antler, was recovered from the 36-42 inch level, and resembles the others in section and mode of manufacture but has a more rounded or snub end (fig. 11o, pl. 9j). It, too, resembles a blanket pin or gaming piece from the Shoup Rock Shelters (Swanson and Sneed 1966,fig. 22h) and objects from the Karlo site referred to as flakers by Riddell (1960,fig. 11i). Although striations are present at the tip, they are few in number and their shallowness suggests abrasion in finishing. It, too, may have been two-ended.

A third midsection (LMA 1-169813), from an object of characteristics and dimensions similar to the others, cannot be definitely reconstructed. It was recovered from the 0-6 inch level.

Spatulate Objects

A tapering antler object fragment (LMA 1-169851), manufactured from a splinter as were the rod-like objects, but plano-convex in section, was found in the bottom of the 36-42 inch level. Its end is snub in outline and beveled downward toward the flat surface. The latter bears serial sets of relatively deep striations cutting across the longitudinal striation near the end, strongly suggesting its having been used as a flaker (fig. 11g). Riddell (1960:65) mentions a similar antler object with a beveled end. The fragment from site CA-Las-194 is 1.1 cm. at its widest part (the end), and 0.3 cm. thick.

A spatulate bone object fragment (LMA 1-169836) was found in the 18-24 inch level. It was manufactured from a wide, thin sliver of long-bone, probably artiodactyl, the shaping and final high polishing resulting in numerous longitudinal striations. It is lenticular in section and 0.3 cm. in thickness. The fragment tapers from a maximum width of 1.1 cm. near the break to a blunted, ground, and "faceted" tip, where its width measures 0.8 cm. The break occurred in a constriction accomplished by grinding a U-shaped groove almost completely around the object, save for a small area on one curved surface. This groove or "waist" was presumably at the middle of the object, only a very small vestige of the other section being preserved. It is quite probable that the object was two-ended, so that the 5.1 cm. long fragment may be reconstructed as a symmetrically shaped and tapered object about 10 cm. long (fig. 11m, pl. 9l). As it does not seem to have been put to heavy use or abraded, and in view of the workmanship and shape, this object may have served as an unmarked gaming piece.

A second fragment of a highly polished, tapering, spatulate bone object (LMA 1-169843) was recovered from the 42-48 inch level, associated with a possible house floor. The fragment is plano-convex in section and 0.2 cm. thick. It tapers from 1.2 to 1.0 cm., both ends being breaks. The surface bears numerous fine longitudinal striations. It was probably very much like

specimen LMA 1-169836; that is, two-ended and tapered toward the ends. Of special interest are the remains of two bands of incision on the curved surface. The areas to be decorated were defined by pairs of finely incised lines across the curved surface. The 0.2 cm. wide bands were then filled with fine crosshatching, some of which crossed the boundaries. The breaks at both ends of the fragment occurred along such boundary lines, and it is the presence of traces of careless notching that allowed for the reconstruction of a third band now missing. The distance between this margin and that of the nearest band is 0.3 cm., while the distance between the second band and the third at the other end is 1.5 cm. (fig. 11l, pl. 9k). The specimen, when complete, could have served as a marked gaming piece.

Antler Flaker

An antler tine flaking tool (LMA 1-169867) was recovered at site CA-Las-194. It bears deep horizontal striations and wear on its snub-rounded working end, evidence of extensive use. The base of the tine was evenly cut from the rest of the antler, and exhibits some rounding through gripping when in use. The flaker is 11.5 cm. long and 2.2 cm. in diameter at the base. It was found at a depth of 82 inches in a cache (feature 61) along with the scapular saw.

Miscellaneous Bone Objects

A small fragment of ground and polished mammal bone (LMA 1-169859), probably artiodactyl, was found at the 54-60 inch level. It has striations on all unbroken surfaces and is rectangular in section. Its small size and lack of diagnostic characteristics make identification of the complete object uncertain.

A second fragment of artiodactyl long-bone (LMA 1-169837), from the 24-30 inch level, has a neat, deep, V-shaped groove across its surface, which may have been an attempt to cut the bone, but the regularity of the groove suggests decoration as its purpose. It was not possible to determine the original nature of the object (fig. 11n).

Another fragment of artiodactyl long-bone (LMA 1-169979), found at the 30-36 inch level, has several chips, rather than fresh, unaltered breaks, that share the over-all polish of the surface. Its use could not be determined (fig. 11p).

Shell

Six items of shell, all artifacts, were recovered from the midden at the Rodriguez site (table 14) Five of these are beads; the sixth is apparently a blank intended for bead manufacture. All represent genera from the Pacific Coast which were traded into the valley.

Olivella sp. (5 examples)

Type 1a. After Bennyhoff and Heizer (1958). Two examples of whole Olivella shells with the spires removed to facilitate stringing were recovered. Both occurred in the 18-24 inch level, the approximate zone of contact of the upper brown and gray midden components. Bennyhoff and Heizer (1958:63) indicate the type is not chronologically diagnostic, first appearing about 6000-7000 years B.P. at Leonard Rock Shelter, and being present in all phases thereafter.

Type 3c. After Bennyhoff and Heizer (1958). Two examples of Olivella "saucers" occurred in the upper brown midden. They are general Middle Horizon types (2000 BC-1 AD) in central California and the Great Basin (ibid. 65-66).

Split Olivella blank. An oval section of Olivella shell (1.50 cm. long by 0.75 cm.wide) was recovered. It is not perforated and therefore probably represents evidence of local working of coast shells into beads, as observed at Pelican Island in the Carson Sink, Nevada. There the activity was probably contemporary with upper Phase 1 of the Late Horizon in California (Bennyhoff and Heizer 1958:68-69). The blank was recovered in gray midden (strat. pit No. 2) and offers evidence that the gray midden component overlaps, in part, with the early Late Horizon.

Dentalium. A short section of Dentalium (0.4 cm. long by 0.3 cm. wide) appears to have been broken from a larger or whole shell. Although Bennyhoff and Heizer (1958:67) indicate that dentalia are limited to the "upper part of Phase 1 of the Late Horizon" in northern California, the fragment from site CA-Las-194, associated with Feature 24 (a house floor) in the upper brown midden which has been radiocarbon dated at 200 B.C., suggests that they can occur earlier (see section on Dating). It has been suggested that Vancouver Island, via northern California, would have been a likely source, although the Santa Barbara region is an alternative (ibid., 85).

There is no evidence of decoration on any of the shell beads from site CA-Las-194.

Perishable Material

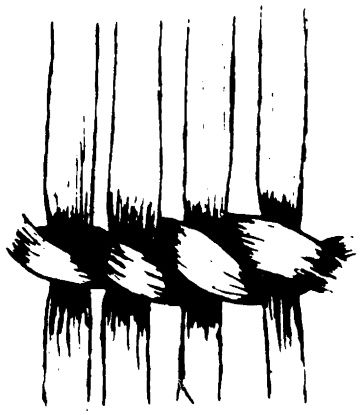
The Rodriguez site is an open site and no perishable materials were expected to be found. However, through the agency of two separate processes, several items that would have ordinarily disappeared were preserved. The burning of a house (feature 24) resulted in the following carbonized items.

TABLE 14

Types and Occurrence of Shell Beads

Type	18-24	24-30	30-36	36-42	42-48	48-54	54-60	60-66	66-72	72-78	Strat. pit 2	Remarks
Olivella												
Type 1a	2											Both found at 24 in. (brown midden)
Type 3c		1			1							
Split Olivella blank											1	6-12 in. level
Dentalium					1							Assoc. with Feature 24

Twined tule construction. A fragment (5 by 5 cm.) of a twined tule object was found on the floor of Feature 24. The warps, four of which were preserved, are single stem, 0.6 to 0.7 cm. wide in their present condition, and spaced approximately 0.5 cm. apart. The single row of wefts is composed of a pair of single stems approximately 0.8 cm. wide and twined down to the right. Barring loss of wefts or destruction before deposition, it is possible to guess, from the existing warp fragments, that the minimum spacing between this and subsequent rows of twining was 3.0 cm. No selvages were preserved.

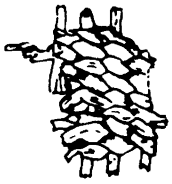


Twined tule, possible mat fragment,
actual size (reconstruction)

Judging from its loose construction and association with a burnt house, the fragment possibly represents part of a tule mat used to cover the floor or to form part of the house wall construction. However, the possibility that it was some other item—a rush wallet, for example—cannot be discounted.

Basketry. Three carbonized fragments of "Catlow twined" basketry were also found associated with Feature 24. Two were picked out of the screen as the fill from the feature was being sifted, while the third was found in situ on the house floor.

None of the fragments exceeds 3 cm. in size. All elements appear to be fibrous rush stems or culms. Warps average 0.2 cm. in diameter in their present state, and consist of two elements spun "Z" at an angle of appromi-20 degrees. There appear to have been an average of 3.5 warps per centimeter. The wefts or twining elements consist of pairs of single elements twined "S" down to the right, each element 0.2 cm. in diameter. The fragments exhibit approximately five rows of twining per centimeter. No structural indications of color change or overlay were observed. Judging from the similarity of the fragments, it is probable that they are parts of the same soft, relatively flexible basket of unknown shape and function.



Fragment of Catlow twined basketry, actual size

Structurally, the fragments appear to fit the description of Catlow twined basketry offered by Cressman (1942:33-45, figs. 12, 14-19, 80-85). Only our inability to determine whether or not the warp elements were split culms makes the identification incomplete.

As an aside, the presence of fragmentary and complete awls throughout the midden suggests that coiled basketry may also have been made, although no examples were recovered. Heizer and Krieger (1956:83) suggest that L-shaped scapular awls, of which the site produced two examples, might have been associated with the manufacture of coiled basketry - the "handle" allowing for ease of withdrawal after penetration.

Shroud. The second set of circumstances permitting preservation of perishable materials occurred in Burial 1. The body was entirely enshrouded

in a twined fabric whose elements were remarkably preserved due to apparent high mineral (silica?) content of the fibers and the probable replacement of organic matter with minerals from the soil. Although very fragile, careful brushing and spraying with a clear lacquer enabled us to uncover a large part of the fabric prior to our decision to remove the burial. A heavy cave-in forced us to rely on photos and a few fragments removed at the time of discovery in attempting a technical analysis.

Judging from the fragments recovered and the variation in measurements, it appears that two distinct layers of fabric were present: an upper layer first observed and seen in the photograph; and a second layer beneath that, separated by a few millimeters of soil from the first and visible only on the underside of the few fragments we possess. Both layers were composed of elements whose fiber has not been identified, although it is likely that they were made of Apocynum, Asclepias, or Artemisia (sagebrush bark). In both, the twining was consistently down to the right ("S") apparently involving pairs of single twining elements and single warps. The angle of twist or the number of elements plied together to produce a cord could not be determined. In the second (under) layer the elements range about 0.7 to 1.5 mm. in diameter in their present condition, with about nine rows per inch (ca. 3.5 per cm.) of closely compacted twining (weft face) over warps that average about twelve to the inch (ca. 5 rows per cm.). The first or upper layer was not analyzed in the field, and the fragments recovered are encrusted with soil hardened by lacquer spray. In conjunction with the photographs, they suggest that the texture tended to be coarser than the under layer, with elements about 2 mm. in diameter. The rows of twining are closely compacted in this structure also, almost hiding the warps, the count being about nine rows of twining per inch (ca. 3.5 rows per cm.) over warps that run about six warps per inch (ca. 2.5 per cm.). It is impossible to say, at this point, whether the differences in texture of the two layers indicate the presence of two separate fabrics.

Objects of European Manufacture

Numerous examples of glass beads picked up at the site were seen in local collections. Four specimens collected from the surface are the only such items that can be attributed with any certainty to aboriginal activity. The numerous objects of glass, crockery, and metal also observed on the surface doubtless resulted from the century of European occupation of the Bare Ranch.

HOUSES

Evidence of thirty-one house floors was recorded, all but two of them having been destroyed by fire. The carbonized floor covering and wall construction composing much of the fill of these house depressions defined their contours. However, not all the structures were as easily recognized and measured as were, for example, Features 24-31. In most cases the amount of carbon was slight or discontinuous, so that it was not possible to distinguish house floors from the surrounding midden. Drying and exposure of the profiles to wind erosion resulted in the slight color differences and differential weathering of the compacted floors connecting the darker patches, and defined the depressions. The profiles provided (figs. 3-8) illustrate the complexity and intensity of occupation.

Measurement of the structures was often difficult or incomplete due to the limited area of excavation, frequent intersection by other features, or later surface activity, as well as incomplete burning (staining) of the floors. Table 15 is a summary of dimensions and association data. Measurements that were obviously incomplete are accompanied by a "+" and suggested reconstructions are provided. Table 16 is intended to provide a key to the illustration of houses in profile drawings or other figures.

General Description

The house floors or depressions were approximately circular, to judge from those features at the intersection of the F and D-G profiles (figs. 3 and 4). They probably ranged from about 10 to 15 feet in diameter and from about 8 to 16 inches in depth, subject to moderate error from disturbance or intersection. The depressions were smoothly curved in profile, no sign of a step or bench being present. In taking the depth of the rim of the depression from the surface (presumed stratigraphic point of origin), the reading was made at the southern terminus where possible, as wind ablation appeared to have been consistently heavier downslope (north). The one feature that does not fall within the range is Feature 2 in Strat. Pit 2, which, although only 25 per cent exposed, appeared to have been a smaller (ca. 5 ft.) and shallower (ca. 3 in.) depression (fig. 12a). All floors were apparently covered with parallel or intersecting grasses, and perhaps an occasional mat.

Wall construction was preserved in small sections in most of the structures and was abundant in the case of Feature 24 (fig. 13). Diffuse porous hardwood poles (willow and aspen still grow along Bare Creek), ranging 3-4 inches in diameter, were employed as wall foundations arranged around the edge of the depression. No evidence of a trench or peripheral post holes were found, the poles presumably resting directly on the ground. Despite

the excellent preservation in the case of Feature 24, it was impossible to determine the nature of the dwelling type; that is, open, domed, conical, or gable-roofed. Feature 31, a house floor, has a probable post hole within the depression, about 5 feet deep and possibly once propped up or stabilized by the numerous stones scattered immediately around it (fig. 12b). This may be evidence that in the case of Feature 31 at least, there may have been two interior posts supporting a gabled roof. Whatever the foundation construction, the whole was covered first, by a layer of branches of diffuse porous hardwood, and then by a thick layer of unidentified grasses, possibly loosely made into mats. No identifiable entrances were encountered.

One certain and four probable hearths, apparently centrally placed, were observed during excavation, suggesting the presence of smoke holes at the tops of the structures and probable winter occupation of the site (see discussion of hearths below). Indoor storage pits or caches were also present in association with seven house floors, perhaps hidden under the floor covering (see Pits below). A complete block mortar was found resting directly on the undisturbed grass floor of Feature 1, while instances of manos in several others indicate that some artifacts were stored and perhaps used inside the house.

In general, no evidence of windbreaks, ramada type shades, etc., were observed, so that with one exception (feature 2) the floors encountered have been referred to as those of houses – the hearths, storage pits, and artifacts all supporting this assumption. Feature 2, the shallow 5 foot depression, may have served a more specialized function of uncertain nature, perhaps for the purpose of isolation of menstruating women. In dimensions, building material, and general appearance, these houses apparently conformed to the basic Great Basin houses documented in the ethnographies of Kelly (1932:104-106), Steward (1941:232-234,282-283), and Stewart (1941:378-379), and illustrated in photographs, especially those of C. Hart Merriam (Heizer:1967, pls. 27a,b, 28, 31a,b,c) and Kelly (1932, pl. 19b, ff.). Several elements, however, deserve brief comment. It is interesting to note that all the Northern Paiute groups listed in Stewart's Culture Element Distributions (1941:379) state that they did not use interior storage pits. Such pits, however, did occur among three Shoshoni groups farther east (Steward 1941:257,319).

No ethnographic descriptions of Great Basin houses suggest that the shallow, curved depression characteristic of the CA-Las-194 houses had a wider distribution, although one photo of a Southern Paiute structure appears to show such a depression (Steward 1939, pl. 11).

Archaeological evidence on Great Basin houses is very scant. At site NV-Pe-67, in west central Nevada, some of the depressions investigated consisted of a superimposed series of smoothly curved floor depressions like those at the Rodriguez site, though smaller in diameter (Cowan and Clewlow n.d.).

TABLE 15

General Descriptive Data on Houses

Feature	Pit No.	Depth to Rim (in.)	Midden	Actual Diameter	Probable Diameter (ft.)	Depression Depth (in.)	Probable Depth (in.)	Associated Features, Artifacts, etc.
1	E3-4+	18	GM	6'3"+	10-12	8+	10(?)	Dated 1050±100 BP (I-3208); hearth (fea. 22b); mano (1-169935);mortar (1-169968);metate frag. (1-169969)
2	S.P. 2	12	GM(?)	26"+x18"+	ca. 5(?)	2+	?	
5a	E4-5	14	GM	6'8"+	ca. 12	15	15-16	Pit (fea. 5b); ash lens (fea. 35); projectile pt. (1-169378); metate frag. (1-169972)
6	E1,FO	ca.30	UBM	10'+x11'+	12-15	16	ca. 16	Pit (fea. 53)
9	DO,FO	ca.36	UBM	10'+x10'+	12-15	12	12-15	Pit (fea. 54); rock concentration (fea. 60)
10	E5	27	UBM or GM	29"+x36"+	?	ca. 5	?	
12	E3-4	21	UBM	7'1"+	10-12	ca. 11	11-12	Pit (fea. 33); hearth (fea. 36)
14	E6	20	GM	38"+x15"+	?	12	12	
17a	E6	37	UBM	45"+x5'+	10-15	12	12	Rock concentration (fea. 17c)
18	E1-2, FO	36	LBM or UBM	7'3"+x7'6"+	10-12	12	12-14	Ash lens (fea. 32)
20	E1,FO	ca.30	UBM	9'+x9'6"+	12-15	ca. 12	12-14	Pit (fea. 55)
23a	E4-5	39	UBM	9'6"+	10-12	?	?	Rock concentration (fea. 23b)
24	E4-6	44	UBM	12'6"+	ca. 15	ca. 16	16	Dated 2150±100 BP (I-3209); pit (fea. 30); Burial 1; knife base (1-169639); Dentalium bead; L-shaped scapula awl (1-169865); basketry and matting fragments
26	FO	48	UBM	5'+	?	?	?	Rock concentration (fea. 26b)
27	E3-4	47	UBM	3'+x5'4"+	?	?	?	

29	E3-4	47-49	UBM	2'6"+x5'4"+	?	?	?	
31	E4-6	ca.62	LBM	11'	ca. 12	11	11-12	Pit (fea. 21); rock concentration (fea. 31b); projectile point (1-169718)
34a	E6	20	GM	4'+x1'3"	?	?	?	Rock concentration (fea. 34b)
37	E4-5	30	UBM	6'+	ca. 12	?	?	
38	E4-5	31	UBM	10'+	ca. 12	8+	10-12	
39	E4-5		UBM	10'+	ca. 12	8-10	10-12	
40	E4-5	56	U/LBM	5'+	?	?	?	
42	E3-4	62	LBM	5'+	10-12	10-12	12	Radiocarbon date 2620±80 BP (UCLA-1222)
43	E3	44	UBM	4'10"+	?	?	?	
44	E2	24	UBM	5'+	?	ca. 10	10-12	
45	E1-2	ca.10	GM	4'7"+	?	14	14	
47	DO-FO	ca.24	GM	7'+x12-15'	12-15	7	7-8	Hearth (fea. 49); ash lens (fea. 62)
48	E2-3	12	GM	ca. 6'8"+	10-15	13	13-15	
50	E5	9	GM	4'5"+	?	ca. 7	?	Hearth (fea. 51)
52	E1-2 D-FO	ca.36	UBM	10'+x12-15'	12-15	13	ca.13-15	Rock concentration (fea. 60); pit (fea.55)
63	E1	15	GM	16"+	?	?	?	

Abbreviations:

S.P.	Stratigraphic pit
GM	Gray sandy midden
UBM	Upper brown midden
LBM	Lower brown midden

TABLE 16

Houses – Key to Profile Drawings

Feature	Illustration	Feature	Illustration
1	Profiles F3-5, E-F4 (figs. 3, 5)	31	Profile F4-7 (fig. 3)
2	Profile Strat. Pit 2 (fig. 8)	34a	Profile E-F7 (fig. 6)
5	Profile F4-5 (fig. 3)	37	Profile F4-6 (fig. 3)
6	Profiles FO-2, D-G1, GO-1 (figs. 3, 4, 7)	38	Profile F4-6 (fig. 3)
9	Profiles FO-1, D-G1, GO-1 (figs. 3, 4, 7)	39	Profile F4-6 (fig. 3)
10	Not illustrated	40	Profile F4-6 (fig. 3)
12	Profiles F3-5, E-F4 (figs. 3, 5)	42	Profile F3-5 (fig. 3)
14	Profile E-F7 (fig. 6)	43	Profile F3-4 (fig. 3)
17a	Profiles F6-7, E-F7 (figs. 3, 6)	44	Profile F2-3 (fig. 3)
18	Profiles FO-2, E-G1 (figs. 3, 4)	45	Profile F1-3 (fig. 3)
20	Profiles FO-2, E-G1 (figs. 3, 4)	47	Profiles FO-1, D-G1 (figs. 3, 4)
23a	Profile F4-6 (fig. 3)	48	Profile F2-4 (fig. 3)
24	Profile F4-7 (fig. 3)	50	Profile F4-5 (fig. 3)
26	Profile GO-1 (fig. 7)	52	Profiles FO-2, D-F1 (figs. 3, 4)
27	Profiles F3-4, E-F4 (figs. 3, 5)	63	Not illustrated
29	Profiles F3-4, E-F4 (figs. 3, 5)		

Diameters of houses at the Karlo site were within the range of those at the Rodriguez site, but peripheral post holes were present in abundance. Floor depressions were apparently absent (Riddell 1960:78-80, map 3).

Destruction of Houses

The fact that 29 of 31 house floors at site CA-Las-194 indicate destruction by fire suggests that the wood and grass structures "readily caught fire and burned up," as Lowie (1924:224) observed among the Shoshoni of Wyoming. However, ethnographic data for the Surprise Valley Paiute, as well as for some other Northern Paiute and Nevada Shoshoni groups indicate that it was customary to burn a house in which a death had occurred, which may account, in part, for the large number of burned structures encountered (Kelly 1932:168; Stewart 1941:412; Steward 1941:257,319). The two unburned houses, and presumably others unrecognized or destroyed by later activity, may have been merely dismantled and abandoned in the event of a death (Kelly, loc. cit.; Stewart, loc. cit; Steward 1941:319).

Superposition

Whatever the causes or reasons for the repeated destruction of house floors, it was obvious that in at least two localities the same depression was used on a number of successive occasions. In Pits E4-5 (see profile F4-5, fig. 3), at least eight successive house floors (features 23, 39, 38, 37, 12, 1, 5a, 50) occupied the same general 10-12 foot wide depression through 32 inches of midden. In Pits E1-2 (fig. 3) and D0-F0 (fig. 4), a sequence of at least six house floors occupied the same depression, approximately 16 feet in diameter (features 9, 52, 20, 6, 45, 47[?]) through about 30 inches of midden.

Such superimposition suggests that burned houses may have been cleared almost immediately for reuse of the area, possibly involving the spreading of clean soil over the burned house fill. However, it is more likely that the midden interspersed between the successive floors represents a span of time when slope-wash, wind deposition, and occasional dumping of refuse, ash, and stones, partially filled the depression. The span of time between successive occupations could not have been great, as the depression was obviously still visible when later houses were located there. Some excavation of the depression in preparation for the new floor would have undoubtedly occurred.

The sequence of superimposed houses also indicates that whatever the nature of the color change between the upper brown and gray midden components, no great period of time could have been involved, both series of superimposed houses bridging the "contact zone."

Because the excavation was limited in area, little can be said concerning settlement pattern. The two complexes of superimposed house floors indicate that during their occupation the distance maintained between them, and perhaps houses in general, was approximately 6 feet. The number of house floors, and therefore the intensity of occupation through time, varied in the area excavated (table 17). The lower and early upper brown midden components appear to represent a period of time when the excavated area, and perhaps the entire site, was only sparsely occupied; house floors were separated by significant amounts of midden and little if any evidence for superimposition is present. Most of the upper brown midden and the early part of the gray midden suggest intensive and more continuous occupation, while the upper part of the gray midden has very few features, indicating that the focus of activity had shifted to another part of the site. Tables 18a and 18b show the occurrence of 31 house floors.

TABLE 17

Occurrence of Houses in Midden Components

	Gray	Gray-Upper Brown	Upper Brown	Lower-Upper Brown	Lower Brown
No. of Houses	10	1	13	5	2

TABLE 18a

Occurrence of House Floors by Probable Depth

	0-6	6-12	12-18	18-24	24-30	30-36	36-42	42-48	48-54	54-60	60-66	66-72
No. of Houses	-	3	3	4	1	4	2	1	1	-	2	-

TABLE 18b

Occurrence of House Floors of Questionable Depth

Gray	Gray-Upper Brown	Upper Brown	Lower-Upper Brown	Lower Brown
2	1	6	1	-

PITS

Seventeen pits were recognized and recorded, for which data are presented in Tables 19 and 20. They occur throughout the midden from earliest occupation of the site, and range in depth from 2-3 to 24 inches and in diameter from 7 to 30 inches. All but four of the pits are approximately circular in plan, the exceptions (features 3a, 3b, 5b, 30) being oblong. In section the pits exhibit a variety of profiles, descriptive terms for which are as follows:

Round bottomed (4 examples):- pits resembling arcs of circles, shallow (see feature 36, profile F-4, fig. 3).

Basin shaped (4 examples):- Shallow pits with flat bottoms and slightly flaring sides (see feature 21, profile F-6, fig. 3).

U-shaped (4 examples):- pits with round bottoms and relatively parallel vertical sides (feature 53, profile E-1, fig. 4).

Inverted bell-shaped (1 example):- a deep pit with round base and widely flaring sides beginning about a third of the way up (feature 55, profile F-1, fig. 4).

All but three of the pits (4A, 4B, 17B) appear to be associated, and therefore contemporary , with house floors. This is especially clear in the five instances (features 6B, 21, 22B, 36, 53, and 54) in which the dark stain of carbonized floor covering and wall construction overlaid the pits. Feature 5B is of special interest in that, in contrast with the others, it appeared to have been empty and open at the time of the destruction of feature 5, as the contours of this deep pit were defined by a layer of charcoal (profile F-5, fig. 3). No doubt can exist that the use of this pit was contemporary with that of the house floor. Those pits whose observable limits are not in contact with such a carbonized layer are referred to a in probable association with the nearest reasonably superimposed and undisturbed house floor.

Function

At least three of these pits appear to have served as caches. Feature 30 contained a stone knife (LMA 1-169523) and a bone hook (LMA 1-169864). Feature 61 owes the recognition of its existence to the presence of a scapular saw (LMA 1-169866) and antler tine flaker (LMA 1-169867) which occurred in unstained and otherwise undifferentiated sterile yellow sand beneath the midden. Feature 17B contained an obsidian point (LMA 169577) which may have been part of the contents of that pit. Whatever perishable objects and linings there may have been left no trace. As already noted, feature 5B was apparently empty when the associated house was destroyed. Other pits which were originally

TABLE 19

Dimensions and Associations of Pits and Hearths

Feature	Pit	Surface to Top of Pit (in.)	Midden	Profile	Diameter (in.)	Depth of Pit (in.)	Contents	Association
3A	SP 2	18	GM(?)	Basin	48+ x 38	4	None	None
3B	SP 2	18	GM(?)	Basin	84+ x 36+	6	None	None
4A	E1	5	GM	Incomplete	7	2-3+	Ash, charcoal	Pit (fea. 4B)
4B	E1	5	GM	Incomplete	9	2-3+	Ash, charcoal	Pit (fea. 4A)
5B	E5	13	GM	U-shaped	22 x 24+	15	Charred house construction, ashy soil	House (fea. 5A)
17B	E6	37	UBM	U-shaped	ca. 18	6+	Brown midden, projectile point	Cuts through house (fea. 17A)
21	E6	49	LBM	Basin	ca. 12	3	Brown midden	House (fea. 31)
30	E4	55	UBM	U-shaped	12 x 20	18	Brown midden, charcoal, 3 rocks, bone hook, knife	Probably house (fea. 24)
33	E4	28	UBM	Irregular	ca. 30	ca. 10	Dark brown midden	Contemporary with house (fea. 12)
53	E1	24	UBM	U-shaped	ca. 12	12	Ash	House (fea. 6)
55	FO	ca. 28	UBM	Inverted bell	ca. 30	ca. 15	Brown midden	House (fea. 9-52 or 20)
61	E5	ca. 66	LBM	?	?	ca. 24	Yellow sterile sand, scapular saw, antler flaker	Probably house (fea. 31)

22B*	E4	14	GM	Round	25	7	Ash	House (fea. 1)
36*	E4	24	UBM	Round	23	ca. 6	Ashy midden	House (fea. 12)
49*	F0	ca. 23	GM	Round	ca. 25	8	Ashy soil, charcoal	House (fea. 47)
51*	E5	11	GM	Round	ca. 27	7	Ashy midden, rocks	House (fea. 50)
54*	E1	42	UBM	Basin	18+	6	Charcoal	House (fea. 9)

* = Possible hearths

Abbreviations: SP = Stratigraphic pit
GM = Gray sandy midden
UBM = Upper brown midden
LBM = Lower brown midden

TABLE 20

Pits and Hearths - Key to Illustrations

Feature	Illustration	Feature	Illustration
Pits			
3A	Fig. 14	21	Profile F6-7, fig. 3
3B	Fig. 14	30	Not illustrated
4A	Not illustrated	33	Profile F4-5, fig. 3
4B	Not illustrated	53	Profile E-F1, fig. 4
5B	Profile F5-6, fig. 3	55	Profile F-G1, fig. 4
17B	Profile E-F7, fig. 6	61	Not illustrated
Possible Hearths			
22B	Profile F4-5, fig. 3	51	Profile F5-6, fig. 3
36	Profile F4-5, fig. 3	54	Profile E-F1, fig. 4
49	Profile F0-1, fig. 3		

excavated for the storage of food and useful or valuable objects may have later been emptied and filled with midden or ash, etc. The dimensions and lack of house association of two pits, features 3A and 3B (ca. 48 x 38 x 4 inches and 84 x 45 x 6 inches), suggest a use other than storage - perhaps as borrow pits, the soil removed being used to cover burned house floors prior to reuse (fig. 14).

A problem arises when an attempt is made to distinguish hearths among such pits. It is obvious that the three caches and three pits containing only midden (features 21, 33, 55) were not hearths. Although the remaining nine pits all contain ash or carbon or both, only feature 51 has the underlying fire-reddened earth that would indicate its use as a hearth. However, some of the others might have served a like purpose, for if our observation concerning winter occupation of the site is correct, hearths would be expected in frequent association with house floors. Features 4A and 4B are too small and thin to be hearths, and presumably are the bottoms of pits with only a small amount of ash and carbon in them. Features 5B and 53 are both U-shaped; that is, deep as well as relatively narrow, and would have been better suited for use as storage pits than hearths.

The four remaining pits, features 22B, 36, 49, and 54, are all shallow (6-8 inches deep), relatively wide (18-24 inches), and round or basin-shaped in section; they closely approximate feature 51, the one certain hearth. The observation that two house floors, features 1 and 12, superimposed in the same depression have two round-bottomed pits superimposed approximately in the center of the floor suggests a similar and probably patterned function and location. Features 51 and 54 (hearths) were also centrally located. It therefore seems justified to suggest that many, if not all, of these five pits were true fire pits.

In summary, it can be said that many pits were dug, usually within the house, some for the purpose of storage, which were later forgotton or filled with refuse; others were intended for, and used as, hearths.

ASH LENSES

Four examples of concentrations of ash that do not appear to relate to the destruction of structures or hearths, or the filling of pits, are assumed to be piles of ash dumped in convenient places (table 21). They range from 16 to 42 inches in diameter and 3 to 6 inches in thickness. Just as unwanted rock appears to have been dumped into abandoned house depressions, so too three of the four lenses suggest that ash was also so disposed of when a lack of empty pits or convenience dictated. Feature 15 is the exception, not being associated with any identifiable house floor. Feature 62 could conceivably be a hearth, but its wide diameter and the presence of a more likely fire pit (feature 47) suggest that it was in fact a lens of ash deposited after the abandonment of the depression.

TABLE 21

Ash Lenses

Feature	Pit	Depth (in.)	Diameter (in.)	Thickness (in.)	Contents	Midden	Associations	Profile	Figure
15	F0	18	24	4	Ash	Gr.sandy	None	F0-1	3
32	E1	41	24	3	Ash	Lower or Upper Br	Fea. 18	E-F1	4
35	E5	18	16	4	Ash	Gr.sandy	Fea. 5A	F5-6	3
62	E1	18	42	6	Ash	Gr.sandy	Fea. 47	E-F1	4

CONCENTRATIONS OF ROCK

Concentrations of rock with no apparent function or plan occur in seven instances in the midden. Six of these are in clear association with buried and presumably abandoned floors of house depressions. The seventh may also be so associated, given that feature 47 is indeed an unburied house floor. The concentrations consist primarily of whole or broken cobbles, some fist-size, and occasional fragments of ground stone artifacts, scattered over areas from 3 to 47 square feet. Numbers of items per feature range from 5 to over 120.

Feature 23 (fig. 15), the largest and most extensive of these concentrations, serves to suggest a likely explanation for the category as a whole. While it clearly lies directly above a burned house floor, neither it nor any of the similar but less extensive concentrations could have served as functional living surfaces. Rather, it appears that stray rock and ground stone fragments were periodically or sporadically collected and dumped in convenient spots—usually the abandoned depressions of houses—as a means of disposing of nuisances underfoot. Occasional bones and lenses of ash suggest dumping of other trash in these areas in a like manner.

A possible exception to this suggestion is feature 31. In this concentration, several of the rocks were clustered about a shallow post hole. Many of these stones may have served to prop up and stabilize the base of the pole (see Houses, and table 15).

Table 22 presents pertinent data on rock concentrations. Such concentrations occur in all three components of the midden and are thus not temporally diagnostic.

BURIALS

Only one burial was encountered during our 1966 excavations. Its unique character and preservation convinced us that it would be better to remove the burial to the laboratory where time and facilities would permit more controlled investigation and recording. After isolating the burial on a pedestal, the entire feature was packed in burlap and plaster to reinforce it for removal and transportation. As a plywood board was being slipped under the encased burial, the sandy midden of the adjacent F profile collapsed, trapping a student by the legs. Within seconds of freeing him, another and even greater slump dumped tons of additional soil on top of the burial to a depth of 4 feet. The threat of continued slumping and the lack of time resulted in the decision to fill in the remainder of the trench and return at some future date to recover the burial. Data on the feature are therefore incomplete.

TABLE 22

Concentrations of Rocks

Feature	Pit	Depth (in.)	Midden	Area (in.)	No. of Rocks	Artifacts	Association
17C	E6	43-48	UBM	36x48	16	Pestle (1-169937	House floor (fea. 17A)
23B	E4-5	36-42	UBM	60x114	126	Ground stone fragments	House floor (fea. 23A)
26B	F0	44	UBM	32x36	8	None	House floor (fea. 26)
28	D0	27-32	UBM	36x36+	21	Metate frag. (1-169974), mano (1-169948)	House floor(?) (fea. 47)
31	E6	65	LBM	36x48	11	Metate frag. (1-169971)	House floor (fea. 31)
34B	E6	20	GM	48x15+	5	None	House floor (fea. 34)
60	E1-0	30-34	UBM	12x36+	8	None	House floor (fea. 9)

Abbreviations: GM = Gray sandy midden
UBM = Upper brown midden
LBM = Lower brown midden

Burial 1 occurred in Pit E-4, the skull being exposed at a depth of 65 inches from the surface. The grave, irregular in plan, measured 48 inches (north-south) by 26 inches (east-west), and was distinguished from the surrounding sterile yellow sand by brown sandy midden fill. The burial pit was sunk to a depth of about 77 inches through (and therefore postdating) features 31, 42, and 40, all house floors. The floor of feature 24, a later house floor, showed no marked disturbance in the area above the burial (fig. 13). The interment predates or was possibly contemporaneous with the occupation of feature 24.

The most striking feature about the burial was the preservation of a twined shroud that completely enveloped the body, being affixed near the base of the pelvis by two bone awls employed as pins. These circumstances allowed for only general observations prior to our abortive attempt to remove the burial to the laboratory.

The individual was probably a sub-adult, sex unknown, and had been buried tightly flexed on the right side and back as evidenced by ribs exposed in a small exploratory trench to the left side of the burial. The entire burial was oriented SSE (head)—NNW, with the head facing northeast. Aside from the two bone awls already noted, no objects were exposed in association with the burial

During the cutting of the road through the site numerous burials had been disturbed by the machinery, of which seventeen were recorded by the Nevada State Museum investigating team. It is possible to say only that all the burials appear to have been flexed in pits sunk into the midden, some occurring in the sterile sand subsoil.

In the course of our excavations, a moderately worn human molar was recovered in gray midden from the 18-24 inch level (pit E-5), apparently part of a disturbed burial of which no other traces were encountered.

DATING

Inferences regarding the age of the occupation deposit at the Rodriquez site are based upon a series of radiocarbon dates and on the distribution of certain artifact types considered to be time-markers in the Great Basin. Four radiocarbon dates have been obtained so far and are presented in Table 23. Of these, three were run on carbon recovered during the course of our work at the site; the fourth (I-2007) represents a sample obtained by Dr. W. A. Davis during salvage operations. No provenience data are available for it, other than the estimated depth of 5 feet from ground surface.

The first of our samples, UCLA-1222, dates a portion of a charred log found in the remains of a burned house (feature 42). The house is stratigraphically the deepest feature we encountered and pertains to the initial phase of occupation at Rodriguez. We are uncertain as to the length of time between the beginning of Rodriguez I and the construction of the dated house, though its stratigraphic position suggests that this interval was not great. On the basis of UCLA-1222, we tentatively place the beginning of Rodriguez I at about 800 B.C.

TABLE 23

Radiocarbon Dates for CA-Las-194

Sample No.	Material Dated	Depth (in.)	Association	Phase	Date
I-2007	Charcoal	ca.60	None	-	2130 ± 105 B.P.
UCLA-1222	Charcoal	63	House (fea. 42)	I	2620 ± 80 B.P.
I-3209	Charcoal	46	House (fea. 24)	II	2150 ± 100 B.P.
I-3208	Charcoal	20	House (fea. 1)	III	1050 ± 100 B.P.

Sample I-3209 dates charcoal from feature 24, a burned house clearly associated with Rodriguez II. Taken with the date from Rodriguez I, it indicates that the beginning of Rodriguez II falls between 670 and 200 B.C.

However, before placing the date more precisely, other evidence should be considered. As noted in the section on projectile points, the introduction of the Elko series marks the beginning of Rodriguez II. The series persists through Rodriguez III in diminished numbers, and is apparently not present in Rodriguez I. Elko points are seen as generally indicative of the period 1000 B.C. to about 400-600 A.D. in west central Nevada (O'Connell 1967:133-135). The apparent discrepancy between the initial date for the point type and that implied by the pre-Elko period carbon date of 670 B.C. may be the result of one of the following factors:

1. Either through contamination of the Phase I carbon sample or through confused or incorrect interpretation of its provenience, the dating of Rodriguez I may be too recent. If this is so, Phase I would be placed earlier in time, and the initial date for Phase II would more closely approximate that suggested by the Elko points.

2. Phase associations of Elko points at Rodriguez may be in error due to insufficient information. In other words, Elko points may have been in use during Rodriguez I, though they are not represented in our small sample.

3. The dating of Elko points as suggested by O'Connell (op. cit.) may need modification in the northwestern Great Basin area.

Evidence presently available from site CA-Las-194 does not allow a clear choice among these alternatives. We think it best to assume that the date implied for Rodriguez I by UCLA-1222 is correct, and tentatively place the beginning of Rodriguez II at about 400 B.C.

The third carbon sample, I-3208, also dates burned house remains (feature 1), in this case associated with Rodriguez III. The beginning of this phase should fall between this date and the date for Rodriguez II; that is, between 200 B.C. and 900 A.D. Turning again to the projectile points, we find that Rodriguez III is marked by the introduction of Rose Spring Corner-notched and Eastgate Expanding Stem points, and by the decline in popularity of the Elko series. As noted above, the suggested date for the latter event is 400-600 A.D. Clewlow (1967:144) has proposed that the former types appear at about this time. Such a date falls within the range indicated by the carbon dates, and in view of the lack of evidence to the contrary, we place the beginning of Rodriguez III at 400 A.D.

A terminal date for Rodriguez III is suggested primarily on the basis of negative evidence. Clewlow (op. cit.) has noted that the Rose Spring and Eastgate series are generally succeeded in the Great Basin by Desert Side-notched points. Baumhoff and Byrne (1959:60-61) have suggested that this type was not present in northeastern California until after 1500 A.D. We failed to find any Desert Side-notched points at the Rodriguez site during our operations there, and have recorded only one example in the several large surface collections from the site that are in the hands of local collectors. Thus the Rodriguez III occupation probably ends at some time prior to 1500 A.D. The nature of occupation between the close of Rodriguez III and the beginning of the ethnographically recorded occupation remains unknown at present.

Further inferences on dating through comparison of artifact types are limited. Though Bennyhoff and Heizer (1958) have provided a means of cross-dating Great Basin sites through the occurrence of certain California shell bead types, only six such beads were found at CA-Las-194, and of these only two are sufficiently restricted in temporal range for our present purposes. Both are type 3c Olivella beads recovered from the upper brown midden (Rodriguez II). The type is characteristic of the Middle Horizon in California, a dating which is temporally consistent with the chronology outlined above.

SUMMARY AND CONCLUSIONS

Preliminary results of archaeological investigations at the Rodriguez site may be summarized as follows. A subsistence pattern based on hunting and gathering is indicated. Evidence for the importance of hunting in the economy is abundant, consisting primarily of large amounts of bone refuse, as well as chipped stone projectile points, knives, and scrapers. More precise information on particular species taken and their relative importance will be provided by results of a study of faunal remains now in progress.

Evidence for the exploitation of local plant resources is limited to the presence of ground stone tools (manos, metates, etc.) presumably used in the preparation of seeds and roots. Given the proximity of the site to the marshy shores of Lower Lake, we suggest a plant-gathering pattern similar to that outlined for Humboldt Lake by Ambro (1967) and Cowan (1967), with emphasis on such plants as Scirphus and Typha species. However, we emphasize that there is no direct evidence for such exploitation presently available at the Rodriguez site.

No evidence of fishing was noted, either in the faunal remains or in the artifact assemblage.

Settlement pattern at the site remains obscure, though limited inferences are possible. We suggest that occupation was seasonal, but for a sufficiently long period to require the construction of simple houses. Such structures served to roof shallow dish-shaped depressions, and were probably domed, conical, or gabled in form. House size and character, evidence of interior hearths and storage pits, and the known ethnographic patterns suggest a winter occupation. Analysis of faunal remains should contribute further evidence on the question of seasonality.

The number of occupants at the site at any one time is not known. Our estimate of five to six families is based primarily on the ethnographic pattern for winter occupations.

In general, analysis of archaeological remains at the Rodriguez site indicates the existence of a relatively consistent cultural pattern through time. With the exception of the introduction of the bow and arrow and possible changes in the popularity of the mortar and pestle, evidence of significant change in artifact inventory and, by inference, subsistence pattern, is lacking. Settlement pattern also appears temporally consistent, although the discrepancy in area between brown and gray midden components may indicate some change in this regard.

In spite of the observed consistency, changes in artifact types, particularly projectile points, have allowed the establishment of a three phase time scale. Comparative dating of artifacts and analysis of a radiocarbon sample have provided the proposed dates for each phase.

Rodriguez III	400 A.D. - pre-1500 A.D.
Rodriguez II	400 B.C. - 400 A.D.
Rodriguez I	800 B.C.(?) - 400 B.C.

APPENDIX I

DATA ON REFUSE FROM STRATIGRAPHIC PITS

As indicated in the preceding report, the excavation procedure at site CA-Las-194 involved the removal of occupation fill in 6 inch levels and its passage through a one-quarter inch mesh screen. All artifacts and identifiable bone, as well as grab samples of chippage and non-identifiable bone refuse, were saved. The remainder of the refuse was discarded. In two of the ten pits (Stratigraphic Pits Nos. 1 and 2), the procedure differed in that all refuse which did not pass through the screen was saved and segregated into one of the following four categories: (1) bone refuse; (2) siliceous refuse, primarily chippage; (3) obsidian refuse, primarily chippage; (4) coarse non-artifactual waste, almost exclusively stream-rolled basalt cobbles and gravels.

The weight of each category was recorded by level. This information is presented in Tables 24 and 25. Coarse non-artifactual wastes were then discarded and the materials in the remaining categories saved and brought back to Berkeley. In addition, a soil column sample was taken from a side wall of each stratigraphic pit.

The aim of this collection was to provide basic data for the quantitative analysis of the midden contents. However, such analysis has yet to be undertaken, and will require a larger sample before it can produce significant information concerning the site.

TABLE 24

Occupation Refuse by Weight (gr.), Stratigraphic Pit No. 2

Depth (in.)	Bone	Silicate	Obsidian	Coarse Non-artifactual Waste (basalt cobbles, etc.)
0-6	3.4	566	607	71,141
6-12	20.2	385	648	39,318
12-18	5.2	15	34	30,459
18-24	4.1	12	102	60,450
24-30	-	-	16	3,631

TABLE 25

Occupation Refuse by Weight (gr.), Stratigraphic Pit No. 1

Depth (in.)	Bone	Silicate	Obsidian	Coarse Non-artifactual Waste (basalt cobbles, etc.)
0-6	4.7	388	488	48,683
6-12	16.1	135	156	15,909
12-18	25.2	188	156	12,727
18-24	21.9	110	286	29,091
24-30	62.1	132	299	33,636
30-36	69.6	96	355	31,818
36-42	82.4	116	321	52,500
42-48	34.9	56	185	27,500
48-54	21.6	48	179	63,181
54-60	55.4	9	67	37,272
60-66	3.1	22	50	17,728
66-72	4.1	26	32	11,818
72-78	-	1	7	9,318

APPENDIX II

DATA ON PROJECTILE POINTS FROM SITE CA-LAS-194

Tables 26 and 27 present data on type, provenience, and weight of all projectile points found at site CA-Las-194 during the course of our work. The points referred to in Table 26 are now in the collections of the Lowie Museum of Anthropology at Berkeley; those listed in Table 27 are in the possession of Mr. Robert R. Rodriguez, owner of the site.

Point type abbreviations used:

BCE	Bare Creek Eared	NSN	Northern Side-notched
CLS	Cottonwood Leaf Shape	PSiS	Pinto Single Shoulder
EE	Elko Eared	PSlS	Pinto Sloping Shoulder
ECN	Elko Corner-notched	PWL	Pinto Willow Leaf
ECS	Elko Contracting Stem	RSCN	Rose Spring Corner-notched
EES	Eastgate Expanding Stem	RSCS	Rose Spring Contracting Stem
HCB	Humboldt Concave Base	SVSS	Surprise Valley Split Stem

TABLE 26

Projectile Points from Site CA-Las-194
in Lowie Museum of Anthropology

LMA No.	Type	Pit	Depth (in.)	Weight (gr.)
1-169246	EE	E-3	12-18	1.3+
1-169248	RSCN	-	Surface	1.7
1-169249	HCB	-	do.	3.9+
1-169250	EE	-	do.	1.4+
1-169251	EE	-	do.	2.8+
1-169253	RSCN	-	do.	0.8+
1-169254	HCB	-	do.	2.0+
1-169255	EE	-	do.	1.7+
1-169256	RSCS	-	do.	0.5
1-169265	EE	E-3	4	2.9+
1-169267	EES	E-3	0-6	1.1+
1-169268	ECN	E-3	do.	4.4+
1-169269	EES	E-3	do.	0.7+
1-169270	RSCN	E-3	do.	0.9
1-169294	PWL	S.P. 2	11	3.8
1-169302	HCB	-	Surface	0.6+

TABLE 26 (cont'd.)

LMA No.	Type	Pit	Depth (in.)	Weight (gr.)
1-169321	SVSS	E-5	10	1.0+
1-169331	RSCN	E-1	0-6	0.4+
1-169339	EE	E-3	30-36	0.8+
1-169343	ECN	E-3	18-24	0.9+
1-169344	NSN	E-3	36-42	0.7+
1-169346	NSN	E-3	32	3.8+
1-169348	Type 1	E-3	30-36	2.0+
1-169350	ECN	E-3	18-24	3.0+
1-169352	EE	E-3	35	3.3+
1-169354	HCB	E-3	36-42	2.2
1-169358	ECN	E-3	do.	2.8+
1-169359	Type 2	E-3	do.	8.5
1-169360	SVSS	E-3	30-36	1.0+
1-169362	SVSS	E-3	do.	1.3+
1-169371	BCE	E-3	60-66	7.5
1-169374	EE	E-5	6-12	3.7+
1-169375	RSCN	E-5	do.	1.5+
1-169376	RSCN	E-5	10	1.0+
1-169378	RSCN	E-5	14	1.3
1-169380	RSCN	E-1	6-12	0.8+
1-169387	SVSS	E-5	0-6	0.7+
1-169391	HCB	-	Surface	1.0+
1-169392	SVSS	E-3	48-54	1.1
1-169394	EE	E-3	42-48	3.7
1-169395	HCB	-	Surface	1.8+
1-169396	EES	-	do.	1.3+
1-169401	EE	E-5	30	5.8
1-169405	RSCN	F-0	0-6	1.1
1-169407	NSN	E-5	12-18	2.1
1-169408	EE	E-5	do.	1.3+
1-169411	SVSS	E-4	do.	0.8+
1-169416	SVSS	E-4	18-24	0.7
1-169417	ECS	E-4	do.	1.6+
1-169419	BCE	E-3	72	7.9
1-169420	Type 3	E-4	18-24	0.6
1-169430	ECN	E-2	0-6	2.6+
1-169433	RSCN	E-2	2	0.5+
1-169434	PWL	E-1	42-48	4.7
1-169440	EE	E-1	30-36	4.6+
1-169446	SVSS	E-5	12-18	1.0+

TABLE 26 (cont'd.)

LMA No.	Type	Pit	Depth (in.)	Weight (gr.)
1-169451	EE	E-5	12-18	1.1+
1-169479	SVSS	E-6	do.	0.4+
1-169484	SVSS	E-6	11	0.4+
1-169489	RSCN	E-4	6	1.0+
1-169494	BCE	E-4	6	6.0+
1-169495	RSCN	E-4	0-6	1.5
1-169500	EE	F-0	6-12	2.0+
1-169518	CLS	E-2	25	1.0
1-169531	EES	E-4	6-12	1.3+
1-169537	ECN	E-1	12-18	1.5+
1-169539	ECN	E-1	do.	3.0+
1-169544	EE	E-1	do.	2.2+
1-169549	EE	E-1	18-24	1.7+
1-169557	EE	E-2	30	3.0+
1-169566	ECN	E-2	33	5.5
1-169573	ECN	E-6	36-42	2.7
1-169577	EE	E-6	45	3.0+
1-169581	EE	E-6	42-48	2.3+
1-169585	EE	E-6	do.	4.4
1-169595	EE	F-0	12-18	3.5
1-169601	EE	E-6	34	9.3+
1-169604	Type 6	E-6	30-36	2.9+
1-169611	EES	F-0	18-24	1.8+
1-169614	HCB	-	Surface	2.5+
1-169615	SVSS	-	do.	1.0+
1-169616	RSCN	-	do.	1.0
1-169617	EE	E-6	28-30	1.9+
1-169621	SVSS	D-0	0-6	0.7+
1-169629	EE	E-6	42-48	1.9+
1-169630	EE	E-5	43	5.1+
1-169635	EE	-	Surface	4.8+
1-169641	Type 5	-	do.	0.8
1-169642	BCE	-	do.	2.2+
1-169643	EES	-	do.	1.0+
1-169649	EE	E-5	39	3.9+
1-169650	EE	E-5	42	2.9
1-169657	CLS	D-0	24-30	1.2+
1-169662	HCB	F-0	do.	2.4+
1-169671	NSN	E-4	12-18	0.7+
1-169672	RSCN	E-4	do.	1.1+

TABLE 26 (cont'd.)

LMA No.	Type	Pit	Depth (in.)	Weight (gr.)
1-169673	CLS	E-4	12-18	1.2+
1-169678	RSCN	-	Surface	1.0+
1-169681	Type 5	D-0	6-12	0.9
1-169688	NSN	D-0	23	2.1+
1-169691	BCE	E-4	42-48	3.6+
1-169697	EES	-	Surface	0.7+
1-169699	EE	F-0	42-48	3.9+
1-169702	EE	F-0	36-42	1.1+
1-169704	RSCS	-	Surface	0.5
1-169710b	HCB	-	do.	1.9+
1-169711	Type 3	-	do.	0.5
1-169712	ECN	-	do.	2.1+
1-169713	EES	-	do.	1.3+
1-169714	ECN	-	do.	1.5+
1-169715	EE	E-3	4	2.5+
1-169718	NSN	E-4	66	2.1
1-169721	PSiS	E-5	66-72	1.7
1-169728	BCE	E-5	67	6.8
1-169731	RSCS	-	Surface	0.5
1-169734	PS1S	-	do.	6.7
1-169735	EE	-	do.	3.1+

TABLE 27

Projectile Points from Site CA-Las-194
in Possession of R. R. Rodriguez

Field Cat. No.	Type	Pit	Depth (in.)	Weight (gr.)
14	ECN	E-3	12-18	1.8
16	EE	-	Surface	2.9
80	PSiS	T.P. 1	11	2.6
84	RSCN	-	Surface	0.9
143	EE	E-3	33	8.7
163	BCE	E-3	60-66	13.9
185	SVSS	-	Surface	1.0
195	EE	-	do.	2.6

TABLE 27 (cont'd.)

Field Cat. No.	Type	Pit	Depth (in.)	Weight (gr.)
224	ECN	E-5	31	3.9
329	EE	E-5	12-18	3.6
450	EE	E-6	25	4.1
537	EE	E-4	41	2.2
577	ECS	E-6	42-48	3.1
624	EE	E-4	36	3.7
674	EE	E-5	36-42	3.1
764	EE	E-4	36	2.8
829	ECN	E-4	42	3.4
904	Type 4	E-4	65	5.9

APPENDIX III

L-SHAPED SCAPULA AWLS

L-shaped scapula awls occur widely throughout the Columbia Plateau, the Great Basin, and the Southwest. Cressman (1942:63-65) describes the type, summarizes data on its distribution, and concludes that occurrences were historically connected. He further suggests the possibility of a northern (Plateau or northern Great Basin) origin and subsequent diffusion of the type. More recently distribution summaries have appeared in Heizer and Krieger (1956:83) and Grosscup (1960:20-21). Additional examples are reported by Daugherty, Purdy and Fryxell (1967:77-78, fig. 18d-e), Caldwell and Mallory (1967:67, pl. 23h), Jennings (1957:193, figs. 176d,e,h, 178i,l, m), and Riddell (1960:64, fig. 20c). Publication of these new data indicates that a review of information on the type may be profitable.

Table 28 summarizes known information on the occurrence of L-shaped scapula awls in the Columbia Plateau, the Great Basin, and the Southwest. The type appears earliest in the Columbia Plateau at Three Springs Bar. in components dated 2000 to 4000 years B.C. on the basis of associated artifacts and on geological grounds. The recovery of specimens from late prehistoric and early historic contexts in this site indicates persistence of the type through a long period of time. While the provenience of the scapula awl found at Divide Creek, Idaho, is not clearly indicated by Caldwell and Mallory (1967), placement of the piece in either component in question would indicate persistence well into the Christian era.

L-shaped scapula awls are reported most abundantly in the Great Basin where they occur in contexts dated 2000 B.C. to 1200 A.D. Though their presence in Danger III deposits implies an earlier appearance in the Basin, questions concerning both the dating of Danger III and the Danger Cave artifact sequence as a whole indicate that the age of L-shaped scapula awls at this site is uncertain (Baumhoff and Heizer 1965:704). Dating of Juke Box II is also unclear, though the presence of Elko Corner-notched projectile points in this level (Jennings 1957, fig. 159a-c) suggests a date of 1300 B.C.-400 A.D. (cf. O'Connell 1967). In Humboldt Cave they were found between depths of 36-42 inches and 66-72 inches; that is, in the earlier half of the refuse deposit. The probable age of this lower deposit is the first millennium A.D. The type is not clearly associated with late prehistoric (post 1200 A.D.) or protohistoric contexts in the Great Basin.

Data on specimens occurring in the Southwest may be incomplete, yet they are remarkably consistent. All examples known to us occur in Basketmaker II deposits, a period dated about 100 B.C. to 400 A.D. (Willey 1967:199).

In summary, we believe that Cressman, and Heizer and Krieger, are probably correct in their conclusion that occurrences of L-shaped scapula awls are historically connected rather than successive local inventions. While the evidence is still slender, Cressman's suggestion of a northern origin seems valid. Present data indicate that the type appeared first in the Columbia Plateau during Altithermanl times. By the beginning of the Medithermal, it had spread to the Great Basin, perhaps carried by peoples moving into the area with the improvement of climatic conditions. The type continued to be carried south and east, either by diffusion or migration, and first appeared in the Southwest by the beginning of the Christian era. L-shaped scapula awls apparently persisted into late prehistoric times in the Columbia Plateau, though they seem to have disappeared in other area at an earlier date.

TABLE 28

Occurrences of L-shaped Scapula Awls

	No.	Provenience and Dating	References
Columbia Plateau			
Three Springs Bar	4	Component 2 (1), ca. 4000-2000 B.C. Component 3 (1), ca. 4000-2000 B.C. Component 8 (1), older than modern ± 127 B.P. date for component 9 Component 9 (1), historic, -100 yrs	Daugherty et al., 1967:77-78, fig. 18d,e, Table 2. cf. Style 2
Divide Creek	1	Big Bar phase. 1450-1800 A.D. or Robinette phase, 500-1100 A.D.	Caldwell and Mallory 1967:67, 78, pl. 23h. cf. Form 4
Wakemap Mound	2+	Unknown	Grosscup 1960:20
Umatilla Co., Oregon	1	Unknown	Cressman 1942:64
Island in Columbia R. 65 km. above confluence with Snake R.	1	Unknown	Cressman 1942:64 H. I. Smith 1910: 72

TABLE 28 (cont'd.)

	No.	Provenience and Dating	References
Great Basin			
Rodriguez Site (CA-Las-194)	2	Rodriguez II, 400 B.C.-400 A.D.	cf. Bone Artifacts this report
Karlo Site (CA-Las-7)	1	12-24 in. level, prob. Karlo period, Early or Transitional Lovelock, 2000 B.C.-1 A.D.	Riddell 1960:64, fig. 20c. cf. Type IIa
Lovelock Cave (NV-Ch-18)	31	Harrington's Level III (2), 505-29 B.C.; ibid. Level VI (1) 2010-1456 B.C. Early and Transitional Lovelock Unknown (28)	Grosscup 1960:20-21; cf. p. 11 for dating
Humboldt Cave (NV-Ch-35)	5	Late Lovelock, 0-1000 A.D.	Heizer & Krieger 1956:17, 83, pl. 10b-e
Humboldt Lakebed (NV-Ch-15)	2	Surface finds	Heizer & Krieger 1956:83
Deep Springs, Inyo Co., Cal.	1	Unknown	Grosscup 1960:20
Roaring Springs Cave	3	Upper basketry level (1), prob. Late Lovelock, 0-1200 A.D. Unknown (2)	Cressman 1942:63-64, fig. 92b:8, 9
Albert Lake	1	Unknown	Cressman 1942:64
Deadman Cave	6	Top of Level 4 through Level 3, 2000 B.C.-500 A.D.	E. R. Smith 1941:35 pl. VII: 8-9
Danger Cave	9	Danger IV (6) 1869 B.C. ± 160 Danger III (3) predates Danger IV	Jennings 1957:193, figs. 176d,e,k, 178i,l,m
Juke Box Cave	1	Level II (1300 B.C.-400 A.D.?)	Jennings 1957:203, fig. 186i

TABLE 28 (cont'd.)

	No.	Provenience and Dating	References
Southwest			
Tabeguache Cave	1	Basketmaker II	Hurst 1942, pl. 2
Woodchuck Cave	1	Basketmaker II	Lockett & Hargrave 1953:20, fig. 10f
Unspecified Southwestern sites	6	Miscellaneous Basketmaker II components	Cressman 1942:64, fig. 92a: 2-7

Explanation of Following Illustrations

Figure 3 Profile of east wall of E-trench, F-0 - F-7

Figure 4 Profile of section D-1 - G-1

Figure 5 Profile of section E-4 - F-4

Figure 6 Profile of section E-7 - F-7

Figure 7 Profile of section G-1 - G-0

Figure 8 Profile of west wall of Stratigraphic Pit No. 2

Figure 9 Projectile points

	Field cat. no.	Type
a.	163	Bare Creek Eared
b.	16	Elko Eared
c.	143	do.
d.	195	do.
e.	329	do.
f.	450	do.
g.	537	do.
h.	624	do.
i.	674	do.
j.	764	do.
k.	14	Elko Corner-notched
l.	224	do.
m.	829	do.
n.	577	Elko Contracting Stem
o.	80	Pinto Single Shoulder
p.	185	Surprise Valley Split Stem
q.	84	Rose Spring Corner-notched
r.	904	Type 4

Figure 10 (Lowie Museum of Anthropology accession numbers)
- a. Slab metate (1-169963)
- b. Block metate (1-169962)
- c. Bowl mortar (1-169976)
- d. Block mortar (1-169968)

Figure 11 Bone artifacts
- a. Bone tube (1-169827)
- b-e. Bone tube fragments (1-169823, 1-169841, 1-169804, 1-169852)
- f. Rod-like object (1-169808)

Figure 11
- g. Spatulate object (1-169851)
- h-k. Bone hooks (1-169856, 1-169824, 1-169864, 1-169822)
- l. Spatulate object (1-169843)
- m. Spatulate object (1-169836)
- n. Grooved bone fragment (1-169837)
- o. Rod-like object (1-169815)
- p. Chipped bone fragment (1-169979)

Figure 12
- a. Plan of Feature 2, Stratigraphic Pit No. 2. Segment of small house depression. See Figure 8 for cross section.
- b. Partial floor plan of Feature 31. Shaded area indicates post hole. Also indicated are associated rocks and timbers.

Figure 13 Feature 24. Partial floor plan. Note pole fragments, carbonized grass stems. Wall or floor material indicated by shading. ⊗ marks locations of basketry and matting fragments. Broken lines indicate Burial 1, superimposed by a portion of Feature 24 wall construction.

Figure 14 Floor plan and cross section of two possible borrow pits (fea. 3A and 3B). Stratigraphic Pit No. 2.

Figure 15 Feature 23B. Partial floor plan of pits E-4 and E-5, showing rock concentration. Shaded areas indicate carbon stains on floor of house pit in which Feature 23b lies.

Plate 1 Site CA-Las-194 from the west. E-trench area indicated by trucks. Bare Ranch headquarters left center.

(The following accession numbers are those of the Lowie Museum of Anthropology)

Plate 2 Projectile points
- a. Bare Creek Eared (1-169419)
- b. do. (1-169728)
- c. do. (1-169691)
- d. do. (1-169494)
- e. do. (1-169642)
- f. do. (1-169371)
- g. Elko Eared (1-169394)
- h. do. (1-169601)
- i. do. (1-169401)

Plate 2

j. Elko Eared (1-169400)
k. do. (1-169650)
l. do. (1-169557)
m. do. (1-169699)
n. do. (1-169255)
o. do. (1-169250)
p. do. (1-169408)
q. do. (1-169251)
r. do. (1-169581)
s. do. (1-169630)
t. do. (1-169649)
u. do. (1-169549)
v. do. (1-169451)
w. do. (1-169585)
x. do. (1-169374)

Plate 3

Projectile points

a. Elko Eared (1-169629)
b. do. (1-169595)
c. do. (1-169635)
d. do. (1-169246)
e. do. (1-169702)
f. do. (1-169339)
g. do. (1-169617)
h. do. (1-169500)
i. do. (1-169544)
j. do. (1-169735)
k. do. (1-169352)
l. do. (1-169577)
m. do. (1-169715)
n. do. (1-169260)
o. Elko Corner-notched (1-169268)
p. do (1-169566)
q. do. (1-169539)
r. do. (1-169573)
s. do. (1-169537)
t. do. (1-169358)
u. do. (1-169430)
v. do. (1-169714)
w. do. (1-169712)
x. do. (1-169343)
y. do. (1-169350)
z. Elko Contracting Stem (1-169417)

Plate 4 Projectile points

a. Northern Side-notched (1-169688)
b. do. (1-169671)
c. do. (1-169718)
d. do. (1-169407)
e. do. (1-169344)
f. do. (1-169346)
g. Humboldt Concave Base (1-169254)
h. do. (1-169242)
i. do. (1-169395)
j. do. (1-169662)
k. do. (1-169302)
l. do. (1-169354)
m. do. (1-169710b)
n. do. (1-169614)
o. do. (1-169391)
p. Pinto Sloping Shoulder (1-169734)
q. Pinto Single Shoulder (1-169721)
r. Pinto Willow Leaf (1-169294)
s. do. (1-169434)
t. Surprise Valley Split Stem (1-169484)
u. do. (1-169446)
v. do. (1-169362)
w. do. (1-169321)
x. do. (1-169615)
y. do. (1-169621)
z. do. (1-169360)
a'. do. (1-169392)
b'. do. (1-169387)
c'. do. (1-169416)
d'. do. (1-169479)
e'. do. (1-169411)

Plate 5 Projectile points

a. Rose Spring Corner-notched (1-169270)
b. do. (1-169678)
c. do. (1-169495)
d. do. (1-169380)
e. do. (1-169376)
f. do. (1-169489)
g. do. (1-169672)
h. do. (1-169405)
i. do. (1-169331)
j. do. (1-169253)
k. do. (1-169616)

Plate 5

l. Rose Spring Corner-notched (1-169375)
m. do. (1-169433)
n. do. (1-169378)
o. do. (1-169248)
p. Rose Spring Contracting Stem (1-169704)
q. do. (1-169256)
r. do. (1-169731)
s. Eastgate Expanding Stem (1-169396)
t. do. (1-169267)
u. do. (1-169269)
v. do. (1-169713)
w. do. (1-169697)
x. do. (1-169643)
y. do. (1-169531)
z. do. (1-169611)
a'. Cottonwood Leaf Shape (1-169518)
b'. do. (1-169673)
c'. do. (1-169657)
d'. Type 1 (1-169348)
e'. Type 2 (1-169359)
f'. Type 3 (1-169711)
g'. Type 3 (1-169420)
h'. Type 5 (1-169641)
i'. Type 5 (1-169681)
j'. Type 6 (1-169604)

Plate 6

a. Knife, Type 1 (1-169349)
b. do. (1-169426)
c. do. (1-169664)
d. do. (1-169247)
e. do. (1-169598)
f. do. (1-169656)
g. Knife, Type 2 (1-169361)
h. do. (1-169720)
i. Knife, Type 3 (1-169694)
j. Drill, Type 1 (1-169638)
k. do. (1-169564)
l. Drill, Type 2 (1-169405)

Plate 7

a. Notched scraper (1-169472)
b. do. (1-169386)
c. do. (1-169536)
d. do. (1-169610)
e. do. (1-169)
f. do. (1-169466)

Plate 7

g. Flake scraper (1-169329)
h. do. (1-169596)
i. Graver (1-169431)
j. do. (1-169599)

Plate 8

a. Shaped mano (1-169897)
b. do. (1-169928)
c. Unshaped mano (1-169881)
d. do. (1-169921)
e. Pestle (1-169925)
f. do. (1-169926)

Plate 9

a. Bone bead, Type I (1-169805)
b. do. (1-169835)
c. do. (1-169821)
d. Bone bead, Type IIa (1-169849)
e. do. (1-169830)
f. do. (1-169811)
g. Bone bead, Type IIb (1-169847)
h. Bone hook (1-169824)
i. do. (1-169856)
j. Rod-like object (1-169815)
k. Spatulate object (1-169843)
l. do. (1-169836)
m. L-shaped awl (1-169832)
n. do. (1-169865)
o. Radius awl (1-169857)
p. Rib awl (1-169834)
q. Splinter awl (1-169816)
r. Scapula saw (1-169866)
s. Antler flaking tool (1-169867)

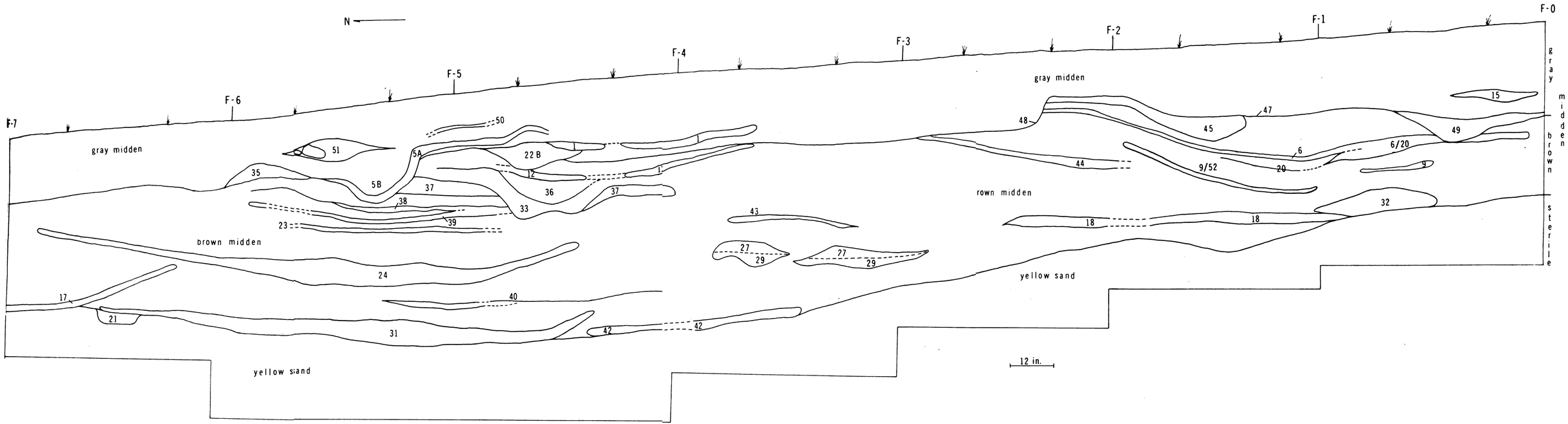


Fig. Profile of east wall of E-trench, F-0 — F-7

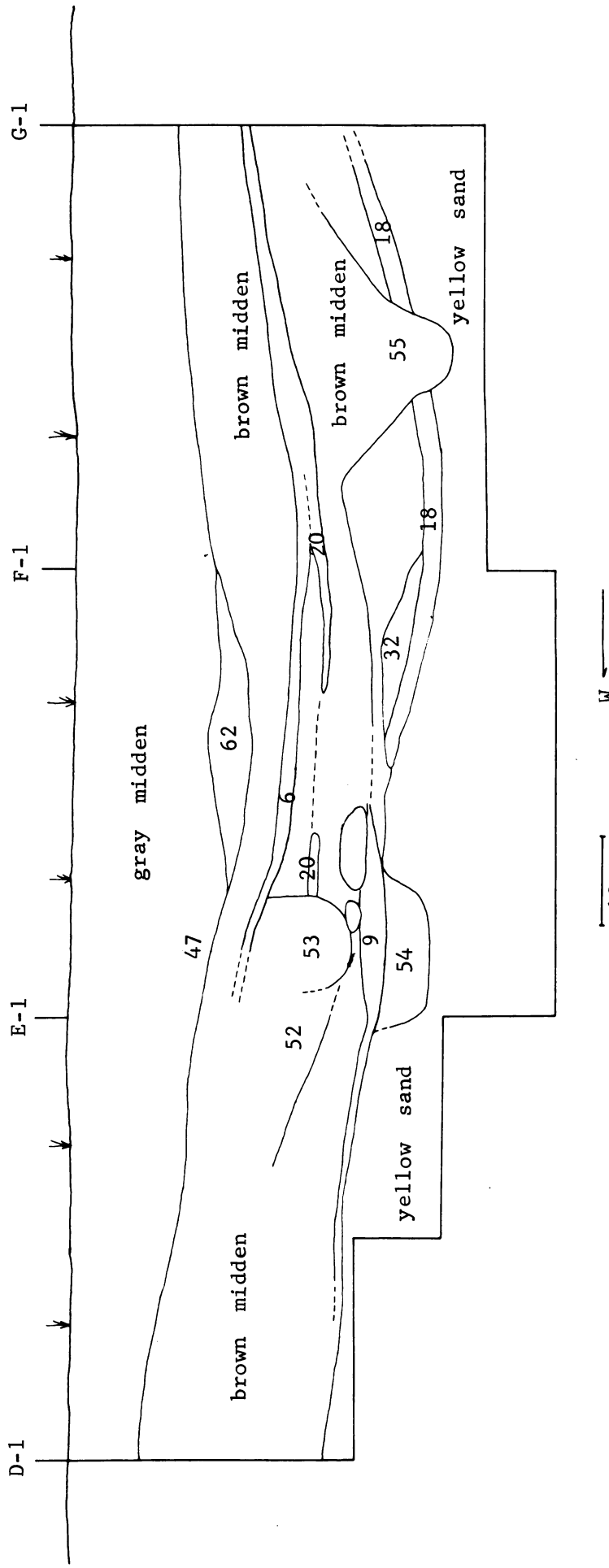


Fig. 4. Profile of section D-1 - G-1

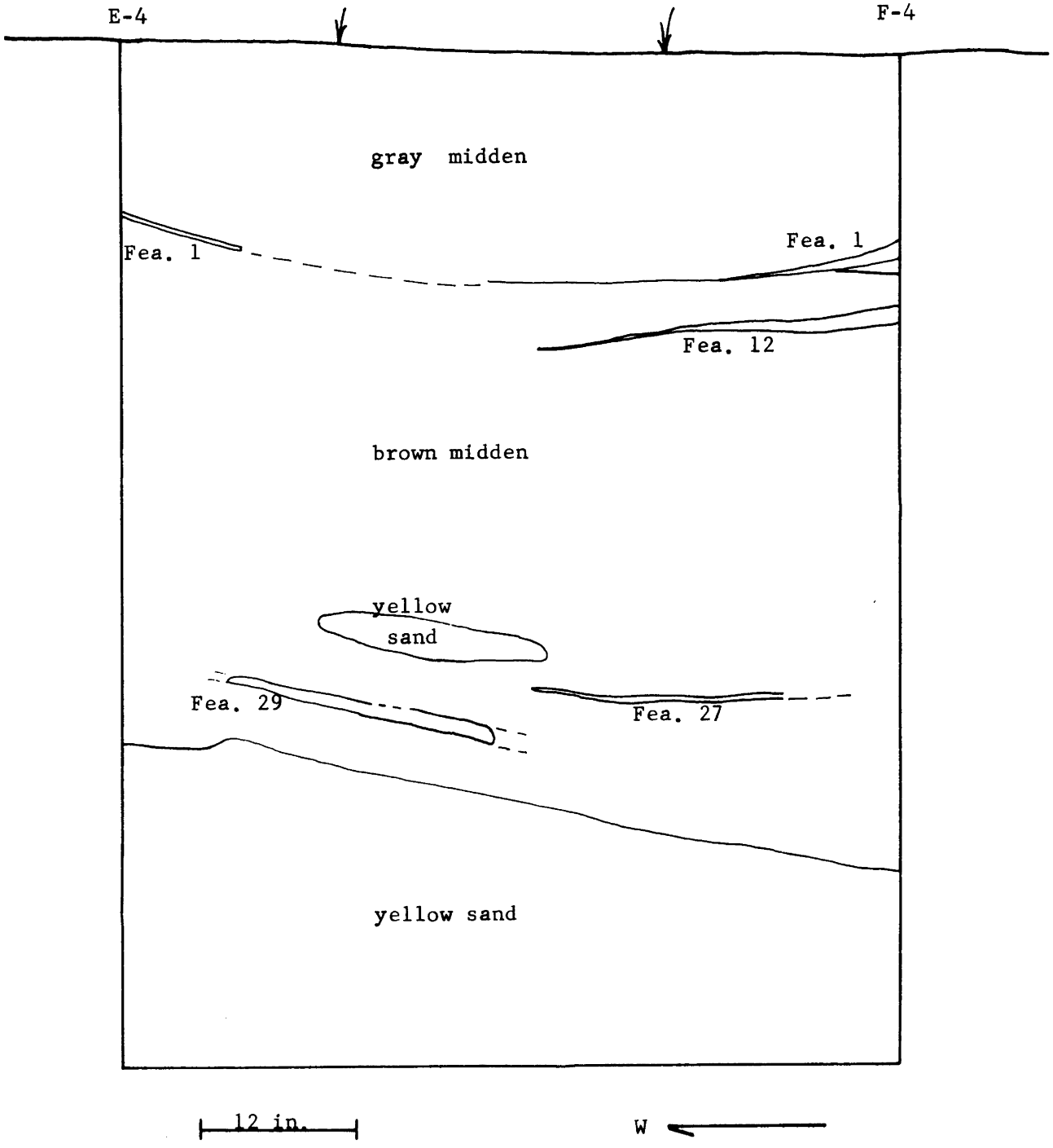


Fig. 5 Profile of section E-4 - F-4

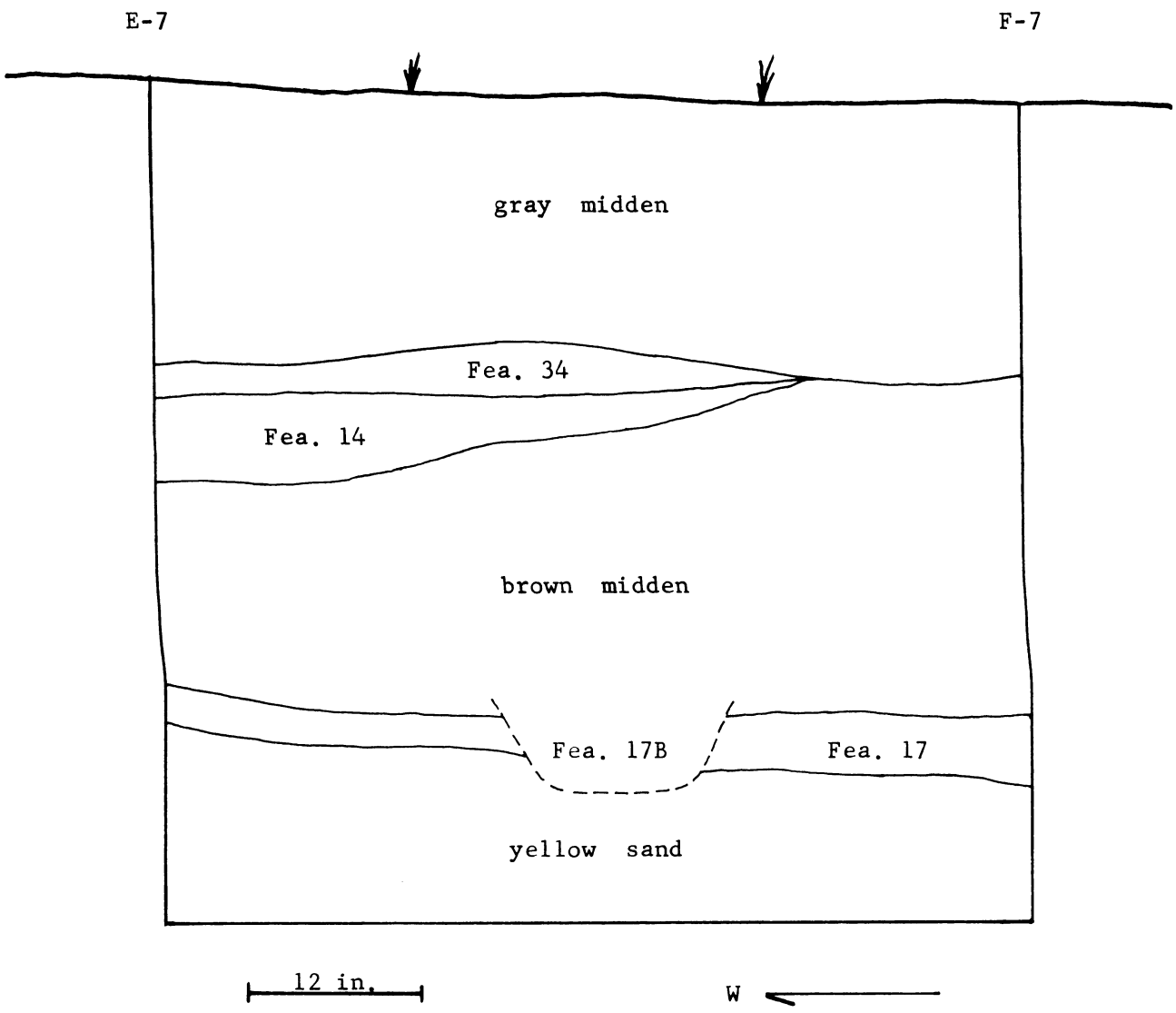


Fig. 6. Profile of section E-7 - F-7

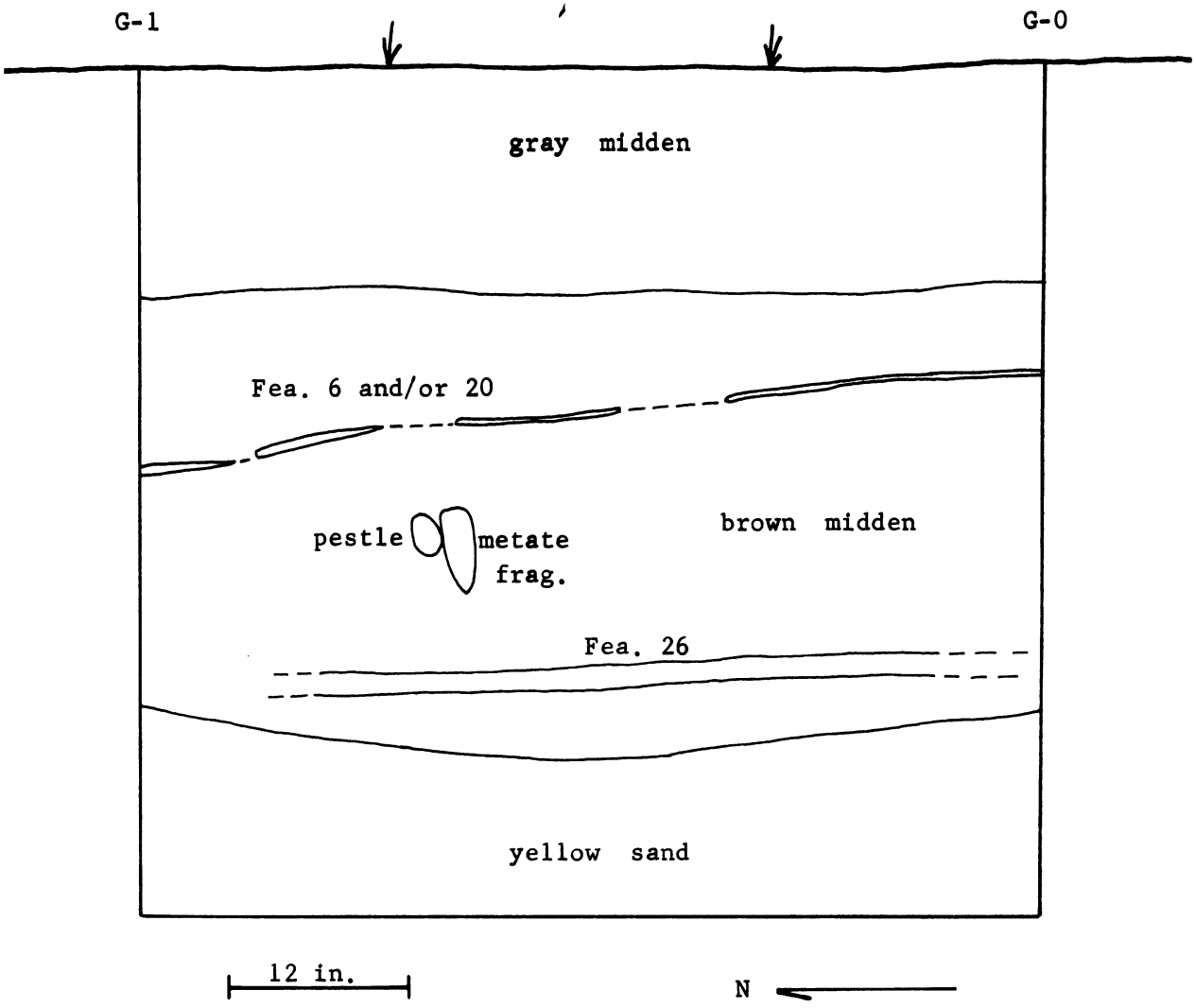


Fig. 7. Profile of section G-1 - G-0

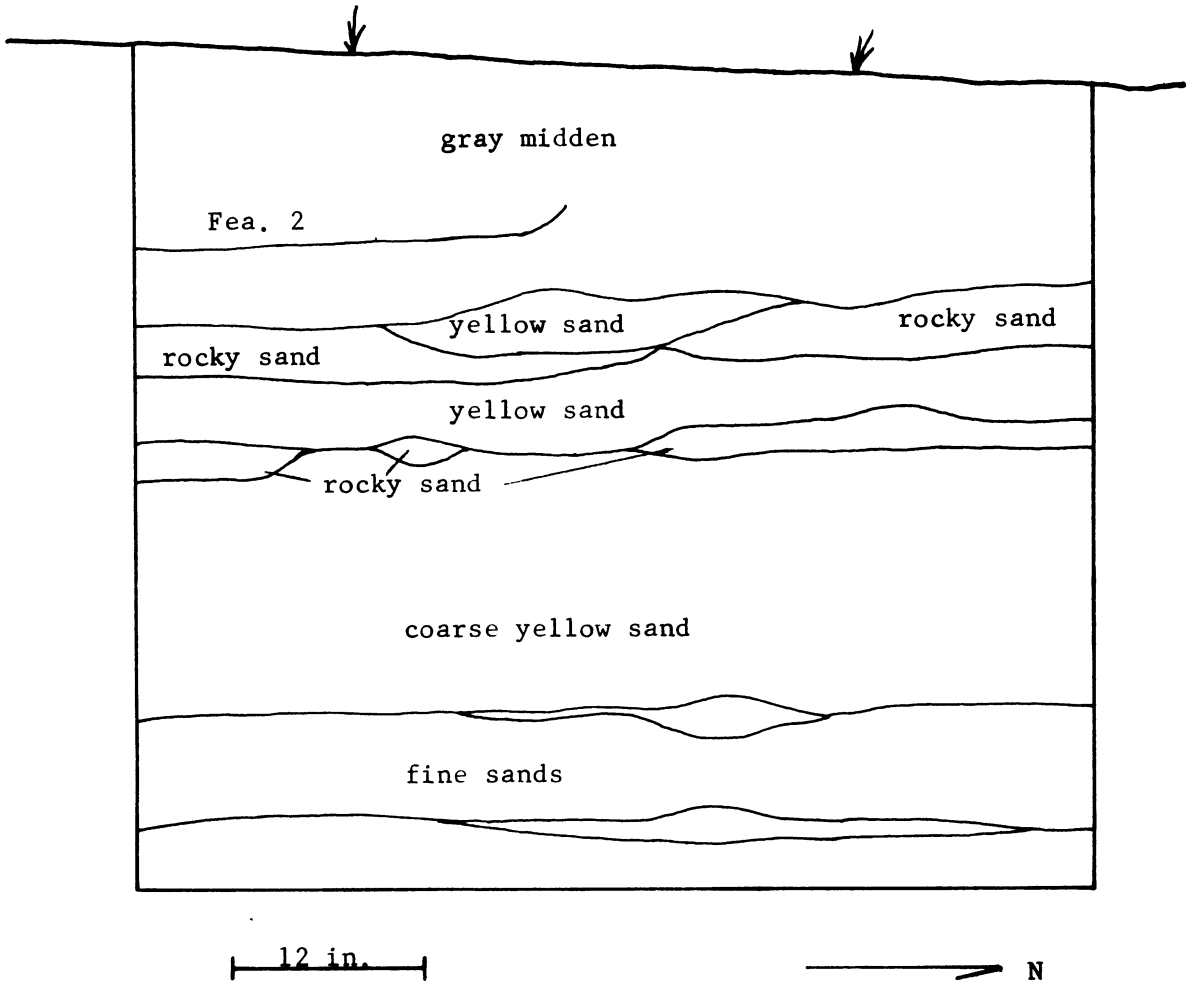


Fig. 8. Profile of west wall
of Stratigraphic Pit No. 2

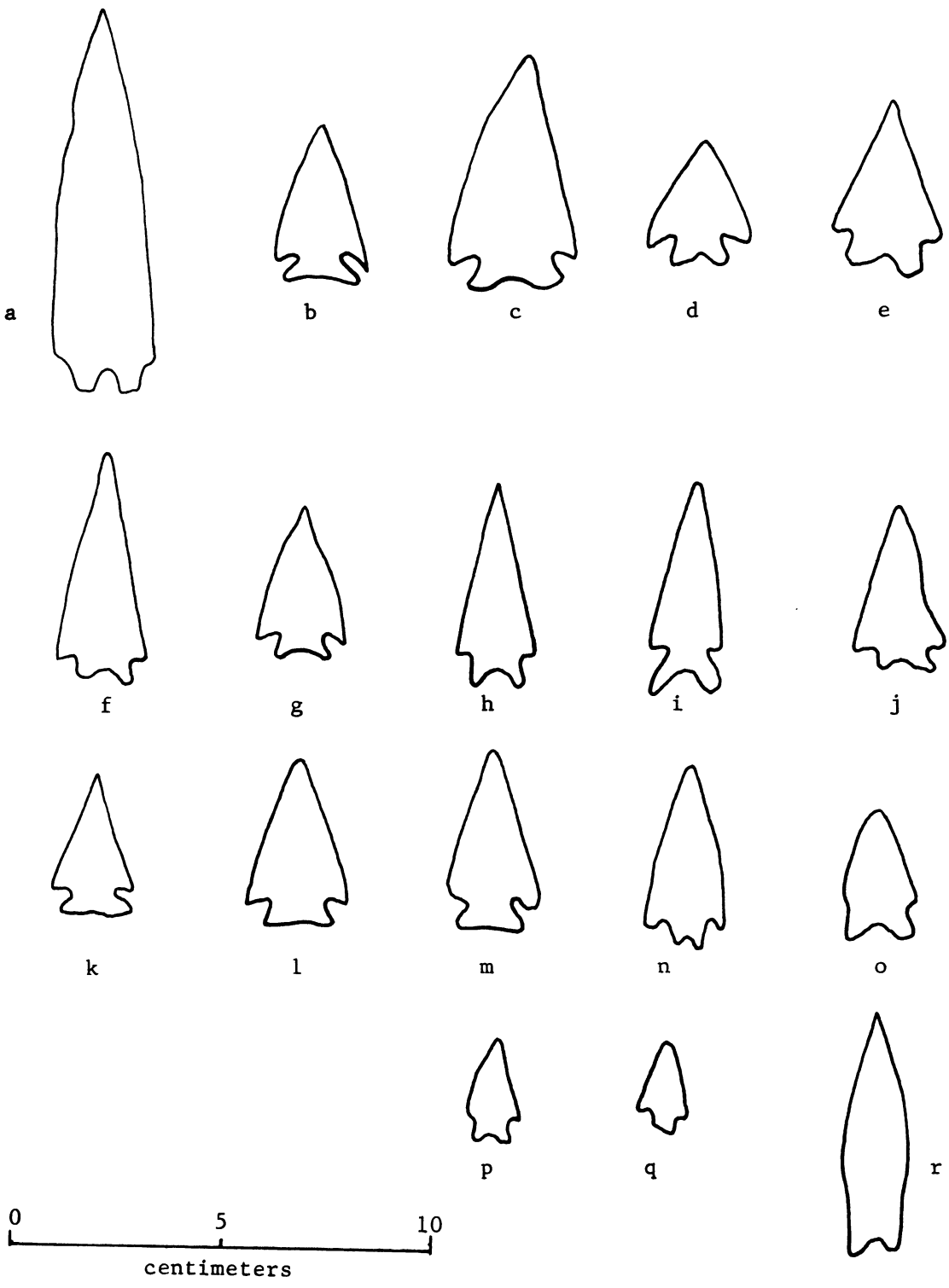


Figure 9

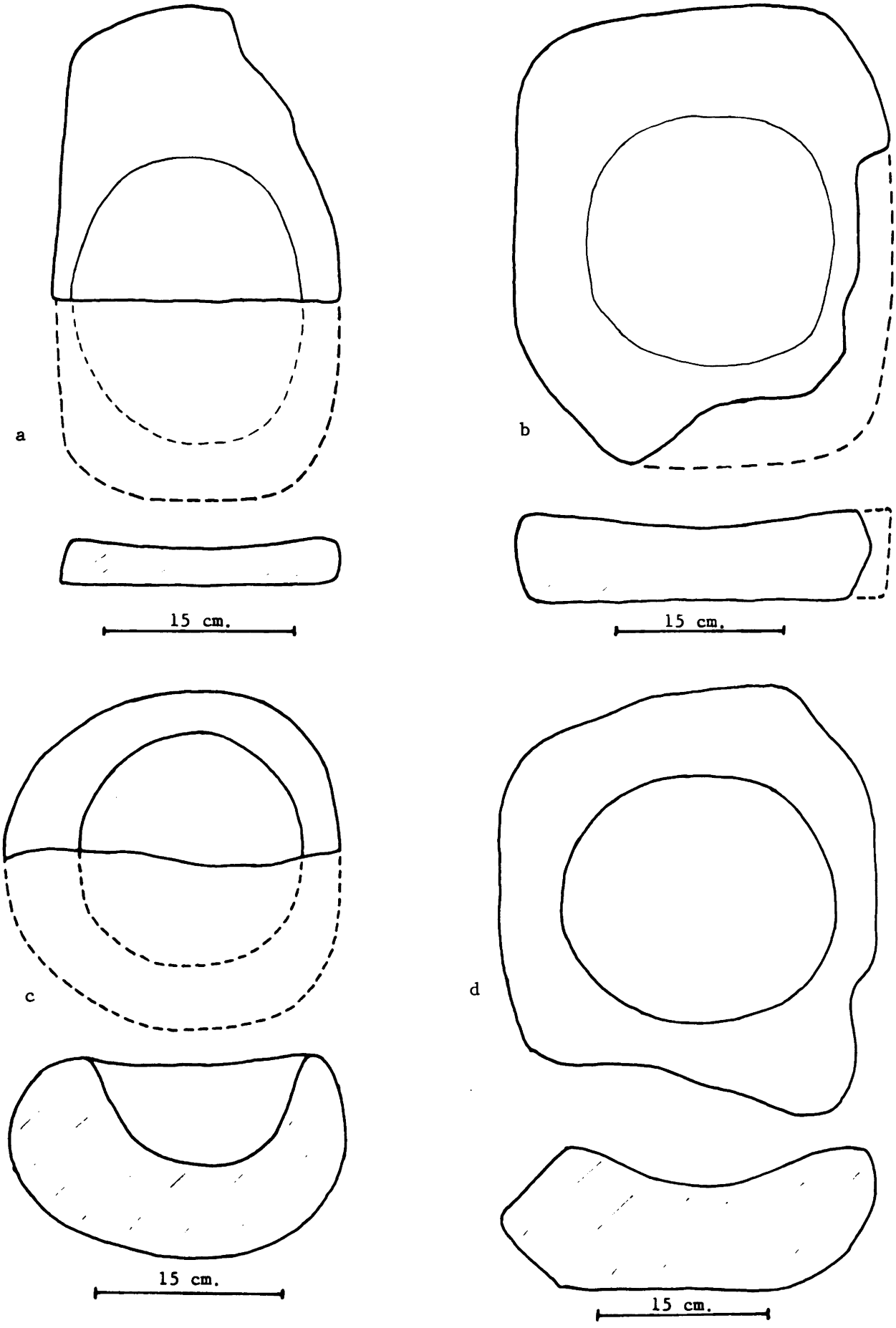


Figure 10

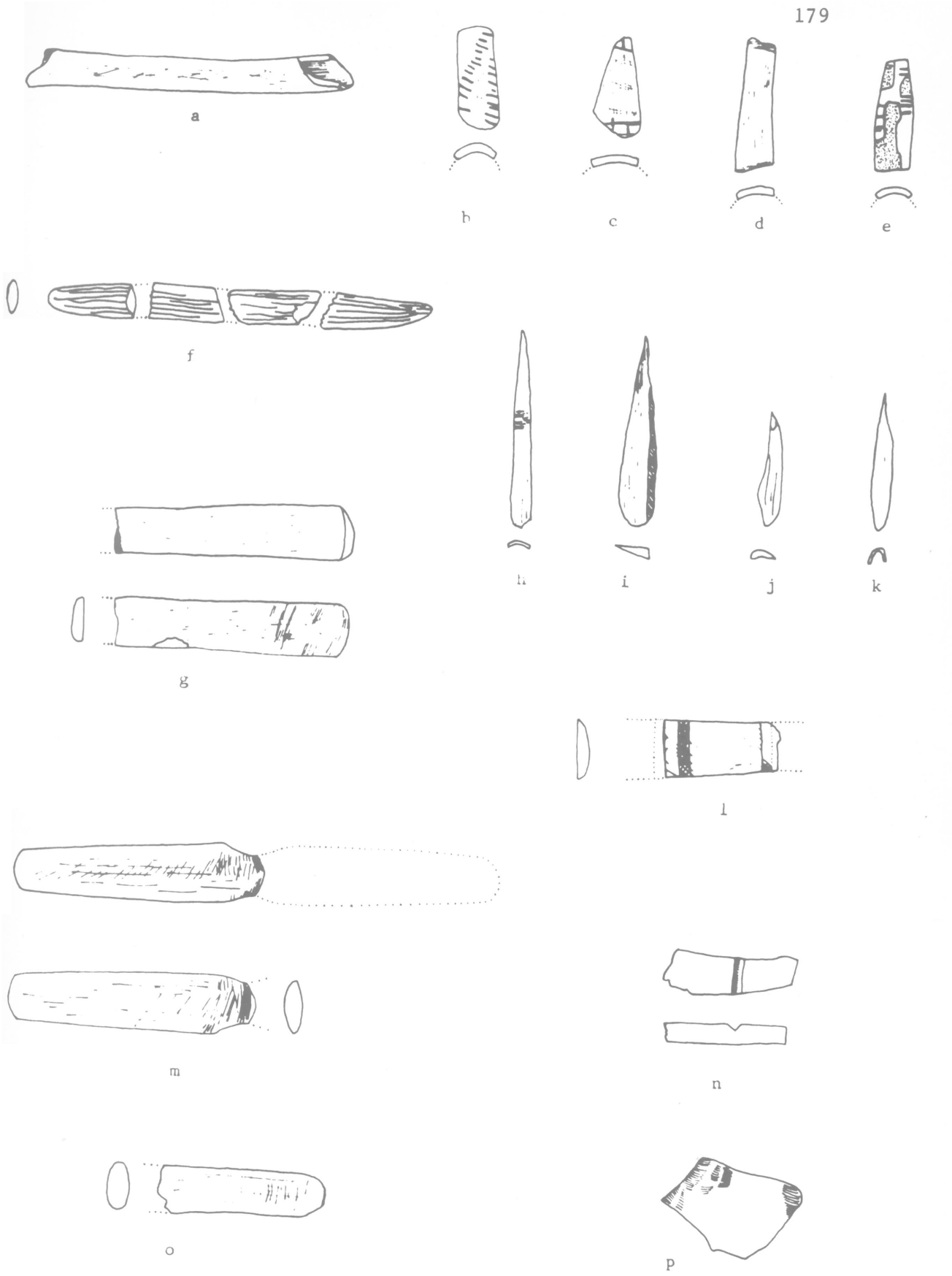


Figure 11

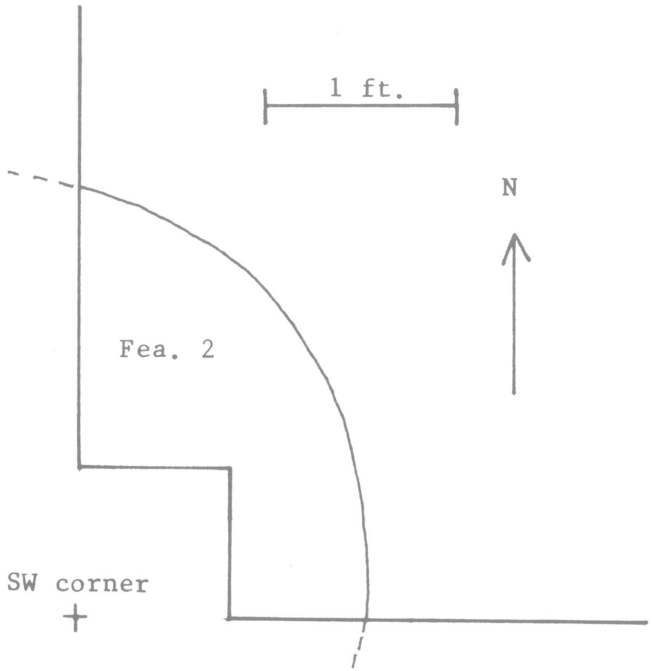


Fig. 12a. Plan of Fea. 2, Strat. Pit No. 2. Segment of small house depression. See Fig. 8 for cross section.

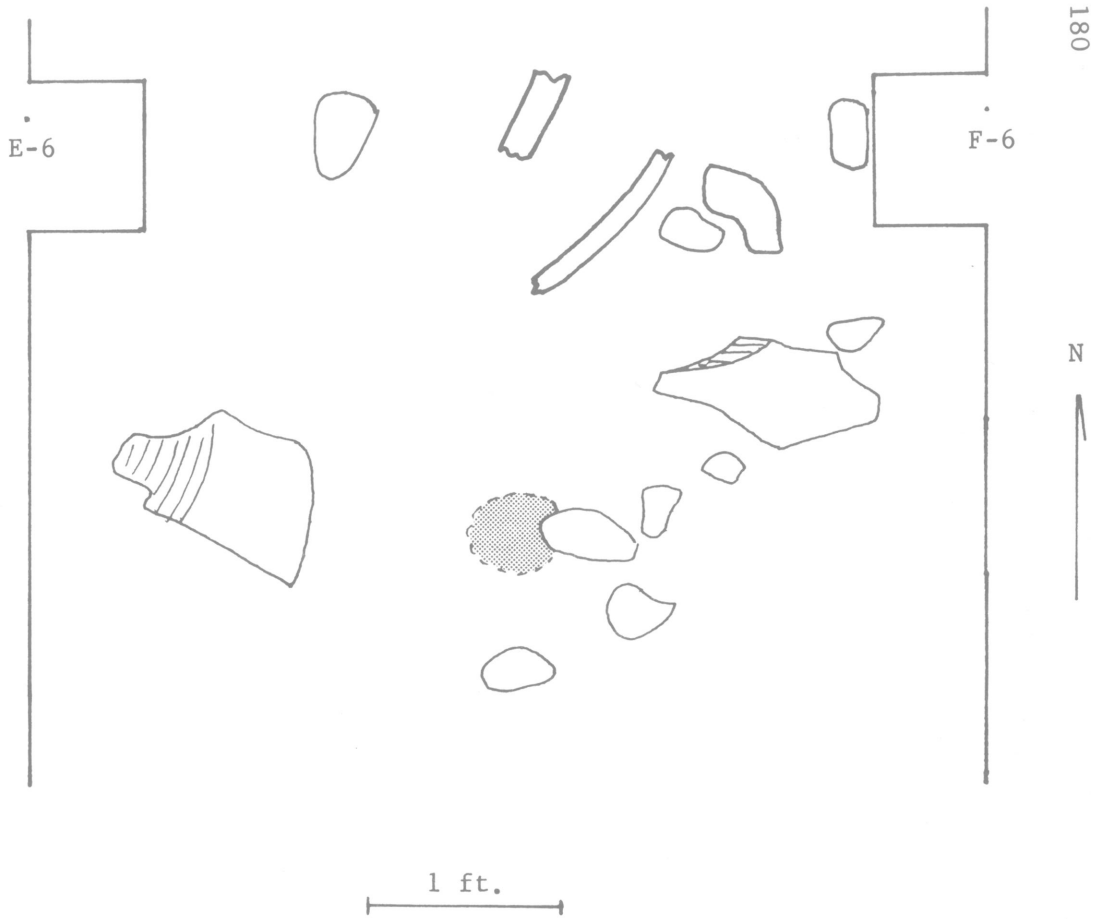


Fig. 12b. Partial floor plan of Fea. 31. Shaded area indicates post hole. Also indicated are associated rocks and timbers.

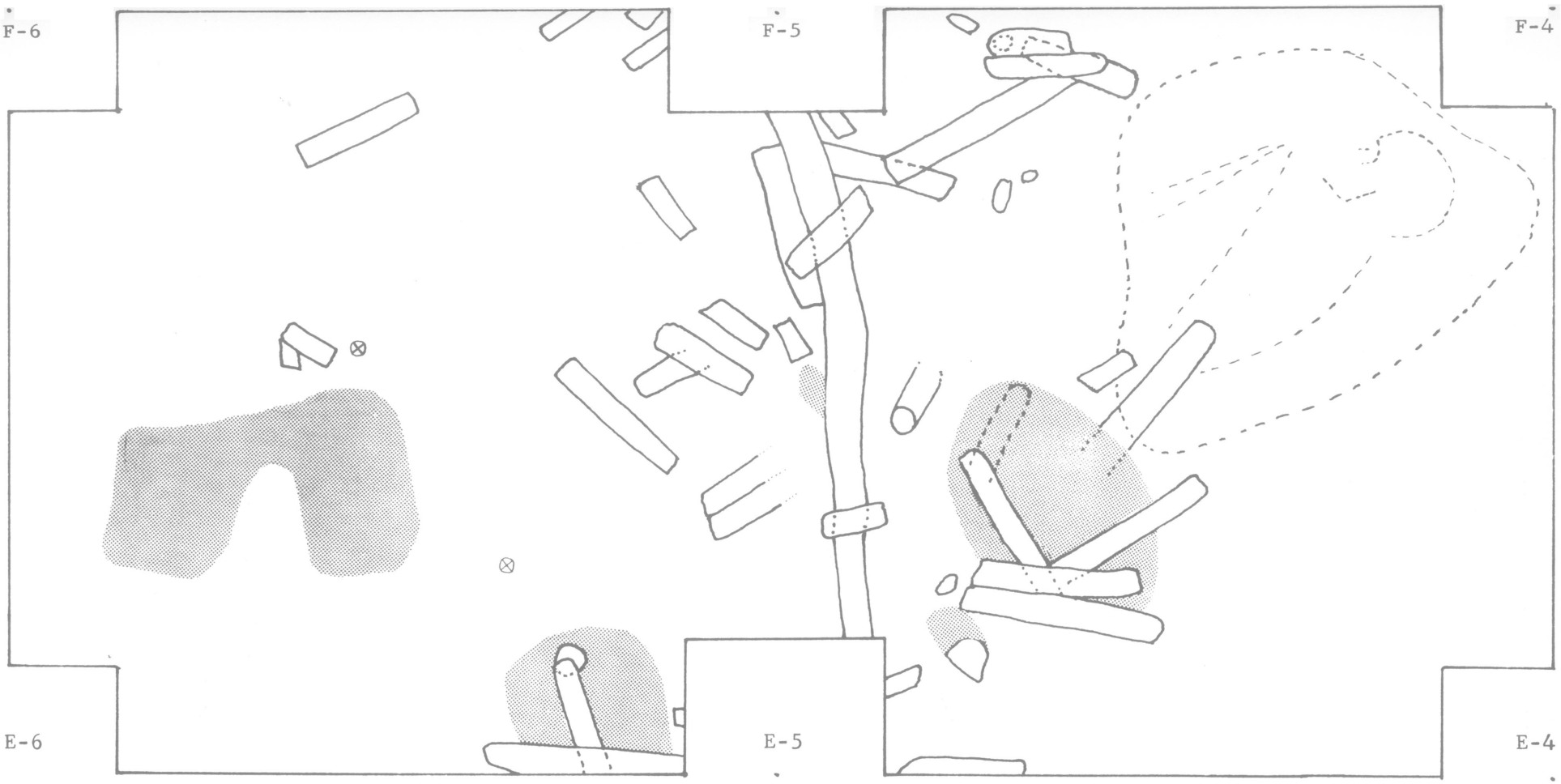
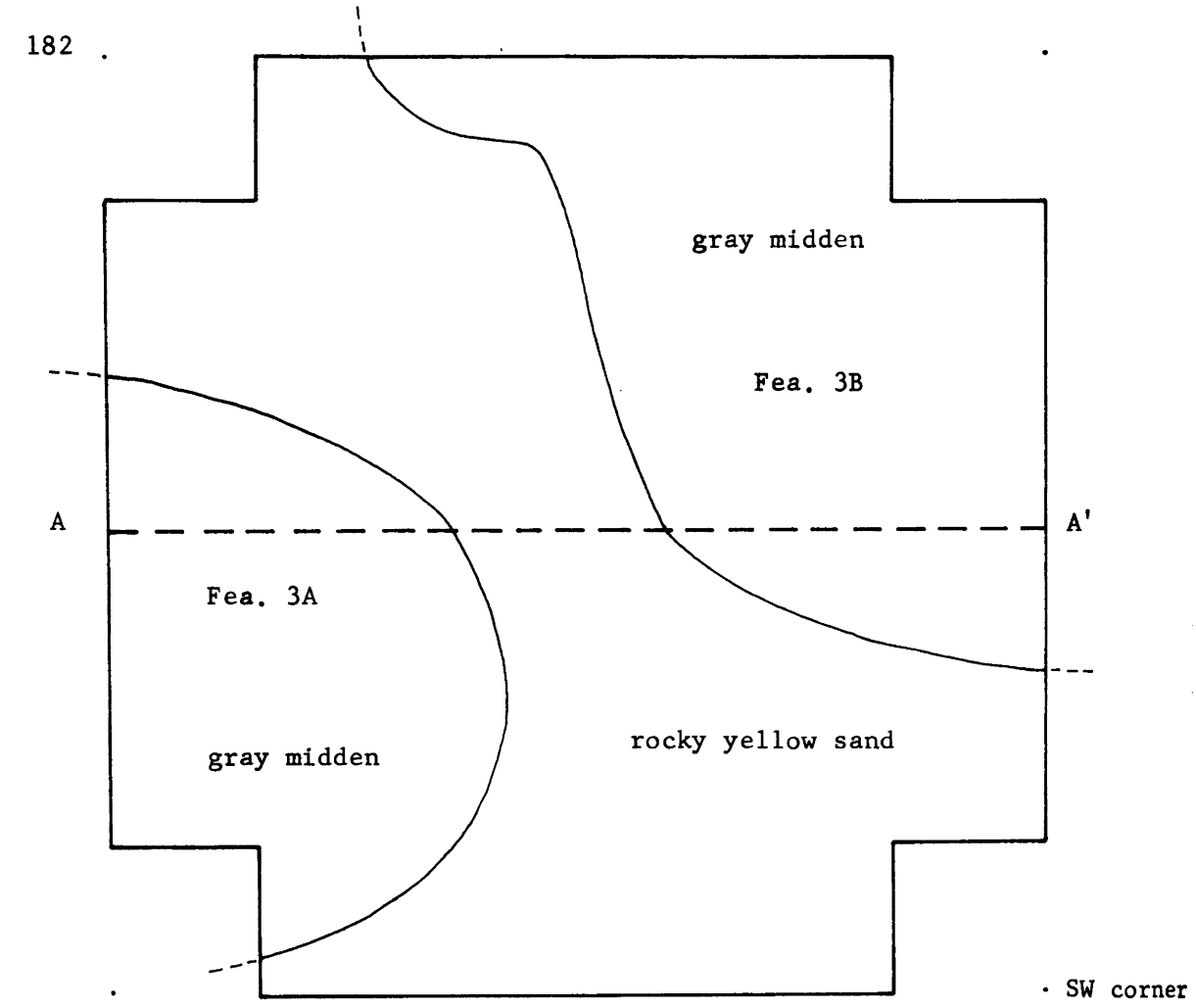


Fig. 13. Feature 24



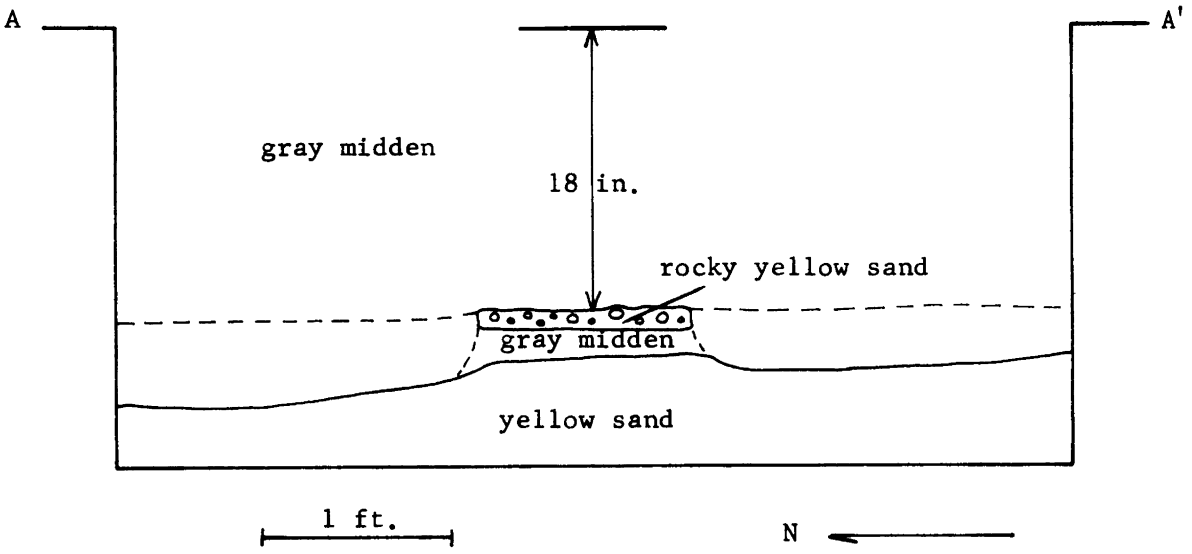


Fig. 14. Stratigraphic Pit No. 2

Fig. 15. Feature 23B

Plate 1. Site CA-Las-194 from the west

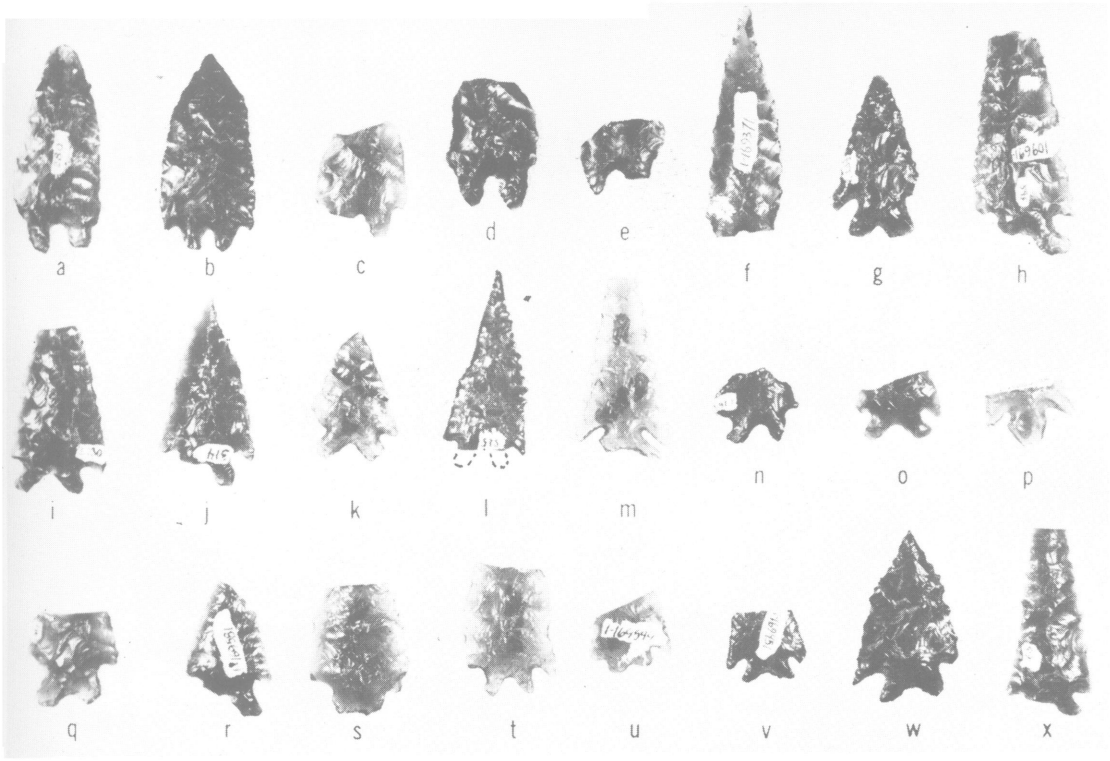
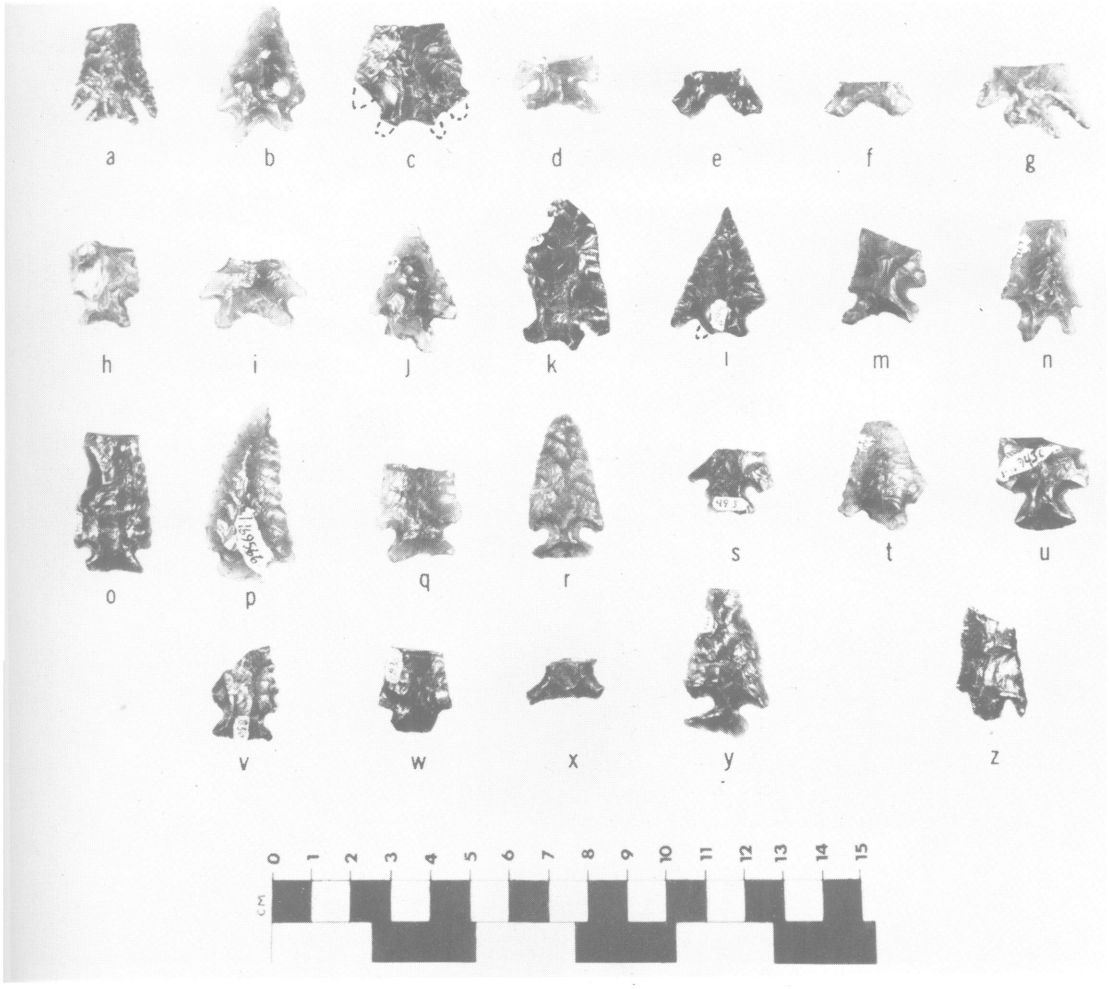


Plate 2



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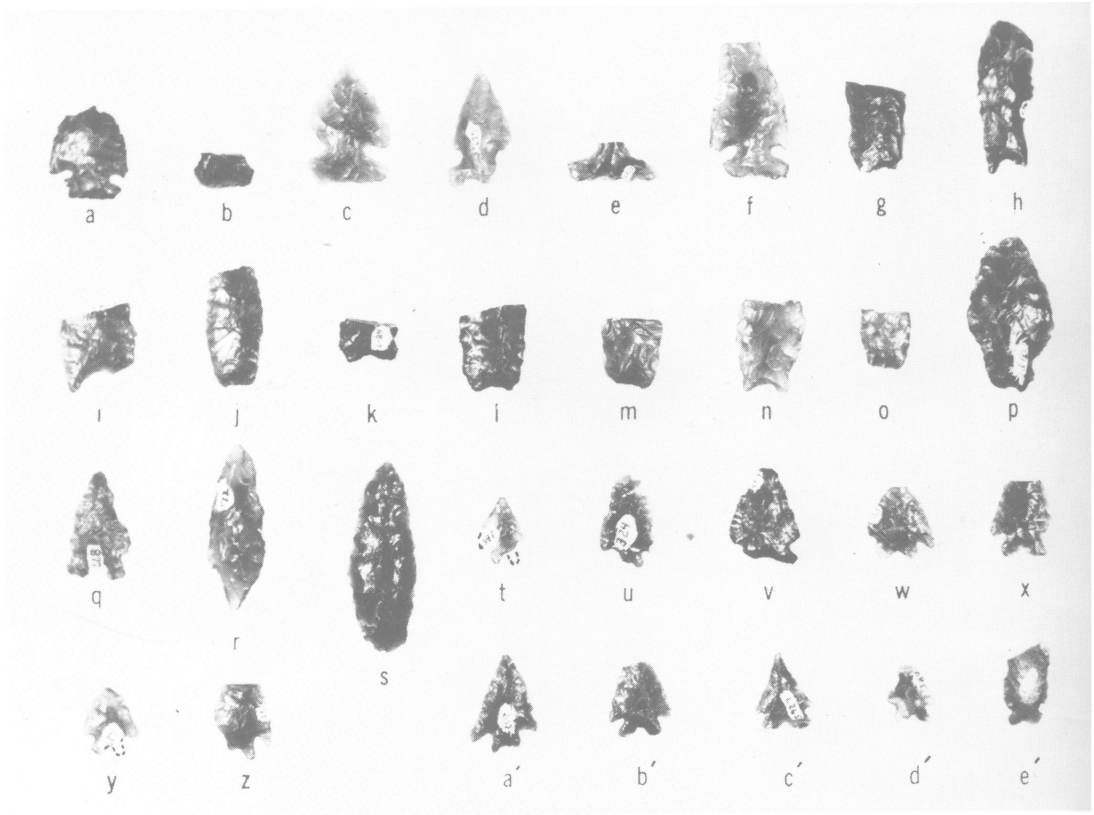

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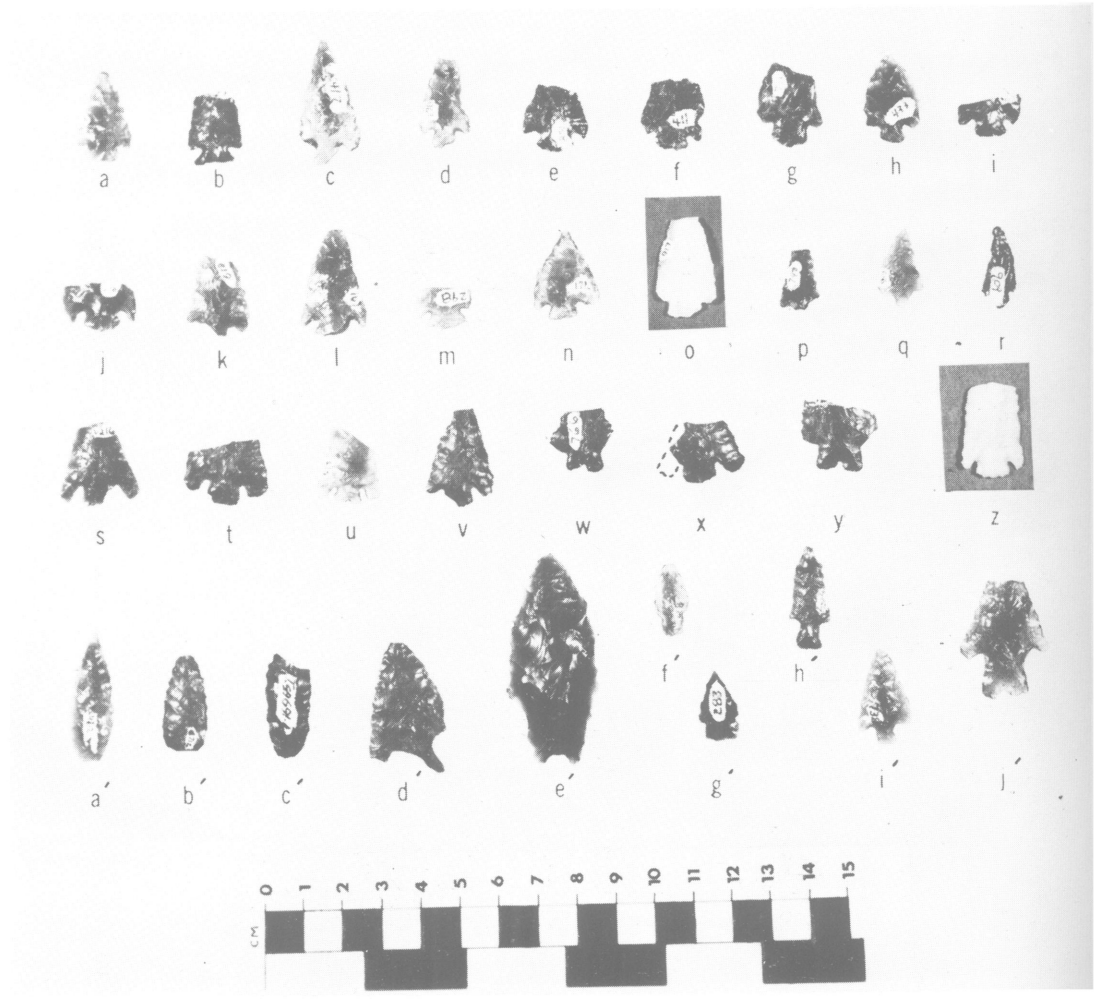

Plate 5

Plate 6

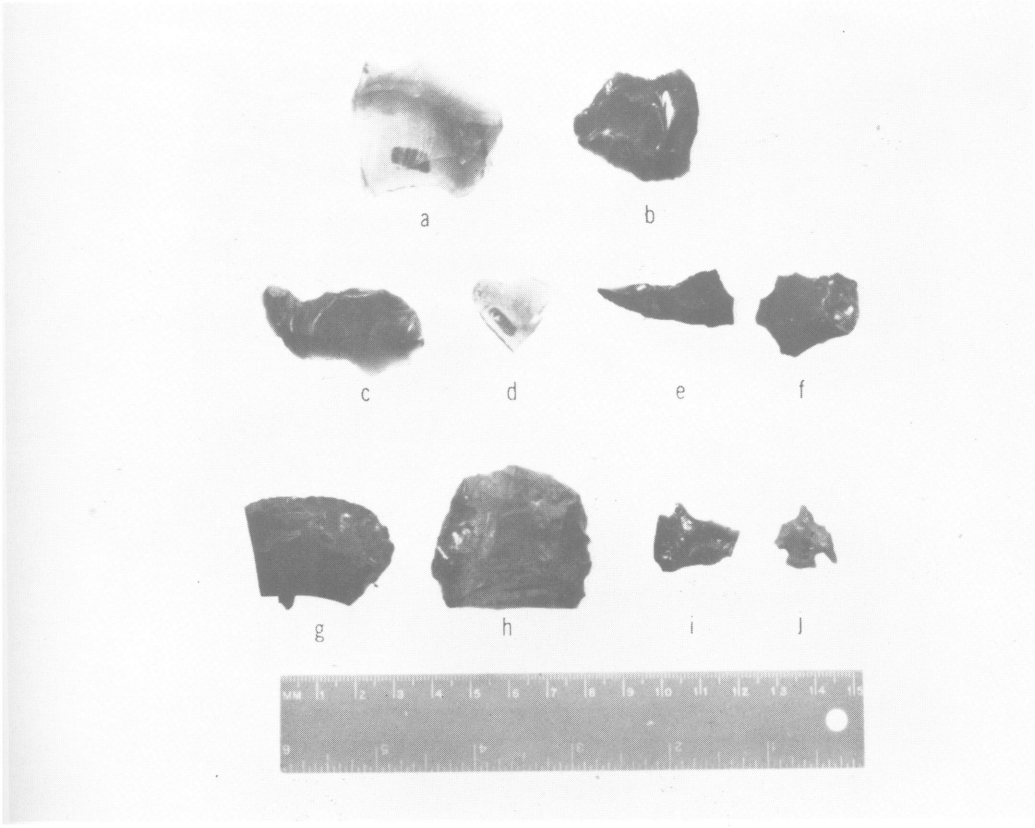

Plate 7

Plate 8

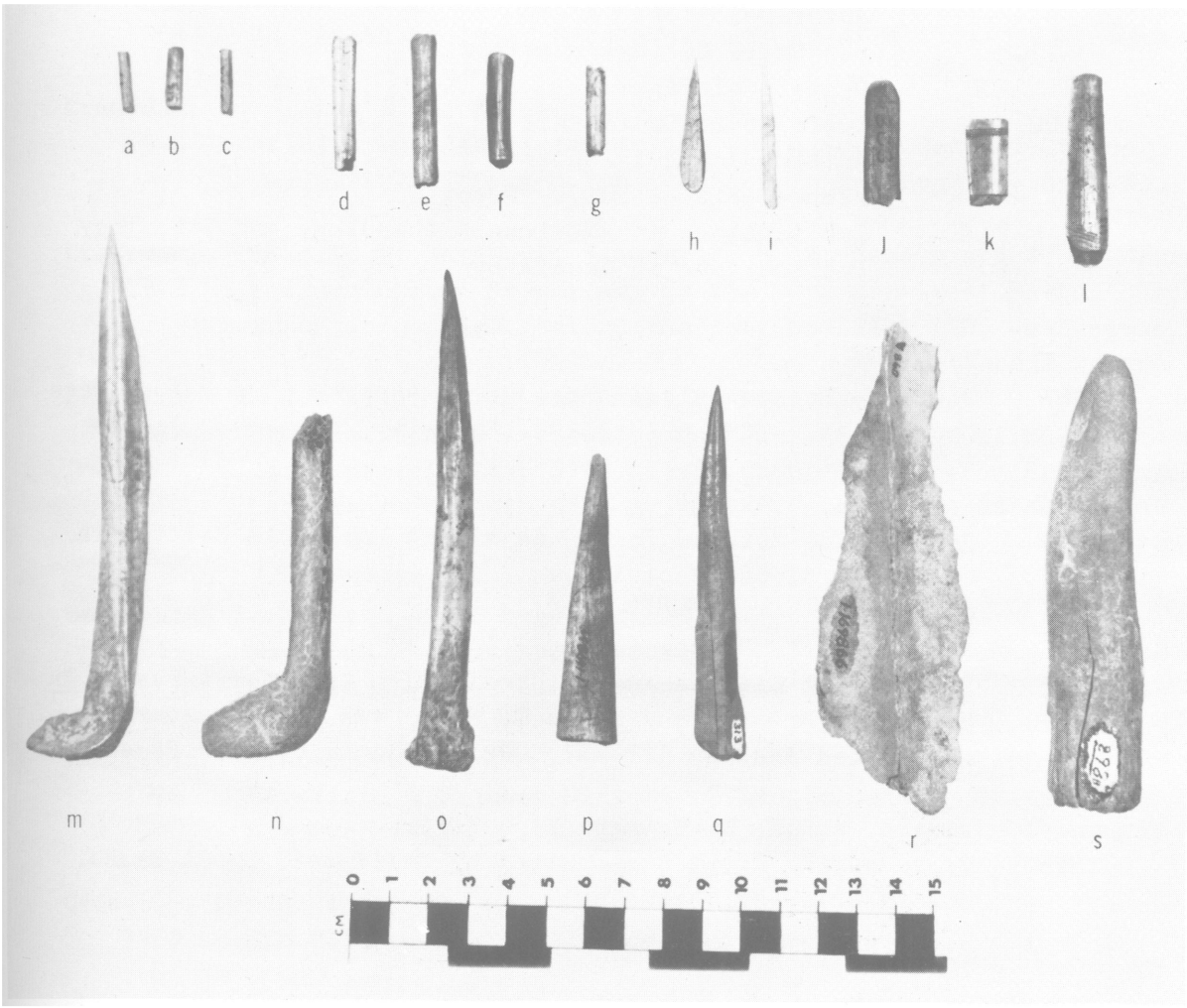

Plate 9

Bibliography

Abbreviations Used

AMNH	American Museum of Natural History
-AP	Anthropological Papers
ISCM	Idaho State College Museum
-OP	Occasional Papers
UC	University of California
-AR	Anthropological Records
-AS-R	Archaeological Survey Report
-PAAE	Publications in American Archaeology and Ethnology
-PG	Publications in Geography

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