

THE ROBERT LIVERMORE ADOBE SITE

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INTRODUCTION

Robert Livermore was born in Springfield, England in 1799. He went to sea in 1816 and left ship in Monterrey, California in the early 1820's. In 1837 he obtained a Mexican land grant of about 9,000 acres in eastern Livermore Valley. Livermore settled in an adobe house in the late 1830's, which was located on the south side of Los Positas Creek in the northern part of present-day Livermore. There are no above-ground remains of the adobe and its exact location had not been scientifically determined by 1981.

Many Livermore residents have been interested in commemoration of the site during the last 25 years or more. Since the City of Livermore has issued a Planned Unit Development permit to the Anderson Project for construction at the site vicinity, I decided to undertake a historical and archeological investigation to try to locate the site. If the site location could be proven, the city and the Anderson Project could take steps to preserve the site or to arrange for a full archeological excavation to locate and recover all artifacts, and structural remains of the building now lying below the ground at the site.

The historical records indicate that Robert Livermore did build several adobe buildings ajoined or adjacent to each other at the location during the late 1830's and early 1840's. He later built a frame house nearby which was constructed of materials shipped from the east coast in kit form. This house was replaced with a pre-built modular house in the 1950's by the present owner, Chester Anderson.

In addition to these houses, there have been several other houses, barns, chicken-houses, and outbuildings built and torn down over the years since the adobes were built. Some of the remains of these buildings are stacked in a junk pile near the theoretical adobe site along with other junk.

The sketch of the adobe shown on the cover sheet of this report was copied from a sketch which was a copy of a painting shown in F. L. de Nier's thesis "Robert Livermore and the Development of the Livermore Valley to 1860" (1927), University of California.

A housing development, the Anderson Project, (PUD 1-81) is planned for construction at the Robert Livermore adobe site (see Site Survey Record, Topography map and Sketch maps 1 and 2), in the City of Livermore, California. In order to confirm the site location so that construction activities would not accidentally disturb the site, a one-day surface survey and a one-day test boring program were undertaken by the writer.

The surveys were done as a project of the Livermore Heritage Guild, a private non-profit corporation for historical preservation. In conjunction with these surveys, a literature search was made to find historical references to the Livermore adobe and its location. Also, extensive consultations were held with Janet Newton, an authority on the history of Robert Livermore.

Consultations on archeological techniques were held with archeologist Dr. George Miller, California State University, Hayward (CSUH). Archeological equipment was loaned by CSUH for the auger survey. Indian observer Trish Garcia, and David Wiesner assisted on the auger survey.

Surface Survey

At a Livermore Planning Commission hearing on the Anderson Project, I talked with landowner, Chester Anderson. Mr. Anderson invited me to survey the adobe site area to see if evidence could be found to pin-point the site. The survey was conducted on March 11, 1981 by the writer.

The morning was devoted to a search of the ground surface around the reported adobe site (Hendry and Bowman). Of the 101 artifacts found in this area (see sketch maps 1 and 2), ten are dated pre-1900 and the rest are post-1900. Table 1 is a listing of the pre-1900 artifacts, which are machine-cut square-shank nails, ceramic sherds and purple glass sherds.

The afternoon was devoted to a surface survey of the outlying area around the adobe site. Several historical artifacts were found such as glass sherds and metal fragments. Indian artifacts were also found. Two stone flakes, possibly of Indian origin were found 600 feet north of the adobe site. A piece of a

sandstone acorn-grinding mortar of definite Indian origin was found 330 feet west of the adobe site along the south banks of Las Positas Creek. Fig 1 shows these artifacts. The finding of Indian artifacts infers that Indians lived in the area in the past. Indian Village site Ca-Ala-47 is located in this vicinity.

Based on historical records (Newton, 1969), Robert Livermore built his adobe home in the 1830's. A part of the walls was still visible in 1896 (Chris Anderson quoted in Bowman and Hendry). The presence of the pre-1900 artifacts tends to confirm the reported site location. However, there were other pre-1900 wood buildings nearby. The site location of the adobe was reported in Hendry and Bowman as "50 feet south of Arroyo Las Positas (Las Positas Creek) and about 100 feet north of the present frame house of Chris Anderson". Chris Anderson was living in Robert Livermore's 1851 frame house. (Chester Anderson's modular house is located on the site of the Livermore frame house.) I recommended to Chester Anderson that a series of auger borings be done at the site to search for foundations or artifacts which would establish the adobe site location. Mr. Anderson agreed and augering was done on Saturday, April 18, 1981.

Using a four-inch diameter auger, six holes were bored to depths of down to 16 inches in four-inch vertical increments. The pattern of holes, shown in sketch map 1. was a five-hole east-to-west linear array, at five foot intervals designed to intersect the reported adobe house site. One hole was bored 15 feet south of the line of five holes. As each 4 inch level was bored and removed, it was sifted through a 1/8 inch sieve and all artifacts removed and placed in labeled level bags. Notes and records for the auger program and the surface survey were recorded in the field notebook which is retained by me along with all artifacts.

Table 2 is a listing of all artifacts found during the augering program. A non-statistical preliminary analysis of the depth of artifacts has been made. It should be pointed out

that the auger survey was a small (0.02%) sampling of the site area and that a larger sample might produce different results. However, until the Anderson Project or the City of Livermore requests further augering or excavation, this is the only data we have to analyze.

Results of Analysis

Types of artifacts from all holes were grouped together; e.g. food, square nails, round nails. The mean depth of each type was calculated according to the following equation:

Mean depth = summation of (no. of artifacts x depth of each artifact) divided by total number of artifacts of that type.

or:

$$D_m = \frac{\sum n_1 d_1 + n_2 d_2 + \dots}{N_t}$$

\sum = summation

D_m = mean depth of a type of artifact

n_1 = number of artifacts in level one from all holes.

d_1 = average depth of level one

N_t = total number of artifacts of that type from all levels of all holes.

Table 3 shows the results.

Conclusions

There are two questions to be addressed: 1) did the auger program indicate that more testing should be done? 2) can it be concluded that this is the adobe site?

In answer to the first question, there was ample material in the 97 artifacts to justify a complete excavation program to prove, physically, the site location. As to whether we can conclude that this is the site, there is much evidence in favor of such a conclusion. There is documentary evidence in Newton's book and in Bowman and Hendry's book which gives general descriptions and actual coordinates of the adobe site.

The analysis of artifacts indicates that there is a logical relationship of the mean depth of artifact types to the chronological order in which such types would be deposited. The greatest mean depth was for brick or tile fragments, of 9.8 inches. A tile floor such as the one recently found under the Mission San Jose church floor, could be expected to be the deepest portion of the adobe house archeological deposit. The next greatest depth was for food at 6.5 in. deep. Livermore and his helpers would have been living at the site during construction. The next deepest was 6 in. for square nails. These machine-made square nails (1835-1900, Nelson, 1968) would have been used for roofing and interior walls. Next, charcoal and coal were found at a mean depth of 5.5 inches. These should have been as deep as food, but the possible error in such a small sample would make the 5.5 inches reasonable. Also, food would have to be cooked during construction, but fuel for cooking and heating would have been used throughout the lifetime of the house. This would tend to reduce the mean depth to a value less than the construction artifacts (square nails).

Round nails (made after 1850, Nelson, 1968) were the next deepest material at 5.4 inches deep. We would expect round nails to be shallower because they were used later than square nails. For the adobe house they would have been used after the original construction for repairs and additions and this would also put them at a shallower depth. The mean depth of trash materials (glass, ceramics, bone and pits) was 4.8 inches, but the mean depth of all artifacts was 5.6 inches. This difference could indicate that the deposit is not primarily a dump site.

The logic of the above deductions is based on the idea or "model" of "materials being deposited chronologically as they were used". Such a model may be wrong for an adobe house floor of tile instead of packed earth unless the artifacts could work themselves down between the tiles as they fell to the floor over time. A different depositional order might be expected if the auger borings were outside rather than inside the house. Based on the probable age of the artifacts and their non-random distribution, and the documentary evidence cited, I conclude that the site is a pre-1900 habitation site and could be Robert Livermore's adobe home site.

BIBLIOGRAPHY

Hendry, G.W. & Bowman, J.R. The Spanish and Mexican Adobe and Other Buildings in the Nine San Francisco Bay Counties, 1776 to 1850. (Bancroft Library)

Nelson, L.H., Nail Chronology as an Aid to Dating Old Buildings. National Park Service Technical Leaflet 48, 1968.

Newton, Janet, Las Positas, The Story of Robert and Josefa Livermore. Newton, 1969.

de Nier, Flora , Robert Livermore and the Development of the Livermore Valley to 1860. Thesis, University of California, 1927

ARCHAEOLOGICAL SITE SURVEY RECORD

1. Site Robert Livermore Adobe Site		2. Map Livermore, Ca. U.S.G.S.	
3. County Alameda	3s	2 E	none
4. Township		Range / ¼ of	¼ Section
5. UTM Grid or Long & Lat 121° 46' 40" N Long 37° 42' 12.5" W Lat			
6. Location 0.4 mi. SE of the Portola exit Rt. US 580, 0.2 mi. S of Rt. US 580. Livermore, Ca.			
7. Contour Elevation 440 ft.	8. Previous site designation 0.57 mi. SE of Ca Ala 47,		Cal. Hist. Land- mark # 241
9. Owner Chester Anderson		10. Address P.O. Box 176, Livermore, Ca.	
11. Present tenant Chester Anderson			
12. Description of site 50 ft x 75 ft flat terrace 30 ft S of Las Positas Cr., 10 ft above bed of creek, 130 ft N of Anderson mod. house. No remains of adobe house above ground.			
13. Area about 2000 ft ²		14. Depth 1½ ft to sterile	
15. Vegetation grass and weeds			
16. Nearest water 30 ft to Las Positas Cr		17. Soil of site gravelly loam	
18. Surrounding soil type gravelly loam			
19. Previous excavation none			
20. Cultivation-logging possibly barley, oats or wheat in the past			
21. Buildings, roads, etc. Nearby buildings (Anderson Home), Old Las Positas Rd.			
22. Erosion none		23. Possibility of destruction Anderson Project P.U.D. 1-81, Livermore Ca.	
24. Features (burials, house pits, etc.) Concrete bridge nearby (80' ft NE), concrete current deflector below terrace upstream 10 ft			
25. Artifacts Artifacts from 6 hole auger program and surface survey; glass & ceramic sherds, bone, square nails, metal, brick. Indian artifacts; chert flake, agate flake, mortar fragment.			
26. Remarks EIR for project requires hired archeologist to evaluate adobe site before development there, and requires action if artifacts are unearthed in other parts of the project.			
27. Published references Janet Newton, <u>Las Positas</u> , Livermore, Ca. Bowman & Hendry, <u>The Spanish & Mexican Adobe and other Blds..</u>			
28. Sketch maps attached		29. Photos <u>In the Nine S.F. Bay Cty</u> s attached	
30. Recorded by William C. O'Neal			31. Date 4-20-81

TOPOGRAPHICAL MAP

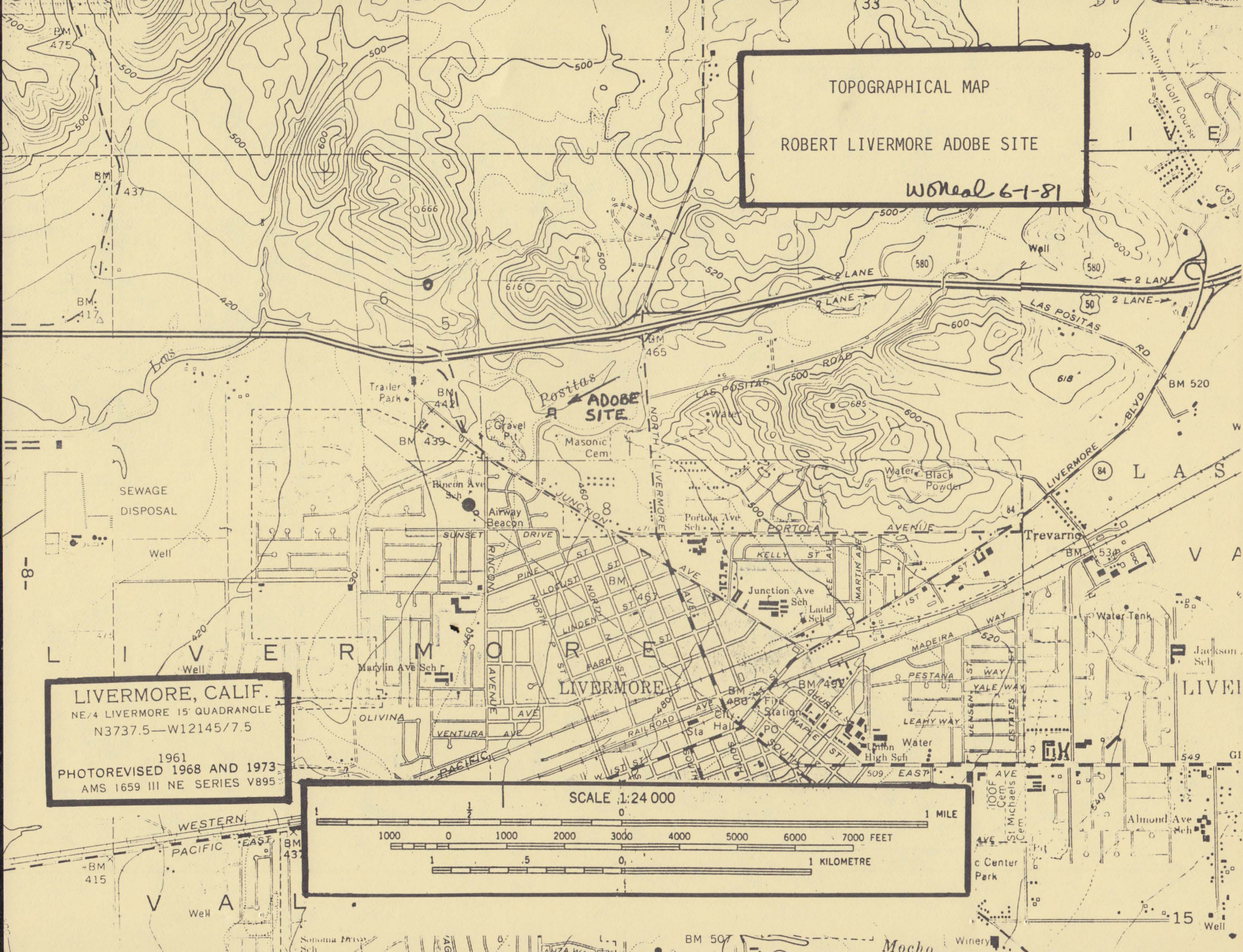
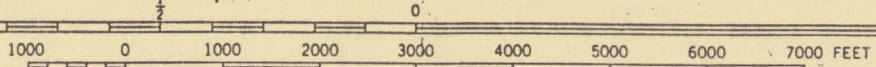
ROBERT LIVERMORE ADOBE SITE

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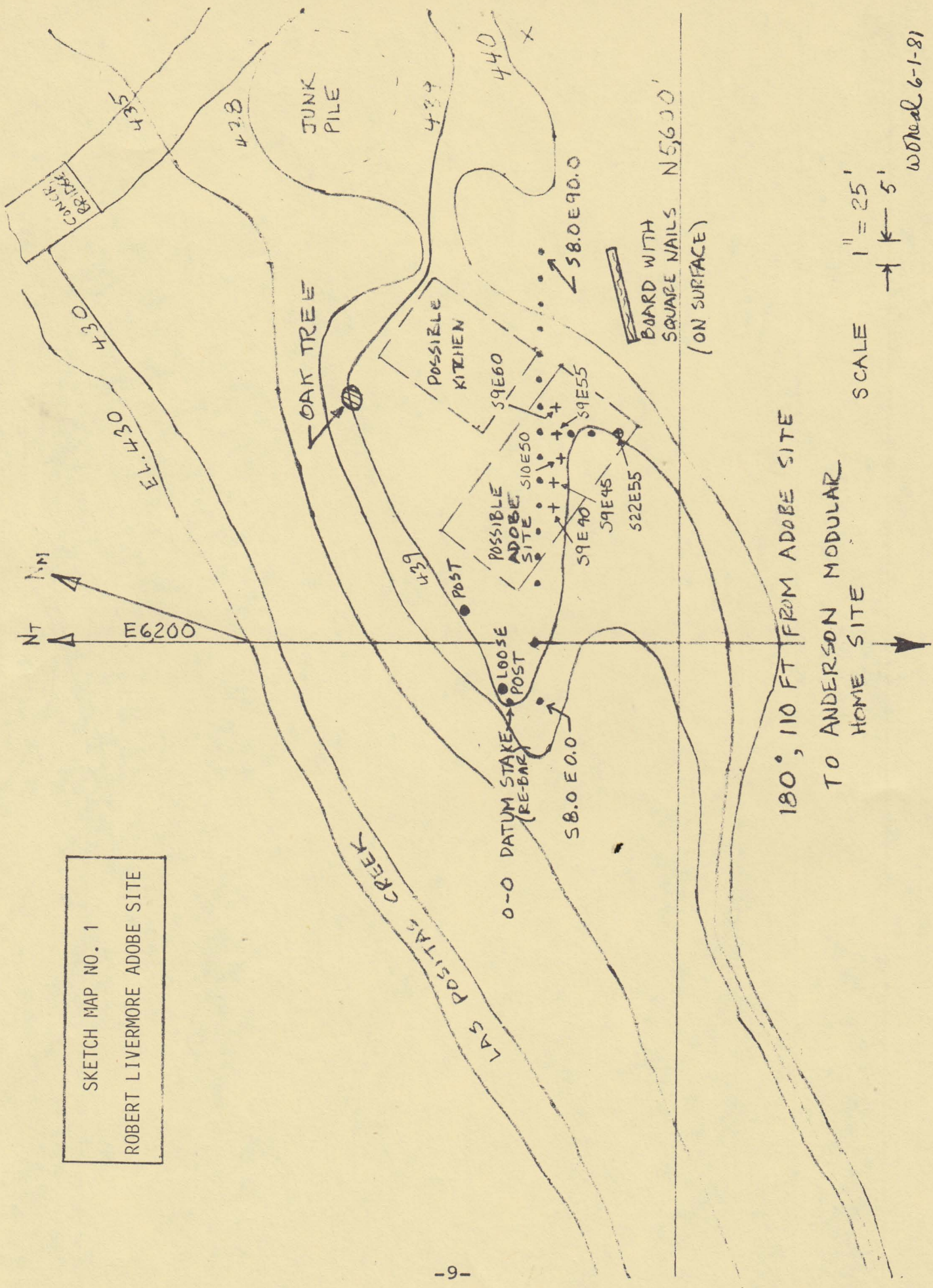
LIVERMORE, CALIF.
NE/4 LIVERMORE 15' QUADRANGLE
N3737.5—W12145/7.5

1961
PHOTOREVISED 1968 AND 1973
AMS 1659 III NE SERIES V895

SCALE 1:24 000



SKETCH MAP NO. 1
 ROBERT LIVERMORE ADOBE SITE



W. B. Neal
6-1-81

SKETCH MAP NO. 2

ROBERT LIVERMORE ADOBE SITE

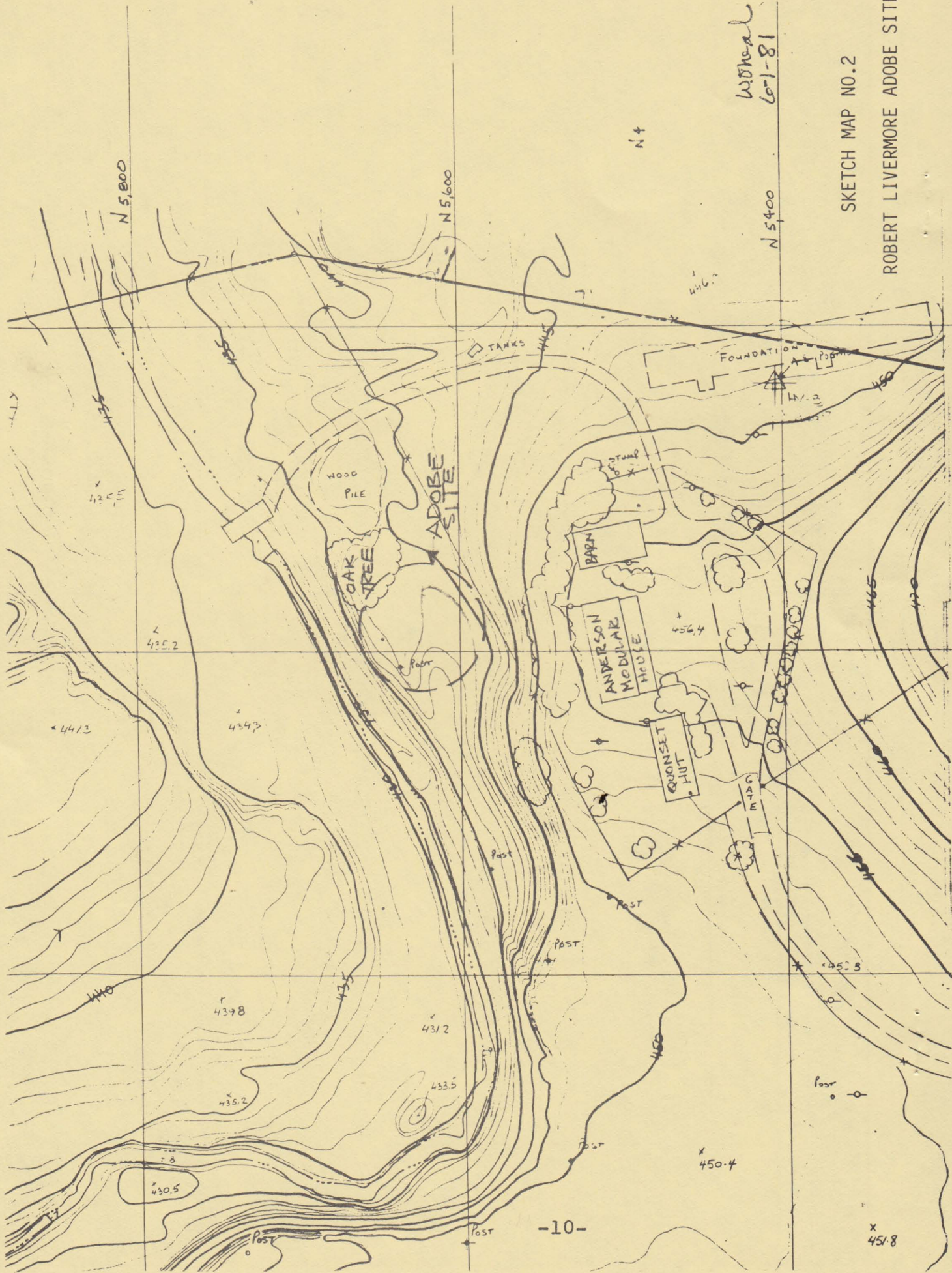


TABLE 1

Pre-1900 Artifacts Found on the Surface Survey of the Livermore
Adobe Site, CHM-241

<u>Quantity</u>	<u>Description</u>
1	Double-headed rivet, steel, 2 3/8 in. long x 5/8 in. diameter head 1/4 in diameter round shank possibly hand forged
5	Square shank nails, machine cut, various lengths and shank dimensions
1	purple glass sherd
1	ceramic sherd, white glazed earthware, "75" mark (1875?)
1	ceramic sherd, white ironstone, unicorn hallmark

TABLE 2 (see p.12-14)

TABLE 3

Mean Depth of Artifact Types

All types of Artifacts were found at all levels, but some levels had more of the same type. (S=RMS standard deviation)

<u>Type of Artifact</u>	<u>No. of Pieces</u>	<u>Mean Depth, Inches</u>	<u>S</u>
brick or tile	9	9.8	6.6
steel	29	4.8	2.0
trash (glass, ceramic, bone)	64	4.8	3.0
construction materials	28	5.9	3.0
round nails	7	5.4	2.4
fuel (charcoal and coal)	9	5.5	1.4
square nails	5	6.0	2.8
food	16	6.5	2.3
all artifacts	97	5.6	3.0

TABLE 2

Artifacts Unearthed by the Auger Program

<u>Hole No. S22.5, E55.0</u>			
<u>Level</u>	<u>Depth, Inches</u>	<u>Quantity</u>	<u>Description</u>
surface	0		weeds and grass iron harrow tooth
1	0-4	1	brown glass sherd
		1	round shank nail
		1	bark fragment
2	4-8		brown gavelly loam
		2	round shank nail
		1	petrified wood fragment
		6	coal clinker
		2	brick fragment
		1	bone
		1	wood
		1	green glass bottle sherd
3	8-12		brown gravelly loam
		3	brick fragment
		1	fruit pit fragment
4	12-16		cannot penetrate - gravel

<u>Hole No. S9.0, E40.0</u>			
<u>Level</u>	<u>Depth, Inches</u>	<u>Quantity</u>	<u>Description</u>
surface	0		weeds and grass
1	0-4		dry brown gravelly loam
		1	charcoal fragment
		1	bone fragment, rib
		1	bent round shank nail
		3	glass sherds, painted milk glass
		2	brown glass sherds
		1	smokey glass sherd
		1	plastic bottle cap fragment
2	4-8		dry brown gravelly loam
		1	clear glass sherd, bottle
		1	clear glass sherd, light bulb
3	8-12		dry brown gravelly loam
		1	glass sherd, clear, letters "EST"
		1	glass sherd, brown, bottle base
		2	milk glass sherd, bubbly
		1	round nail
4	12-16		gravel - impenetrable

TABLE 2 (cont.)

Artifacts Unearthed by the Auger Program

<u>Hole No. S9.0, E45.0</u>			
<u>Level</u>	<u>Depth, Inches</u>	<u>Quantity</u>	<u>Description</u>
surface	0		grass, weeds
1	0-4		dry brown gravelly loam
		1	brick fragment
		7	clear glass sherds, curved
		1	clear glass sherd, scratched (table wear?)
2	4-8		dry brown gravelly loam
		1	square shank nail, machine cut
		1	round nail
		1	steel staple
		3	glass sherds, clear, curved
		1	coal clinker
3	8-12		dry brown gravelly loam
			sterile - no artifacts

<u>Hole No. S10.0, E50.0</u>			
<u>Level</u>	<u>Depth, Inches</u>	<u>Quantity</u>	<u>Description</u>
Surface	0		metal detector indication
1	0-4		dry brown gravelly loam
		1	ceramic sherd, white glazed cream
		1	earthenware, crazed, plate bottom
		1	glass sherd, clear, flat, scratched
		1	glass sherd, brown
		1	steel flake, rusted
2	4-8		dry brown gravelly loam
		1	round nail, bent
		1	milky glass sherd
		1	steel flake, rusted
3	8-12		gravelly loam, 2 black chert pebbles
		1	glass sherd, brown
		1	square nail, machine cut
		2	brick fragment
4	12-16		sterile, no artifacts

TABLE 2 (cont.)

Artifacts Unearthed by the Auger Program

Hole No. S9.0, E60.0

<u>Level</u>	<u>Depth Inches</u>	<u>Quantity</u>	<u>Description</u>
Surface	0	1	steel flake, large
		4	brick or tile fragments
1	0-4	1	fruit pit
		3	brick or tile fragments
		1	steel flake
		1	square nail
		1	wood fragment
2	4-8	1	brick or tile fragment
		1	charcoal fragment
		1	oystershell fragment
3	8-12	1	brick or tile fragment
		1	glass sherd, clear
		1	polished black chert pebble
4	12-16		hard gravel-impenetrable

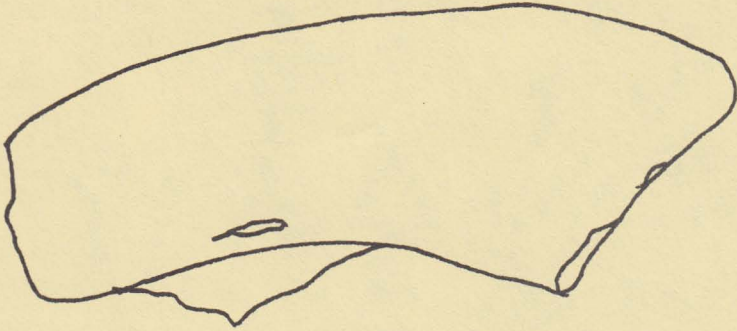
Hole No. S9.0, E55.0

<u>Level</u>	<u>Depth Inches</u>	<u>Quantity</u>	<u>Description</u>
Surface	0	none	weeds and grass
1	0-4		brown gravelly loam
		1	steel button, rivet type
		7	steel flakes
		1	glass sherd, brown
		1	brick or tile fragment
2	4-8		brown gravelly loam
		1	fruit pit
		7	bone fragments
		1	glass sherd, clear
		1	button piece, steel
		1	steel can rim fragment
		2	square nails
		1	glass sherd, brown
		1	steel flake
3	8-12		hard gravelly loam
		1	glass sherd, brown
		2	steel hooks, upholstery
		3	bone fragments
4	12-16		cannot penetrate

Figure 1.

Indian artifacts found near the Livermore adobe site.

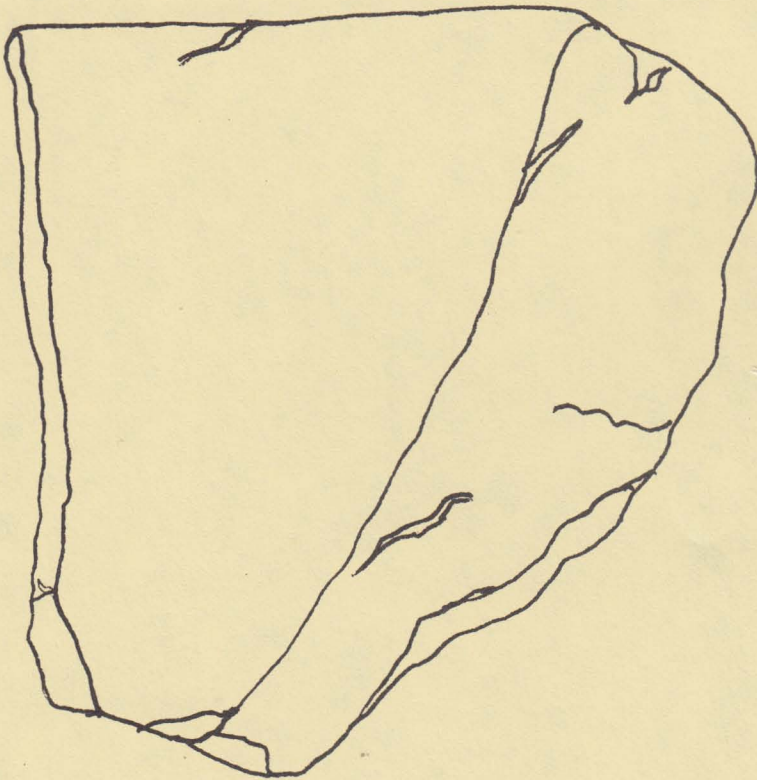
a. top



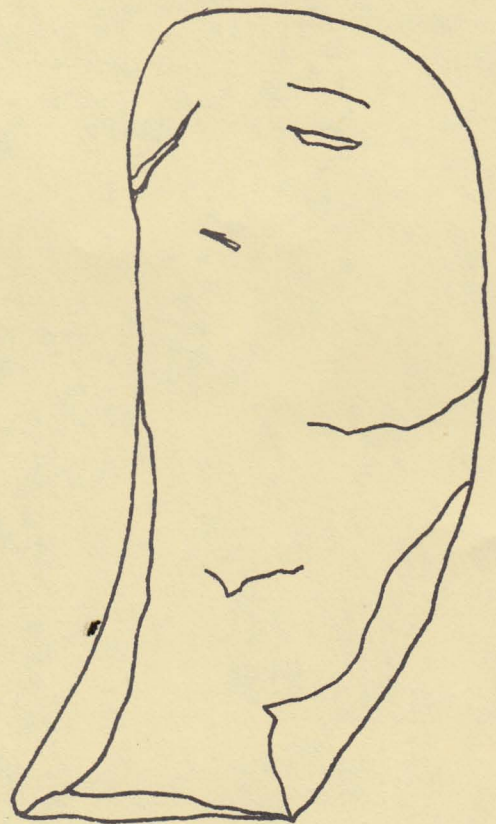
- a) Sandstone mortar fragment
- b) Agate flake
- c) Chert flake

Scale-full size

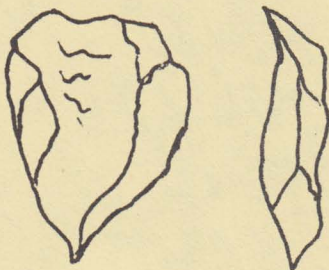
front



side



b. front side



c. front side

