THE TEOTIHUACAN VALLEY PROJECT FINAL REPORT

VOLUME 5

THE AZTEC PERIOD OCCUPATION OF THE VALLEY

Part 2 - Excavations at T.A. 40 and Related Projects

Edited by

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and

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Editor's Note

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CHAPTER 4

THE 1966 SURVEY OF ZONES 10 AND 17 OF THE TEOTIHUACAN VALLEY

by Jeffrey R. Parsons and William T. Sanders

1. INTRODUCTION

The 1966 field season was an extension of the regional survey undertaken in 1963 and 1964 by the Teotihuacan Valley Project. Our objective in 1966 was to fill in several gaps in the earlier survey coverage - particularly between Xometla and Oxtotipac on the south side of the valley, and between Cerro Gordo and Axapusco on the north. The fieldwork got underway in late May and ended in mid August. The survey crew consisted of Jeffrey Parsons and four University of Michigan graduate students: Robert Bettarel, William Englebrecht, Mary Hrones, and John Speth. Parsons worked with the students in the field for two weeks in May, and then again for about 10 days in August. During June and July, while Parsons was in Guatemala, the students worked alone, with the benefit of some good advice on ceramic chronology from James Bennyhoff and Thomas Charlton.

The basic field-by field survey methodology used in the 1966 campaign had been developed through trial-and-error by Jeffrey Parsons, Charles Kolb, John McCullough, and William Sanders during the preceding 1963-1964 field season. We began working in 1963 using the foundational "general" surveys carried out, primarily by Joseph Marino, in 1960, 1961, and 1962. Marino's earlier work had succeeded in locating many individual sites, dating to all major ceramic phases, throughout the Teotihuacan Valley. The original idea was that we would revisit these known sites in 1963 for more detailed observations, and we proceeded to do this. However, as the 1963 field season progressed, we gradually came to realize that the best way to record the extensive and highly dispersed Late Postclassic (Aztec) occupation was on a field-by-field basis; there was simply too much of it to make sense of in terms of the individual "sites" that Marino had previously defined. In 1963 we gradually worked out an appropriate series of procedures for maneuvering in the field and for recording the survey data on airphotographs varying from 1:4,000 to 1:5,000 in scale. We also learned that the field-by-field methodology was appropriate for dealing effectively with earlier (pre-Aztec) sites, that were generally much less extensive and more nucleated. These survey procedures were further refined during the 1964 field season, and by 1966 they had become fairly standardized.

In 1966 we were still using the small (8 1/2 by 11 inch) airphotographs that William Mather had painstakingly enlarged from the original (1:25,000) airphoto mosaic printed by the Compañia Mexicana de Aerofoto. Although these small airphoto base maps had proved fairly effective during the 1963 and 1964 seasons, by 1966 we had grown increasingly dissatisfied with them: because each photo covered such a small area, we had to carry several of them with us each day so as to have photo coverage for all the area we walked over. This was awkward and often produced confusion and locational errors as we groped our way uncertainly across the inevitable distortions of the edges of each photo. Furthermore, because the photos were small and light, they sometimes blew away in the strong afternoon winds, and on one occasion we almost lost one to a hungry goat. It was during the 1966 field season that we began to consider adopting a larger, more rigid airphoto basemap, which we did beginning in 1967.

The 1966 field season marked an important transition in the Basin of Mexico regional survey. It was the final season of regional survey in the Teotihuacan Valley, and it led directly to new surveys in other parts of the Basin in 1967, 1969, 1972, 1973, 1974, and 1975. In 1966 we made full use of an increasingly effective survey methodology that had been implemented during the pioneering stages of the Teotihuacan Valley project, and we developed some ideas about new methodological refinements that we put in place during subsequent years, as the Basin of Mexico surveys were extended and completed.

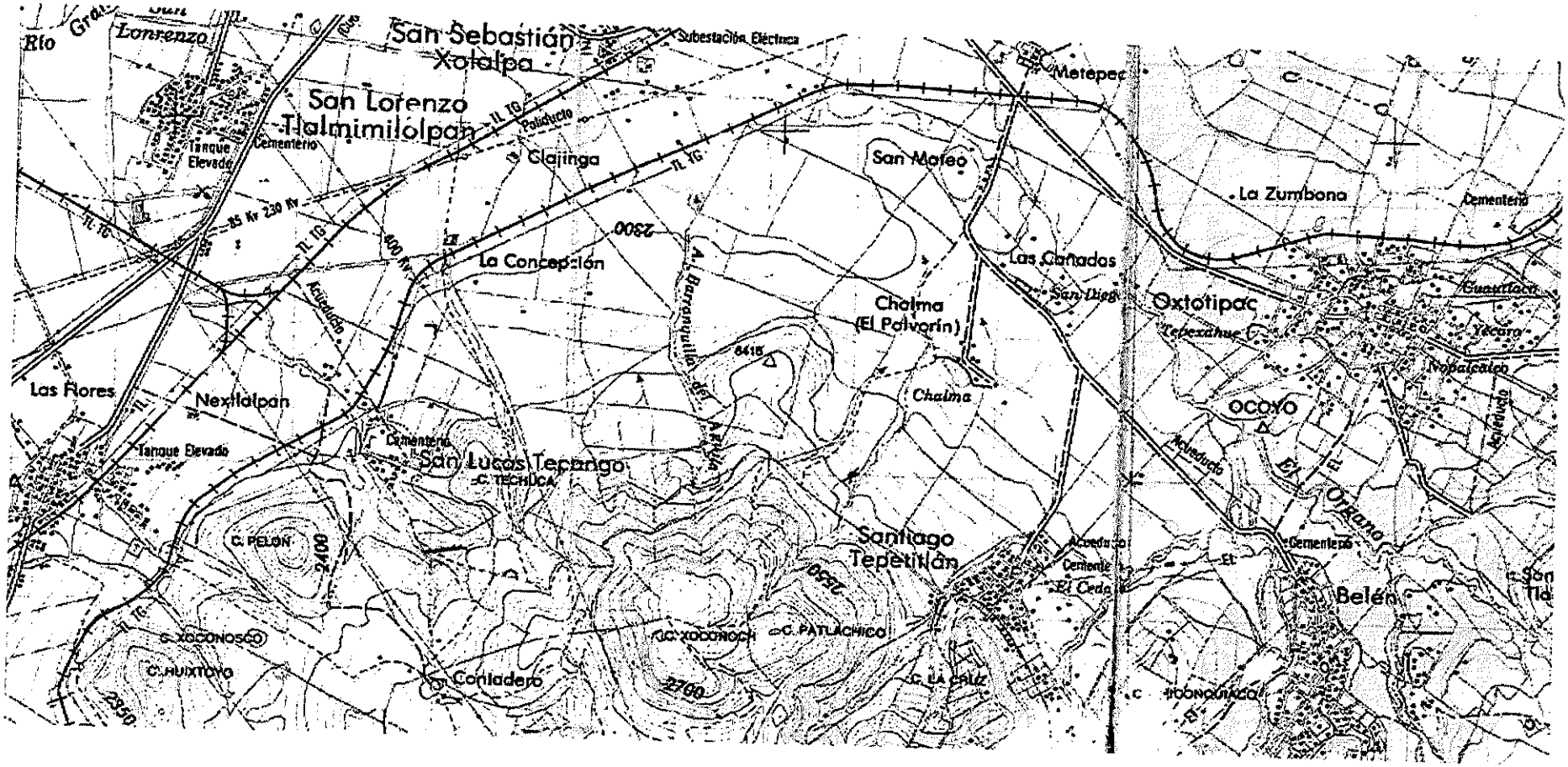
2. ZONE 10: MIDDLE VALLEY: SOUTH PIEDMONT AND ADJACENT ALLUVIAL PLAIN (see Figures 136, 137; Plate 123)

The south piedmont of the Middle Valley is bordered on the north by the alluvial plain of the Middle Valley, and is a narrow band of terrain on the lower flank of the Patlachique Range. It is a zone of carefully tended terraces for agriculture in the lower piedmont area, and of sheep and goat grazing on the higher slopes. Within the dispersed village of Tepetitlan are grown tecojotes, a small orchard tree which produces a tiny astringent crabapple-like fruit. The large white, small green, and red tuna prickly pear cacti are also found around the stone and adobe houses. The giant "manso" variety of maguey grows along the lower terraces, while smaller varieties are grown farther up the slope from the village. There is one running spring near the chapel of Santiago Tepetitlan, but the maize and frijol plantings of the lower terraces are dependent on rainfall, which though somewhat heavier here than in the Middle Valley plain and north piedmont of the valley, fails in some years.

During the General Survey Phase of the Teotihuacan Valley Project, a series of sites were defined along the South Piedmont of the Middle Valley; from west to east designated T.A. 176, 177, 178, 94, 180, 186, 188, 189, and 190. T.A. 178 may have been the location of the 16th century village of San Lucas Tlamazingo (today San Lucas Tepanco); T.A. 186 the village of Santiago Tepetitlan; and the T.A. 190 site, an outlying settlement of the village of Belen. The 1966 survey included an extensive arc of territory that runs from San Miguel Xometla on the west, to Oxtotipac and Belen to the east, on the lower piedmont of the Patlachique Range, and the adjacent area of alluvial plain. It extends approximately eight km east-west, following the contours of the piedmont, and occupying a north-south band 1.7-2.4 km wide, an area of approximately 1,600 hectares. Some Aztec pottery was noted in virtually every field within this zone, but approximately half of these field units were rated as scanty in density. On the basis of the relatively continuous areas of light or light plus settlement and/or presence of mounds, Parsons arbitrarily divided this survey strip into nine units referred to as "sites". As the following discussion of the individual sites will indicate, in fact, the mounds, or more densely settled areas, occur as a series of closely spaced clusters of varying density, usually of hamlet size, in terms of our community classification system. An alternate approach to the site definition used by Parsons would be to break down the nine defined sites into perhaps as many as 25-30 hamlets and/or small villages. The reader is referred to the site maps and the discussions in the site descriptions for further discussion of problems of site definition in this area. Much of the area is severely eroded, complicating our reconstruction of site patterning. The nine areas defined as sites occupy approximately 800 hectares, or about half of the area covered in the intensive survey. Because of the broader definition of the site areas in this survey, we have not included measurements of the sites in the site descriptions. In Chapter 13, however, we included an estimate of the site areas on the 1966 sites.

Our originally designated T.A. 180 is the same as Parsons's site T.A. 234; T.A. 188 is one of the clusters within his site T.A 236; T.A. 178 runs through portions of sites 230 and 233, and T.A. 177 is the same as T.A. 230. T.A. 233 and T.A. 235 are separated by a foothill During general survey Marino recorded a site here and noted both Teotihuacan and Aztec occupations. He assigned the site numbers T.C 118 and T A. 185 to the two noted components. It was not resurveyed by any of the survey teams during the Teotihuacan Valley Project When we prepared the Teotihuacan volume we were unaware of Marino's description of this site and hence we will describe it in this volume as Appendix B. While the site was primarily occupied during the Teotihuacan period, it was evident that there was an Aztec presence as well and the 1966 survey team also recorded some Mazapan. Within his survey of site T.A. 233, Parsons

Figure 136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San Lorenzo Tlalmimilolpan
Lorenzo
Río
Subestación Eléctrica
Metepec
Tanque Elevado
Cementerio
Clajinga
Policía
San Mateo
La Zumbona
Cementerio
La Concepción
Las Cañadas
Chalma (El Polvorín)
Oxtotipac
Tepexahuac
Yécaro
Las Flores
Nextlalpan
Tanque Elevado
Cementerio
San Lucas Tecango
C. TECHUCA
OCOYO
Acueducto
El Organo
Cementerio
Santiago Tepetitlán
Acueducto
Cementerio
El Cedro
Belén
C. PELON
C. XOCONOSCO
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Figure 137

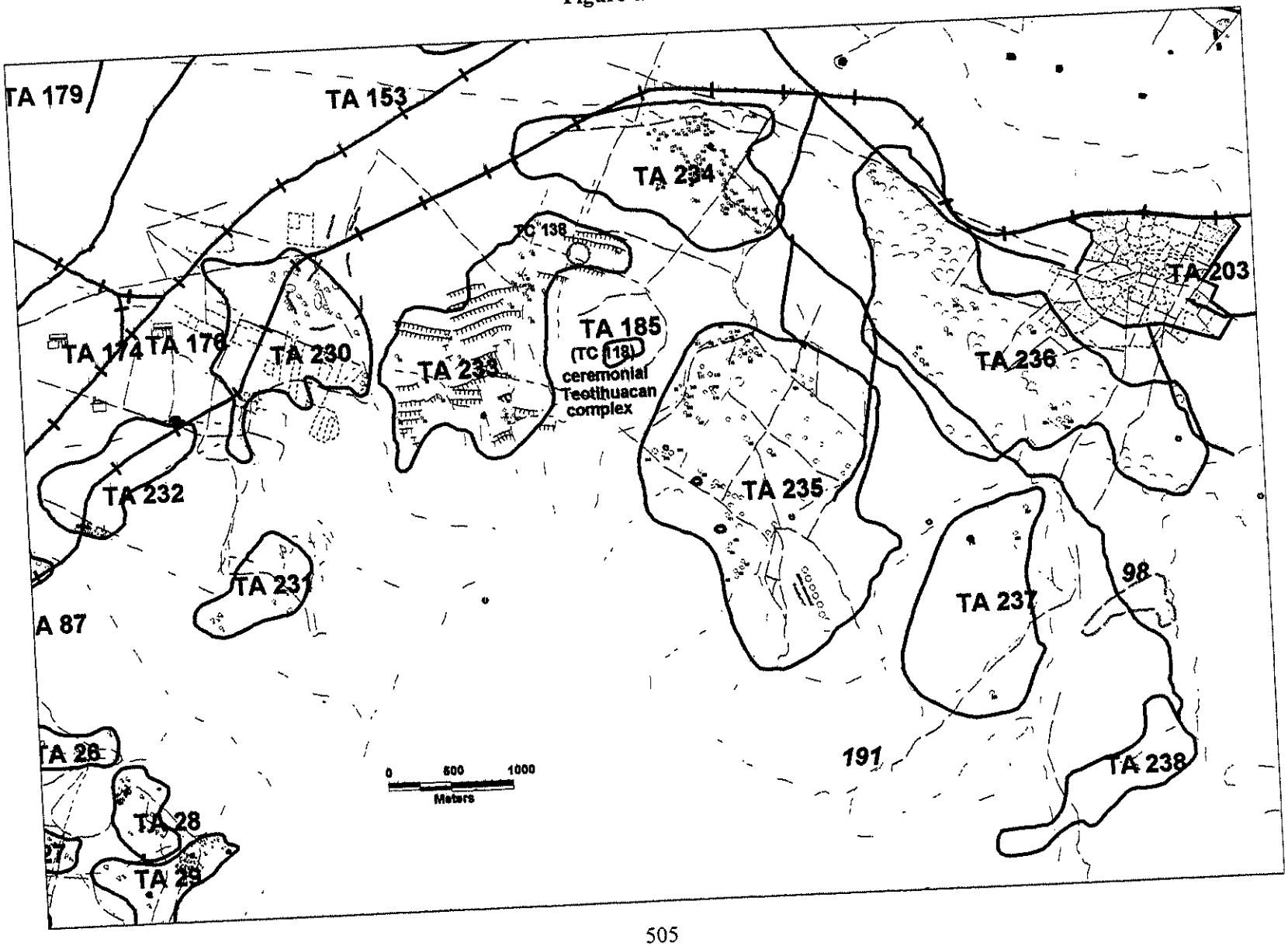
TA 179
TA 153
TA 234
TC 138
TA 203
TA 174
TA 176
TA 230
TA 233
TA 185
(TC 118)
ceremonial
Teotihuacan
complex
TA 236
TA 232
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Plate 123

Figure 138

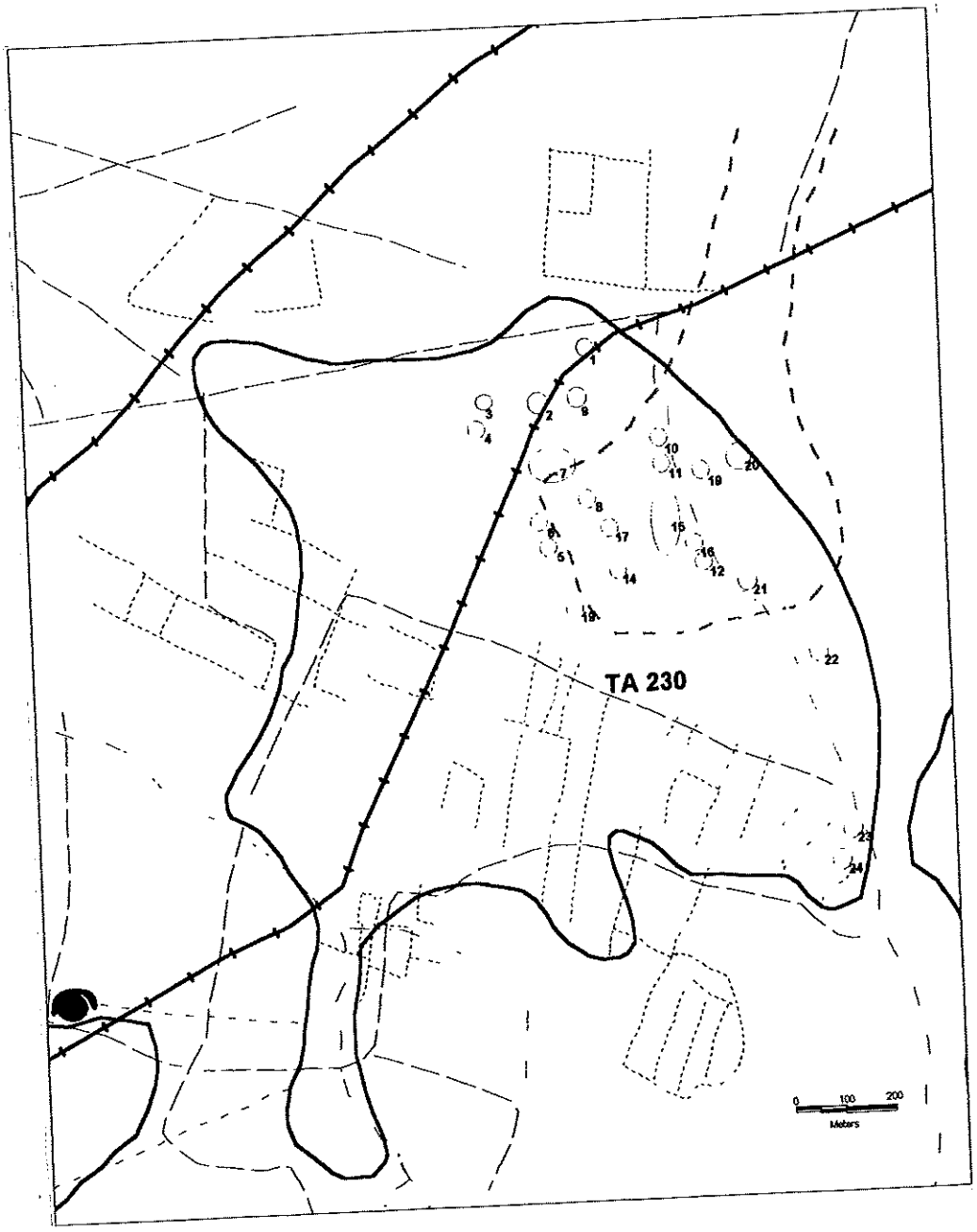
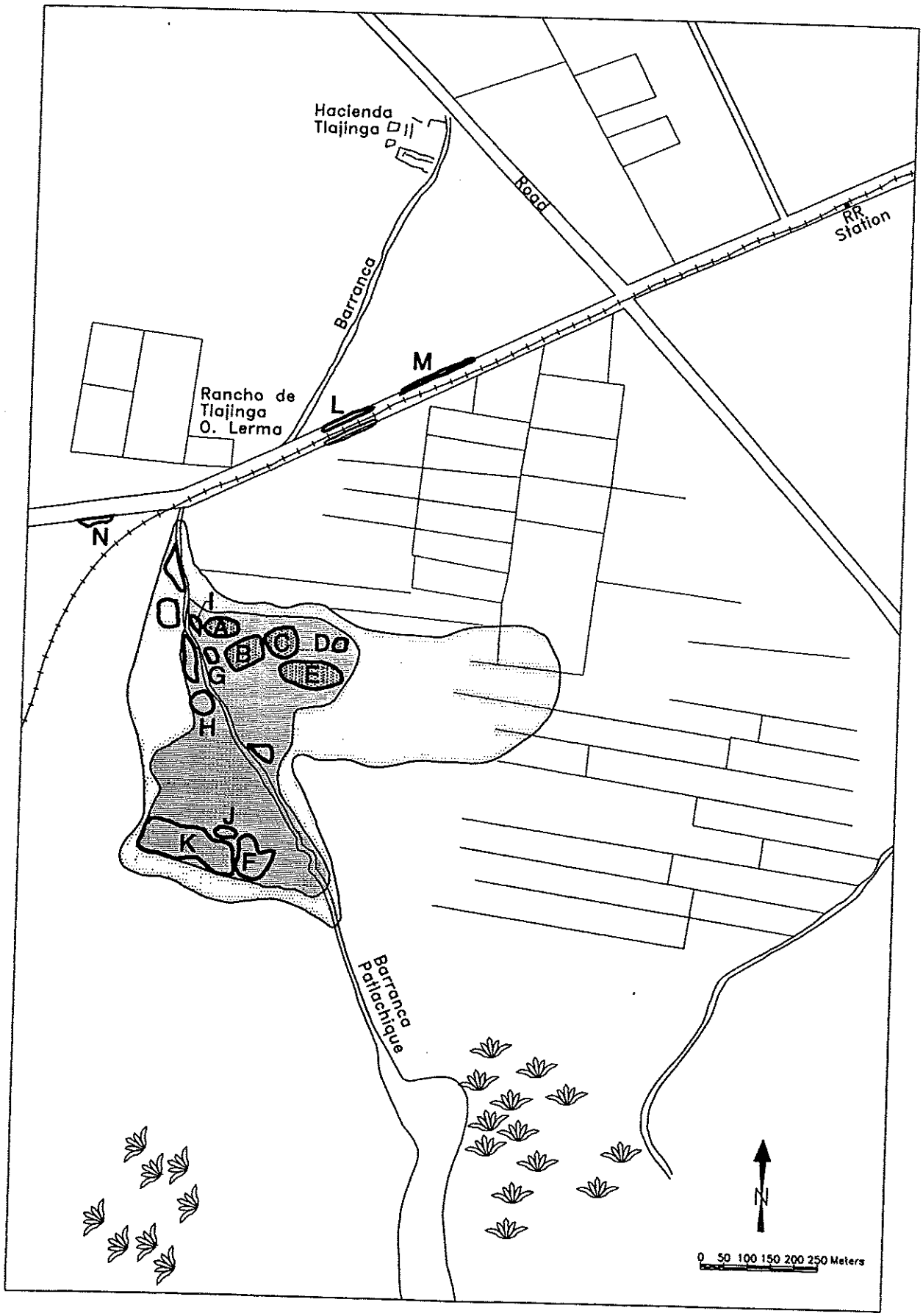


Figure 139


Hacienda
Tlajinga
Road
RR
Station
Barranca
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Rancho de
Tlajinga
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Barranca
Patlachique
N
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also located a small, compact hamlet with substantial Teotihuacan period population In our original general survey of the Teotihuacan Valley we had located this site, but when we prepared the Teotihuacan Period volume we did not find a description of it in our files, and so we dropped it from the list of sites. A brief description is included within the description of the Aztec site, renumbered as T.C 138

T.A. 230 (T.A. 177) (Figs. 138, 139)

Classification Probably a small somewhat nucleated village with dispersed outliers of hamlet size

This site is located on the lower piedmont and adjacent alluvial plain south of the Teotihuacan period city of Teotihuacan and the Aztec conurbation of Teotihuacan A detached ward of the Teotihuacan period city, as defined by the Teotihuacan Valley Mapping Project, was considered a separate site during the Teotihuacan Valley Project survey and given the designation T C. 14. It lies within the Aztec site T A. 230, at its northern end. Following the Teotihuacan Mapping Project interpretation, it is identified as an integral part of the city and located at the terminus of the north-south avenue of the Teotihuacan period city Aztec occupation occurs over all of the Teotihuacan site but covers a more extensive area, extending to the east, west, and south of it.

Natural Setting and Modern Land Use: The piedmont here, 2280-2350 m, generally has a substantial soil cover varying from 25-50 cm, and is extensively terraced with maguey bancals. Two major barrancas, one bordering the site to the southwest 10 meters wide, 2-4 meters deep, the other forming the east border of the site, and ranging from 10-25 meters in width and over most of this distance 2-5 meters deep Upstream this depth rises to 10-15 meters. In general the barrancas get wider and deeper as they go upstream Many pirul trees are scattered throughout the site area. The northern 2/3 is heavily cultivated with maize and beans planted on maguey terraces. Upslope the area is mostly pasture and is covered by wild thorn bush and wild nopal Near the village of San Lucas Tepanco, located at the southeast edge of the site, there is considerable nopal cultivation San Lucas is a typical dispersed village. A network of drainage ditches and canals are found throughout the site area associated with the terracing. There was much site density variation, due in part to extensive sheet erosion in the south, and plowing in the north

Archaeological Remains: The survey team detected twenty-four definite mounds, three of which are large, with a number of undulations on their surfaces that suggest the remains of large complex structures. Plaster floors were also noted in these They are all in the area of T.C. 14 and probably date from that time period In this area we found not only Teotihuacan and Aztec occupation, but also Early Toltec (Xometla). All but two of the mounds occur as a dense cluster within and adjacent to T.C. 14. Aztec occupation here is denser and numerous areas of medium occupation were reported. Over the rest of the site occupation is generally defined as light with only occasional areas of heavier occupation. The survey also recorded scattered evidence of Mazapan in this area (T.T. 201, 202). In all probability there was a relatively nucleated Aztec settlement on and around T.C. 14 somewhat comparable to San Luis Tepanco today, surrounded by more dispersed settlement in the peripheral areas of the site.

Table 37: Mound Observations - T.A. 230

Mound No.	Height	Size	Condition	Comments
1	25	15	Eroded	Residential

2	25	10-15	Very Eroded	Residential
3	Imp	10-15	Very Eroded	Residential
4	Imp	10-15	Very Eroded	Residential
5	Imp	10	Very Eroded	Residential
6	Imp	10	Very Eroded	Residential
7	1-2	60	Good	Complex of Teo Period Residential Bldgs
8	25	15	Good	Complex of Teo Period Residential Bldgs
9	1 0	35	Good	Complex of Teo Period Residential Bldgs
10	1 0	10	Good	Residential
11	Imp	15	Poor	Residential
13	Imp	10	Poor	+ Teo
15	2 0	80-100x50-60	Good	Prob Teo Date Bldg Complexes
18	5	10-15	Good	
19	1 5-2 0	30	Good	Poss Teo Structure
20	2 0	50	Good	Poss Teo Structure
21	1 0	30-35	Good	Poss Teo Structure
22	3- 5	10-15	Good	Residential
23	5- 75	10	Poor	Residential
24	Imp	10	Very Poor	Residential

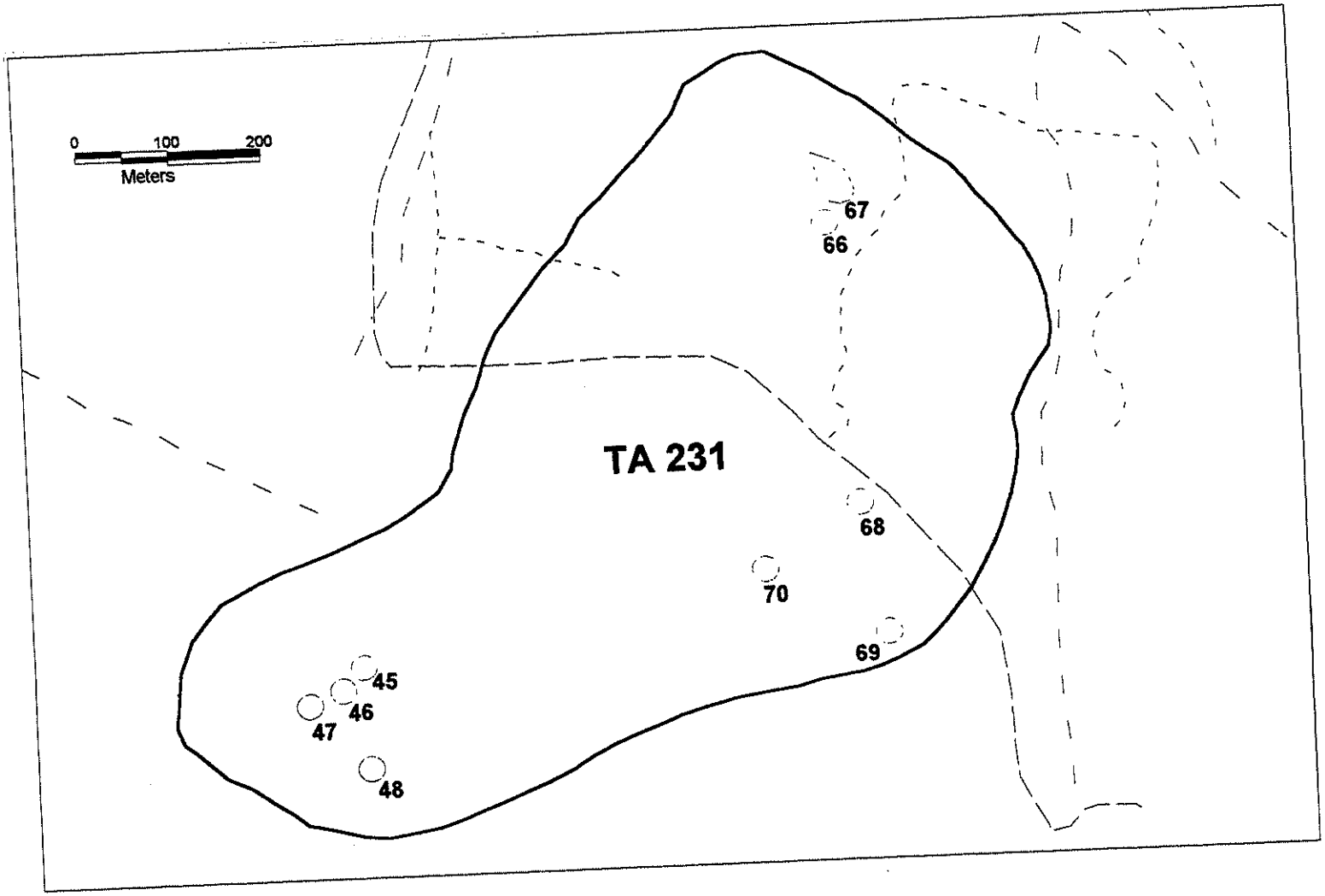
Enthnohistoric Information: Problematic. It may have been the location of San Lucas Tlamazingo, a sujeto to Acolman in 1580.

T.A. 231 (T.A. 176) (Fig 140)

Classification: Several hamlets.

Natural Setting and Modern Land Use: Site lies south of Cerro Xoconochco on relatively flat terrain, at 2400-2450 m. The southwestern part of the site is severely eroded with much exposed tepetate, to the northeast the terrain is relatively level and has a substantial soil cover, often up to a meter in depth A major barranca defines the site to the northeast and separates it from T.A 230. The headwaters of another barranca run northwest, from the southwest end of the site and runs between Cerros Xoconochco and Huixtonco. The northeast-northwest barranca is 20-30 m in depth and 50 m wide A deeply entrenched, steep walled feature runs through the center of the site, from west to east, with numerous cave-like features located along its walls. Most of the area is in pasture today with a few scattered pirul, nopal, and maguey. No 20th century structures or terraces survived in the area at the time of the visit. Terrace remains, however, are common and probably ancient in date.

Figure 140



Archaeological Remains: The archaeological remains consists of scattered sherds and rock rubble, particularly in the portions of the site that were heavily eroded. Nine mounds were defined by the survey. The northeastern half of the site has an almost continuous distribution of rock rubble and light to medium concentration of Aztec pottery. Two mounds, 66-67, were located in this area. Mounds 45-48 form a cluster in the eroded southwestern portion of the site and the balance were widely dispersed Of these nine mounds, only four were sufficiently well preserved to obtain further data.

Table 38: Mound Observations - T.A. 231

Mound No.	Height	Size	Condition	Comments
45	100	15-16	Good	Traces of Teo + Aztec
47	70	6	Good	?
48	Imp	5	Good	Much Aztec
67	30	60x20	Good	Much Aztec Probably a Temple Mound

Ethnohistoric Information: This settlement was probably an outlying portion of San Miguel Tumetla (Xometla), a sujeto of Acolman in 1580.

T.A. 232 (T.A. 176) (Fig. 141)

Classification Small dispersed village with a possible hamlet outlier.

Natural Setting: This site extends as a band of settlement on the lower piedmont, running in an arc along the northwest, north, and northeast flank of a small volcanic cone called Cerro Pelon or Cerro Xoconochco at 2280-2330 m On the summit and the upper slopes of this hill is located a Tezoyuca phase settlement, T.F. 26. Most of the site is severely eroded with numerous areas of exposed tepetate. Maximum soil depth is 30 cm. The western edge of the site is defined by a deep (5 m) wide (15 m) barranca that flows south to north between Cerros Xoconochco and Huixtonco.

Modern Land Use: The site lies east of the village of Xometla and a few houses of the village lie along the western edge of the site. To the north of it, within the alluvial plain, is the old Hacienda Nextlalpan. A large jagüey lies at the northeast edge of the site. The only significant cultigen planted in 1966 was maguey and much of the site area was used as very marginal pasture land. The railroad from Mexico City to Vera Cruz runs through the site from west to east.

Archaeological Remains The archaeological site extends for a distance of 1.5 km east-west and averages about 250 m wide. Over this area occupation density varied generally from very light to light with a number of areas rising to medium. Thirteen mounds were identified, all low, small features and probably remains of residential structures; they were found primarily in the southwestern quadrant of the site. Elsewhere a number of areas of dispersed rubble and medium density of occupation were located that are undoubtedly the remains of additional structures. In one of these areas Mazapan (T.T. 200) and Teotihuacan (T.C. 137) sherds were noted.

Figure 141

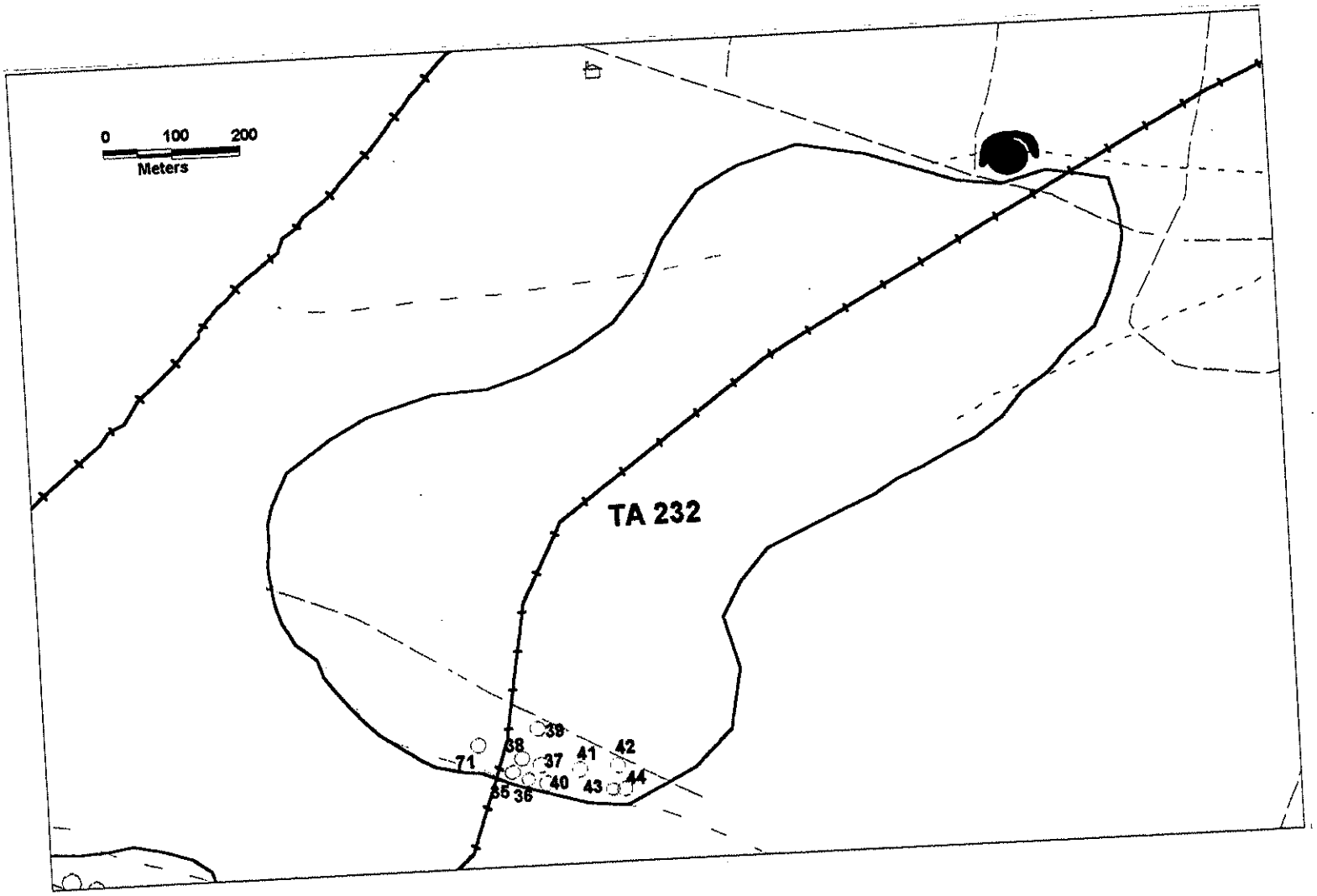


Table 39: Mound Observations - T.A. 232 (T.A. 176)				
Mound No.	Height	Size	Condition	Comments
35	60	12	Partially Eroded by Barranca	Substantial Aztec
36	120	10	Partially Eroded by Barranca	Substantial Aztec
37	Imp	5-6	Heavily Eroded	?
38	Imp	5-6	Heavily Eroded	?
39	50	10	Fair	?
40	Very Low Dispersed Eroded Structure			Substantial Aztec
41	150	12	Good	Heavy Aztec
42	Very Low Dispersed Eroded Structure			Substantial Aztec
43	100	12	Good	Substantial Aztec
44	60	10	Good	Substantial Aztec
71	100	8	Good	Substantial Aztec
72	60	10	Eroded	Aztec & Mazapan

Ethnohistoric Information: This settlement was probably an outlying hamlet of San Miguel Tumetla (Xometla), a sujeto of Acolman in 1580.

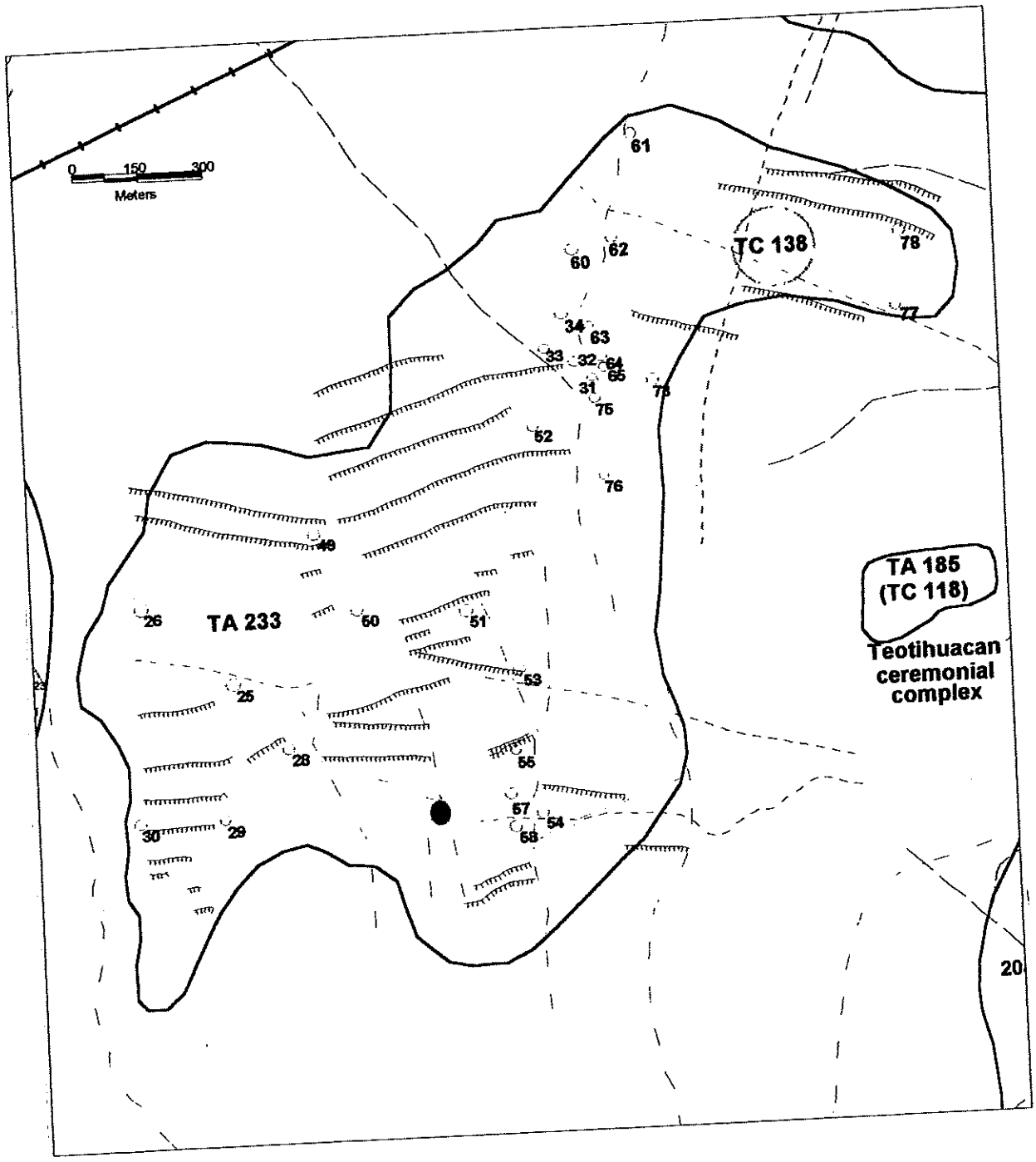
T.A. 233 (T.A. 178) (Fig. 142)

Classification: Problematical; it probably consists of three closely spaced hamlets with a total population of 200 people, assuming that close to 100% of the original residential mounds have survived.

Natural Setting and Modern Land Use: T A. 233 is located on medium to gentle sloping terrain bordering a series of steep rocky foothills of the Patlachique Range, at 2300-2400 m. On the summit of one of these foothills is the Teotihuacan period ceremonial complex T.C. 118 (see Appendix B) The area is severely eroded with large areas of tepetate, particularly on the steeper slopes to the south. Remains, in various stages of disrepair, of narrowly spaced maguey bancals are abundant in this southern area. To the north the slope angle decreases, the bancals become wider, the soil depth increases to 20-30 cm in the extreme northwest and northeast portions of this site.

Two barrancas traverse part of the site, one along its western edge. It runs for some distance to the north and then changes direction to the east, where it merges with a larger barranca, which runs along the eastern edge of the site in a north-south direction. Both of these vary from 10-15 meters in width and 5-10 meters in depth. Additional gullies are frequently found throughout the site as are drainage ditches linked to the bancals. Two jagüeys are located within this site area. The area of wider bancals to the north have deeper soils, have suffered less from erosion and at the time of the survey were planted in maize and beans. The steeper slopes to the south were primarily used as pasture along with the lines of maguey.

Figure 142


0 150 300
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TC 138
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76
49
TA 185
(TC 118)
Teotihuacan
ceremonial
complex
26
TA 233
60
51
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Archaeological Remains: Thirty mounds were defined, all of them in very poor condition. Most of them were under 40-50 cm, with only a few having a height of up to 40 or 50 cm or higher. One mound 34, had preserved walls; Mounds 51 and 50 were 70 cm high; Mound 53, 60 cm high; Mound 57, 1 m high; Mound 67, 77 cm; Mound 63, 70 cm; and Mound 73, 1 meter in height. Preservation of mounds was better in the steeper, more eroded areas of the site than further below, where they were heavily damaged by plowing (see Table 40).

The mounds occur in three major clusters. One cluster includes 14 mounds, strung along both sides of the east barranca for a distance of 600 meters, in a band 160 meters wide with an area of approximately 7 hectares. A second cluster occurs as a linear north-south string of seven mounds running through the middle of a set of narrowly spaced maguey bancals in the area between the two barrancas, just above their merger. A third cluster of 5 mounds occurs in a similar context, between the west barranca and the steep slopes of one of the foothills that defines the site to the west. The remaining 5 mounds are widely scattered over the lower portions of the site, to the north. A major question here is the degree to which plowing destroyed mounds differentially in the more gently sloping, deeper soil areas to the north, where 20th century cultivation is more intense. The survey team did not record any unusual localized concentrations of stone and sherds that indicate the former presence of mounds. More probably these areas of the site were very lightly occupied. Other occupations include a small Teotihuacan period hamlet (T C. 38).

Table 40: Mound Observations - T.A. 233

Mound No.	Height	Size	Condition	Comments
25	Imp	10	Very Poor	Residential
26	1 5	15-20	Good	Prob Special Function
27	2	15	Good	Residential
28	15	15	Good	Residential
29	2	15	Good	Residential
30	5	15	Good	Residential
31	6	10-15	Good	Residential
32	6	15-20	Good	Residential
33	3	20-25	Good	Residential
34	1 5	16x4	Good	Residential
49	5	10-15	Good	Residential
50	5	10-15	Good	Residential
51	5- 7	10	Good	Residential
52	Imp	20	Poor	Residential
53	6	?	Good	Residential
54	5	20-30	Good	Residential
55	3	25	Good	Residential

57	1 0	30-40	Good	Residential
58	5	15	Good	Residential
60	7	8-10	Good	Residential
61	Imp	?	Poor	Residential
62	3	10		Residential
63	7	20		Residential
64	3	10		Residential
65	3- 5	10		Residential
73	1 0	18x2		Residential
75	4	20		Residential
77	5	10-15		Residential
78	Imp	?	Poor	Residential

Ethnohistoric Information: If the Hacienda of Tlajinga, a holding of the royal lineage of Teotihuacan in the 18th century, was a prehispanic holding (see Chapter 12) then this site would lie within its territory.

T.A. 234 (T.A. 180) (Fig 143)

Classification: This a highly problematical site because of its multicomponent nature. During the Teotihuacan Valley Project, when we visited it during general survey, we noted that it had Teotihuacan, Toltec, (primarily Xometla phase), and Aztec occupation on it. The Aztec site was designated T.A. 180, the Teotihuacan period, T.C. 116; and the two Toltec components were assigned the numbers T.T 84 and T.T. 173. We found the Teotihuacan period site prior to the Teotihuacan Mapping Project's redefinition of the Teotihuacan period city, and considered it a separate village site during that time period. The Teotihuacan Mapping Project included it as part of the city and on their map it appears as a ward on the south bank of the Barranca de San Lorenzo. Paralleling the barranca to the north, the Mapping Project defined an extension of the east avenue of the city which runs between the site we designed as T.C. 116 and another site at the Hacienda of Metepec, which we also considered as a separate detached settlement when we first surveyed it, and gave it the number T. C. 119. The Barranca of San Lorenzo, which borders T A. 234 to the north, has obviously been artificially straightened and this was accomplished as part of the process of expansion of the great Teotihuacan period city.

Natural Setting and Modern Land Use: The western and central portions of the site have substantial soil cover, which becomes shallower to the east where there are areas of exposed tepetate. The cultivated areas were in the form of maguey bancals and were uncultivated at the time of the survey. Within the Barranca of San Lorenzo is a large floodwater dam with an associated canal system. The site lies at 2290-2310 m

Archaeological Remains: The multicomponent site is heavily pitted, with numerous exposed floors. Many of the mounds on this site are of considerable size and are probably Teotihuacan period multicomponent house compounds. Approximately 59 mounds were defined in our survey. Many of these probably are of

earlier age, but were undoubtedly reoccupied as residential sites during the Aztec period. Most of the mounds in the southeast portion of the site have only Aztec occupation

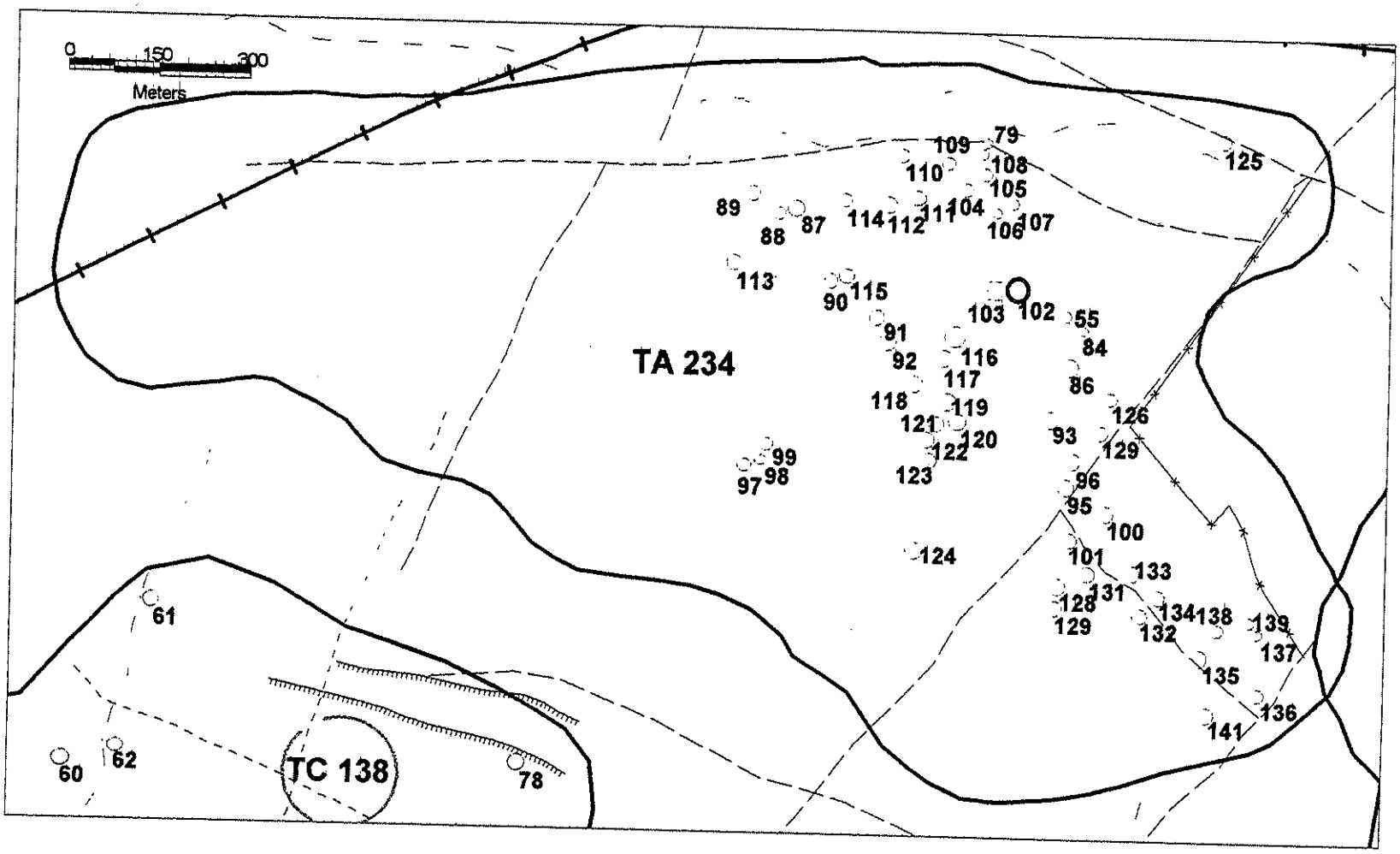
Table 41: Mound Observations - T.A. 234

Mound No.	Height	Size	Condition	Comments
79	3	20	Poor	Residential
84	2	20	Poor	Residential
85	2	20	Fair	Residential
86	5	50	Fair	Residential
87	3	40	Fair	Residential
88	3	75	Much Dispersed Rubble, Probably Teo	Residential
89	Imp	50	Much Dispersed Rubble, Probably Teo	Residential
90	Very Dispersed Rubble Area, Probably Remains of Teotihuacan Structure			Residential
91	3	20	Possible Teotihuacan Structure	Residential
92	Imp	10	Possible Teotihuacan Structure	Residential
93	2	10	Possible Teotihuacan Structure	Residential
94	3	10	Possible Teotihuacan Structure	Residential
95	1 0	20	Possible Teotihuacan Structure	Residential
97	Imp	30	Eroded	Residential
98	Heavily Eroded and Dispersed Rock Rubble over a Large Area, Possible Remains of 5 to 6 Residential Mounds			Teotihuacan and Aztec Occ
99				
100				
101	Imp	15		Residential
102	Large Mound with Attached Platform			Teotihuacan Date
	5 0	40x60		
103	3 0	20x40	Pitted	Plaster Floor Exposed Teo Age
104	1-4	30	Pitted	Plaster Floor - Teo Period
105	1-1 5	30	Good	Teotihuacan Date
106	3- 5	20	Good	Aztec and Teo
107	3- 5	20	Good	Aztec and Teo
108	2 0	25	Good	Teotihuacan Date
109	1 5	25-30	Good	Teotihuacan Date

110	10	20x25	Good	Prob Teotihuacan Date
111 A,B	Imp	Dispersed Rubble	Poor	Poss Teotihuacan Age
112	5	25	Poor	Poss Teotihuacan Date
113	15	50	Poor	Teotihuacan Date
114	12	20	Poor	
115	10	8	Poor	Teotihuacan Date
116	1-12	25	Poor	Teotihuacan Date
117	30	25	Poor	
118	40	25	Poor	Teotihuacan Date
119	30	25-30	Poor	
120	20	25	Poor	Teotihuacan Date
121	12	12	Poor	
122	12	7	Poor	
123	10	6	Poor	
124	13	23	Poor	Teotihuacan Date
125	Heavily Damaged by Road Cut			
126	2	150	Fair	Residential
127	1	6	Fair	Residential
128	25-30	15x35	Good	Residential
129	5	50	Good	Poss Teotihuacan Age
130	3	20-25	Good	Residential
131	2	15	Good	Residential
132	3	40	Good	Residential
133	3	15-20	Good	Residential
134	2	15-20	Good	Residential
135	1	10-15	Fair	Residential
136	1	10-15	Fair	Residential
137	1	10	Fair	Residential
138	1	10	Fair	Residential
139	1	20	Fair	Residential

Ethnohistoric Information: N.D.

Figure 143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T.A. 236 (Fig. 144)

Classification: As defined, this site extends for approximately 3 km along both sides of the Barranca de San Lorenzo in a lineal band varying in width from 800-1,200 m. Its status is problematical, it could be considered as a small dispersed village or as several closely spaced hamlets.

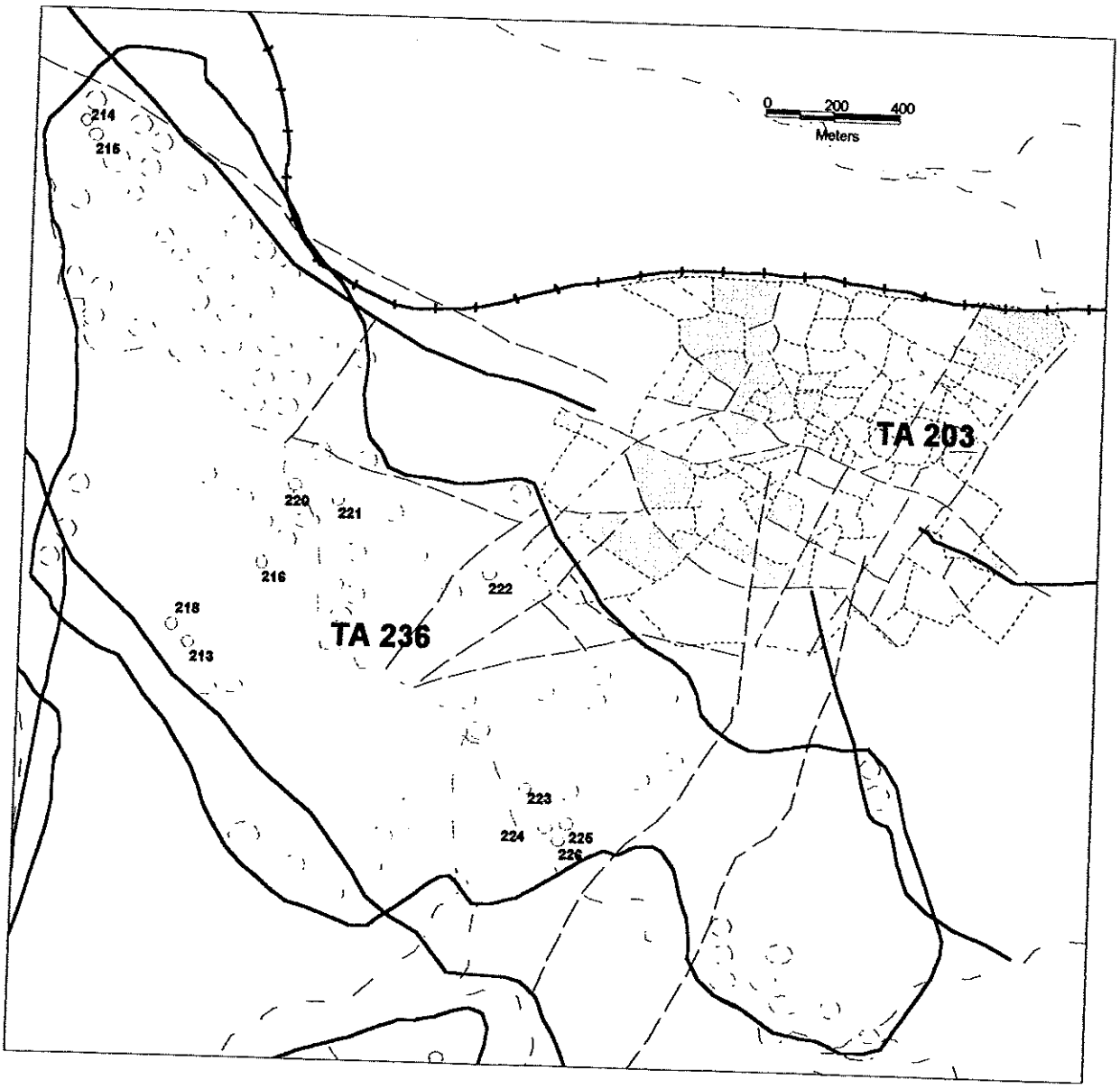
Natural Setting and Modern Land Use: This site is crossed by a branch road that departs from the highway between San Juan Teotihuacan and Oxtotipac and runs to Belen. The barranca here flows in a south-east, north-west direction, prior to the point where it was artificially straightened by the rulers of the Classic city of Teotihuacan and directed due west. Part of the site lies on a series of small floodplains of the barranca, but most of it is on gently sloping piedmont at 2300-2340 m. Soil depth within the site area is highly variable; on the sloping areas maguey terraces are located, primarily planted in maize, in variable condition at the time of the survey.

Archaeological Remains: Over most of this large site, the survey team recorded very light to scanty occupation Only 12 mounds were defined, all in poor condition and all probably remnants of residential structures. Besides the 12 mounds, however, the survey team recorded approximately 50 small localized areas, varying from 30-80 m in diameter, where occupation was generally noted as light, often light to medium. These are all probably remains of residential structures. Even including these as residential sites the overall residential density on this site is rather low and, in fact, one might redefine it as a series of 3 closely spaced hamlets. If all of the 50 areas of light to medium or medium occupation are the remains of residential mounds, the total population of this site would be somewhere in the neighborhood of 400-500 people, with an overall density even lower than modern dispersed villages. Thomas Charlton's resurvey of a portion of this site (see Volume 4) located two small areas of Mazapan occupation within the site area (coded as T T 324-325).

Table 42: Mound Observations - T.A. 236

Mound No.	Height	Size	Condition	Comments
214	Very Poor Condition			
215	Imp	25-30	Heavily Eroded	Residential
216	Very Large Amorphous Area of Rock Rubble with Very Few Sherds			
220	5	20	Good	Residential
221	Imp	15	Poor	Residential
222	7	30	Good	Residential
223	10	15-20	Good	Residential
224	10	40	Good	Residential
225	10	15-20	Good	Residential
226	13	20	Good	Residential

Figure 144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Ethnohistoric Information: This site may have been a outlying suburban area of the town of Oxtoticpac (today Oxtotipac) in the 16th century. Alternatively it could have been a portion of the village of Belen.

T.A. 235 (185) (Figs, 145, 146)

Classification: Probably a large dispersed village.

Natural Setting and Modern Land Use: The site is located on primarily gently sloping terrain on the Patlachique Range Piedmont northwest of the village of Santiago Tepetitlan, at 2310-2360 m. Soil depth varies from severely eroded areas with exposed tepetate to the south, up to over 30 cm in the more alluviated areas in the northern and central portions of the site. North of the Rancho Chalma severe erosion has also occurred. Three major barrancas cross the site, running in a northeast or north-northeasterly direction The largest barranca runs along the west side of the village of Tepetitlan, where it is 30-35 meters deep, and in some localities up to 30-40 meters wide (Barranca Onda). A check dam was constructed within the barranca bed. A second barranca flows west of Rancho Chalma. The flow from this barranca has been diverted onto a huge bancal from which it is then fed into a jagüey near the Rancho. A third barranca lies along the west edge of the site Pirul and wild nopal are common in the eroded areas, and maize and beans are planted in the deeper soil areas The noted barrancas, along with the dam, have been integrated into a complex water control system which provides floodwater for irrigation of the fields in the adjacent alluvial plain.

Archaeological Remains: The architectural remains consist of 39 numbered residential mounds, 2 terraced temple platforms, and a ceremonial complex on the summit of Cerro la Cruz behind Santiago Tepetitlan, at 2480-2500 m; but numerous additional concentrations of rock and ceramics were located in the survey It is clearly the 1580 community of Santiago Tepetitlan, and is the major site on the Middle Valley South Piedmont All the architectural remains are located in the western half of the site, on wide maguey bancals Mazapan occupation occurs dispersed over the site (T T. 203)

On the summit of Cerro de la Cruz, above the main area of occupation of the site and above the village of Santiago Tepetitlan, the survey recorded a set of temple platforms forming a linear pattern, and referred to in the survey as "Ceremonial Complex C"; the third of three ceremonial complexes found on the summit of hills in the Patlachique Range during the survey. Steep slopes occur below on all sides of the site and hill summit. Six definite mounds were identified, plus a large oval shape area, at the southeast end of the series, that may be the remains of other mounds or terraces. A small post-Aztec period shrine was noted on Mound 2 Teotihuacan and Mazapan occupation was noted by the 1966 survey team but Aztec was clearly the major component. Presumably this hilltop shrine was a major ceremonial area during the Aztec occupation of the large village site, T.A. 235, that lies below it to the north and west. The following table summarizes the quantitative data on the mounds.

Figure 145

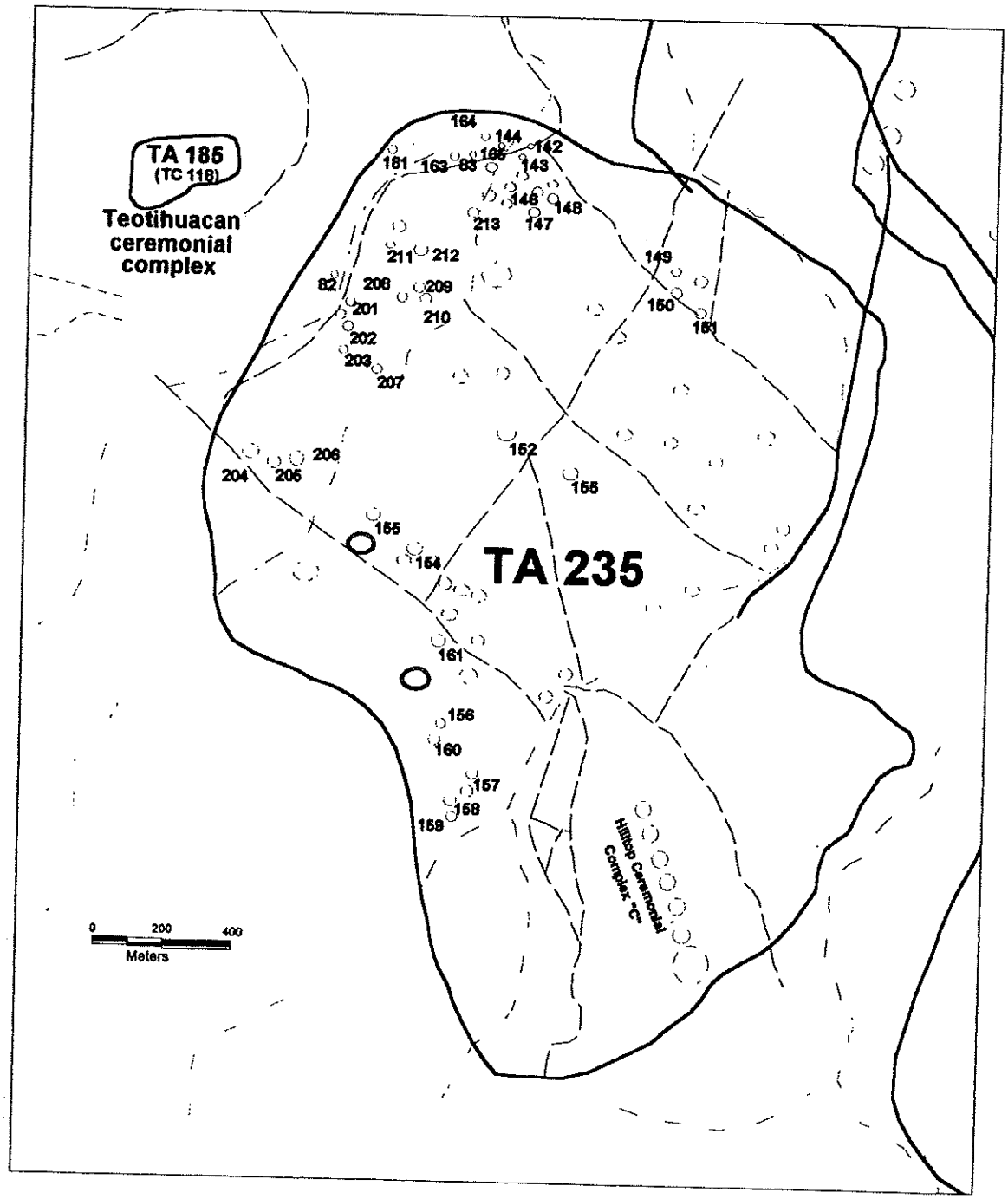

TA 185
(TC 118)
Teotihuacan
ceremonial
complex
TA 235
Hilltop Ceremonial
Complex "C"
0
200
400
Meters

Figure 146

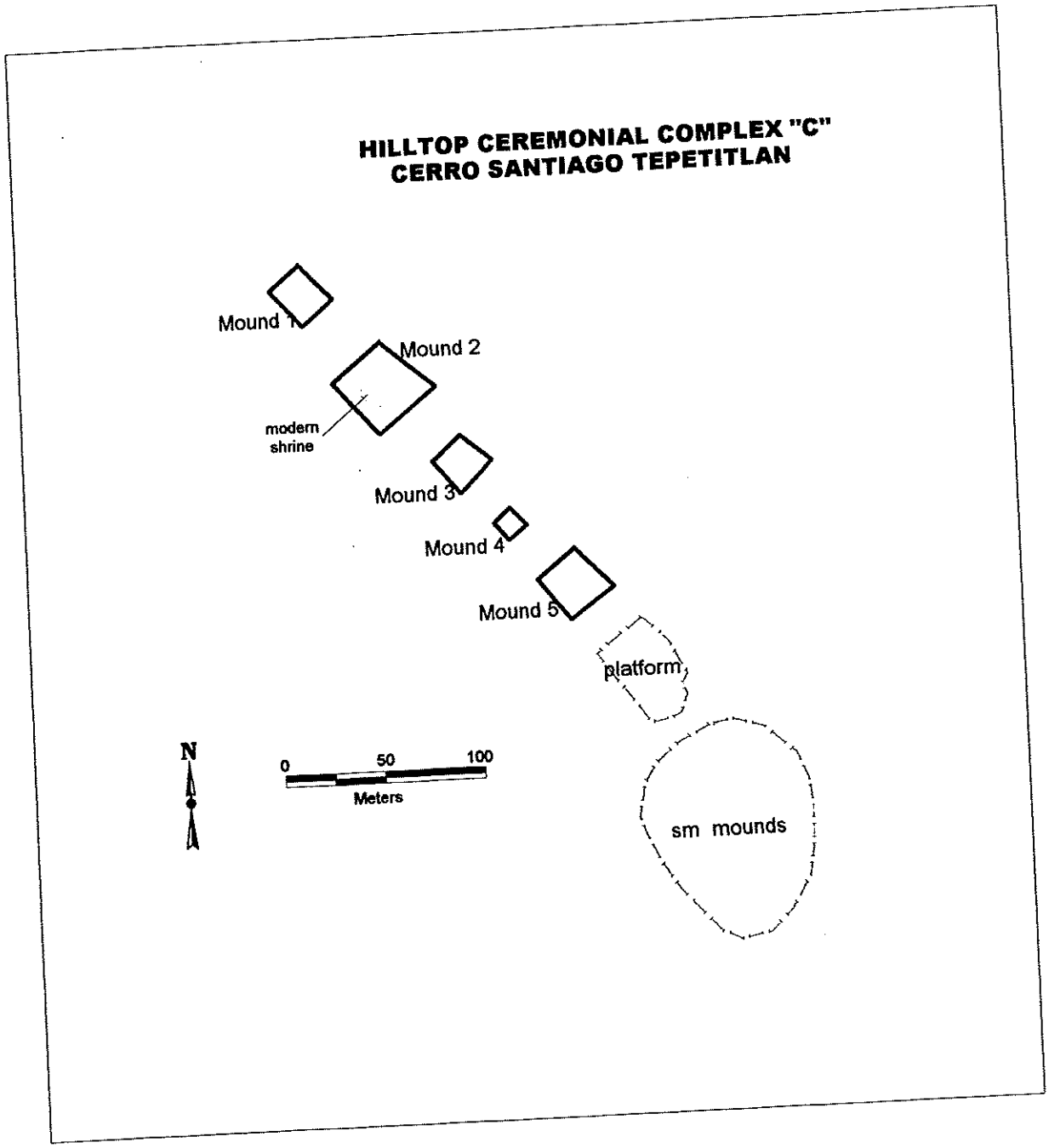

HILLTOP CEREMONIAL COMPLEX "C"
CERRO SANTIAGO TEPETITLAN
Mound 1
Mound 2
modern shrine
Mound 3
Mound 4
Mound 5
platform
sm mounds
N
0
50
100
Meters

Table 43: Mound Observations - T.A. 235				
Mound No.	Height	Size	Condition	Comments
81	3-5	10	Very Poor	Residential
82	5-75	10	Very Poor	Residential
83	25	15	Poor	Residential
142	3-4	15	Poor	Residential
143	5-5	10	Poor	Residential
144	2	16		Residential
145	15	15-20	Very Poor	Residential
146	1 5	30	Good	Residential
147	1 25	10	Fair	Residential
148	1 0	35x15	Good	Residential
149	1 5	35	Good	Residential
150	1 0	15	Fair	Residential
151	3	20	Fair	Residential
152	4	20	Fair	Residential
153	4	25	Fair	Residential
154	7	20-25	Fair	Residential
155	6-7	15	Fair	Residential
x	1 0	70	Good	Residential
x	2 5	17x17	Good	Residential
156	5	50	Fair	Residential
157	4	40	Fair	Residential
158	4	15-20	Fair	Residential
159	Imp	Heavily Pitted, Disturbed		
160	5	20	Fair	Residential
x	3 0	60	Good	Residential
x	2 5	12x12	Good	Residential
161	1 5	20	Fair	Residential
163	Imp	No Data	Very Poor	Residential
164	5	15	Fair	Residential
165	65-7	25	Fair	Residential
201	1 25	5	Heavily Affected by Maguey Bancals	Residential

202	Imp	5	Heavily Affected by Maguey Bancals	Residential
203	Imp	5	Heavily Affected by Maguey Bancals	Residential
204	1 0	10	Fair	Residential
205	1 0	6	Poor	Residential
206	1 0	6	Poor	Residential
207	4	7		Residential
208	1 0	10	(But Rubble is Dispersed over 30 m)	Residential
209	1 5	12	(But Rubble is Dispersed over 30 m)	Residential
210	3	30	(But Rubble is Dispersed over 30 m)	Residential
211	1 0	30	(But Rubble is Dispersed over 30 m)	Possible Complex of Mds
212	1 0	30	(But Rubble is Dispersed over 30 m)	Residential
213	1 0	30	(But Rubble is Dispersed over 30 m)	Residential

Mound Observations - Ceremonial Complex C

Mound No.	Dimensions (m)	Elevation (m)
1	20 x 20	5
2	30 x 35	2 5-3 0
3	20 x 20	2 0
4	10 x 10	5
5	25 x 25	2 5-3 0
6(?)	Approx 25 x 35	N D (certainly below 5)
7(?)	60 (Oval)	N D (certainly below 5)

Ethnohistoric Information: This is probably the site of Santiago Tepetitlan, a sujeto of Oxtoticpac in the 16th century.

Figure 147

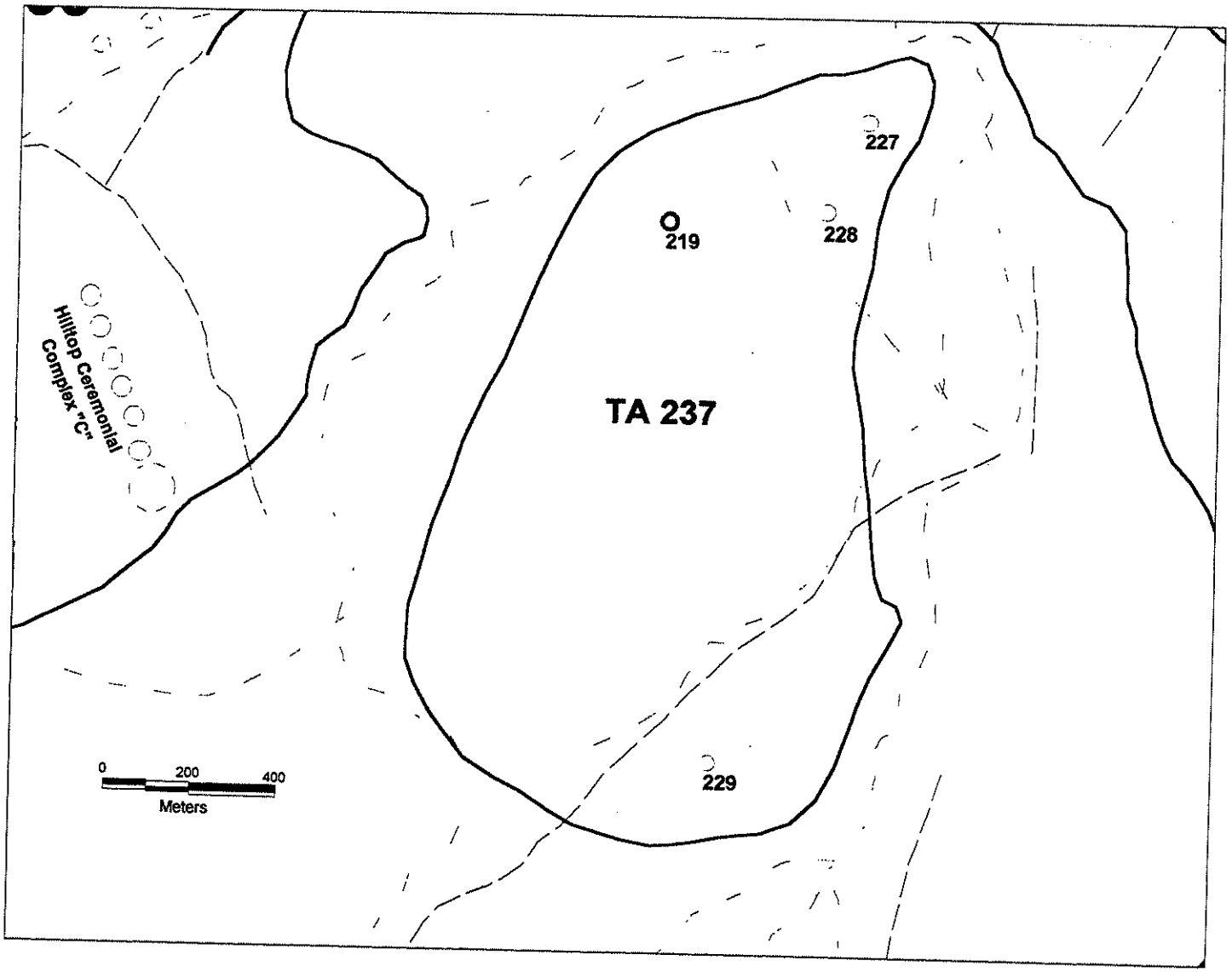
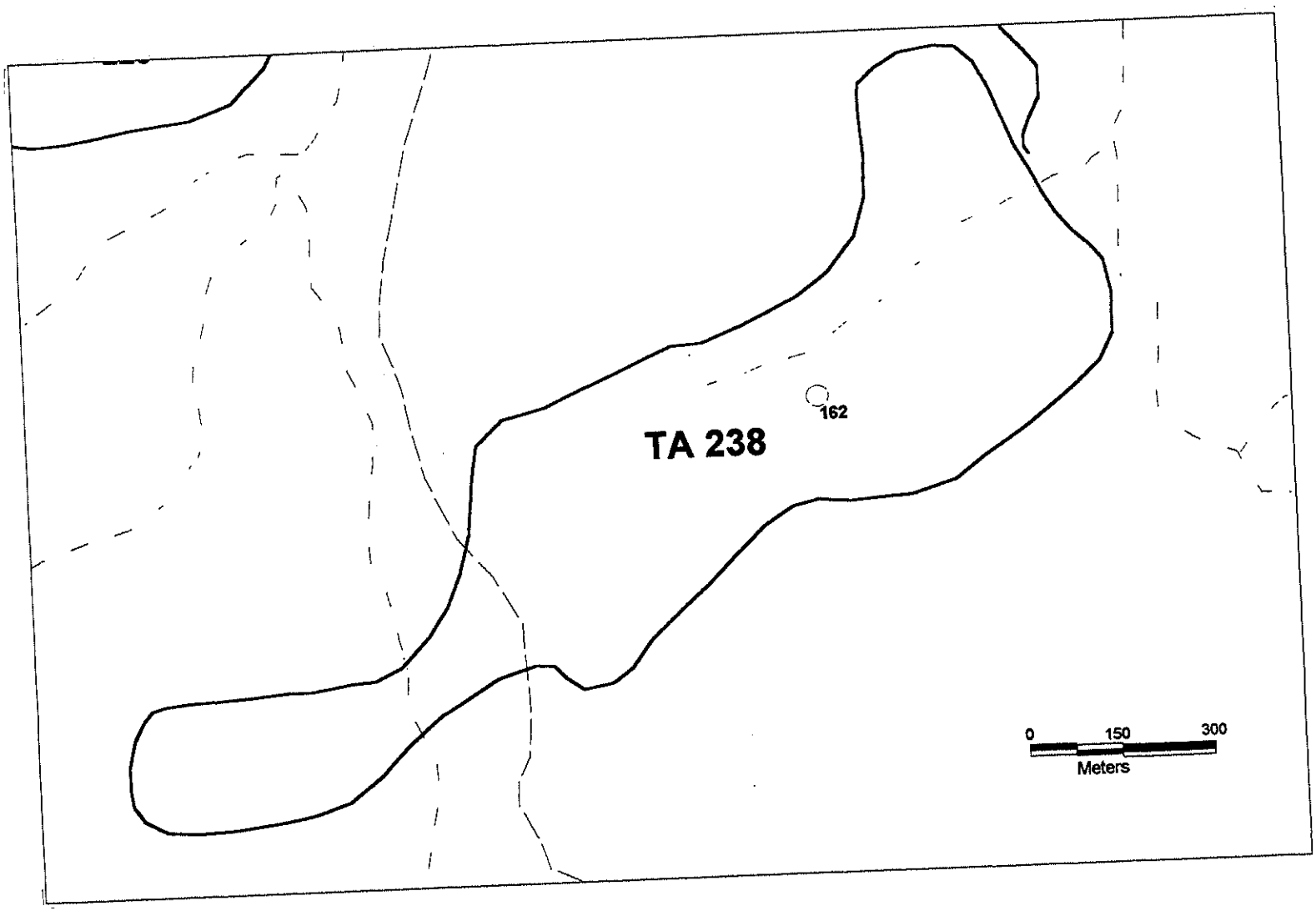

227
219
228
TA 237
Hilltop Ceremonial Complex "C"
0
200
400
Meters
229

Figure 148



T.A. 237 (Fig. 147)

Classification: Problematical, could be a small very dispersed village or several hamlets.

Natural Setting and Modern Land Use: This site is located between Santiago Tepetitlan and Belen, on the slope of a small, volcanic cone called Cerro Chiconquiaco, at 2350-2400 m., which lies between two converging barrancas, both tributaries of the Barranca de San Lorenzo. The portion of the site, on the Belen side, has deeper soils with only moderate erosion, most of the rest of the site, particularly to the southeast and on the north slope, is severely eroded. Most of the hill today is used for grazing, but on the lower slopes near the barrancas, are maguey bancals, planted in maize. The east barranca has check dams for floodwater irrigation. The modern settlement consists of very widely dispersed houses on the east slope, an extension of the village of Belen.

Archaeological Remains: Over most of the area of the site occupation is generally light with areas dropping to scanty; the original Aztec settlement pattern may have resembled the modern settlement pattern still found on the east slope of the hill. Only 4 mounds were noted, one of which was a ceremonial structure 4 m high and 10 m in diameter (Mound 219). Mound 227 may also be ceremonial in function, since it was 2 1/2 m high and has a diameter of 30 x 20 m. It is on a summit of a small knoll. As stated before the overall occupation tends to vary from scanty to light over most of the site, rising to light to medium in a small area to the southeast, central west, and northern portions of the site; perhaps the site should have been designated as several small sites rather than a single large one.

Ethnohistoric Information. This site was probably an outlying settlement of Belen, a sujeto of Oxtoticpac during the 16th century.

T.A. 238 (Fig. 148)

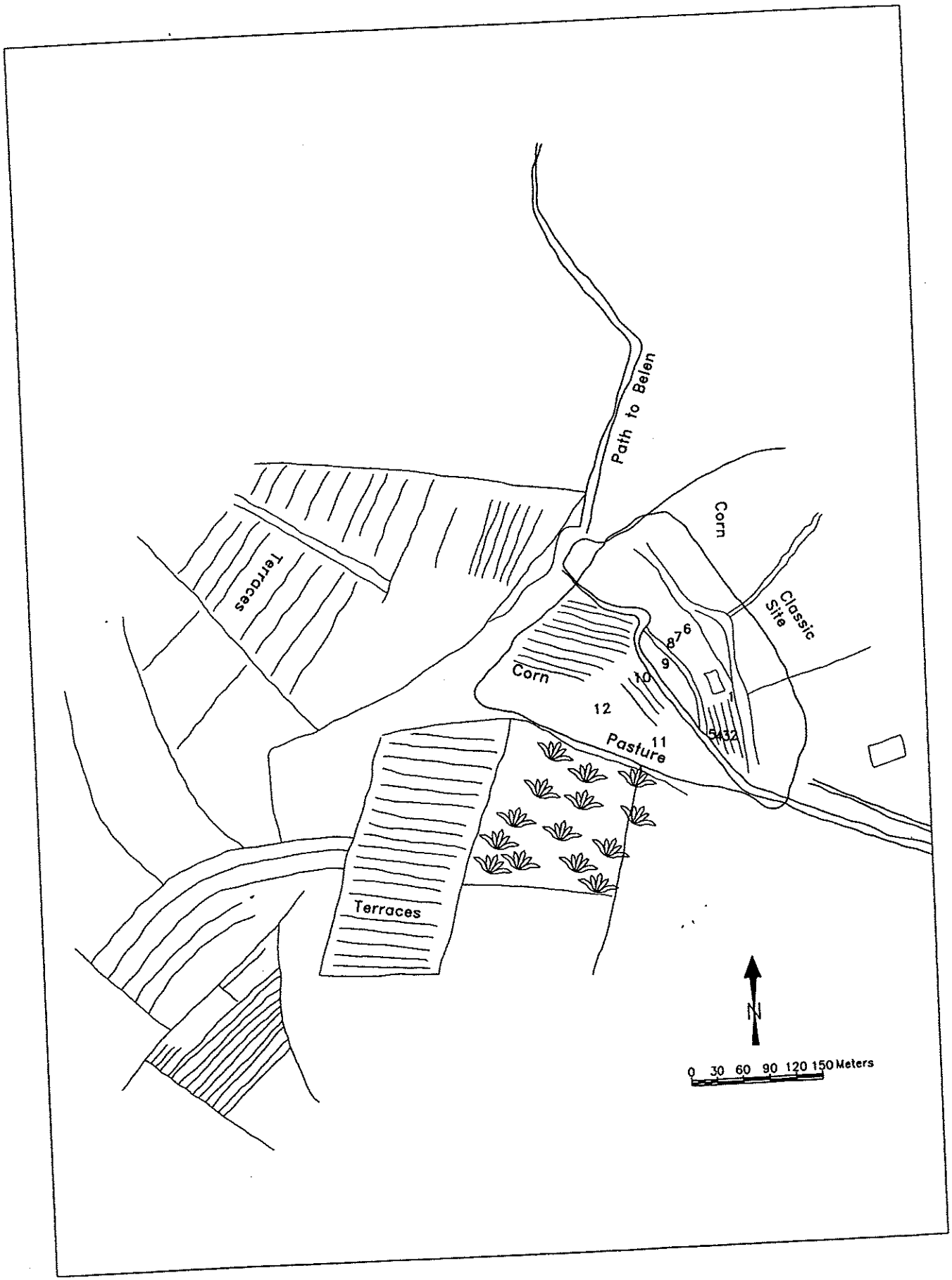
Classification: Probably several well spaced hamlets.

Natural Setting and Modern Land Use: This site is located in an area of severe erosion, at 2330-2380 m, most with less than 20 cm of soil; the soils are somewhat deeper in a terraced area on the southeastern edge One barranca, 2-3 m wide, 1-2 m deep traverses the site, several others run along the edges, all draining into the San Lorenzo barranca. These are much larger streams varying from 15-30 m in width and 3-15 m in depth. Much of the area was in thorn bush with wild nopal and maguey at the time of the visit A few scattered modern houses and field huts were found in the area. Some slopes have maguey terraces, planted in beans or maize.

Archaeological Remains: The site appears as a linear band along the bases of the nearby slopes. In general this is a poor area for agriculture and is used primarily for grazing. The survey team reported only one mound but several areas of sherd and rock concentration. This is another site which perhaps should be split up into several separate hamlets.

Ethnohistoric Information. This site is probably an outlying settlement of the village of Belen, a sujeto of Oxtoticpac in the 16th century.

Figure 149


Path to Belen
Corn
Classic Site
Terraces
Corn
Pasture
Terraces
N
0 30 60 90 120 150 Meters

T.A. 190 (Fig 149)

Background and Classification: This site, located approximately 2 kilometers south of Belen, was recorded in 1963, and resurveyed in 1964 as part of the Teotihuacan period Survey. Two separate portions of the site were visited during general survey and designated as TC-26 and TC-98. The Aztec component of the site has been designated T.A. 190. The artifact collections from the Teotihuacan survey consisted of 12 samples; of these 5 have light to medium concentration of Aztec sherds and possibly represent Aztec house mounds. In all probability this is a relatively small, detached hamlet of the larger site T.A. 238, located closer to Belen

Natural Setting. Site T.A. 190 is located in the Middle Valley, South Piedmont Ecological zone, at 2,360-2,370 m. Soils in the site area have a sandy to loamy texture and are tan to medium brown in color, with depths ranging from 0-30+ cm. There is moderate to heavy erosion in the area, and tepetate is exposed in the western section of the site. Moderate to heavy concentrations of rock and tezontle fragments are found in the area. Vegetation in the vicinity includes pirul, nopal, maguey, and various grasses. Other natural features include a large barranca to the west and several washes to the southeast and northeast.

Modern Land Use: Cultural features include no structures and no jagüeys. The site area is used primarily for agricultural purposes, including the cultivation of maize and maguey. Maguey bancals and stone terraces are also found on a portion of the site.

Archaeological Remains: The total multicomponent site occupies 5.5 ha. Site T.A. 190 has two phases of the pre-Teotihuacan, three phases of the Teotihuacan, and two phases of post Teotihuacan represented for a total of seven. Associated non-Aztec sites include T.C. 26, 98.

The site has a sparse and uneven distribution of lithic materials including obsidian blades and scrapers Ground stone tools, especially manos and metates, were noted.

Ethnohistoric Information: This site is probably an outlying hamlet of the village of Belen, a sujeto of Oxtoticpac in the 16th century.

3. ZONE 17: CERRO GORDO: EAST SLOPE (Figs. 150, 151; Plate 130)

In his 1966 season, Parsons surveyed an area of approximately 2,500 ha. on the slopes of four foothills on the east flank of Cerro Gordo and their adjacent lower piedmont/thin soil alluvial plains On the southwest, this zone borders on and is adjacent to the linear band surveyed by Sanders in 1963 on the south slope of Cerro Gordo, and to the south and southeast it runs a short distance north of the village of Axapusco. To the east it borders on Charlton's 1975 survey around the two hills of San Miguel and Tezontla (see Chapter 5). To the northwest it borders Charlton's 1963-1964 survey of sites near Colhuacan. The 1966 survey ended just south of the modern village of Santo Domingo Aztaquemecan. Between the northern extension of the 1966 survey and the southern extension of the Temascalapa 1975 survey is an area of unsurveyed terrain that includes the village of Santo Domingo and a hilly region immediately adjacent to and north of the village.

The northern and eastern part of the survey area consists of a relatively flat, thin-soil plain. The balance consists of the slopes of four foothills of Cerro Gordo; Cerro Cuajio, Cerro el Pelon, Cerro la Soledad, and Cerro Texuca, and their small intermontane valleys. There are no present-day villages located within the survey area. All of the area has suffered severe erosion, with extensive areas of exposed tepetate, and is used primarily for pasture and maguey cultivation. In terms of 20th century land use, it is perhaps the most marginal zone of the entire Teotihuacan Valley.

Aztec occupation, in contrast, is extensive and occurs in both of the terrain types described above T.A. 243 and 245 lie within the gently sloping plain to the north, T.A. 247 and T.A. 240 to the east T A 246 occupies the lower north, east, and south slopes of Cerro Pelon On the summit of this same hill is a ceremonial complex which we designated as T.A. 250. T.A. 241 occupies the entire small valley between Cerros Pelon and Texuca. T.A. 242 lies between the two hills Texuca and La Soledad. T.A. 239 is located on the lower east and southern slopes of Cerro Texuca, and T.A. 244 is on the northwestern slopes of Cerro el Pelon.

A very high percentage of the survey area falls within the boundaries of sites defined by the survey crew as was the case of the complex of sites T.A. 230 - T.A. 239 on the south piedmont of the Middle Valley. The problem is similar to that encountered in many areas in the Upper Valley where it is difficult to define the perimeters of sites. This is particularly true of the sites in Zone 17. Distances between the edges of the defined sites are small and, in fact, in some cases we could have included two and even three sites as a single one. Furthermore, within the areas defined as sites there are significantly large areas of scanty to very light occupation and the surviving mounds and areas of substantial occupation very often occur in clusters within a site's boundary. We could easily have defined many and more smaller sites than we did, in terms of the procedures used in site definition. We will note some of these characteristics as we describe the various designated sites.

We have virtually no ethnohistoric information on this area because of the lack of known tax documents for nearby Axapusco. Presumably all of it was subject to that community during the Late Aztec and Early Colonial phases. Charlton has identified T.A. 247 as the location of the 16th century sujeto of San Sebastian Molango

Figure 150

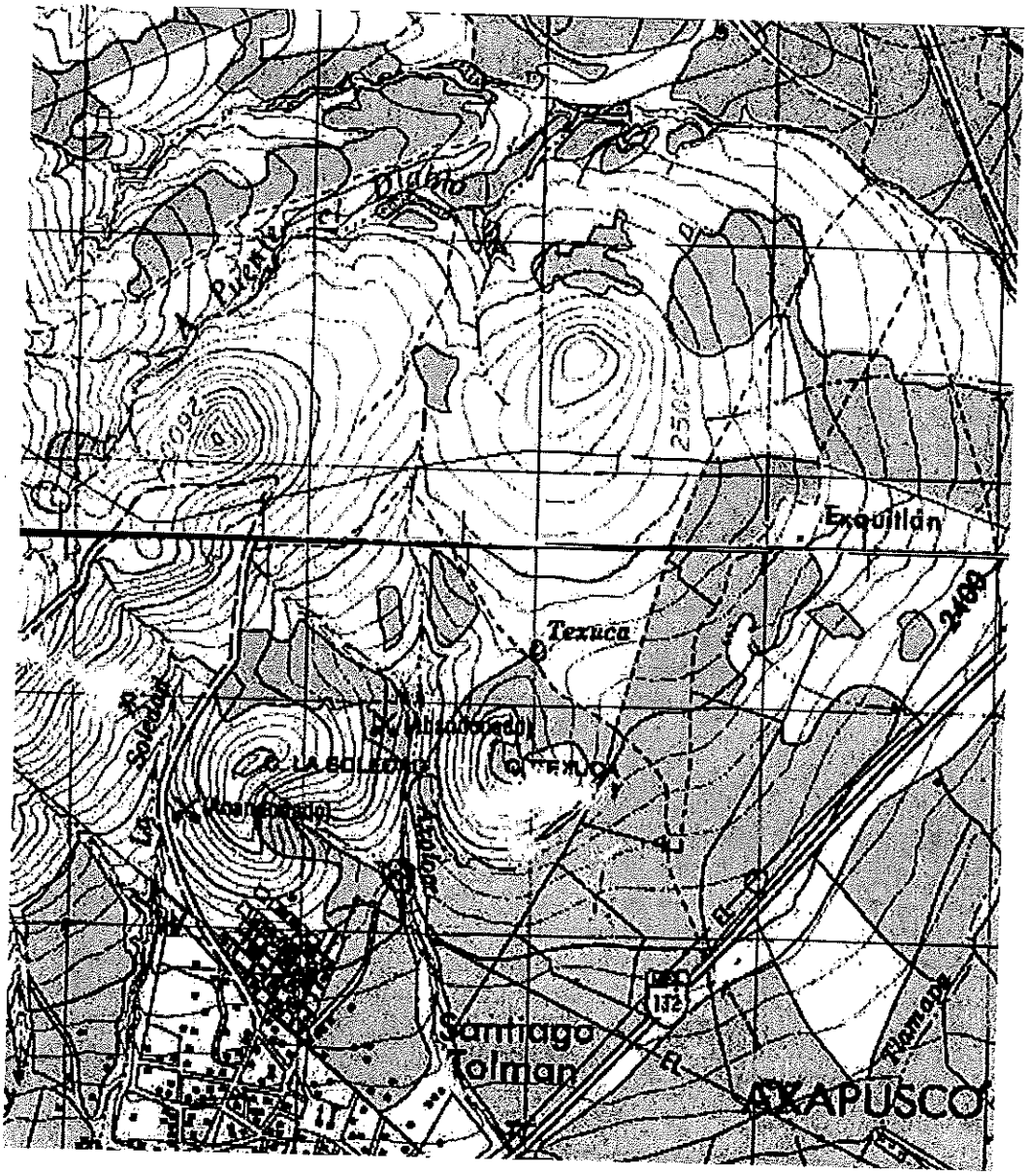


Figure 151

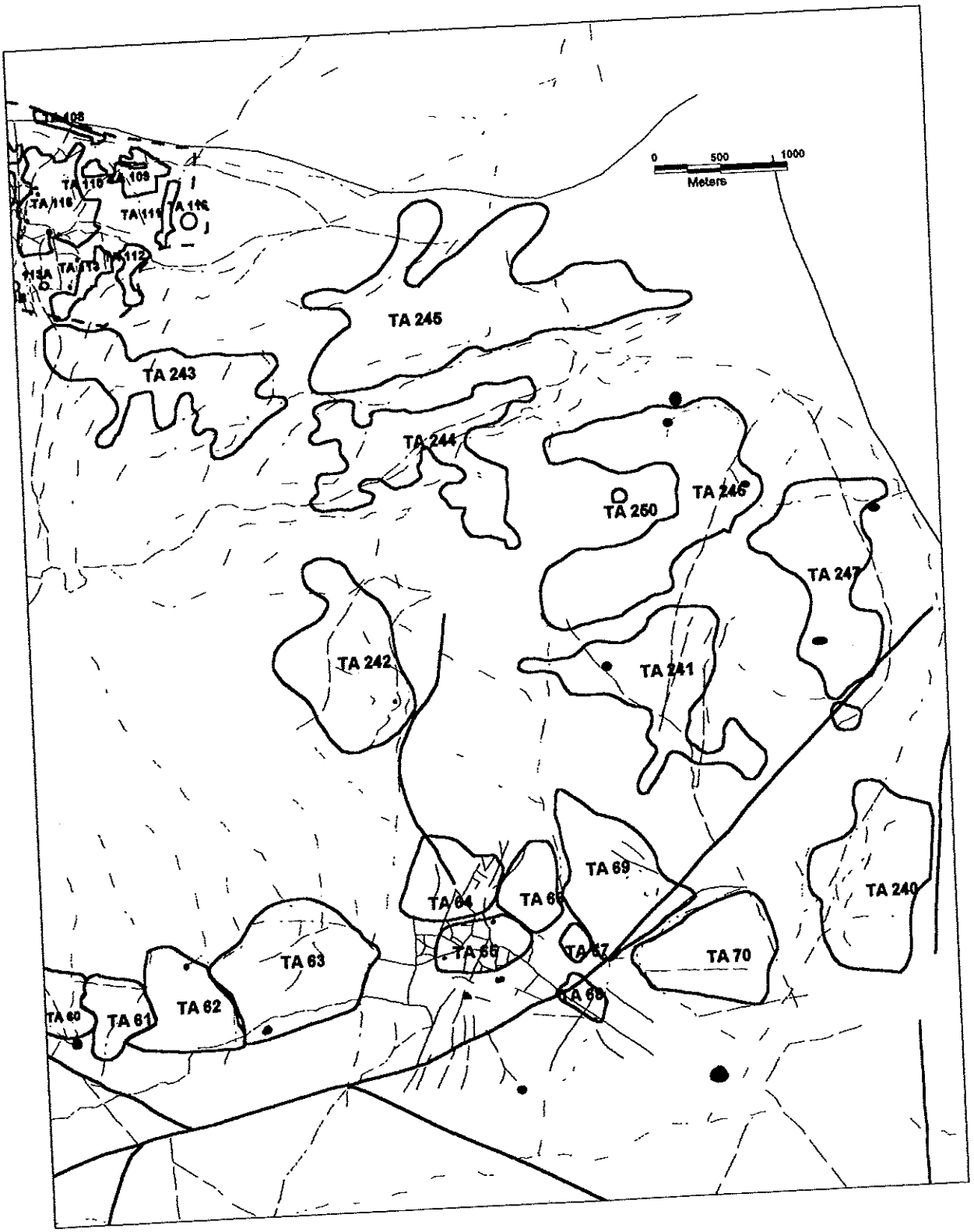
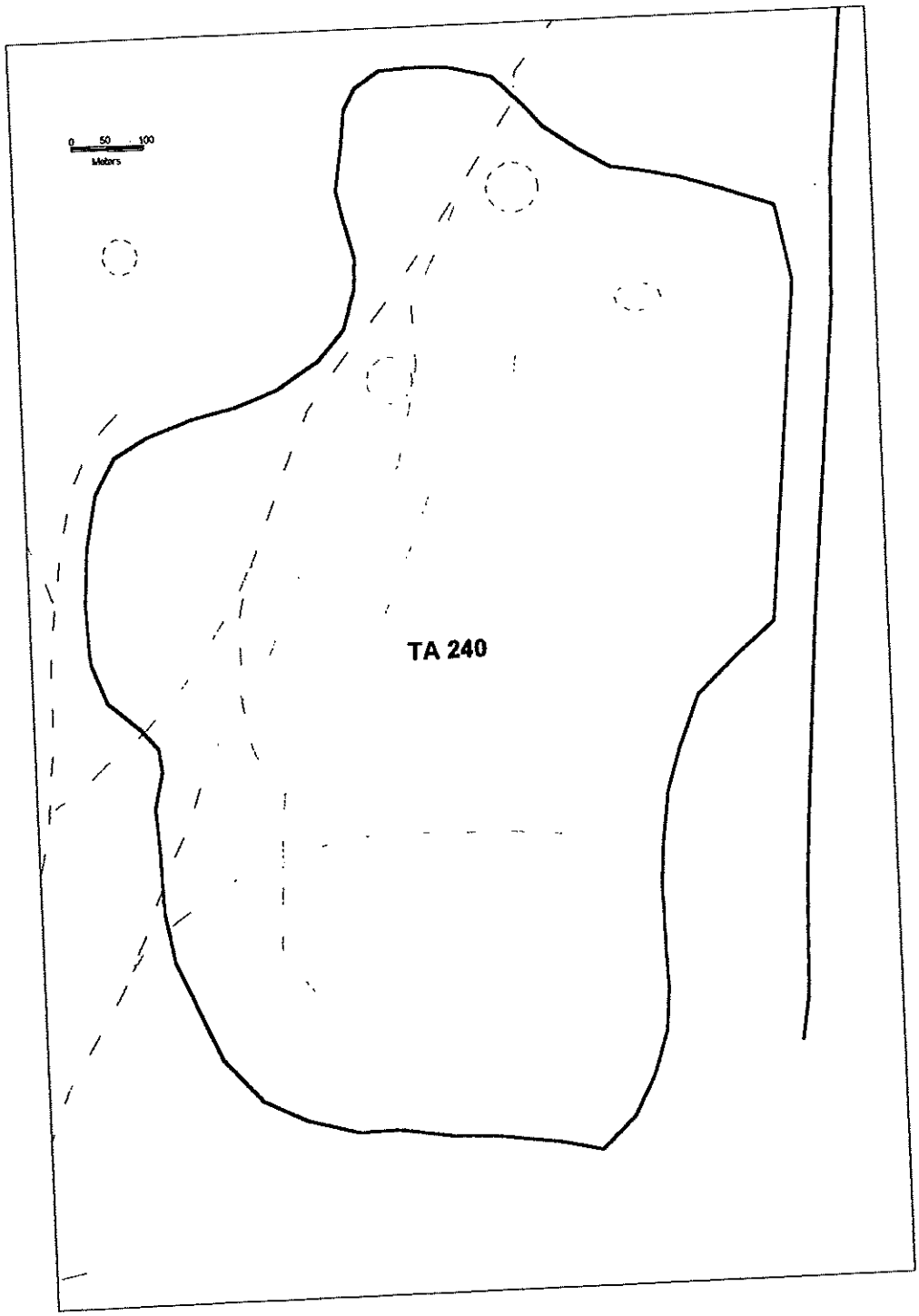

0
500
1000
Meters
TA 245
TA 243
TA 244
TA 250
TA 246
TA 247
TA 242
TA 241
TA 69
TA 64
TA 66
TA 67
TA 70
TA 240
TA 63
TA 62
TA 61
TA 60
TA 68

Plate 124

Figure 152



T.A. 240 (Fig. 152)

Classification: Probably a small dispersed village.

Natural Setting: In general the site is in an area of gently sloping terrain at 2350-2390 m, traversed north-south by a deeply (3 m deep) incised barranca, which flows through the center of the site. Another barranca flows along its western edge, separating it from T.A. 239. Relatively deep soils - up to 50 cm are found east of this central barranca. In general, this is an area of severe erosion with numerous extensive areas of exposed tepetate and numerous washes cross the site, running from northwest to southeast

Modern Land Use The eastern portion of the area is occupied primarily by maguey and the western section is uncultivated. In the northeast, where deeper soils occur, there is some cultivation of maize and beans. No traces of terracing were noted in the western, more eroded area. No 20th Century structures were found within the area.

Archaeological Remains: Throughout the entire area defined as the site, Aztec occupation occurs rather evenly with scanty to light density. The survey did not identify any definite mounds and evidence of occupation occurs as a series of widely separated and dispersed scatters of sherds usually light in density, occasional heavier than this. In three areas medium concentrations of sherds were noted, but they included Early Colonial phase ceramics.

T.A. 239 (T.A. 70) (Fig. 153)

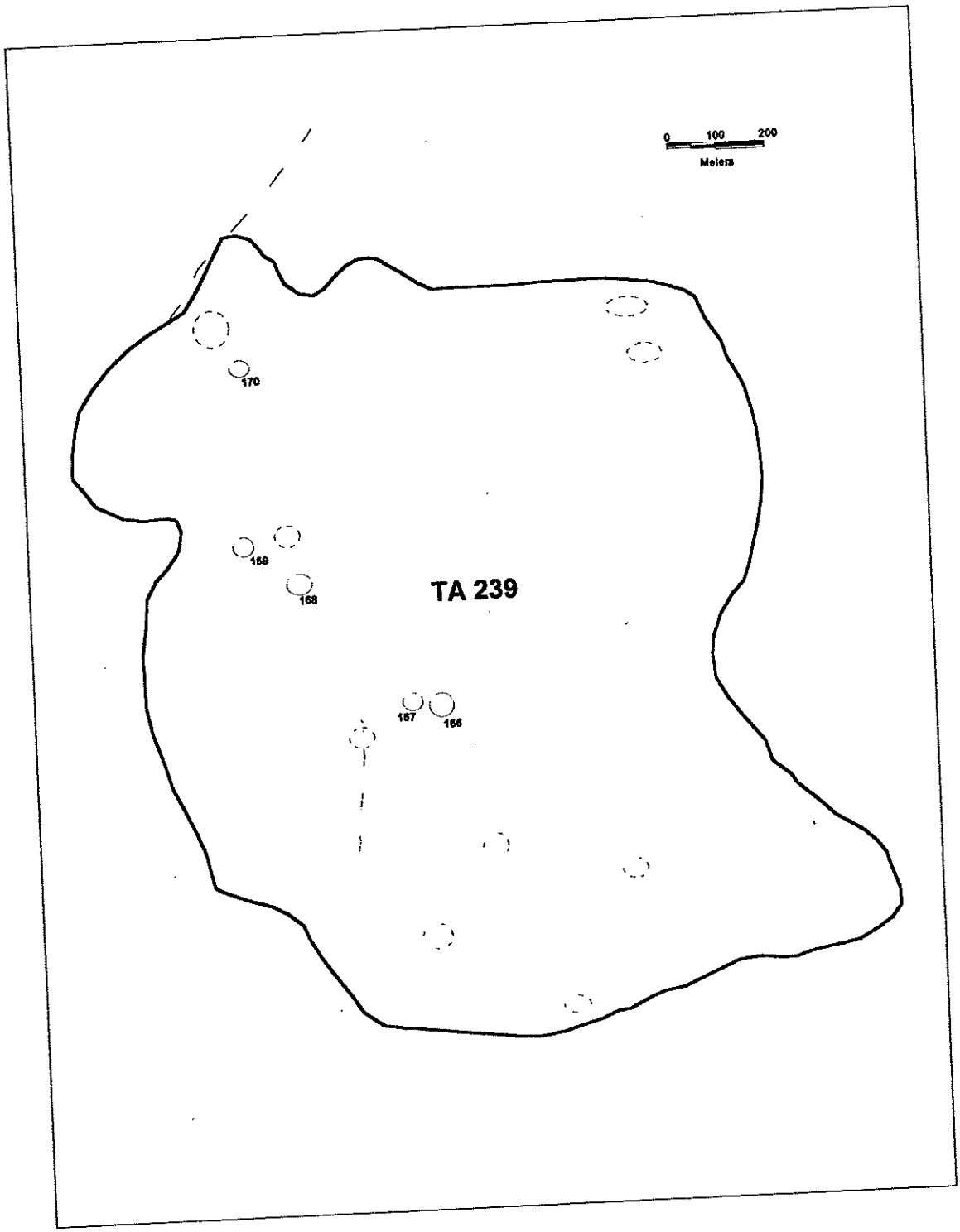
Classification: Two hamlets or a small dispersed village

Natural Setting: This site is located on the eastern lower slope of Cerro Texuca and on the adjacent plain, at 2340-2360 m, northwest of Axapusco. A major wash-barranca traverses the site from northwest to southeast. Much of the area of the site is severely eroded, with numerous areas of exposed tepetate and small washes, but within the site are several areas of well maintained terraces that have deeper soils, particularly in the southwestern portion of the site.

Modern Land Use: No 20th century structures or jagüeys were noted on the site. Much of the area is eroded. Well preserved terraces of two types occur in some areas. These are defined by earthen banks upon which are planted either maguey or fruit trees. One set consists of very narrowly spaced lines of maguey, the others have much wider spacing. The latter were planted in maize and beans at the time of the survey.

Archaeological Remains: Most of the evidence of Aztec occupation occurs in the eroded areas of the site. An unusual number of figurine fragments were collected in the surface samples, particularly in the southwestern portion of the site where both Aztec and Mazapan occupations occur together (the Mazapan occupation was coded as T.T. 51, 52 in the 1963 survey). In these areas ceramic density was recorded as medium or medium+ over an almost continuous area - the product of the two occupations. Remnants of stone terracing were noted in this same area. Over much of the site area occupation occurs as scanty to light. At the far northern and southern ends of the site are areas of medium occupation. Because of the nature of distribution of remains, one could describe this site as two widely spaced hamlets rather than as a single site. Four definite mounds were noted in the survey, all in the area of the Aztec-Mazapan occupation, Mound 166 is a large low elevation with a maximum height of 60-80 cm and a diameter of 40 ms east-west. Mound 167 extends 25 m. east-west, has a maximum elevation of 60 cm, Mound 168 has an

Figure 153



elevation of 30-50 cm and extends 30 m north-south and is very heavily eroded. Finally Mound 169 is approximately 1 m high and measures 25 ms. east-west. Fragments of Mazapan figurines and a few sherds were found on Mounds 167-169. This is the same site as T.A. 70 surveyed, by Sanders in 1963 - see Chapter 3, page 279. In the 1963 survey Sanders recorded 17 mounds in varying states of preservation. Either the 1966 survey crew missed the more poorly preserved mounds or some destruction of the site had occurred in the intervening years.

Ethnohistoric Information: This probably was part of the village of Santiago Tolman, a sujeto of Teotihuacan in the 16th century.

T.A. 250

Classification Hilltop ceremonial precinct.

Natural Setting and Modern Land Use: The site is located on a hilltop, at 2,560 m. The soil depth is shallow, the area today is used as marginal pasture. No 20th century structures are found on the hill.

Archaeological Remains: The site consists of a single mound probably a temple platform (Mound 351), it is approximately 1 m. in elevation and about 15-20 m. in diameter. Large amounts of Aztec ceramics were noted on and around the mound, including censer ware. North, south, and east of the site, and on the lower flank of the hill, is the large dispersed village designated as T.A 246, and this ceremonial precinct probably served that site.

T.A. 247 (Fig. 154)

Classification: Probably a small dispersed village.

Natural Setting: The site is located in an area of level to gently sloping terrain, east of Cerro Pelon, at 2400-2460 m and the soil depth overall was shallow, comprised primarily of sand mixed with gravel Erosion was considerable and there are numerous areas of exposed tepetate. A small barranca traverses the northern portion of the site, running from west to east of Cerro Pelon A well defined wash crosses the site from north to south. The vegetation consists of scattered pirul trees and, in areas that are not completely eroded, a grass cover. Scattered nopal and maguey also occur within the site area.

Modern Land Use: One large hacienda ruin is located at the northeastern edge of the site. Two jagüeys were located in the survey at opposite ends, to the northeast and southwest. Very little cropping was taking place at the time of the survey. In the northeastern area of the site, near one of the jagüeys, is a series of north-south earthen embankments, planted in maguey, between which some maize and beans were planted

Archaeological Remains: Occupation varies but occurs continuously over all of the site area. Clusters of surviving mounds occur near the two jagüeys, but occupation is at least light over much of the intervening terrain. Eleven definite mounds were recorded but at least twice as many small areas of medium concentration of rock and sherd were recorded as well. Also found were a number of concentrations of rock in the form of low mounds, but very little evidence of occupation was seen, in the form of sherds or obsidian, and their origin is problematical. Most of the mounds occur in two clusters, four near the south jagüey, and seven to the north Also in the northern area were three more areas of concentrated rock and light to medium Aztec pottery, but no definite mounding.

Figure 154

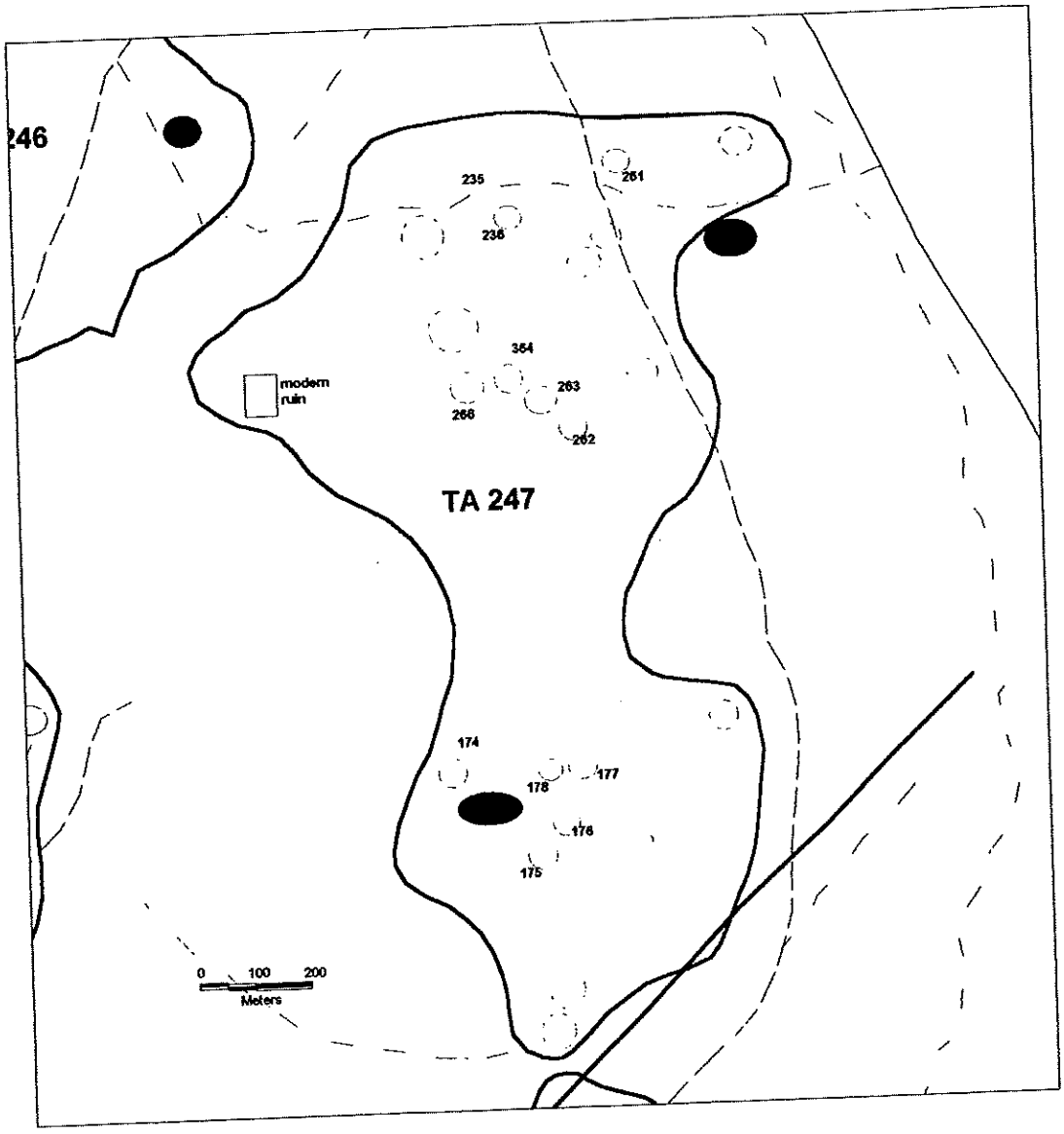

246
235
261
236
364
modern
ruin
263
266
262
TA 247
174
177
178
176
175
0
100
200
Meters

Figure 155

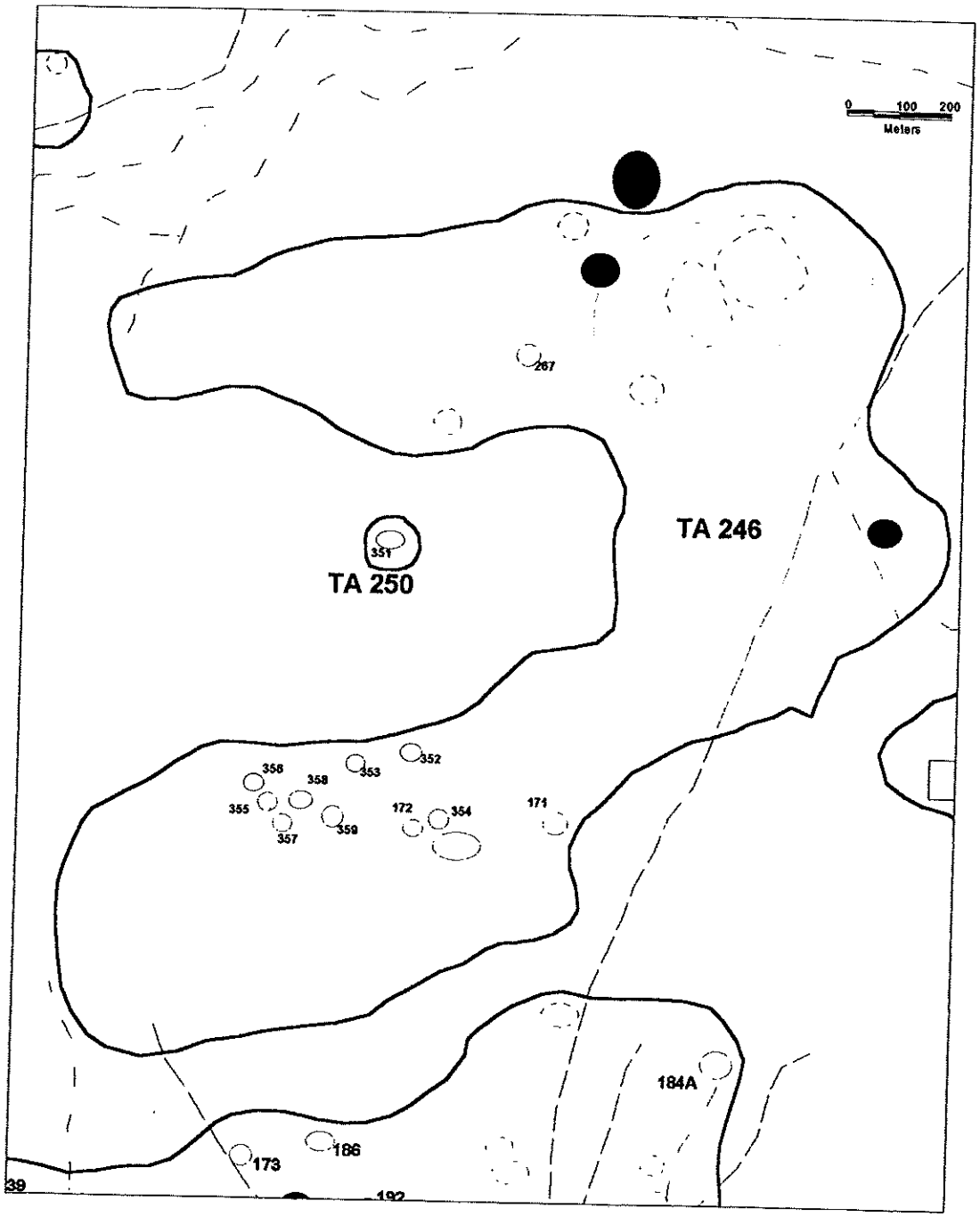

0 100 200
Meters
267
TA 250
351
TA 246
356
358
353
352
355
357
359
172
354
171
184A
186
173
39
192

Table 44: Mound Observations - T.A. 247

Mound Number	Condition	Maximum Elevation	Size	Ceramic Density	Rock Density
South Cluster					
179	Badly Eroded	1 0	10	L-M Aztec	Heavy
175	Very Badly Eroded	1 5	7 x 3-4	M Aztec	Heavy
176	Very Badly Eroded	1 0	10	L-M Aztec	Heavy
177	Very Badly Eroded	1 0	10	L-M Aztec-Col	Heavy
178	Very Badly Eroded	5	10	L-M Aztec-Col	Heavy
North Cluster					
236	Poss a Non Mound	5	6	None	Heavy
261	N d	25	7	L-M Aztec-Col	Medium
262	N d	1 0	12	M Aztec	Light-Medium
263	N d	5	10-12	L-M Aztec-Col	Heavy
264	N d	5	10	Sc Aztec	Medium
266	N d	5	12	L-M	Heavy
Non Mound	Widely Dispersed	Imp	45 x 25	L-M Aztec-Col	Heavy
Non Mound	Widely Dispersed	Imp	30 x 20	L-M Aztec-Col	Heavy
Non Mound	Widely Dispersed	Imp	Much Smaller	L-M Aztec-Col	Heavy

Ethnohistoric Information: This was the village of San Sebastian Molango, a sujeto of Axapusco in the 16th century

T.A. 246 (Fig. 155)

Classification: Either a small or large dispersed village or several hamlets.

Natural Setting: This site lies in a band of gently sloping terrain at 2450-2500 m, along the lower and middle slopes of Cerro Pelon, almost encircling the hill on its north, east and south sides. Soil depth over much of this area was very shallow with numerous areas of exposed tepetate. Erosion was particularly heavy to the west and south. The summit of the hill appears as a steep sided knoll. A major barranca runs along the northern edge of the site 25-70 ms wide and with a maximum depth of 15 ms. Virtually all of the bed of the barranca was filled with check dams and deep soil terraces, like those we described on the North Slope of Cerro Gordo in Volume 1 of the project series. Natural vegetation consists of scattering of shrubs, pirul trees, maguey, and nopal and is used primarily as grazing land.

Modern Land Use: Today much of the site is marginal pasture with maguey plantings in the southern and eastern portions of the site. No crops were found to the north and west of the hill. Remains of ditches and

terraces were noted on the east slope of the hill. Three jagüeys were located in the northeast and eastern portions of the site.

Archaeological Remains. Substantial occupation occurs in two localities, one in the north central portion of the site and north of the hill and the other in the southwest portion of the site and south of the hill, where all of the eleven mounds were located. Nevertheless, sizable areas of light+ occupation were noted as well, on the east slope, between the two zones of heavier settlement. The western slope of the hill seems to have had little or no occupation, with the exception of the northwestern portion, where T.A. 244 begins. The entire eastern border of the site is only a short distance from the western edge of T.A. 247, and the division between these two sites is somewhat arbitrary. The two mound clusters also have significant amounts of Mazapan occupation (T.T. 204). On the summit of Cerro Pelon is an isolated ceremonial precinct, designated T A. 250, which may have served as a ritual center for this site and others in the area.

Table 45: Mound Observations - T.A. 246, 250

Mound Number	Condition	Maximum Elevation	Size	Ceramic Density	Rock Density
171	Very Heavily Eroded	50-1 0	15	?	Present
172	N d	5-1 5	10-12	M Aztec, Maz	Medium
267	N d	Imp	6	L-M Aztec	Heavy
351 (T-P)	N d	1 0	15	L-M	N d
352	Severely Eroded	7	8	N d	Present
353	Severely Eroded	1 0	10	M Aztec	Heavy
354	N d	6-1 0	10	M	Medium
355	N d	6-1 0	30 x 20	M Aztec, Maz	Medium-Heavy
356	N d	1 5	15	Aztec, Maz	Light-Medium
357	N d	5-1 5	25	Aztec, Maz	Medium
358	N d	1 5	7	Aztec, Maz	Medium-Heavy
359	Very Heavily Eroded	Imp	N d	Aztec, Maz	Medium-Heavy

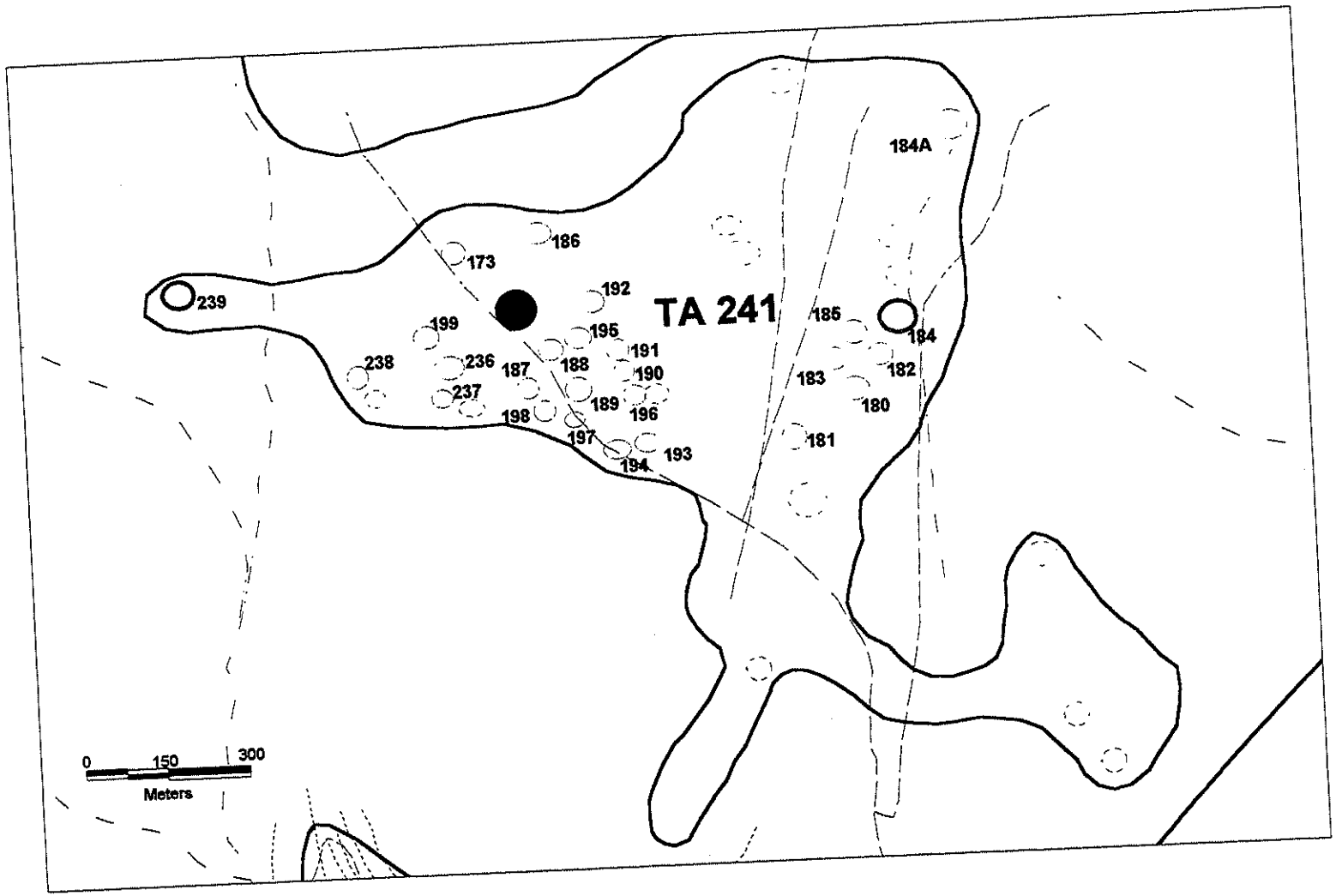
Ethnohistoric Information: See page 533.

T.A. 241 (Fig 156)

Classification. Small dispersed village or several hamlets.

Natural Setting: Site lies within a small valley running east-west between Cerro Pelon to the north and Texuca to the south, on the lower and middle north slopes of the latter, at 2400-2470 m. A portion of the site extends to the summit of Cerro Texuca. The terrain covered by the site varies from gently to steeply sloping. Soil depth overall is shallow, particularly in the northern area of the site where it varies from 50 cm to exposed tepetate. The area drains to the south as part of a "Y" shaped barranca system that flows

Figure 156


TA 241
184A
186
173
239
192
199
195
191
238
236
187
188
190
237
189
196
198
197
193
194
185
184
183
182
180
181
0
150
300
Meters

between Cerro Texuca and Cerro Soledad The main barranca varies from 3 ms in depth to 30 ms in its southern portion and is 18 to 15 ms wide. Washes and eroded areas are common to the north. Wild or semi-wild vegetation is sparse and includes scattered pirul trees, shrubs, and maguey. Modern quarries occur on the summit of Cerro Texuca on the northwest flank of the hill.

Modern Land Use: Approximately in the center of the site is a large jagüey surrounded by a horseshoe of trees and one house located near it. Maguey cultivation occurs on the hill slopes, and in the form of very narrowly spaced rows over large areas of the site, particularly to the northeast and south. Most of the northern portion of the site is severely eroded and is not longer cultivated Most of the Aztec occupation occurs in these eroded areas.

Archaeological Remains: In general, the site area is heavily eroded and the identifiable mounds are partially or almost completely destroyed. At the eastern and western ends of the site are two large temple platforms (Mound 184 to the east, Mound 239 to the west). Twenty-five residential mounds were noted in the survey. they occur in two clusters, one in the vicinity of the jagüey, the other on the northern edge of the site near one of the temple mounds (184). Also noted were isolated wall fragments, either of terraces or structures, on the upper slopes. A number of mounds were found with heavy rock concentrations, but very little pottery, particularly north of the jagüey and their origin is not clear. A small area of Mazapan occupation appears in the mound cluster around the jagüey (T.T. 205).

Table 46: Mound Observations - T.A. 241

Mound Number	Condition	Maximum Elevation	Size	Ceramic Density	Rock Density
170	N d	N d	N d	M Aztec	Medium
173	N d	5	10	L-M Aztec (Piece of a Section of Wall)	Medium
180-181	Heavily Eroded	Imp	N d	Present	N d
182	Heavily Eroded	3	N d	Sc-L Aztec	Medium-Heavy
183	Questionable	5	10	Sc-L Aztec	Light
183	N d	1 0	15	M Aztec	Heavy
184 (T-P)	N d	2 0	20	M Aztec	Heavy
Evidence of a Double Staircase					
185	N d	1 0	30	Sc-M Aztec	N d
186	Heavily Eroded	2 5	30	L Aztec	Heavy
187	N d	4	7 0	M Aztec, Col	Heavy
188	Disturbed by Plow	Imp	4 0	M Aztec, Col	Heavy
189	Disturbed by Plow	3	7 0	M Aztec, Col	Heavy
190	Heavily Eroded by a Wash Between It and 191	4	7 0	M Aztec, Col	Heavy

191	Heavily Eroded	1 0	N d	M Aztec, Col	Heavy
192	N d	1 0	5 x 5 (Defined by Walls)	N d	N d
193	Heavily Disturbed by Road	2	Widely Dispersed	N d	N d
194	Disturbed by Bancals	1 0	7 0 Traces of Walls	Sc-L Aztec	N d
195	Disturbed by Bancals	3	5 0	L-M Aztec	N d
196	N d	5	3 0	Lrg Continuous Area of Sherds and Rock Part of a Cluster of Mds and Terrace	
197	N d	5	5 0	Part of a Cluster of Mds and Terraces	
198	N d	N d	N d	Part of the Above Cluster	
199	N d	5	15 0	L-M Aztec	Heavy'
236	One of a series of rock mounds with almost no pottery, the others were unassigned numbers Elevation 5 Diameter 18 m				
237	N d	5	22	L-M Aztec	Medium
238	Severely Eroded	Imp	8 x 30 m	N d	N d
This mound occur in an area of steep slope with considerable dispersing of material down slope					
239 (T-P)	Badly Eroded	1 0	10 (Exposed Walls Terraced)	L-M Aztec, Maz	Heavy

Ethnohistoric Information: See page 533.

T.A. 242 (Fig. 157)

Classification: Small dispersed village.

Natural Setting: Site lies on steeply sloping and gently sloping terrain at 2480-2560 m, between Cerro Soledad, and Cerro Cuajio, and borders T.A. 241 to the west. The western half of the site is on lower flank of Cerro Gordo itself, and the two smaller hills, and is heavily eroded, with numerous areas of exposed tepetate. The only area of relatively well preserved soil is to the southeast, where agriculture is still practiced today. A major barranca, running from northwest to southeast, traverses the eastern portion of the site and then flows south between Cerro Texuca and Cerro Soledad, to join the barranca located east of Santiago Tolman Two other smaller barrancas run from west to east from Cerro Gordo. With the exception of the noted southeastern portion, all of the site area today is sparse pasture land with scattered pirul, shrubs, maguey, and nopal. The slopes of Cerro Soledad are covered with small quarries with rustic roads leading to them.

Figure 157

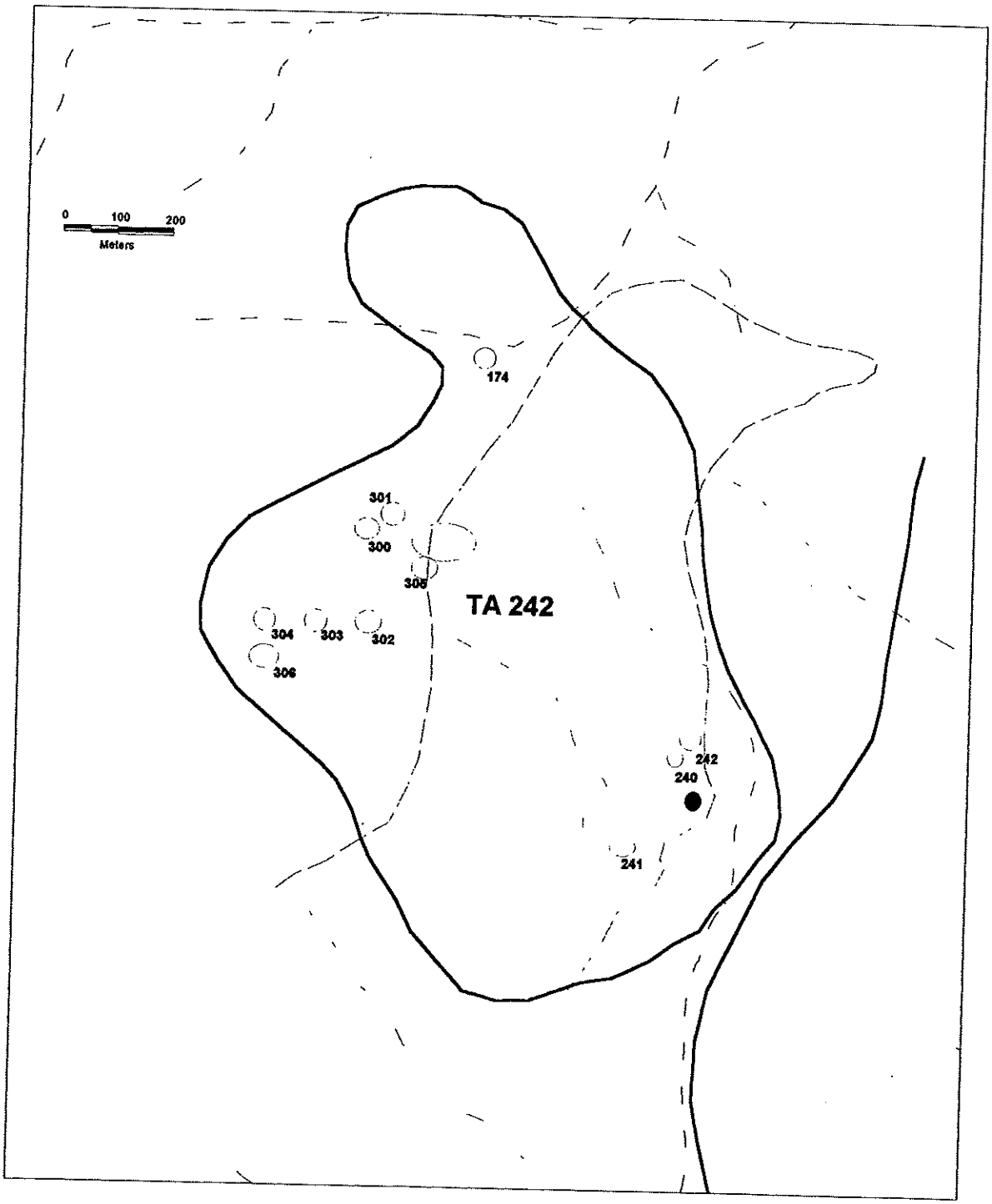
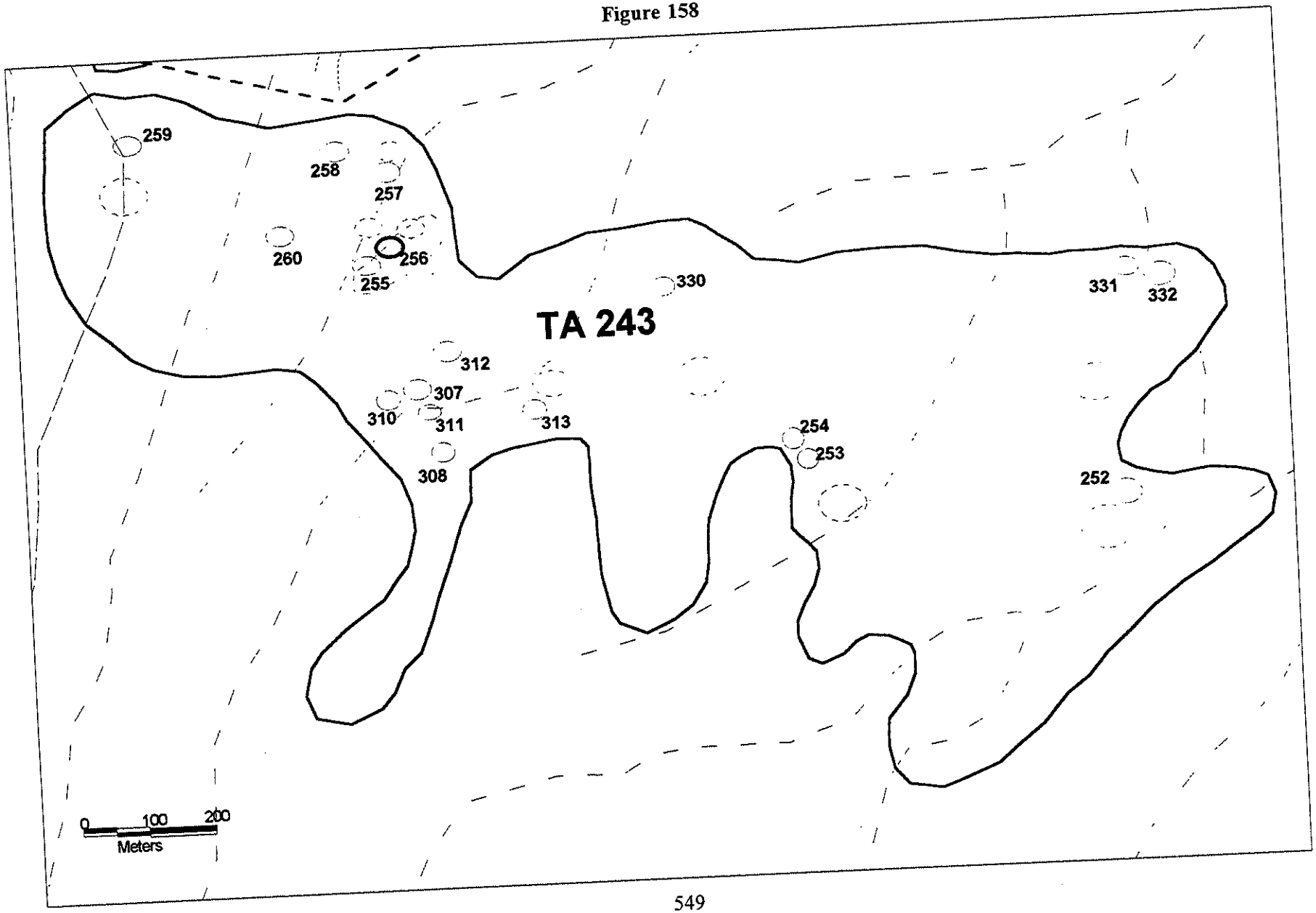

0
100
200
Meters
174
301
300
305
TA 242
304
303
302
306
242
240
241

Figure 158


259
258
257
260
256
255
330
331
332
TA 243
312
307
310
311
313
308
254
253
252
0
100
200
Meters

Modern Land Use: One large new rectangular jagüey is found in the southeastern portion of the site and near it are several ruined 20th century structures. In the southeastern part of the site is a well preserved system of bancal terraces planted in wheat, maize, and beans. The rest of the area had virtually no cultigens. On the south slope of Cerro Cuajio there are abundant remains of rock terraces, as well as on the slope of Cerro Gordo.

Archaeological Remains: This site, while heavily eroded, is well defined. Occupation is substantial and virtually continuous over the site area but very heavily disturbed. The defined mounds are all heavily eroded and appear as erosive remnants, with a mixture of soil, sherds, and rock. Eleven of them were numbered, but the survey team pointed out, that at one time, there were numerous mounds in the area, to judge by the locations of sherds and rock. The best evidence of the Aztec occupation is found primarily in areas of gentle slope, on the lower flanks of the elevations noted previously.

Table 47: Mound Observations - T.A. 242

Mound Number	Condition	Maximum Elevation	Size	Ceramic Density	Rock Density
174	Heavily Eroded	5	3 0	L-M Aztec	Medium
240	Heavily Eroded	8	4 0	L Aztec	Heavy
241	N d	1 0	Walls Exposed over an Area 6 x 3 ms	Present	Present
242	Heavily Eroded	5	5 0	L Aztec	Heavy
300	No Data	75	4 0	M Aztec	Medium
301	Heavily Eroded	1 5	5 x 3	M Aztec	Medium
302	N d	2 0	5 0	L-M Aztec	Light
303	Heavily Eroded	1 0	6 0, Traces of Walls	M Aztec	Heavy
304	Heavily Eroded	5	3-5	M Aztec	Heavy
305	N d	1 0	10 (Exposed Walls)	M Aztec	Medium
306	N d	1 5	10	L-M Aztec	Medium

Ethnohistoric Information: See page 533.

T.A. 243 (Fig. 158)

Classification: Small dispersed village.

Natural Setting: This site occurs on the lower northeast slope of Cerro Gordo at 2460-2600 m. in an area of terrain that varies from steep sided foothills, to gently sloping tongues of land between four major barrancas, that run southwest to northeast across the site. Erosion is severe on these interfluves and in these areas are considerable amounts of rock rubble and numerous large sherds suggesting that the barrancas have deepened and widened since the Aztec occupation. The erosion is most severe in the western half of the

site; to the east, where the barrancas converge, there is more soil and cultivation occurs here. The upper slopes are covered with a dense shrub vegetation; in the lower areas there is a sparse scattering of pirul, maguey, and nopal. The two northernmost barrancas are deeply incised, up to 30 ms, and very wide; those to the south are both narrower 8-20 ms and only 8-10 ms deep.

Modern Land Use: The southwestern portion of the site had no evidence of agricultural activities, the northern half is planted primarily in maguey. The barrancas are partially filled with check dams and in them the soils are deeper and moister, and maize is cultivated. The surveyors noted evidence of abandoned terraces in the southeastern portion of this site. One area of heaviest Aztec occupation occurs in the western and central portions of the site, an area now completely abandoned for cultivation. A second area of concentrated Aztec settlement occurs to the northeast, in an area of substantial modern cultivation.

Archaeological Remains: Generally the site is severely eroded and mounds appears as erosional remnants in areas of tepetate, on the interfluves. Large sherds are common, as is rock rubble, and both are widely dispersed over the area. It appears as though there has been little cultivation in the area following its abandonment after the Spanish Conquest. Because of this abandonment the area has suffered extensive erosion. There were probably numerous mounds over the occupied areas of the site but we were able to identify only twenty-one. They seem to occur in clusters, in the two mentioned areas, but significant occupation does occur in the intervening spaces as well. Mound 256 is almost certainly a temple platform and the balance are all residential mounds. All mounds have suffered significant erosion.

Table 48: Mound Observations - T.A. 243

Mound Number	Condition	Maximum Elevation	Size	Ceramic Density	Rock Density
252	Heavily Eroded	25	12 0	M-H Aztec	Medium-Heavy
253	Heavily Eroded	5	3	L-M Aztec	Medium
254	Heavily Eroded	25	10	M Aztec	Light
255	On an Eroded Island within the Barranca	1-1 5	10	L Aztec	Heavy
256	Heavily Eroded	Imp	20 x 40 (Several Walls)	N d	N d
257	Heavily Eroded	5	8-10	N d	N d
258	Heavily Eroded	1 0	8	L-M Aztec	Heavy
259	Heavily Eroded	1-1 5	17 x 7	M Aztec	Heavy
260	Heavily Eroded	1 5-2 0	12	M Aztec	Heavy
307	Heavily Eroded	1 5	12	M Aztec	Light
308 (Walls Exposed) T P	Heavily Eroded	1 5-2 0	12	M Aztec	Heavy
328 (Walls Exposed) T P	Heavily Eroded	Imp	2-3	Sc Aztec	Heavy
329	Heavily Eroded	1 0	10	L-M Aztec	Medium

330	Heavily Eroded	2 0	12	M Aztec	Light-Medium
331	Heavily Eroded	5-1 0	15	L-M Aztec	Heavy
322	Heavily Eroded	5-1 0	15	L-M Aztec	Heavy
311	Heavily Eroded	1 5	8 (Walls Exposed)	L-M Aztec	Medium
312	Heavily Eroded	25	12	M Aztec	Heavy
313	Heavily Eroded	25	7	L-M Aztec	Medium
310	Heavily altered by the construction of a modern jacal (field hut)				

Ethnohistoric Information: See page 533.

T.A. 244 (Fig. 159)

Classification: Small dispersed village.

Natural Setting: This site lies on the interfluve of gently sloping terrain at 2450-2490 m, between Cerros Pelon and Cuajio. It is adjacent to T.A. 246 to the east and with it, forms an almost complete band of settlement around Cerro Pelon. Soil depth over this site is greater than general in this zone, particularly in the northern, lower portion. Several barrancas run through the site area and a major one borders it on its northern edge, running from southwest to northeast. The site area does not have significant areas of exposed tepetate, as is the case with virtually all of the other sites in this zone. Wild vegetation varies in density and consists of shrubs, pirul, maguey, and nopal.

Modern Land Use: No jagüeys were noted in the site area. The barrancas have check dams within them and are planted in maize, and beans, and were often bordered with fruit trees. Elsewhere maguey is the major crop and remnants of terracing were observed in the northeastern portion of the site.

Archaeological Remains: Generally mounds located on the site were in poor condition. Eleven were recorded of which two, 360 and 361, apparently have Teotihuacan period occupation as well as Aztec. All but 319, probably a temple platform, were probably residences. Mounds 243, 246, 247, and 250 have exposed walls on them. In the northeastern part of the site is a small nucleated Teotihuacan period occupation which includes the two mounds (coded as T.C. 140). Besides the mounds numerous areas of substantial concentration of Aztec sherds were noted in the survey but they had no definite elevation.

Figure 159

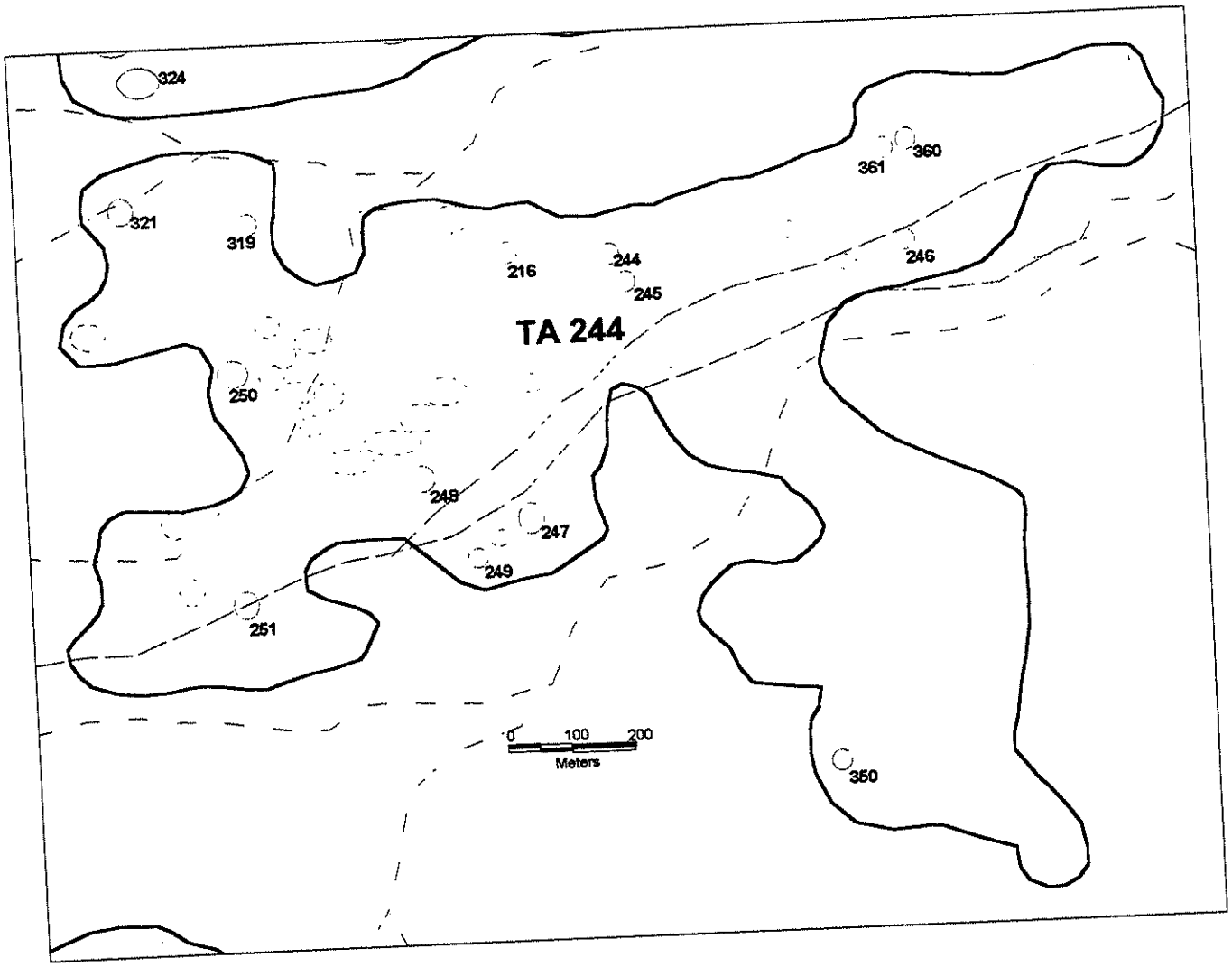

324
360
361
321
319
216
244
245
246
TA 244
250
248
247
249
251
0
100
200
Meters
350

Table 49: Mound Observations - T.A. 244					
Mound Number	Condition	Maximum Elevation	Size	Ceramic Density	Rock Density
350	Erosional Remnant	1 5-1 8	N d	N d	N d
360	N d	1 5	6-7	L Aztec	Medium
361	N d	1 5	6-7	L Aztec	Medium
250	N d	1 0	10	H Aztec	Heavy
319	N d	On Hillside	30	L-M Aztec	Heavy
320	N d	5	3-4	L-M Aztec	Heavy
321	N d	Imp	7 0	L-M Aztec	Heavy
247	Probably a cluster of mounds		35	M-H Aztec	Heavy
248	Sloping Terrace	Imp	10	L-M Aztec	Heavy (Several Pieces of Cut Stone
249	Sloping Terrace	Imp	7 0	L-M Aztec	Light
251	N d	5	4	M Aztec	Medium
243	Dispersed by a Road	1 0	7 0	M-H Aztec	N d
244-316	N d	6	7 0	Substantial	
316	N d	5	10 0	M Aztec	Medium
245-317	N d	3	5 0	Substantial	
317	N d	5	4 0	L-M Aztec	Light-Medium
246-318	N d	1 0	7 0	Many Lrg Sherds	N d
318	N d	1 0	10 0	M Aztec	Medium-Heavy

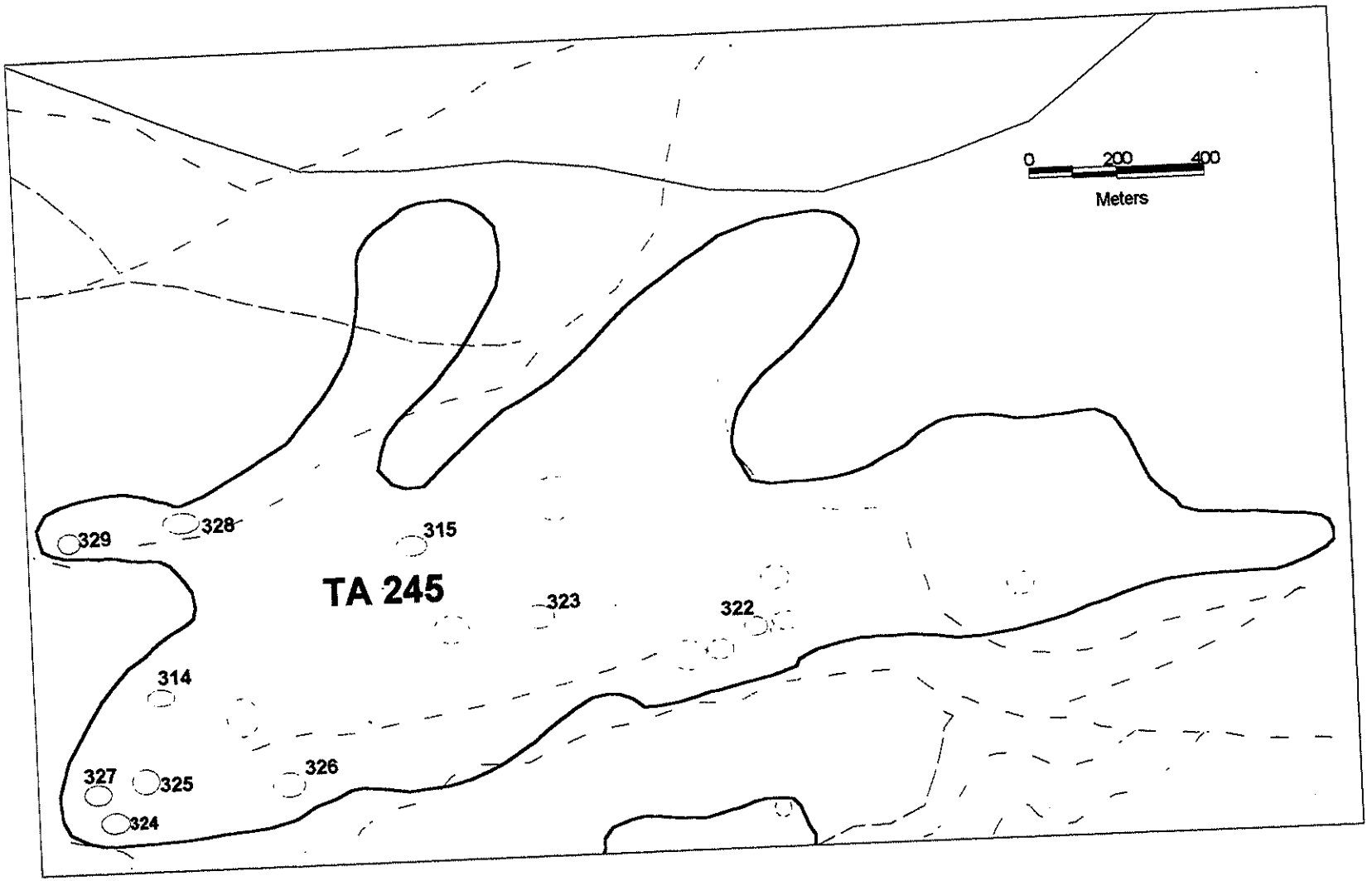
Ethnohistoric Information: See page 533.

T.A. 245 (Fig 160)

Classification. Small dispersed village or several hamlets

Natural Setting: This site is located in a wide interfluve, between two barrancas that run southwest to northeast, at 2430-2450 m. To the west it merges with T.A. 243, located south of the southernmost of the two barrancas that border this site. In general this is an area of gently sloping terrain, with relatively good soil cover, and is today under extensive cultivation. There are small localized areas of washes and exposed tepetate. Erosion in general can be described as only moderate. The site does not extend to the edge of the

Figure 160



north barranca.

Modern Land Use: Generally is an area of cultivation, primarily for maguey, with two types of maguey terracing, relatively widely spaced lines, in this case interplanted with maize and beans, and very tightly spaced lines of maguey without intercrops. The only significantly eroded area is in the southwest portion of the site where three of the Aztec residential mounds are located (324, 325, 327). Two other mounds, 314 and 321, also occur in much smaller areas of more eroded terrain. In summary, some of the densest areas of Aztec settlement are located in the few marginal zones found within the site, in terms of present day land use

Archaeological Remains: Aztec occupation is concentrated in the two noted zones, one in the southwestern corner of the site where Mounds 314, 325, 327 are located, and another in the south central portion of the site where four areas, were not denoted as mounds, but form a cluster of probably destroyed mounds around Mound 322.

Table 50: Mound Observations - T.A. 245

Mound Number	Condition	Maximum Elevation	Size	Ceramic Density	Rock Density
315	Heavily Plowed and Eroded	5	10	L Aztec	Medium
322	N d (Walls Exposed	5	6 0	M Aztec	Heavy
323	N d	1 5	4-5	M Aztec, Col	Heavy
324	Appears as Dispersed Debris	6	30 0	N d	N d
325	N d	Imp	Dispersed concentration of Aztec and Col Ceramics		Medium
326	N d	5-1 0	16 (Exposed Walls	M Aztec	Heavy
327	N d	1 0	10-12	M Aztec (Exposed Corner)	Heavy
314	N d	5-1 5	10	L-M Aztec	Heavy
267	N d	1 0	6	L-M Aztec	Heavy
268	N d	1 5	6-10	L-M Aztec	Light-Medium

Ethnohistoric Information: See page 533.

APPENDIX B

T.A. 248 (T.C. 100) (Ceremonial Complex B - Figure 161)

Classification: This site consists of two separate ceremonial precincts, Complex 1, which is an isolated temple platform, and Complex 2, a more elaborate ceremonial precinct cum residential site.

Natural Setting and Modern Land Use: The two complexes lie approximately 200 meters apart on the summit of Cerro Patlachique, the highest elevation in the Patlachique Range, at 2,800 m, and the second highest elevation in the Teotihuacan Valley (Cerro Gordo is 3,050 m.). A low intervening saddle separates the two complexes. Soil cover on the summit of Cerro Patlachique is thin, with numerous areas of exposed bedrock, and today serves as marginal pasture. Numerous small barrancas flow down the slopes of the hill to merge with major barrancas on the piedmont and alluvial plain. The vegetation cover consists of scattered nopal, maguey, and oaks - the last, the original natural vegetation of this area. Narrow terrace remnants were noted on the upper summits, immediately below the site, that may be prehispanic in date.

Archaeological Remains: During the Teotihuacan Valley survey, Complex 1 was located and identified by Marino as a Teotihuacan Period temple platform (see Volume 3, page 632). The 1966 intensive survey, however, noted very little or no Teotihuacan occupation, and all of the ceramic collections dated from the Aztec period. This sample includes abundant censer ware sherds, including Texcoco molded, and Texcoco filleted. The site consists of a single temple platform 60 m. in diameter and 4 m. in elevation. It is constructed on a natural elevation several meters in height.

Complex 2 is a much more complex site and consists of a set of continuous plazas defined by mounds. Two adjacent plazas, one much larger than the other, are placed on an elevation which may be artificial, since terrace remnants were noted along its edge. The elevated area measures 100x80 m. On its summit the main complex consists of three mounds, each 2 m. high arranged around a plaza. A few meters to the north is a smaller and similar complex. Further to the north, and still on the summit of the possible terrace, is evidence of other smaller but not clearly differentiated mounds. These may be residential in function since a significant amount of occupation was noted in that area. Adjacent to the possible artificial terrace was a plaza group we are referring to as Plaza B complex. It includes 11 mounds, three of which had one or two elevated areas on their summits. East of Plaza Complex A is a large oval shaped platform mound, 60x30 m. in dimensions, with two smaller mounds on its summit. Smaller mounds, in one case with exposed floors, and adjacent terraces were noted, north of Plaza Complex B and east of Mound 22 that probably are all that remains of residential structures. Approximately 150 m. south of Plaza Complex A is a third small plaza group defined by three mounds.

Virtually all of the noted occupation on and around these structures is Teotihuacan in date and the site was obviously an important ceremonial center, with a resident population dating from that time period. quantitative data is summarized in the following table.

Figure 161

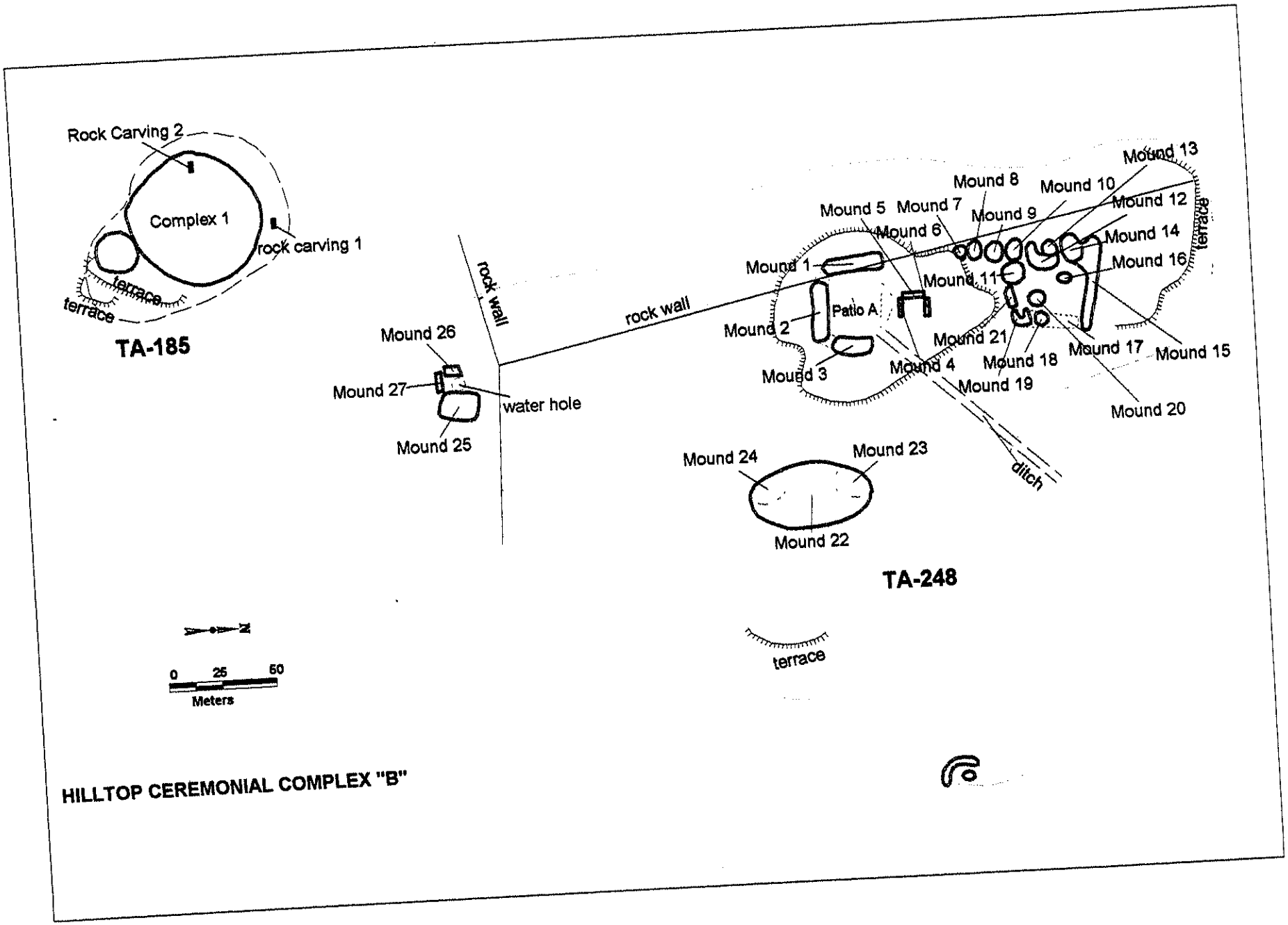

Rock Carving 2
Complex 1
rock carving 1
terrace
terrace
TA-185
rock wall
Mound 26
Mound 27
water hole
Mound 25
rock wall
Mound 1
Mound 2
Mound 3
Patio A
Mound 4
Mound 5
Mound 6
Mound 7
Mound 8
Mound 9
Mound 10
Mound 11
Mound 12
Mound 13
Mound 14
Mound 15
Mound 16
Mound 17
Mound 18
Mound 19
Mound 20
Mound 21
terrace
ditch
Mound 24
Mound 23
Mound 22
TA-248
0 25 50
Meters
terrace
HILLTOP CEREMONIAL COMPLEX "B"

Table 51: Ceremonial Complex B		
Architectural Unit	**Dimensions (m.)**	**Elevations (m.)**
Patio A Complex		
Patio A	24 x 32	
Mound 1	28 x 8	2.0
Mound 2	28 x 8	2.0
Mound 3	8 x 10	2.0
Patio B Complex		
Patio B	8 x 12	
Mound 4	3 x 8	1.0
Mound 5	3 x 12	1.0
Mound 6	3 x 8	1.0
Basal Terrace of Patio A, B Complexes	80 x 100	N.D.
Mound 22 Complex		
Mound 22	56 x 32	.3
Mound 23	18 x 12	.4
Mound 24	18 x 12	.4
Patio C Complex		
Patio C	32 x 20	
Mound 7	4	.5
Mound 8	8	.5
Mound 9	8	.5
Mound 10	8	.5
Mound 11	10 - 11	.4
Mound 12	16 x 12	.5
Mound 13	8	.6
Mound 14	8 x 12	.6
Mound 15	45 x 5-12	.3
Mound 16	4	.4

Mound 17	28 x 6	.3
Mound 18	5	.5
Mound 19	8 x 6	.5
Mound 20	7	.5
Mound 21	4 x 10	.5
Plaza D Complex		
Plaza D	16 x 8	
Mound 25	18 x 12	1.5
Mound 26	8 x 2	N.D.
Mound 27	5 x 12	1.5

T.A. 185 - (T.C. 118) (Fig. 162)

Classification: Hilltop ceremonial precinct (Ceremonial Complex A).

Natural Setting and Modern Land Use: This site is located on the summit of Cerro Italia, a peninsula-like elevation, extending out from the main body of the Patlachique Range into the alluvial plain and lower piedmont, of the Middle Teotihuacan Valley. Two 20th century villages, San Luis Tepanco and Santiago Tepetitlan, are found on the piedmont, adjacent to the lower flank of the hill, to the west and east respectively. The summit of Cerro Italia is gently undulating. Soil cover ranges from exposed bedrock to a maximum depth of perhaps 30 cm. Today it is used for marginal pasture and has a sparse cover of grass, thorn bush, nopal, and scattered pirul trees. No 20th century structures were noted on the site, on the slope below were noted remnants of stone terraces possibly ancient in date.

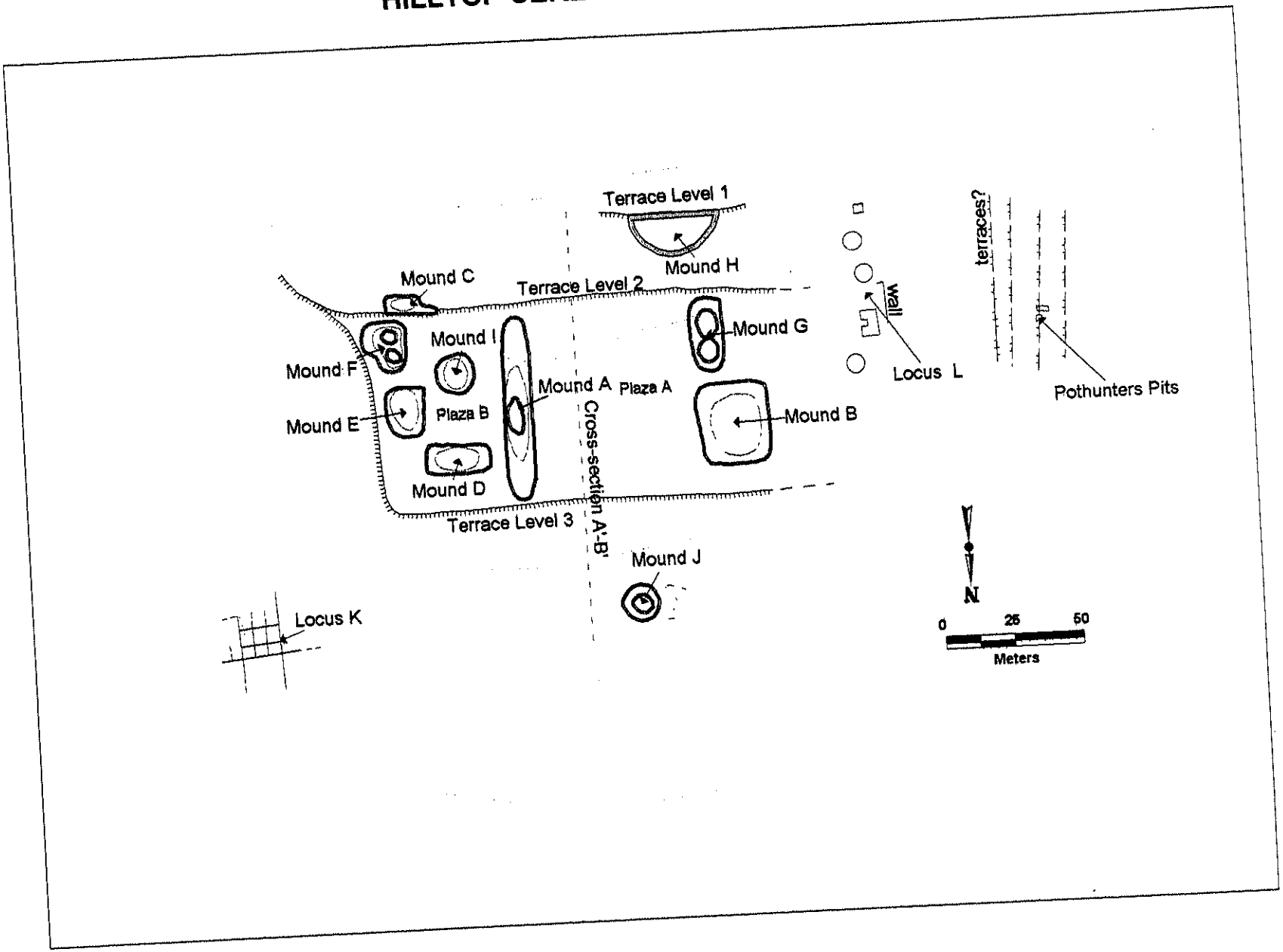
Archaeological Remains: This site was located, and brief notes taken, during the general survey phase of the Teotihuacan Valley Project. Teotihuacan period pottery was observed and it was considered a Teotihuacan period ceremonial precinct. During the 1966 survey both Aztec and Mazapan occupation were recorded as well, but the major occupation does seem to be Teotihuacan. While its function is primarily ceremonial, surface indications of ceramics on the periphery of the ceremonial precinct, indicate a permanent resident population (noted as K and L on the map).

The ceramic precinct was built on three, low, broad terraces with a single temple platform (Mound J) on the lower platform, two adjacent plaza complexes (including Mounds AB, D-G; Plazas A and B) on the central terrace and a semi-lunar platform on the upper most terrace (see Figure 162). The overall height of the three terraces were as follows: Terrace 1 - .2 m., Terrace 2 - .3 m., and Terrace 3 - .6 m. The mound measurements are summarized in the table below.

Table 52: T.A. 185					
Mound	**Dimension (m)**	**Elevation (m)**	**Mound**	**Dimension (m)**	**Elevation(m)**
A	10 x 55	+2	F	12 x 15	1.5
B	20 x 25	1.5	G	10 x 20	1 5
C	15 x 5	.6	H	10 x 25	.5
D	8 x 20	.5	I	10 x 10	3
E	10 x 15	.5	J	10 x 10	

Figure 162

HILLTOP CEREMONIAL COMPLEX "A"



CHAPTER 5

THE TRADE ROUTE SURVEY - 1975: AXAPUSCO-TLAMAPA SURFACE SURVEY AREA

By Cynthia Otis Charlton and Thomas H Charlton

Figure 163

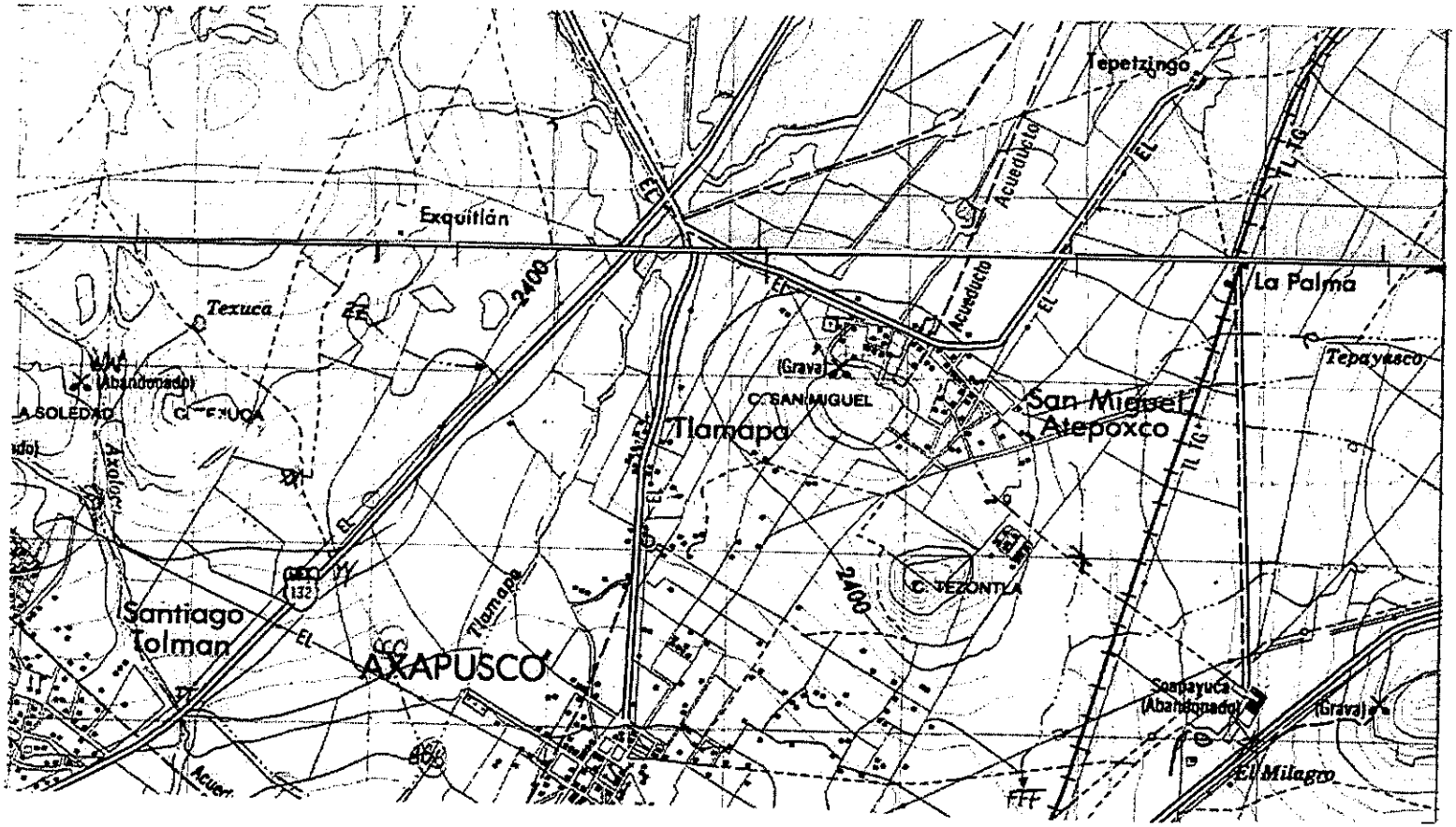
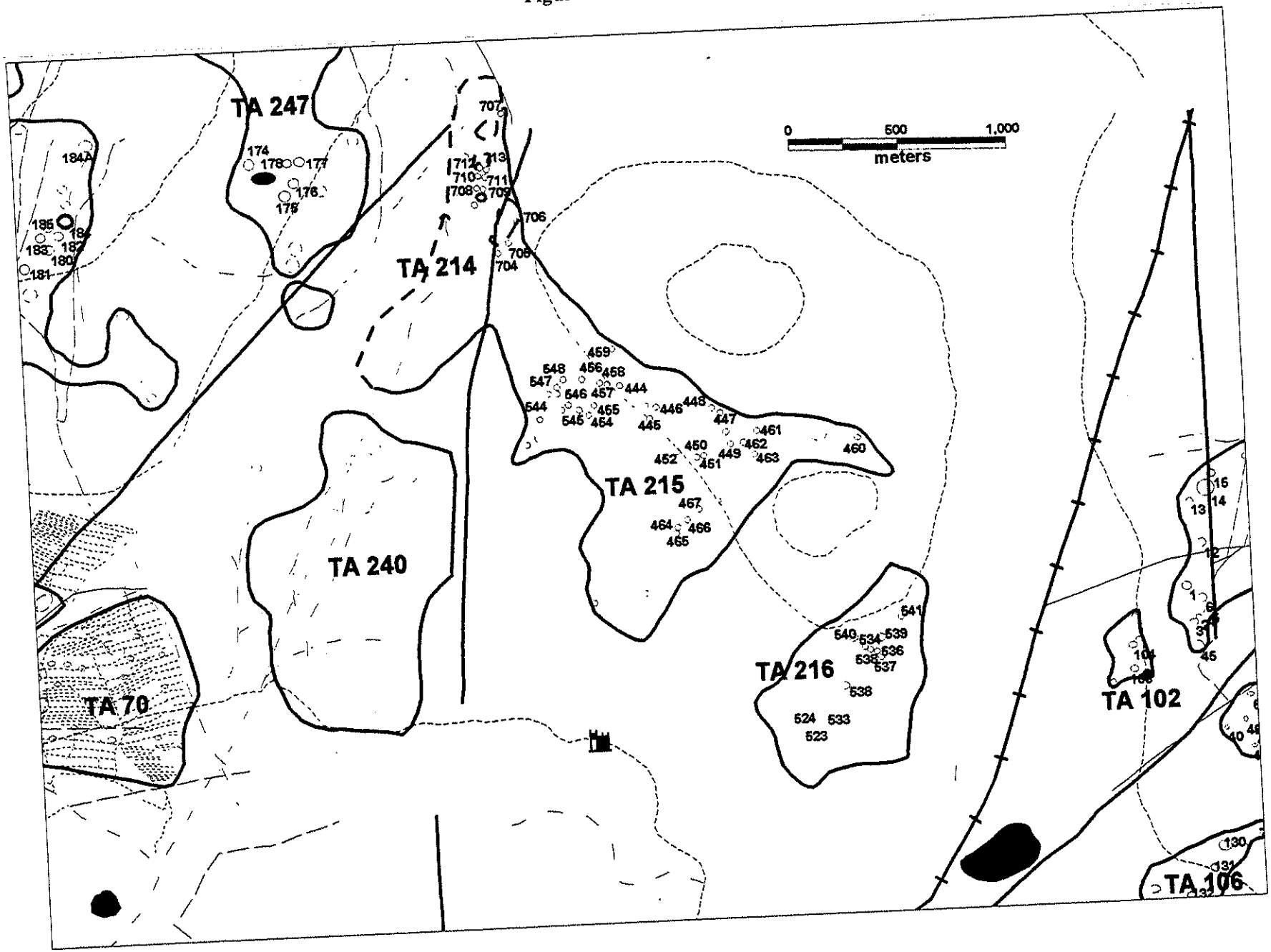

Tepetzingo
Exquitlán
Texuca
2400
Acueducto
La Palma
Tepayesco
(Abandonado)
A SOLEDAD
(Grava)
C. SAN MIGUEL
Tlamapa
San Miguel
Atepoxco
Axolotl
C. TEZONTLA
Santiago
Tolman
AXAPUSCO
Tlamapa
Soapayuca
(Abandonado)
(Grava)
El Milagro

Figure 164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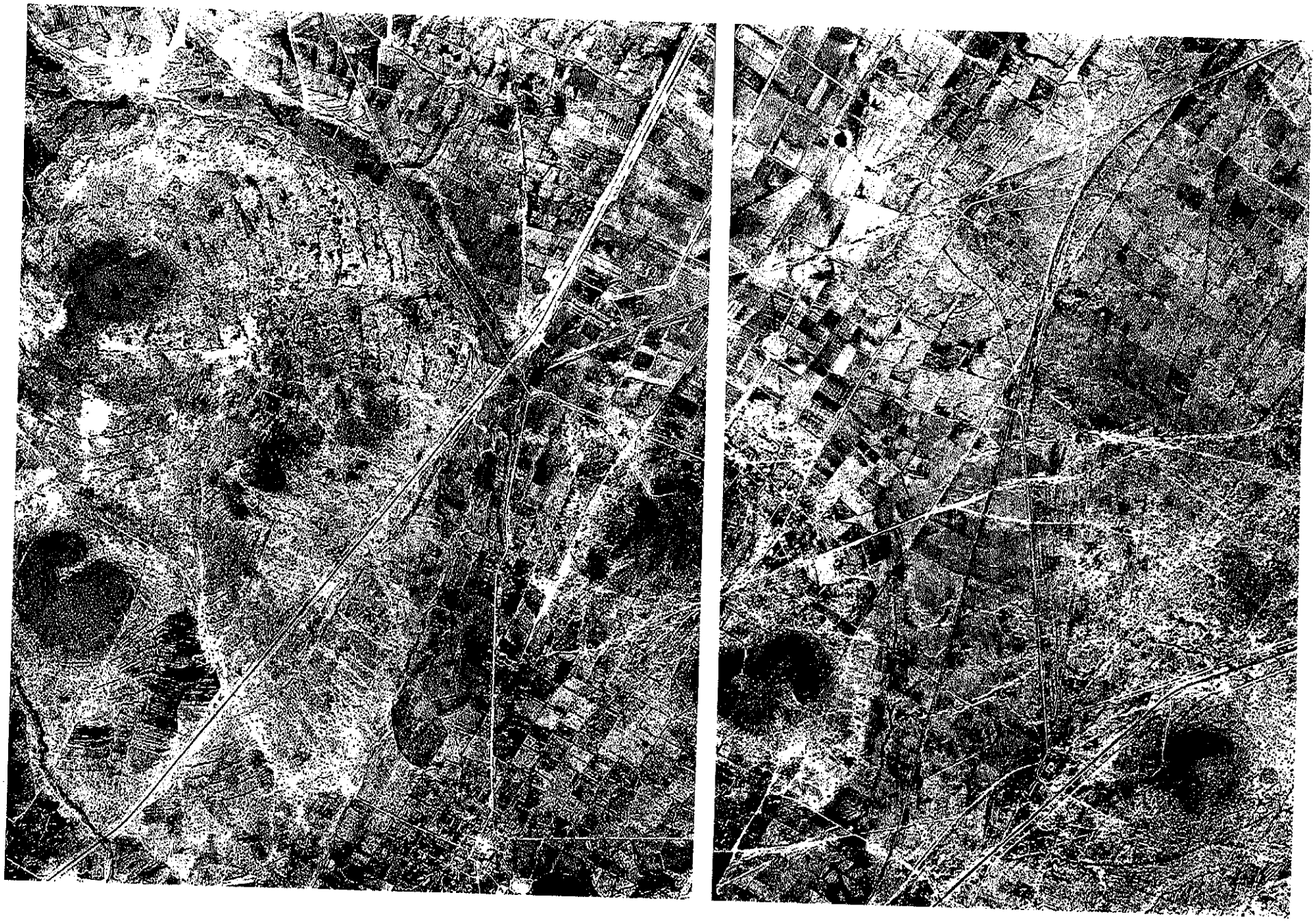
TA 214
TA 240
TA 215
TA 216
TA 70
TA 102
TA 106
0
500
1,000
meters

Plate 125



1. INTRODUCTION

In 1975 Cynthia and Thomas Charlton surveyed the area west, south, and east of the village of San Miguel Atepoxco - located in the Upper Teotihuacan Valley, north of the cabecera of San Esteban Axapusco. Initially three sites were defined and were assigned the numbers T.A. 214, 215, and 216. The 1975 survey indicated that the first two sites formed a continuous settlement and, although we have kept the site designations, they are described here together. The survey did not extend within the 16-20th century village of San Miguel, which is a typical dispersed linear village similar to Aztec settlements in the same topography. The modern village and the Aztec sites occur as a nearly continuous strip of settlement on the lower flank of an isolated chain consisting of two small volcanoes. The sites were probably subject to Axapusco in the 16th century.

The survey was conducted as part of a broader project called the Trade Route Survey which had, as its primary objective, the tracing of Teotihuacan period trade routes through the Upper Valley, towards neighboring areas in Puebla and Tlaxcala.

2. SITE DESCRIPTIONS

T.A. 216

Classification: Small dispersed village.

Natural Setting: 2380-2410 m. The site is located to the south and east of the slopes of Cerro Tezontla beginning at its base and sloping gently away. Soil is medium brown, varying in depth from .20-1.0 m in depth with erosion to tepetate in some locations, particularly along the main N/S road and in the area of the densest Aztec occupation.

Modern Utilization Rainfall cultivation: beans, corn, barley. Maguey and some nopales in the bancals between fields. Some fields are small nopaleras (see footnote).

Archaeological Remains: Light to heavy pottery concentrations over a site area of approximately 44 hectares. The Aztec occupation overlies an earlier Teotihuacan occupation and covers an area of approximately twice its size The earliest presence on the site is a light scatter of Late Formative (Tez/Patl/Tzac). The Teotihuacan site (21 ha.) covers approximately the west half of the multicomponent site It was distinguished by three distinct mounds in the southern part of the site. Mound 523 had a medium rock scatter and was heavily pitted in 1975 Its size was approximately 8 m in diameter and 3 m in height. It may have been a small pyramid. Surface ceramics appeared to be Teotihuacan with some Aztec and Mazapan. Collection 2, taken on the south edge of the mound, revealed Early and Late Xolalpan and some Metepec.

Mound 524, just to the north of Mound 523, had a medium rock scatter. It was 2 m high and approximately 4x3 m in area, but had been cut by the main N/S road, so exact dimensions are not certain

(Note: Some additional fields had been modified for use as nopaleras by 1999. A number of new structures, primarily houses, are also being built in former small field lots, particularly to the west of the main N/S road A chapel was built on top of Teotihuacan Mound 523 in 1988).

This mound had also been plowed. Surface pottery was heavily Teotihuacan with some Late Aztec It is possible that a flat area running to the west from these two mounds may have been a plaza area. Mound 533 was located to the north and slightly east from the other two mounds. It had a medium rock scatter and had been heavily plowed. It was 1.5 m in height and extended approximately 8x12 m with a heavy Teotihuacan pottery scatter. Collection 1, taken on Mound 533, produced Early Tlamimilolpa through Late Xolalpan ceramics. There was a small Pat/Tzac component as well as some Late Aztec. A humerus fragment was also found.

A collection was also taken in a heavy Teotihuacan scatter to the NW of the three mounds, 523, 524, and 533. This collection included a small Tzacualli component, with the majority of the ceramics being Early Tlamimilolpa through Late Xolalpan and some Metepec. The collection also included some Aztec.

In summary, the Teotihuacan period occupation may have included a ceremonial complex but is primarily a residential site.

The center of the Aztec occupation is north of the Teotihuacan occupation center, though the Aztec occupation overlies the Teotihuacan site as well. The Aztec occupation consisted of eight distinct mounds Four of these mounds, Mounds 534, 535, 536, and 537, were roughly aligned E/W though they differ from each other physically. Mounds 534, 535, and 536 may have formed a single complex. One collection was taken on Mound 536. This collection was primarily Late Aztec but with a small Mazapan component. The majority of the obsidian consisted of green prismatic blades.

Mound 538 lay to the south of the four aligned mounds mentioned previously, approximately midway between them and the Teotihuacan mounds. Three additional mounds were located to the north of the four central Aztec mounds. Two of these (Mounds 539, 540) were near the central complex of four mounds. To the north of these mounds was one additional mound, Mound 541.

The eight extant mounds appear to be domestic in nature, though the central four may have formed a complex as opposed to individual house mounds.

A collection was taken at the approximate eastern boundary of the Aztec occupation zone. These materials were also primarily Aztec with a small Mazapan component One additional collection was taken to the south of the area of the Teotihuacan/Aztec site boundaries in the area of an odd sherd scatter. This collection contained a majority of Tez/Pat/Tzacualli sherds, and a few Teotihuacan sherds. The second largest component was Aztec and there was a good Mazapan component as well. Both the Formative and Mazapan occupations appear to have been very small and dispersed. No other evidence of occupation (mounding, rock scatter) appeared in the area.

Table 53: Mound Observations T.A. 216

Mound	Height	Dimensions	Density of Rock	Density and Dating of Sherds	Additional Remarks
534	10	2x4	M-H	H Aztec	Heavily Eroded
535	5	2x3	M-H	M-H Aztec	Heavily Eroded
536	20	60	H	M-H Aztec	Eroded
537	1-2	80	H	M Aztec	Wall Remnants
538	5	50	H	H Aztec	ND

539	10	50	L-M	M-H Aztec	Eroded
540	15	4x5	H	M-H Aztec	Eroded
541	10	6x8	H	L Aztec	Wall Remnants

T.A. 214-215

Classification: May be a large dispersed village, primarily based on sherd density, particularly if this site is a continuation of T.A. 240 There was no ceremonial architecture though there was some remaining evidence of a few possible platform mounds.

Natural Setting: 2370-2430 m. The site is located from the western and southwestern slopes of Cerro Tezontla and south slope of Cerro San Miguel, extending west to the edge of a barranca that parallels the Mexico-Tulancingo highway at the north end of Tlamapa. The slope is moderate on the hills to gentle to nearly flat in the westernmost parts of the site. Soil is medium brown and varies from very eroded slopes with exposed tepetate on the hills, to near 1 m in depth in the lower more western fields. Soil preservation seems largely dependent on maintenance of bancals and field boundaries and varies widely.

Modern Utilization Rainfall cultivation: beans, corn, barley. Magueys and nopals on bancals in some fields. Some nopaleras and maguey fields. Few magueys were still maintained in fields by 1999. More of the fields have been modified into nopaleras. Many others have been leveled and chisel plowed and small fields have been combined to allow tractor cultivation on a larger scale. All three communities are growing and many additional fields have been transformed into house lots.

Archaeological Remains: Light to heavy pottery concentrations occur over a site area of approximately 147 ha. A Late Aztec occupation is dispersed across the site that may be an extension of Parsons's T.A. 240 site The western edge of the site is along a barranca drainage midway between the Mexico-Tulancingo highway and the Axapusco-Tlamapa road. The area had a 0-.5 m soil depth and contained a group of mounds and a number of soil remnants, with medium to heavy Late Postclassic Aztec pottery concentrations. There are ten areas identified as mounds in this westernmost part of the site (the area originally designated as a separate site, T.A. 214). All are heavily eroded and have been plowed. Mound 704 had a pirul growing from it. Mounds 705 and 706 have been cut through by a bancal. Mounds 709 and 710 may form a possible complex. All the mounds in this area appeared to be domestic in nature.

Although light to medium sherd scatters continue on the ground, mounding becomes more evident again at about the midpoint of the site area with a rough cluster of some 12 mounds as well as soil remnants with medium to heavy sherd scatters (the area of the site originally designated as T.A. 215). Mounds 544 and 545 were located below a nopal and a pirul respectively. One collection was taken on Mound 455. Sherds were primarily Aztec with a small Mazapan component and traces of Formative (Tzac.) and Teotihuacan. One collection was taken on Mound 456. The ceramics were primarily Late Aztec including some possible Otumba Polished Tan and a traces of Patlachique, Mazapan and Colonial. Obsidian was nearly all green prismatic blades. One collection was taken in Field 573, east of Mound 444, in a soil remnant area The collection was about evenly split between Aztec and Mazapan sherds with a trace of Patl/Tzac. There was only a small amount of obsidian (6 frags.) with no prismatic blades. One collection was taken in Field 325 just to the east of Mounds 445 and 446. The collection was primarily Aztec with a trace of Tzacualli and a moderate Mazapan component. It also included a fair amount of glazed ware and a trace of

identifiably Colonial material. Obsidian was primarily green prismatic blades

Mound 447 and two soil remnants besides it were eroded heavily but may have been part of a simple complex One collection was taken on the remnant area to the east of the mound. Ceramics were primarily Aztec with traces of Pat/Tzac , Teotihuacan, and a small amount of Mazapan. Mound 453 was the most southerly mound remaining in this part of the site. One collection was taken in Field 586 in a remnant area to the south of this mound The sherds were primarily Aztec but contained traces of Tzacualli and Mazapan as well as some Colonial One collection was taken in Field 585, the next field to the east of Mound 453 The collection was primarily Aztec but contained a quantity of glazed ware and majolica as well as identifiably Colonial sherds, probably indicating a Colonial occupation as well

Mound 460 was the most northern extant mound in this eastern end of the site It was located at the base of the north slope of Cerro Tezontla. There was also a soil remnant in the same field that may have been a mound Mound 461 was located to the southwest of Mound 460 and was also at the base of Cerro Tezontla A collection was taken in Field 625 across the field to the east of this mound Ceramics recovered were primarily Aztec with traces of Formative, Mazapan and Colonial

Mounds 462 and 463 were just south of Mound 461. Several soil remnants remained in the field south of the previous two mounds and showed medium Aztec ceramics scatters A collection was taken in Field 527 in the area of one of these remnants. The sherds were heavily Aztec with a trace of Formative (Tzac) and a light Mazapan component.

The next field south contained four mounds. Mound 464 was barely more than an earth remnant Mound 465, next to it, had wall remnants and a possible platform It is possible the two mounds formed a single complex Some soil remnants continue in the fields to the south of the mounds just noted, forming what appears to be the eastern boundary of the site Two collections were taken in these fields A collection was taken in Field 688 and was primarily Aztec, with a small component of Formative (Tzac), Mazapan and Colonial/Modern A second collection taken in Field 688, was primarily Aztec, with a fair amount of Colonial, including majolica and glazed ware, and a trace of Mazapan

In summary, the site consists of a minimum of 39 mounds and a number of soil remnants dispersed across the site area All appear to be domestic and Aztec in date though a few may continue into the Colonial period Obsidian is primarily in the form of finished prismatic blades There is no evidence of ceremonial architecture or a nucleated center within the site Though there are traces of Formative, Teotihuacan and Mazapan over the eastern 2/3 of the site, there are no focussed areas or remaining mounds from any occupations earlier than the Aztec occupation.

Table 54: T.A. 214-215 Mound Observations
Western Extension of the Site (T.A. 214)

Mound	Height	Dimensions	Density of Rock	Density and Dating of Sherds	Additional Remarks
704	3-4	40	L	L Aztec	Heavily Eroded
705	2	1x2	M	L Aztec	Heavily Eroded
706	4	1x2	M	L Aztec	Heavily Eroded
707	5-10	5x4	L	L-M Aztec	Heavily Eroded

708	4	20	M	Sc Aztec	Heavily Eroded
709	5	6x8	M-H	L-M Aztec	Heavily Eroded
710	5	60	M-H	L-M Aztec	Heavily Eroded
711	5-10	6x4	M-H	Sc Aztec	Medium Erosion
713	1-2	8x6	M-H	L-M Aztec	Medium Erosion, Wall Remnant
Center of the Site (T.A. 215)					
Mound	**Height**	**Dimensions**	**Density of Rock**	**Density and Dating of Sherds**	**Additional Remarks**
544	10	6x5	H	H Aztec	Eroded
545	5	6x4	L	M Aztec	Eroded
546	5	5x4	M-H	M-H Aztec	Eroded
547	3	2x2	M	H Aztec	Eroded, Wall Remnant
548	5	3x2	M-H	M-H Aztec	Eroded, Wall Remnant
454	5	20	M-H	M Aztec	Heavily Eroded
455	10	80	M-H	H Aztec, Trace of Teo, Maz	Eroded
456	5	6x5	L-M	H Aztec, Trace of Teo	Eroded
457	5	4x6	L-M	L-M Aztec	Eroded
458	10	6x8	M-H	M-H Aztec	Two Walls
459	10	4x3	L	Sc-L Aztec	Eroded
444	5	30	L	L-M Aztec	Heavily Eroded
445	5	3x2	L	M Aztec	Eroded
446	5	5x3	M	M Aztec	Heavily Eroded
447	5	4x3	H	H Aztec	Eroded
448	10	80	H	M-H Aztec	Eroded
449	5	40	M	L Aztec	Eroded
450	15	6x4	H	M-H Aztec	Eroded
451	5-10	20	M-H	Sc Aztec	Eroded
452	10	5x4	H	Sc Aztec, Majolica	Possible Col Structure, Wall Remnants
453	5	8x3	M	M-H Aztec	Eroded
Eastern Extension of The Site (T.A. 215)					
Mound	**Height**	**Dimensions**	**Density of Rock**	**Density and Dating of sherds**	**Additional Remarks**
460	5	20	M	Sc Aztec, Col	Heavily Eroded

461	10	4x3	L	M Aztec Trace of Teo	Heavily Eroded
462	10	5x4	L	L-M Aztec	Heavily Eroded
463	10	8x6	M-H	M-H Aztec, Sc Teo	Heavily Eroded
464	5	2x1	Sc	H Aztec	Very Heavily Eroded, Possible only a Earth Remnant
465	10	30	H	M Aztec	Remnants of Wall and possible Platform
466	10	6x8	L	H Aztec	Heavily Eroded
467	10	80	H	H Aztec	Heavily Eroded

CHAPTER 6

TEMASCALAPA REGION: AZTEC PERIOD SITE DESCRIPTIONS

by

Larry Gorenflo and William T. Sanders

1. INTRODUCTION: THE TEMASCALAPA REGION

In 1975 we surveyed an area of 130 km^2 to the north of the Teotihuacan Valley Project area, which we refer to as the Temascalapa Region. As we have indicated in Part 1, we have decided to include the Aztec period settlements in this volume because virtually all of the area was subject to towns located in the Teotihuacan Valley in 1519.

The Temascalapa Region consists of two major geographic sub-regions. Approximately 2/3 of it lies within the drainage basin of one of the major streams in the Basin of Mexico, the Avenidas de Pachuca or Arroyo Papalote From the perspective of the residents of Mexico City this is one of the most dangerous river systems in all of the Basin of Mexico. It drains a considerable area, all of which falls in one of the areas of lowest mean annual rainfall in the Basin of Mexico. As in the case of other arid regions of the world, however, this also means wide fluctuations in annual rainfall. In unusually wet years enormous amounts of water were discharged by this river system into Lake Zumpango. The filling of this basin ultimately caused rising lake levels in the southern lakes and flooded the city of Mexico. Over much of the area the annual rainfall falls between 500 and 600 mm per year, even below 500 mm in the northeastern corner of the survey area, in the vicinity of the modern village of Santa Maria Aticpac.

This sub-region is topographically complex. Three major volcanoes define the southern edge; Cerro Gordo, elevation 3,050 masl, Cerro Verde 2,560 meters, and Cerro Paula 2,630 meters. These three volcanoes have very extensive piedmont flanks, particularly the first and the third. To the north of these volcanoes is a great plain, traversed by the Rio Papalote. This plain has relatively thin soil with numerous island like fluoresences of basalt. It is the poorest alluvial plain in the Basin of Mexico with respect to agriculture potential. This is due not only to the shallow soils but to the low mean annual rainfall. On the southern edge of the plain, between it and the three major volcanoes, is a series of small, isolated volcanoes, among them Cerros Coayucan and Buena Vista (the flanks of the latter were surveyed during the Teotihuacan Valley Project). Elevations among these hills varies from 2,550 to 2,750 masl. Because of the high elevation of the summits and presence of the two series of volcanoes, runoff is abundant south of the plain and during the rainy season conditions are ideal for floodwater irrigation, combined with bancal terracing, particularly on the flanks of the three big volcanoes to the south. Most of the sites found in this region occur on the flanks of the hills and between them. One exception is a relatively small area on the Arroyo Papalote flood plain around the Presa el Manantial. Conditions are most conducive to the successful maize agriculture, therefore, on the slopes of the higher volcanoes. The great majority of the sites are located in the elevation band that we refer to as the Middle Piedmont (Sanders, Parsons, and Santley 1979).

The remaining one-third of the survey area consists of the lake shore plain east of Lake Xaltocan. It is situated to the west of the first zone. It is defined by the southwest flank of Cerro Paula to the northeast, a string of small hills to the east and southeast, and the lake to the west. Soil depth in this area is generally comparable to that of many of the other plains in the Basin of Mexico and the area could be described as a typical alluvial plain.

In general, the Temascalapa region is much poorer in agricultural potential than the Teotihuacan Valley, particularly in terms of maize cultivation, and its history of occupation indicates this marginality In a separate volume we will present descriptions of the pre-Aztec sites and here we will offer only a brief summary of the population history of the region. We found no occupations prior to the Tzacualli phase, and

even then the pattern consists of a widely scattered distribution of hamlets, primarily in the Lake Xaltocan plain. Only three hamlets and a few trace occupations were detected in the portion of the Papalote drainage surveyed as part of the Temascalapa Project. Subsequently population during the Teotihuacan Period was relatively sparse in the Papalote drainage basin, with the exception of a cluster of sites, including three small villages and five hamlets, around the Presa de Manantial. The Lake Xaltocan plain was more densely settled, with two large villages, nine small villages and nine hamlets. All of the Early Toltec occupation occurs as a cluster of settlements oriented towards a major town on the eastern edge of the Xaltocan Plain.

It was only during the Mazapan phase that the area was generally settled, primarily in the form of a dense scatter of hamlets, particularly in the western portion of the Rio Papalote basin, and on the Lake Xaltocan plain. Immediately to the north of the Temascalapa survey region, and within the Rio Papalote drainage is a large Late Toltec town, with substantial preserved architecture, in 1961 when we visited it It is located near a community called San Miguel Eyacalco and apparently was a provincial center for much of the region.

During the Aztec period the entire area was densely settled, although primarily in the form of hamlets Of particular interest, and this is the only area in the Basin of Mexico covered by the various surveyed projects that this true, there were no settlements in the eastern one-third of the Rio Papalote drainage prior to the Aztec period. This is primarily the area around Santa Maria Aticpac, one with less than 500 mm of mean annual rainfall.

Unfortunately the Temascalapa Survey Project did not include a study of the modern cultural geography of the region, as we did during the Teotihuacan Valley Project and we do not have data on the population for the base line dates of 1950, and 1960, that we used during the Teotihuacan Valley Project. We also lack detailed studies of the 20th century settlement pattern of the region, land use, and even municipal organization. The following observations therefore are very limited in scope and detail and are based on a simple examination of the cetenal sheet map of the area and the aerial photographs used in the initial survey. We will describe the area in terms of the sub-divisions mentioned above, the hilly flanks in the southern half of the Rio Papalote drainage basin, the flat plain to the north, and the Lake Xaltocan plain to the southwest. Beginning from the west a number of large substantial villages are located in the hilly terrain in the southern portion of the Rio Papalote drainage, including, from west to east, Temascalapa, San Bartolo Actopan, and San Maria Aticpac. Interspersed among them are several smaller settlements such as San Antonio Coayucan, San Felipe Zacatepec, and San Pablo Suchil. All of these are relatively dispersed communities, very much like Oxtotipac and Santiago Tolman in the Teotihuacan Valley, communities that we classified as scattered villages in Volume 1. On the banks of the Papalote Arroyo, mostly outside of the surveyed area, are the large settlements of Ixtlahuaca de Cuauhtemoc and Villa Tezontepec, which are dense compact settlements like those communities within the archaeological zone in the Teotihuacan Valley, i.e. San Francisco Mazapan and San Martin de los Piramides. All of the communities on the alluvial plain of Lake Xaltocan are relatively large, compact settlements, and include the town of Tecamac, the villages of San Pablo Tecalco, San Marcos Nepantla (located in an area surveyed during the Teotihuacan Valley Project), San Jeronimo Xonacahuacan, San Miguel Atlamajac, San Pedro Patzahuacan, Santo Domingo Ajuluapan, Los Reyes Acozoc, and San Lucas Xolox. Because of the compact, dense nature of the settlements in this area we were not able to survey the town of Tecamac at all, and with respect to the villages we only have partial coverage,primarily the house lots and huertas along the edges.

Plate 126

Figure 165

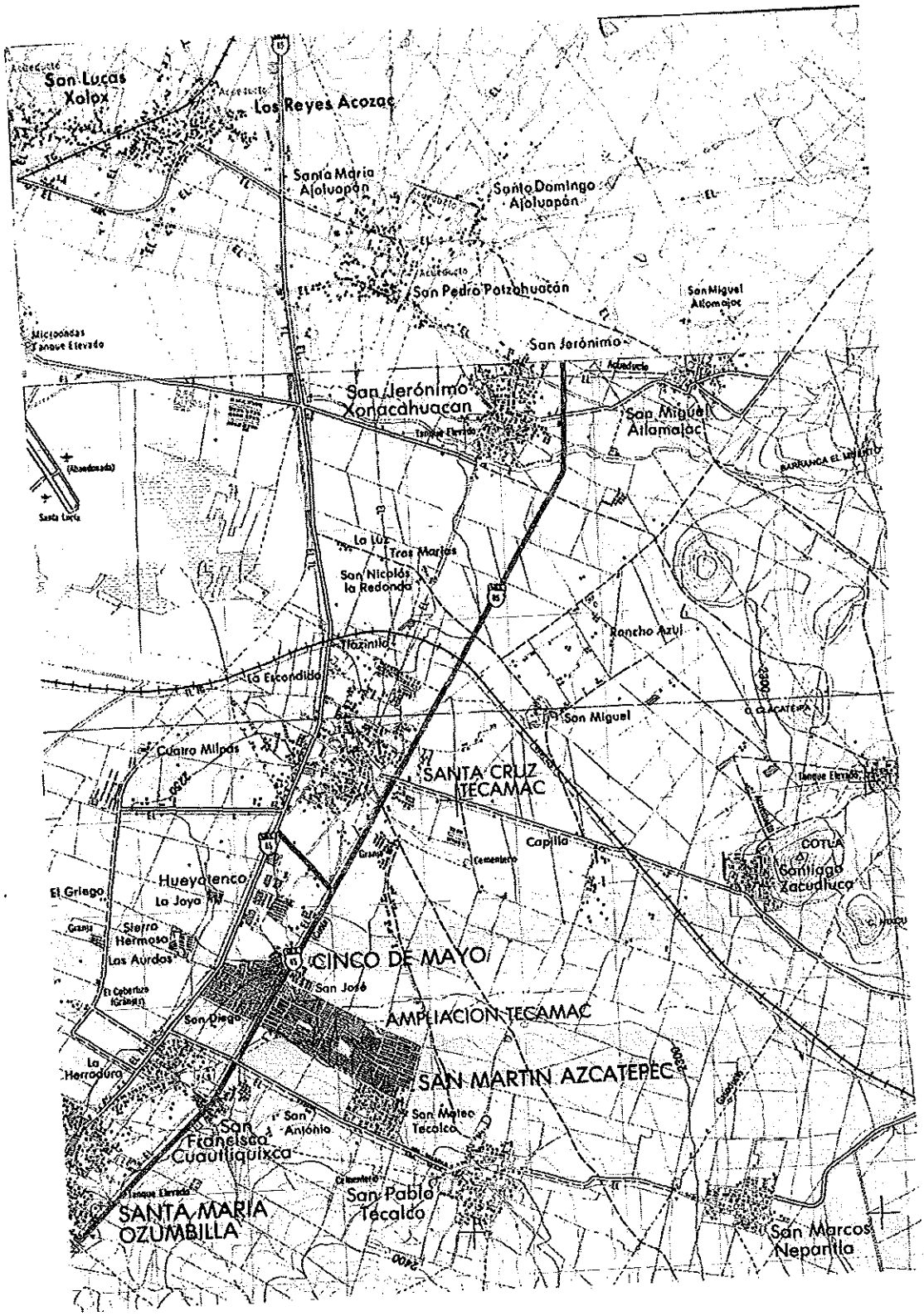

San Lucas Xolox
Los Reyes Acozac
Santa María Ajoloapan
Santo Domingo Ajoloapan
San Pedro Pozohuacan
San Miguel Atlamajac
San Jerónimo
San Jerónimo Xonacahuacan
San Miguel Ailamajac
Microondas Tanque Elevado
Santa Lucía
La Luz
Tres Marías
San Nicolás la Redonda
Tlazintla
Rancho Azul
La Escondida
San Miguel
Cuatro Milpas
SANTA CRUZ TECAMAC
Capilla
Cementerio
COTLA
Santiago Zacuautuca
El Griego
Hueyatenco
La Joya
Sierra Hermosa
Las Aurdos
CINCO DE MAYO
San José
San Diego
AMPLIACION TECAMAC
La Herradura
SAN MARTIN AZCATEPEC
San Antonio
San Mateo Tecalco
San Francisco Cuautliquixca
SANTA MARIA OZUMBILLA
San Pablo Tecalco
San Marcos Nepantla

Plate 127

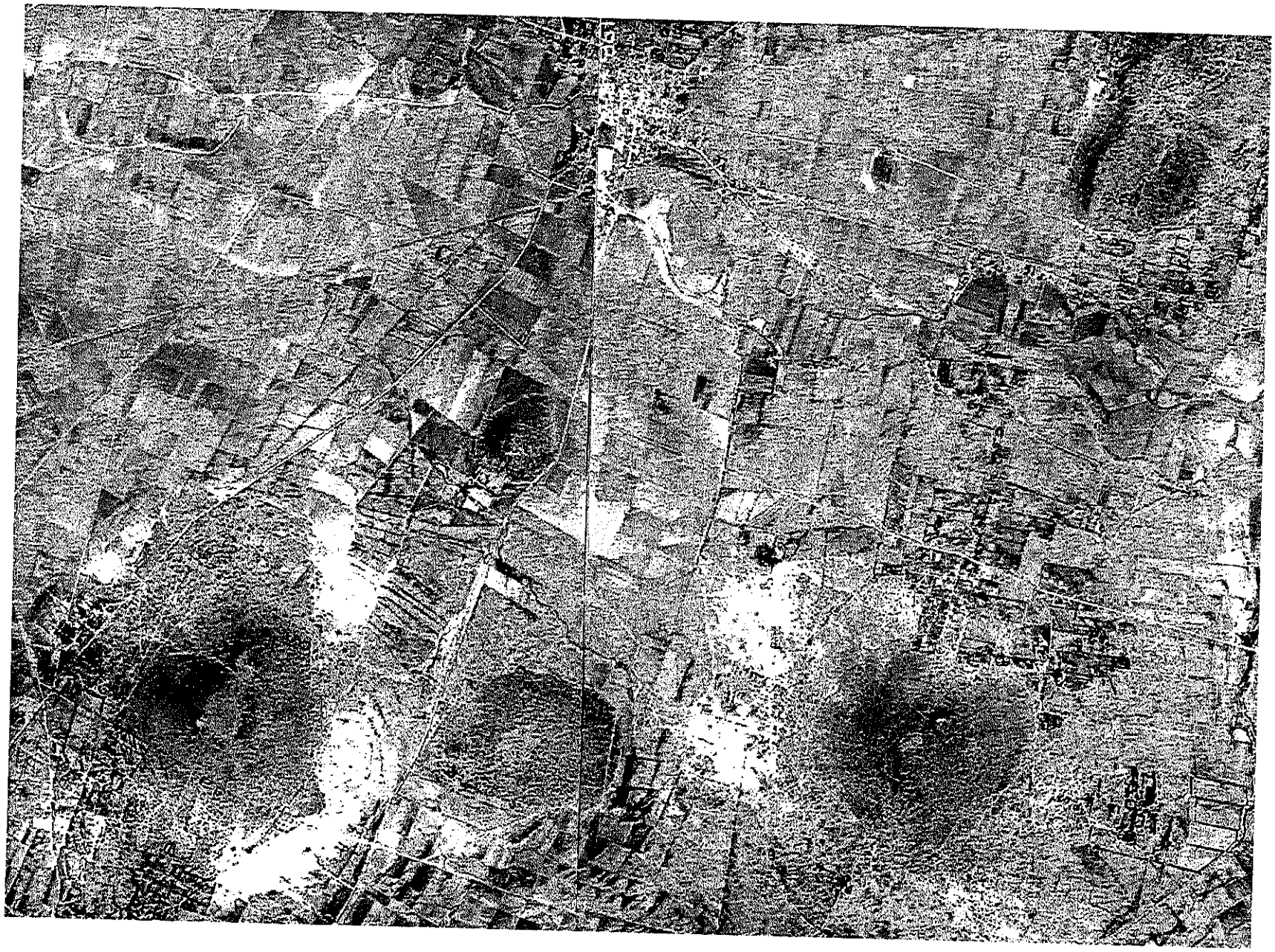


Figure 166

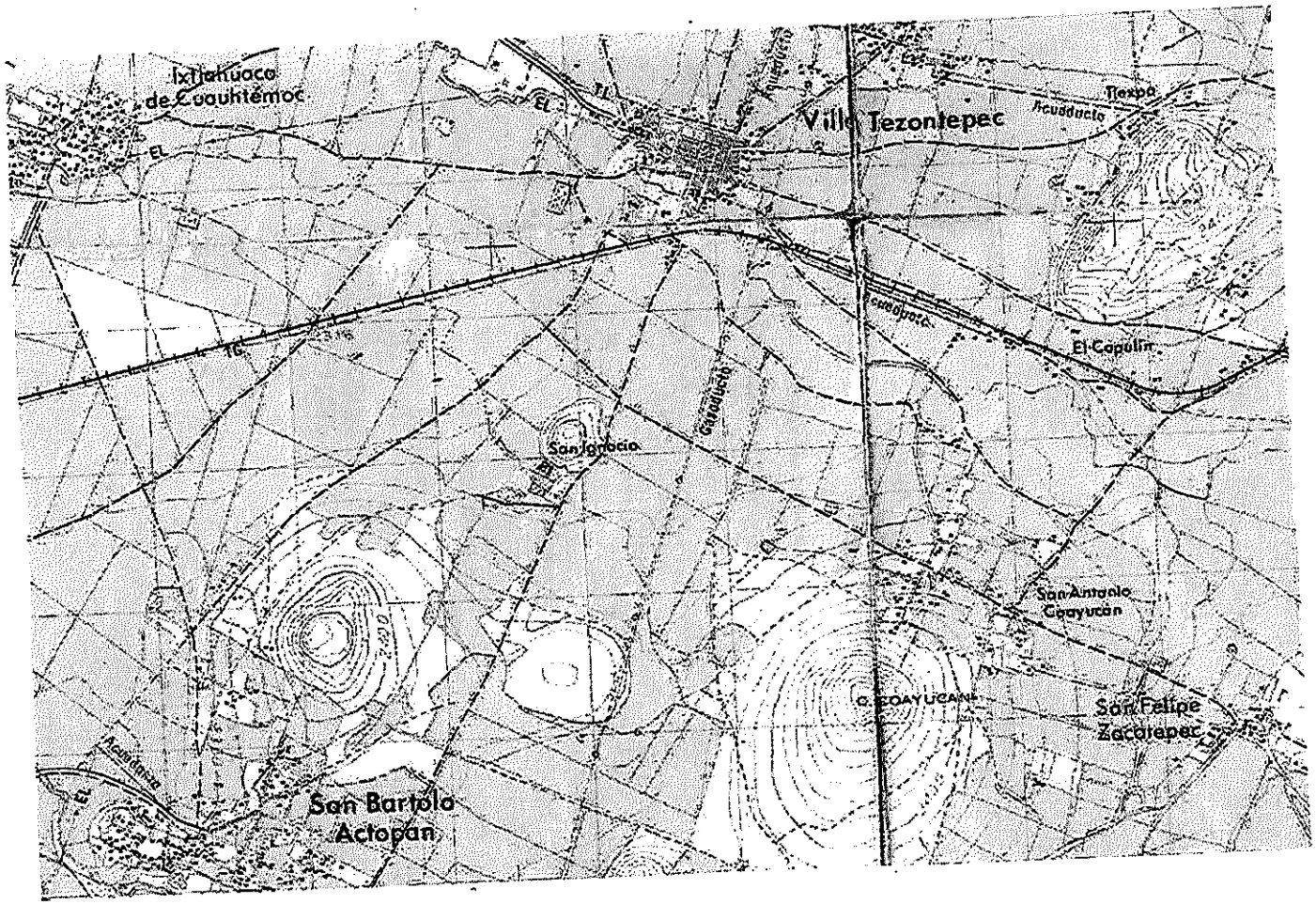
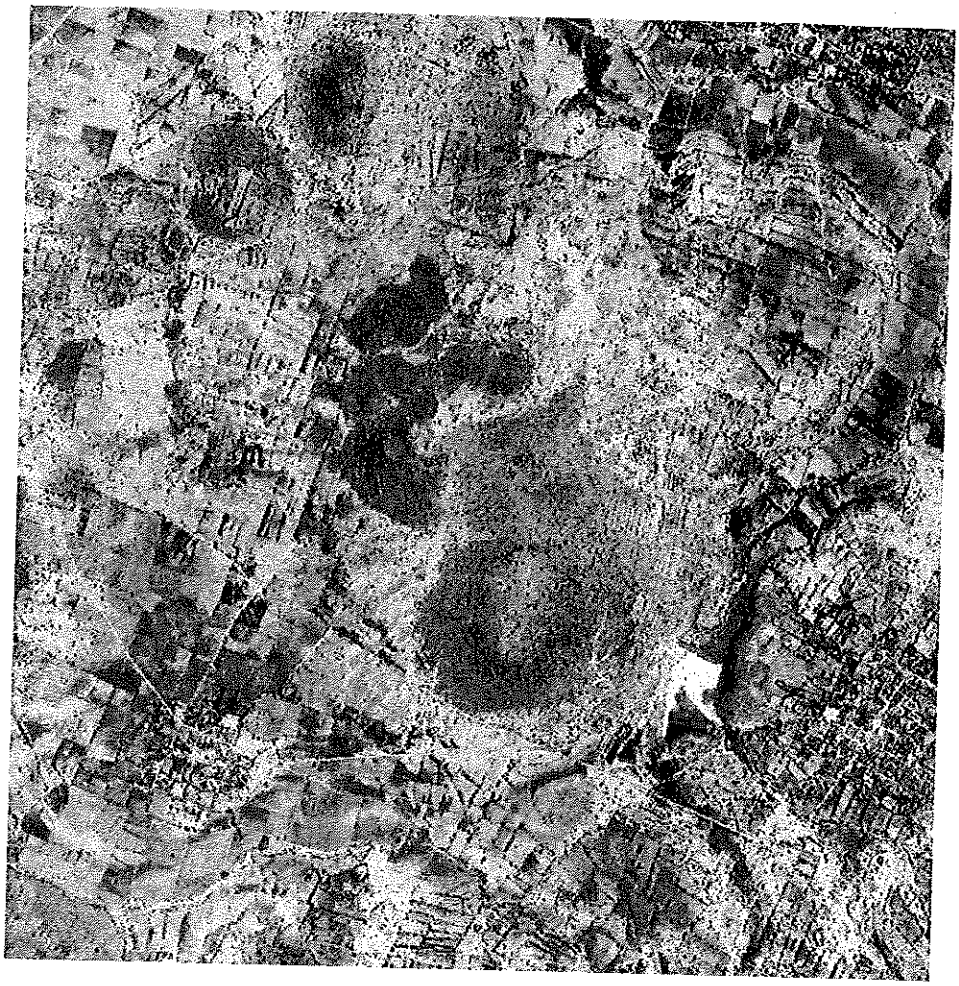

Ixtlahuaca
de Cuauhtémoc
Villa Tezontepec
Tlexpa
Acueducto
El Copalín
San Ignacio
San Antonio
Coayucan
San Felipe
Zacatepec
San Bartolo
Actopan

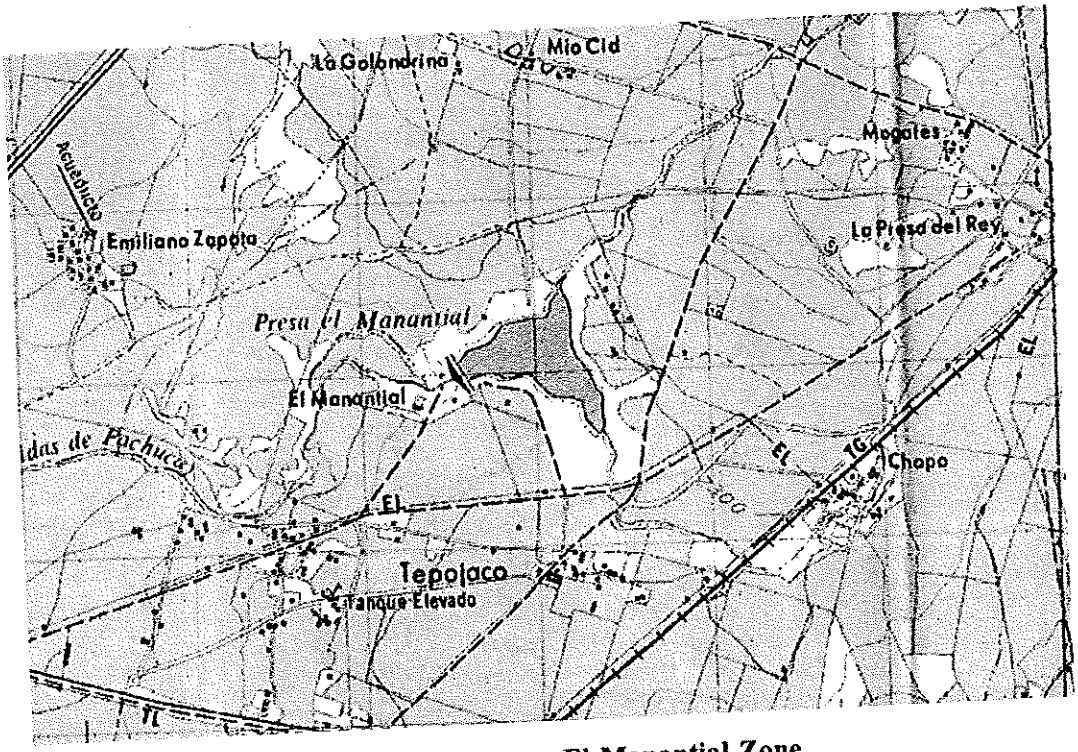
Plate 128

A

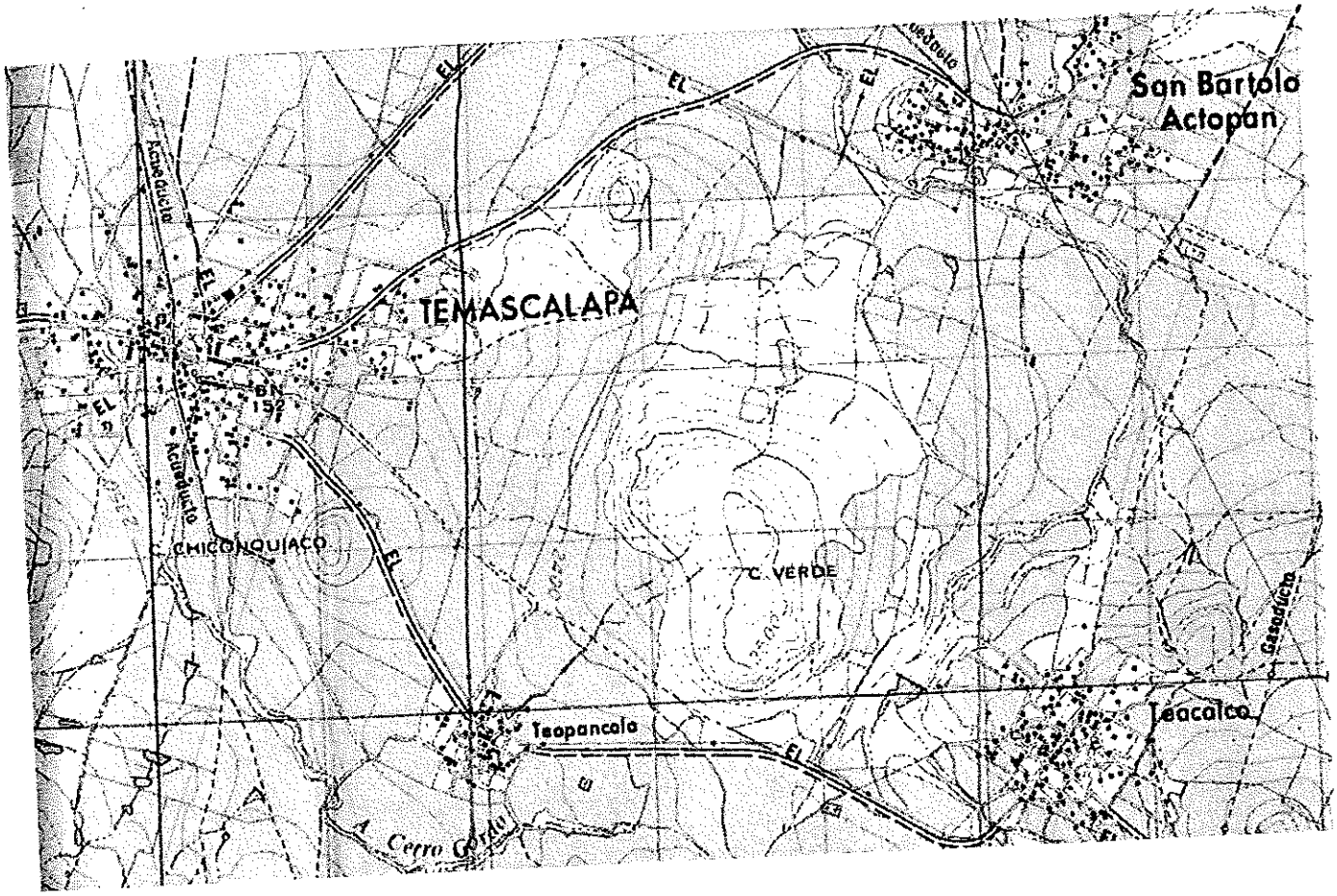


B

Figure 167



A Presa Del Rey - El Manantial Zone



B Temascalapa - Cerro Verde Zone

Figure 168

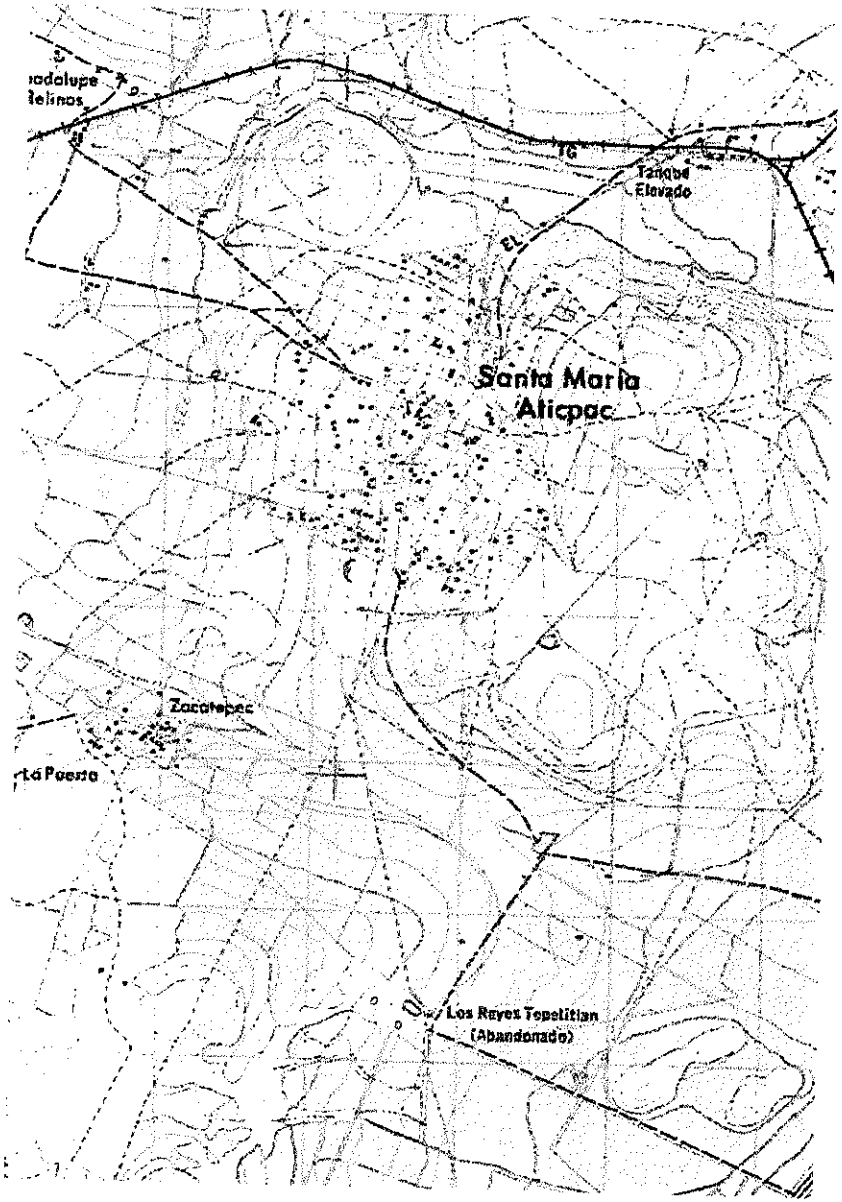
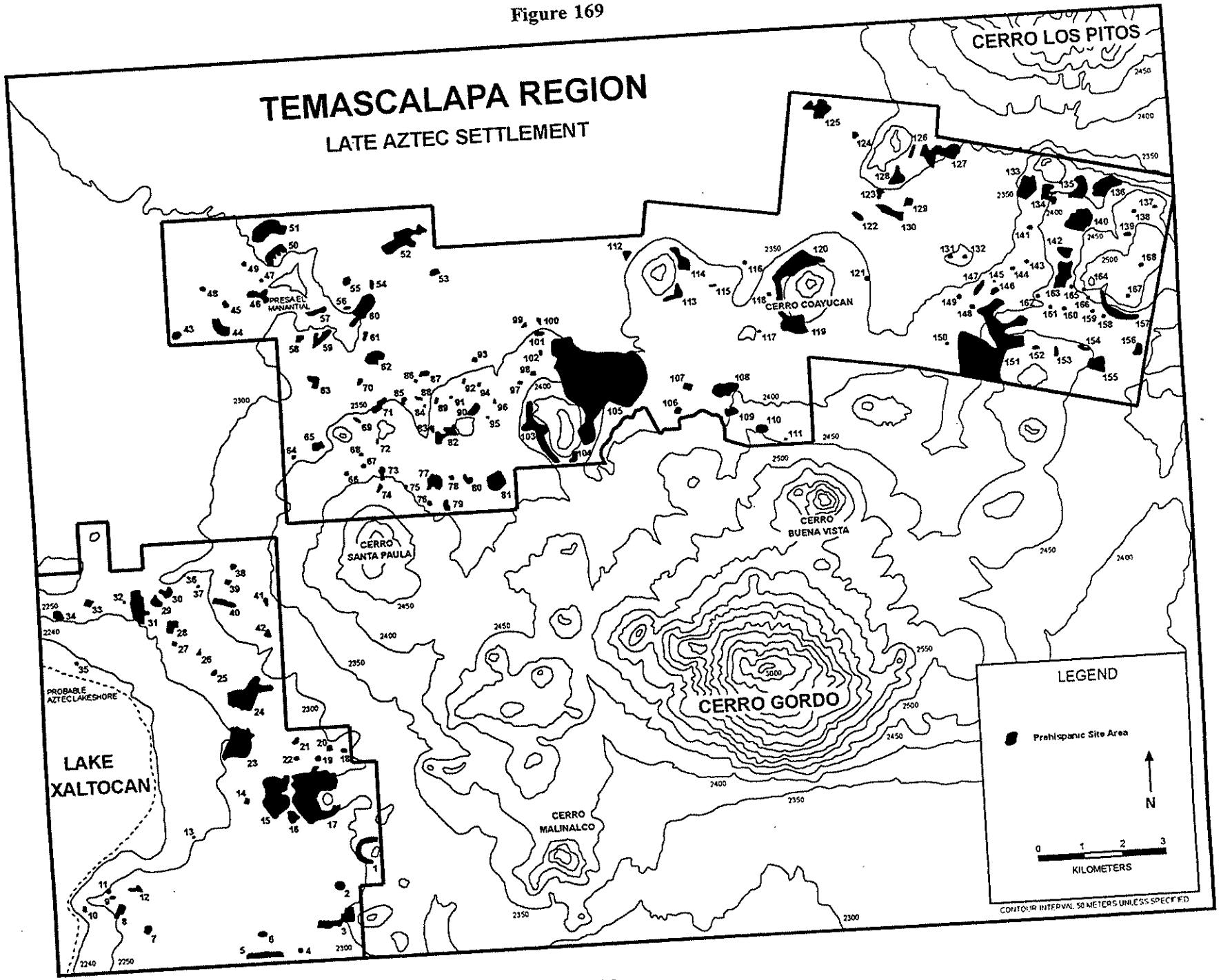


Plate 129

Figure 169


TEMASCALAPA REGION
LATE AZTEC SETTLEMENT
CERRO LOS PITOS
CERRO COAYUCAN
PRESA EL MANANTIAL
CERRO SANTA PAULA
CERRO BUENA VISTA
CERRO GORDO
CERRO MALINALCO
LAKE XALTOCAN
PROBABLE AZTEC LAKESHORE
LEGEND
Prehispanic Site Area
N
0 1 2 3
KILOMETERS
CONTOUR INTERVAL 50 METERS UNLESS SPECIFIED

Tm-Az-1

Classification: Small dispersed village, 60-250 people.

Natural Setting: 2300-2340 meters, in the Lower Piedmont east of Lake Xaltocan. Situated on gently sloping ground. Generally shallow soil cover, becoming shallow to medium along the agricultural plain Slight erosion.

Modern Land Use: Rainfall cultivation. Nopal was present during survey, though most of the site was covered with sod.

Archaeological Remains: Variably very light to moderate surface pottery (Aztec 3 and 4), and scattered obsidian artifacts, over an area of 10.0 hectares. Slight rises and associated artifact concentrations probably represented the poorly preserved remains of as many as 12 residential mounds, though due to heavy disturbance from plowing and looting no measurements were recorded. Two rises, reaching 1.5-2.0 meters in height on the southern part of the site, probably represented the remnants of ceremonial pyramids. The remains of stone terraces along the hill slopes likely dated to the Late Aztec occupation as well. This site was surveyed with a 1:25000 airphoto.

Tm-Az-2

Classification: Hamlet, 20-50 people

Natural Setting: 2275 meters, in the Thin Soil Alluvium east of Lake Xaltocan. Situated on gently sloping ground. Generally medium soil cover. No erosion.

Modern Land Use: Rainfall cultivation, with maize, oats, beans, and barley present at the time of survey.

Archaeological Remains: Light-to-moderate surface pottery, and very light obsidian and ground stone tools, over an area of 2.0 hectares. No structural remains. Mixed with generally light Late Toltec (Tm-Lt-14) material.

Tm-Az-3

Classification: Small dispersed village, 75-150 people.

Natural Setting: 2280-2315 meters, in the Thin Soil Alluvium and Lower Piedmont east of Lake Xaltocan Situated on flat to gently sloping ground at the western flank of a small hill. Shallow to medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with dense maize, barley , and oats present at the time of survey, in fields equipped with earth banks. Site occurred among house lots in the northwestern part of the modern village of Zacualuca, extending west of the settlement up the side of a hill. The southwestern edge of the site was defined by a modern road.

Archaeological Remains: Generally light surface pottery, with some moderate concentrations, over an area of 15.0 hectares. Generally substantial rock rubble, becoming heavy in places, and very light obsidian artifacts also occurred. Concentrations of rubble and artifacts on slight rise probably defined the remains of 15 poorly preserved residential mounds; due to their condition, dimensions were not recorded. Additional, less clearly defined concentrations of rock rubble likely represented the remnants of other residential mounds.

Tm-Az-4

Classification: Small hamlet, 5-10 people.

Natural Setting: 2280 meters, on the Thin Soil Alluvium southeast of Lake Xaltocan. Situated on flat ground. Shallow to medium soil cover. Slight, localized erosion.

Modern Land Use: Rainfall cultivation, with maize and barley present at the time of survey in fields equipped with maguey bancals. Part of the site used for grazing as well.

Archaeological Remains: Light surface pottery over an area of 1.0 hectare. No structural remains. Mixed with Mazapan (Tm-Lt-1) material of approximately equal density.

Tm-Az-5

Classification: Hamlet, 55-110 people.

Natural Setting: 2285 meters, on the Thin Soil Alluvium southeast of Lake Xaltocan. Situated on gently sloping ground featuring numerous small washes. Shallow to medium soil cover. Slight, localized erosion.

Modern Land Use: Rainfall cultivation, with maize present at the time of survey in fields equipped with maguey bancals

Archaeological Remains: Generally light surface pottery, becoming moderate in a few places, and very light obsidian artifacts over an area of 7.0 hectares. No structural remains. Mixed with similarly dense Mazapan (Tm-Lt-2) material.

Tm-Az-6

Classification: Questionable. Probably a briefly occupied small hamlet. Population undetermined.

Natural Setting: 2270 meters, on the Thin Soil Alluvium southeast of Lake Xaltocan. Situated on generally flat ground. Generally medium soil cover. No erosion.

Modern Land Use: Mixed rainfall and rainfall-irrigated cultivation, with maize and beans present at the time of survey.

Archaeological Remains: Very light surface pottery and obsidian artifacts over an area of 1.5 hectares. No structural remains. Mixed with light Mazapan (Tm-Lt-3) material.

Tm-Az-7

Classification Small hamlet, 4-10 people.

Natural Setting: 2275 meters, on the Thin Soil Alluvium southeast of Lake Xaltocan. Situated on flat ground. Shallow soil cover. Slight, localized erosion.

Modern Land Use: Rainfall cultivation, with both maize and maguey present at the time of survey

Archaeological Remains: Very light-to-light surface pottery over an area of 2 0 hectares. No structural remains. Mixed with similarly sparse Mazapan (Tm-Lt-7) material.

Tm-Az-8

Classification: Hamlet, 15-30 people.

Natural Setting: 2250-2265 meters, on the Thin Soil Alluvium southeast of Lake Xaltocan. Situated on flat ground. Shallow soil cover. No erosion.

Modern Land Use: Rainfall cultivation, with both maize and barley present at the time of survey in fields equipped with maguey bancals.

Archaeological Remains: Very light-to-light surface pottery over an area of 4.0 hectares. The remains of five mounds are visible (Figure 170; Table 55). Mixed with similarly sparse Mazapan (Tm-Lt-8) material.

TABLE 55 Tm-Az-8 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	14 x 12	1 0	Light	Light	Probably residential; Aztec 3
Mound 2	15 x 12	1 5	Very light	None	Ceremonial; Aztec 3
Mound 3	30 x 25	1 5	Very light-light	Light	Probably ceremonial; Aztec 3
Mound 4	10 x 9	1 0	Very light	None	Probably residential; Aztec 3, heavily disturbed
Mound 5	16 x 8	1 0	Light	Light	Probably residential

(Tm-Tf-3), very light Early Toltec (TM-Et-3), moderate Teotihuacan (Tm-Cl-1), and an unrecorded amount of Early Aztec material.

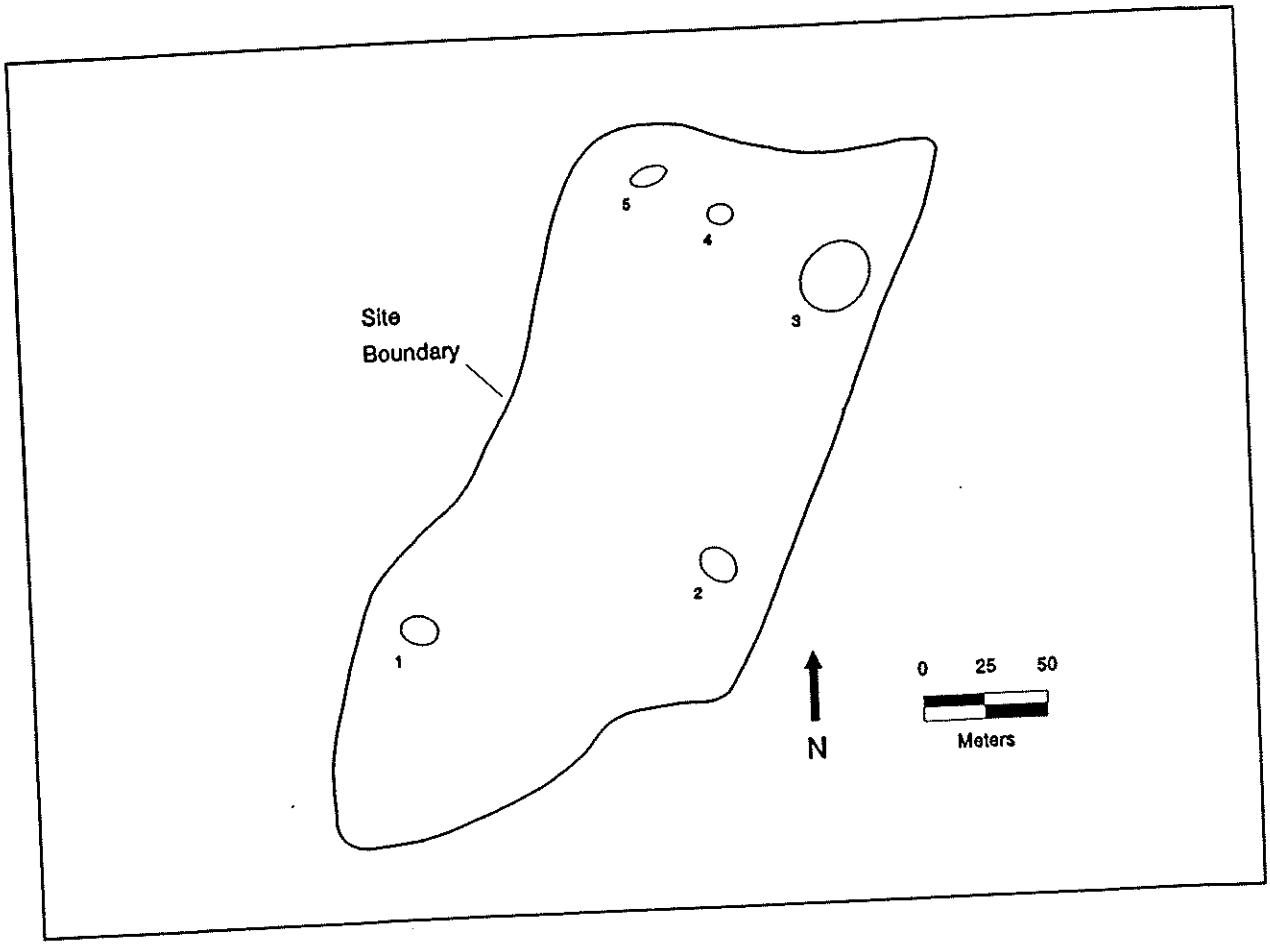


Figure 170 Tm-Az-8 Architectural Features

Tm-Az-9

Classification: Small hamlet, 11-22 people

Natural Setting: 2255 meters, on the Thin Soil Alluvium just above the southeastern shore of Lake Xaltocan Situated on flat ground. Shallow to medium soil cover. Slight, localized erosion.

Modern Land Use: Rainfall cultivation, with maize the predominant crop at the time of survey.

Archaeological Remains: Light surface pottery (predominantly Aztec 2), and generally light-to-substantial rock rubble, over an area of 2.2 hectares. No structural remains. Mixed with very light-to-light Terminal Formative (Tm-Tf-3), very light Early Toltec (Tm-Et-3), and moderate Teotihuacan (Tm-Cl-1) material.

Tm-Az-10

Classification: Hamlet, 40-100 people.

Natural Setting 2245 meters, on the Thin Soil Alluvium just above the southeastern shore of Lake Xaltocan. Situated on flat ground. Medium soil cover. Moderate erosion.

Modern Land Use: Rainfall cultivation.

Archaeological Remains: Very light-to-light surface pottery over an area of 20 0 hectares. No structural remains. This site was surveyed with a 1:25000 airphoto.

Tm-Az-11

Classification· Hamlet, 15-38 people

Natural Setting: 2250 meters, on the Thin Soil Alluvium just above the southeastern shore of Lake Xaltocan. Situated on a flat outcrop of vesicular basalt. Shallow soil cover. Extensive erosion.

Modern Land Use: Grazing.

Archaeological Remains: Variable surface pottery (predominantly Aztec 2), ranging in density from light to moderate, over an area of 1.5 hectares No structural remains visible, although generally substantial rock rubble throughout the site suggests that some form of architecture existed previously. Mixed with very light-to-light Teotihuacan (Tm-Cl-2) and Mazapan (Tm-Lt-10) material. This site was surveyed with a 1:25000 airphoto.

Tm-Az-12

Classification. Hamlet, 30-60 people.

Natural Setting: 2265 meters, on the Thin Soil Alluvium just above the southeastern shore of Lake Xaltocan. Situated on flat to gently sloping ground. Shallow soil cover. Variable erosion, ranging from virtually none to moderate.

Modern Land Use: Rainfall cultivation, with both maize and maguey present at the time of survey in fields equipped with earth banks and maguey bancals.

Archaeological Remains. Very light-to-light surface pottery and variable densities of rock rubble (generally sparse but becoming substantial in places) over an area of 4.0 hectares. Seven mounds are present, forming a southeastern group of four and a northwestern group of three (Figure 171), their basic characteristics presented in Table 56. Mixed with very light Terminal Formative (Tm-Tf-4) and light Mazapan (Tm-Lt-9) material.

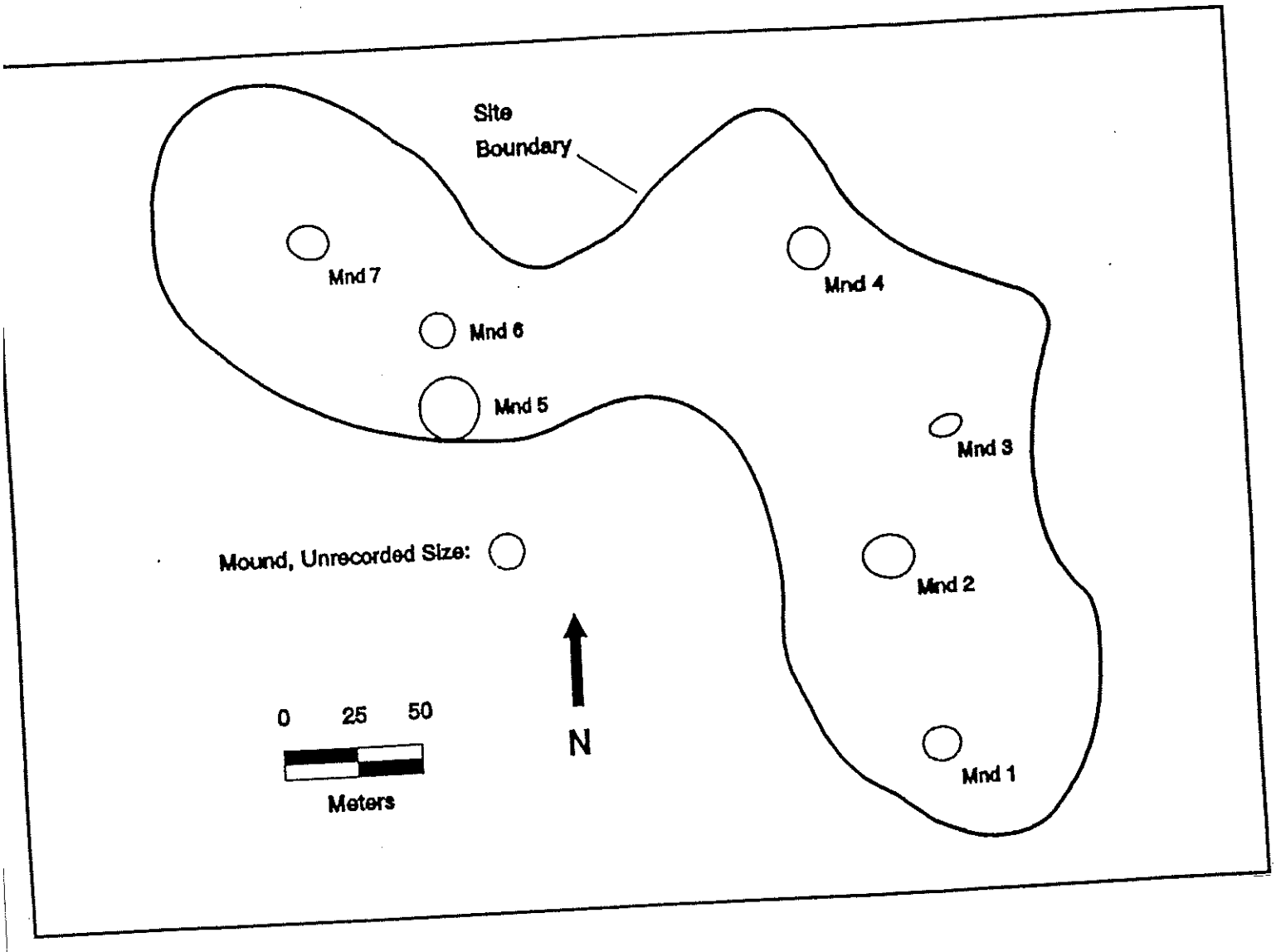


Figure 171 Tm-Az-12 Architectural Features

TABLE 56 Tm-Az-12 Architectural Features

Feature No.	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	NR	NR	Light	None	Residential; very heavily disturbed
Mound 2	20 x 20	1 5	Light	None	Ceremonial
Mound 3	12 x 10	1 0	Light	None	Residential
Mound 4	15 x 15	1 0	Light	None	Residential
Mound 5	25 x 25	1.0	Light	Heavy	Residential
Mound 6	NR	NR	Light	Heavy	Residential; very heavily disturbed
Mound 7	14 x 12	0.9	Light	None	Residential

Note: NR means "not recorded "

Tm-Az-13

Classification: Small hamlet, 5-10 people. This site may extend further south into the colonia, an area that was not surveyed.

Natural Setting: 2250 meters, on the Deep Soil Alluvium east of Lake Xaltocan. Situated on gently sloping ground on a small basalt knoll. Shallow to medium soil cover. Virtually no erosion.

Modern Land Use: Site lies within scattered house lots of Tlazintla, a colonia of Santa Cruz Tecamac. Some rainfall cultivation occurred at the time of survey.

Archaeological Remains: Very light-to-light surface pottery over an area of 1.0 hectare. One slight elevation on the knoll may represent the poorly preserved remains of a residential mound or platform, though due to its condition no measurements were recorded. This site was surveyed with a 1:25000 airphoto.

Tm-Az-14

Classification: Hamlet, 40-80 people.

Natural Setting: 2255 meters, on the Thin Soil Alluvium east of Lake Xaltocan. Situated on gently sloping ground. Medium soil cover. Virtually no erosion.

Modern Land Use: Rainfall cultivation, with maize and barley present at the time of survey in fields equipped with earth banks and maguey bancals.

Archaeological Remains: Light-to-moderate surface pottery over an area of 3.0 hectares. The remains of eight residential mounds are visible. The four best preserved mounds are all quite similar to one another, measuring about 15 meters in diameter and 0.5 meter in height; the remaining four were so poorly preserved that no measurements were possible.

Tm-Az-15

Classification. Large nucleated village, 330-825 people.

Natural Setting: 2260-2280 meters, on the Thin Soil Alluvium east of Lake Xaltocan Situated on generally flat ground Shallow to medium soil cover Erosion ranges from none to slight (localized)

Modern Land Use Rainfall cultivation, with barley and maize present at the time of survey

Archaeological Remains Variably light-to-moderate surface pottery over an area of 33.0 hectares. The remains of six residential mounds and two ceremonial mounds are visible (Figures 172, 173), as described in Table 57 Mixed with similarly dense Early Toltec (Tm-Et-10) and light Terminal Formative (Tm-Tf-7, Tm-Tf-11, Tm-Tf-12, and Tm-Tf-13) and Mazapan (Tm-Lt-17) material

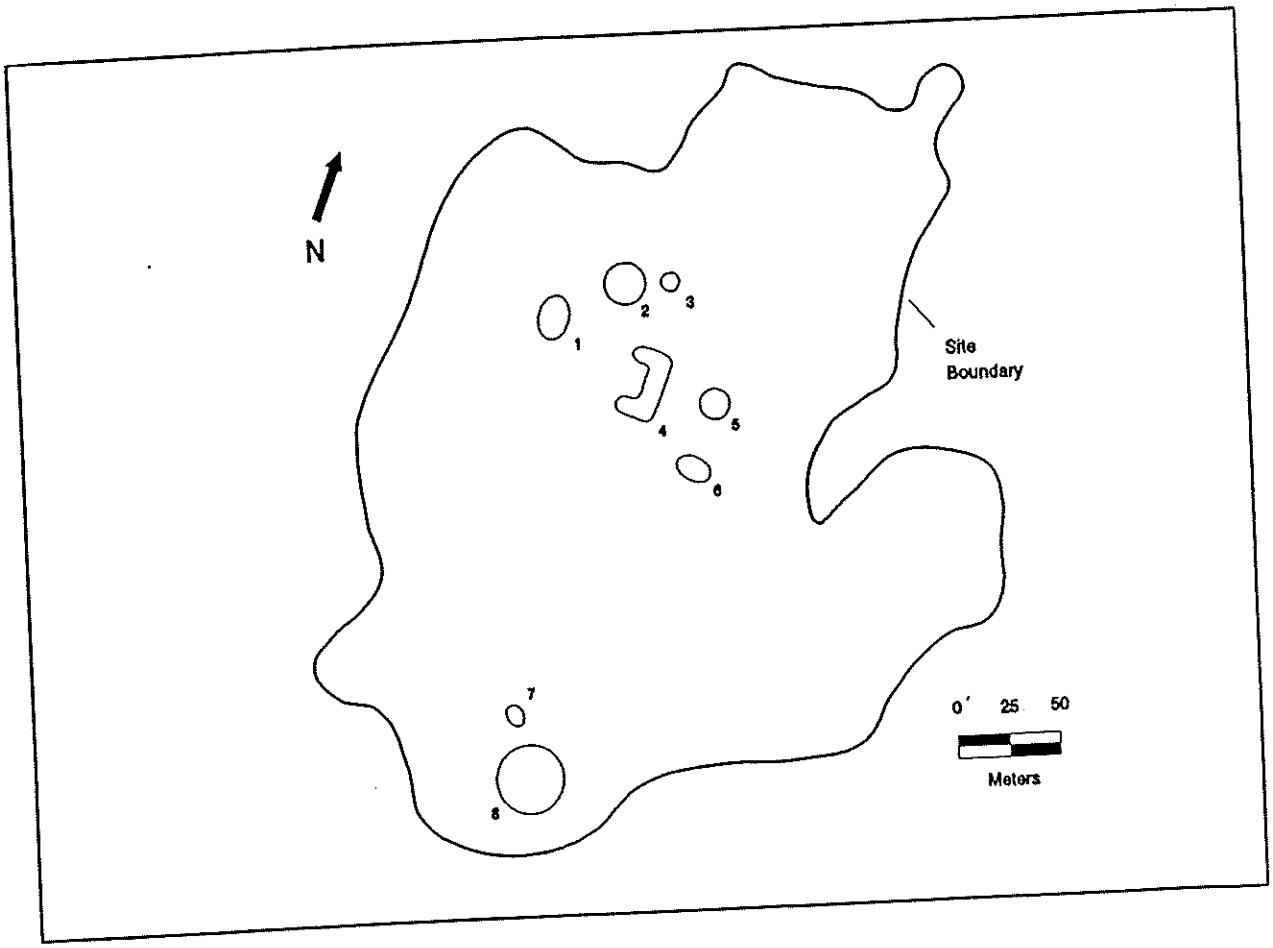


Figure 172 Tm-Az-15 Architectural Features

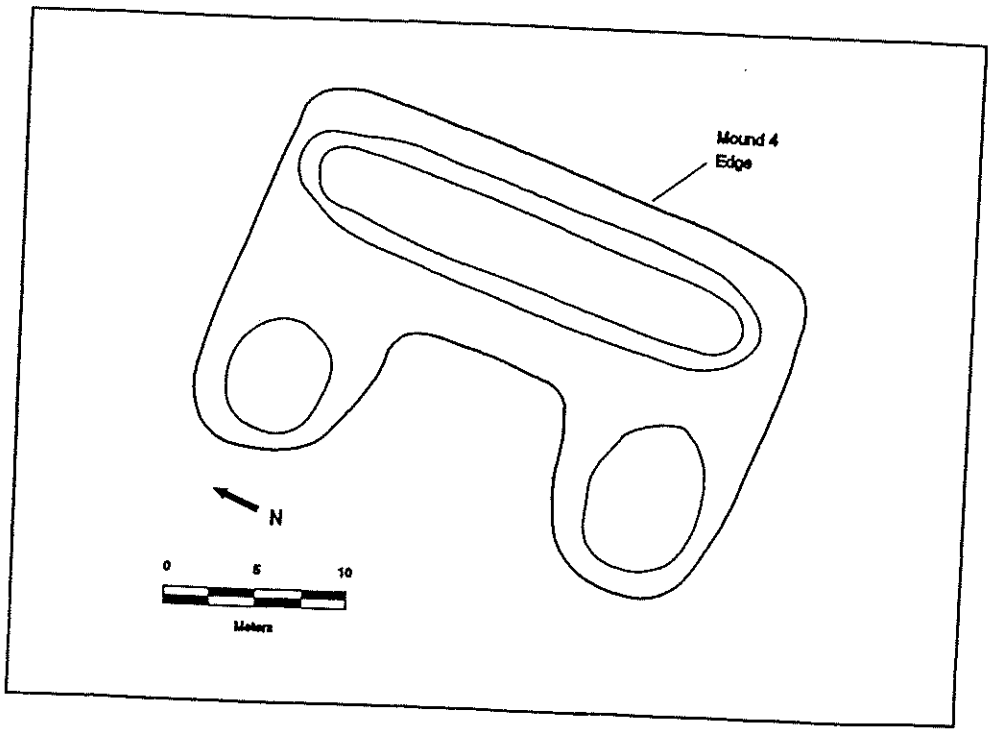


Figure 173 Tm-Az-15, Mound 4 Architectural Details

TABLE 57 Tm-Az-15 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	22 x 15	1 5	Light	None	Ceremonial; Aztec 3 and 4
Mound 2	20 x 20	1 0	Light	None	Probably residential; Aztec 3 and 4; wall fragments also present
Mound 3	7 x 7	0 35	Light	None	Residential; Aztec 3 and 4; poorly preserved
Mound 4	32 x 20	0 5	Light	None	Residential; U-shaped structure which may represent the poorly preserved remains of a single house compound
Mound 5	15 x 15	0 5	Light	None	Residential
Mound 6	20 x 10	0 3	Very light	None	Residential; Aztec 3
Mound 7	12 x 7	0 5	Light	None	Residential
Mound 8	35 x 35	2 0	Light	None	Ceremonial, a second structure possibly was built on this mound, but little of it remains

Tm-Az-16

Classification: Hamlet, 30-60 people.

Natural Setting: 2275 meters, on the Thin Soil Alluvium east of Lake Xaltocan. Situated on gently sloping ground at the base of the western flank of Cerro Colorado. Shallow to medium soil cover. Generally slight erosion, with no erosion in some places.

Modern Land Use: Rainfall cultivation, predominantly of barley at the time of survey. Agricultural activity has heavily disturbed the site.

Archaeological Remains: Light surface pottery over an area of 6.0 hectares. No structural remains. Mixed with similarly dense Terminal Formative (Tm-Tf-15) and light-to-moderate Early Toltec (Tm-Et-9) material

Tm-Az-17

Classification: Small dispersed village, 150-375 people. This site appears to be a typical dispersed, rural Aztec village which overlies a much more substantial Early Toltec site.

Natural Setting: 2280-2330 meters, on the Thin Soil Alluvium and Smooth Lower Piedmont east of Lake Xaltocan. Situated on gently to moderately sloping ground on the northern, western, and southern flanks of Cerro Colorado. One major barranca lies immediately to the north, with another cutting through the site itself. Shallow to medium soil cover. Generally moderate erosion, though slight in places and becoming extensive in upper portions of the site.

Modern Land Use: Grazing on the upper, most heavily eroded portion of the site. Rainfall cultivation on the lower parts of the site, with barley and maize present at the time of survey in fields equipped with drainage ditches and maguey bancals. Several roads cut across the site.

Archaeological Remains. Very light-to-light surface pottery over an area of 75.0 hectares, coupled with concentrations of rock rubble ranging from light to substantial in density. A total of 14 mounds are visible (Figure 174), as described in Table 58. Concentrations of artifacts suggest the presence of at least 12 additional, poorly preserved residential mounds, though no measurements were possible due to their poor preservation Mixed with similarly sparse Mazapan (Tm-Lt-18) and light-to-moderate Early Toltec (Tm-Et-11) remains scattered over the same area. Also present over smaller areas are light Terminal Formative (Tm-Tf-19 and Tm-Tf-20), light-to-moderate Terminal Formative (Tm-Tf-16 and Tm-Tf-17), and very light Teotihuacan (Tm-Cl-7) material.

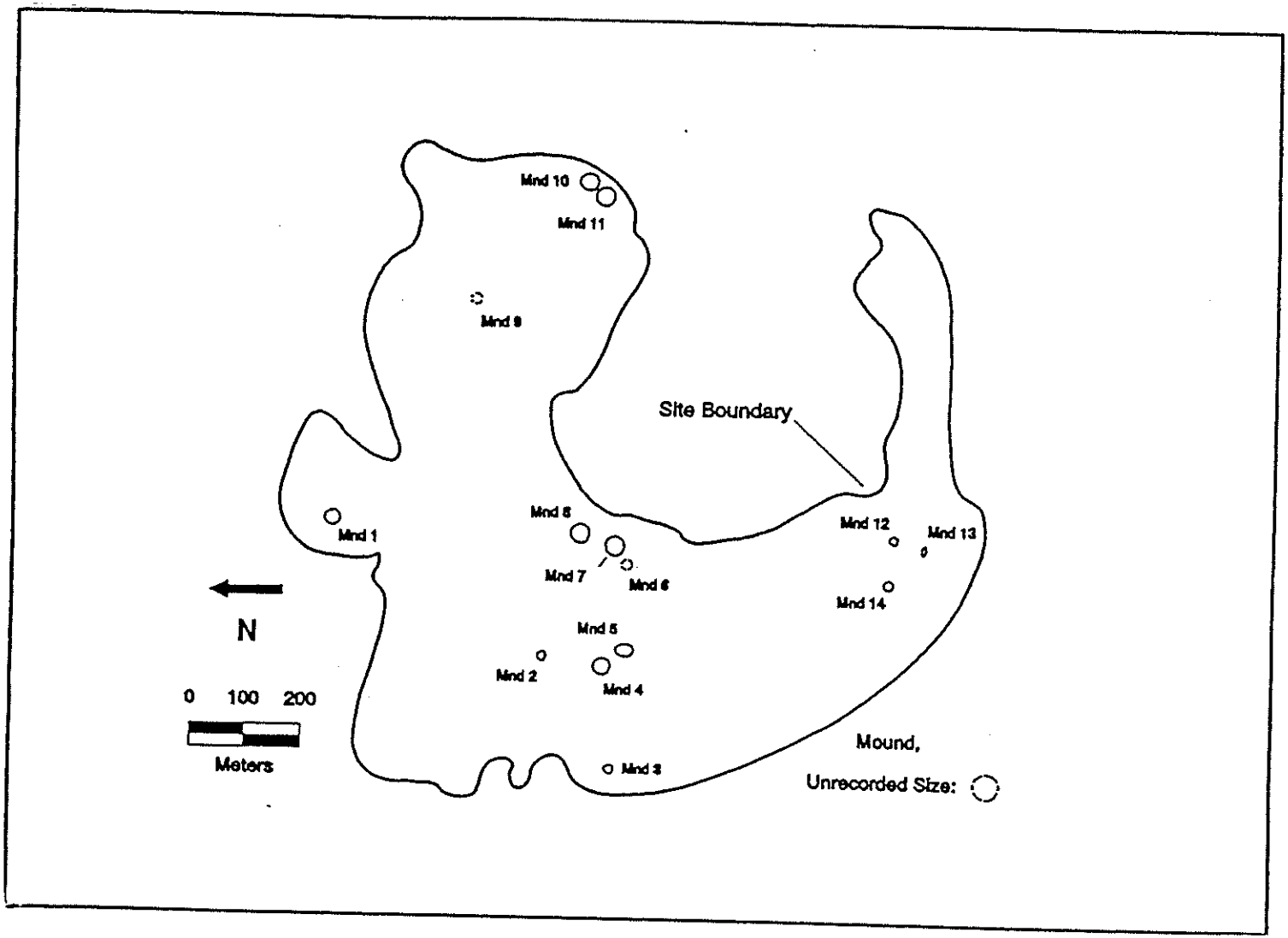


Figure 174 Tm-Az-17 Architectural Features

TABLE 58 Tm-Az-17 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	18 x 18	1 5	Light	Substantial	Ceremonial; heavily looted
Mound 2	12 x 12	1 0	Light	Substantial	Probably residential; also Early Toltec material
Mound 3	15 x 15	1 0	Light	Light	Probably residential; also a few Terminal Formative sherds on edge; heavily looted
Mound 4	20 x 20	1 0	Light	Substantial	Probably residential; also some Early Toltec material
Mound 5	25 x 15	1 0	Very light	Substantial	Probably residential
Mound 6	NR	NR	Light	Light	Residential; obsidian artifacts also present; very poor condition
Mound 7	30 x 30	3 0	Light	Light	Ceremonial; also some Early Toltec material; poor condition
Mound 8	30 x 30	3 0	Light	Light	Ceremonial; also Late Toltec material
Mound 9	15 x NR	3 0	Light	Substantial	Ceremonial; also Early Toltec and Aztec; southern part of mound destroyed
Mound 10	30 x 25	3 5	Light	Light	Ceremonial; 40 x 20 m plaza, composed of artificially levelled hill, immediately west of mound; also Early Toltec material
Mound 11	30 x 30	3 0	Light	Substantial	Ceremonial; also Early Toltec material; heavily looted
Mound 12	15 x 12	1 0	Light	Substantial	Probably residential; also some Early Toltec material; mound partially destroyed by road
Mound 13	10 x 5	0 5	Very light	Light	Residential
Mound 14	15 x 15	1 0	Very light	Light	Probably residential

Note: NR means "not recorded "

Tm-Az-18

Classification: Small hamlet, 5-10 people.

Natural Setting: 2280 meters, on the Smooth Lower Piedmont east of Lake Xaltocan. Situated on moderately sloping ground immediately north of the junction between Barranca el Muerto and another large barranca. Shallow soil cover. Slight, localized erosion.

Modern Land Use: Grazing. Some limited rainfall cultivation.

Archaeological Remains: Generally light surface pottery, becoming moderate in places, over an area of 1 0 hectare. No structural remains. Mixed with light Mazapan (Tm-Lt-20) material.

Tm-Az-19

Classification: Small hamlet, 5-13 people.

Natural Setting: 2275 meters, on the Smooth Lower Piedmont east of Lake Xaltocan. Situated on gently sloping ground on the eastern edge of a large barranca Shallow to medium soil cover. Severe erosion.

Modern Land Use· Rainfall cultivation.

Archaeological Remains: Light-to-moderate surface pottery over an area of 0.5 hectare. No structural remains. Mixed with similarly dense Mazapan (Tm-Lt-21) material.

Tm-Az-20

Classification. Small hamlet, 4-10 people.

Natural Setting: 2290 meters, on the Smooth Lower Piedmont east of Lake Xaltocan. Situated on gently sloping ground, a small barranca which runs east-west bisecting the site. Shallow soil cover. Generally moderate erosion, becoming severe near the barranca.

Modern Land Use: Grazing.

Archaeological Remains: Very light-to-light surface pottery over an area of 2.0 hectares. No structural remains.

Tm-Az-21

Classification: Small hamlet, 5-14 people.

Natural Setting. 2275 meters, on the Thin Soil Alluvium east of Lake Xaltocan. Situated on gently sloping ground. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with barley present at the time of survey. Part of the site also used for grazing. A modern road, running east-west, bisects the site.

Archaeological Remains: Very light-to-light surface pottery over an area of 2.7 hectares. A concentration of artifacts may represent the poorly preserved remains of a single residential mound in the southeastern portion of the site. One ancient canal, of unknown date, cuts through the site. Mixed with similarly dense Mazapan (Tm-Lt-23) material.

Tm-Az-22

Classification: Small hamlet, 5-13 people.

Natural Setting: 2275 meters, on the Thin Soil Alluvium east of Lake Xaltocan. Situated on gently sloping ground on the northern bank of Barranca el Muerto. Shallow soil cover. Moderate to severe erosion, becoming heavier near the barranca

Modern Land Use: Rainfall cultivation, with barley present at the time of survey.

Archaeological Remains: Light-to-moderate surface pottery over an area of 0.5 hectare. A concentration of artifacts may represent the remnants of a single residential mound. Mixed with light Mazapan (Tm-Lt-22) material.

Tm-Az-23

Classification: Small dispersed village, 80-160 people.

Natural Setting: 2250-2270 meters, on the Thin Soil Alluvium east of Lake Xaltocan. Situated on gently sloping ground between two large barrancas. Shallow to medium soil cover. Generally slight erosion, but with some areas showing no erosion and other areas eroded down to bedrock.

Modern Land Use Rainfall cultivation, with maize, maguey, and barley present at the time of survey in fields equipped with a few maguey and nopal bancals. Site is overlain by the modern village of San Jerónimo Xonacahuacan.

Archaeological Remains: Generally light surface pottery over an area of 16.0 hectares. No structural remains. Mixed mainly with moderate-to-heavy Teotihuacan (Tm-Cl-9) material; also present, over smaller areas, are light Terminal Formative (Tm-Tf-10) and Mazapan (Tm-Lt-25) remains, and light-to-moderate Mazapan (Tm-Lt-24) material.

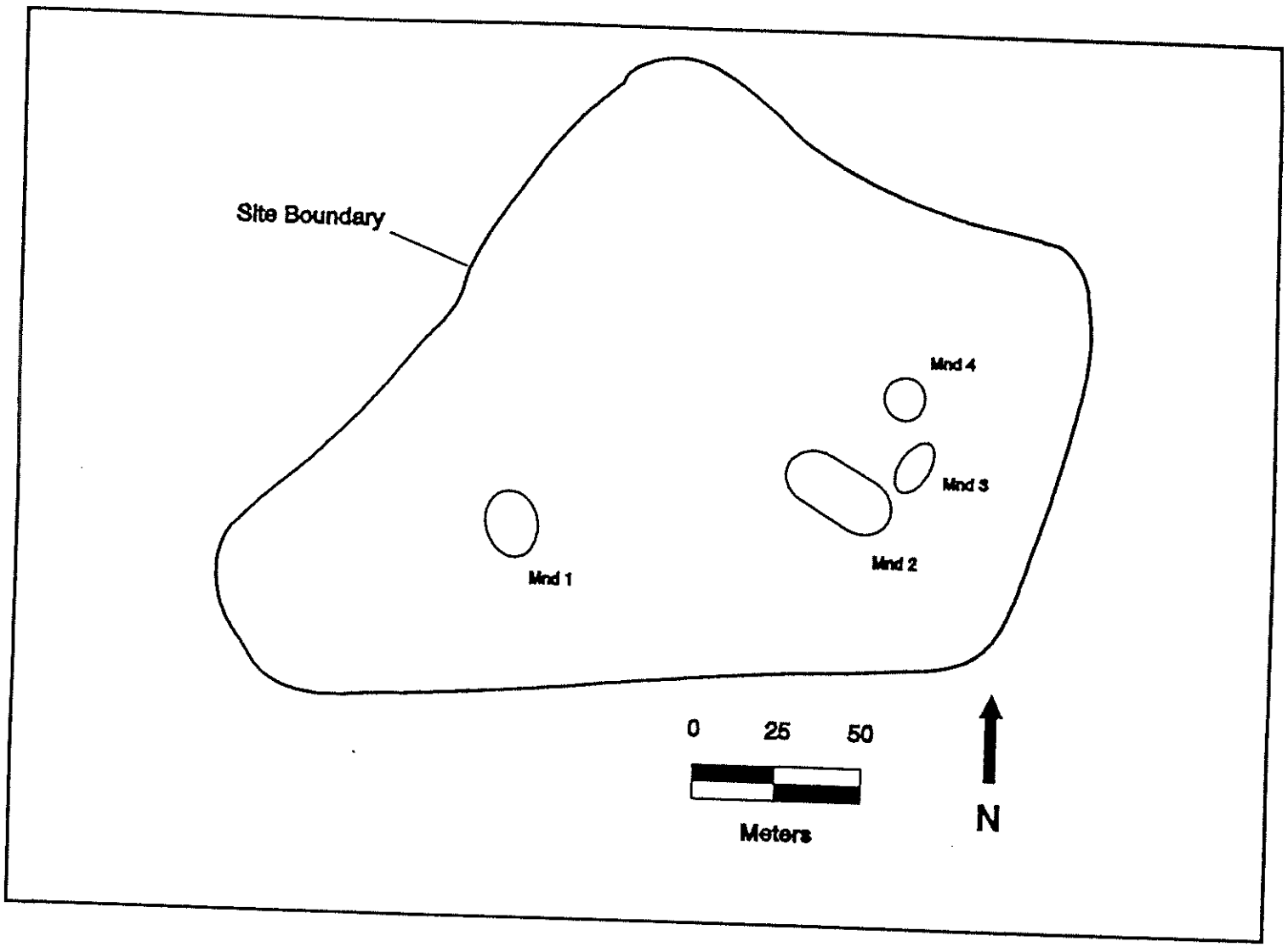


Figure 175 Architectural Features, Tm-Lt-26

Tm-Az-24 (see Figure 175, LT 26)

Classification: Small dispersed village, 442-550 people.

Natural Setting: 2255-2295 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on gently sloping ground slightly south of a major barranca which drains west towards the lake. Shallow to medium soil cover. Generally slight erosion.

Modern Land Use: Rainfall cultivation in fields equipped with earth banks. Most fields contained maize at the time of survey, though a few fields contained barley, nopal, maguey, or were lying fallow. The site lies on the northern edge of the modern settlement of San Jerónimo Xonacahuacan and immediately east of San Pedro Potzohuacán. Four modern roads pass through different portions of the site.

Archaeological Remains: Generally light surface pottery, though ranging from very light to moderate, mixed with very light obsidian artifacts over an area of 39.0 hectares. Variable amounts of rock rubble also occur, generally ranging from sparse to light. The remains of four residential mounds are visible, as described under Tm-Lt-26 (see Figure 175). In addition, several concentrations of rock rubble and pottery may indicate the presence of other, poorly preserved mounds. Mixed with very light-to-light Terminal Formative (Tm-Tf-23) and Mazapan (Tm-Lt-26) remains, and light Terminal Formative (Tm-Tf-22) material, all occurring in small areas of the much larger Aztec site.

Tm-Az-25

Classification: Small hamlet, 2-5 people.

Natural Setting: 2260-2270 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on gently sloping ground Shallow to medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, in conjunction with limited irrigation. Maize, barley, and alfalfa were present at the time of survey in fields equipped with earth banks. Site lies within the modern village of Santo Domingo Ajoluapán, and a modern road cuts across it

Archaeological Remains: Very light-to-light surface pottery (Aztec 3) over an area of 1.0 hectare. No structural remains. Mixed with very light Terminal Formative (Tm-Tf-24) and light Teotihuacan (Tm-Cl-11) material.

Tm-Az-26

Classification: Small hamlet, 5-10 people.

Natural Setting: 2275 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on gently sloping ground immediately east of a large barranca. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall and limited irrigation cultivation, with maize present at the time of survey in fields equipped with earth banks. Site lies in the eastern portion of the modern village of Santa María Ajoluapán.

Archaeological Remains: Very light-to-light surface pottery (Aztec 3) over an area of 1.0 hectare. A concentration of ceramics probably represents the remnants of one poorly preserved residential mound; due to its condition, no dimensions were recorded.

Tm-Az-27

Classification: Small hamlet, 5-12 people.

Natural Setting: 2270 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on gently sloping ground, with a canalized barranca lying immediately east of the site. Shallow soil cover No erosion

Modern Land Use: Rainfall cultivation, predominantly of maguey at the time of survey in fields equipped with earth banks. Site lies on the northwestern edge of the modern village of Santa María Ajoluapán.

Archaeological Remains: Very light-to-light surface pottery over an area of 2.3 hectares. One mound is visible, measuring 6 by 6 meters at its base and 0.6 meter in height. Teotihuacan, Mazapan, and Aztec material all occur on this mound. Mixed with similarly sparse Terminal Formative (Tm-Tf-25) and Teotihuacan (Tm-Cl-12) remains and light-to-moderate Mazapan (Tm-Lt-28) material.

Tm-Az-28

Classification: Hamlet, 12-30 people.

Natural Setting: 2265-2275 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan. Situated on gently to moderately sloping ground. Generally shallow soil cover. Slight, localized erosion.

Modern Land Use: Predominantly grazing, with much of the site lying fallow as well. A limited amount of rainfall cultivation occurs in two fields equipped with earth banks and maguey bancals, planted in maize at the time of survey.

Archaeological Remains: Very light-to-light surface pottery, combined with light-to-substantial rock rubble, over an area of 6.0 hectares. No structural remains. Mixed with similarly sparse Terminal Formative (Tm-Tf-26) and Mazapan (Tm-Lt-29) material, and generally moderate Teotihuacan (Tm-Cl-13) remains.

Tm-Az-29

Classification: Hamlet, 25-50 people.

Natural Setting: 2270 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan. Situated on gently to moderately sloping ground. Shallow soil cover. Slight, localized erosion.

Modern Land Use Grazing Although at the time of survey no associated fields were used for agriculture, several featured earth banks and irrigation canals passed through those fields

Archaeological Remains Very light-to-light surface pottery over an area of 2 5 hectares The remains of five residential mounds are present (Figure 176), with varying Aztec 3 and Aztec 4 ceramics associated, as described in Table 59. Mixed with very light Teotihuacan (Tm-Cl-15) material

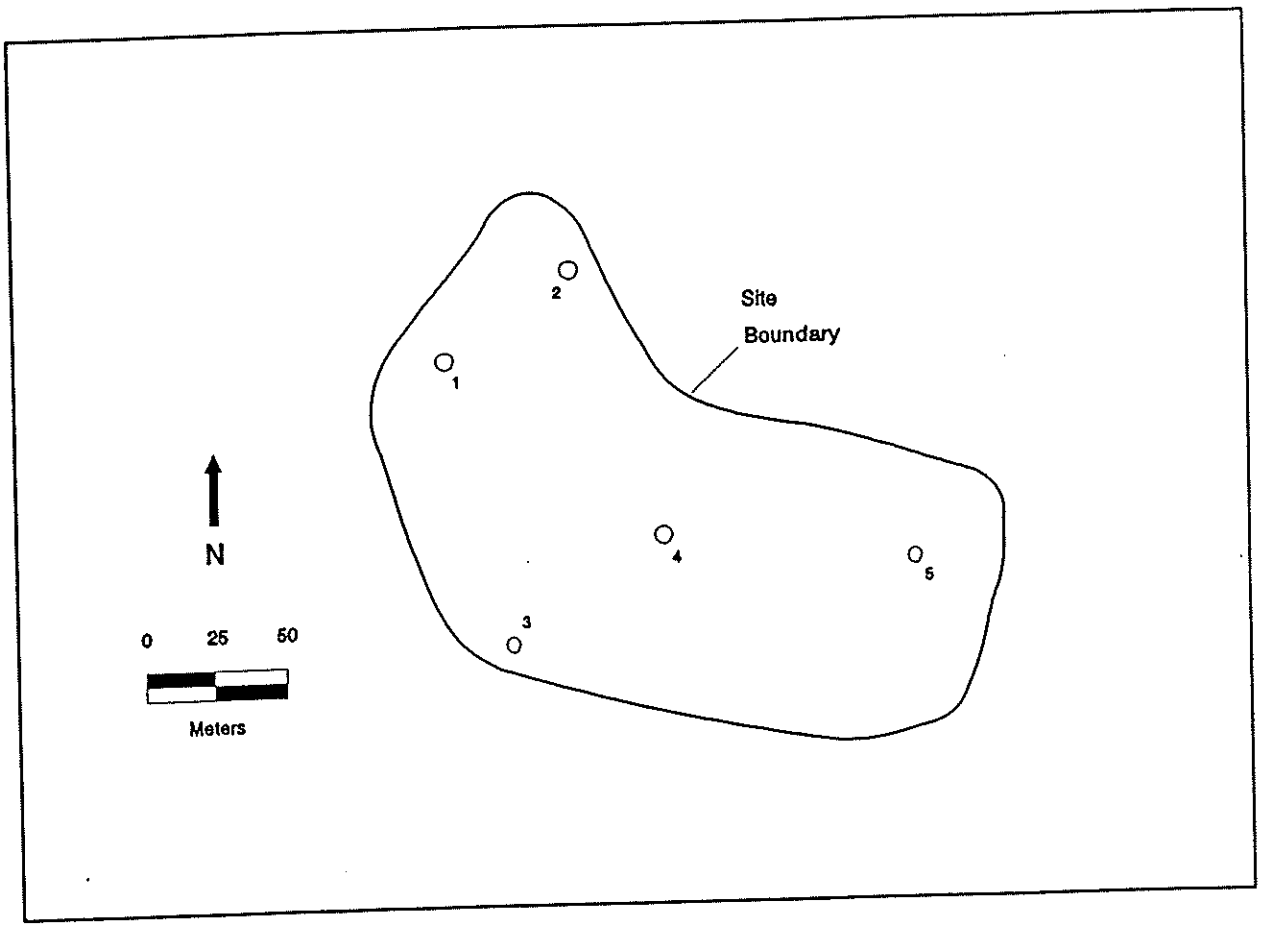


Figure 176 Tm-Az-29 Architectural Features

TABLE 59 Tm-Az-29 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	4 x 4	0 6	Light	None	Residential, Aztec 3
Mound 2	4 x 4	0 6	Light	None	Residential, Aztec 3
Mound 3	4 x 3	0 6	Light	None	Residential, Aztec 3 and 4
Mound 4	4 x 4	0 6	Light	None	Residential; Aztec 3
Mound 5	4 x 3	0 6	Light	None	Residential, Aztec 2~~???~~ and 4

Tm-Az-30

Classification. Hamlet, 55-138 people.

Natural Setting· 2280-2290 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan Situated on moderately sloping ground west of a major barranca Shallow soil cover. Slight erosion

Modern Land Use Irrigated cultivation, predominantly of nopal and maguey at the time of survey in fields equipped with earth banks and maguey bancals, some fields also lying fallow.

Archaeological Remains: Light-to-moderate surface pottery (Aztec 3) and scattered basalt artifacts over an area of 5 5 hectares Five residential mounds are present on the western half of the site (Figure 177), as described in Table 60

TABLE 60 Tm-Az-30 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	10 x 8	NR	Light	None	Residential
Mound 2	10 x 8	NR	Light	None	Residential
Mound 3	10 x 8	NR	Light	None	Residential
Mound 4	5 x 4	0 6	Light	None	Residential
Mound 5	4 x 4	0 6	Light	None	Residential

Note· NR means "not recorded "

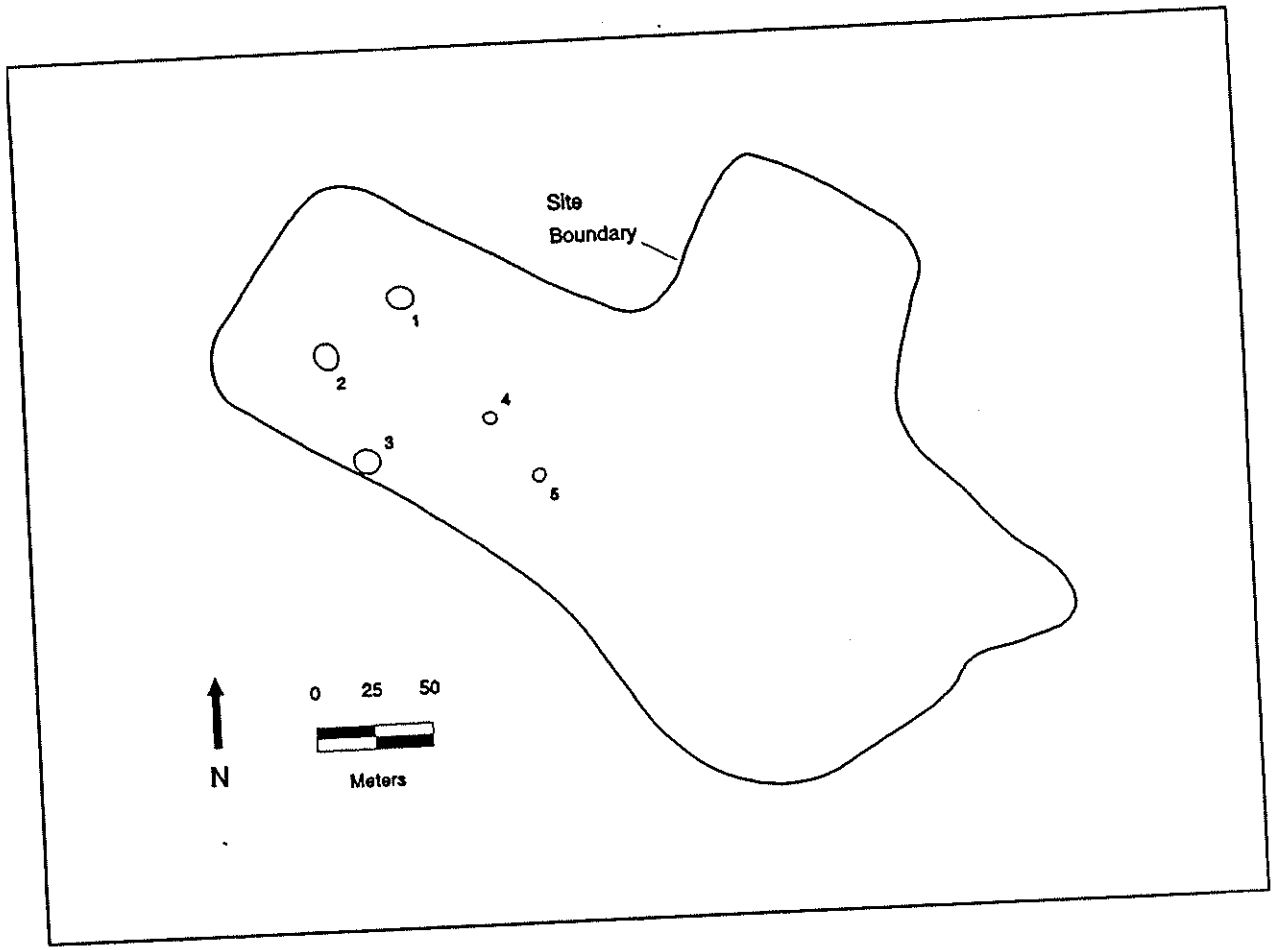


Figure 177 Tm-Az-30 Architectural Features

Tm-Az-31

Classification: Small dispersed village, 150-300 people.

Natural Setting: 2250-2265 meters, on the Thin Soil Alluvium and Smooth Lower Piedmont northeast of Lake Xaltocan. Situated on flat to gently sloping ground. Shallow to medium soil cover. Slight, localized erosion.

Modern Land Use: Grazing and rainfall cultivation in the northern and eastern portions of the site, with maguey and barley grown in fields equipped with drainage ditches, earth banks, and maguey bancals. Rainfall cultivation of maize, barley, habas, maguey, and oats in the southern part of the site. Highway 85 runs north-south through the western portion of the site.

Archaeological Remains: Very light surface pottery (including Aztec 2), mixed with very light rock rubble and obsidian and a few basalt tools, over an area of 20.5 hectares. Survey personnel noted the poorly preserved remains of 30 mounds, most defined by clearly delineated concentrations of cultural material. Only three mounds were preserved well enough to enable measurement. Two measured 6 by 4 meters at the base and about 0.8 meter in height, the third measuring 12 by 4 meters at its base and 1.0 meter in height, with the height of all three due largely to concentrations of rubble. All mounds-concentrations featured Late Aztec ceramics; five also featured Aztec 2 ceramics and 14 included very small amounts of Mazapan pottery. Mixed with similarly light Terminal Formative (Tm-Tf-28) and Early Toltec (Tm-Et-14) remains, and light Mazapan (Tm-Lt-31) material.

Tm-Az-32

Classification: Small hamlet, 5-10 people.

Natural Setting: 2255 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan. Situated on gently sloping ground. Shallow to medium soil cover. Virtually no erosion.

Modern Land Use: Rainfall cultivation, with maize, barley, and oats present at the time of survey in fields equipped with maguey bancals.

Archaeological Remains: Very light-to-light surface pottery and scattered obsidian artifacts over an area of 0.5 hectare. A slight rise, probably representing the disturbed remains of one heavily plowed, poorly preserved residential mound, is the main component of this site; due to its condition, mound dimensions were not recorded. Most of the cultural material occurs on the mound.

Tm-Az-33

Classification: Hamlet, 12-30 people.

Natural Setting: 2270 meters, on the Smooth Lower Piedmont north of Lake Xaltocan. Situated on gently sloping ground. Medium to deep soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation in fields equipped with stone terraces, as well as nopal and maguey

bancals. At the time of survey most fields were lying fallow, though a few were planted in maize.

Archaeological Remains: Very light-to-light surface pottery over an area of 6.0 hectares. No structural remains.

Tm-Az-34

Classification: Hamlet, 12-30 people.

Natural Setting: 2250-2275 meters, on the Thin Soil Alluvium north of Lake Xaltocan. Situated on gently sloping ground composed of mixed soil and ground tepetate. Medium soil cover. Generally very slight or no erosion

Modern Land Use: Rainfall cultivation in fields equipped with earth banks, stone terraces, and maguey bancals. Fields lying fallow or planted in maguey predominated at the time of survey, though maize and oats also were present. Site lies within the northern edge of the modern town of San Lucas Xolox, which partially obscures prehispanic remains.

Archaeological Remains: Very light-to-light surface pottery (including Aztec 2) and obsidian artifacts, mixed with locally light-to-substantial rock rubble, over an area of 6.0 hectares. No structural remains. Mixed with very light Terminal Formative (Tm-Tf-29) material, light Teotihuacan (Tm-Cl-17) remains, and light-to-moderate Mazapan (Tm-Lt-32) material. Tm-Az-34 represents a definable concentration of Aztec (mainly Aztec 2 and 3) remains among several fields with very sparse Aztec material.

Tm-Az-35

Classification: Small hamlet, 5-10 people.

Natural Setting: 2235 meters, on the Saline Lakeshore Plain north of Lake Xaltocan. Situated on flat ground. Deep soil cover. No erosion.

Modern Land Use: Rainfall cultivation in fields equipped with drainage ditches and earth banks, though the area was lying fallow at the time of survey.

Archaeological Remains: Very light-to-light surface pottery over an area of 0.5 hectare. A concentration of ceramics on a slight rise probably represents the remains of one poorly preserved residential mound; due to its condition, no dimensions were recorded. Most of the cultural material at this site occurred on the mound concentration.

Tm-Az-36

Classification: Small hamlet, 5-10 people.

Natural Setting: 2300 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan. Situated on moderately sloping ground northwest of a large barranca. Shallow soil cover. Slight erosion

Modern Land Use Rainfall cultivation, with maize present at the time of survey.

Archaeological Remains: Light-to-moderate surface pottery (Aztec 3) over an area of 0.1 hectare One residential mound is present, measuring 6 by 4 meters at its base and 0.8 meter in height; a fragment of floor is visible on the top of the mound.

Tm-Az-37

Classification: Small hamlet, 10-25 people

Natural Setting: 2285 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan Situated on moderately sloping ground immediately south of a large barranca. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maize present at the time of survey in a field equipped with earth banks and stone terraces.

Archaeological Remains: Light-to-moderate surface pottery (Aztec 3) over an area of 1.0 hectare. No structural remains.

Tm-Az-38

Classification: Small hamlet, 10-25 people.

Natural Setting: 2315 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan. Situated on gently sloping ground leading to a barranca which forms the northern boundary of the site. Basalt cobbles and outcrops occur nearby. Shallow soil cover. Slight, localized erosion.

Modern Land Use: Rainfall cultivation, predominantly of barley at the time of survey in fields equipped with maguey bancals. Part of the site also is used for grazing.

Archaeological Remains: Variable light-to-moderate surface pottery over an area of 1.0 hectare. No structural remains. Mixed with light Terminal Formative (Tm-Tf-31) and Mazapan (Tm-Lt-35) material and moderate Teotihuacan (Tm-Cl-22) remains.

Tm-Az-39

Classification: Hamlet, 38-75 people.

Natural Setting: 2310 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan. Situated on moderately sloping ground immediately south of a large barranca. Shallow to medium soil cover. Slight, localized erosion.

Modern Land Use: Rainfall cultivation, predominantly of barley, but with maize and oats present as well at the time of survey in fields equipped with earth banks.

Archaeological Remains: Generally moderate surface pottery, fluctuating between light and heavy, over an area of 1.5 hectares. No structural remains. Mixed with moderate Teotihuacan (Tm-Cl-21) material.

Tm-Az-40

Classification: Hamlet, 40-100 people.

Natural Setting: 2300-2310 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan. Situated on moderately sloping ground. Shallow soil cover. Slight, localized erosion.

Modern Land Use: Rainfall cultivation, predominantly of barley but with some fields planted in maize or oats (or lying fallow) at the time of survey in fields equipped with earth banks.

Archaeological Remains: Light-to-moderate surface pottery over an area of 4.0 hectares. No structural remains.

Tm-Az-41

Classification: Hamlet, 19-38 people.

Natural Setting: 2335-2340 meters, on an isolated hill in the Lower Piedmont northeast of Lake Xaltocan Situated on gently sloping ground. Shallow soil cover. Slight, localized erosion.

Modern Land Use: Rainfall cultivation, with both oats and barley present at the time of survey in fields equipped with maguey bancals.

Archaeological Remains: Light surface pottery over an area of 3.8 hectares. No structural remains. Mixed with similarly dense Mazapan (Tm-Lt-34), very light Terminal Formative (Tm-Tf-30), and moderate Teotihuacan (Tm-Cl-20) material.

Tm-Az-42

Classification: Hamlet, 50-125 people.

Natural Setting: 2320 meters, on top of an isolated hill in the Lower Piedmont northeast of Lake Xaltocan. Situated on gently sloping ground. Shallow soil cover. Slight, localized erosion.

Modern Land Use: Grazing Also some rainfall cultivation, with nopal and maguey present at the time of survey.

Archaeological Remains: Generally light-to-moderate surface pottery (Aztec 3) over an area of 5.0 hectares. Six residential mounds are present, lying in roughly a north-south alignment, as described in Table 61.

TABLE 61 Tm-Az-42 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	6 x 4	0 6	Light	None	Residential
Mound 2	4 x 4	0 6	Light	None	Residential
Mound 3	4 x 3	0 4	Light	None	Residential
Mound 4	4 x 4	0 4	Light	None	Residential
Mound 5	4 x 4	0 4	Light	None	Residential
Mound 6	4 x 3	0 3	Light	None	Residential

Tm-Az-43

Classification: Small hamlet, 1-3 people.

Natural Setting: 2270 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on generally flat ground about 200 meters south of the Avenidas de Pachuca barranca. Medium to deep soil cover. No erosion

Modern Land Use Rainfall cultivation, with maize, beans, maguey, and nopal present at the time of survey in fields equipped with earth banks and maguey bancals.

Archaeological Remains: Very light-to-light surface pottery over an area of 0.5 hectare. No structural remains. Mixed with light-to-moderate Late Toltec (Tm-Lt-36) material.

Tm-Az-44

Classification: Hamlet, 25-50 people.

Natural Setting: 2290 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on gently sloping ground roughly 100 meters south of the Avenidas de Pachuca barranca. Generally medium to deep soil cover. No erosion.

Modern Land Use: Rainfall cultivation, with maguey and nopal present at the time of survey in fields equipped with stone terraces. Site lies among house lots in the modern village of Tepojaco.

Archaeological Remains: Generally light surface pottery, increasing to heavy in places on the southeastern part of the site, over an area of 5.0 hectares. Scattered obsidian artifacts also present. No structural remains. Mixed with very light-to-light Teotihuacan (Tm-Cl-30) and moderate-to-heavy Late Toltec (Tm-Lt-38) material.

Tm-Az-45

Classification: Hamlet, 25-50 people.

Natural Setting: 2280 meters, on an isolated hill on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on a generally flat vesicular basalt outcrop slightly north of the Avenidas de Pachuca barranca in an area of exposed bedrock and general rock debris. Very shallow soil cover. Moderate erosion.

Modern Land Use: Rainfall cultivation, predominantly of maguey and nopal at the time of survey in fields equipped with earth banks and maguey bancals.

Archaeological Remains: Moderate-to-heavy surface pottery over an area of 0.5 hectare. No structural remains. Mixed with very light Terminal Formative (Tm-Tf-38) and light-to-moderate Teotihuacan (Tm-Cl-31) material.

Tm-Az-46

Classification: Small hamlet, 8-20 people.

Natural Setting: 2290 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on a gently sloping outcrop of vesicular basalt immediately south of the lake Presa el Manantial. Very shallow to shallow soil cover, with much exposed bedrock towards the western end of the site. Slight erosion.

Modern Land Use: Rainfall cultivation in surrounding fields, with both barley and maize present at the time of survey Site lies within the modern village of El Manantial.

Archaeological Remains: Very light-to-light surface pottery and a few obsidian blades over an area of 4.0 hectares. No structural remains. Mixed with very light Teotihuacan (Tm-Cl-32) and light-to-moderate Late Toltec (Tm-Lt-39) material.

Tm-Az-47

Classification: Small hamlet, 5-10 people.

Natural Setting: 2290 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on gently sloping ground on the northwestern edge of the Lake Presa el Manantial. Shallow soil cover. Virtually no erosion.

Modern Land Use: A limited amount of rainfall cultivation, with nopal present at the time of survey. Irrigation cultivation of barley and maize occurs immediately north of the site.

Archaeological Remains: Moderate-to-heavy surface pottery, light-to-substantial rock rubble, and scattered obsidian blades over an area of 0.1 hectare. The site is oriented around the remains of a single residential mound which lies near its center; the mound measures 3 by 3 meters at its base and 0.5 meter in height.

Tm-Az-48

Classification: Hamlet, 40-80 people.

Natural Setting: 2290 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on gently sloping ground slightly north of the Avenidas de Pachuca barranca. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maize and nopal present at the time of survey.

Archaeological Remains: Moderate-to-heavy surface pottery over an area of 0.8 hectare. No structural remains.

Tm-Az-49

Classification: Small hamlet, 3-5 people.

Natural Setting. 2285 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on flat ground north of the lake Presa el Manantial. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with beans present at the time of survey in a field equipped with earth banks.

Archaeological Remains: Light surface pottery, and substantial rock rubble, over an area of 0.5 hectare. No structural remains.

Tm-Az-50

Classification: Hamlet, 60-120 people.

Natural Setting: 2300-2305 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on a flat to gently sloping outcrop of vesicular basalt north of the lake Presa el Manantial. Shallow soil cover. Slight, localized erosion.

Modern Land Use: Rainfall cultivation, predominantly of barley and nopal at the time of survey, in fields equipped with earth banks and maguey bancals.

Archaeological Remains: Light surface pottery and a few obsidian blades over an area of 12.0 hectares. Slight rises (1.5 meters or less in height) in agricultural fields probably represent the poorly preserved remains of 12 residential mounds dating to both Teotihuacan and Aztec occupations. Mixed with moderate Teotihuacan (Tm-Cl-34) and light-to-moderate Late Mazapan (Tm-Lt-40) material.

Tm-Az-51

Classification: Hamlet, 15-30 people.

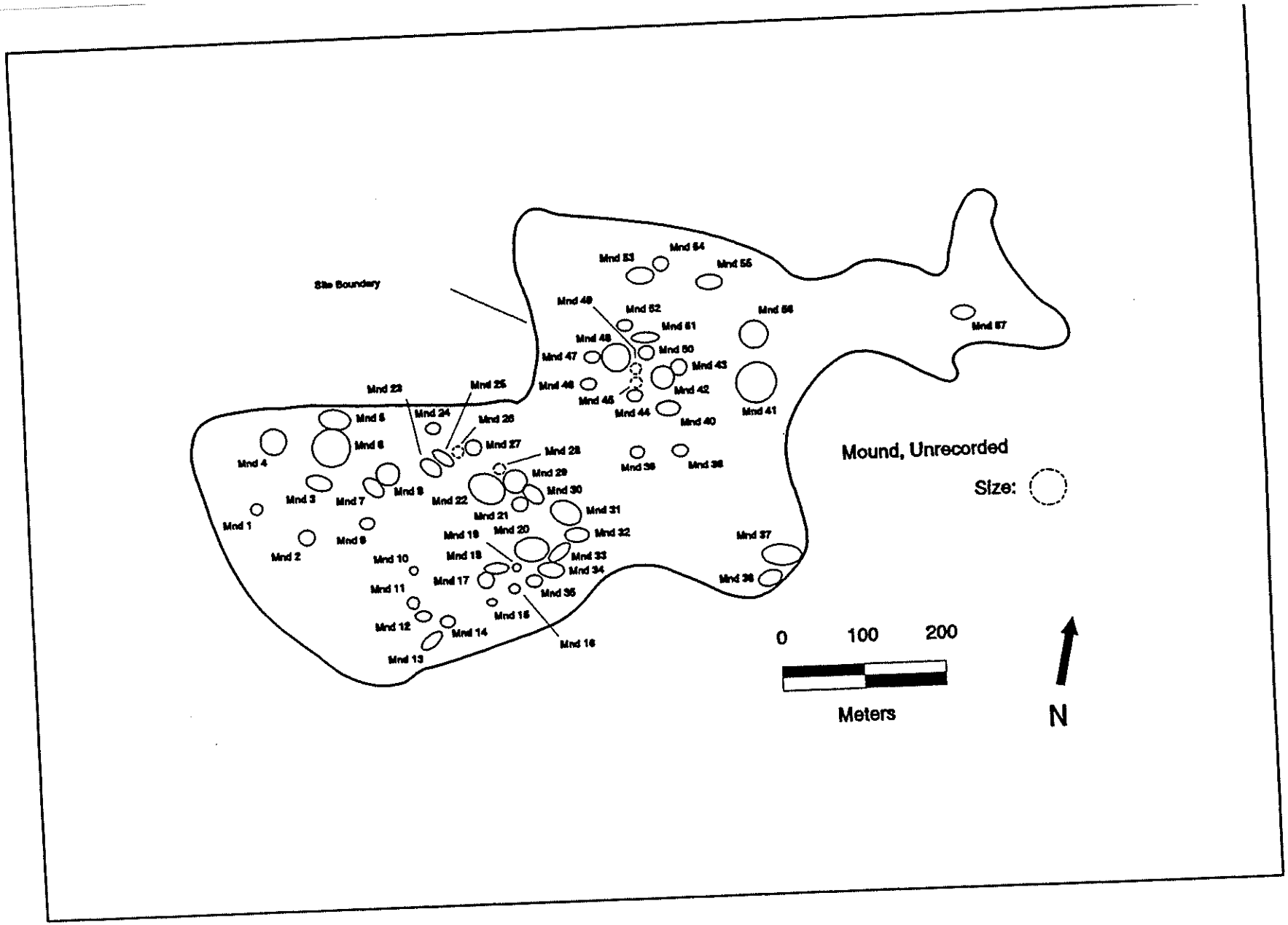


Figure 178 Architectural Features, Tm-Lt-45 (T.A. 52)

Natural Setting: 2305-2315 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on generally flat ground north of the lake Presa el Manantial. Very shallow soil cover, with some exposed bedrock. Extensive erosion.

Modern Land Use: Rainfall cultivation, with barley, maguey, and nopal present at the time of survey.

Archaeological Remains: Generally light surface pottery, light-to-substantial rock rubble, and a few obsidian blades over an area of 4.0 hectares. Artifact concentrations on slight rises in the southwestern corner of the site probably represent the poorly preserved remains of three residential mounds; due to their poor condition, mound dimensions were not recorded. Mixed with moderate-to-heavy Late Toltec (Tm-Lt-41) material.

Tm-Az-52 (see Figure 178, Lt 45)

Classification: Large dispersed village, 400-600 people.

Natural Setting: 2310-2320 meters, on the Thin Soil Alluvium west of Barranca Tecorral. Situated on a gently sloping vesicular basalt outcrop above agricultural fields. Generally very shallow soil cover, becoming medium in places. Slight, localized erosion, with additional damage from barrancas and washes which cut through the site.

Modern Land Use: Predominantly grazing, with some rainfall cultivation of barley, maize, and maguey at the time of survey. Much of this site is not cultivable due to the vesicular basalt outcrop. About 20 percent of the site lies within the modern villages of Presa del Rey (to the east) and Mogotes (to the northwest), and as a result portions of the site boundary are obscured. Several modern structures occur within the boundary of the site. The ruins of three historic structures occur in the western part of the site.

Archaeological Remains: Generally light surface pottery, and variable rock rubble (ranging from sparse to heavy), over an area of 37.0 hectares. A total of 57 mounds are present, showing evidence of both Late Toltec and Aztec occupations (see Figure 178). Several of the mounds appear to have had primarily ceremonial or administrative functions, including Mounds 5, 6, 8, 9, 30, 32, 33, 34, 37, 42, 43, and 48. This large proportion of administrative-ceremonial structures suggests that this site may have served a larger, hinterland population both during the Late Toltec and Aztec occupations, particularly given the relatively few residential mounds present on the site. Nevertheless, survey crews also encountered large amounts of residential refuse—including manos, metates, basalt scrapers, and assorted chipped chert and obsidian artifacts Mixed with variably very light-to-heavy Late Toltec (Tm-Lt-45) and light Teotihuacan (Tm-Cl-35) material.

Tm-Az-53

Classification: Small hamlet, 5-10 people.

Natural Setting: 2315 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on gently to moderately sloping ground on the flank of a small hill, near the hilltop and overlooking a deep soil plain. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maguey present at the time of survey.

Archaeological Remains: Very light-to-light surface pottery, substantial-to-heavy rock rubble, and a few ground stone artifacts over an area of 1.5 hectares. One large residential mound is present, measuring 30 by 23 meters at its base and 1.0 meter in height.

Tm-Az-54

Classification: Hamlet, 25-50 people.

Natural Setting: 2310 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on gently sloping ground slightly north of the large barranca which empties west into the lake Presa el Manantial Shallow soil cover. Severe erosion.

Modern Land Use: A modern road, generally running north-south, cuts through the length of the site. No use occurred on the site itself, though rainfall cultivation of barley was present at the time of survey in surrounding fields.

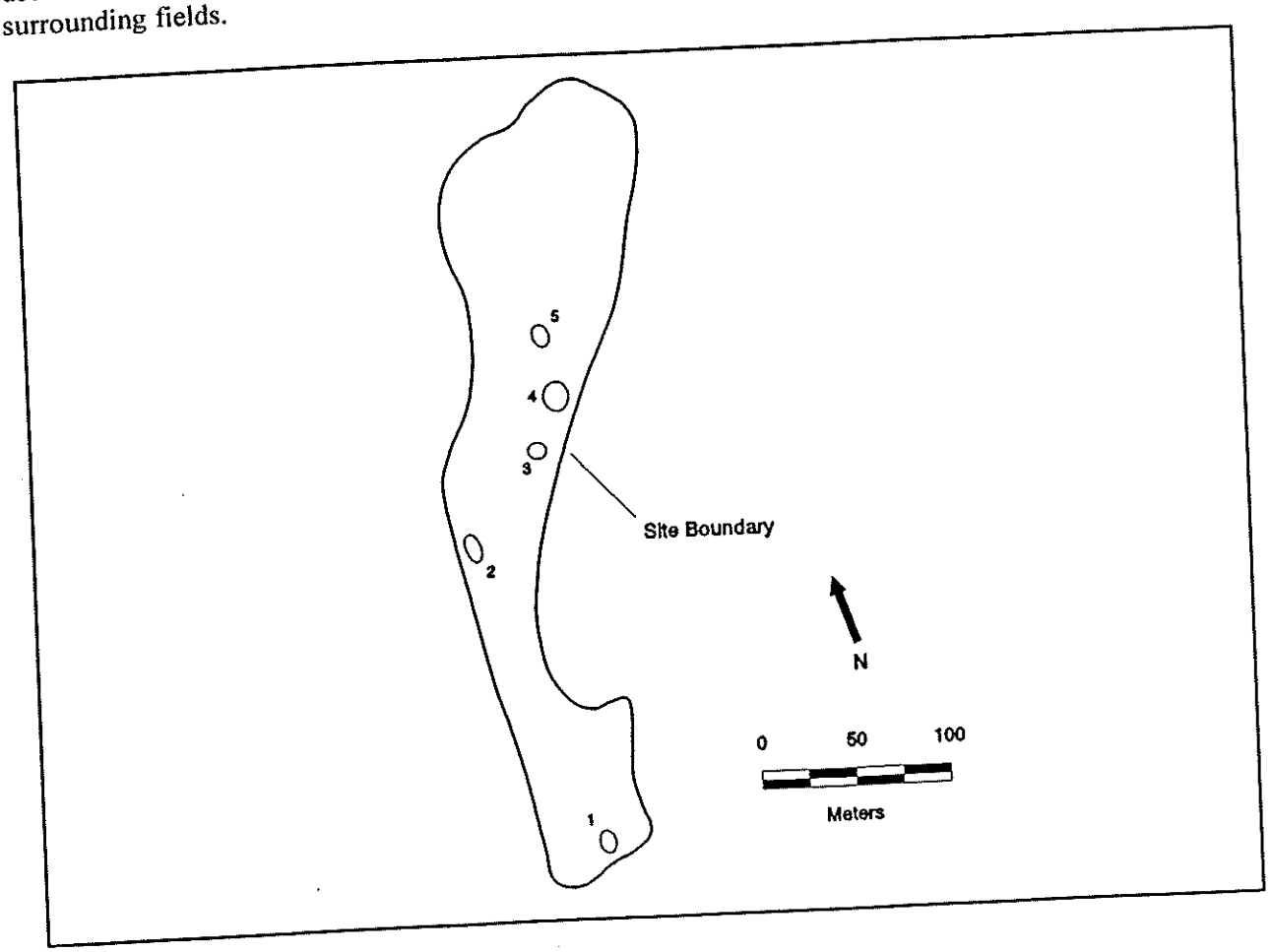


Figure 179 Tm-Az-54 Architectural Features

Archaeological Remains: Generally very light-to-light surface pottery, rock rubble ranging in density from

substantial to heavy, and scattered obsidian artifacts over an elongated area of 3.0 hectares. The remains of five residential mounds are present (Figure 179), arranged in a north-south alignment along the long axis of the site, as described in Table 62.

TABLE 62 Tm-Az-54 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	12 x 8	0 2	Very light	Heavy	Residential
Mound 2	14 x 6	0 8	Moderate	Heavy	Residential; very light obsidian also present, road cuts through mound
Mound 3	9 x 7	0 1	Very light	Substantial	Residential
Mound 4	15 x 12	0 1	Light	Heavy	Residential
Mound 5	11 x 8	0 2	None	Heavy	Residential

Tm-Az-55

Classification: Small hamlet, 7-18 people.

Natural Setting: 2305 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on a flat vesicular basalt outcrop which rises 1 to 2 meters above the surrounding level ground, north of a large barranca which drains towards the lake Presa el Manantial. Generally shallow to medium soil cover. Slight erosion.

Modern Land Use: Primarily grazing, with part of the site used for rainfall cultivation of maguey. Surrounding fields used for rainfall cultivation of barley at the time of survey. A modern road lies immediately south of the site.

Archaeological Remains: Very light-to-light surface pottery, a few obsidian and other lithic artifacts (chert, quartz, and basalt), and generally substantial rock rubble (ranging from light to heavy) over an area of 3.5 hectares. No structural remains. Mixed with moderate-to-heavy Teotihuacan (Tm-Cl-36) material.

Tm-Az-56

Classification: Questionable. Probably a briefly occupied house lot or small hamlet. Population undetermined.

Natural Setting: 2300 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on generally flat ground north of a large barranca which empties into the lake Presa el Manantial. Generally medium soil cover. Virtually no erosion.

Modern Land Use: Rainfall cultivation, with barley and wheat present at the time of survey.

Archaeological Remains: Very light surface pottery over an area of 0.5 hectare. No structural remains Mixed with similarly sparse Terminal Formative (Tm-Tf-36) and moderate Teotihuacan (Tm-Cl-37) material.

Tm-Az-57

Classification: Hamlet, 30-75 people.

Natural Setting: 2295 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on gently sloping ground slightly east of a large barranca which empties into the lake Presa el Manantial. Medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with wheat present at the time of survey.

Archaeological Remains: Light-to-moderate surface pottery and substantial rock rubble over an area of 3 0 hectares. A concentration of artifacts and rubble on a slight rise probably represents the remains of one poorly preserved residential mound; due to its condition, no dimensions were recorded.

Tm-Az-58

Classification: Hamlet, 45-113 people.

Natural Setting: 2305 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on flat ground immediately south of a large barranca which empties northward into the lake Presa el Manantial. Medium soil cover. No erosion.

Modern Land Use: Rainfall cultivation, with barley and wheat present at the time of survey. The site lies on the southern edge of the modern village of Tepojaco.

Archaeological Remains: Light-to-moderate surface pottery over an area of 4.5 hectares. One mound is visible in the northern portion of the site, though due to extremely poor preservation no measurements were recorded. Mixed with very light Teotihuacan (Tm-Cl-29) material.

Tm-Az-59

Classification: Hamlet, 16-40 people.

Natural Setting: 2305 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on flat ground south of a large barranca which empties northward into the lake Presa el Manantial. Medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with both maize and beans present at the time of survey. Northwestern portion of site intersects the eastern edge of the modern village of Tepojaco. A railroad borders the site to the southeast.

Archaeological Remains: Very light-to-light surface pottery over an elongated area of 8.0 hectares along a

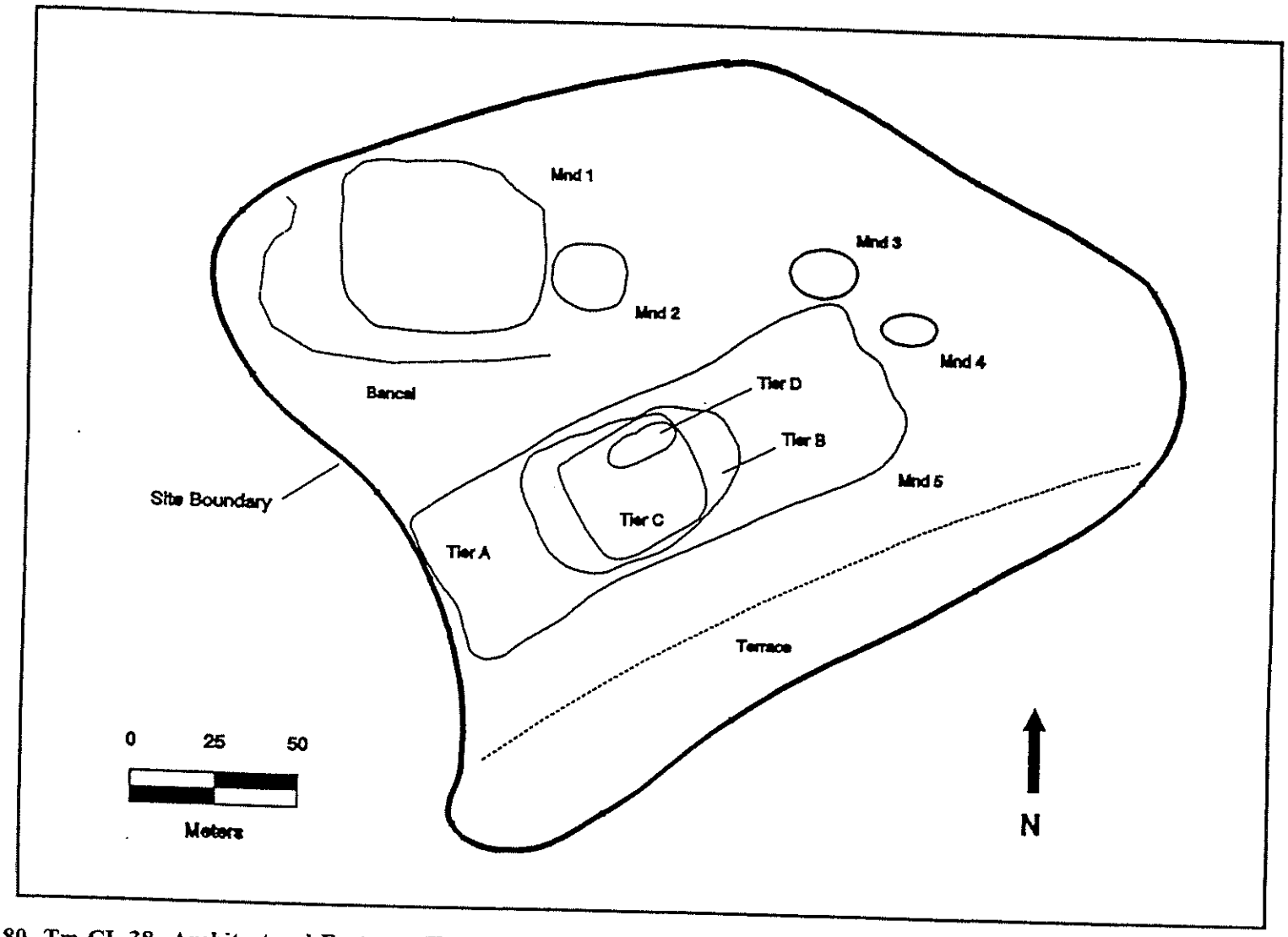


Figure 180 Tm-CL-38 Architectural Features (Tm-Az-60)

northeast-southwest axis. No structural remains. Mixed with very light Terminal Formative (Tm-Tf-35) and Classic (Tm-Cl-28) remains, and light Late Toltec (Tm-Lt-48) material.

Tm-Az-60

Classification: Small dispersed village, 78-180 people.

Natural Setting: 2300-2310 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on a level outcrop of vesicular basalt, southwest of a large barranca which drains westward into the lake Presa el Manantial. Shallow to medium soil cover. Slight to moderate erosion.

Modern Land Use: Floodwater irrigated and rainfall cultivation, with maize and barley present at the time of survey in fields equipped with drainage ditches, stone terraces, and maguey bancals. Part of the site is overlain by the modern village of Chopo.

Archaeological Remains: Generally light surface pottery, becoming moderate in places, over an area of 15 5 hectares. Additional remains include obsidian and basalt artifacts, figurines, censer fragments, and ground stone tools; substantial-to-heavy rock rubble occurs on the northeastern part of the site. Site is defined by an elongated scatter, with its major axis stretching north to south. Five mounds occur in the northeastern part of the site, four residential and one ceremonial, with Teotihuacan, Late Toltec, and Aztec remains associated. Four more mounds are visible near the center of the site. Based on the artifacts present, three of this central group of mounds probably are residential, the fourth likely ceremonial—though preservation was so poor that no dimensions were recorded. Mixed with similarly dense Late Toltec (Tm-Lt-47) and moderate Teotihuacan (Tm-Cl-38) and Late Toltec (Tm-Lt-46) material.

Tm-Az-61

Classification: Small hamlet, 10-20 people.

Natural Setting: 2305 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on gently sloping ground just west of a large barranca. Generally deep soil cover. Moderate erosion.

Modern Land use: Rainfall cultivation.

Archaeological Remains: Generally light surface pottery over an area of 2.0 hectares. Site consists of two definite concentrations of pottery connected by a lighter scatter. No structural remains

Tm-Az-62

Classification: Hamlet, 50-100 people.

Natural Setting: 2320 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on gently sloping ground south of a large barranca which flows northwest towards the lake Presa el Manantial, and between two smaller barrancas to the east and west. Medium to deep soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maguey, maize, and beans present at the time of survey.

Archaeological Remains: Light surface pottery over an area of 10.0 hectares. The remains of five poorly preserved Aztec mounds are present, their dimensions not measured due to their poor state of preservation. A number of Aztec artifact concentrations may signify the remains of additional mounds which historic agricultural activities have destroyed. Mixed with similarly dense Terminal Formative (Tm-Tf-34) and Late Mazapam (Tm-Lt-55) remains, and moderate Teotihuacan (Tm-Cl-27) material.

Tm-Az-63

Classification: Small hamlet, 10-25 people.

Natural Setting. 2310-2315 meters, on the Thin Soil Alluvium northeast of Lake Xaltocan. Situated on flat to gently sloping ground. Shallow to medium soil cover. Slight erosion.

Modern Land Use. Rainfall cultivation. At the time of survey, some of the fields were planted in maize, barley, and beans, while others were lying fallow.

Archaeological Remains: Very light-to-light surface pottery, and generally light rock rubble (becoming substantial in places), over an area of 5.0 hectares. No definite structural remains are visible, but three concentrations of pottery and rubble in the west-central portion of the site may represent the poorly preserved remains of Late Mazapan and Aztec mounds. Mixed with slightly heavier Late Toltec (Tm-Lt-51) material.

Tm-Az-64

Classification: Small hamlet, 8-15 people.

Natural Setting: 2345 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan. Situated on gently sloping ground. Shallow soil cover. Slight to moderate erosion.

Modern Land Use: Rainfall cultivation, with beans present at the time of survey.

Archaeological Remains: Light surface pottery over an area of 1.5 hectares. No structural remains.

Tm-Az-65

Classification: Hamlet, 20-50 people.

Natural Setting: 2340 meters, on the Smooth Lower Piedmont northwest of Cerro Santa Paula. Situated on gently sloping ground between two dammed barrancas at the base of a small hill. Generally shallow soil cover, with both exposed basalt bedrock and tezontle present. Slight, localized erosion.

Modern Land Use: Grazing. Also rainfall cultivation in the moist soil of the barrancas, with nopal, beans, and maize present at the time of survey.

Archaeological Remains: Light-to-moderate surface pottery over an area of 2.0 hectares. No structural remains. Mixed with Teotihuacan (Tm-Cl-25) material of approximate equal density.

Tm-Az-66

Classification: Questionable. Probably a briefly occupied house or small hamlet. Population undetermined.

Natural Setting: 2375 meters, on the Smooth Middle Piedmont northeast of Lake Xaltocan. Situated on gently sloping ground. Generally very shallow soil cover. Moderate erosion.

Modern Land Use: Rainfall cultivation, with maguey and nopal present at the time of survey. Part of the site also is used for grazing.

Archaeological Remains: Generally very light surface pottery, and substantial rock rubble, over an area of 0.5 hectare. No structural remains, although one isolated concentration of artifacts and rubble is visible in a wash.

Tm-Az-67

Classification: Small hamlet, 8-15 people.

Natural Setting: 2375 meters, on the Smooth Middle Piedmont northeast of Lake Xaltocan. Situated on flat ground. Shallow to medium soil cover. Moderate erosion.

Modern Land Use: Rainfall cultivation, with maize and beans present at the time of survey (part of the site also lying fallow).

Archaeological Remains: Generally light surface pottery over an area of 1.5 hectares. No structural remains.

Tm-Az-68

Classification: Hamlet, 18-35 people.

Natural Setting: 2385 meters, on the Smooth Middle Piedmont northeast of Lake Xaltocan. Situated on gently to moderately sloping ground on the eastern flank of a small hill. Generally very shallow soil cover Slight to moderate erosion.

Modern Land Use: Rainfall cultivation, with nopal present at the time of survey. Part of the site also used for grazing.

Archeological Remains: Light-to-moderate surface pottery over an area of 1.5 hectares, with the heavier density found in a 0.5 hectare concentration in the east-central part of the site. No structural remains.

Tm-Az-69

Classification: Hamlet, 40-80 people.

Natural Setting: 2360-2370 meters, on the Smooth Middle Piedmont north of Cerro Santa Paula. Situated on moderately sloping ground at the base of a small hill. Generally very shallow soil cover, with some exposed bedrock. Very slight erosion.

Modern Land Use: Rainfall cultivation, with nopal present at the time of survey.

Archaeological Remains: Generally very light surface pottery, becoming light-to-moderate in a few places, over an area totalling 1.5 hectares. Rock rubble also is present, in densities ranging from sparse to substantial, over the same area. Concentrations of artifacts and rubble on slight rises may indicate the poorly preserved remains of eight mounds—though due to the high degree of disturbance no measurements were recorded.

Tm-Az-70

Classification: Small dispersed village, 145-275 people.

Natural Setting: 2330 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan. Situated on gently sloping ground. Shallow soil cover. Slight, generally localized erosion, becoming more severe (both sheet and gully erosion) along the southern and southeastern fringes of the site.

Modern Land Use: Rainfall cultivation, with beans and maize present at the time of survey. A modern road cuts through the northern end of the site.

Archaeological Remains: Site covers 27.0 hectares in all, including very light surface pottery over an area of 25.0 hectares and light-to-moderate pottery on another 2.0 hectares. No definite structural remains, though eight concentrations of artifacts on the eastern part of the site may represent the poorly preserved remains of residential mounds.

Tm-Az-71

Classification: Hamlet, 28-70 people.

Natural Setting: 2340-2360 meters, on the Smooth Middle Piedmont north of Cerro Santa Paula. Situated on gently to moderately sloping ground at the base of a small hill. Generally medium soil cover, but varying from deep to exposed tepetate. Severe erosion.

Modern Land Use: Predominantly grazing. Also rainfall cultivation, with maguey, maize, and barley present at the time of survey

Archaeological Remains: Generally very light-to-light surface pottery over an area of 14.0 hectares. The site is an elongated scatter stretching from the southwest to the northeast. The remains of seven very poorly preserved mounds are present in the western half of the site; due to poor mound condition, no dimensions

were recorded. Mixed with light Late Mazapan (Tm-Lt-58) material.

Tm-Az-72

Classification: Small hamlet, 3-5 people.

Natural Setting: 2395 meters, on the Smooth Middle Piedmont north of Cerro Santa Paula. Situated on gently sloping ground at the base of a small hill. Shallow soil cover. Slight to moderate erosion.

Modern Land Use: Rainfall cultivation, with maize and barley present at the time of survey.

Archaeological Remains: Light surface pottery over an area of 0.5 hectare. No structural remains.

Tm-Az-73

Classification: Small nucleated village, 138-275 people.

Natural Setting: 2410-2420 meters, on the Smooth Middle Piedmont on the northern flank of Cerro Santa Paula. Situated on gently to moderately sloping ground at the base of a small hill presently being quarried for tezontle. A barranca borders the site on the east. Very shallow soil cover, with large areas of exposed tepetate. Slight to moderate erosion.

Modern Land Use: Predominantly grazing. Also rainfall cultivation, though associated fields were fallow at the time of survey.

Archaeological Remains: Moderate surface pottery over an area of 5.5 hectares. Two concentrations of ceramics in the southern part of the site may represent the remains of two former residential mounds, though due to their poor condition no measurements were recorded. Mixed with light-to-moderate Late Mazapan (Tm-Lt-60) material.

Tm-Az-74

Classification: Small hamlet, 3-5 people.

Natural Setting: 2440 meters, on the Smooth Middle Piedmont on the northern slope of Cerro Santa Paula. Situated on moderately sloping ground. Generally very shallow soil cover. Slight to moderate erosion.

Modern Land Use: Rainfall cultivation, with maize and beans present at the time of survey.

Archaeological Remains: Light surface pottery over an area of 0.5 hectare. No structural remains

Tm-Az-75

Classification: Small hamlet, 5-10 people.

Natural Setting: 2400 meters, on the Smooth Middle Piedmont northeast of Cerro Santa Paula. Situated on moderately sloping ground immediately east of a large barranca. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, although the marginal farmland associated with the site was lying fallow at the time of survey. Part of the site also is used for grazing.

Archaeological Remains: Moderate surface pottery, light-to-substantial rubble, and a few obsidian blades over an area of 0.2 hectare. One residential mound is present, measuring 13 by 11 meters at its base and 0 3 meters in height.

Tm-Az-76

Classification: Small hamlet, 5-10 people.

Natural Setting: 2390 meters, on the Smooth Middle Piedmont between Cerro Santa Paula and Cerro Verde. Situated on moderately sloping ground between two barrancas. Generally shallow to medium soil cover. Slight, localized erosion.

Modern Land Use: Grazing on the immediate site area. Rainfall cultivation in each of the neighboring barrancas, with earth banks and maguey bancals present for erosion control.

Archaeological Remains: Light surface pottery (Aztec 3), a few obsidian blades and scrapers, and generally light rubble over an area of 0.5 hectare. One mound is visible, measuring 24 by 16 meters at its base and 0 3 meter in height. Several other raised areas are present in nearby fields, but none are clearly defined or have prehispanic remains associated. Aztec artifacts on the mound are mixed with moderate Late Toltec (Tm-Lt-61) material.

Tm-Az-77

Classification: Hamlet, 32-80 people.

Natural Setting: 2360-2385 meters, on the Smooth Middle Piedmont between Cerro Santa Paula and Cerro Verde. Situated on gently sloping ground just above the junction where a tributary barranca joins Barranca Cerro Gordo. Springs lie about 100 meters southeast of the site. Shallow to medium soil cover. Slight, localized erosion.

Modern Land Use: Rainfall and floodwater irrigated cultivation, with both maize and barley present at the time of survey in fields equipped with drainage ditches and maguey bancals.

Archaeological Remains: Very light-to-light surface pottery, with scattered obsidian and ground stone tools and generally substantial rock rubble, over an area of 16.0 hectares. No structural remains. Mixed with similarly sparse Terminal Formative (Tm-Tf-32) and Mazapan (Tm-Lt-62) material, and moderate

Teotihuacan (Tm-Cl-24) remains.

Tm-Az-78

Classification: Questionable. Probably a briefly occupied single house lot or small hamlet. Population undetermined.

Natural Setting: 2375 meters, on the Smooth Middle Piedmont between Cerro Santa Paula and Cerro Verde. Situated on gently sloping ground just west of the northern "A" branch of Barranca Cerro Gordo. Shallow soil cover. Slight erosion.

Modern Land Use. Rainfall cultivation, with barley present at the time of survey in a field equipped with maguey bancals.

Archaeological Remains: Generally very light surface pottery, coupled with scattered obsidian artifacts, over a slight hollow area of 0.3 hectare. No structural remains.

Tm-Az-79

Classification: Hamlet, 15-30 people.

Natural Setting: 2390-2395 meters, on the Smooth Middle Piedmont between Cerro Santa Paula and Cerro Verde. Situated on gently sloping ground just southwest of Barranca Cerro Gordo. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maize and habas present at the time of survey in fields equipped with maguey bancals.

Archaeological Remains: Light surface pottery in a very even distribution over an area of 3.0 hectares. Scattered obsidian artifacts also present. No structural remains.

Tm-Az-80

Classification: Hamlet, 40-100 people.

Natural Setting: 2370 meters, on the Smooth Middle Piedmont between Cerro Santa Paula and Cerro Verde. Situated on gently to moderately sloping ground just east of Barranca Cerro Gordo. Medium to deep soil cover. No erosion.

Modern Land Use: Rainfall cultivation, with maize and barley present at the time of survey in fields equipped with earth banks and maguey bancals. Site shows evidence of heavy plowing over many years. A modern road obscures the western and southern edges of the site.

Archaeological Remains: Generally light-to-moderate surface pottery, along with very light obsidian blades and a few mano fragments, over an area of 4.0 hectares. One elongated rise about 82 meters long may represent the poorly preserved remains of a large mound. Neither the width nor height of this mound could

be measured with any certainty due to heavy disturbance—particularly plowing, which may have extended the length of the mound as well.

Tm-Az-81

Classification. Small dispersed village, 70-140 people. This site is heavily disturbed, primarily by the construction of the modern village, making any more detailed assessment of the archaeological remains impossible Because the survey crew was denied access to fields immediately east of the modern community, the existing site may be larger than that recorded.

Natural Setting: 2370-2380 meters, on the Smooth Middle Piedmont southwest of Cerro Verde. Situated on gently to moderately sloping ground 200 meters north of Barranca Cerro Gordo. Generally medium soil cover, becoming shallow in some places and deep in others. Slight erosion.

Modern Land Use: The northern two-thirds of the site lies within the modern village of Teopancala, which partially obscures prehispanic site boundaries. At the time of survey house lots were used for pasture and for rainfall irrigated cultivation of maguey, nopal, and maize; maguey bancals in several agricultural fields provide erosion control. The remainder of the site lies in deeper soil towards Barranca Cerro Gordo, and contained irrigated fields of maize and barley at the time of survey.

Archaeological Remains: Predominantly light surface pottery, increasing to moderate densities in localized areas, over a total area of 13.5 hectares. Variable rock rubble, reaching substantial densities in places, also occurs Two concentrations of obsidian, one in the northwestern portion of the site and the other in the south central portion (immediately south of Mound 3), appear to be workshops. A total of 17 mounds occur (Figure 180), their basic characteristics described in Table 63. Mounds 13, 14, 15, 16, and 17 show definite clustering and probably were the ceremonial-administrative center of the site during the Aztec occupation Unfortunately, the village and church currently obscuring much of the site were placed in the middle of this mound group. The main plaza for the Aztec settlement may be in the fields bordered by Mounds 4 and 13 on the south and Mound 6 on the north. Based on their arrangement, Mounds 13, 14, and 18 possibly served as the ceremonial center during Teotihuacan and possibly Toltec times. Mixed with similarly dense Mazapan (Tm-Lt-65) and moderate Teotihuacan (Tm-Cl-23) material.

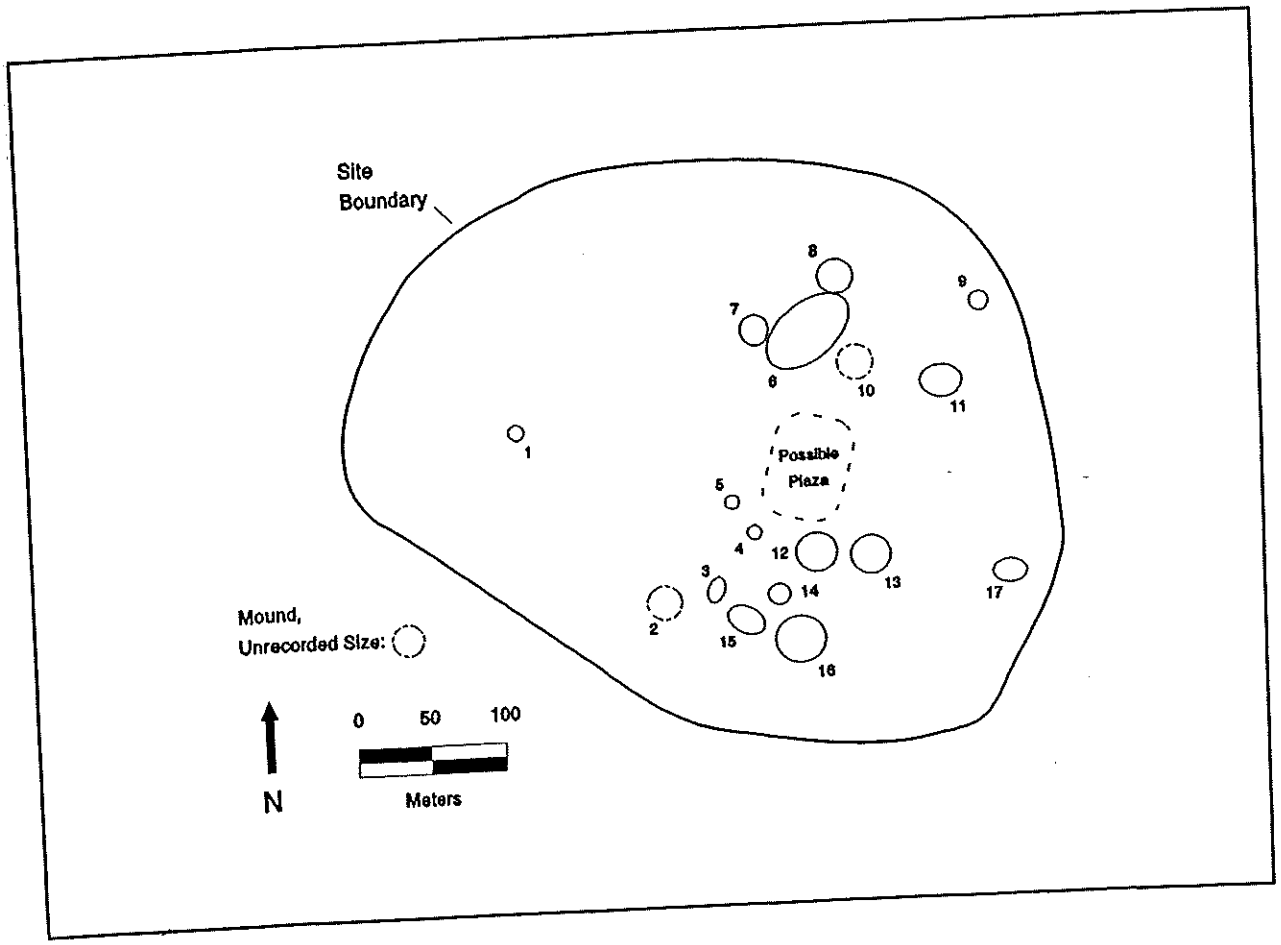


Figure 181 Tm-Az-81, Architectural Features

TABLE 63 Tm-Az-81 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	7 x 7	1 0	Light	None	Probably residential
Mound 2	22 x NR	0 3	Light	None	Probably residential; also Mazapan material; road cut has destroyed one side of mound
Mound 3	15 x 7	0 2	Light	None	Residential; also Mazapan material; obsidian tools and debitage (possible workshop)
Mound 4	5 x 5	0 2	Light	None	Residential; also Teotihuacan and Mazapan material
Mound 5	5 x 5	0 2	Light	None	Residential; also Teotihuacan and Mazapan material

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 6	NR	NR	Light	None	Residential; also Teotihuacan and Mazapan material; mound dimensions obscured by modern construction
Tier 1	60 x 30	0 5	Light	None	
Tier 2	3 x 3	0 2	Light	None	On southeastern corner of Tier 1
Mound 7	20 x 18	0 3	Light	None	Residential; also Teotihuacan and Mazapan material; partially covered by modern building
Mound 8	21 x 21	0 2	Light	None	Residential; also Teotihuacan and Mazapan material; partially covered by modern building
Mound 9	9 x 9	0 15	Light	None	Residential
Mound 10					Two-tiered ceremonial; also Teotihuacan and Mazapan material; located in church yard
Mound 11	NR	NR	NR	NR	Residential
Mound 12	26 x 19	0 2	Light	None	Residential; also Teotihuacan and Mazapan material
Mound 13	26 x 26	0 2	Light	None	Residential; also Teotihuacan and Mazapan material
Mound 14	25 x 25	0 2	Light	None	Residential; also Teotihuacan and Mazapan material
Mound 15	10 x 10	NR	Light	None	Residential; also Teotihuacan and Mazapan material; looted
Mound 16	25 x 15	0 2	Very light	None	Residential; also Teotihuacan and Mazapan material
Mound 17	30 x 30	0 3	Light	None	Platform; also Teotihuacan and Mazapan material; looted
Mound 18	22 x 15	1 5	Light	None	Probably ceremonial; also Teotihuacan and Mazapan; partially destroyed by road cut

Note: NR means "not recorded "

Tm-Az-82

Classification: Large nucleated village, 500-1000 people.

Natural Setting. 2360 meters, on the Smooth Middle Piedmont between Cerro Santa Paula and Cerro

Verde, on the southwestern flank of Cerro Chiconquiaco Situated on gently to moderately sloping ground on top of a dome-shaped deposit of volcanic gravel, between the northern branch of Barranca Cerro Gordo and Barranca Chiconquiaco. Exposed basalt occurs in the beds of the barrancas themselves Generally shallow soil cover, becoming deep in the lower portions of the site. Slight to moderate erosion, becoming heavy in some areas.

Modern Land Use Marginal rainfall cultivation, with barley, maize, maguey, and beans all present at the time of survey in fields equipped with drainage ditches and maguey bancals. Grazing on the upper portion of site

Archaeological Remains Variable, localized surface pottery (Aztec 3 and 4) ranging from light to heavy, over an area totaling 10 0 hectares A small amount of rock rubble, scattered obsidian blades and scrapers, and a few ground stone tools also occur Four mounds were recorded at the site—three ceremonial mounds arranged around a central plaza and one small residential mound immediately outside the plaza (Figure 181), as described in Table 64 Mixed with light-to-moderate Mazapan (Tm-Lt-64) material

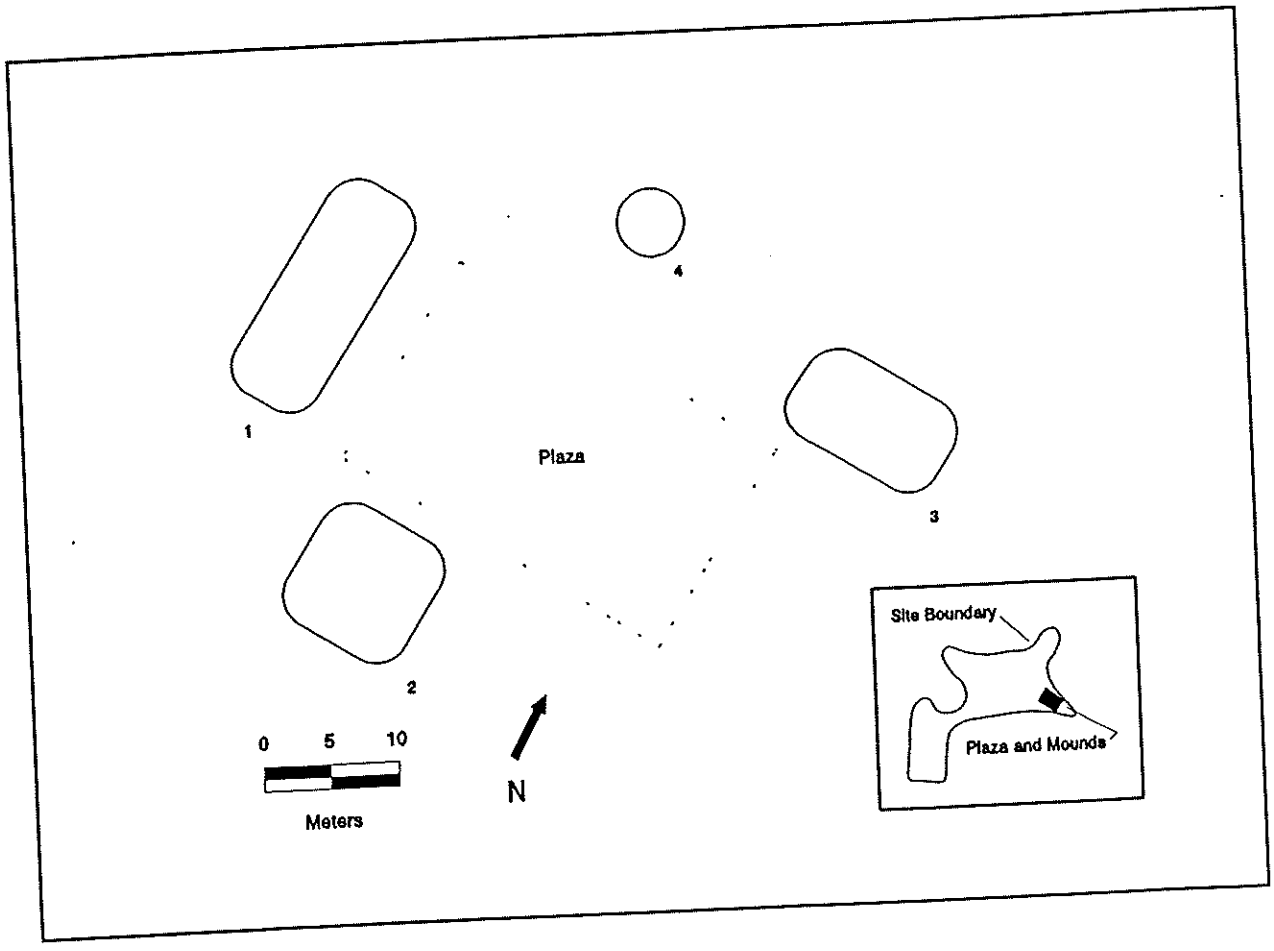


Figure 182 Tm-Az-82 Architectural Features

TABLE 64 Tm-Az-82 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	18 x 7	0 5	Light	Heavy	Ceremonial; most rubble on western end of mound
Mound 2	10 x 10	1 0	Light	None	Ceremonial
Mound 3	12 x 7	0 5	Light	None	Ceremonial
Mound 4	5 x 5	0 2	Light	None	Residential; poorly preserved

Tm-Az-83

Classification: Questionable. Probably a briefly occupied small hamlet. Population undetermined. people.

Natural Setting: 2350 meters, on the Smooth Middle Piedmont between Cerro Santa Paula and Cerro Verde Situated on gently sloping ground 100 meters east of the northern branch of Barranca Cerro Gordo. Exposed basalt is present in the bed of the barranca. Shallow soil cover. No erosion.

Modern Land Use: Rainfall cultivation, predominantly of barley at the time of survey (but with maguey and nopal also grown in more shallow soil), in fields equipped with drainage ditches and maguey bancals

Archaeological Remains Very light surface pottery, along with scattered obsidian scrapers and blades, over an area of 4.3 hectares. Substantial rock rubble also occurs on the site over an area of about 2.0 hectares No definite structural remains, though concentrations of rubble and artifacts scattered over roughly 2 0 hectares probably represent the remnants of an unknown number of mounds. Mixed with Late Mazapan (Tm-Lt-63) material varying in density from light to heavy.

Tm-Az-84

Classification. Small hamlet, 5-10 people. Note that currently Tm-Az-84 is one of several small hamlets within the modern town of Temascalapa. The western group of these (Tm-Az-84, 85, 85, 87, 88, and 89) are clustered spatially and *may* have formed a single dispersed village during the Aztec period. Due to a discontinuous distribution of cultural material, and hence an absence of direct evidence for a larger settlement, we report these sites as separate hamlets. The absence of ceremonial architecture in any of the sites associated with Temascalapa caused us to question its provincial center/cabecera status - an issue debated in Early Colonial times; see discussion in Chapter 8.

Natural Setting. 2345 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan. Situated on gently sloping ground between the northern branch of Barranca Cerro Gordo and a large barranca to the east. Shallow soil cover Slight erosion.

Modern Land Use: Rainfall cultivation, with barley present at the time of survey. Site lies on the southern edge of the modern town of Temascalapa.

Archaeological Remains: Generally light surface pottery, becoming light-to-moderate in one location, over an area of 1.0 hectare. An artifact concentration on a slight rise probably represents the poorly preserved remains of a residential mound, its size impossible to determine due to modern disturbance.

Tm-Az-85

Classification: Hamlet, 30-60 people.

Natural Setting: 2340 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan. Situated on gently sloping ground just west of Barranca Cerro Gordo. Shallow soil cover. No erosion.

Modern Land Use: Rainfall cultivation, with barley, maguey, and nopal present at the time of survey in fields equipped with drainage ditches, earth banks, and maguey bancals. Site lies on the western edge of the modern town of Temascalapa.

Archaeological Remains: Generally moderate surface pottery, becoming heavy in places, and scattered obsidian artifacts over an area of 1.2 hectares. No structural remains. Mixed with very light Late Mazapan (Tm-Lt-57) material.

Tm-Az-86

Classification: Small hamlet, 7-18 people.

Natural Setting: 2340 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan. Situated on gently sloping ground between the northern branch of Barranca Cerro Gordo and another large barranca to the east. Medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maguey and nopal present at the time of survey in fields equipped with maguey bancals. Site lies within house lots in the western part of the modern town of Temascalapa.

Archaeological Remains: Light-to-moderate surface pottery over an area of 0.7 hectare. No structural remains.

Tm-Az-87

Classification: Hamlet, 35-70 people.

Natural Setting: 2340 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan. Situated on gently sloping ground between the northern branch of Barranca Cerro Gordo and another large barranca to the east. Medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maguey and nopal present at the time of survey in fields equipped with maguey bancals and earth banks. Site lies within house lots in the northern part of the modern town of Temascalapa.

Archaeological Remains Light surface pottery over an area of 7.0 hectares No structural remains.

Tm-Az-88

Classification: Small hamlet, 5-10 people.

Natural Setting: 2340 meters, on the Smooth Lower Piedmont northeast of Lake Xaltocan. Situated on gently sloping ground between the northern branch of Barranca Cerro Gordo and another large barranca, just above a rich agricultural plain. Medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with barley, maguey, and nopal present at the time of survey in fields equipped with maguey bancals. Site lies in the southern part of the modern town of Temascalapa.

Archaeological Remains: Generally light surface pottery, reaching moderate density in places, and very light obsidian, over an area of 1.0 hectare. No structural remains.

Tm-Az-89

Classification: Hamlet, 18-35 people.

Natural Setting: 2355 meters, on the Smooth Middle Piedmont west of Cerro Verde. Situated on gently sloping ground just east of a large barranca. Medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maguey and nopal present at the time of survey in fields equipped with earth banks and maguey bancals. Site lies within house lots in the south-central part of the modern town of Temascalapa.

Archaeological Remains: Moderate surface pottery over an area of 0.7 hectare. No structural remains.

Tm-Az-90

Classification. Small dispersed village, 65-170 people.

Natural Setting: 2390 meters, on the Smooth Middle Piedmont west of Cerro Verde. Situated on gently to moderately sloping ground on the northern flank of Cerro Chiconquiaco. Shallow to medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maguey present at the time of survey in fields equipped with maguey bancals.

Archaeological Remains: Generally light surface pottery (but reaching moderate-to-heavy densities in places), along with scattered obsidian blades and scrapers and ground stone tools, over an area of 4.0 hectares. Slight rises and associated artifact concentrations probably indicate the remains of five Aztec residential mounds, though no dimensions were recorded due to poor preservation. Less distinct topographic features and artifact concentrations suggest the presence of 8-12 additional mounds, almost completely destroyed by

a combination of plowing, erosion, and the overburden of a Colonial period settlement.

Tm-Az-91

Classification. Small hamlet, 1-2 people.

Natural Setting: 2355 meters, on the Smooth Middle Piedmont west of Cerro Verde. Situated on gently sloping ground. Medium soil cover. No erosion.

Modern Land Use: Rainfall cultivation, with maguey and nopal present at the time of survey in fields equipped with earth banks and maguey bancals. Site lies in a lot in the southeastern portion of the modern town of Temascalapa.

Archaeological Remains: Light surface pottery over an area of 0.2 hectare. No structural remains.

Tm-Az-92

Classification: Small hamlet, 4-7 people.

Natural Setting: 2355 meters, on the Smooth Middle Piedmont west of Cerro Verde. Situated on gently sloping ground. Medium soil cover Slight erosion.

Modern Land Use: Rainfall cultivation in fields equipped with maguey bancals, though areas associated with the site were lying fallow at the time of survey.

Archaeological Remains: Light surface pottery over an area of 0.7 hectare. No structural remains.

Tm-Az-93

Classification: Small hamlet, 10-25 people.

Natural Setting: 2340 meters, on the Thin Soil Alluvium northwest of Cerro Verde. Situated on gently sloping ground. Shallow soil cover. Slight erosion.

Modern Land Use: Grazing, in an area of scattered earth banks and maguey bancals. Site lies on the northern edge of the modern town of Temascalapa.

Archaeological Remains: Generally light-to-moderate surface pottery and very light obsidian artifacts over an area of 1.0 hectare. No definite structural remains, though a linear distribution of substantial rock rubble on the northern part of the site may represent the remains of an Aztec terrace.

Tm-Az-94

Classification: Small hamlet, 2-5 people.

Natural Setting: 2360 meters, on the Smooth Middle Piedmont west of Cerro Verde. Situated on moderately sloping ground. Generally shallow to medium soil cover, though with some exposed bedrock. No erosion.

Modern Land Use: Rainfall cultivation, with nopal present at the time of survey in a field equipped with stone terraces and maguey bancals.

Archaeological Remains: Light-to-moderate surface pottery, very light obsidian artifacts, and substantial rock rubble over an area of 0.2 hectare. No structural remains.

Tm-Az-95

Classification: Small hamlet, 5-10 people.

Natural Setting: 2390 meters, on the Smooth Middle Piedmont west of Cerro Verde. Situated on moderately sloping ground on the northeastern flank of Cerro Chiconquiaco. Shallow soil cover. No erosion, though deep washes occur immediately north and south of the site.

Modern Land Use: Rainfall cultivation, with maguey present at the time of survey in fields equipped with maguey bancals.

Archaeological Remains: Very light-to-light surface pottery and scattered obsidian blades over an area of 0 1 hectare. One mound is visible, measuring 10 by 7 meters at its base and about 0.2 meters in height. Pieces of adobe are present on the mound, which appears to date to both Late Toltec and Aztec occupations. Mixed with light-to-moderate Late Mazapan (Tm-Lt-66) material.

Tm-Az-96

Classification. Small hamlet, 7-18 people.

Natural Setting· 2375 meters, on the Smooth Middle Piedmont west of Cerro Verde. Situated on gently sloping ground. Very shallow soil cover. ·General, heavy erosion.

Modern Land Use: Grazing.

Archaeological Remains: Light-to-moderate surface pottery over an area of 0 7 hectare No definite prehispanic structural remains, though a short section of wall may date to the Aztec occupation.

Tm-Az-97

Classification: Small hamlet, 5-10 people.

Natural Setting: 2380 meters, on the Smooth Middle Piedmont west of Cerro Verde. Situated on moderately sloping ground overlooking an agricultural plain. Shallow soil cover. No erosion.

Modern Land Use: Rainfall cultivation, with maguey and nopal present at the time of survey in fields

equipped with maguey bancals.

Archaeological Remains: Moderate surface pottery, very light obsidian, and scattered light rock rubble over an area of 0.2 hectare. No structural remains.

Tm-Az-98

Classification: Questionable. Probably a briefly occupied single house lot or small hamlet. Population undetermined.

Natural Setting: 2390 meters, in the Thin Soil Alluvium west of Cerro Verde. Situated on gently sloping ground about 100 meters east of a large barranca. Shallow soil cover. Generally moderate erosion, becoming heavy in southern portions of the site.

Modern Land Use: Rainfall irrigated cultivation, with both maize and beans present at the time of survey in fields equipped with stone terraces and maguey bancals.

Archaeological Remains: Very light surface pottery and a trace of obsidian artifacts over an area of 0.5 hectare. No structural remains. Mixed with similarly sparse Terminal Formative (Tm-Tf-33) and light-to-moderate Late Toltec (Tm-Lt-67) material.

Tm-Az-99

Classification: Hamlet, 12-30 people.

Natural Setting: 2340 meters, on the Thin Soil Alluvium northwest of Cerro Verde. Situated on gently sloping ground upslope from a large barranca which contains exposed basalt. Shallow soil cover Heavy, localized erosion.

Modern Land Use: Grazing.

Archaeological Remains: Generally light-to-moderate surface pottery over an area of 1.2 hectares. No structural remains.

Tm-Az-100

Classification: Hamlet, 12-30 people.

Natural Setting: 2340 meters, on the Thin Soil Alluvium north of Cerro Verde. Situated on moderately to steeply sloping ground on the flank of a small hill. Generally very shallow soil cover. Extensive erosion, in part due to a small barranca that runs through the site.

Modern Land Use: Rainfall cultivation, with barley, maize, and maguey present at the time of survey in fields equipped with earth banks

Archaeological Remains: Generally very light-to-light surface pottery, substantial-to-heavy rock rubble, and scattered obsidian and basalt artifacts over an area of 6.0 hectares. One poorly preserved, probably ceremonial mound is present on the southeast part of the site, measuring 34 by 30 meters at its base and 1.5 meters in height, with moderate-to-heavy artifacts and rubble associated.

Tm-Az-101

Classification: Hamlet, 40-80 people

Natural Setting: 2355 meters, on a small hill on the Middle Piedmont north of Cerro Verde. Situated on moderately sloping ground overlooking an agricultural plain. Shallow to medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maize and barley present at the time of survey in fields equipped with drainage ditches.

Archaeological Remains: Very light-to-light surface pottery over an area of 6.0 hectares, becoming light-to-moderate in places and mixed with very light obsidian artifacts. No structural remains are visible, though distinct light-to-moderate concentrations of surface material may indicate the presence of eight separate house lots on this site.

Tm-Az-102

Classification: Small hamlet, 10-25 people.

Natural Setting: 2350-2360 meters, on the Smooth Middle Piedmont northwest of Cerro Verde on the southern flank of a small foot hill. Situated on gently sloping ground about 100 meters upslope from a large barranca which contains exposed basalt. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with both maguey and nopal present at the time of survey in fields equipped with maguey bancals, earth banks, and stone terraces. Part of the site also used for grazing.

Archaeological Remains: Generally very light surface pottery (becoming moderate in places) and substantial rock rubble over an area of 5.0 hectares. No structural remains. Mixed with moderate Late Toltec (Tm-Lt-68) material.

Tm-Az-103

Classification: Small dispersed village, 120-400 people.

Natural Setting: 2410-2450 meters, on the Smooth Middle Piedmont on the southwestern flank of Cerro Verde. Situated on moderately sloping ground. Shallow to medium soil cover. Moderate to extensive erosion, including several washes and the beginnings of two barrancas.

Modern Land Use: Mainly grazing. Some marginal rainfall cultivation also occurs, with nopal, maguey, barley, and maize present at the time of survey.

Archaeological Remains: Generally light-to-moderate surface pottery, rock rubble ranging in density from sparse to heavy, and scattered obsidian artifacts, over an area of 12.0 hectares. The remains of 14 mounds are visible along the base of Cerro Verde, with their basic characteristics presented in Table 65. Concentrations of artifacts and rubble on slight rises may represent the remnants of other mounds. Mixed with light Late Toltec (Tm-Lt-70) material. This site was surveyed with a 1:25000 airphoto.

TABLE 65 Tm-Az-103 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	14 x 11	0 5	Light	Heavy	Residential; badly eroded
Mound 2	12 x 8	0 2	Light-moderate	Light	Residential; scattered obsidian flakes also present
Mound 3	13 x 9	1 5	Light-moderate	Heavy	Ceremonial; also Late Toltec material
Mound 4	12 x 10	1 0	Moderate-heavy	Light-substantial	Probably residential; also Late Toltec material; heavily eroded
Mound 5	6 x 4	0 6	Light-moderate	Substantial	Residential; also Late Toltec material; heavily plowed
Mound 6	NR	NR	Moderate-heavy	Substantial	Residential; also Late Toltec material; heavily plowed and eroded
Mound 7	100 x 20	1 5	Moderate	Substantial	Residential
Mound 8	16 x 10	0 5	Moderate	Light-substantial	Residential; heavily plowed
Mound 9	5 x 5	0 5	Moderate-heavy	Sparse-light	Residential
Mound 10	NR	NR	Moderate-heavy	Substantial	Residential; very light obsidian also present
Mound 11	20 x 10	0 5	Moderate-heavy	Light	Residential; badly eroded
Mound 12	40 x 20	1 0	Light	Light	Probably residential; a few Late Toltec potsherds also present
Mound 13	40 x 30	1 0	Moderate-heavy	None	Probably residential
Mound 14	12 x 9	1 0	Light	Light-substantial	Probably residential

Note: NR means "not recorded "

Tm-Az-104

Classification: Hamlet, 50-125 people.

Natural Setting: 2460-2480 meters, on the Smooth Middle Piedmont on the southeastern flank of Cerro Verde. Situated on moderately sloping ground. Shallow to medium soil cover. Moderate to extensive erosion.

Modern Land Use: Mainly grazing. Also marginal rainfall cultivation, with barley present at the time of survey.

Archaeological Remains: Generally light-to-moderate surface pottery and scattered obsidian artifacts over an area of 5.0 hectares. The remains of four mounds are present (Table 66). A concentration of obsidian on one of the mounds may indicate the presence of a workshop. This site was surveyed with a 1:25000 airphoto.

TABLE 66 Tm-Az-104 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	NR	NR	None	None	Residential; concentration of obsidian cores, tools, and debitage suggests the presence of a workshop
Mound 2	12 x 10	0 5	Light-moderate	Substantial-heavy	Residential; Aztec terraces associated
Mound 3	15 x 10	0 5	Light-moderate	Heavy	Residential; Aztec terraces associated
Mound 4	25 x 16	0 8	Moderate	Substantial	Residential; light obsidian also present; Aztec terraces associated; looted

Note NR means "not recorded "

Tm-Az-105

Classification: Large dispersed village, 320-800 people. The poor condition of this site, coupled with the necessarily brief time invested in its survey, contribute to the difficulty of interpretation with more intensive survey it might appear to be either a series of hamlets or several adjacent small linear villages.

Natural Setting: 2350-2460 meters, on the Thin Soil Alluvium and Smooth Middle Piedmont on the northeastern flank of Cerro Verde. Situated on gently to moderately sloping ground. Variable soil cover, generally medium but ranging in depth from very shallow to deep. Moderate to severe erosion, often associated with numerous small barrancas which occur on the site, with the west-central half of the site eroded down to tepetate in many places.

Modern Land Use: Irrigation and rainfall cultivation, with both barley and maize present at the time of survey in fields equipped with drainage ditches, irrigation ditches, and earth banks. Site shows evidence of

years of heavy plowing. Some grazing occurs on the upper portions of the site area.

Archaeological Remains: Generally very light-to-light surface pottery, though reaching moderate-to-heavy densities in places, over an area of 160.0 hectares. Highly variable rock rubble, ranging from none to locally heavy densities, scattered obsidian flakes, blades, and cores, and assorted ground stone artifacts also occur. Due to the poor preservation of this site, the remnants of only 13 residential mounds and one ceremonial mound remain visible, as described in Table 67. Mixed on part of this total area with generally very light Late Toltec (Tm-Lt-69) material. This site was surveyed with a 1:25000 airphoto, in a manner comparable to the general surveys conducted during the Teotihuacan Valley Project.

TABLE 67 Tm-Az-105 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	13 x 13	0 4	Light-moderate	Substantial-heavy	Residential; scattered obsidian flakes
Mound 2	40 x 20	2 5	Light-moderate	Substantial	Ceremonial; heavily eroded and plowed
Mound 3	12 x 12	1 0	Light-moderate	Light	Probably residential; bancal connects this mound with Mound 2; also Late Toltec material
Mound 4	12 x 8	0 2	Light	Heavy	Residential; also Late Toltec material
Mound 5	12 x 10	1 0	Very light	Substantial-heavy	Probably residential
Mound 6	30 x 5	0 3	Light-moderate	Light	Residential; scattered obsidian
Mound 7	43 x 20	0 3	Heavy	Light	Residential; heavily eroded
Mound 8	30 x NR	1 0	Moderate-heavy	Light	Probably residential; very badly eroded
Mound 9	30 x 10	0 3	Moderate-heavy	Light	Residential; scattered basalt flakes; cut by path and very badly eroded; also Late Toltec material
Mound 10	20 x 20	1 0	Heavy	Heavy	Probably residential
Mound 11	15 x 15	1 0	Moderate-heavy	Substantial	Probably residential; scattered obsidian and mano fragments; eroded edges; also Late Toltec material
Mound 12	33 x 23	1 0	Heavy	Substantial	Probably residential; eroded edges
Mound 13	50 x 30	0 4	Moderate	Substantial	Residential; cut by wash, badly eroded; prehispanic bancals nearby; also Late Toltec material
Mound 14	16 x 14	1 0	Moderate	Substantial	Probably residential

Note: NR means "not recorded"

Tm-Az-106

Classification: Small hamlet, 10-25 people.

Natural Setting: 2395 meters, on the Smooth Middle Piedmont east of Cerro Verde. Situated on gently sloping ground. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation.

Archaeological Remains: Light-to-moderate surface pottery over an area of 1.0 hectare. No structural remains. This site was surveyed with a 1:25000 airphoto.

Tm-Az-107

Classification: Small hamlet, 10-25 people.

Natural Setting: 2390 meters, on the Smooth Middle Piedmont east of Cerro Verde. Situated on gently sloping ground. Shallow to medium soil cover. Severe erosion.

Modern Land Use: Rainfall cultivation.

Archaeological Remains: Generally light-to-moderate surface pottery over an area of 1.0 hectare. No structural remains. This site was surveyed with a 1:25000 airphoto.

Tm-Az-108

Classification: Hamlet, 56-140 people.

Natural Setting: 2380-2400 meters, on the Smooth Middle Piedmont east of Cerro Verde. Situated on gently sloping ground. Shallow to medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with two jagüeys present.

Archaeological Remains: Generally very light-to-light surface pottery, becoming light-to-moderate in a few places, over an area of 20.0 hectares. No definite structural remains, although several artifact concentrations 30-40 meters in diameter may represent the remains of mounds destroyed by plowing. This site was surveyed with a 1:25000 airphoto.

Tm-Az-109

Classification: Small hamlet, 10-20 people.

Natural Setting: 2390-2410 meters, on the Smooth Middle Piedmont east of Cerro Verde. Situated on gently sloping ground. Shallow to medium soil cover. Moderate erosion.

Modern Land Use: Rainfall cultivation.

Archaeological Remains: Light surface pottery over an area of 2.0 hectares. No structural remains. This site was surveyed with a 1:25000 airphoto.

Tm-Az-110

Classification: Small nucleated village, 75-150 people.

Natural Setting: 2450 meters, in the Middle Piedmont north of Cerro Gordo. Situated on gently sloping ground. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation; although maguey and nopal were present, most of the site was lying fallow at the time of survey.

Archaeological Remains: Generally moderate surface pottery (Aztec 3 and 4) over an area of 3.0 hectares. The remains of a single residential mound were noted, measuring 6 by 6 meters at its base and 0.6 meter in height. This site was surveyed with a 1:25000 airphoto.

Tm-Az-111

Classification: Small hamlet, 8-15 people.

Natural Setting: 2450 meters, in the Middle Piedmont north of Cerro Gordo. Situated on gently to moderately sloping ground at the base of the northern flank of Cerro Buena Vista. Medium soil cover Moderate erosion.

Modern Land Use: Rainfall cultivation, with maguey, nopal, and maize present at the time of survey. One jagüey was present. Site showed evidence of heavy plowing.

Archaeological Remains: Moderate surface pottery (Aztec 3), and a scatter of obsidian artifacts, over an area of 0.3 hectare. No structural remains. This site was surveyed with a 1:25000 airphoto.

Tm-Az-112

Classification: Small hamlet, 1-3 people.

Natural Setting: 2345 meters, on the Thin Soil Alluvium west of Cerro Coayucán. Situated on gently sloping ground. Shallow soil cover. Virtually no erosion.

Modern Land Use Rainfall cultivation, with maize present at the time of survey.

Archaeological Remains: Light-to-moderate surface pottery and very light obsidian artifacts over an area of 0.1 hectare. No structural remains.

Tm-Az-113

Classification: Hamlet, 30-60 people.

Natural Setting: 2390 meters, on the Smooth Middle Piedmont west of Cerro Coayucán. Situated on gently sloping ground at the base of a small hill. Shallow soil cover. Extensive erosion.

Modern Land Use: Rainfall cultivation, with maize, barley, habas, and oats all present at the time of survey in fields equipped with stone terraces and maguey bancals.

Archaeological Remains Generally light surface pottery (including Aztec II) and variable rock rubble (ranging from light to substantial) over an area of 6.0 hectares. The main components of this site are three residential mounds and one ceremonial mound arranged in an L-shaped pattern and connected by a scatter of artifacts, as described in Table 68. Mixed with very light Mazapan (Tm-Lt-71) material and an unrecorded amount of Early Aztec material.

TABLE 68 Tm-Az-113 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	20 x 7	2 0	None	Light	Ceremonial; Aztec 3 and 4
Mound 2	6 x 6	0 8	None	Light	Residential; Aztec 3 and 4
Mound 3	5 x 5	0 8	Light	None	Residential; Aztec 2 and 3
Mound 4	NR	NR	Light	Light	Residential; Aztec 2 and 3; poorly preserved

Note: NR means "not recorded "

Tm-Az-114

Classification: Small dispersed village, 85-170 people.

Natural Setting: 2370-2390 meters, on the Smooth Middle Piedmont west of Cerro Coayucán. Situated on moderately-to-steeply sloping terrain on the northeastern flank of a small hill. Shallow to medium soil cover. Generally moderate erosion, but ranging from slight to heavy in places.

Modern Land Use: Rainfall cultivation, with maize, barley, and oats all present at the time of survey in fields equipped with maguey bancals. Grazing also occurs on part of the site area.

Archaeological remains: Very light-to-light surface pottery (including Aztec II), along with generally light rock rubble (though becoming substantial in places), over an area of 19.0 hectares. A total of 18 mounds are visible, stretching northwest to southeast in an elongated distribution (Figure 182), as described in Table 69 Concentrations of rubble and ceramics may represent the poorly preserved remnants of other mounds along the eastern edge of the site. Mixed with light Mazapan (Tm-Lt-72) material and an unrecorded amount of Early Aztec material.

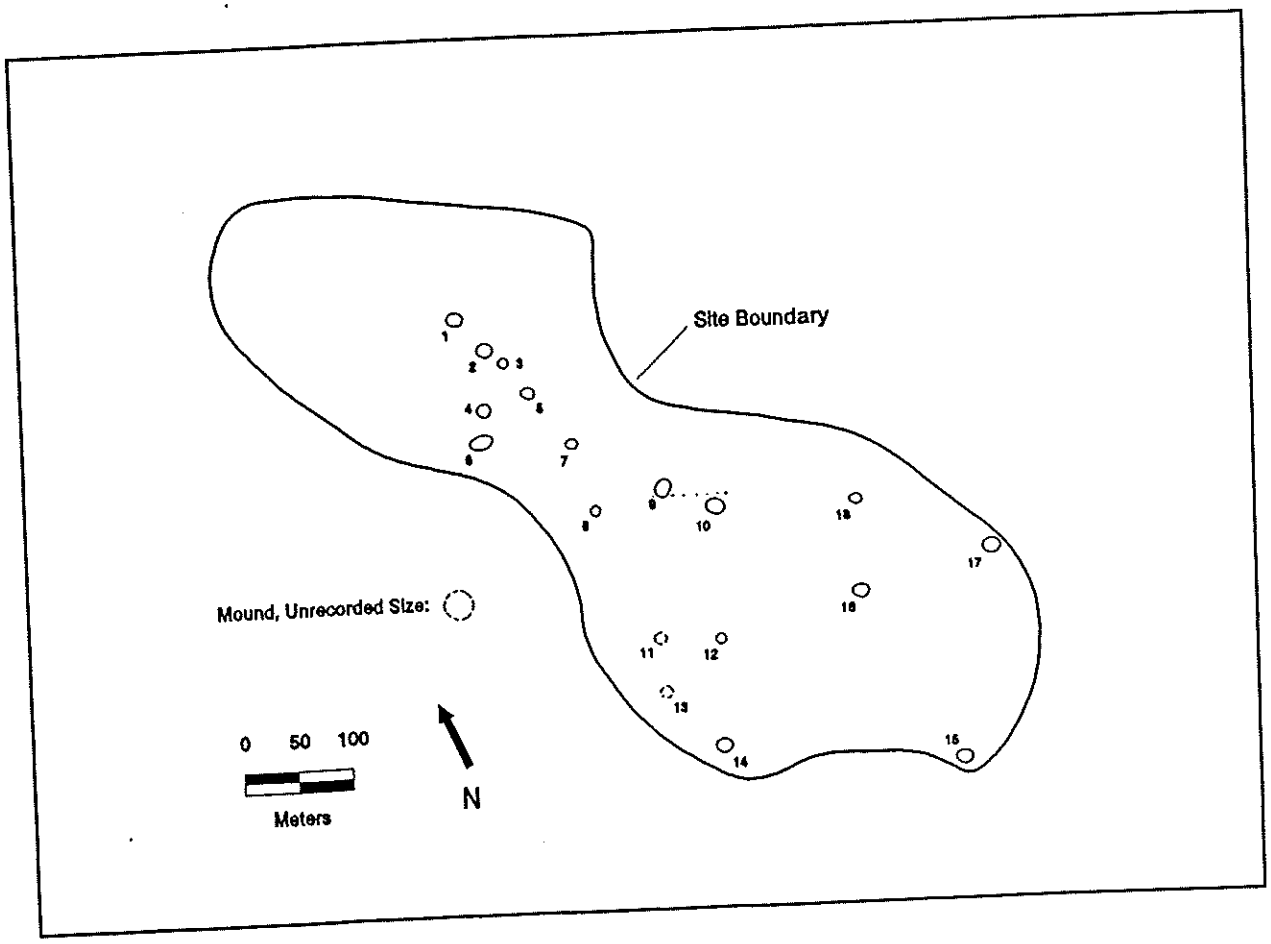


Figure 183 Tm-Az-114 Architectural Features

TABLE 69 Tm-Az-114 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	8 x 6	0 8	Light	None	Residential; Mazapan and Aztec (3 and 4
Mound 2	8 x 6	0 8	Light	None	Residential; Mazapan and Aztec (3 and 4)
Mound 3	4 x 4	0 5	Heavy	Light	Residential, bone fragments also present, virtually all remains are Mazapan
Mound 4	6 x 6	NR	Very light-light	None	Residential, poorly preserved
Mound 5	8 x 4	0 5	Very light	None	Residential
Mound 6	20 x 10	1 0	Light	None	Probably residential; Aztec 3

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 7	6 x 4	NR	Very light	None	Residential; Aztec 3; poorly preserved
Mound 8	4 x 4	0 6	Very light	None	Residential; Aztec 3
Mound 9	12 x 11	0 8	Heavy	Heavy	Residential; Aztec 4
Mound 10	12 x 10	0 8	Very light	None	Residential; Aztec 3 and 4
Mound 11	NR	NR	NR	NR	
Mound 12	5 x 5	0 6	Very light-light	Substantial	Residential; Aztec 3 and 4
Mound 13	NR	NR	NR	NR	
Mound 14	8 x 6	0 8	Light-moderate	Light	Residential; Aztec 3 and 4
Mound 15	8 x 6	0 8	Moderate	Substantial	Residential; Aztec 3 and 4
Mound 16	9 x 8	0 6	Light	None	Residential
Mound 17	8 x 6	1 0	Very light-light	Light	Probably residential; Aztec 2 and 3
Mound 18	6 x 4	0 5	Very light	Light	Residential; Aztec 3

Note NR means "not recorded "

Tm-Az-115

Classification: Small hamlet, 10-20 people.

Natural Setting: 2370 meters, on a small hill on the Middle Piedmont west of Cerro Coayucán. Situated on steeply sloping ground just off the hilltop itself. Shallow to medium soil cover. Virtually no erosion.

Modern Land Use: Rainfall cultivation, with maguey present at the time of survey.

Archaeological Remains: Very light-to-light surface pottery (Aztec 3) and a few ground stone artifacts over an area of 0.5 hectare. The main features of this site are two poorly preserved residential mounds on the steep hillside, defined by concentrations of artifacts on slight rises just off the edge of the hilltop. Due to their condition, no dimensions of the mounds were recorded

Tm-Az-116

Classification: Small hamlet, 5-10 people.

Natural Setting: 2350 meters, on the Smooth Middle Piedmont west of Cerro Coayucán. Situated on gently sloping ground. Shallow to medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maize, habas, and barley present at the time of survey.

Archaeological Remains: Light surface pottery (Aztec 3) and substantial rock rubble over an area of 0.3 hectare. One residential mound is visible, measuring 8 by 8 meters at its base though with no height recorded (due to considerable disturbance).

Tm-Az-117

Classification: Isolated ceremonial center, no permanent population.

Natural Setting: 2380 meters, on the Smooth Middle Piedmont southwest of Cerro Coayucán. Situated on the southwestern flank of a small hill. Shallow to medium soil cover. Virtually no erosion.

Modern Land Use: Rainfall cultivation, with maize and barley present at the time of survey.

Archaeological Remains: Very light-to-light surface pottery, substantial rock rubble, and a few mano fragments over an area of 0.5 hectare. Site consists mainly of one poorly preserved ceremonial mound; due to disturbance from years of plowing and looting, no mound dimensions were recorded.

Tm-Az-118

Classification: Small hamlet, 5-10 people.

Natural Setting: 2370 meters, on the Smooth Middle Piedmont west of Cerro Coayucán. Situated on gently sloping ground. Shallow soil cover. Extensive erosion.

Modern Land Use: Grazing.

Archaeological Remains: Very light-to-light surface pottery, along with scattered obsidian and ground stone artifacts, over an area of 0.5 hectare. The remains of a single, badly eroded residential mound are visible, though due to its poor condition no dimensions were recorded. The mound may be situated on the remains of Aztec period terraces, but extensive erosion and the presence of modern fill make terrace age difficult to determine.

Tm-Az-119

Classification: Small dispersed village, 145-290 people.

Natural Setting: 2380-2410 meters, in the Smooth Middle Piedmont on the southwestern flank of Cerro Coayucán. Situated on moderately sloping ground below much steeper slopes, in an area cut by several washes. Shallow soil cover. Generally moderate to heavy erosion.

Modern Land Use: Rainfall cultivation, with maguey and nopal present at the time of survey. A few modern house lots lie within bounds of the site.

Archaeological Remains: Generally light surface pottery (Aztec 3 and 4) over an area of 29.0 hectares. The remains of seven mounds are visible, their basic characteristics presented in Table 70. Mixed with slightly lighter Terminal Formative (Tm-Tf-39), light-to-moderate Classic (Tm-Cl-40), and light Mazapan (Tm-Lt-73) material, all restricted to a much smaller area on the northwestern edge of Tm-Az-119.

TABLE 70 Tm-Az-119 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	12 x 12	2 0	None	None	Ceremonial; looted in center
Mound 2	25 x 25	3 5	None	None	Ceremonial; looted in center
Mound 3	15 x 15	1 0	None	None	Probably residential; possibly associated with nearby terraces
Mound 4	12 x 12	2 0	None	None	Ceremonial; lies on remnants of terraces with tepetate walls; poorly preserved
Mound 5	12 x 12	1 0	None	None	Probably residential; looted in center
Mound 6	25 x 25	1 0	Light	None	Probably residential; stucco fragments also present
Mound 7	NR	NR	None	None	Residential; poorly preserved

Note: NR means "not recorded "

Tm-Az-120

Classification: Small dispersed village, 105-210 people.

Natural Setting: 2370-2410 meters, on the Smooth Middle Piedmont on the northern and western flank of Cerro Coayucán. Situated on gently to steeply sloping ground immediately below a very steep slope. Generally shallow soil cover, with some areas of exposed tepetate. Extensive erosion.

Modern Land Use: Rainfall cultivation, with scattered nopal and pirul present.at the time of survey. A few associated fields equipped with stone terraces to help control erosion. Part of the site also used for grazing. The eastern end of this site is located within the modern village of San Antonio Coayucán.

Archaeological Remains: Generally light surface pottery, though becoming moderate-to-heavy in a few places, and scattered obsidian artifacts over an area of 21.0 hectares. The remains of four poorly preserved mounds are visible—two near the southern tip of the site, one in the west-central part of the site, and one at the eastern end of the site. Due to the poor state of mound preservation, no dimensions were recorded. The remnants of bancals which probably date to the Aztec occupation also occur. Mixed with a small amount of light-to-moderate Mazapan (Tm-Lt-74) material.

Tm-Az-121

Classification: Small hamlet, 2-5 people.

Natural Setting: 2350 meters, on the Smooth Middle Piedmont on the eastern flank of Cerro Coayucán. Situated on gently sloping ground. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with nopal and maguey present at the time of survey in fields equipped with drainage ditches and maguey bancals.

Archaeological Remains: Light-to-moderate surface pottery over an area of 0.2 hectare. No structural remains.

Tm-Az-122

Classification: Hamlet, 15-30 people.

Natural Setting: 2330 meters, on the Thin Soil Alluvium southwest of Cerro los Pitos. Situated on gently sloping ground west of a major barranca. Deep soil cover. Virtually no erosion.

Modern Land Use: None.

Archaeological Remains: Light-to-moderate surface pottery and light rock rubble, coupled with a scattering of obsidian artifacts, over an area of 1.0 hectare. Concentrations of artifacts and rubble on slight rises probably represent the remains of three poorly preserved residential mounds. Due to their poor preservation, no dimension were recorded. The remains of two poorly preserved terraces, possibly dating to the Aztec occupation, also occur on the site.

Tm-Az-123

Classification Hamlet, 45-90 people.

Natural Setting: 2340-2350 meters, on the Thin Soil Alluvium southwest of Cerro los Pitos. Situated on gently sloping ground on the southern flank of Cerro Tlexpa. Shallow to medium soil cover, including pulverized tezontle. Slight, localized erosion.

Modern Land Use: Rainfall cultivation, predominantly of maize and maguey at the time of survey in fields equipped with maguey bancals.

Archaeological Remains: Generally very light surface pottery, mixed with light rock rubble and scattered obsidian and basalt artifacts, over an area of 2.0 hectares. Concentrations of artifacts and rock rubble on slight rises probably represent the poorly preserved remains of nine residential mounds dating to the Aztec occupation. Due to lack of mound preservation, no dimensions were recorded. Mixed with light Mazapan (Tm-Lt-75) material.

Tm-Az-124

Classification: Small dispersed village, 90-180 people.

Natural Setting: 2335-2350 meters, on the Thin Soil Alluvium southwest of Cerro los Pitos. Situated on flat ground which extends to a gentle, then medium slope at the western flank of Cerro Tlexpa Generally shallow to medium soil cover. Slight, localized erosion.

Modern Land Use: Rainfall cultivation in fields equipped with stone terraces and maguey bancals. Maize was the predominant crop planted at the time of survey, but barley, habas, and maguey also were present and some fields were lying fallow. Site lies within house lots of the modern village of Tlexpa. A modern road, running northwest-southeast, crosses the site.

Archaeological Remains: Generally light surface pottery, becoming moderate-to-heavy in places, over an area of 9.0 hectares. Ground stone tools, scanty-to-light obsidian tools, and substantial-to-heavy rock rubble also are present. Concentrations of artifacts and rubble likely represent the remains of 18 poorly preserved mounds—all disturbed to the point that no measurements were possible. Site has been heavily looted; in addition to artifact scatters, two human crania and several bones were exposed on the eastern part of the site. Mixed with Mazapan (Tm-Lt-76) material, varying in density from light to heavy, on the mound concentrations and throughout the site.

Tm-Az-125

Classification: Hamlet, 30-60 people.

Natural Setting: 2335 meters, on the Thin Soil Alluvium southwest of Cerro los Pitos. Situated on flat to gently sloping ground. Medium soil cover. Virtually no erosion.

Modern Land Use: Rainfall cultivation in fields equipped with stone terraces and maguey bancals, though much of the site was lying fallow at the time of survey. Site lies on the southern edge of the modern village of Juarez.

Archaeological Remains: Light surface pottery, substantial rock rubble, and scattered obsidian and ground stone artifacts over an area of 6.0 hectares. This site forms an elongated scatter, stretching northwest to southeast but constricted near the middle in manner which nearly pinches the site in two. No structural remains.

Tm-Az-126

Classification: Hamlet, 15-30 people.

Natural Setting: 2385 meters, on the Smooth Middle Piedmont southwest of Cerro los Pitos. Situated on moderately sloping ground at the base of Cerro Tlexpa. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maguey present at the time of survey in fields equipped with stone terraces. A modern house also occurs on the site, and part of the area was used for grazing.

Archaeological Remains: Generally light surface pottery and rock rubble over an elongated area of 1.5 hectares. Concentrations of ceramics and rubble on slight rises near the center of the site probably represent the remains of three poorly preserved residential mounds arranged along a north-south axis. Due to their poor preservation, no dimensions of the mounds were recorded.

Tm-Az-127

Classification: Small nucleated village, 130-325 people.

Natural Setting: 2345-2375 meters, on the Smooth Middle Piedmont southwest of Cerro los Pitos. Situated on flat to gently sloping rocky ground at the base of a small hill overlooking a deep soil plain. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maguey and nopal present at the time of survey in fields equipped with stone terraces and maguey bancals. The eastern part of the site lies within the modern dispersed village of Guadalupe Relinas.

Archaeological Remains: Variable light-to-moderate surface pottery over an area of 13.0 hectares. A small concentration of obsidian blades and cores occurs on the northern edge of the site. No structural remains.

Tm-Az-128

Classification: Small nucleated village, 150-300 people.

Natural Setting: 2360-2380 meters, on the Smooth Middle Piedmont southwest of Cerro los Pitos. Situated on gently to moderately sloping ground on the southern flank of Cerro Tlexpa. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with scattered nopal and maguey present at the time of survey in fields equipped with bancals.

Archaeological Remains: Moderate surface pottery, substantial-to-heavy rock rubble, and very light-to-light obsidian artifacts over an area of 6.0 hectares. Concentrations of ceramics and rubble on slight rises probably define the remains of 12 poorly preserved residential mounds, nine occurring in the northern half of the site. Due to the condition of the mounds, no dimensions were recorded. A few Mazapan Toltec potsherds were found, though in insufficient amounts to define an earlier site.

Tm-Az-129

Classification: Small hamlet, 5-10 people.

Natural Setting: 2340 meters, on the Smooth Lower Piedmont southwest of Cerro los Pitos. Situated on flat ground. Shallow to medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maguey present at the time of survey in fields equipped with maguey bancals.

Archaeological Remains: Light surface pottery and scattered obsidian artifacts over an area of 1.0 hectare. No structural remains.

Tm-Az-130

Classification: Hamlet, 15-38 people.

Natural Setting: 2340 meters, on the Smooth Lower Piedmont southwest of Cerro los Pitos. Situated on flat to gently sloping ground slightly west of a major barranca. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with some fields planted in barley, nopal, and maguey at the time of survey in fields equipped with drainage ditches, earth banks, and maguey bancals. Other fields lying fallow.

Archaeological Remains: Very light-to-light surface pottery over an area of 7.5 hectares. No structural remains.

Tm-Az-131

Classification: Isolated ceremonial center, no permanent population.

Natural Setting: 2360 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on the steep, sandy western slope of a small hill. Shallow soil cover. Generally moderate erosion.

Modern Land Use: Grazing.

Archaeological Remains: Light surface pottery and heavy rock rubble over an area of 0.1 hectare. One mound is present, measuring 3 by 3 meters at its base and 0.2 meters in height and composed almost entirely of rubble.

Tm-Az-132

Classification: Isolated ceremonial center, no permanent population.

Natural Setting 2370 meters, on a hilltop in the Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on generally flat ground. Shallow soil cover. Moderate erosion.

Modern Land Use: Grazing. Site lies near a modern tezontle quarry, also located on the hilltop.

Archaeological Remains: Light-to-moderate surface pottery (Aztec 3) and a few obsidian artifacts over an area of 0.1 hectare. No structural remains.

Tm-Az-133

Classification: Large nucleated village, 500-1000 people.

Natural Setting: 2350-2380 meters, on the Smooth Middle Piedmont south of Cerro los Pitos. Situated on moderately to steeply sloping ground on the western flank of a small hill overlooking a deep soil plain. Generally shallow soil cover. Moderate erosion, particularly associated with the many washes running through the site.

Modern Land Use: Grazing. Also some rainfall cultivation, with maguey and nopal present at the time of survey in fields equipped with stone terraces and maguey bancals.

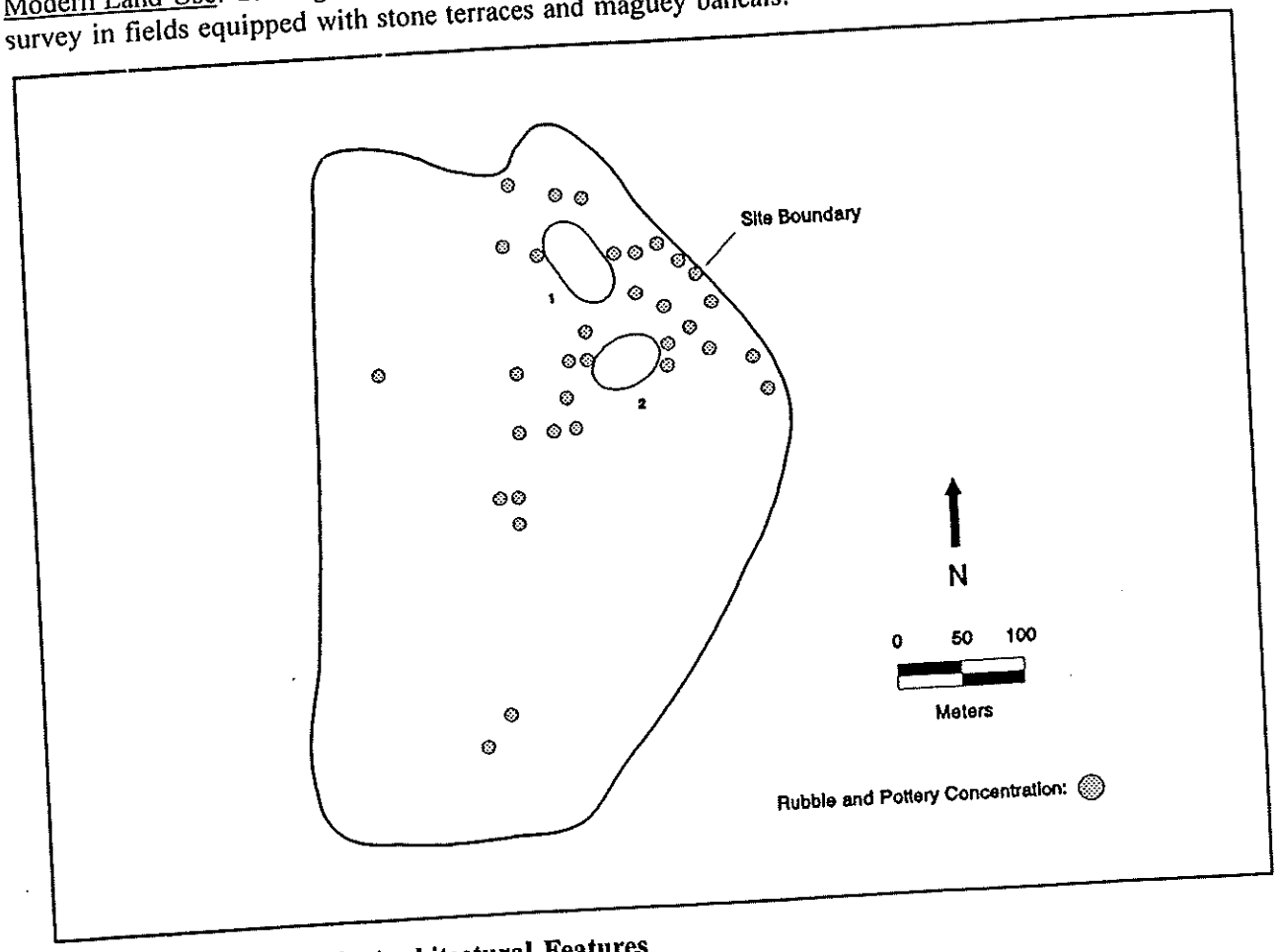


Figure 184 Tm-Az-133 Architectural Features

Archaeological Remains: Generally moderate surface pottery, mixed with scattered obsidian blades and cores, over an area of 20.0 hectares. Two large ceremonial mounds occur on the eastern part of the site (Figure 184) — Mound 1 measuring 80 by 40 meters at its base and 3.0 meters in height, and Mound 2 measuring 60 by 40 meters at its base and 3.0 meters in height. Concentrations of artifacts on slight rises throughout the site probably represent the remains of 33 poorly preserved residential mounds. All of these latter mounds have been heavily plowed (and pitted), scattering the surface remains and making the measurement of dimensions impossible. The degree of agricultural use of this site, coupled with the occurrence of additional artifact concentrations, suggests that other mounds possibly existed at one time.

Tm-Az-134

Classification: Small dispersed village, 112-160 people.

Natural Setting: 2390-2400 meters, on the Smooth Middle Piedmont south of Cerro los Pitos. Situated on gently to moderately sloping ground along the southeastern flank of a small hill. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maguey present at the time of survey in fields equipped with drainage ditches, stone terraces, and bancals. Site lies on the northwestern edge of the modern village of Santa María Aticpac.

Archaeological Remains: Very light-to-light surface pottery, and light-to-substantial rock rubble, over an area of 7.0 hectares. Artifact and rubble concentrations probably represent the remains of 16 poorly preserved residential mounds scattered across the site. Due to the poor condition of these mounds, no dimensions were recorded. The remnants of several stone terraces, probably dating to the Aztec occupation, also occur on the site.

Tm-Az-135

Classification Small nucleated village, 110-275 people.

Natural Setting: 2370-2410 meters, on the Smooth Middle Piedmont south of Cerro los Pitos. Situated on gently to moderately sloping ground overlooking a deep soil plain and immediately west of a large barranca. Shallow soil cover. No erosion.

Modern Land Use: Rainfall cultivation, with maguey and nopal present at the time of survey in fields equipped with stone terraces; other fields lying fallow. Site lies within the northern part of the modern village of Santa María Aticpac.

Archaeological Remains: Light-to-moderate surface pottery (mostly Aztec 3), and heavy rock rubble, over an area of 11.0 hectares. Scattered obsidian and ground stone artifacts also occur across much of the site. The site contains the poorly preserved remains of at least 25 residential mounds (Figure 185) defined by slight rises and concentrations of rubble, and in general scattered uniformly across the site. Although specific measurements were not recorded, most of these likely residential mounds measured 10-12 meters in diameter and less than 0.5 meter in height. Many contain the remains of walls and wall fragments. Most of the areas between mounds have denser artifact concentrations than the residential mounds themselves. The remains of one well preserved residential mound and three ceremonial mounds also are present (Table 71)

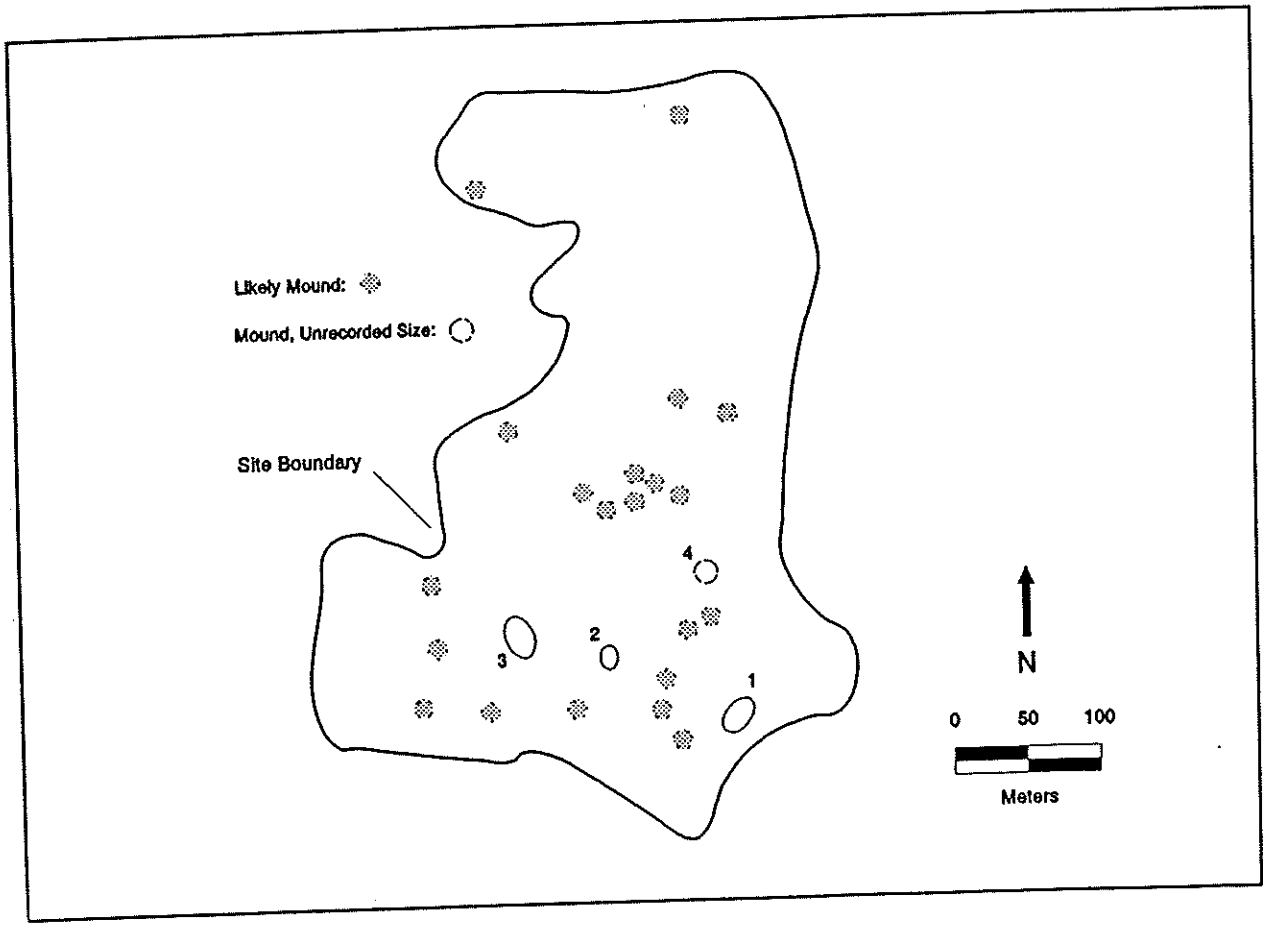


Figure 185 Tm-Az-135 Architectural Features

TABLE 71 Tm-Az-135 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	28 x 15	1 5	None	None	Ceremonial(?? Special function)
Mound 2	16 x 9	0 5	None	None	Residential
Mound 3	30 x 20	2 5	None	None	Ceremonial(?? Special function)
Mound 4	NR	NR	None	Heavy	Possibly ceremonial; poorly preserved

Note NR means "not recorded "

Tm-Az-136

Classification: Small dispersed village, 80-160 people. A deep barranca separates this site from Tm-Az-135, introducing the possibility that at one time these two sites may have formed a single, larger dispersed village—a possibility made more likely by the presence of civic architecture only at Tm-Az-135.

Natural Setting: 2350-2400 meters, on the Smooth Middle Piedmont south of Cerro los Pitos. Situated on gently to moderately sloping ground immediately east of a large barranca. Medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with barley, maguey, and nopal present at the time of survey in fields equipped with maguey bancals. Many fields lying fallow. Site lies just beyond the northeastern edge of the modern village of Santa María Aticpac.

Archaeological Remains: Generally light surface pottery, becoming moderate in places, light rock rubble, along with scattered obsidian and ground stone tools over an area of 9.0 hectares. Artifact and rubble concentrations on slight rises probably represent the poorly preserved remains of at least 16 residential mounds scattered uniformly across the site. These mounds have been plowed to the point of near total destruction, making precise measurement largely impossible; most appear to be about 10 meters in diameter and 0.2-0.3 meter in height. Several of these likely mounds have fragments of walls associated. A moderate concentration of obsidian indicates the presence of a probable workshop.

Tm-Az-137

Classification: Small hamlet, 1-2 people.

Natural Setting: 2475 meters, on the Smooth Middle Piedmont south of Cerro los Pitos. Situated on gently sloping ground. Shallow soil cover. Extensive erosion.

Modern Land Use: Rainfall cultivation, with maguey and nopal present at the time of survey. Grazing also occurs on part of the site.

Archaeological Remains: Very light-to-light surface pottery and substantial rock rubble over an area of 0.3 hectare. No structural remains.

Tm-Az-138

Classification: Small hamlet, 1-3 people.

Natural Setting: 2475 meters, on the Smooth Middle Piedmont south of Cerro los Pitos. Situated on gently sloping ground immediately east of a large barranca. Shallow soil cover. Extensive erosion.

Modern Land Use: Rainfall cultivation, with barley present at the time of survey.

Archaeological Remains: Very light-to-light surface pottery over an area of 0.5 hectare. No mounds are visible, but small, poorly preserved fragments of walls are present.

Tm-Az-139

Classification: Small hamlet, 10-25 people.

Natural Setting: 2490 meters, on the Smooth Middle Piedmont south of Cerro los Pitos. Situated on moderately sloping ground at the base of a small hill and slightly east of the head of a large barranca. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation. Also grazing.

Archaeological Remains: Light-to-moderate surface pottery over an area of 1.0 hectare. No definite structural remains, though two small concentrations of pottery may represent the remains of two former mounds.

Tm-Az-140

Classification: Large nucleated village, 500-1000 people.

Natural Setting: 2420-2440 meters, on the Smooth Middle Piedmont south of Cerro los Pitos. Situated on gently to moderately sloping ground. Shallow soil cover. Severe erosion.

Modern Land Use: Site lies near the center of the modern village of Santa María Aticpac.

Archaeological Remains: Moderate-to-heavy densities of surface pottery and substantial-to-heavy rock rubble over an area of 10.0 hectares. Most rubble occurs in the northeastern portion of the site, though it is not associated with any structural remains. This site has abundant Aztec material mixed with a large amount of Colonial period remains, hindering specific delineation of the extent and density of the prehispanic occupation.

Tm-Az-141

Classification: Small hamlet, 13-25 people.

Natural Setting: 2370 meters, on the Smooth Middle Piedmont south of Cerro los Pitos. Situated on gently to moderately sloping ground at the base of an andesite rock outcrop. Shallow soil cover. Generally moderate erosion.

Modern Land Use: Rainfall cultivation, with maguey present at the time of survey in fields equipped with stone terraces and maguey bancals.

Archaeological Remains: Generally moderate surface pottery and very light obsidian blades over an area of 0.5 hectare. No definite structural remains, although associated stone terraces may date to the Aztec occupation. Mixed with similarly dense Mazapan (Tm-Lt-77) material.

Tm-Az-142

Classification: Hamlet, 50-125 people. Areas of heavy erosion to the north and south of Tm-Az-145 separate this site from Tm-Az-140 and Tm-Az-163, respectively; at the time they were occupied, all three sites may have formed a single, dispersed village

Natural Setting: 2410-2425 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on gently to moderately sloping ground. Shallow soil cover. Moderate erosion, though immediately west of a heavily eroded area.

Modern Land Use: Rainfall cultivation. Site lies on the southern edge of the modern town of Santa María Aticpac.

Archaeological Remains: Light-to-moderate surface pottery over an area of 5.0 hectares. Three residential mounds are visible, lying in an east-west alignment near the southern edge of the site. Mound 1 (the westernmost) measures about 25 meters in diameter and 0.5 meter in height, while Mound 3 (the easternmost) measures 12 meters in diameter and 0.5 meter in height. Mound 2, lying between the other two structures, represents a small concentration of artifacts on a slight rise; due to its poor preservation, no dimensions were recorded.

Tm-Az-143

Classification: Small hamlet, 3-5 people.

Natural Setting: 2370 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on gently to moderately sloping ground immediately north of (and possibly cut by) a large barranca. Shallow to medium soil cover. Moderate erosion.

Modern Land Use: Marginal rainfall cultivation, with maize present at the time of survey in fields equipped with maguey bancals. Site shows evidence of heavy plowing over time.

Archaeological Remains: Moderate surface pottery over an area of 0.1 hectare. Terraces which probably date to the Aztec occupation also occur. No other structural remains.

Tm-Az-144

Classification: Isolated ceremonial center, no permanent population.

Natural Setting: 2360 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on gently sloping ground. Medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with barley, maize, and maguey present at the time of survey in fields equipped with maguey bancals.

Archaeological Remains: Moderate surface pottery and scattered obsidian artifacts over an area of 0.3

hectare. One mound is visible, measuring 60 by 43 meters at its base and 1.5 meters in height and probably used for ceremonial purposes.

Tm-Az-145

Classification: Small hamlet, 5-10 people.

Natural Setting: 2360 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on gently sloping ground near the head of a major barranca system running to the southwest. Generally shallow soil cover. Moderate to severe erosion, particularly associated with several washes which run through the site.

Modern Land Use. Grazing

Archaeological Remains: Moderate-to-heavy surface pottery, light-to-substantial rock rubble, and scattered basalt flakes miscellaneous grey obsidian tools over an area of 0.1 hectare. The remains of one badly eroded mound are visible, measuring 14 by 12 meters at its base and ranging from about 0.1 meter in height to a slight depression. Several concentrations of pottery and rubble occur near the mound. Mixed with moderate Teotihuacan(Tm-Cl-43) material.

Tm-Az-146

Classification: Small hamlet, 5-10 people.

Natural Setting: 2365 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on moderately sloping ground. Shallow soil cover. Moderate erosion.

Modern Land Use: Grazing.

Archaeological Remains: Very light-to-light surface pottery, ground stone tools, and obsidian artifacts over an area of 1 0 hectare No certain structural remains, though a concentration of artifacts on a slight rise may represent the poorly preserved remnants of a residential mound. A few Mazapan potsherds were noted, but in insufficient quantities to define a site.

Tm-Az-147

Classification· Small hamlet, 6-12 people.

Natural Setting: 2355 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on gently sloping ground, the site bordered on the north and south by barrancas. Shallow to medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maguey present at the time of survey.

Archaeological Remains: Light surface pottery, becoming moderate in a few places, combined with light

rock rubble and scattered obsidian artifacts over an area of 1.2 hectares. One mound is visible near the west-central portion of the site, measuring 26 by 13 meters at its base and 1.0 meter in height.

Tm-Az-148

Classification: Small hamlet, 5-10 people.

Natural Setting: 2360 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on moderately sloping ground to the east of a major barranca. Shallow soil cover. Moderate erosion.

Modern Land Use: Rainfall cultivation, with maguey present at the time of survey.

Archaeological Remains: Generally light surface pottery, coupled with scattered obsidian and basalt artifacts, over an area of 0.3 hectare. Light rock rubble also occurs, primarily in the northeastern part of the site and reaching substantial densities in places. One mound is visible, measuring 10 by 10 meters at its base and 0.2 meter in height and associated with considerable basalt rubble.

Tm-Az-149

Classification: Small hamlet, 2-3 people.

Natural Setting: 2355 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos Situated on gently sloping ground composed of mixed soil and tepetate immediately east of a major barranca. Shallow soil cover. No erosion.

Modern Land Use: Rainfall cultivation, with barley present at the time of survey.

Archaeological Remains: Light surface pottery and rock rubble over an area of 0.3 hectare. No structural remains.

Tm-Az-150

Classification: Small hamlet, 1-3 people.

Natural Setting: 2365 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on gently sloping ground immediately east of a major barranca. Shallow to medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with maguey present at the time of survey in fields equipped with earth banks.

Archaeological Remains: Light-to-moderate surface pottery, sparse rock rubble (becoming light in a few places), and a scatter of obsidian blades over an area of 0.1 hectare. No structural remains.

Tm-Az-151

Classification: Town, provincial, or regional center, 1060-1325 people. Although this site features the types of architectural remains that one would expect to find at a provincial center in the Basin of Mexico, it is not documented as such in ethnohistoric records. One possible explanation is that the site functioned as such a center during an early phase of the Late Aztec period of occupation in the Basin, only to lose its administrative status at a later date prior to the conquest, such as occurred with Oxtoticpac (Gibson 1964:68-71). Another possibility is that it was the original site of the prehispanic cabecera of Aztaquemecan and that it was moved to its present location as part of the Congregación.

Natural Setting: 2380-2450 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on level and gently sloping ground, on two hilltops, and the saddle connecting them. Generally very shallow soil cover, with large areas of exposed tepetate. Moderate to heavy erosion; much of the more extensive erosion is associated with a network of barrancas that transverse the southern part of the site.

Modern Land Use: Rainfall cultivation, with barley, beans, and maguey present at the time of survey. Several fields also lying fallow. Despite the presence of bancals, stone terraces, and earth banks throughout the site, much of this area has been badly damaged by erosion. At the time of survey, large-scale reclamation was underway, with much soil being moved about and plowed and many trees uprooted—in the process, bulldozing or otherwise modifying several prehispanic mounds. An old hacienda house lies on the summit of a small hill on the site. The modern settlements of La Puerta and Zacatepec cover the northern portions of Tm-Az-151.

Archaeological Remains: Highly variable densities of surface pottery, ranging from very light to moderate-to-heavy, over an area of 103.0 hectares. Considerable rock rubble, reaching heavy densities in places, also occurs. Artifacts present include numerous manos and metates, obsidian cores and blades (including at least one obsidian workshop), and figurines. Two Huastec figurines also were noted. A total of 65 residential mounds are visible, as well as 26 special function mounds, that is temple platforms, and elite residences, and possible telpochcalli school buildings (Figure 186), their basic characteristics presented in Table 72. The poorly preserved remains of likely prehispanic terraces and bancals occur on the northern and southeastern portions of the site; some of those which also may be mounds are noted below in the mound descriptions.It is likely that this site once contained many more mounds, destroyed by a combination of natural erosion and modern activities (primarily modern house and road construction, agricultural activity, and erosion). The site possibly was substantially larger, but due to heavy erosion over about 60 percent of the site, heavy plowing and bulldozing over another 30 percent, and the disturbance associated with modern settlement in the northern third of the site it is impossible to say with any certainty how large it may have been. This disturbance affected the evaluation of this site in the field, indicating the presence of four separate, smaller sites (based on the arrangement of mounds) which we now feel are barrios within the same administrative center.

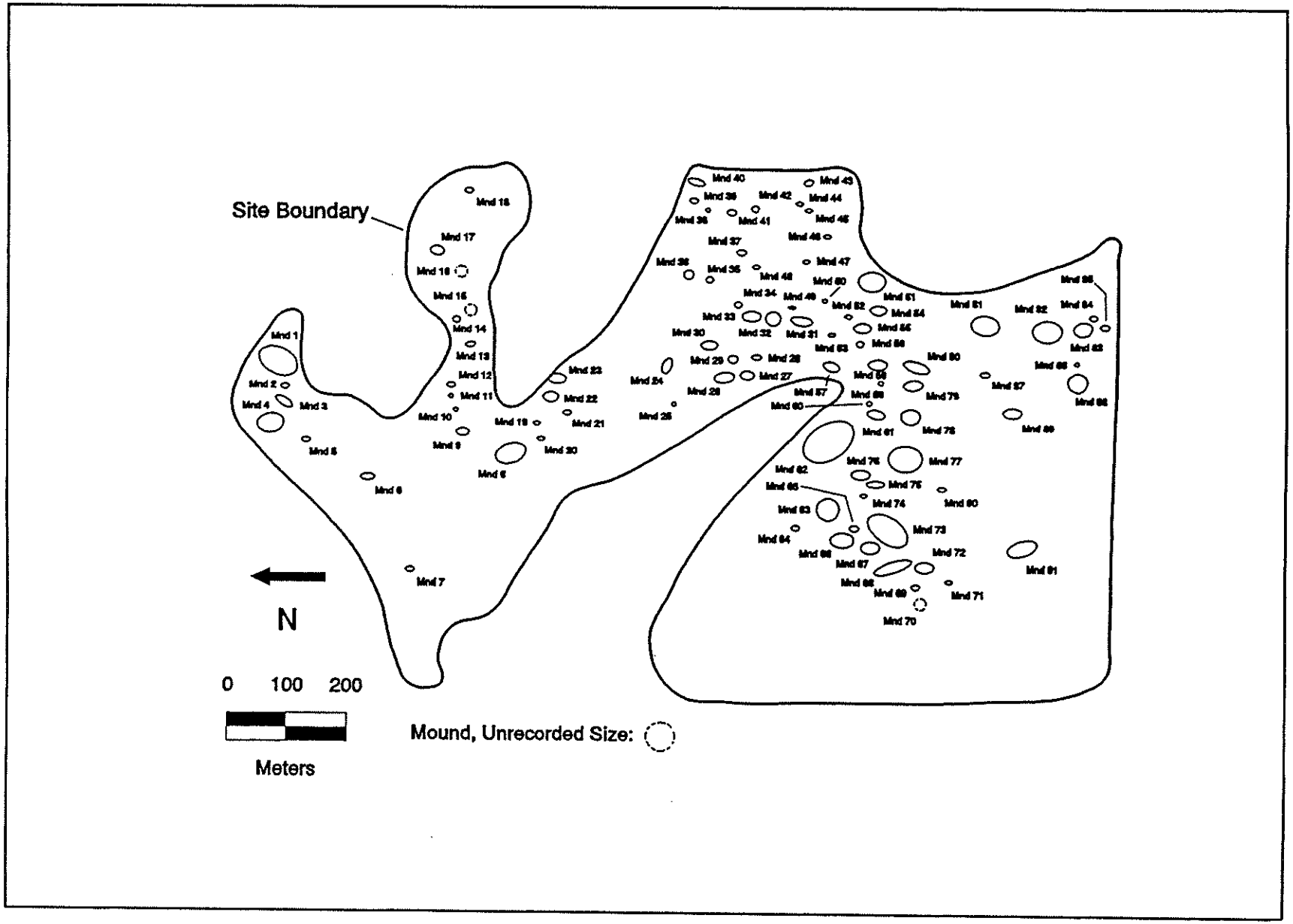


Figure 186 Tm-Az 151 Architectural Features

TABLE 72 Tm-Az-151 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	80 x 28	0 2	None	None	Residential mound or terrace
Mound 2	11 x 8	0 15	None	None	Residential
Mound 3	53 x 30	0 3	Light	Light	Residential mound or terrace
Mound 4	29 x 8	0 25	None	Light	Residential mound or terrace
Mound 5	12 x 6	0 3	Light	Light	Residential; badly eroded
Mound 6	26 x 15	0 7	Light	Light	Residential
Mound 7	10 x 6	0 2	Moderate	Substantial	Residential; moderate obsidian also present
Mound 8	57 x 30	5 0	Moderate	Heavy	Special function; light obsidian also present
Mound 9	20 x 14	1 5	Heavy	Heavy	Special function; heavy obsidian also present
Mound 10	4 x 2	0 1	None	None	Residential; poorly defined
Mound 11	5 x 5	0 4	Heavy	Heavy	Residential
Mound 12	12 x 8	0 2	Moderate	Heavy	Residential
Mound 13	19 x 13	1 0	Moderate	Heavy	Probably residential
Mound 14	7 x 7	0 15	Very light	Heavy	Residential
Mound 15	NR	NR	NR	NR	Probably residential; poorly preserved
Mound 16	NR	NR	NR	NR	Probably residential; poorly preserved
Mound 17	20 x 9	0 15	Light-moderate	Substantial	Residential
Mound 18	12 x 8	0 2	Moderate	Heavy	Residential
Mound 19	9 x 5	0 75	Moderate	Substantial-heavy	Residential
Mound 20	9 x 4	0 2	Moderate	Substantial	Residential; wall fragments also present
Mound 21	12 x 8	1 0	Light	Heavy	Probably residential
Mound 22	26 x 23	1 0	Heavy	Heavy	Probably residential; heavily disturbed (bulldozed)
Mound 23	29 x 17	1 0	Moderate-heavy	Heavy	Probably residential
Mound 24	26 x 20	1.5	Light-moderate	Heavy	Special function
Mound 25	5 x 5	NR	Moderate-heavy	Heavy	Remnants of a heavily disturbed residential mound

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 26	30 x 12	0 2	Light-moderate	Heavy	Residential
Mound 27	17 x 12	0 4	Light-moderate	Heavy	Residential
Mound 28	18 x 11	0 35	Light	Heavy	Residential
Mound 29	15 x 13	1 5	Moderate	Heavy	Special function
Mound 30	26 x 20	1 0	None	Heavy	Probably residential
Mound 31	36 x 15	2 0	Light	Heavy	Special function; heavy obsidian also present
Mound 32	20 x 19	2 0	Moderate	Substantial	Special function
Mound 33	25 x 15	0 5	Moderate	Heavy	Residential
Mound 34	30 x 15	1 5	Heavy	Heavy	Special function; heavy obsidian also present
Mound 35	8 x 8	1 0	Light	Substantial	Probably residential
Mound 36	12 x 12	0 5	Light	Heavy	Residential
Mound 37	15 x 8	0.2	Very light	Heavy	Residential; very light obsidian also present
Mound 38	6 x 6	0 5	Light	Heavy	Residential
Mound 39	10 x 7	0 1	Moderate	Heavy	Residential; very light obsidian also present
Mound 40	21 x 10	0 1	Moderate	Substantial-heavy	Residential; very light obsidian also present
Mound 41	16 x 11	1 0	Very light	Heavy	Probably residential
Mound 42	8 x 6	1 0	Very light	Heavy	Probably residential; very light obsidian also present
Mound 43	16 x 9	0 2	Very light	Heavy	Residential
Mound 44	12 x 7	0 15	Moderate	Substantial	Residential
Mound 45	9 x 7	0 35	Very light	Heavy	Residential
Mound 46	11 x 6	0 4	Very light	Heavy	Residential
Mound 47	13 x 9	0 4	Very light	Heavy	Residential
Mound 48	8 x 7	0 2	Light	Substantial-heavy	Residential; very light obsidian also present
Mound 49	9 x 5	0 5	Moderate	Substantial	Residential
Mound 50	5 x 4	0 2	Heavy	Heavy	Residential
Mound 51	50 x 30	1 5	Light-moderate	Substantial	Special function
Mound 52	11 x 7	0 3	Very light	Substantial	Residential

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 53	12 x 9	0 15	Heavy	Heavy	Residential
Mound 54	27 x 18	2 0	Moderate	Substantial-heavy	Special function; scattered obsidian blades, flakes, and scrapers also present
Mound 55	30 x 18	2 5	Light-moderate	Substantial-heavy	Special function
Mound 56	9 x 8	2 0	Very light	Heavy	Special function
Mound 57	25 x 20	2 0	Moderate	None	Special function
Mound 58	29 x 22	1 0	Moderate-heavy	Heavy	Probably residential; light-moderate obsidian also present
Mound 59	5 x 5	NR	Light	Substantial-heavy	Special function; very light obsidian also present; partial remains of ceremonial mound cut by barranca
Mound 60	9 x 7	NR	Moderate	Heavy	Special function; no height recorded due to heavy plowing
Mound 61	25 x 16	1 5	Very light	Heavy	Special function
Mound 62					Three-tiered special function mound
Tier 1	100 x 60	7 0	Heavy	Heavy	
Tier 2	46 x 43	3 5	Heavy	Heavy	
Tier 3	6 x 4	NR	Light-moderate	Heavy	
Mound 63	29 x 29	1 5	None	None	Probably special function
Mound 64	12 x 8	0.2	Very light	None	Residential, 3 x 3 m house foundation present
Mound 65	14 x 11	0 5	Moderate-heavy	Heavy	Residential; 9 x 9 m raised area at mound center
Mound 66	39 x 23	1 5	None	Substantial	Probably residential
Mound 67	28 x 13	0 1	Moderate	Substantial-heavy	Residential
Mound 68	75 x 13	1 5	None	None	Special function, one Huastec potsherd; badly eroded
Mound 69	12 x 8	0 2	Light-moderate	Substantial	Residential
Mound 70	35 x NR	1 0	Light	Light	Probably special function; ceramics and rubble within a 12 x 4 m area; one side of the mound bulldozed
Mound 71	12 x 4	0 3	Light	Light	Residential; heavily plowed

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 72	33 x 15	0 1	Light-moderate	Light-substantial	Residential
Mound 73	45 x 90	2 0	None	None	Special function
Mound 74	11 x 10	0 1	None	None	Residential; about half of mound badly eroded
Mound 75	24 x 10	0 2	None	None	Residential
Mound 76	31 x 13	0 1	Moderate	Light	Residential
Mound 77	70 x 50	5 0	None	None	Special function; converted to jagüey
Mound 78	29 x 26	1 0	Moderate-heavy	Heavy	Probably residential; heavy obsidian also present
Mound 79	29 x 22	0 3	Moderate	Substantial	Residential; very light obsidian also present
Mound 80	50 x 20	0 75	Moderate	Substantial-heavy	Residential; moderate-heavy obsidian also present
Mound 81	50 x 35	3 0	Light-moderate	Substantial-heavy	Special function
Mound 82					Two-tiered ceremonial mound
Tier 1	45 x 60	2 5	Light-moderate	Heavy	
Tier 2	8 x 7	0 15	Light	Substantial-heavy	Situated atop Tier 1
Mound 83	32 x 20	1 5	Moderate-heavy	Heavy	Special function; light obsidian also present
Mound 84	12 x 8	1 0	Very light	Heavy	Probably special function; situated atop *possible* platform mound measuring 30 x 12 m at the base, 0 3 m in height
Mound 85	14 x 10	1 0	None	Substantial-heavy	Probably residential
Mound 86	7 x 7	0 2	Very light	Heavy	Residential
Mound 87	16 x 11	1 5	Moderate	Heavy	Special function
Mound 88	35 x 35	NR	None	None	Probably residential; height not measured due to heavy disturbance
Mound 89	32 x 13	0 15	Moderate	None	Residential; heavily plowed
Mound 90	16 x 4	1 0	Light	Heavy	Probably residential; scattered fragments of lime plaster with red paint present; mound has been bulldozed

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 91	69 x 26	1 0	Light-moderate	Heavy	Probably residential

Note: NR means "not recorded "

Tm-Az-152

Classification: Small hamlet, 10-25 people.

Natural Setting: 2470 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Site lies on moderately sloping ground. Shallow soil cover. Moderate to extensive erosion.

Modern Land Use: Rainfall cultivation, with maize, barley, and maguey present at the time of survey in fields equipped with maguey bancals.

Archaeological Remains: Light-to-moderate surface pottery over an area of 1.0 hectare. Two mounds are located at opposite ends of this elongated site and connected by a light scatter of pottery. The eastern mound measures 4 by 4 meters at its base and 0.3 meter in height; it is heavily eroded and plowed, with very light ceramics associated. The western mound, measuring 7 by 5 meters at its base and about 1.0 meter in height, has light-to-moderate ceramics associated.

Tm-Az-153

Classification: Hamlet, 15-30 people.

Natural Setting: 2470 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on moderately sloping ground. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with barley and maize present at the time of survey in fields equipped with maguey bancals.

Archaeological Remains: Very light surface pottery over an area of 1.0 hectare. Slight rises with a few potsherds associated probably represent the remnants of three poorly preserved residential mounds; due to their condition, no dimensions were recorded.

Tm-Az-154

Classification: Hamlet, 30-60 people.

Natural Setting: 2455 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on gently sloping ground. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with barley and present at the time of survey in fields equipped with

earth banks and maguey bancals.

Archaeological Remains: Very light surface pottery (Aztec 3), and light-to-substantial rock rubble, over an area of 1.0 hectare. The remains of six residential mounds are present, lying roughly in an east-west alignment Two of these mounds measure 10 by 10 meters at the base and about 0.8 meter in height; the remaining four are very poorly preserved, defined primarily by concentrations of rubble and artifacts, with no dimensions recorded.

Tm-Az-155

Classification: Small nucleated village, 188-375 people.

Natural Setting: 2440-2450 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos Situated on moderately to steeply sloping ground. Shallow soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, mainly of maize and barley but with some maguey and nopal also present at the time of survey. Maguey bancals occur in fields on the eastern part of the site. Parts of this site also are used for grazing. Modern roads lie along the eastern, northern, and southern borders of the site, making boundaries difficult to define.

Archaeological Remains: Generally moderate surface pottery (Aztec 3 and 4), light-to-substantial rock rubble, and assorted lithic artifacts over an area of 7.5 hectares. Concentrations of rubble and artifacts on slight rises in the western half of the site define the remains of four poorly preserved residential mounds. Due to their condition, no dimensions were recorded. A small piece of painted plaster (measuring 0.54 by 0.45 meter) was noted on one of the mounds. Concentrations of ceramics near the eastern edge of the site may define the remnants of two additional mounds. Although a few Early Toltec potsherds were found, they were insufficient to define an earlier occupation.

Tm-Az-156

Classification. Hamlet, 20-40 people.

Natural Setting: 2475 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos Situated on gently sloping ground. Shallow soil cover. No erosion.

Modern Land Use: Rainfall cultivation, with maize, barley, and oats present at the time of survey in fields equipped with earth banks.

Archaeological Remains: Very light-to-light surface pottery, a few basalt artifacts (manos), and light rock rubble over an area of 3.2 hectares. The remains of four residential mounds were present, three clustered in the southern portion of the site and the other in the northern portion. The latter mound is about 10 by 10 meters at its base, with no height determined; fragments of walls on top of this mound define the remnants of a 3.0 by 3.0 meter room. The remaining three mounds all are very poorly preserved, defined primarily by concentrations of rubble and a few associated artifacts (ceramics, manos), and hence were not measured. A small concentration of artifacts occurs near the center of the site between the two mound groups.

Tm-Az-157

Classification Small dispersed village, 125-250 people

Natural Setting. 2430-2480 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on moderately to steeply sloping ground along the southern and eastern flank of a small hill. Shallow to medium soil cover. Slight erosion.

Modern Land Use: Rainfall cultivation, with barley and oats present at the time of survey Part of the site also was used for grazing

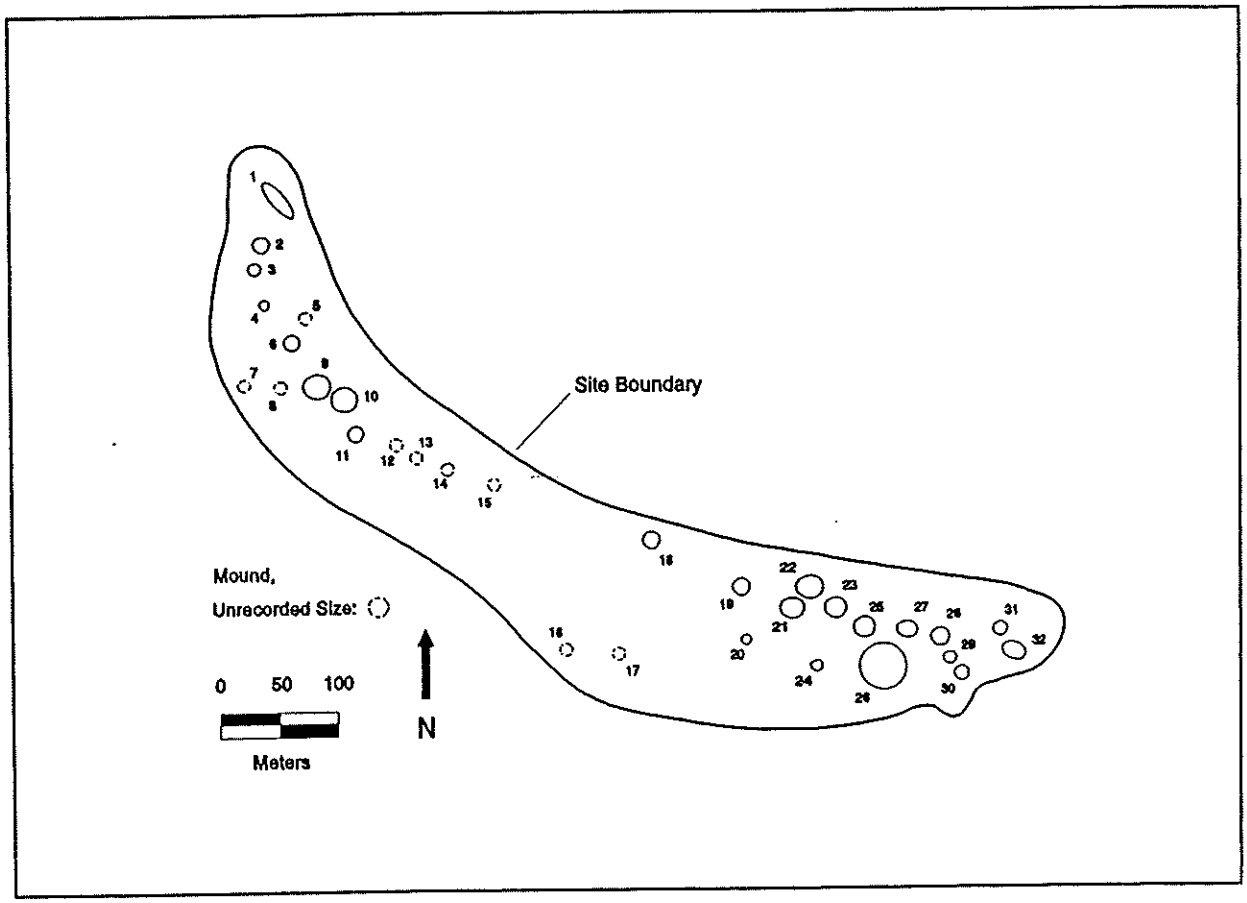


Figure 187 Tm-Az-157 Architectural Features

Archaeological Remains: Light surface pottery and very light obsidian artifacts (mainly blades and cores) over an area of 13.0 hectares. Variable densities of rock rubble also occur, generally light but ranging from none to heavy The remains of 32 mounds are visible, arranged around a small hill and falling into an eastern group and western group (Figure 187). Table 73 presents basic descriptions of these mounds Some details of the house configuration on Mound 25 were visible (Figure 188B); wall fragments were visible from the rooms on Mound 10 (Figure 188A).

TABLE 73 Tm-Az-157 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	40 x 10	0 5	None	None	Probably elite residence; wall fragments (some with murals) define one 3 x 3 m room on the east-central part of the mound
Mound 2	9 x 9	2 0	None	None	Ceremonial; wall fragments also present
Mound 3	6 x 6	1 5	Very light	None	Ceremonial; Aztec 3; wall and mural fragments also present
Mound 4	4 x 4	0 8	None	None	Residential; wall and mural fragments also present
Mound 5	NR	2 0	None	None	Ceremonial; wall fragments; heavily disturbed on all sides
Mound 6	8 x 8	1 5	None	None	Ceremonial; one wall section about 2 5 m long on the northern part of the mound
Mound 7	NR	NR	None	None	Residential; very poorly preserved
Mound 8	NR	NR	None	None	Residential; very poorly preserved
Mound 9	13 x 12	3 0	Light	None	Ceremonial; Aztec 1V; wall fragments define one 5 x 3 m room near mound center
Mound 10	12 x 12	2 0	Light	None	Ceremonial; Aztec 1V; wall fragments define two 6 x 3 m rooms
Mound 11	8 x 8	NR	Light	Light	Residential; poorly preserved
Mound 12	NR	NR	None	Substantial	Residential; very poorly preserved
Mound 13	NR	NR	None	Substantial	Residential; very poorly preserved
Mound 14	NR	NR	None	Substantial	Residential; very poorly preserved
Mound 15	NR	NR	None	Substantial	Residential; very poorly preserved
Mound 16	NR	NR	None	Heavy	Residential; very poorly preserved
Mound 17	NR	NR	Light	Substantial	Residential; very poorly preserved
Mound 18	10 x 10	0 5	None	None	Residential
Mound 19	10 x 10	0 5	None	None	Residential
Mound 20	3 x 3	1 0	None	Heavy	Probably residential; composed almost entirely of rubble
Mound 21	20 x 20	0 5	None	Heavy	Residential; wall sections on the northern end of the mound
Mound 22	25 x 25	0 4	None	None	Residential; wall fragments on the northern part of the mound

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 23	20 x 20	0 4	Heavy	None	Probably elite residence; Aztec 3 ceramics; three wall fragments (one with mural remnants) on the northern part of the mound; mound cut by a modern road
Mound 24	5 x 4	0 1	None	Heavy	Residential
Mound 25	20 x 20	0 4	None	None	Residential; wall fragments on the northern portion of the mound
Mound 26	40 x 40	1 0	None	None	Probably residential; Aztec 3 and 4; stucco floor in northeast corner; sections of other floors and walls define at least two rooms, one 6 x 4 m and the other 15 m by an unknown width
Mound 27	15 x 10	0 2	None	None	Ceremonial; Aztec 4; long section of painted plaster along southern edge of mound
Mound 28	15 x 15	1 5	Very light	None	Probably elite residence, wall sections and a few mural fragments also present
Mound 29	6 x 5	NR	Light	None	Probably elite residence; Aztec 3; mural fragments also present
Mound 30	7 x 7	NR	Light	None	Probably residential; Aztec 3 and 4
Mound 31	7 x 7	0 1	None	None	Probably residential; poorly preserved
Mound 32	20 x 15	0 2	Very light	None	Residential; mural fragments also present

Note: NR means "not recorded "

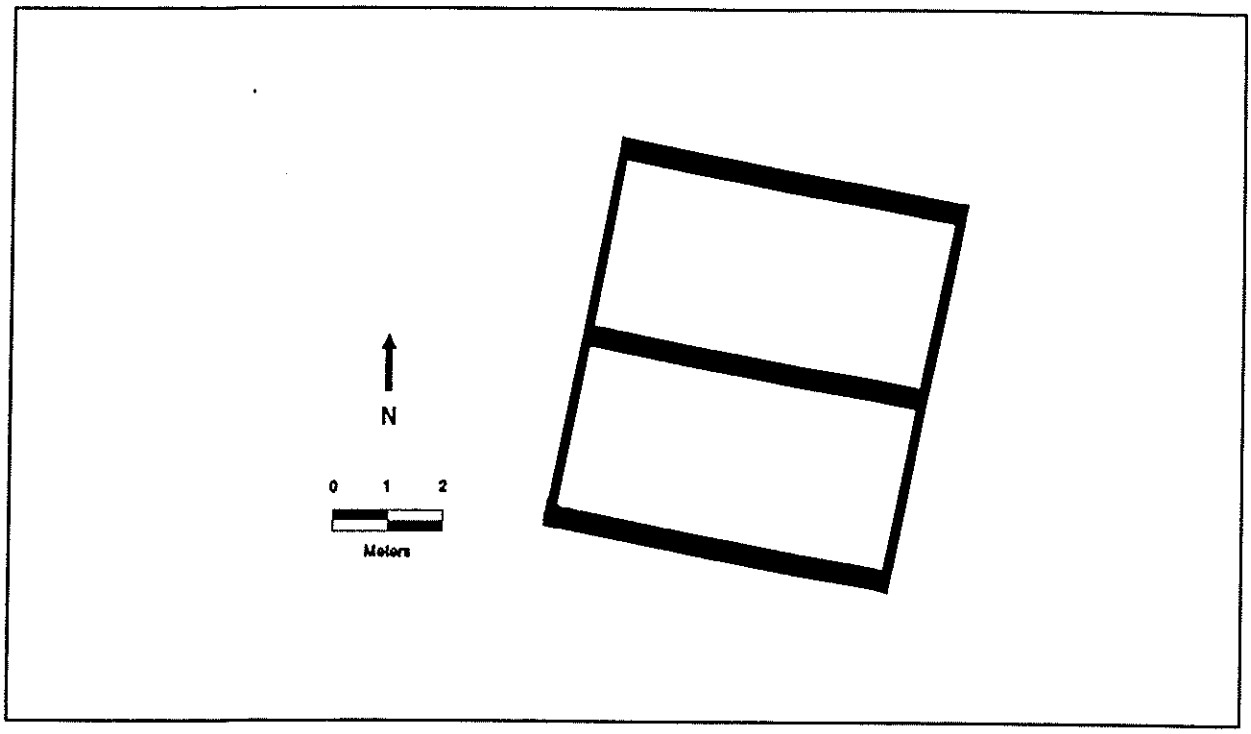


Figure 188A Tm-Az-157, Mound 10 Wall Fragments

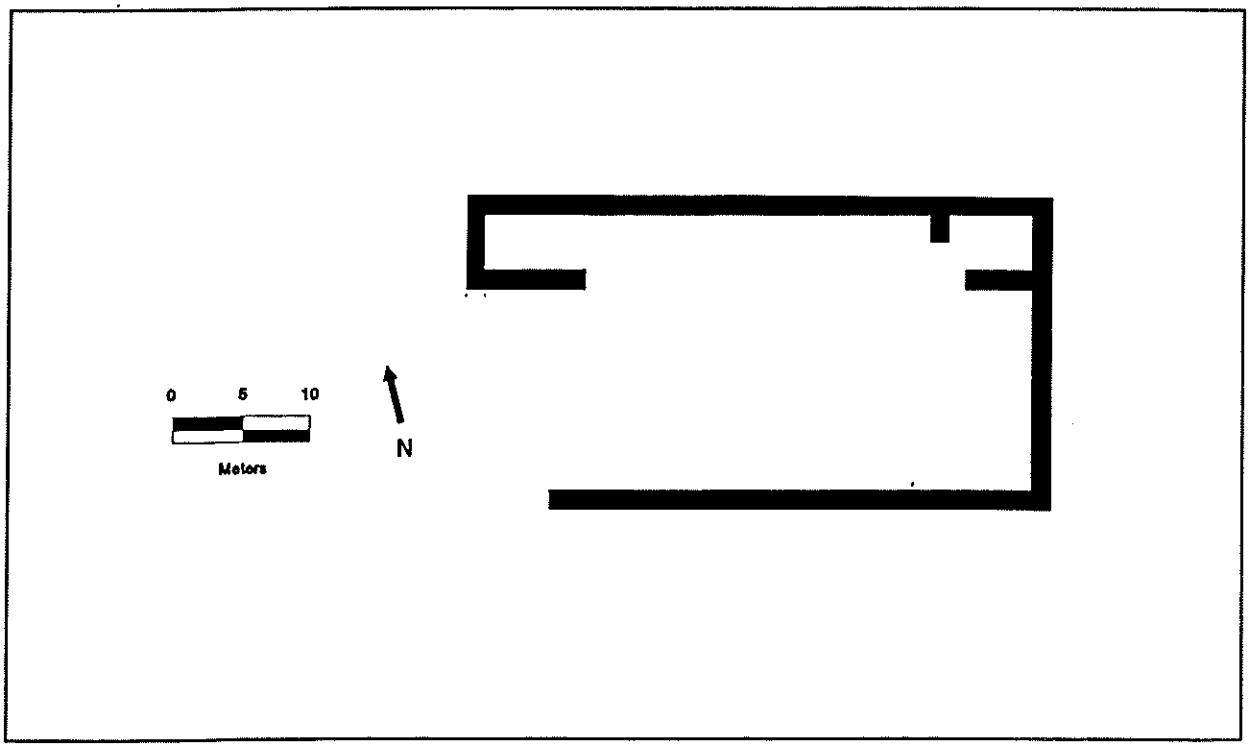


Figure 188B Tm-Az-157, Mound 25 Wall Fragments

Tm-Az-158

Classification: Small hamlet, 5-10 people.

Natural Setting: 2435 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on gently sloping ground adjacent to a small barranca lying immediately to the northeast. Medium soil cover. Slight erosion.

Moderate Land Use: Rainfall cultivation, with maguey present at the time of survey in fields equipped with bancals.

Archaeological Remains: Light-to-moderate surface pottery, and substantial rock rubble, over an area of 0.3 hectare. One poorly preserved residential mound is present, measuring 5 meters in diameter and 0.5 meter in height, with moderate ceramics and rubble associated.

Tm-Az-159

Classification: Small hamlet, 5-10 people.

Natural Setting: 2435 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on gently sloping ground. Shallow to medium soil cover. Slight erosion.

Modern Land Use: Grazing, though associated fields equipped with earth banks.

Archaeological Remains: Light-to-moderate surface pottery (Aztec 3 and 4), and substantial rock rubble, over an area of 0.3 hectare. One mound is present, measuring 12 by 9 meters at its base and 2.0 meters in height, with moderate ceramics and rubble associated.

Tm-Az-160

Classification: Small hamlet, 10-20 people.

Natural Setting: 2415-2425 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on gently sloping ground. Shallow soil cover. Extensive erosion.

Modern Land Use: Grazing.

Archaeological Remains: Very light surface pottery over an area of 0.4 hectare. Two residential mounds are present, each measuring 7 by 7 meters at its base and 0.8 meter in height.

Tm-Az-161

Classification: Small hamlet, 5-10 people.

Natural Setting: 2415-2425 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los

Pitos. Situated on gently sloping ground. Shallow soil cover. Extensive erosion.

Modern Land Use: Grazing. Also some rainfall cultivation, with maguey and nopal present at the time of survey.

Archaeological Remains: Very light surface pottery over an area of 0.2 hectare. One residential mound is present, measuring 9 by 7 meters at its base and 0.7 meter in height.

Tm-Az-162

Classification: Small hamlet, 10-20 people.

Natural Setting: 2390 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on gently sloping ground. Shallow soil cover. Severe erosion.

Modern Land Use: Rainfall cultivation, with barley and wheat present at the time of survey in fields equipped with earth banks.

Archaeological Remains: Generally light surface pottery (Aztec 3 and 4), becoming heavy in places (primarily on mounds), and substantial rock rubble over an elongated area of 3.0 hectares. Two mounds occur on the eastern end of the site. The southern mound measures 4 by 4 meters at its base and 0.3 meter in height, with moderate-to-heavy ceramics associated. The northern mound also measures 4 by 4 meters at its base and 0.3 meter in height, with heavy ceramics associated. A few Late Toltec potsherds were found, but in an insufficient amount to represent remains of a residential site.

Tm-Az-163

Classification: Small dispersed village, 112-160 people.

Natural Setting: 2410-2430 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on gently to moderately sloping ground slightly north of the head of a large barranca Shallow to medium soil cover. Extensive erosion.

Modern Land Use: Rainfall cultivation, with barley and maguey present at the time of survey in fields equipped with earth banks, stone terraces, and maguey bancals.

Archaeological Remains: Very light-to-light surface pottery (mostly Aztec 3), along with substantial-to-heavy rock rubble and very light obsidian (blades, scrapers, and cores) and basalt (scrapers) artifacts, over an area of 15.0 hectares. Density of surface remains at this site are greatly affected by erosion patterns. Sixteen residential mounds and the remains of a possible tepochcalli occur on the site (Figure 189, Table 74), situated on terraces which presumably date to the Aztec occupation. All mounds are separate except for one pair near the eastern edge of the site and a triad near the center of the site. Concentrations of tepetate rubble may represent the poorly preserved remnants of several other mounds.

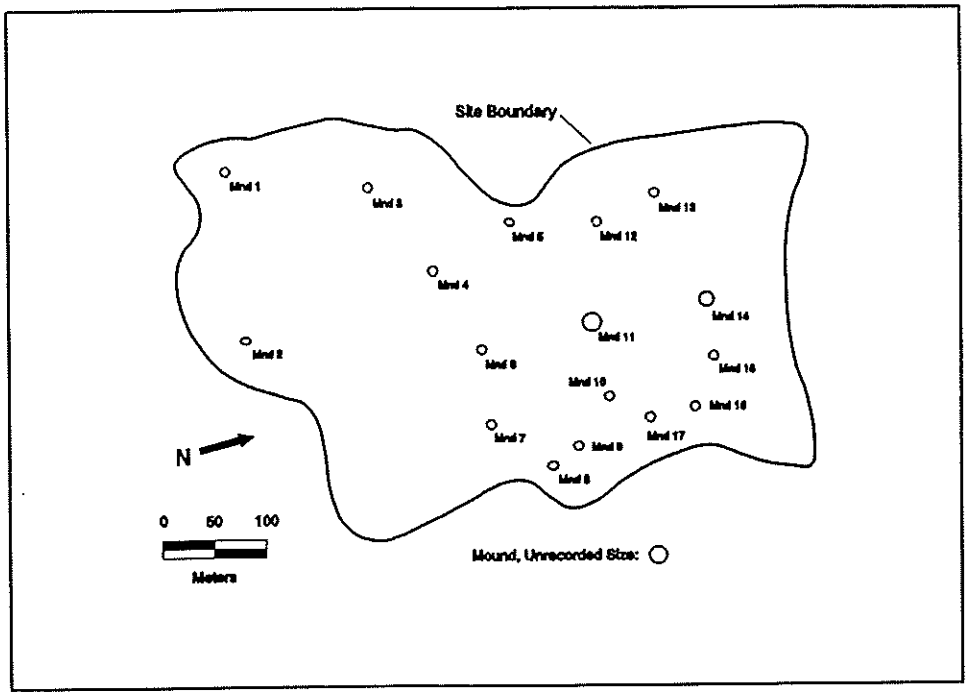


Figure 189 Tm-Az-163 Architectural Features

TABLE 74 Tm-Az-163 Architectural Features

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 1	NR	NR	Light	Substantial	Residential, poorly preserved
Mound 2	5 x 3	0 3	None	None	Residential
Mound 3	NR	NR	Light	Substantial	Residential, poorly preserved
Mound 4	NR	NR	Light-moderate	Heavy	Residential
Mound 5	5 x 3	0 2	Light	None	Residential
Mound 6	NR	NR	Light-moderate	Heavy	Residential, poorly preserved
Mound 7	NR	NR	Very light	Substantial	Residential, poorly preserved
Mound 8	6 x 4	0 4	Very light	Heavy	Residential
Mound 9	NR	NR	Light	Substantial	Residential, poorly preserved
Mound 10	NR	0 5	Light	Heavy	Residential; poorly preserved
Mound 11	20 x 20	NR	Moderate-heavy	Heavy	Residential, two rubble concentrations may define two separate mounds

Feature No	Area (m)	Height (m)	Surface Pottery	Rock Rubble	Comments
Mound 12	NR	NR	Light	Substantial	Residential; poorly preserved
Mound 13	NR	NR	Light	Substantial	Residential; poorly preserved
Mound 14	15 x 15	NR	Light	None	Possible telpochcalli, based on artifacts and spatial relationship to other mounds
Mound 15	NR	NR	Light-moderate	Heavy	Residential; very badly eroded
Mound 16	NR	0 5	Light-moderate	Substantial	Residential; wall fragments also present; badly eroded
Mound 17	NR	NR	None	Substantial	Residential; poorly preserved

Note: NR means "not recorded "

Tm-Az-164

Classification: Small hamlet, 5-10 persons.

Natural Setting: 2435 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos Situated on gently sloping ground on the western flank of a large hill. Shallow soil cover. Extensive erosion.

Modern Land Use: Rainfall cultivation, with maize, barley, and some maguey present at the time of survey.

Archaeological Remains: Very light surface pottery (Aztec 3) over an area of 0.1 hectare. One residential mound is present, measuring 5 by 4 meters at the base, its height unrecorded due to heavy disturbance.

Tm-Az-165

Classification: Questionable, due to the poor preservation of the site. Probably an isolated ceremonial center, with no permanent population

Natural Setting: 2460 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on gently sloping ground on the western flank of a large hill. Shallow soil cover. Extensive erosion.

Modern Land Use: Rainfall cultivation, with maize and maguey present at the time of survey in fields equipped with earth banks. Part of the site also is used for grazing.

Archaeological Remains. Very light-to-light surface pottery (Aztec 3) over an area of 0.3 hectare. The major feature of this site is one badly preserved ceremonial mound, almost totally destroyed by cultivation and heavy erosion. Due to its poor condition, no dimensions of this mound were recorded.

Tm-Az-166

Classification: Small hamlet, 5-10 people.

Natural Setting: 2450 meters, on the Smooth Middle Piedmont between Cerro Gordo and Cerro los Pitos. Situated on gently sloping ground on the western flank of a large hill. Shallow soil cover. Extensive erosion.

Modern Land Use: Rainfall cultivation, with maize present at the time of survey in fields equipped with earth banks. A modern road lies immediately east of the site.

Archaeological Remains: Very light surface pottery and substantial rock rubble over an area of 0.3 hectare. One mound is present, measuring 18 by 7 meters at its base, but of undetermined height due to heavy modern disturbance.

Tm-Az-167

Classification: Isolated ceremonial center, no permanent population.

Natural Setting: 2520 meters, on the Smooth Upper Piedmont between Cerro Gordo and Cerro los Pitos. Situated on gently sloping ground. Shallow to medium soil cover. Slight erosion.

Modern Land Use: No clear modern use, though part of the site may be used for grazing. Irrigation canals occur nearby.

Archaeological Remains: Very light-to-light surface pottery (Aztec 3 and 4) over an area of 0.2 hectare The site mainly consists of a single ceremonial mound, measuring 50 by 50 meters at its base and 4.5 meters in height; fragments of a mural occur on the north face of the mound.

Tm-Az-168

Classification: Small hamlet, 5-10 people.

Natural Setting: 2515 meters, on the Smooth Upper Piedmont south of Cerro los Pitos. Situated on gently sloping ground. Medium soil cover. Slight erosion.

Modern Land Use: Grazing.

Archaeological Remains: Light surface pottery, in conjunction with scattered obsidian and basalt artifacts, over an area of 1.0 hectare. A concentration of artifacts and some wall fragments on a slight rise probably represents the remnants of a single mound near the center of the site—although due to its poor condition no dimensions were recorded.

TABLE 75. TABULAR PRESENTATION OF PREHISPANIC SETTLEMENT DATA
Aztec Sites

SITE NUMBER	CLASSIFICATION	ELEV (m)	ENVIRONMENTAL ZONE	RAINFALL (mm)	AREA (ha)	POPULATION	OTHER OCCUPATIONS							
							TF	EC	MC	LC	ET	LT	EA	LA
TM-AZ-1	Sm Disp Village	2320	Low Piedmont-Smooth	580	10.0	155	0	0	0	0	0	0	0	0
TM-AZ-2	Hamlet	2275	Thin Soil Alluvium	540	2.0	35	0	0	0	0	0	1	0	0
TM-AZ-3	Sm Disp Village	2285	Thin Soil Alluvium	530	15.0	113	0	0	0	0	0	0	0	0
TM-AZ-4	Small Hamlet	2280	Thin Soil Alluvium	530	1.0	8	0	0	0	0	0	1	0	0
TM-AZ-5	Hamlet	2285	Thin Soil Alluvium	530	7.0	83	0	0	0	0	0	1	0	0
TM-AZ-6	Questionable	2270	Thin Soil Alluvium	550	1.5	0	0	0	0	0	0	1	0	0
TM-AZ-7	Small Hamlet	2276	Thin Soil Alluvium	580	2.0	7	0	0	0	0	0	1	0	0
TM-AZ-8	Hamlet	2258	Thin Soil Alluvium	580	4.0	23	0	0	0	0	0	1	0	0
TM-AZ-9	Small Hamlet	2255	Thin Soil Alluvium	590	2.2	17	1	1	0	0	1	0	1	0
TM-AZ-10	Hamlet	2245	Thin Soil Alluvium	590	20.0	70	0	0	0	0	0	0	0	0
TM-AZ-11	Hamlet	2250	Thin Soil Alluvium	590	1.5	27	0	1	1	1	0	1	2	0
TM-AZ-12	Hamlet	2265	Thin Soil Alluvium	580	4.0	45	1	0	0	0	0	1	0	0
TM-AZ-13	Small Hamlet	2250	Thin Soil Alluvium	590	1.0	8	0	0	0	0	0	0	0	0
TM-AZ-14	Hamlet	2255	Thin Soil Alluvium	590	3.0	60	0	0	0	0	0	0	0	0
TM-AZ-15	Lg. Nucl Village	2270	Thin Soil Alluvium	580	33.0	578	4	0	0	0	1	1	0	0
TM-AZ-16	Hamlet	2275	Thin Soil Alluvium	580	6.0	45	1	0	0	0	1	0	0	0
TM-AZ-17	Sm Disp Village	2305	Thin Soil Alluvium	570	75.0	263	4	1	1	1	1	1	0	0
TM-AZ-18	Small Hamlet	2280	Low Piedmont-Smooth	570	1.0	8	0	0	0	0	0	1	0	0

Table 75 Continued TABULAR PRESENTATION OF PREHISPANIC SETTLEMENT DATA
Aztec Sites

SITE NUMBER	CLASSIFICATION	ELEV (m)	ENVIRONMENTAL ZONE	RAINFALL (mm)	AREA (ha)	POPULATION	OTHER OCCUPATIONS							
							TF	EC	MC	LC	ET	LT	EA	LA
TM-AZ-19	Small Hamlet	2275	Low Piedmont-Smooth	580	0.5	9	0	0	0	0	0	1	0	0
TM-AZ-20	Small Hamlet	2290	Low Piedmont-Smooth	580	2.0	7	0	0	0	0	0	0	0	0
TM-AZ-21	Small Hamlet	2275	Thin Soil Alluvium	590	2.7	10	0	0	0	0	0	1	0	0
TM-AZ-22	Small Hamlet	2275	Thin Soil Alluvium	580	0.5	9	0	0	0	0	0	1	0	0
TM-AZ-23	Sm Disp Village	2260	Thin Soil Alluvium	600	16.0	120	1	1	1	1	0	2	0	0
TM-AZ-24	Sm Disp Village	2275	Thin Soil Alluvium	600	496	2	0	0	0	0	0	1	0	0
TM-AZ-25	Small Hamlet	2265	Thin Soil Alluvium	600	1.0	4	1	1	0	0	0	0	0	0
TM-AZ-26	Small Hamlet	2275	Thin Soil Alluvium	600	1.0	8	0	0	0	0	0	0	0	0
TM-AZ-27	Small Hamlet	2270	Thin Soil Alluvium	6000	2.3	9	1	1	1	1	0	1	0	0
TM-AZ-28	Hamlet	2270	Low Piedmont-Smooth	600	6.0	21	1	1	1	1	0	1	0	0
TM-AZ-29	Hamlet	2270	Low Piedmont-Smooth	600	2.5	38	0	1	1	1	0	0	0	0
TM-AZ-30	Hamlet	2285	Low Piedmont-Smooth	590	5.5	97	0	0	0	0	0	0	0	0
TM-AZ-31	Sm Disp Village	2258	Thin Soil Alluvium	600	20.5	225	1	0	0	0	1	1	3	0
TM-AZ-32	Small Hamlet	2255	Low Piedmont-Smooth	600	0.5	8	0	0	0	0	0	0	0	0
TM-AZ-33	Hamlet	2270	Low Piedmont-Smooth	600	6.0	21	0	0	0	0	0	0	0	0
TM-AZ-34	Hamlet	2263	Thin Soil Alluvium	600	6.0	21	1	1	1	1	0	1	4	0
TM-AZ-35	Small Hamlet	2235	Lakeshore Plain	600	0.5	8	0	0	0	0	0	0	0	0
TM-AZ-36	Small Hamlet	2300	Low Piedmont-Smooth	590	0.1	8	0	0	0	0	0	0	0	0

Table 75 Continued TABULAR PRESENTATION OF PREHISPANIC SETTLEMENT DATA
Aztec Sites

SITE NUMBER	CLASSIFICATION	ELEV (m)	ENVIRONMENTAL ZONE	RAINFALL (mm)	AREA (ha)	POPULATION	OTHER OCCUPATIONS							
							TF	EC	MC	LC	ET	LT	EA	LA
TM-AZ-37	Small Hamlet	2285	Low Piedmont-Smooth	590	1.0	18	0	0	0	0	0	0	0	0
TM-AZ-38	Small Hamlet	2315	Low Piedmont-Smooth	580	1.0	18	1	1	1	1	0	1	0	0
TM-AZ-39	Hamlet	2310	Low Piedmont-Smooth	590	1.5	57	0	1	1	1	0	0	0	0
TM-AZ-40	Hamlet	2305	Low Piedmont-Smooth	590	4.0	70	0	0	0	0	0	0	0	0
TM-AZ-41	Hamlet	2338	Low Piedmont-Hill	590	3.8	29	1	1	1	1	0	1	0	0
TM-AZ-42	Hamlet	2320	Low Piedmont-Hill	590	5.0	88	0	0	0	0	0	0	0	0
TM-AZ-43	Small Hamlet	2270	Thin Soil Alluvium	570	0.5	2	0	0	0	0	0	1	0	0
TM-AZ-44	Hamlet	2290	Thin Soil Alluvium	560	5.0	38	0	1	1	1	0	1	0	0
TM-AZ-45	Hamlet	2280	Thin Soil Alluv-Hill	560	0.5	38	1	1	1	0	0	0	0	0
TM-AZ-46	Small Hamlet	2290	Thin Soil Alluvium	550	4.0	14	0	1	1	1	0	1	0	0
TM-AZ-47	Small Hamlet	2290	Thin Soil Alluvium	550	0.1	8	0	0	0	0	0	0	0	0
TM-AZ-48	Hamlet	2290	Thin Soil Alluvium	560	0.8	60	0	0	0	0	0	0	0	0
TM-AZ-49	Small Hamlet	2285	Thin Soil Alluvium	550	0.5	4	0	0	0	0	0	0	0	0
TM-AZ-50	Hamlet	2303	Thin Soil Alluvium	550	12.0	90	0	0	1	1	0	1	0	0
TM-AZ-51	Hamlet	2310	Thin Soil Alluvium	550	4.0	23	0	0	0	0	0	1	0	0
TM-AZ-52	Lg Disp Village	2315	Thin Soil Alluvium	540	37.0	500	0	1	1	0	0	1	0	0
TM-AZ-53	Small Hamlet	2315	Thin Soil Alluvium	540	1.5	8	0	0	0	0	0	0	0	0
TM-AZ-54	Hamlet	2310	Thin Soil Alluvium	550	3.0	38	0	0	0	0	0	0	0	0

Table 75 Continued TABULAR PRESENTATION OF PREHISPANIC SETTLEMENT DATA
Aztec Sites

SITE NUMBER	CLASSIFICATION	ELEV (m)	ENVIRONMENTAL ZONE	RAINFALL (mm)	AREA (ha)	POPULATION	OTHER OCCUPATIONS							
							TF	EC	MC	LC	ET	LT	EA	LA
TM-AZ-55	Small Hamlet	2305	Thin Soil Alluvium	550	3.5	13	0	1	1	1	0	0	0	0
TM-AZ-56	Questionable	2300	Thin Soil Alluvium	550	0.5	0	1	1	1	1	0	0	0	0
TM-AZ-57	Hamlet	2295	Thin Soil Alluvium	550	3.0	53	0	0	0	0	0	0	0	0
TM-AZ-58	Hamlet	2305	Thin Soil Alluvium	560	4.5	79	0	1	1	1	0	0	0	0
TM-AZ-59	Hamlet	2305	Thin Soil Alluvium	560	8.0	28	1	1	1	1	0	1	0	0
TM-AZ-60	Sm Disp Village	2305	Thin Soil Alluvium	550	15.5	129	0	1	1	1	0	2	0	0
TM-AZ-61	Small Hamlet	2305	Thin Soil Alluvium	550	2.0	15	0	0	0	0	0	0	0	0
TM-AZ-62	Hamlet	2320	Thin Soil Alluvium	550	10.0	75	1	1	1	1	0	1	0	0
TM-AZ-63	Hamlet	2313	Thin Soil Alluvium	560	5.0	18	0	0	0	0	0	1	0	0
TM-AZ-64	Small Hamlet	2345	Low Piedmont-Smooth	570	1.5	12	0	0	0	0	0	0	0	0
TM-AZ-65	Hamlet	2340	Low Piedmont-Smooth	570	2.0	35	0	1	0	0	0	0	0	0
TM-AZ-66	Questionable	2375	Mid Piedmont-Smooth	560	0.5	0	0	0	0	0	0	0	0	0
TM-AZ-67	Small Hamlet	2375	Mid Piedmont-Smooth	570	1.5	12	0	0	0	0	0	0	0	0
TM-AZ-68	Hamlet	2385	Mid Piedmont-Smooth	570	1.5	27	0	0	0	0	0	0	0	0
TM-AZ-69	Hamlet	2365	Mid Piedmont-Smooth	560	1.5	60	0	0	0	0	0	0	0	0
TM-AZ-70	Sm Disp Village	2330	Low Piedmont-Smooth	560	27.0	210	0	0	0	0	0	0	0	0
TM-AZ-71	Hamlet	2350	Mid Piedmont-Smooth	560	14.0	49	0	0	0	0	0	1	0	0
TM-AZ-72	Small Hamlet	2395	Mid Piedmont-Smooth	560	0.5	4	0	0	0	0	0	0	0	0

TABLE 75 Continued TABULAR PRESENTATION OF PREHISPANIC SETTLEMENT DATA
Aztec Sites

SITE NUMBER	CLASSIFICATION	ELEV (m)	ENVIRONMENTAL ZONE	RAINFALL (mm)	AREA (ha)	POPULATION	OTHER OCCUPATIONS							
							TF	EC	MC	LC	ET	LT	EA	LA
TM-AZ-73	Sm. Nucl Village	2415	Mid Piedmont-Smooth	570	5.5	207	0	0	0	0	0	1	0	0
TM-AZ-74	Small Hamlet	2440	Mid Piedmont-Smooth	570	0.5	4	0	0	0	0	0	0	0	0
TM-AZ-75	Small Hamlet	2400	Mid Piedmont-Smooth	560	0.2	8	0	0	0	0	0	0	0	0
TM-AZ-76	Small Hamlet	2390	Mid Piedmont-Smooth	560	0.5	8	0	0	0	0	0	1	0	0
TM-AZ-77	Hamlet	2373	Mid Piedmont-Smooth	560	16.0	56	1	1	1	0	0	1	0	0
TM-AZ-78	Questionable	2375	Mid Piedmont-Smooth	560	0.3	0	0	0	0	0	0	0	0	0
TM-AZ-79	Hamlet	2393	Mid Piedmont-Smooth	560	23	0	0	0	0	0	0	0	0	0
TM-AZ-80	Hamlet	2370	Mid Piedmont-Smooth	560	4.0	70	0	0	0	0	0	0	0	0
TM-AZ-81	Sm Disp Village	2375	Mid Piedmont-Smooth	560	13.5	105	0	1	1	1	0	1	0	0
TM-AZ-82	Lg Nucl Village	2360	Mid Piedmont-Smooth	560	10.0	750	0	0	0	0	0	1	0	0
TM-AZ-83	Questionable	2350	Mid Piedmont-Smooth	560	4.3	0	0	0	0	0	0	1	0	0
TM-AZ-84	Small Hamlet	2345	Low Piedmont-Smooth	550	1.0	8	0	0	0	0	0	0	0	0
TM-AZ-85	Hamlet	2340	Low Piedmont-Smooth	550	1.2	45	0	0	0	0	0	1	0	0
TM-AZ-86	Small Hamlet	2340	Low Piedmont-Smooth	550	0.7	13	0	0	0	0	0	0	0	0
TM-AZ-87	Hamlet	2340	Low Piedmont-Smooth	550	7.0	53	0	0	0	0	0	0	0	0
TM-AZ-88	Small Hamlet	2340	Low Piedmont-Smooth	550	1.0	8	0	0	0	0	0	0	0	0
TM-AZ-89	Hamlet	2355	Mid Piedmont-Smooth	550	0.7	27	0	0	0	0	0	0	0	0
TM-AZ-90	Sm Disp Village	2390	Mid Piedmont-Smooth	550	4.0	118	0	0	0	0	0	0	0	0

TABLE 75 Continued TABULAR PRESENTATION OF PREHISPANIC SETTLEMENT DATA
Aztec Sites

SITE NUMBER	CLASSIFICATION	ELEV (m)	ENVIRONMENTAL ZONE	RAINFALL (mm)	AREA (ha)	POPULATION	OTHER OCCUPATIONS							
							TF	EC	MC	LC	ET	LT	EA	LA
TM-AZ-91	Small Hamlet	2355	Mid Piedmont-Smooth	550	0.2	2	0	0	0	0	0	0	0	0
TM-AZ-92	Small Hamlet	2355	Mid Piedmont-Smooth	550	0.7	6	0	0	0	0	0	0	0	0
TM-AZ-93	Small Hamlet	2340	Thin Soil Alluvium	540	1.0	18	0	0	0	0	0	0	0	0
TM-AZ-94	Small Hamlet	2360	Mid Piedmont-Smooth	550	0.2	4	0	0	0	0	0	0	0	0
TM-AZ-95	Small Hamlet	2390	Mid Piedmont-Smooth	550	0.1	8	0	0	0	0	0	1	0	0
TM-AZ-96	Small Hamlet	2375	Mid Piedmont-Smooth	550	0.7	13	0	0	0	0	0	0	0	0
TM-AZ-97	Small Hamlet	2380	Mid Piedmont-Smooth	540	0.2	8	0	0	0	0	0	0	0	0
TM-AZ-98	Questionable	2390	Thin Soil Alluvium	540	0.5	0	1	0	0	0	0	1	0	0
TM-AZ-99	Hamlet	2340	Thin Soil Alluvium	540	1.2	21	0	0	0	0	0	0	0	0
TM-AZ-100	Hamlet	2340	Thin Soil Alluvium	540	6.0	21	0	0	0	0	0	0	0	0
TM-AZ-101	Hamlet	2355	Mid Piedmont-Hill	540	6.0	60	0	0	0	0	0	0	0	0
TM-AZ-102	Small Hamlet	2355	Mid Piedmont-Smooth	540	5.0	18	0	0	0	0	0	1	0	0
TM-AZ-103	Sm Disp Village	2430	Mid Piedmont-Smooth	540	12.0	260	0	0	0	0	0	1	0	0
TM-AZ-104	Hamlet	2470	Mid Piedmont-Smooth	540	5.0	88	0	0	0	0	0	0	0	0
TM-AZ-105	Lg Disp Village	2395	Thin Soil Alluvium	540	160.0	560	0	0	0	0	0	1	0	0
TM-AZ-106	Small Hamlet	2395	Mid Piedmont-Smooth	530	1.0	18	0	0	0	0	0	0	0	0
TM-AZ-107	Small Hamlet	2390	Mid Piedmont-Smooth	520	1.0	18	0	0	0	0	0	0	0	0
TM-AZ-108	Hamlet	2390	Mid Piedmont-Smooth	520	20.0	98	0	0	0	0	0	0	0	0

TABLE 75 Continued TABULAR PRESENTATION OF PREHISPANIC SETTLEMENT DATA
Aztec Sites

SITE NUMBER	CLASSIFICATION	ELEV (m)	ENVIRONMENTAL ZONE	RAINFALL (mm)	AREA (ha)	POPULATION	OTHER OCCUPATIONS							
							TF	EC	MC	LC	ET	LT	EA	LA
TM-AZ-109	Small Hamlet	2400	Mid Piedmont-Smooth	520	2.0	15	0	0	0	0	0	0	0	0
TM-AZ-110	Sm Nucl Village	2450	Mid Piedmont-Smooth	510	3.0	113	0	0	0	0	0	0	0	0
TM-AZ-111	Small Hamlet	2450	Mid Piedmont-Smooth	500	0.3	12	0	0	0	0	0	0	0	0
TM-AZ-112	Small Hamlet	2345	Thin Soil Alluvium	520	0.1	2	0	0	0	0	0	0	0	0
TM-AZ-113	Hamlet	2390	Mid Piedmont-Smooth	520	6.0	46	0	0	0	0	0	1	5	0
TM-AZ-114	Sm Disp Village	2380	Mid Piedmont-Smooth	520	19.0	128	0	0	0	0	0	0	6	0
TM-AZ-115	Small Hamlet	2370	Mid Piedmont-Hill	520	0.5	15	0	0	0	0	0	0	0	0
TM-AZ-116	Small Hamlet	2350	Mid Piedmont-Smooth	510	0.3	8	0	0	0	0	0	0	0	0
TM-AZ-117	Ceremonial Ctr	2380	Mid Piedmont-Smooth	510	0.5	0	0	0	0	0	0	0	0	0
TM-AZ-118	Small Hamlet	2370	Mid Piedmont-Smooth	510	0.5	8	0	0	0	0	0	0	0	0
TM-AZ-119	Sm Disp Village	2395	Mid Piedmont-Smooth	510	29.0	218	1	1	0	0	0	1	0	0
TM-AZ-120	Sm Disp Village	2390	Mid Piedmont-Smooth	500	21.0	158	0	0	0	0	0	1	0	0
TM-AZ-121	Small Hamlet	2350	Mid Piedmont-Smooth	500	0.2	4	0	0	0	0	0	0	0	0
TM-AZ-122	Hamlet	2330	Thin Soil Alluvium	500	1.0	23	0	0	0	0	0	0	0	0
TM-AZ-123	Hamlet	2345	Thin Soil Alluvium	490	2.0	68	0	0	0	0	0	1	0	0
TM-AZ-124	Sm Disp Village	2343	Thin Soil Alluvium	490	9.0	135	0	0	0	0	0	1	0	0
TM-AZ-125	Hamlet	2335	Thin Soil Alluvium	490	6.0	45	0	0	0	0	0	0	0	0
TM-AZ-126	Hamlet	2385	Mid Piedmont-Smooth	490	1.5	23	0	0	0	0	0	0	0	0

TABLE 75 Continued TABULAR PRESENTATION OF PREHISPANIC SETTLEMENT DATA
Aztec Sites

SITE NUMBER	CLASSIFICATION	ELEV (m)	ENVIRONMENTAL ZONE	RAINFALL (mm)	AREA (ha)	POPULATION	OTHER OCCUPATIONS							
							TF	EC	MC	LC	ET	LT	EA	LA
TM-AZ-127	Sm Nucl Village	2360	Mid Piedmont-Smooth	490	13.0	228	0	0	0	0	0	0	0	0
TM-AZ-128	Sm Nucl Village	2370	Mid Piedmont-Smooth	490	6.0	225	0	0	0	0	0	0	0	0
TM-AZ-129	Small Hamlet	2340	Low Piedmont-Smooth	490	1.0	8	0	0	0	0	0	0	0	0
TM-AZ-130	Hamlet	2340	Low Piedmont-Smooth	490	7.5	27	0	0	0	0	0	0	0	0
TM-AZ-131	Ceremonial Ctr	2360	Mid Piedmont-Smooth	490	0.1	0	0	0	0	0	0	0	0	0
TM-AZ-132	Ceremonial Ctr	2370	Mid Piedmont-Hill	490	0.1	0	0	0	0	0	0	0	0	0
TM-AZ-133	Lg. Nucl Village	2365	Mid Piedmont-Smooth	480	20.0	750	0	0	0	0	0	0	0	0
TM-AZ-134	Sm Disp Village	2395	Mid Piedmont-Smooth	480	7.0	136	0	0	0	0	0	0	0	0
TM-AZ-135	Sm Nucl Village	2390	Mid Piedmont-Smooth	480	11.0	193	0	0	0	0	0	0	0	0
TM-AZ-136	Sm Disp Village	2375	Mid Piedmont-Smooth	480	9.0	120	0	0	0	0	0	0	0	0
TM-AZ-137	Small Hamlet	2475	Mid Piedmont-Smooth	480	0.3	2	0	0	0	0	0	0	0	0
TM-AZ-138	Small Hamlet	2475	Mid Piedmont-Smooth	480	0.5	2	0	0	0	0	0	0	0	0
TM-AZ-139	Small Hamlet	2490	Mid Piedmont-Smooth	480	1.0	18	0	0	0	0	0	0	0	0
TM-AZ-140	Lg Nucl Village	2430	Mid Piedmont-Smooth	480	10.0	750	0	0	0	0	0	0	0	0
TM-AZ-141	Small Village	2370	Mid Piedmont-Smooth	490	0.5	19	0	0	0	0	0	0	0	0
TM-AZ-142	Hamlet	2418	Mid Piedmont-Smooth	490	5.0	88	0	0	0	0	0	0	0	0
TM-AZ-143	Small Hamlet	2370	Mid Piedmont-Smooth	490	0.1	4	0	0	0	0	0	0	0	0
TM-AZ-144	Ceremonial Ctr	2360	Mid Piedmont-Smooth	490	0.3	0	0	0	0	0	0	0	0	0

TABLE 75 Continued TABULAR PRESENTATION OF PREHISPANIC SETTLEMENT DATA
Aztec Sites

SITE NUMBER	CLASSIFICATION	ELEV (m)	ENVIRONMENTAL ZONE	RAINFALL (mm)	AREA (ha)	POPULATION	OTHER OCCUPATIONS							
							TF	EC	MC	LC	ET	LT	EA	LA
TM-AZ-145	Small Hamlet	2360	Mid Piedmont-Smooth	490	0.1	8	0	1	1	0	0	0	0	0
TM-AZ-146	Small Hamlet	2365	Mid Piedmont-Smooth	490	1.0	8	0	0	0	0	0	0	0	0
TM-AZ-147	Small Hamlet	2355	Mid Piedmont-Smooth	490	1.2	9	0	0	0	0	0	0	0	0
TM-AZ-148	Small Hamlet	2360	Mid Piedmont-Smooth	490	0.3	8	0	0	0	0	0	0	0	0
TM-AZ-149	Small Hamlet	2355	Mid Piedmont-Smooth	490	0.3	3	0	0	0	0	0	0	0	0
TM-AZ-150	Small Hamlet	2365	Mid Piedmont-Smooth	500	0.1	2	0	0	0	0	0	0	0	0
TM-AZ-151	Provincial Ctr	2415	Mid Piedmont-Smooth	500	103.0	1193	0	0	0	0	0	0	0	0
TM-AZ-152	Small Hamlet	2470	Mid Piedmont-Smooth	490	1.0	18	0	0	0	0	0	0	0	0
TM-AZ-153	Hamlet	2470	Mid Piedmont-Smooth	490	1.0	23	0	0	0	0	0	0	0	0
TM-AZ-154	Hamlet	2455	Mid Piedmont-Smooth	490	1.0	45	0	0	0	0	0	0	0	0
TM-AZ-155	Sm Nucl Village	2445	Mid Piedmont-Smooth	490	7.5	282	0	0	0	0	0	0	0	0
TM-AZ-156	Hamlet	2475	Mid Piedmont-Smooth	490	3.2	30	0	0	0	0	0	0	0	0
TM-AZ-157	Sm Disp Village	2455	Mid Piedmont-Smooth	490	13.0	188	0	0	0	0	0	0	0	0
TM-AZ-158	Small Hamlet	2435	Mid Piedmont-Smooth	490	0.3	8	0	0	0	0	0	0	0	0
TM-AZ-159	Small Hamlet	2435	Mid Piedmont-Smooth	490	0.3	8	0	0	0	0	0	0	0	0
TM-AZ-160	Small Hamlet	2420	Mid Piedmont-Smooth	490	0.4	15	0	0	0	0	0	0	0	0
TM-AZ-161	Small Hamlet	2420	Mid Piedmont-Smooth	490	0.2	8	0	0	0	0	0	0	0	0
TM-AZ-162	Small Hamlet	2390	Mid Piedmont-Smooth	490	3.0	15	0	0	0	0	0	0	0	0
TM-AZ-163	Sm Disp Village	2420	Mid Piedmont-Smooth	490	15.0	136	0	0	0	0	0	0	0	0
TM-AZ-164	Small Hamlet	2435	Mid Piedmont-Smooth	490	0.1	8	0	0	0	0	0	0	0	0

TABLE 75 Continued TABULAR PRESENTATION OF PREHISPANIC SETTLEMENT DATA
Aztec Sites

SITE NUMBER	CLASSIFICATION	ELEV (m)	ENVIRONMENTAL ZONE	RAINFALL (mm)	AREA (ha)	POPULATION	OTHER OCCUPATIONS							
							TF	EC	MC	LC	ET	LT	EA	LA
TM-AZ-165	Questionable	2460	Mid Piedmont-Smooth	490	0.3	0	0	0	0	0	0	0	0	0
TM-AZ-166	Small Hamlet	2450	Mid Piedmont-Smooth	490	0.3	8	0	0	0	0	0	0	0	0
TM-AZ-167	Ceremonial Ctr	2520	Upr Piedmont-Smooth	490	0.2	0	0	0	0	0	0	0	0	0
TM-AZ-168	Small Hamlet	2515	Upr Piedmont-Smooth	480	1.0	8	0	0	0	0	0	0	0	0

CHAPTER 7

THE CERRO GORDO SOUTH SLOPE: AN AZTEC PERIOD RURAL SETTLEMENT IN THE TEOTIHUACAN VALLEY

by

Susan Toby Evans

1. INTRODUCTION

This report describes Late Horizon (Aztec period, A.D. 1350-1521) rural settlement on the lower southern slopes of Cerro Gordo in the Teotihuacan Valley. This settlement was the subject of a detailed surface survey, designed to investigate two dimensions of the settlement pattern. 1) the relation of house mounds to agricultural terraces and water supply, and 2) the relation of certain large-scale architectural features to other house mounds

In this report, these aspects of the spatial distribution of archaeological remains will be discussed in the course of the survey description The report on the survey of the Cerro Gordo site includes the method of survey, mound distribution over the landscape and its relation to land use, and the variation in size of mounds. The site is then analyzed as a rural settlement, drawing together the results of the survey.

2. SURVEY DESCRIPTION AND RESULTS

Dispersed settlement on the south slope of Cerro Gordo was first surveyed by Sanders during the Teotihuacan Valley Project in 1963, and in this period of initial research, the pattern of almost continuous dispersed settlement of the piedmont zone of the Teotihuacan Valley was just being recognized. The earliest surveys tended to call each recognizable cluster of mounds a separate site, and the site referred to here as the Cerro Gordo site was divided into three sites, designated T.A. 61, T.A 62, and T.A. 63, based roughly on mound groupings near a jagüey and along two outwashes In 1977, Evans made an intensive survey of the area to plot size and distribution of mounds, in order to study relations of distribution to agricultural terraces and drainage patterns.

The area is bordered on the east by the town of Santiago Tolman, on the west by heavily wooded barrancas, on the north by the steeper upper slopes of Cerro Gordo, and on the south by the alluvial plain The alluvial plain of the Teotihuacan Valley is free of remains of the Late Horizon dispersed occupation which so characterizes the piedmont. Land on the plain adjacent to piedmont settlements was probably worked by the local peasants in those settlements

The method of survey first involved using a blowup of a Compañia Mexicana de Aerofoto photograph to delineate the site area and grid it into one hectare segments. The visible landscape features of each hectare were transferred onto a sheet of graph paper, and the graph paper maps were used in the field to note archaeological features Starting with the lowest terrace, survey proceeded along terraces, noting mounds and rubble concentrations, rock wall outcrops, drainage and erosion patterns, modern crops, and sherd concentrations My research permit did not include collection of sherds, limiting notes on ceramics to general functional and stylistic variation, and sherd density. The assessment of sherd density follows the notation used in the Basin of Mexico Projects. scattered (one or two sherds every few meters), light (a few sherds every 20-30 cm), moderate (100-200 sherds per m^2) heavy (more than 200 sherds per m^2). This notation is used in Fig 193

The individual one hectare maps were combined into a composite map (Fig 193), and the data derived from the survey were used to describe and interpret this settlement complex The single hectare

survey units provide the basis for discussing variation in occupation density over the study area, and for comparing different patterns of mound distribution.

This survey located 194 mounds and rubble concentrations, distributed over about 140 terraces in a total survey area of 114 hectares (Fig 193) This area measures about 1 6 km east to west, and about 0 7 km north to south. (Elevation of the study area ranges from 2320 masl to 2400; rainfall averages 500-600 mm).

As Sanders (1965) noted, the mounds are not house platforms like the Maya built, but rather are "formed by the debris of collapsed walls and roofs of small two to four room houses of stone and earth." House floors were of pounded earth, and exterior walls of uncut stone, with cut stone used for doorways and corners Interior wall bases were of rolled river stones and chucks of tepetate were used to finish the walls

Preservation of Late Horizon architecture varied from clear wall lines to concentrated scattering of rubble and sherds. The area, in transition back to agricultural use, varies greatly in terms of soil depth on the surface and processes of both soil erosion and reclamation (involving soil buildup and plowing) have dispersed archaeological remains Of the 194 locations with remains visible, 143 were easily recognizable as mounds, while 51 are regarded as more tentative; these are rubble and sherd concentrations, but they lack structural house mound features such as surface elevation or wall lines. In this analysis these more eroded remains have been included with the definite house mounds. Dimensions range from 4 x 5 m (20 m^2) to 20 x 57 m (1140 m^2). The average area of the 189 mounds which were measurable is 112 3 m^2

In Table 76 each mound is described in terms of its size, location and possible function The presence and location of pottery and rubble concentrations are noted in Figure 193

Distribution Of Mounds Over The Landscape

Of the total area of 114 survey units (of 1 hectare each), 60 survey units had mounds, with an average mound density of 3.23 per occupied hectare. The distribution of these mounds was generally focused on three landscape features, two outwashes and the jagüey (an artificial pond) The eastern outwash area (Fig 190) is most densely occupied, with an average of 3 61 mounds/ha (112 mounds in 31 occupied hectares), while the west outwash (Fig 191) has an average density of 2.75 (66 mounds in 24 occupied hectares), and the jagüey area (Fig. 192) averages 3.2 (16 mounds in 5 occupied hectares). That the mounds are clustered around the outwashes is obvious from the map, and can also be derived by comparing mound density of occupied hectares which outwashes bisect (3 73 mounds/hectare) with the density in hectares not cut through by an outwash (2 68 mounds/hectare).

The Cerro Gordo Site has a pattern of house mounds distributed over agricultural terraces, and apparently each household farmed an adjacent terraced plot. In this piedmont zone, seasonal irrigation from rainfall runoff was channeled through the terrace system As Donkin has noted, the terracing technique serves to increase productivity in other ways· it provides a level planting surface, controls erosion, and curtails exhaustion and too-rapid drying of soil. These improvements of farming in hilly areas result in "larger, more concentrated, and less fluctuating yields" (Donkin 1979).

The extensive terracing from the Late Horizon which extends around the entire lower piedmont of Cerro Gordo evidences the careful use of this resource of land. The Cerro Gordo terrace walls are constructed of small boulders and cobbles; sometimes on gentle slopes they are of rubble consisting of fragments of tepetate (compacted volcanic ash), heaped up just downslope from plantings of maguey and

nopal Today where erosion has removed the soil cover down to bare tepetate, holes are excavated into the compacted surface and drought-resistant young plants (maguey and nopal) are planted, with the broken up tepetate serving as a planting medium until soil accumulates

These methods harness the flow of water and soil down Cerro Gordo, and the soil builds up quickly behind the rocks or plantings, and as level planting surfaces develop the terraces can be incorporated into the canalized runoff system already established on the slope. Lateral baulks are constructed so that it is possible to regulate irrigation of the terrace fields with rainfall runoff. In this way terrace systems develop over time in an area, having deep and fertile soil after ten to twenty years. This present day pattern of terrace reclamation can be seen as the terrace system extends west from the village of Santiago Tolman on Cerro Gordo, and is assumed to be the fifteenth and sixteenth century pattern as well

The breakdown of a terrace system progresses much more rapidly than its buildup If a breach develops in a wall, soil begins to wash down onto the adjacent terraces, and the wall continues to break down Erosion sets in and soil is removed from the tepetate, which then is carved into gullies, causing runoff to bypass the established channel system Observing a modern terrace system in use on the north slope of Cerro Gordo, Sanders noted that

> terrace maintenance is an arduous and never-ending task Erosion is a constant treat there seems to be a very close relationship between the condition of terraces and the distance from house to land Apparently it is difficult to maintain terrace systems when they are more than 300-400 meters from the farmer's house (Sanders 1965)

Coping with the erosion problem was one reason why the relation between terrace agriculture and the settlement pattern of dispersed house mounds distributed over terraces was an intimate one in the Late Horizon Teotihuacan Valley The pattern functions to insure that terraces will be well maintained, a task which demands continued attention, but does not entail complex organization

In using an agricultural system where irrigation is derived from rainfall runoff, it is important for farmers to divert temporary streams In this area today, a heavy rainfall brings out villagers who simply divert the flow down the outwashes into their fields with temporary dams of stones and brush. In Aztec times, the location of houses near the downslope channels would permit the villagers to take ready advantage of the summer afternoon rainstorms

The agricultural strategy produces about 80 metric tons of dry husked grain per km^2 (enough to support a population of approximately 500 people). This would be, roughly, the yield in the total study area The question remains as to whether or non-grain production (maize, amaranth, and chia) predominated in the piedmont zone in the Late Horizon, but if we look at the issue of whether or not it was possible for the local population to support itself by growing grain on its own land, we see that the piedmont area coextensive with this dispersed settlement was inadequate

Estimation of the grain requirement for the population combines an estimate of population size and of a probable economic strategy The size of the population in the study area was probably about 1000 This is crudely derived by simply multiplying the number of mounds thought to be private residences (164, see below) by the average household size of 5.6 which Carrasco derived from his study of the early 16th century barrio of Tepoztlan, Morelos (see Chapter 12) This gives a value of 918 4 and does not include residents of the largest residences It also presumes contemporary occupation of all house mounds, which has not been justified through direct evidence, but simply from the reasoning that in a situation of population growth, an established house would be kept in continuous use The population estimate of 1000 accords nicely with Blanton's suggestion that calpulli size was probably 800 to 1600, based on the known size of the calpulli

military unit, 200 to 400 males. (see Chapter 13).

A population of 1000 would need 160 metric tons of grain for subsistence along. If a modest surplus of 25% is calculated in, this requirement goes up to 200 tons In an earlier study of population-productivity relations in the Teotihuacan Valley as a whole, I determined that the Valley was capable of producing sufficient grain crops to support its population, and that judging from ethnohistoric documentation of land use categories, the peasant population living in dispersed villages in the piedmont zone probably used the alluvial plain adjacent to their villages to make up the balance of their needs. This could have been the case for the population of the Cerro Gordo study area, as there are no sites on the alluvial plain immediately adjacent to its south It should be noted, however, that this interpretation assumes the necessity of each village to provide its own subsistence food needs, and some trading of other products for grain may have been occurring even in rural contexts

Turning now to the distribution of architectural remains over the terraces, we may detect some general patterns The mounds are broadly distributed over a continuous system of terraces. There are two major outwashes cutting downslope, these would have been the major downslope drainage channels for the Late Horizon community. These outwashes flank a linear arrangement of public-scale buildings which extends eastward from the jagüey. They are probably natural streams that were canalized during the Late Aztec period.

While the age of the jagüey is not known, it is probably derived from a preconquest feature. Such a water source would have been necessary for the community, and the use of jagüeys as water sources is known to predate the conquest. A mound of dirt and rubble just above the jagüey has no sherds, and may be debris from jagüey construction, this would indicate that the jagüey was established at the beginning of the Late Horizon occupation of the area. There are sixteen mounds in the 6 hectare area near the jagüey (Fig 192) with an average mound density of occupied hectares of 3.2/ha.

The major focus here is a linear arrangement of very extensive structural remains lying just above a path which connects the two outwashes. On the eroded slope above these remains are scattered mounds The general area is eroded, and pottery concentrations are scattered to moderate

To the east and west of the public-scale complex, mounds are distributed over the terrace system These areas are presently badly eroded, with the extensive outwashes today testifying to the potential as water sources for terrace agriculture dependent on the control of seasonal runoff

As can be seen from Figure 190, the eastern outwash is presently cut through by many branches of a major north-south drainage pattern. The upper part of this area is now badly eroded, in some areas down to tepetate, and this erosion continues down the east border of the mapped site. Through the central section are numerous narrow (about 10 m wide) terraces, these become broader around the outwash itself, and on the eastern edge of the site The terraces are now being used for growing beans and nopal. Nopal is being grown orchard-fashion, as well as being used, with maguey, as a bancal planting.

The eastern outwash area has 112 mounds, with a mound density of 3.61 in the 31 survey hectares having mounds Density in survey units bisected by an outwash is 4.4 per ha., those units away from the outwash branches have 2.88 mounds/ha Pottery concentrations range from scattered to heavy.

The major focus of the western side of the site (Fig. 191) is an eroded outwash and its various branches. Most mounds (48 of 66 in 24 occupied hectares) are in a cluster along this outwash Others are on terraces adjacent to it, or on or near branches of the outwash system to the west The average mound

density of the 66 mounds is 2.75/ha., with a density of 3.27 in outwash units, 2 3 mounds per hectare in units away from the outwash. Pottery concentrations range from scattered to heavy.

Variation In Mound Size

In order to break down the range of variation in mound size (20 m^2 to 1140 m^2) into categories which would be later useful in drawing functional inferences, data from two of the few relevant reports of survey and excavation were used.

At the time the survey was conducted Charlton's systematic excavation of Mound 15, an Aztec period house-mound in T A 40, a village on the north slope of Cerro Gordo provided our single best source on the subject (see Chapter 8) Since then eight additional structures have been excavated at site T A. 81, Cihuatecpan, by Susan Evans and this research is summarized in Chapter 10 Mound 15 at T.A 40 had three main rooms, each with a hearth, and another attached wall enclosure Charlton's analysis of the construction history suggests that the house was built in stages, beginning with a single room (for a couple, perhaps) Later enlargements provided space as the co-residing group expanded Charlton's house construction phases are used to break down the distribution of non-public scale mounds in the study area by size, based on the probable number of rooms represented by the mound area. The definition of a category of mounds whose size indicates public function is based on Blanton's survey work at Ixtapaluca Viejo, where he assumed mounds measuring over 250 m^2 to have a public scale function (Blanton 1972).

Based on these sources, the following size breakdown of mounds were made:

1	Small less than 75 m^2, assumed to represent 1-2 rooms	= 83
2.	Medium 75 to 132 m^2, assumed to represent 3-4 rooms	= 68
3	Large 140 to 250 m^2, assumed to represent 5-8 rooms	= 27
4.	Public scale: greater than 250 m^2	= 11
5	Structural remains too fragmentary to measure (no dimensions)	= 5
	Total	= 194

The crude and arbitrary nature of this breakdown is obvious, but given the dearth of comparative data, the breakdown will help in developing generalizations about mound function at this initial stage of research

Variation In Mound Function

In order to gain a preliminary understanding of the variety of structure types at the site, accounts by Zurita and Sahagun of daily life and dwellings of the period, and relevant data and interpretations from archaeological research were used to develop probable building types for the rural village. Each mound at the site could then be tentatively assigned to a building type based on mound size, and nature of architecture and artifacts, if these were visible in survey. These functional categories permit a provisional reconstruction of certain aspects of village life which will be discussed below

The meshing of size categories with functional categories resulted in a polythetic relationship. In general, members of the non-public scale size categories are assumed to represent private residences and outbuildings, but some outbuildings had public functions. While most of the structures in the public scale

category have indications of a possible community function, several are probably very large private residences, or private function platforms.

3. THE CERRO GORDO SITE AS A COMMUNITY

The organization of an Aztec period village is by no means completely and clearly understood. Ethnohistoric sources, Sahagun and Zurita foremost among them, do provide information on the material lives of the rural peasantry, and we turn to these and to evidence from the Cerro Gordo site survey and other archaeological surveys and isolated instances of excavation in order to reconstruct the architectural and artifactual aspects of the village. It should be noted that comparative archaeological data from systematic excavation of a whole village from this time period in the Basin of Mexico were not presently available at the time of the Cerro Gordo resurvey (but see Chapter 10 in this volume). In terms of diversity of architecture, several types of buildings would be found. The most common type would be the average commoner household. Some very large residences possibly with community functions (such as the household of the headman) would also be found. Outbuildings would be associated with some residences and also with some community buildings. Community structures are the telpochcalli, the young man's school; the teocalli, or temple, and the cemetery.

In the discussions below, the types of buildings in the village are discussed in turn, and possible examples of the type at the Cerro Gordo Site are discussed. It should be noted that these functional categories, and the assignment of mounds to them, are tentative designations.

1. The Commoner Household: this would be a building housing a nuclear or small extended family Again, Charlton's excavation of Mound 15 at T.A. 40 on the north slope of Cerro Gordo has provided the best documentation of this type of building. The mound had three main rooms, each with a hearth, and another attached walled enclosure. (Evan's Cihuatecpan excavations provides additional evidence of this type of residence). The artifact assemblage shows evidence of common domestic activities. As Charlton notes, ceramic vessels such as molcajetes (chili grinders), jars, comals (griddles), as well as bowls and plates indicate food preparation, as do ground stone manos and metates; ceramic spindle whorls indicate that the common household activity of thread production was taking place (see Chapter 8). Sahagun documented that spinning, weaving, sewing, and cooking were female occupations among the Aztecs (Sahagun 1961).

The masculine component of the rural domestic unit of production is more difficult to document from artifact evidence of the household, since farming leaves fewer localized remains. Brumfiel (1980) uses two types of chipped stone tools, the felsite endscraper and the unifacially retouched obsidian blade, to denote two agricultural activities, maguey scraping and manufacturing or reworking digging sticks.

We would expect some variation in household affluence at the Cerro Gordo site. This might be expressed, for example, in a greater proportion of decorated wares in use at more affluent households.

For the assignment of mounds to this type, size categories are used. First, it is assumed that all 95 mounds of medium and large sizes (75 m^2 to 250 m^2) were residences as well.

The preliminary categorization of small mound (<75 m^2) as a small house or an outbuilding depended on the relative size of mounds in a cluster, and the proximity of mounds. A small mound adjacent to a larger

structure was given a possible function as an outbuilding, an isolated small mound, or one in a group of other small mounds, was thought to have a residential function Sixty-nine mounds were tentatively identified as small houses, for a total of 164 mounds in the commoner residential category compared to T A 40, Mound 15 and all but one of the excavated mounds from Cihuatecpan (see Chapter 10).

2 Outbuildings these would have been associated with both private residences and with public use structures, serving as storerooms, possibly also as workrooms They would be one or two room buildings adjacent to larger structures, and the range of artifacts found in such settings would depend on what crops or goods were being stored The outbuildings probably did not have a hearth, and artifacts found in such a context would reflect a particular use, rather than the general household repertoire Twelve small mounds adjacent to larger residential mounds have been designated as private use outbuildings and 6 mounds may have been outbuildings associated with public function structures

Public Function Structures

Community activities such as tribute coordination, allocation of land, resolution of local problems, education, and religious ceremonies, and burial of the dead would have taken place in special rooms in some residences, and special purpose structures The categories of public function buildings include the telpochcalli, the teocalli, the cemetery, and two types of residences

3 The Headman's house Sahagun gives the name tecpancalli for "the house of the ruler, or the government house", and it is unclear as to what level of government is being discussed, especially since he also gives the name tlatocalli for the "house of the ruler". It is possible that the tecpancalli could refer to the headman's house, and keeping the cautionary note of uncertainty in mind, we turn to Sahagun's wide ranging description of a house which is

> extended, roomy, it has a portal, . . servants halls, (rooms) pertaining to women, (rooms) pertaining to men It is provided with a place of detention, an audience room, an eating place, a sleeping place . . . It is a courtyard; it is provided with a walled enclosure .
> It is low, a little low, squat, a small house; it is of average size, or ordinary size, pleasing (Sahagun 1961)

In spite of some apparent contradictions, Sahagun gives the idea of diversity of function

Architecturally, the headman's house would be larger and more complex than other residences In his study of household size in Morelos, Carrasco noted that the cacique's house had 23 residents, compared with an average of 5 6 per household for the rest of the town (Carrasco 1964). These people were probably family and servants or retainers The size of the headman's family may be larger than average, since polygyny in the Late Horizon seems to have been a perquisite of whomever could afford it (Bray 1968) Housing for both the family and servants of the headman would require many rooms, probably of a similar size to those of the average household Vaillant believed that each family living room in such a context would have a hearth (see Chapter 9) Mound 8 at Cihuatecpan, excavated by Evans in 1984 is an excellent archaeological example of this level of household (see Chapter 10).

In addition, other kinds of rooms would be anticipated in the headman's house, rooms for storage, since one of the headman's functions was to organize tribute collection for the tlatoani, and also a room for meetings Zurita lists one of the headman's duties as providing a place for the meeting of village members, to deliberate tribute payments and plan festivals (Zurita 1963)

In terms of artifacts and architecture, this building would be expected to display the same functional range as the average household, but at an expanded scale, and to include some special functions in addition. The standard range of domestic ceramic vessels would be anticipated. Given the elevated status of the headman, there may be more decorated wares in his household, or exotic wares such as polychromes which are not found in other more modest domestic contexts.

Stone artifacts (ground and chipped) would also be expected to show a range similar to that of the average household.

Mound 102 has been tentatively identified as the headman's house. It extends over 672 m^2 (13 x 52 m) and is just east of the jagüey. It is the largest building in the jagüey group. It is also the most complex in terms of internal differentiation; the impression, from internal wall fragments, is of a warren of rooms. Without excavation it is impossible to determine the number and size of these rooms, but some (e.g., on the west end of the building) are small (2 or 2.5 m on a side) while others measure 4 or 5 m to a side. Passageways also are visible. This building is located next to (and just above) the jagüey. Assuming the jagüey dates to this period, then it and the large buildings would have formed a focus of public life for the area. Sherd density is moderate to heavy on the terrace just below the path and Mound 102. Sherd scatter to the east of the mound is light, and no sherds were found upslope or to the west. Decorated sherds included both Aztec 3 and Aztec 4 wares. Size and complexity, and the ceramic assemblages suggest that this may have been the headman's house.

4. Very large residences with possible administrative function: three public-scale mounds are tentatively classified as very large residences (Mound 22 - 300 m^2, eastern outwash; Mound 51 - 322 m^2, western outwash; Mound 55 - 255 m^2, jagüey group). These mounds have heavy concentrations of sherds of the household repertoire. 22 and 55 have small adjacent mounds which may be outbuildings. Excavation would be necessary to delineate interior architecture, and determine whether these residences had large rooms (as in the tecpancalli) which may have served a general purpose. In Tepoztlan, Morelos Carrasco found that peasant villages of 120 to 168 houses were subdivided into barrios of up to 51 houses (Carrasco 1976). The symmetry of the location of 22 in the eastern outwash and 51 in the western outwash suggests that these buildings may function as local subarea foci.

5. The telpochcalli: in contrast to the headman's house and other residences, this building would have more narrowly defined functions. Zurita writes that the sons of commoners

> were brought up in Houses of Youth maintained by the barrios. Each house was headed by an elder who assembled the boys and had charge of their instruction. The youths brought fuel to the temples, repaired them, and did the same for the house in which they stayed. They also cultivated fields set apart for the support of their house . . . . They received a Spartan training, for they ate but a little hard bread, and they slept with little covering and half exposed to the night air in rooms and quarters open like porches. (Zurita 1963)

At age twenty, a youth left the house to marry. "If a youth was poor, he was aided by his house at the time of marriage with produce from its storehouse" The picture emerges of a fairly large, but simple building. It would have to be large enough to house this settlement's teenage boys, and in a village of roughly a thousand people, perhaps as many as 100 would have been lodged in the telpochcalli. Besides dormitory rooms, there would have been store rooms or adjacent small outbuildings used for this purpose.

The artifact repertoire of this building would sharply contrast with that of the headman's house. The artifacts associated with women's textile work would be absent, and those associated with food preparation

few Decorated and exotic wares would also have no place in this austere setting. The chipped stone tool industry, associated with men's work, may be disproportionately represented here.

Mound 104 has been tentatively identified as the telpochcalli. It is about 50 m east of 102. It measures 15 x 26 m (390 m^2) and features wall lines of cut stone and some boulders Remains are comprised of three sets of wall lines, and it is not altogether clear from surface remains if these are integrated into a single structure Furthermore, an adjacent structure (105, 70 m^2)_ is oriented in the same directions, and may be part of 104, which would give the building overall rough dimensions of 20 x 42 m, larger than 102. Like 102, 104 is subdivided into a number of rooms Unlike 102, 104 seems part of a mound group. The two other adjacent mounds (103, 80 m^2, and 106, 156 m2) have a different orientation from 104, making it unlikely that they were an integral part of it. This is possibly a large residence and outbuilding, perhaps the telpochcalli and its storage buildings.

6. The temple (the teocalli of Sahagun): like other public use buildings would be distinguishable by architecture and artifacts The temple building would rest atop a raised platform and as depicted in Sahagun, would have a wide opening in the front of a simple structure. The artifacts would not display the normal household functional range, but would feature censers, possibly figurines, and some special wares.

Two platforms have been tentatively classified as bases for temples: 74 in the eastern outwash, and 183 in the western outwash.

7. Cemetery: areas set aside for burial of the dead in rural villages of this era are not well documented. This lack of evidence probably reflects the poverty of systematic excavation of Late Horizon rural sites Recent research in the southern Basin of Mexico has uncovered a cemetery in a small rural site near Xochimilco. A 25 x 35 m (875 m^2) platform was tested with a 2 x 2 m pit, which uncovered four burials Overlying and underlying levels were dated to Aztec 3, which squarely dates the context to the prehispanic period (Parsons etal 1982).

There are two platforms (90 in the eastern outwash, 191 in the western outwash) which may serve this function.

In summary, the picture emerges of a village of numerous family dwellings and several rather more elaborate houses, and some community structures which provided a focus of village life.

Discussion

These descriptions provide a general picture of a village of about 1000 peasants, most of whom lived near the major downslope channels, in houses on agricultural terraces. The jagüey group of public-scale structures provided the community focus these were buildings which served the general needs of administration, education, and ceremony The central location of this public-scale cluster, between the two outwashes and near the permanent water supply of the jagüey argues for the importance of control of water supply as an administrative function at the local level.

The village's symmetry is reflected in the distribution of public-scale structures, each of the flanking outwashes has two large platforms, and another large structure which may be a residence. The functions of these platforms have been briefly discussed above It is likely that several served as the bases for temples, one or more may be cemeteries. The spatial symmetry of these house mound groups, each with a few public-

scale structures, is suggestive of the barrio organization of calpullis in Morelos referred to above. The eastern and western outwash groups may represent such barrios in this village, and the platforms may provide some sub-village level of ceremonial focus.

4. CONCLUSION

The Late Horizon was a time of dynamic change in the political and social order of the Basin of Mexico. The traditional pattern of semi-autonomous city-states, of tribute relations between tlatoani and macehualtin, was altered as these units were drawn into the more complex organization of politics and land use which served the needs of the Mexica In the Teotihuacan Valley, where the traditional pattern was preserved, we can witness the spatial manifestation of the corporate land-holding macehual community. The survey of the Cerro Gordo Site permits investigations of patterns of local land use, and gives us a sense of the size, distribution, and internal variation of the macehual community The next step in reconstructing the life ways of such a village is verification of functional aspects of architecture through excavation. As the Basin of Mexico becomes more extensively developed, we have ever fewer opportunities to investigate the spatial nature of the macehual village. It is to be hoped that excavation of rural dispersed settlements having public-scale architecture will further our knowledge of the cultural organization of the peasant population of this period, while such data are still recoverable

ACKNOWLEDGEMENTS

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EDITORIAL NOTE: The reader is directed to Figures 193 and 194 to compare the map of the area produced by Sanders's 1963 survey - a survey conducted over a period of one week - and that generated by Evans in 1977, over the same area, during a more intensive survey (which lasted approximately two months).

Several differences are apparent 1 Many more mounds or mound remains were recorded in the 1977 survey. 2 A more detailed mapping of terrace remains was achieved by the later survey, and direct association with the mounds more firmly established 3. Sanders located a cluster of large mounds (102, 104, 107, 108 - see Figure 194), on terraces he located below the jagüey. Evans located the same mounds above the jagüey Either the jagüey was moved in the interim between the two surveys, (a common occurrences as jagüeys silt in and need to be relocated) or the mounds were incorrectly located by one of the surveys

Table 76

Mound Descriptions

Mound Number	Zone:	Survey Unit	Area (m^2)	Site Category	Possible Function
1	East:	11R	100	Medium	House
2	East:	11R	72	Small	House
3	East:	11R	72	Small	House
4	East:	11S	56	Small	House
5	East:	11S	42	Small	House
6	East:	11S	56	Small	House
7	East:	11S	63	Small	House
8	East:	11S	64	Small	Outbuilding for 13
9	East:	11S	90	Medium	House
10	East:	11S	20	Small	Outbuilding for 11
11	East:	11S	120	Medium	House
12	East:	11S	81	Medium	House
13	East:	11T	195	Large	House
14	East:	11T	100	Medium	House
15	East:	11T	104	Medium	House
16	East:	12Q	49	Small	House
17	East:	12Q	110	Medium	House
18	East:	12Q	130	Medium	House
19	East:	12Q	100	Medium	House
20	East:	12Q	56	Small	Outbuilding for 22
21	East:	12Q	56	Small	Outbuilding for 22
22	East:	12Q	300	Public-scale	Barrio headhouse
23	East:	12R	80	Medium	House
24	East:	12R	140	Large	House
25	East:	12S	49	Small	House
26	East:	12S	70	Small	House
27	East:	12S	72	Small	House

Mound Number	Zone:	Survey Unit	Area (m^2)	Site Category	Possible Function
28	East:	12S	108	Medium	House
29	East:	12S	56	Small	House
30	East:	12S	90	Medium	House
31	East:	12S	90	Medium	House
32	East:	12T	63	Small	House
33	East:	12T	63	Small	House
34	East:	12T	70	Small	House
35	East:	12T	70	Small	House
36	East:	13P	90	Medium	House
37	East:	13Q	110	Medium	House
38	East:	13Q	63	Small	House
39	East:	13Q	108	Medium	House
40	East:	13Q	30	Small	House
41	East:	13Q	56	Small	House
42	East:	13R	80	Medium	House
43	East:	13R	216	Large	House
44	East:	13R	90	Medium	House
45	East:	13R	42	Small	House
46	East:	13R	72	Small	House
47	East:	13R	56	Small	House
48	East:	13R	72	Small	House
49	East:	13S	80	Medium	House
50	West:	14K	35	Small	House
51	West:	14K	322	Public-scale	Barrio headhouse
52	West:	14L	160	Large	House
53	Jagüey:	14N	80	Medium	House
54	Jagüey:	14N	25	Small	Outbuilding for 55
55	Jagüey:	14N	255	Public-scale	House
56	Jagüey:	14O	132	Medium	House
57	Jagüey:	140	70	Small	House
58	Jagüey:	140	80	Medium	House

Mound Number	Zone:	Survey Unit	Area (m^2)	Size Category	Possible Function
59	Jagüey:	14O	80	Medium	House
60	Jagüey:	14O	140	Large	House
61	East:	14P	168	Large	House
62	East:	14P	42	Small	Outbuilding for 61
63	East:	14P	176	Large	House
64	East:	14P	90	Medium	House
65	East:	14P	100	Medium	House
66	East:	14P	90	Medium	House
67	East:	14Q	84	Medium	House
68	East:	14Q	60	Small	House
69	East:	14Q	49	Small	House
70	East:	14Q	48	Small	House
71	East:	14Q	60	Small	House
72	East:	14Q	40	Small	House
73	East:	14Q	56	Small	House
74	East:	14Q	300	Public-scale	Temple platform
75	East:	14R	120	Medium	House
76	East:	14R	80	Medium	House
77	East:	14R	56	Small	House
78	East:	14R	77	Medium	House
79	East:	14R	49	Small	House
80	East:	14R	120	Medium	House
81	East:	14R	100	Medium	House
82	East:	14S	49	Small	House
83	East:	14S	50	Small	House or outbuilding
84	East:	14S	99	Medium	House
85	East:	14S	132	Medium	House
86	East:	14S	195	Large	House
87	East:	14S	168	Large	House
88	East:	14T	63	Small	Outbuilding for 89
89	East:	14T	210	Large	House

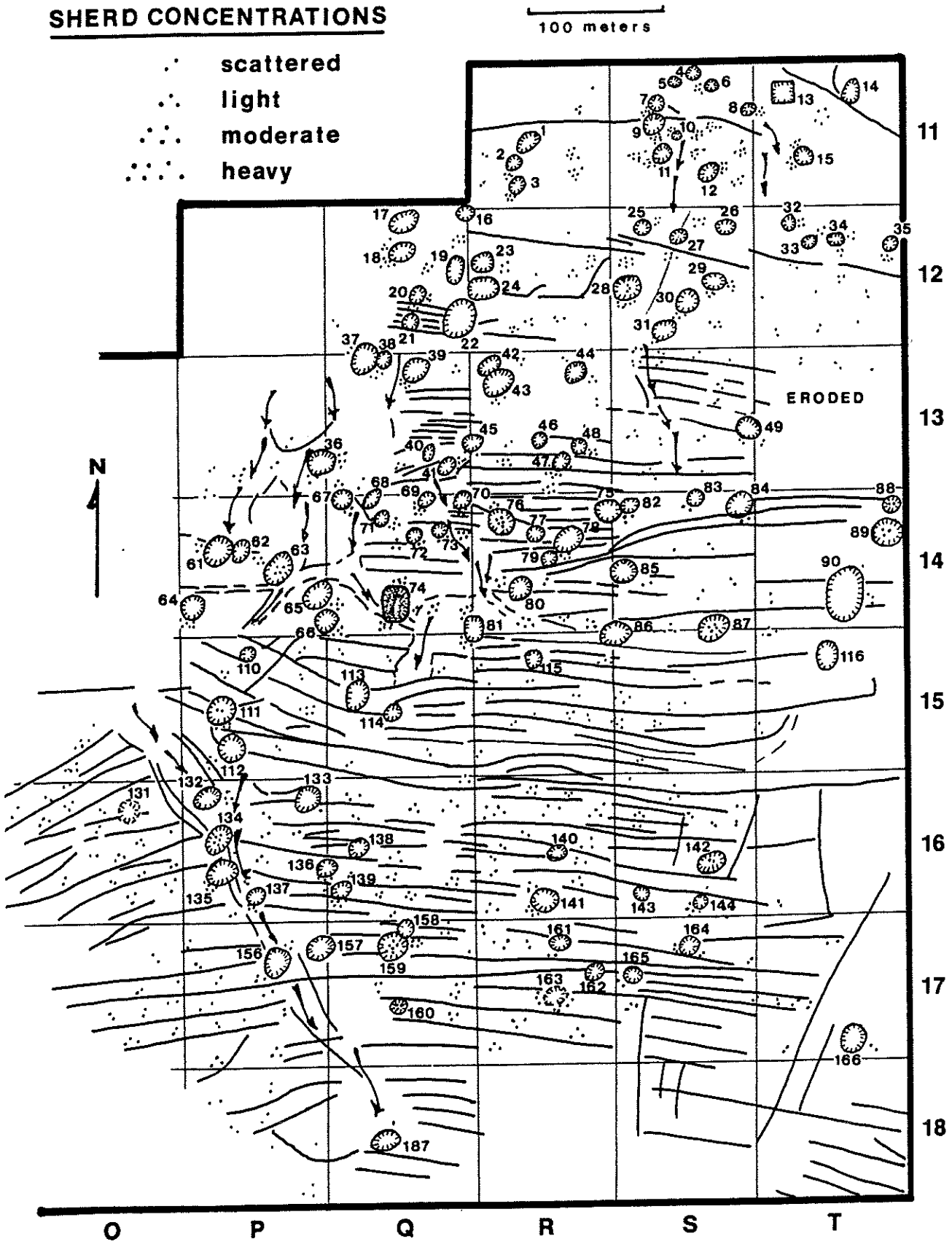
Mound Number	Zone:	Survey Unit	Area (m^2)	Size Category	Possible Function
90	East:	14T	300	Public-scale	Cemetery
91	West:	15K	210	Large	House
92	West:	15K	64	Small	House
93	West:	15K	93	Medium	House
94	West:	15L	94	Medium	House
95	West:	15L	108	Medium	House
96	West:	15L	70	Small	House
97	West:	15L	70	Small	House
98	West:	15L	70	Small	House
99	West:	15L	ND		House
100	West:	15L	ND		House
101	West:	15L	ND		House
102	Jagüey:	15M	672	Public-scale	Tecpancalli
103	Jagüey:	15N	80	Medium	Outbuilding for 104
104	Jagüey:	15N	390	Public-scale	Telpochcalli
105	Jagüey:	15N	70	Small	Outbuilding for 104
106	Jagüey:	15N	156	Large	Outbuilding for 104
107	Jagüey:	15O	300	Public-scale	Unknown
108	Jagüey:	15O	340	Public-scale	Unknown
109	Jagüey:	15O	42	Small	Outbuilding for 108
110	East:	15P	63	Small	House
111	East:	15P	180	Large	House
112	East:	15P	100	Medium	House
113	East:	15Q	80	Medium	House
114	East:	15Q	70	Small	House
115	East:	15R	49	Small	House
116	East:	15T	198	Large	House
117	West:	16J	143	Large	House
118	West:	16K	130	Medium	House
119	West:	16K	90	Medium	House
120	West:	16K	56	Small	House

Mound Number	Zone:	Survey Unit	Area (m^2)	Size Category	Possible Function
121	West:	16K	72	Small	House
122	West:	16K	120	Medium	House
123	West:	16K	132	Medium	House
124	West:	16L	42	Small	Outbuilding for 123
125	West:	16L	80	Medium	House
126	West:	16L	49	Small	House
127	West:	16L	80	Medium	House
128	West:	16M	144	Large	House
129	West:	16N	70	Small	House
130	West:	16N	143	Large	House
131	East:	16O	ND		House
132	East:	16P	132	Medium	House
133	East:	16P	100	Medium	House
134	East:	16P	108	Medium	House
135	East:	16P	120	Medium	House
136	East:	16P	72	Small	House
137	East:	16P	49	Small	House
138	East:	16Q	35	Small	Outbuilding
139	East:	16Q	49	Small	House
140	East:	16R	56	Small	House
141	East:	16R	117	Medium	House
142	East:	16S	84	Medium	House
143	East:	16S	56	Small	House
144	East:	16S	49	Small	House
145	West:	17J	64	Small	House
146	West:	17J	80	Medium	House
147	West:	17K	120	Medium	House
148	West:	17K	90	Medium	House
149	West:	17K	120	Medium	House
150	West:	17K	154	Large	House
151	West:	17L	42	Small	House

Mound Number	Zone:	Survey Unit	Area (m^2)	Size Category	Possible Function
152	West:	17L	200	Large	House
153	West:	17L	162	Large	House
154	West:	17L	96	Medium	House
155	West:	17M	70	Small	House
156	East:	17P	195	Large	House
157	East:	17P	120	Medium	House
158	East:	17Q	25	Small	Outbuilding for 159
159	East:	17Q	144	Large	House
160	East:	17Q	49	Small	House
161	East:	17R	49	Small	House
162	East:	17R	42	Small	House
163	East:	17R	ND		House
164	East:	17S	42	Small	House
165	East:	17S	42	Small	House
166	East:	17T	99	Medium	House
167	West:	18F	132	Medium	House
168	West:	18F	49	Small	House
169	West:	18H	143	Large	House
170	West:	18H	49	Small	Outbuilding for 171 or 173
171	West:	18H	180	Large	House
172	West:	18H	96	Medium	House
173	West:	18H	132	Medium	House
174	West:	18I	25	Small	Outbuilding for 175
175	West:	18I	221	Large	House
176	West:	18I	70	Small	House
177	West:	18J	144	Large	House
178	West:	18L	49	Small	Outbuilding for 179
179	West:	18L	100	Medium	House
180	West:	18M	56	Small	Outbuilding for 181 or 182
181	West:	18M	216	Large	House
182	West:	18M	104	Medium	House

Mound Number	Zone:	Survey Unit	Area (m^2)	Size Category	Possible Function
183	West:	18M	1140	Public-scale	Temple platform
184	West:	18M	72	Small	House
185	West:	18N	120	Medium	House
186	West:	18N	64	Small	Outbuilding for 185
187	East:	18Q	108	Medium	House
188	West:	19E	120	Medium	House
189	West:	19E	130	Medium	House
190	West:	19F	165	Large	House
191	West:	19-20J	540	Public-scale	Cemetery
192	West:	19M	99	Medium	House
193	West:	19M	56	Small	House
194	West:	19N	63	Small	House

Figure 190


SHERD CONCENTRATIONS
scattered
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moderate
heavy
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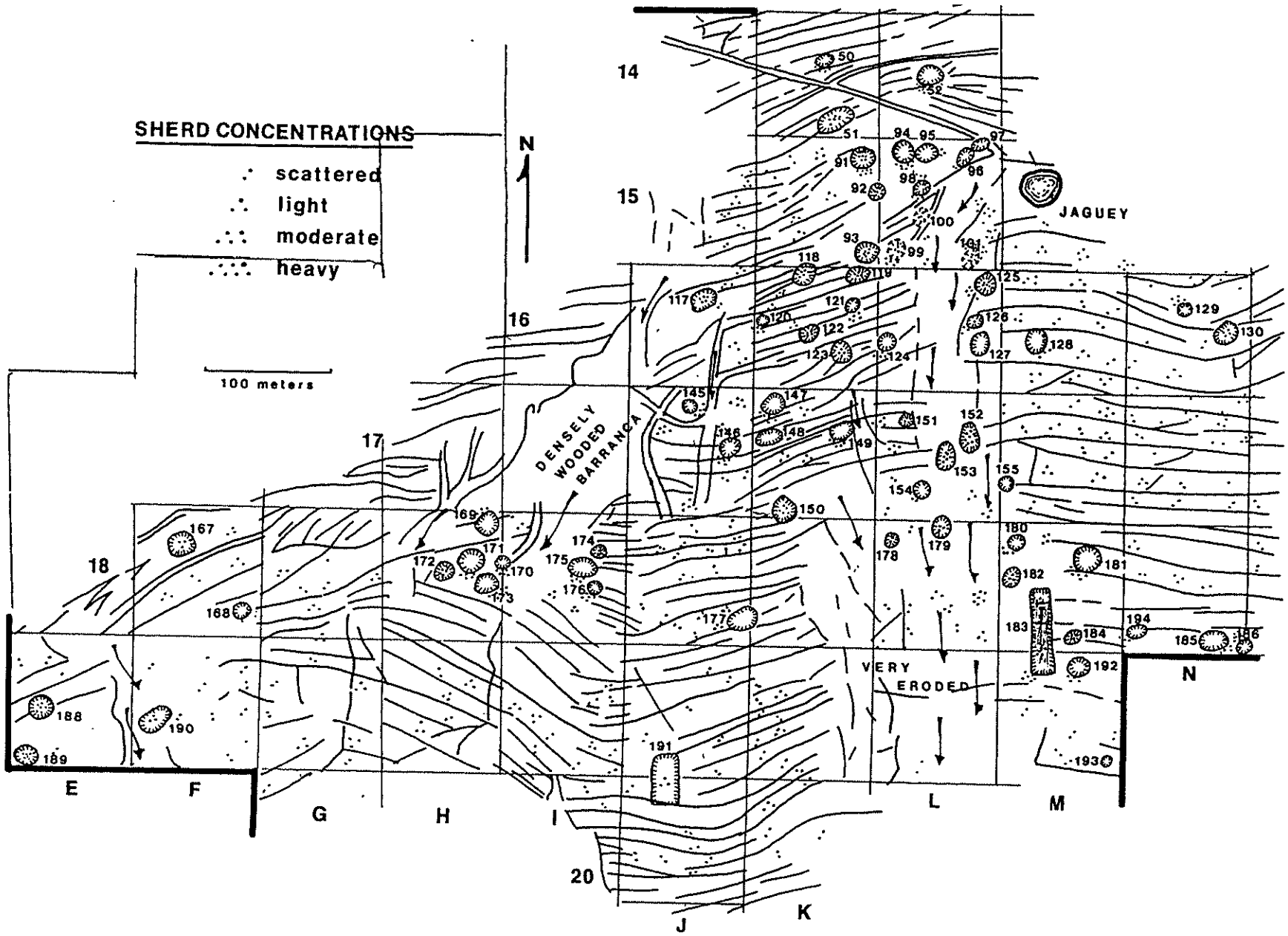
Figure 191


SHERD CONCENTRATIONS
scattered
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DENSELY WOODED BARRANCA
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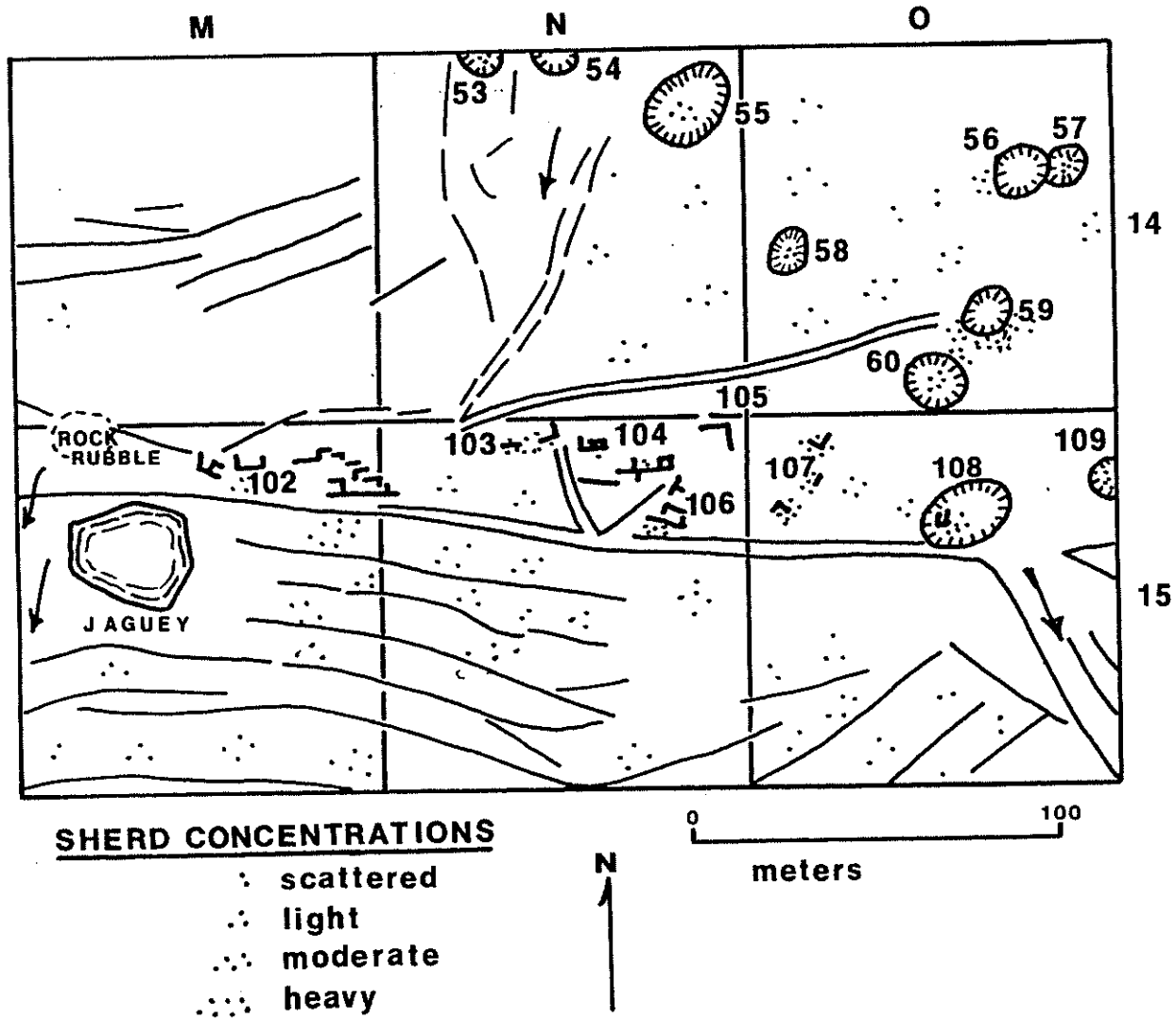
Figure 192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SHERD CONCENTRATIONS
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moderate
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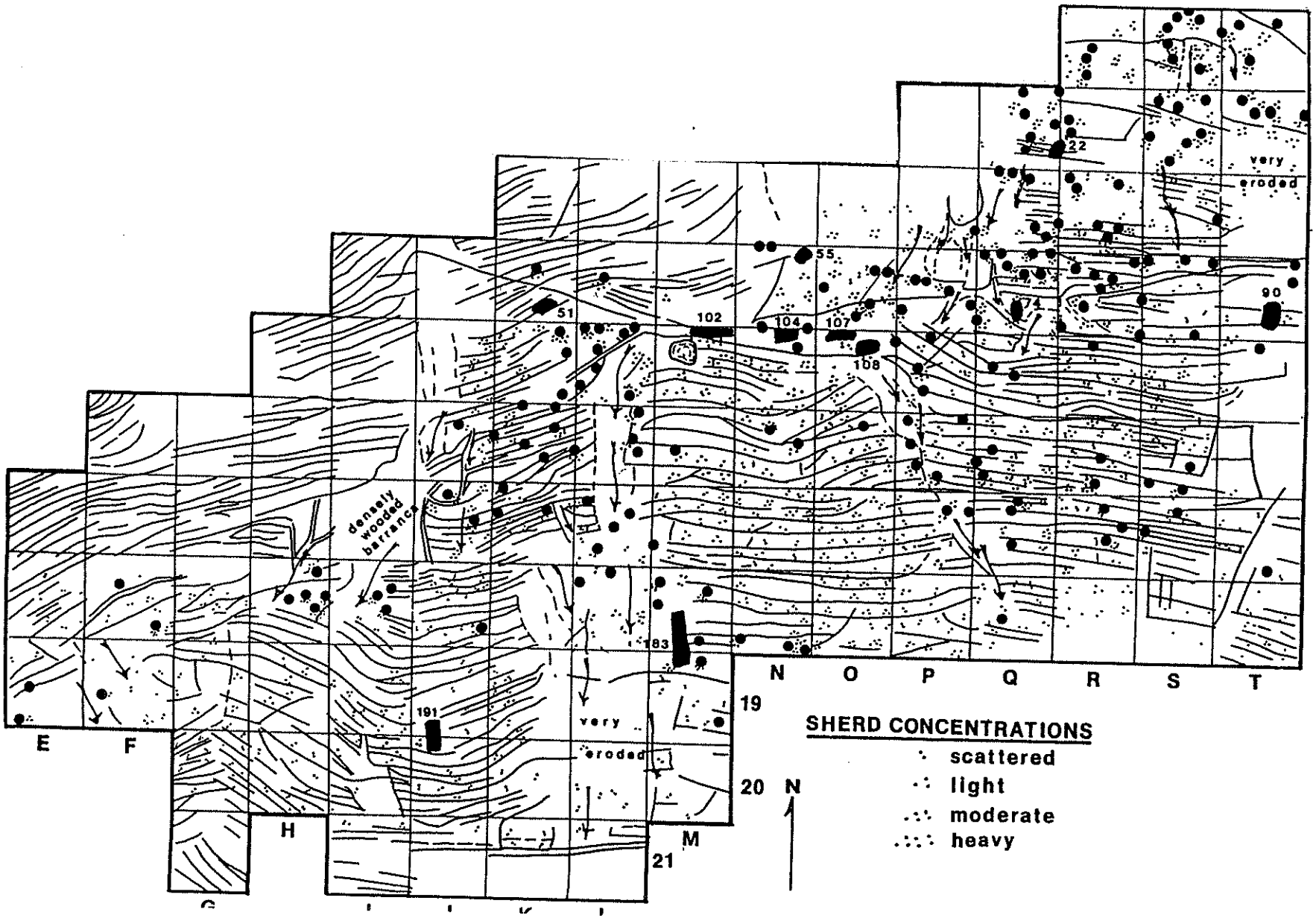
Figure 193


densely wooded barranca
very eroded
very eroded
22
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104
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SHERD CONCENTRATIONS
scattered
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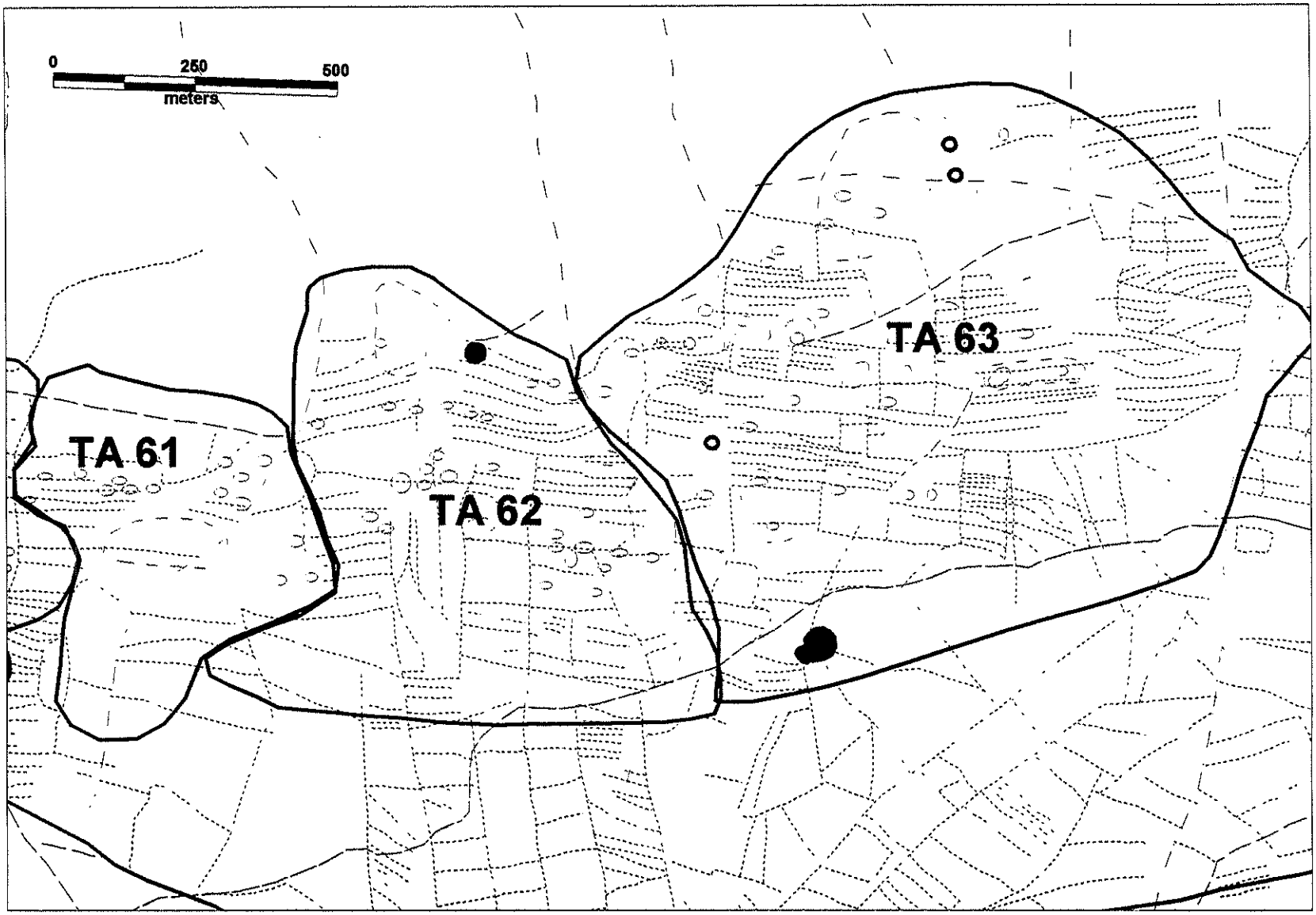
Figure 194



CHAPTER 8

EXCAVATIONS AT T.A. 40, Mound 15

by

Thomas H. Charlton

1. SITE DESCRIPTION

T.A. 40 is located southwest of the village of San Juan Bautista Teacalco, within the Teacalco subarea of the area of intensive survey on the northern slopes of Cerro Gordo (Figure 1) (Sanders 1964, 1965; Charlton 1965). This subarea consists of a single ridge running from Cerro Tlacuache Chico to the northwest bordered by the Barranca Teclalo-Tecorral on the northeast, the Barranca Los Organos on the southwest, and an arbitrarily defined survey boundary across the lower slopes of Cerro Tepetan between the two barrancas on the northwest. Measurements taken from a flat 1:25,000 air photograph indicate a total surface of the sub-area of approximately 461 ha.

The two bordering barranca systems drain to the northwest and are incised quite deeply into the subsurface tepetate. Sanders has described the modern ecology and land use of the Teacalco subarea in detail

> Most of the area was owned by the Hacienda San Cayetano before the Agrarian Reform. Today perhaps 2/3 of it belongs to the village of Teacalco, the rest to Maquixco Alto.
>
> Near the hacienda house ruin is a small area of excellent terracing. For the balance of the area a system of what we might call "extensive terracing" was applied. This involves the construction of long, high earth banks planted in maguey, but very widely spaced and enclosing huge undulating areas of gently sloping terrain. Internal terracing, so essential to successful maize cultivation, is lacking. Some of the big contour terraces are impressive works. A huge undulating field occupies the high part of the ridge near the hacienda, and is delimited by a single terrace bank with flood water canals. It is divided by sod paths into a number of long rectangular fields. The area is fairly level and the big terrace apparently works fairly effectively to retain the soil, which in this area averages from 30 to 70 cm in depth.
>
> There was another big terrace running along the edge of the high ground paralleling the west barranca that has been relatively successful in retaining the soil, but a heavily eroded strip runs between it and the barranca flood plain. Furthermore, soil cover above the terrace, because of the lack of internal terracing, is very variable, as is the quality of the crops.
>
> Terracing generally in the survey strip is poorly executed and maintained and erosion, consequently, is severe. Much of the drainage was canalized, but the poor terracing and generally undulating surface must reduce the efficiency of water distribution considerably. The area above the hacienda to the north is extremely eroded and dissected; many of the gullies look like ancient canals, but it is practically impossible to detect a consistent pattern. Further indication of ancient canals involves a long narrow depressed area running down the center of the strip, below the hacienda, that looks like the lower section of a canal that initiated in the above-noted gullied area. Today it is partly filled in and under cultivation (Sanders 1964:6-7).

On the central section of the ridge, near the ruins of the Hacienda San Cayetano, there is an area of deep soil and well-preserved terraces. To the southeast of the hacienda the surface has suffered extreme sheet and gully erosion, leaving large sections of exposed tepetate. Cerro Tlacuache Chico is rocky with some remnants of previous maguey terracing. To the northwest of the hacienda ruins are small areas of exposed tepetate and medium soil depths, with larger areas of thin soil (Charlton 1970:358, Map 10).

Crops varied in 1963, with areas of deep, well-watered soils being used for maize, and thinner soils being used for barley or pasture (Sanders 1964; Charlton 1965, 1970:343). Sanders estimated the land and land use patterns in 1963 to be as indicated in Table 77.

Table 77: Land Use Patterns, Teacalco Subarea, 1963 (after Sanders 1964:7)

A. First Class Land (6%)	Flood Plain of Barranca Los Organos
B Second Class Land (18%)	Deep Soil Terraces Near Hacienda
	Medium Soil Plain Near Hacienda
	Medium-Deep Soil, T.A. 41, T.A. 41A
C. Third Class Land (24%)	Thin Soil, Poor Terracing
D. Tepetate (52%)	Large Areas Above Hacienda
	Small Areas Below Hacienda

There are seven reported Aztec sites within the Teacalco subarea (Figure 196). The ceramic evidence indicates that the bulk of the occupation was Late Aztec with a few Early Aztec Period ceramics occurring. I have indicated in Tables 78 and 79 the approximate site sizes, structural characteristics, and site characteristics.

All Teacalco subarea sites are aligned along the high ground above the slopes to the barrancas. Six of the sites are located at and below the 2450 m contour interval with only one site located higher, just below the 2500 m contour. All are located on relatively level ground. The sites are composed of the remains of residential structures; a civic-ceremonial structure is represented by the mound at T.A. 41 that served as a temple base. Where preservation is adequate it is evident that residential structures were scattered through the site area with no obvious formal organizational principles evident. Although destruction accounts for many of the variations in the internal densities of sites with some preserved structural remains, a calculation of the percentage of the site area covered by residential remains in the better preserved sites suggests that some sites had more closely spaced mounds than did others. Two patterns emerge: one in which the preserved mounds cover no more than 10% of the site area, and another in which the preserved mounds cover approximately 16% of the site area. T.A. 41 (Figure 197A) has a percentage of occupied space of 16.6% (Table 78) while three other sites vary between 5.9% and 7.4%. Site areas do not indicate a single large site in the Teacalco subarea as a center, but T.A. 41 is the only site in the subarea that has a temple platform. The centrally located temple platform, along with the nucleated area of mounds, might indicate that this site functioned as a focal point for the population scattered in sites along the barrancas to the southeast. Size differences among sites in this subarea are not as great as in the other subareas.

Table 78: Aztec site Mound Densities (after Charlton 1965:84, Table 3)

Site	Site Area	Mounded Area	Mounded Area as % of site area
T A 40	11 20	72	6 4
T A 41	9 60	1 60	16 6
T A 42	6 08	36	5 9
T A 43	14 72	1 10	7 4

Table 79: Aztec Site Characteristics (after Charlton 1965:204-205, Table 17)

Site	Area (Has.)	Pyramids	Residences
T A 40	4 96		22
T A 40A	18 56		5
T A 41	9 60	1	25
T A 41A	12 32		13
T A 42	6 08		9
T A 43	14 72		
T A 43A	66 08		

Within the Teacalco subarea, T.A. 40 occupies the high ground above the barranca edge southwest of the town of San Juan Bautista Teacalco and the Otumba-Tizayuca Highway (Figures 195 and 196). The barranca on the east and a low area of the west effectively delimit the site area. Sanders surveyed the site in September 1963. According to his report (Sanders 1963) the site consists of isolated, well-spaced, low small mounds composed of rock and earth. The site runs along the top of the ridge beside the barranca for approximately 600 meters, varying in width from 80 meters to 240 meters. Sanders noted only two possible clusters of mounds (Fig. 197B). These occur at opposite ends of the site but lack any true plaza formations. Sanders interpreted the site as being residential in nature and forming part of a larger social community centered on T.A. 41 with its ceremonial architecture.

2. MOUND 15 DESCRIPTION

Mound 15 is located in the north cluster of mounds within T.A. 40. Although situated near a badly eroded modern road that cuts across T.A. 40, the mound itself was well-preserved and in a pasture area. It was covered for the most part with short grass; several maguey and nopal plants were also present. The long axis of the visible mound ran north-south. On the western edge and through the center, stone wall bases were exposed. The state of preservation of the mound was a significant factor in its selection for excavation.

Purpose of the Excavation

I directed excavation at Mound 15 to determine the structural nature of Aztec rural residential structures. At the time it was thought that these mounds might be platforms, analogous to Lowland Maya house platforms, retained by stone walls and surmounted by a house built of perishable materials. In addition to providing information to aid in the interpretation of surface features within Aztec Period sites the excavation also formed part of a study designated to determine sociocultural correlates of community settlement patterns and house types in the rural areas of the Teotihuacan Valley (Charlton 1965, 1969)

Excavation Methodology

I directed excavations at T.A. 40, Mound 15, between September 5 and October 1, 1963. Initial explorations to determine the outer dimensions of the mound were carried out by using trenches approximately 35 cm wide to follow the edges of the exposed wall bases. It was soon apparent that the mound was more complicated than a simple house platform. The trenches revealed a five room complex. Three of the rooms were situated on the visibly raised section of the mound. Two others, to the west of the mound, were not discernible prior to excavation.

The rooms thus defined were used as excavation units. Each room was designated by a letter (A through E). The levels excavated within each room were numbered, with the sequence beginning at the top. Level I included the first 20 cm, Level II extended from the base of Level I to the first floor encountered, and Level III ran from the first floor to the second floor. Artifacts were bagged and catalogued with reference to rooms, level, and feature. The upper levels of all rooms were excavated completely. Subsequent excavations varied, depending on the room. Areas outside the house were not cleared. During the excavation there was a serious problem with vandalism that resulted in the destruction of many walls. All were mapped and recorded as they were exposed, thus reducing the potential data loss.

Description of the Structure

Rooms B and C

The rooms designated B and C were originally constructed as a single room unit. This room unit appears to have been the first construction within the five room complex of Mound 15. The exterior walls of the B-C unit are 40 cm in width, composed of basalt, tezontle, and tepetate, and situated directly on an old ground surface 5 to 10 cm above the underlying tepetate. The corners of the wall enclosing the B-C room unit share a characteristic construction technique. Construction was initiated at each corner with the placing of a large, squared stone on the ground (Plate 130B). A thin, flat stone, also squared, was then placed on top. These thin stone slabs continued at the same level through the basal courses of the walls. Additional squared stones were placed on this base at the corners where the walls were bonded.

The lowest floor level is composed of hard-packed earth raised slightly above the ground level. Excavations in both B and C determined the location of this floor but only completely uncovered it around the hearth in Room C (Plate 130C). This floor is common to both rooms, suggesting that they formed a single unit initially. About 15 cm above the first floor there occurred a second hard-packed earth floor. At the time of its use it too was common to both rooms. The interior wall separating Rooms B and C during the final occupancy of the structure was constructed on top of this floor. After the construction of this wall the floor in the Room B section of the B-C unit was raised 10 cm (Plate 130D). The interior wall, approximately 40 cm in width, was built primarily of rolled river stones and irregular chunks of tepetate. None of these is as large as similar materials in the outer walls of the unit (Plate 131A). A doorway about 90 cm in width was constructed at the east end of the wall. Three shaped and smoothed stones formed a door sill in the doorway (Plate 131B). Later the doorway was blocked with adobes measuring 30 cm x 30 cm x 10 cm (Plates 131B and 131C). When excavated, the lower adobe courses were still in place while the upper adobes had collapsed in a pile in Room C. The inner edge of the doorway formed by the interior wall was constructed of smooth oval shaped stones, quite unlike the square stones found in the main entrance to B and C (Plate 133A).

The main, and possibly only entrance, to Rooms B and C is located in the west wall. Only the southern edge of the doorway was preserved, situated 3 m from the outer south wall of Room C. I have reconstructed the doorway width as 90 cm based on the preserved doorway between Rooms B and C. The main doorway had cut stones in the preserved corner and flat, smooth door sill stones level with the upper floor of Room C.

The small extension on the north end of the west wall outside of Room B (Plate 130B) was probably constructed after Rooms E and A were added to the complex and functioned to divert surface runoff from rainfall away from the entrance to the complex.

On the wall between B and C (Plate 131D) and on the floors of both rooms were preserved fragments of mud plaster *in situ*. Although only fragments of charcoal occur in Room B, a definite hearth area was present in Room C. The hearth is located against the central section of the east wall (Plates 130C and 132A). It contained a central area composed of a large number of loose stones and ash, and an outer area with only heavy ash concentrations (Plate 132B). Unfortunately the hearth was destroyed by vandals before it could be completely excavated. Excavations in the destroyed hearth area yielded only a short row of stones, parallel to the east wall and slightly below the upper floor surface (Plate 130C). These stones rested on the fill placed above the earliest floor. It is probable that the hearth was similar to that excavated in Room D (Plate 133B).

In both rooms heavy debris covered the upper floors. This consisted of sherds, cut and uncut stones, scattered adobes, and one unfired brick fragment in Room C. The debris in Room B was concentrated in the western part where the walls were also poorly preserved (Plate 133C). It is possible that the debris in Room B came from collapsed wall and roof structures prior to the complete abandonment of the total complex The blocked doorway, rendering continued use of Room B impossible, may have been a response to the deteriorating condition of the structure. This practice is quite common in the same area today. The cut stones in the debris probably come from the corners of the room where such stones occur regularly in wall construction.

Room D

Room D is located to the south of Room C on the high part of the mound. The walls form linear continuations of the west and east walls of the B-C unit. However, they are not bonded to the B-C walls and merely abut against them (Plate 133D). There is no architectural reason to suggest that Room D was constructed prior to Room E. However, it is an obvious extension of the early B-C room complex and there is some ceramic evidence, which I shall discuss below, indicating a slightly later occupancy for Room E. It is possible, however, that both were built at the same time.

Room D is slightly larger than Room C. It had a hearth situated against the center section of the east wall (Plate 133B). No doorway was visible in the preserved wall bases. On the south side of the room, on the outside of the outer wall, there was a raised earth platform held in place by a single row of stones (Plate 134A). The surface of the platform was level with the final floor surface within Room D.

All of the walls of Room D measure 40 cm in width and were constructed directly on the old ground surface. They were composed of uncut stones and tepetate. Although all of the corners were destroyed, the presence of cut stones on the floor of the room suggests that wall corner construction was similar to that noted for the B-C room complex. The retaining wall of the outside platform varies from the other walls in the room in that it is composed of a single row of uncut stones. The earlier wall located under the final floor in Room D shares dimensions and construction characteristics. It runs parallel to the later west wall of the

room and was probably leveled when this latter wall was constructed.

The earliest floor in Room D occurs at the same level as the initial floor in B-C. It is a hard-packed earthen surface formed on the original ground surface. When the earlier wall was leveled and a new wall built, the floor was raised to cover the base of the first wall. The increase in floor height is twice that which occurred in B-C, the extra height being needed to cover the earlier west wall. The outside bench was constructed to the level of the final floor within Room D. The bench fill is entirely of earth.

The hearth was constructed for the most part on the final floor of Room D although it had an interesting extension below the floor level (Plates 133B and 134B). As in Room C the hearth is centrally located against the east wall. It was composed of two sections, a central section with a large number of loose stones and ash, and an outer section containing only ash. Excavation of the hearth to the level of the upper floor revealed a structure of mud mortared stones built on the floor and against the wall. Excavations below the floor uncovered a horseshoe-shaped pit in the center of the hearth. This had been formed by a raised ring of hard-packed earth situated between the lower and upper floors. The mud-mortared stones of the upper floor level rested on this raised ring. Few bones were found in the hearth areas of either Room C or Room D.

The final floor of Room D was covered with debris containing sherds, cut and uncut stones and adobe bricks. Similar debris also occurred on the surface of the outside platform.

Room E

Room E was originally constructed as a separate unit with no structural connections to the B-C-D complex. The later addition of Room A tied it into that unit. Room E was built only 35 cm west of the B-C unit and is situated partly in front of the main entrance to those rooms. The apparent location of the doorway in Room E would have provided easy access to B-C, and until A was constructed, to D.

The north and east walls of Room E are 40 cm in width but the south and west walls measure only 35 cm. The retaining wall within the room is 40 cm wide although the fragmentary wall on the floor in the west section of the room is only 20 cm wide (Plates 135A, 136C). The north and west walls and the interior retaining wall were built directly on the old ground surface. The south and east walls were constructed on the fill behind the retaining wall.

The floor of the bench was approximately level with the upper floor in Room B. All floors were constructed of hard-packed earth. Because of the heavy rains it was not possible to excavate below the floors in Room E.

The absence of stones in one section of the south wall coupled with the apparent completeness of the other walls suggests that the doorway to Room E may have been located at the eastern end of the south wall. If so it was narrower than the doorway between B and C by 20 cm. In general the materials and techniques of wall construction in Room E are identical to those noted for B-C-D except where I have described them.

A hearth was located in Room E on the surface of the bench against the east wall. It differed from the other hearths in C and D in that there was no heavy concentration of stones or ashes on the surface. There was, however, a concentration of charcoal in association with some stones outlining the hearth area (Plate 136C). Heavy rains prevented further excavation of the hearth.

The debris on the floor in Room E consisted of cut and uncut stones as well as large amounts of

apparently late period Aztec ceramics (i.e Teacalco phase, the old Aztec IV). There was a concentration of cut stones on the floor in the northeast corner of the room.

Room A

This room is the most simply constructed unit of the residential complex. It consisted of only two walls enclosing a space outside rooms C-D and E. These walls abut against the west wall of Room D (Plate 135C) and the south wall of Room E. Room A was the last room to be constructed in the complex.

The two walls constructed to enclose Room A have widths of 35 cm. They were constructed using techniques and materials similar to those described for previous rooms. The only possible entrance to Room A, and to Rooms B, C, and E after the construction of Room A was the narrow alley situated between Rooms B-C and E (Plate 136A) Since Room A is lower than the other rooms it is probable that the extension to the north on the west wall of B-C was added at this time to divert water away from the narrow entrance

There are two floor levels in Room A. The earliest floor may be the old ground surface pounded hard outside the house (as in modern house lots) prior to the construction of the room The upper floor level is separated from the earliest floor by 20 cm of earth fill It consists of a lower layer of hard packed earth and an upper layer of crushed tepetate

Although no hearth was present in Room A there was a concentration of ashes on the upper floor near the entrance to the room (Plate 136B).

3. CONSTRUCTION TECHNIQUES

Materials

In order of frequency of occurrence these are: basalt, tezontle, tepetate, adobes, and fired bricks Walls were constructed primarily of uncut stones (basalt) with the frequent occurrence of tezontle and tepetate. Cut stones were used in corners, doorways, and door sills Adobes blocked the doorway between B and C and possibly were also incorporated into the upper walls One adobe, which had been exposed to heat and partially fired, was recovered in Room C. One fired red brick was also found in Room C Floors, with one exception, were constructed of hard packed earth. The upper floor in Room A had a crushed tepetate surface Mud plaster, and in some instances traces of lime plaster, were found on walls and floors.

Methods

Wall construction began with setting the bottom row of stones directly on the ground surface. These usually consisted of a row of thin, flat stones, placed in two parallel rows with shaped sides facing out The distance between the outer edges of these stones became the width of the wall Between the rows, smaller stones were placed and bonded with mud mortar

Corner construction of bonded walls started with the making of the corner with a large squared base stone. On this was placed a thinner stone slab. At the same level similar thin stone slabs would run through the basal levels of the adjoining walls Above the corner slab, squared stones would be placed forming the

outer edge of the corner. On the interior, smaller stones would be placed joining both walls.

Wall construction proceeded upon the base previously described with outer courses of larger stones and tepetate and inner courses of smaller stones, tepetate, and tezontle. All were bonded with mud mortar. No attempt was made to lay the stones in a manner similar to coursing in modern brick work.

Walls constructed of these materials and with these techniques include the outer walls of the B-C complex, the walls of Room D except for the outer retaining wall, the walls of Room A, and the outer walls and inner retaining walls of Room E. Parts of the latter walls rest not on the ground surface but on fill. Other walls present some individual variations.

The dividing wall between B and C had an outer facing of small, pebble-like stones (Plate 133C). It was constructed directly on the second floor surface shared by both rooms. The outer retaining wall of Room D was a single row of large stones presumably with others once present on the preserved basal row (Plate 134A).

When walls were added to existing rooms, either as interior or exterior constructions, there was no attempt to bond the new wall with the earlier walls. The new wall was built against the earlier wall (Plate 133D). Examples include the east and west walls of Room D built against the south wall of the B-C unit, the inner dividing wall of B-C, built against the west wall of both rooms, the drainage diversion wall built against the north wall of B-C, the inner retaining wall of E built against the north and south walls of that room, the fragmentary wall of E built against the south wall and the two walls of Room A built against the west wall of D and the south wall of E. Similar methods of constructing wall additions are found in modern communities of the area.

Only two doorways were preserved, both in association with the B-C unit. Of these only one was completely preserved. In the preserved doorway, between B and C, three smooth, flat sill stones were found side by side These were not equal to the width of the wall but served to retain the raised floor level in Room B. The corner of the wall that served as the west edge of the doorway was built of smoothed, oval shaped stones (Plate 131B). In the partially destroyed doorway forming the entrance to B-C four smooth flat sill stones were in place. The outer section and the walls had been destroyed with only one square stone left in place on the inside of the room.

Floors in all rooms and on all levels were built of hard-packed earth. The lower floors often covered the wall bases to depths between 5 and 10 cm. On the upper floors where mud plaster was occasionally found, in place, on the lower section of the wall and the edges of the adjoining floors (Room B; Plate 131D), a concave junction was made between the wall and the floor. There were some indications that lime plaster may also have been used but this was not conclusively demonstrated. In Room A the upper floor was covered with a layer of crushed tepetate.

Adobes were associated with construction in one instance. They were used to block the doorway between Rooms B and C (Plates 131B and 131C). In this case they were placed in a single row, one on top of the other, and were bonded with mud mortar. The adobes were square (30 cm x 30 cm x 10 cm) Occasional adobes were also located in the debris on the floor surfaces, but never in sufficient numbers of concentrations to indicate that substantial portions of the now destroyed upper walls were constructed of adobes. They may also have been used in connection with hearth construction, as one partially fired adobe was found. The single piece of brick that was recovered was not associated with any feature or wall.

I suggest that the walls were composed, in their entirety, of the materials preserved in their lower portions. These materials occurred in abundance, both on the room floors and outside of the room complex. This pattern of collapse after abandonment may be seen in a contemporary house ruin in the same region (Plate 139C,D). No information on roof style or construction is available from the excavation. The absence of tiles from the excavation indicates their absence from roof construction.

4. CERAMICS

Immediately after completing the excavation in 1963 I catalogued and analyzed all of the recovered ceramics and other artifactual remains in Mexico. In 1965, J. R. Parsons reanalyzed decorated sherds and undecorated rim sherds as part of a larger study of Aztec Period pottery from the Teotihuacan Valley (Parsons 1966). The ceramics from T.A. 40, Mound 15, were used to define the Teacalco Phase (Aztec 4) of the Teotihuacan Valley sequence. In 1968 I reexamined some of the excavated materials and presented my findings in a paper (1968).

I have summarized the analyzed data in Table 82, using Ware and Type categories as well as Forms described by Parsons (1966). Since the initial analysis on which this table is based was carried out well before Parsons' typology was initiated many of his important refinements of decorative design typology and form characteristics have not been included. I have presented counts for each excavation unit and have calculated percentages within Ware and Type categories. Although screening was not carried out in excavation the sample presented here represents the total range of ceramics to be found in the residence.

5. OTHER ARTIFACTS

I have listed in Table 83 the numbers and frequencies of artifacts encountered per provenience unit. Analysis involved the establishment of three classes of artifacts according to the material used, and then the description of the forms occurring within each class. More detailed analyses of these materials have not been conducted and consequently, information on specific figurine types, spindle whorl (malacate) sizes, and obsidian colors, as well as specific attributes of many other forms, is not available. However, the data presented do contribute significantly to our understanding of the function of the T.A. 40, Mound 15 site.

6. CHRONOLOGY

During the excavation, and after the 1963 ceramic analysis, it was quite apparent that the final phase of construction at T.A. 40, Mound 15, fell into the last phase of the Aztec Period, Aztec 4 or Teacalco Through his later detailed study of Aztec ceramics from several excavations in the Teotihuacan Valley Parsons (1966) confirmed this conclusion and called the Aztec 4 phase of the Teotihuacan Valley sequence,

the Teacalco phase. My later research on the Colonial Period occupation of the Teotihuacan Valley indicates that the Teacalco phase falls entirely or primarily in the Early Colonial Period (1521-1625) (Charlton 1972a, 1976).

I have conducted brief further studies of the ceramics excavated in T.A. 40, Mound 15 (1968) and have seriated the materials from the last occupation of each room (Levels I and II). Listed in Table 82 are the frequencies of the three classes of ceramics used in the Tripole Graph seriation and the results are plotted on a Dipole Graph (Figure 203).

Preliminary plotting of the frequencies of the same classes of ceramics derived from Parsons (1966:281, Table 28) suggests that Plain Orange increases through the Aztec sequence while both Black on Orange and Red Ware decrease. If these trends hold for the rooms at Mound 15 then the data plotted on Figure 9 would indicate that the house complex was abandoned in a sequence in which the most recently constructed rooms (A, D, and E) were abandoned first, while the earliest rooms (B and C) were abandoned last. There is the possibility that these figures may be skewed by functional factors, such as the high frequency of storage jars in B and C. I shall discuss these issues below, under room function. Further problems may be related to the postoccupation deposition patterns within unoccupied rooms, which could result in a distorted abandonment sequence. Rooms first abandoned could have been filled with debris from rooms still occupied.

The site does appear to be securely dated within the Late Aztec and Early Colonial Periods. The room abandonment sequence is not clear and may have been affected by functional factors or by post-occupation deposition patterns.

Table 80: Mound 15: Ceramic Frequency by Room (cf. Figure 199)

Room	Black on Orange		Plain Orange		Red Wares	
	No	Percent	No	Percent	No	Percent
A	39	10 21	314	82 20	29	7 59
B	41	4 95	694	83 91	92	11 12
C	33	2 76	1049	87 85	112	9 38
D	109	6 03	1478	81 88	218	12 07
E	194	7 09	2330	85 19	211	7 71

7. FUNCTIONS

The nature and frequencies of the ceramics (Table 82) and the artifacts (Table 83), combined with the features and structural characteristics of the rooms support the identification of the structure as a rural domestic residence. The bulk of the ceramics, and many of the artifacts, are associated with aspects of food storage, food preparation, food cooking, and food serving. The ceramics and artifacts related to these activities occur in all five rooms. I attempted to determine if there were variations between rooms in

functions related to different steps in foods processing through a Tripole Graph seriation of Jars (storage), Molcajetes (grinding), and Comals (cooking). The forms were drawn from all types and wares. I have listed their frequencies below (Table 81) and have plotted the results on a Dipole Graph (Figure 204).

The rooms fall into two distinct clusters, based primarily on the ratio of jars to comals. Molcajetes occur in low frequencies in all rooms except E. Rooms E, D, and A have higher ratios of comals to jars than Rooms B and C which have proportionately more jars than comals. These differences probably reflect differential emphases on cooking (E, D, A) and storage (B, C). The increased frequency of molcajetes in Room E may indicate an emphasis on food preparation and cooking in that room and confirm a preliminary interpretation of Room E as a kitchen area. As I noted previously these functional considerations may have skewed the internal chronology of the site as depicted in the seriation in Figure 203. The emphasis on jars in B and C may have provided a later occupation than is otherwise warranted. However, as I shall discuss in the following section on the history of the social structure of the groups occupying the house, both the functional and the chronological seriation tie in quite well with the postulated construction sequence and the probable social history of the residential unit.

The ceramics indicate a primary domestic occupation for all rooms in the complex and this interpretation is supported by the artifact categories noted in Table 83. The obsidian found suggests an emphasis on blade tools with some evidence for blade production in the complex. Ground stone artifacts indicate an emphasis on food grinding. The distribution of these artifacts suggests that heavy food preparation was carried out in Rooms C and D, with 31.25% and 37.50%, respectively, of the ground stone artifacts used for food preparation encountered in the upper levels. The distribution of obsidian blades suggests an emphasis on cutting activities, and fine preparation, in Rooms D (24.73%) and E (40.86%). The presence of spindle whorls (malacates) in the room complex in low frequencies suggests the presence of domestic spinning operations for household consumption, using maguey fibers.

Table 81: Frequencies of Vessel Types by Rooms in Mound 15

Room	Molcajetes		Jars		Comals	
	No	Percent	No	Percent	No	Percent
A	2	1 28	51	32 69	103	66 02
B	8	1 52	312	59 31	206	39 16
C	8	1 29	389	62 84	222	35 86
D	9	1 42	193	30 53	420	68 03
E	47	7 02	136	20 32	486	72 64

In addition to the primary domestic functions noted above there is evidence for ceremonial activities within the complex. Both censers and figurines occur within each of the rooms albeit in varying frequencies. Rooms A and B have the lowest frequencies of censers and figurines found in the upper levels (censers: A, 4.00%, B, 13.33%; figurines: A, 2.08%, B, 12.50%). Higher frequencies of both occur in Rooms C, D, and E, although only D has equivalent frequencies of both categories (censers: C, 17.33%, D, 33.33%, E,

32.07%; figurines: C, 29.16%, D, 31.25%, E, 25.00%). The associations do not indicate any structure or room preference except for Rooms C, D, and E. Undoubtedly these artifacts were used within the domestic context of the room complex and formed an integral part of other activities.

The occupants of the room complex maintained links with near and distant communities through exchange networks. Obsidian cores were undoubtedly obtained from specialists located elsewhere. Salt was traded in the vessel in which it was made (Charlton 1971). More distant contacts are indicated by the occurrence of small amounts of Chalco-Cholula Polychrome and Huastec pottery. The low frequencies may indicate the rural situation of the site or the breakdown in long distance exchange networks during the early Colonial Period.

8. SOCIAL HISTORY

Using several lines of evidence (constructional, ceramics, area, and sequential) it is possible to outline the relationship between the establishment and decline of the room complex and the changes in composition of the social group which occupied it. The earliest part of the complex built was Room B-C, constructed as a single unit and housing a nuclear family. Using Naroll's formula a total of 3 persons would have lived in this room (Naroll 1962). I think his formula gives figures too low by about 40%, in the Aztec example. The T.A. 40, Mound 15 room complex is comparable in size to other Late Aztec and Early Colonial structures excavated in the Teotihuacan Valley and surrounding area (Charlton 1972b), and the above statement would apply to those cases as well.

The addition of Room D (lower room) may have resulted from the establishment of another nuclear family, probably a married son of the family in Room B-C. The enlargement of Room D to its final size probably coincided with the raising of the second floor level in B-C. Based on Naroll's formula, Room D would have housed 2 persons (a figure probably too low).

The establishment of two nuclear families within the complex probably necessitated the construction of a special kitchen unit for B-C alone or with D. The construction of the wall dividing B from C and the elevation of the final floor in B may also have been related to the increasing differentiation of space and functions within the complex. The addition of Room E would permit the addition of one further person, bring the total inhabitants to 6. The minimum figure I would suggest for the room complex at this stage of its development is 10.

The addition of Room A would have impeded access between B-C and E, on the one hand, and D on the other, if the apparent absence of evidence of doorways between D and B-C is correct. This may have marked the beginning of population decline within the unit confining the occupied area to B-C and finally C alone. The seriation of the rooms suggests that the later additions were the first to be abandoned, resulting in a loss of complexity in functional differentiation and a reduction in occupants. Later, Room B was sealed and C remained the last room to be occupied.

The sequence of occupancy of the room complex would appear to relate to the cycle of nuclear family development, expansion, contraction, and decline. Although the cycle of growth may be representative of the Aztec Period the cycle of decline may be aberrant and result from post-conquest epidemics introduced by the Spanish.

9. CONCLUSION

The room complex revealed through the 1963 excavations at T.A. 40, Mound 15, is a rural, Late Aztec and/or Early Colonial Period residential structure within a small village site. Both the size and the construction techniques are comparable to other structures from the same time period, excavated more recently in the eastern Teotihuacan Valley. In addition to indicating the probable chronology of the room complex the associated ceramics and artifacts also permit some differentiation of rooms on the basis of associated functions. In general, however, the ceramics, artifacts, and inferred functions are compatible with those occurring at other rural sites of the same time period in the Teotihuacan Valley and adjacent areas. From the data recovered there is no indication of high status for the occupants. The occupants of the room complex probably included one to two nuclear families during different stages of its growth and decline. The constructional sequence and room function differentiation may be related to this cycle of family expansion and contraction. It is probable that the final abandonment of the structure was due to the effect of epidemic diseases introduced by the Spanish during and after the conquest period.

10. ACKNOWLEDGEMENTS

The Social Science Research Council supported by participation in the Teotihuacan Valley Project through a Research Training Fellowship (1963-1964). The excavation reported here formed one segment of my dissertation research. Dr. William T. Sanders supported the laborers used in the excavations and provided transportation and laboratory facilities. I am grateful for all support received.

Figure 195

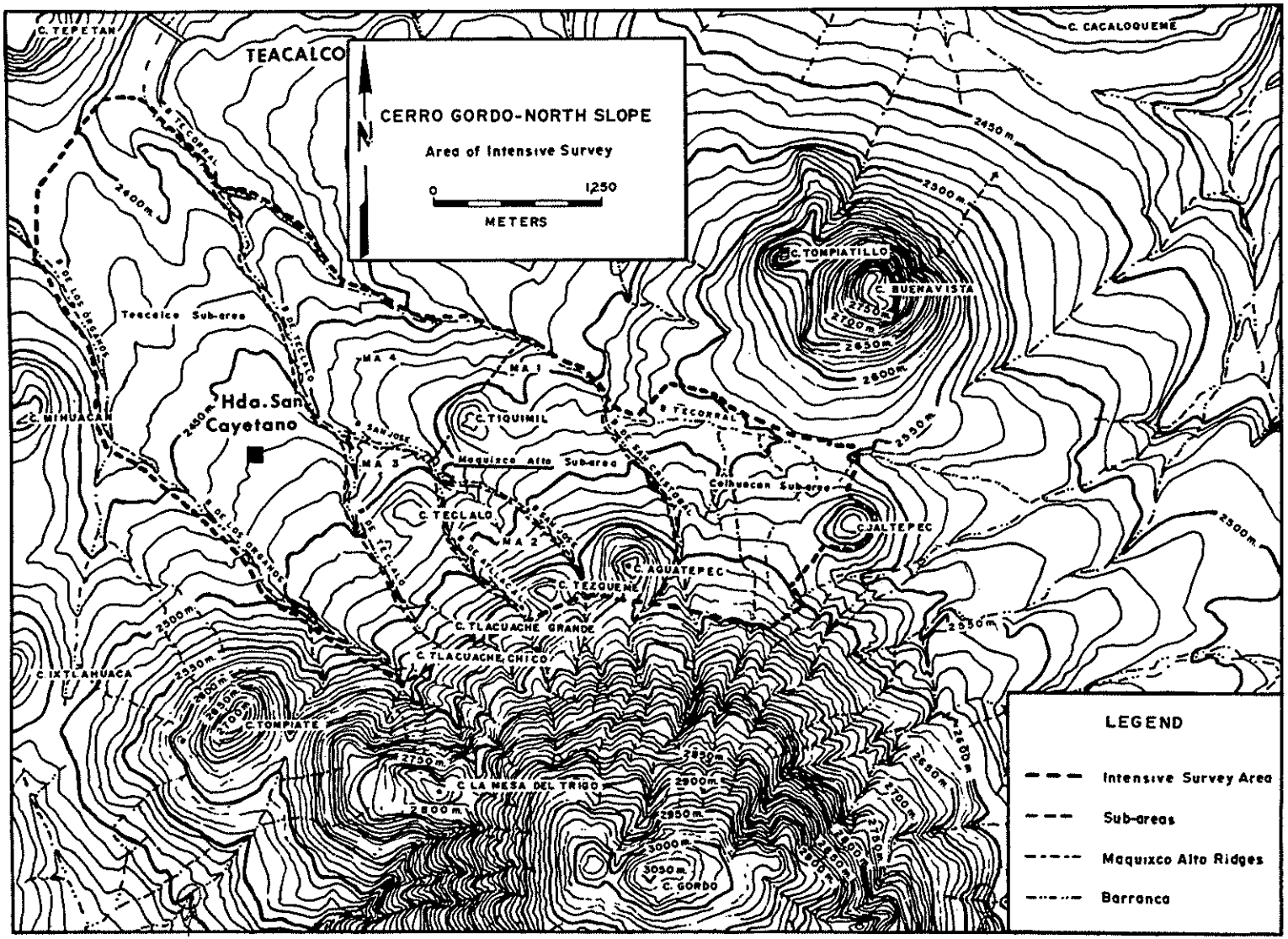

CERRO GORDO-NORTH SLOPE
Area of Intensive Survey
0
1250
METERS
N
TEACALCO
C. TEPETAN
C. CACALOQUEME
C. TOMPIATILLO
C. BUENAVISTA
Teocalco Sub-area
Hda. San Cayetano
C. MIMUACAN
C. TIQUIMIL
Maquixco Alto Sub-area
Colhuacan Sub-area
C. TECLALO
C. JALTEPEC
C. AGUATEPEC
C. TEZQUENE
C. TLACUACHE GRANDE
C. TLACUACHE CHICO
C. IXTLAHUACA
C. TOMPIATE
C. LA MESA DEL TRIGO
C. GORDO
MA 1
MA 2
MA 3
MA 4
LEGEND
Intensive Survey Area
Sub-areas
Maquixco Alto Ridges
Barranca

Figure 196

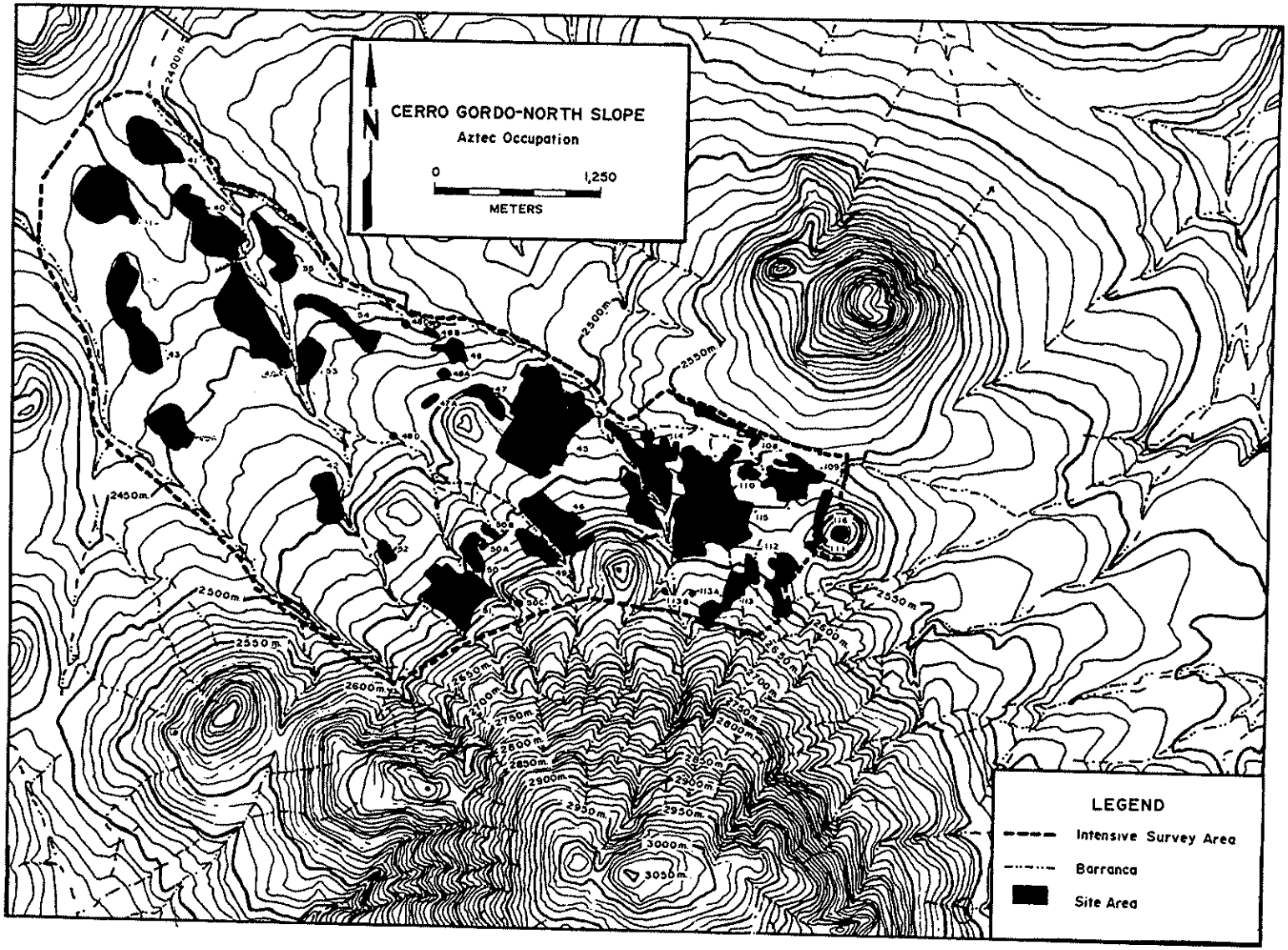

CERRO GORDO-NORTH SLOPE
Aztec Occupation
0
1,250
METERS
N
LEGEND
Intensive Survey Area
Barranca
Site Area

Figure 197

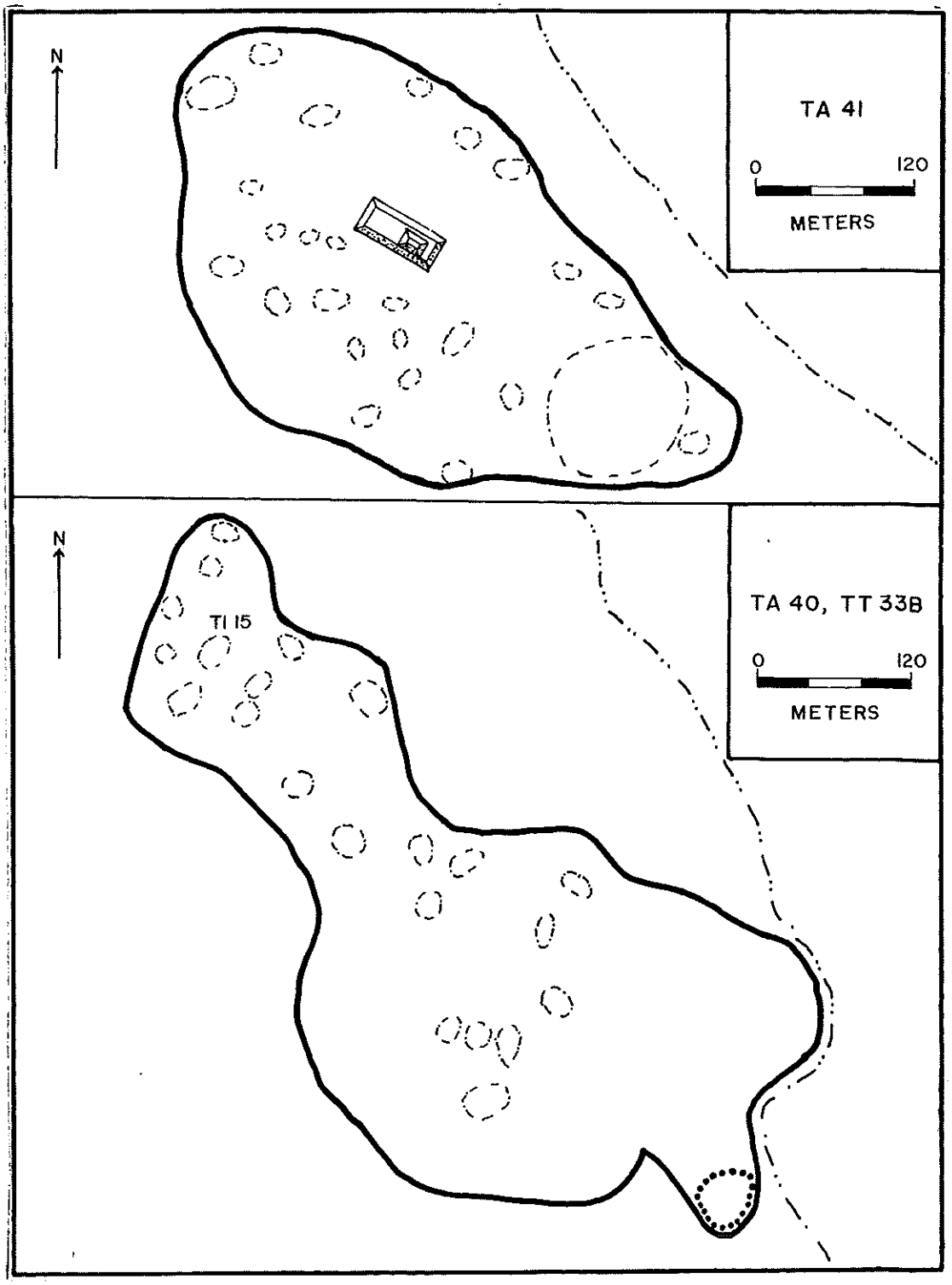


Figure 198

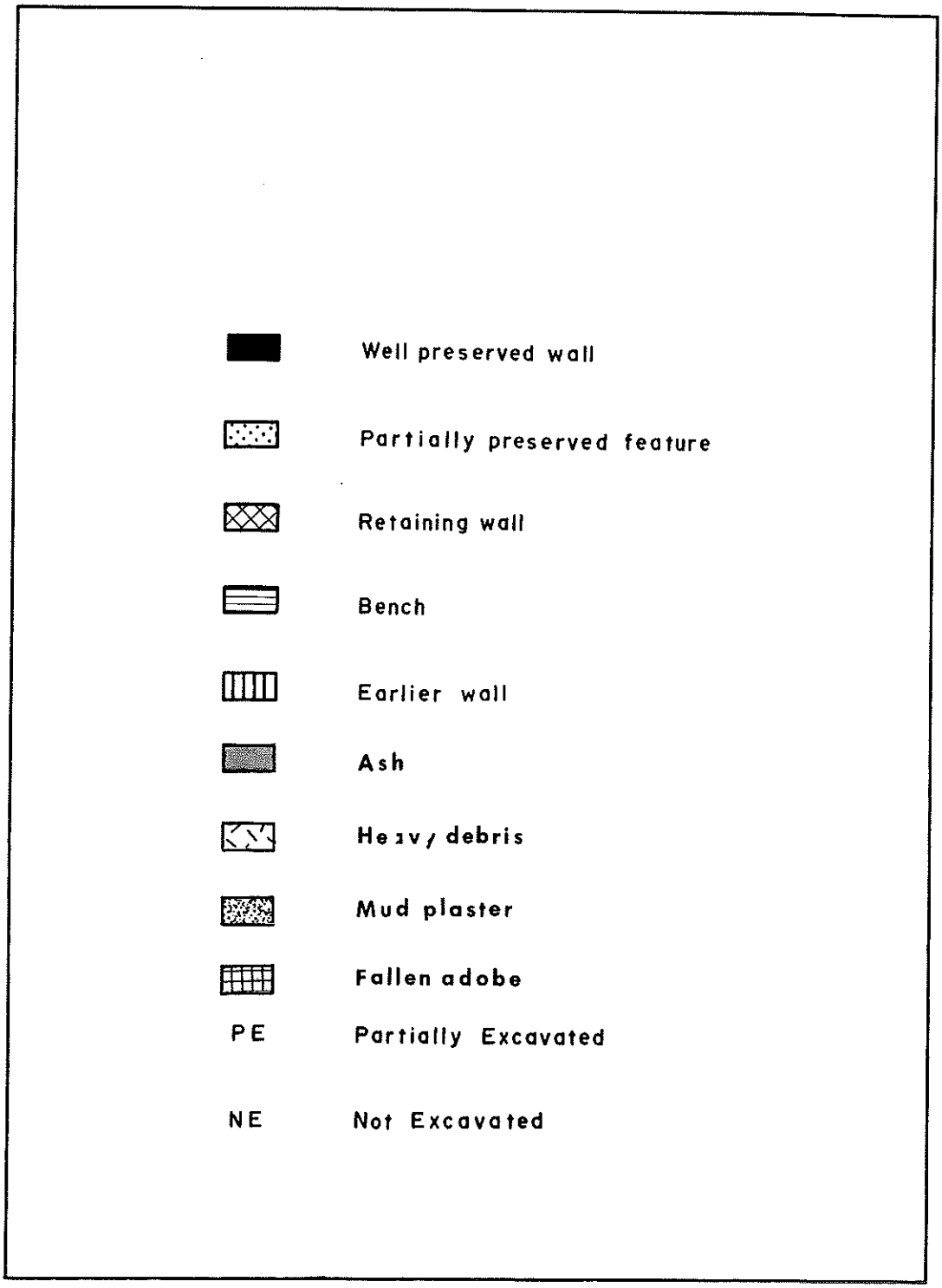

Well preserved wall
Partially preserved feature
Retaining wall
Bench
Earlier wall
Ash
Heavy debris
Mud plaster
Fallen adobe
PE
Partially Excavated
NE
Not Excavated

Figure 199

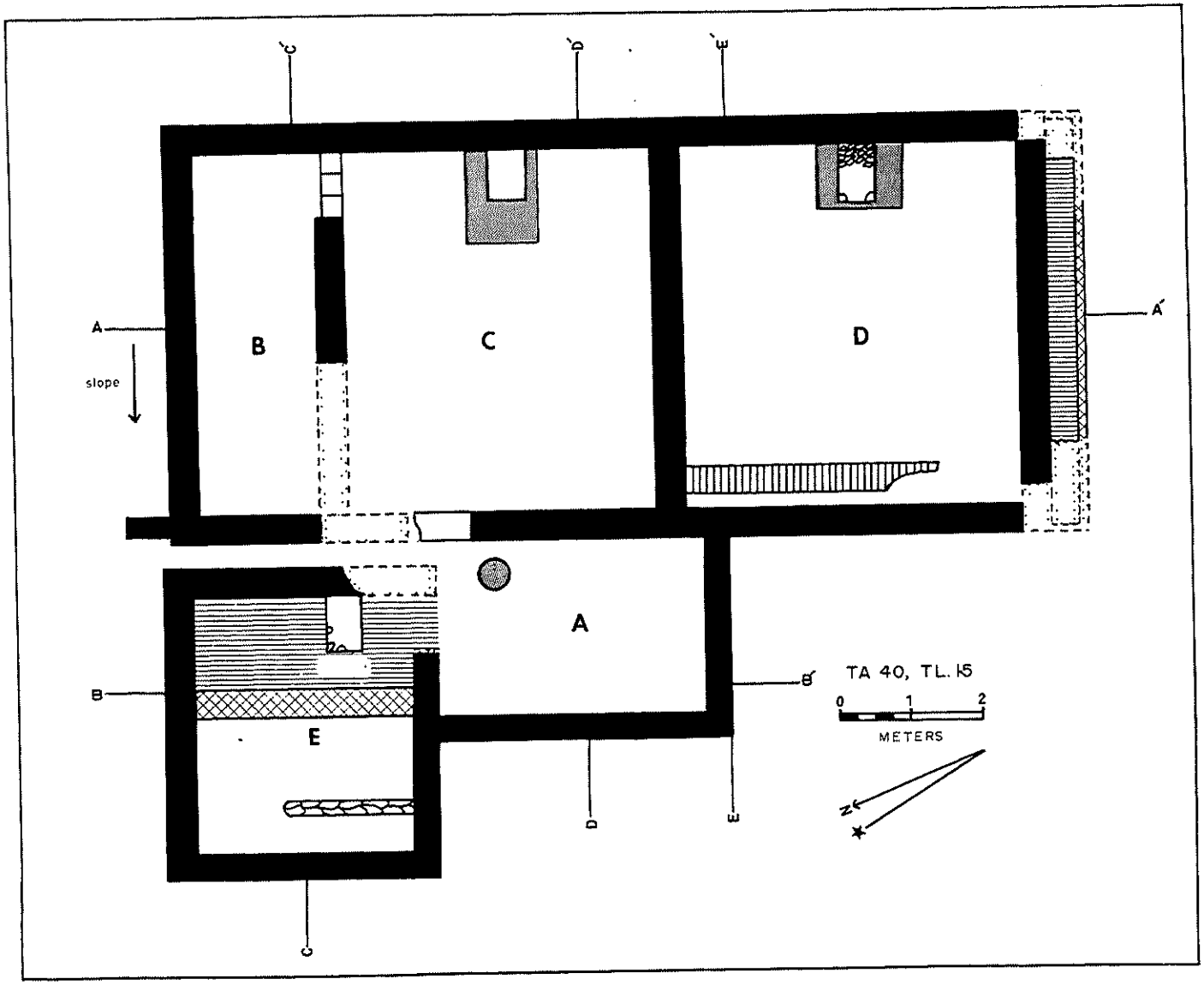


Figure 200

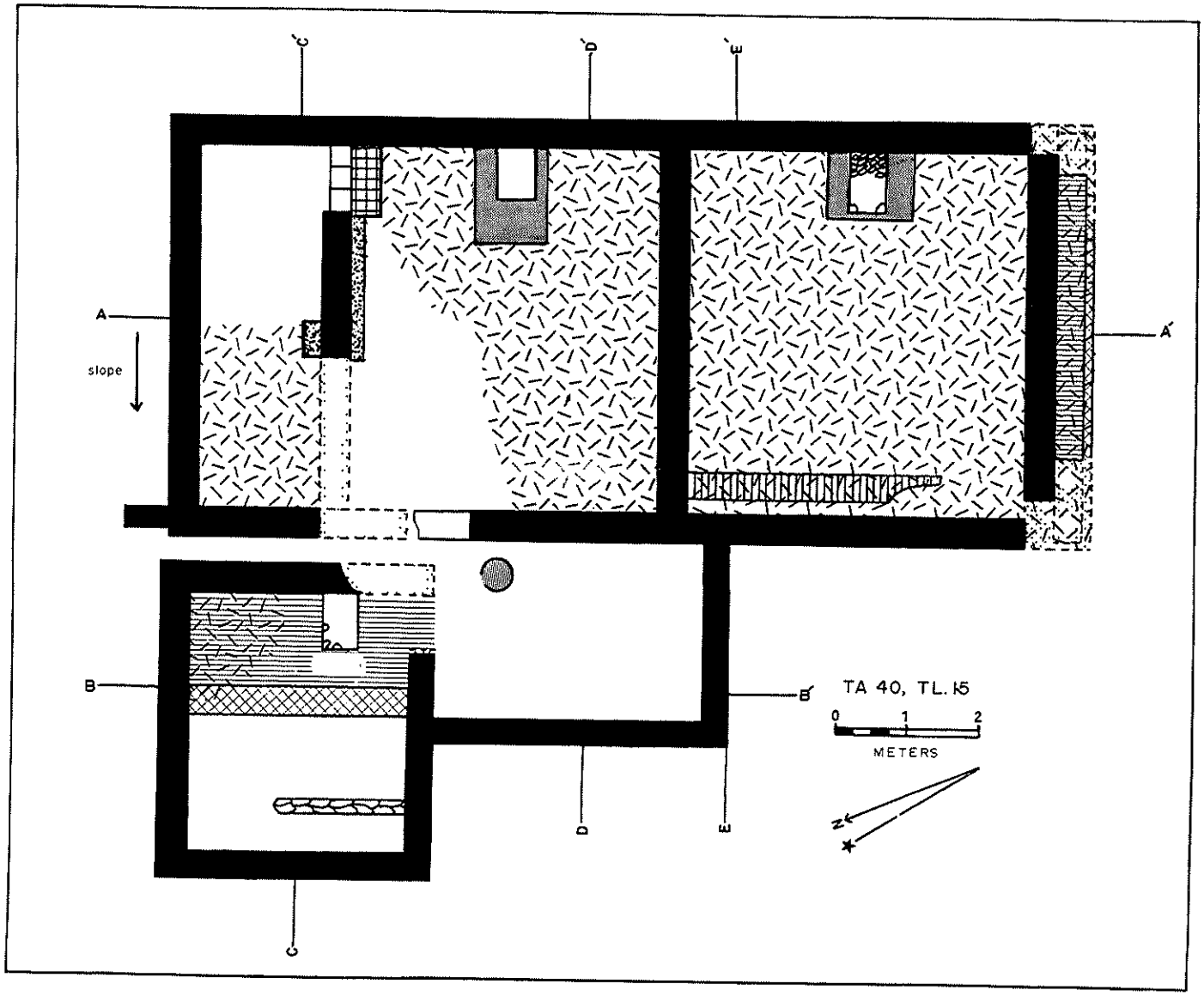


Figure 201

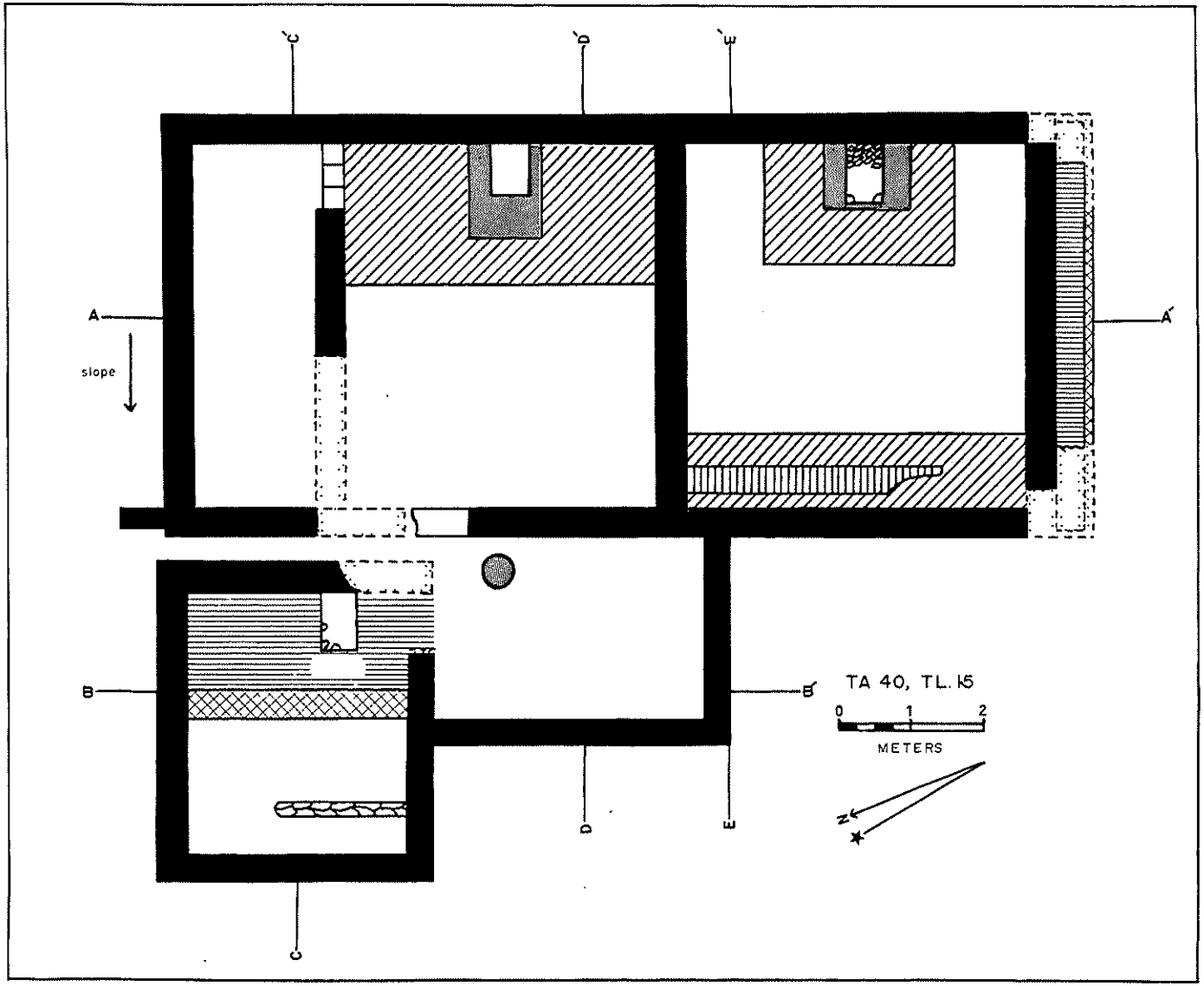


Figure 202

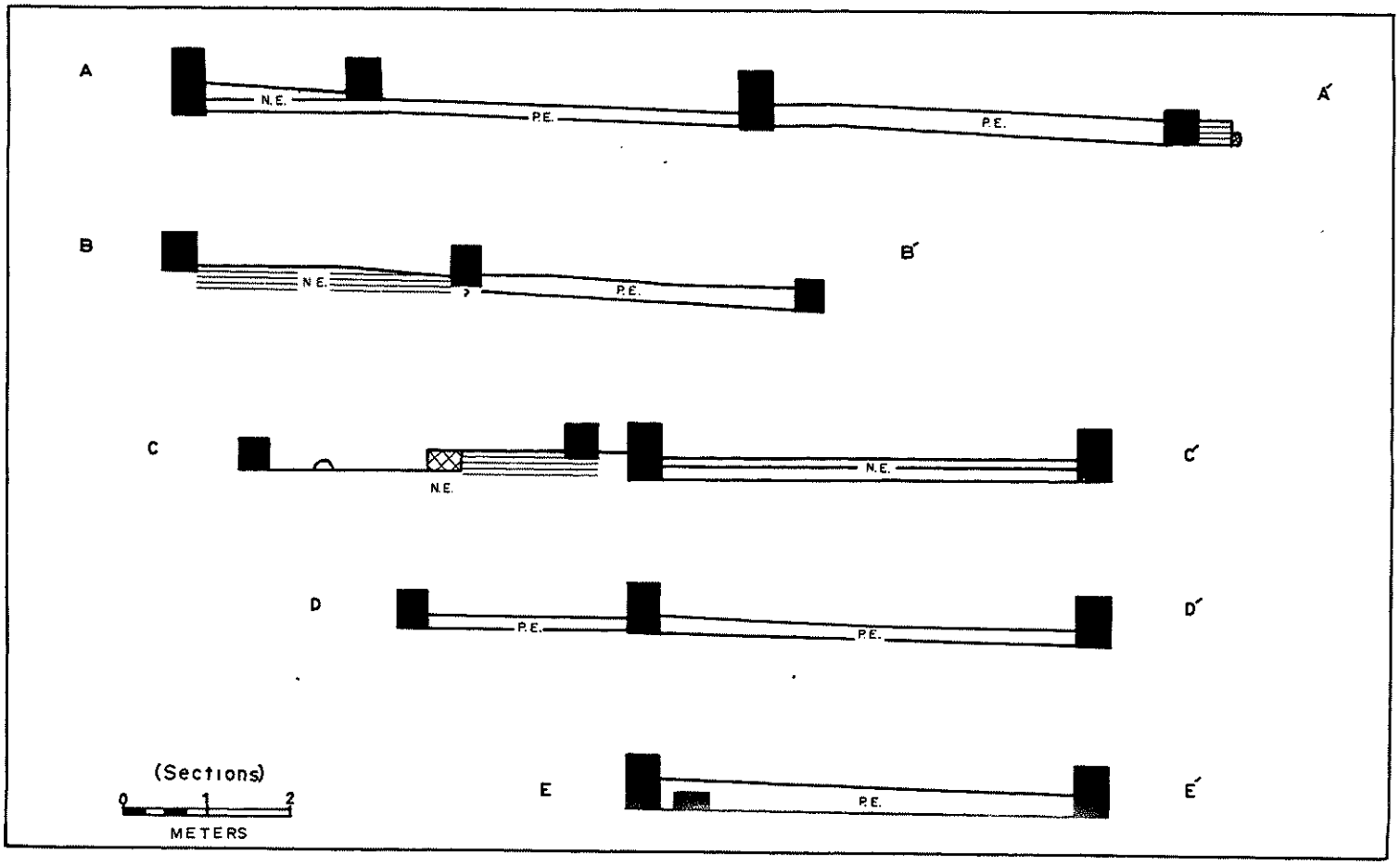


Figure 203

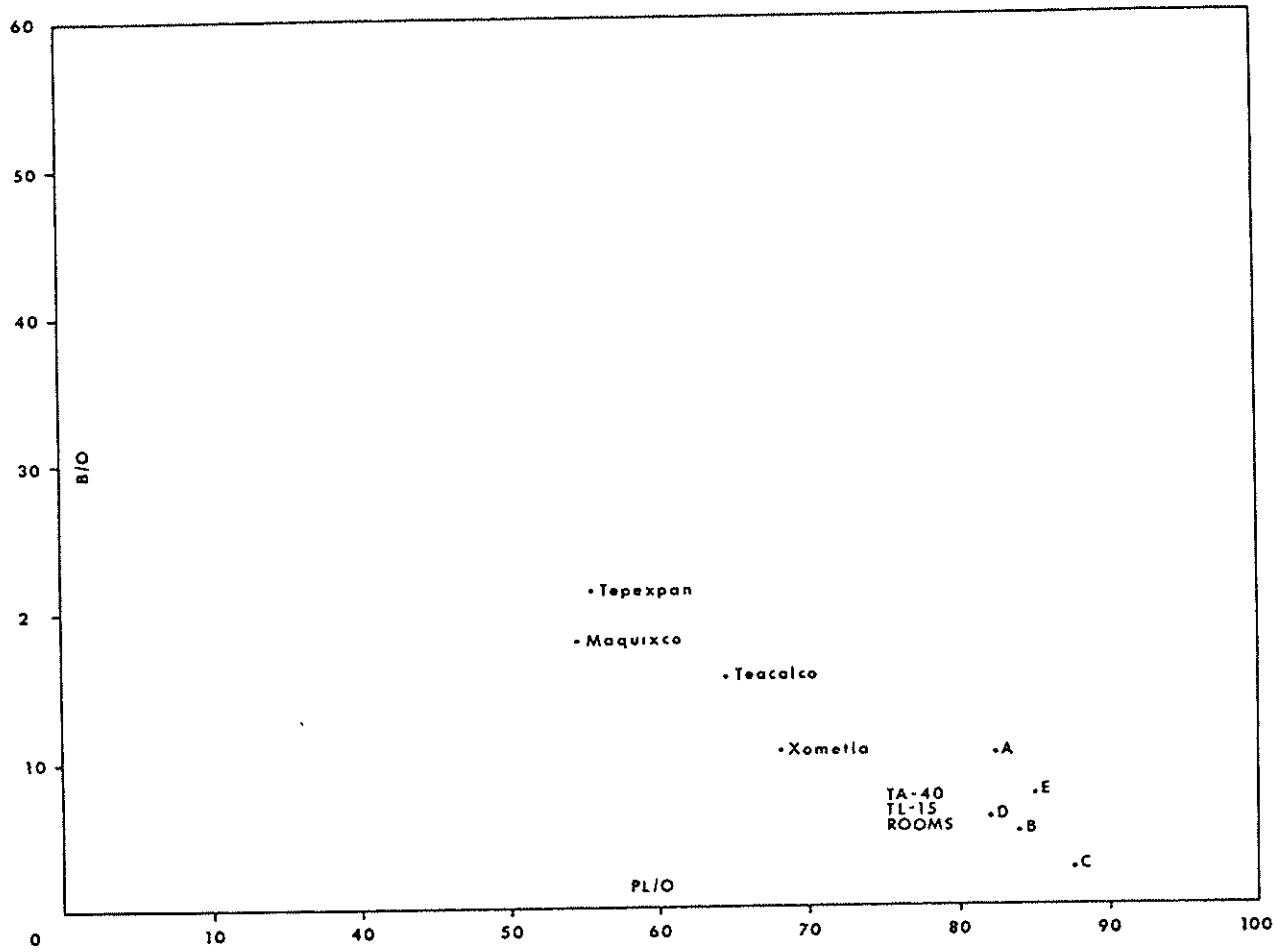


Fig. 10. Room Seriation, TA-40, Tl. 15, with Late Aztec Sites Noted.

Figure 204

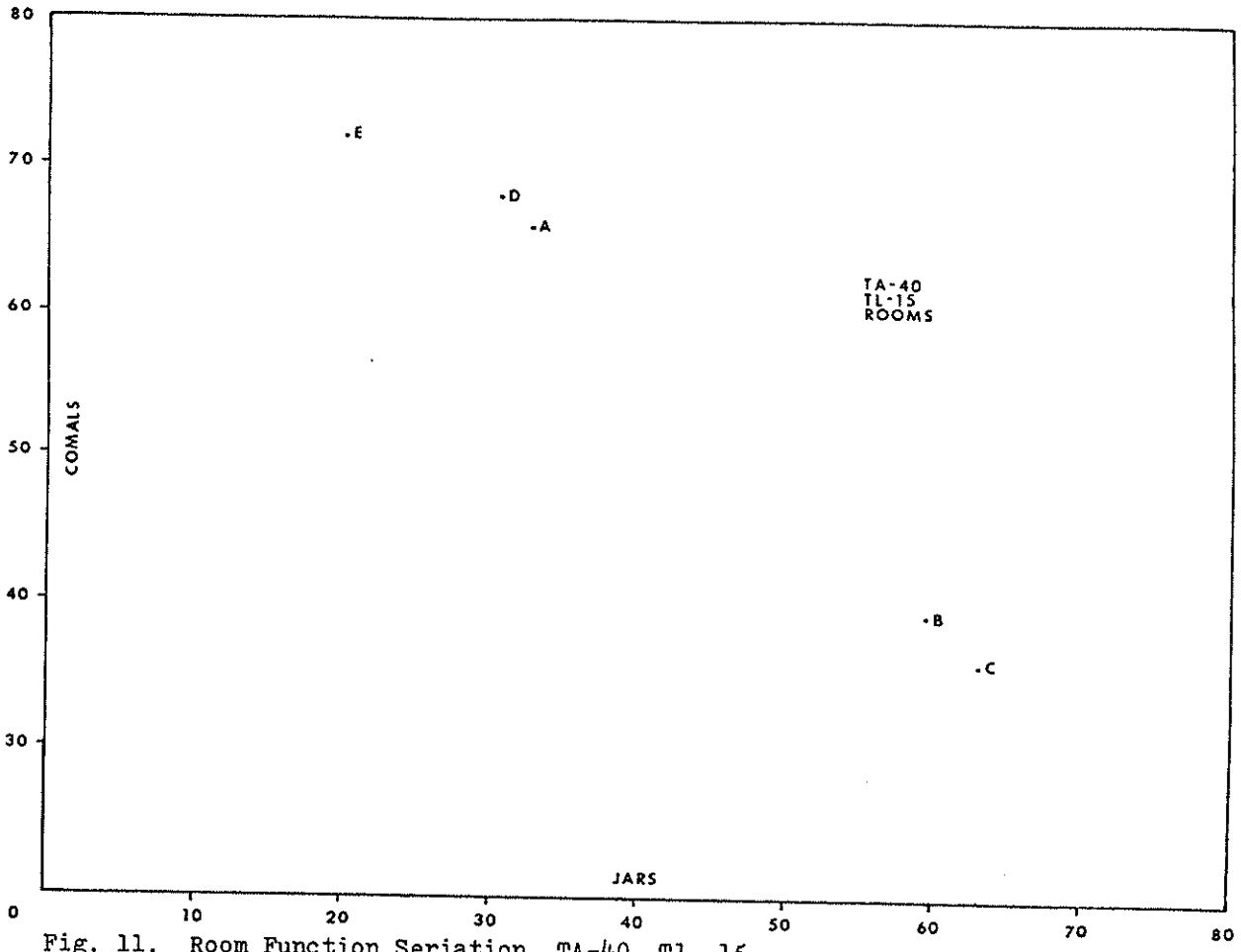
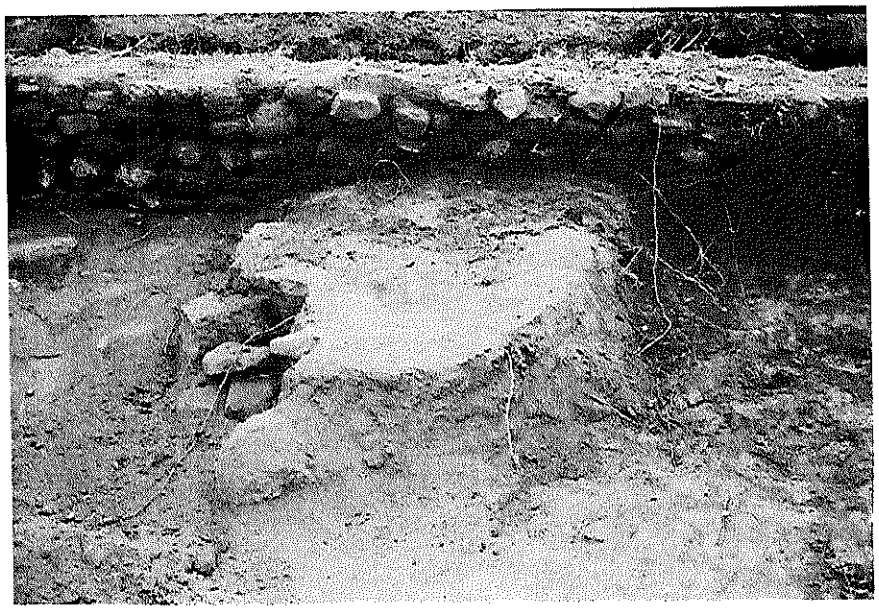


Fig. 11. Room Function Seriation, TA-40, Tl. 15.

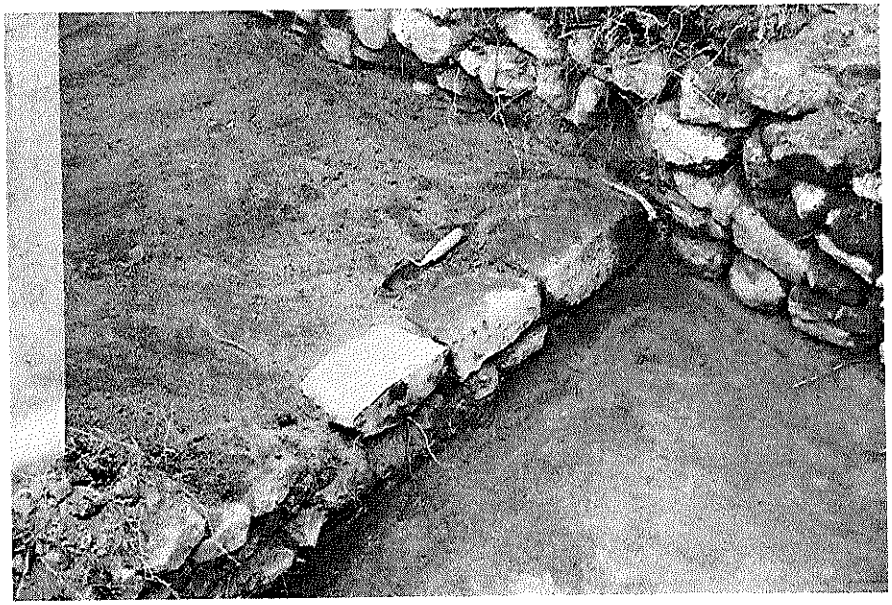
Plate 130

A

B



C



D

Plate 131

A

B

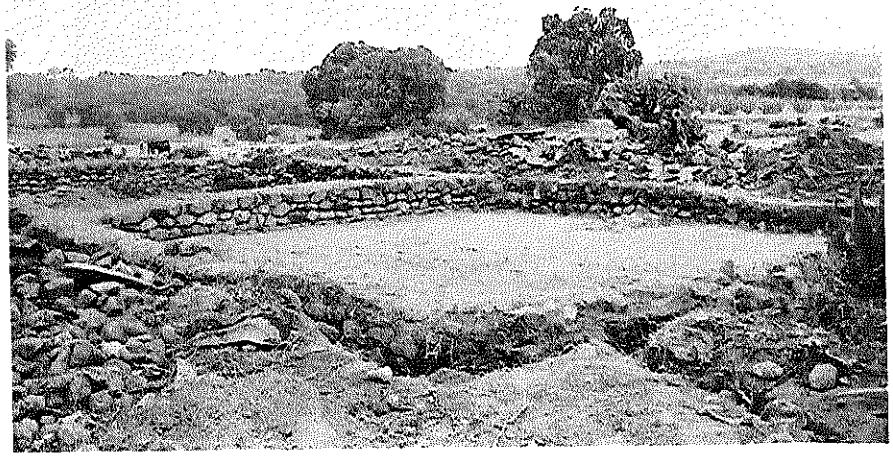
C

D

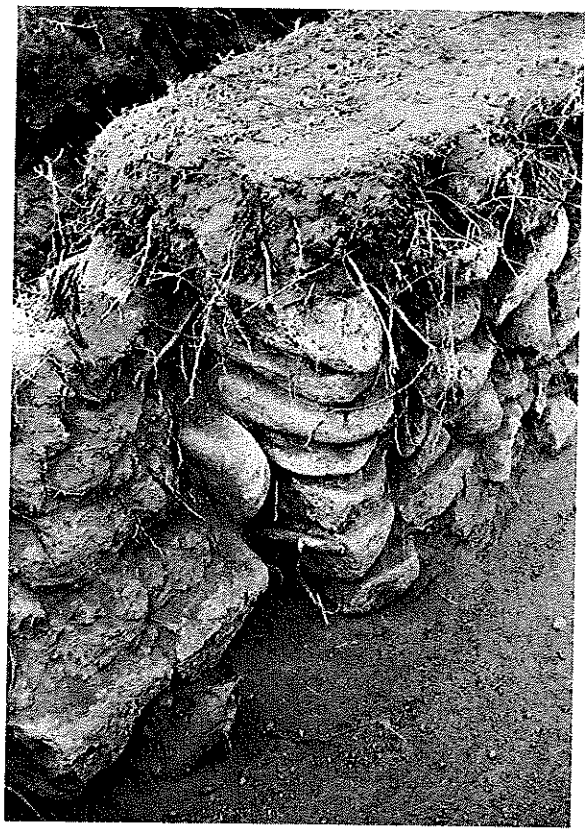
Plate 132

A

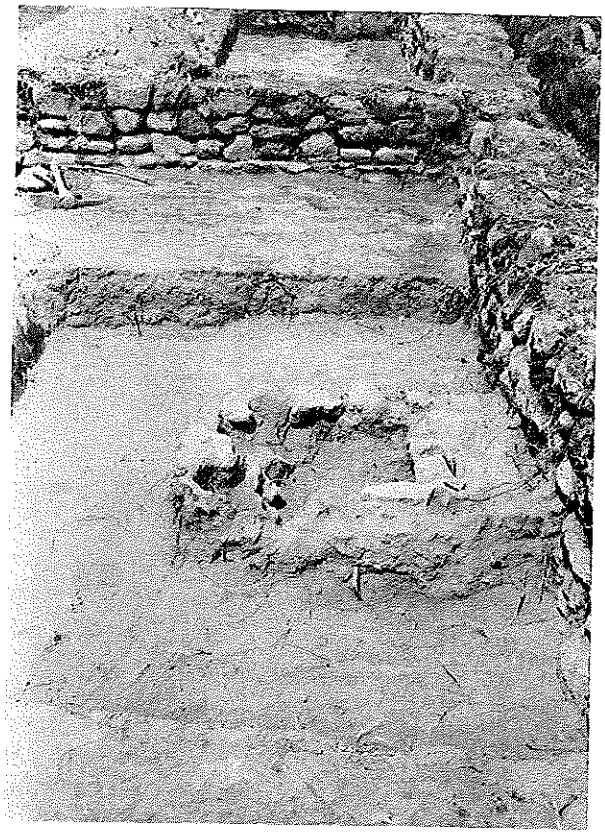
B



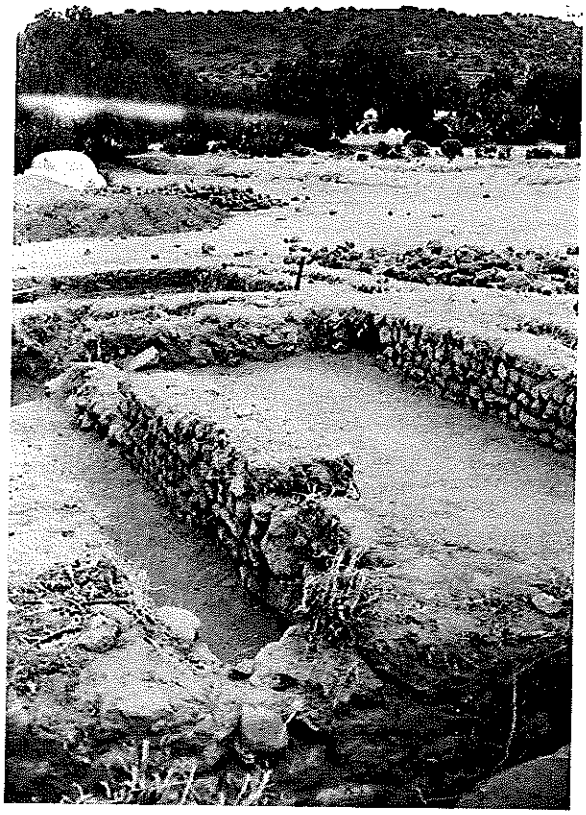
C



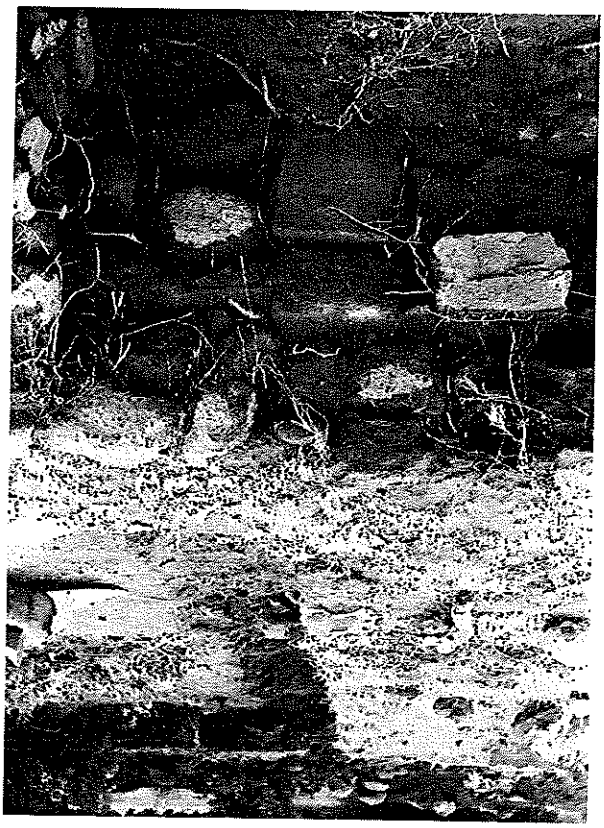
A



B

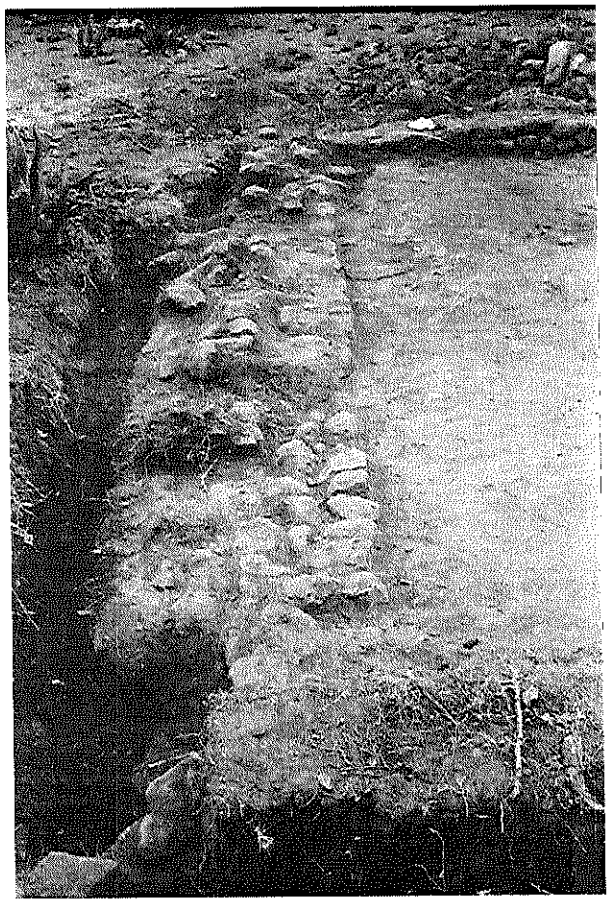


C

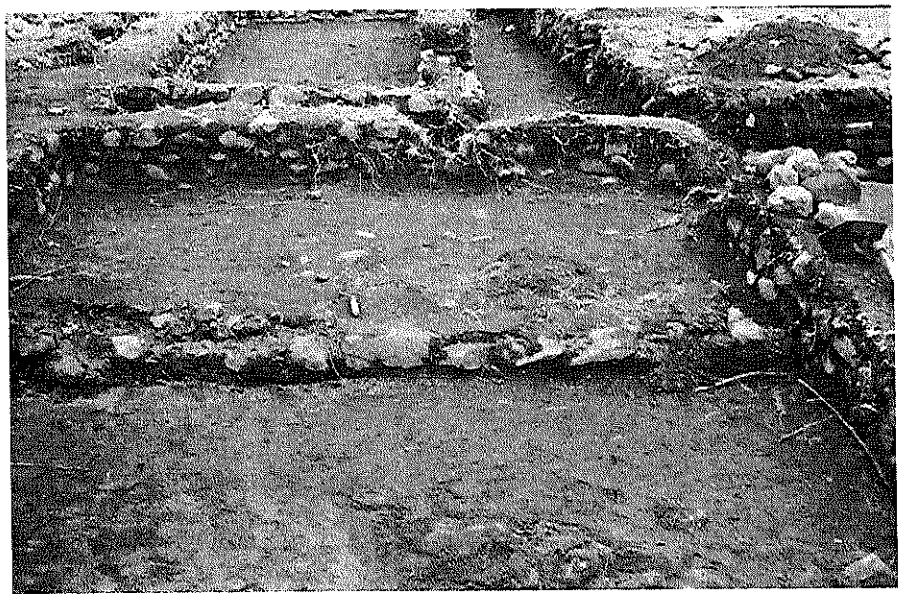


D

Plate 134



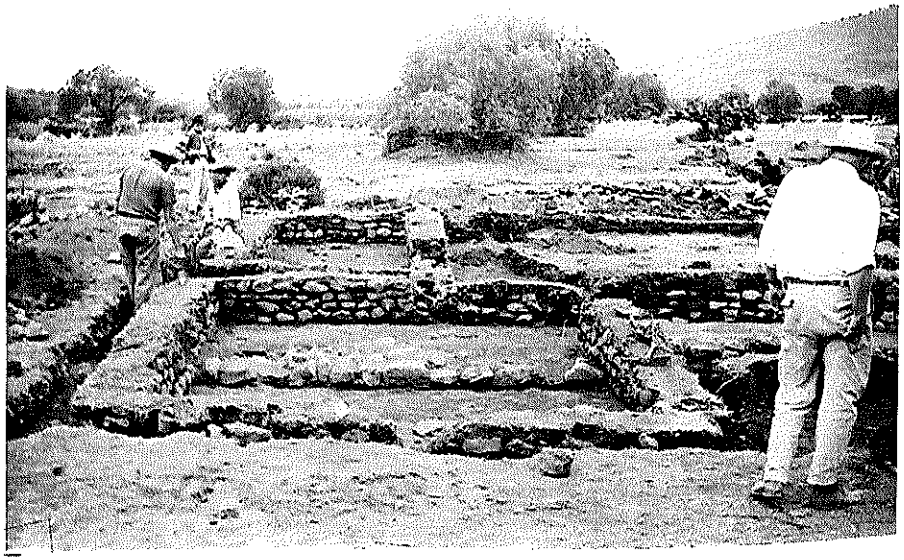
A



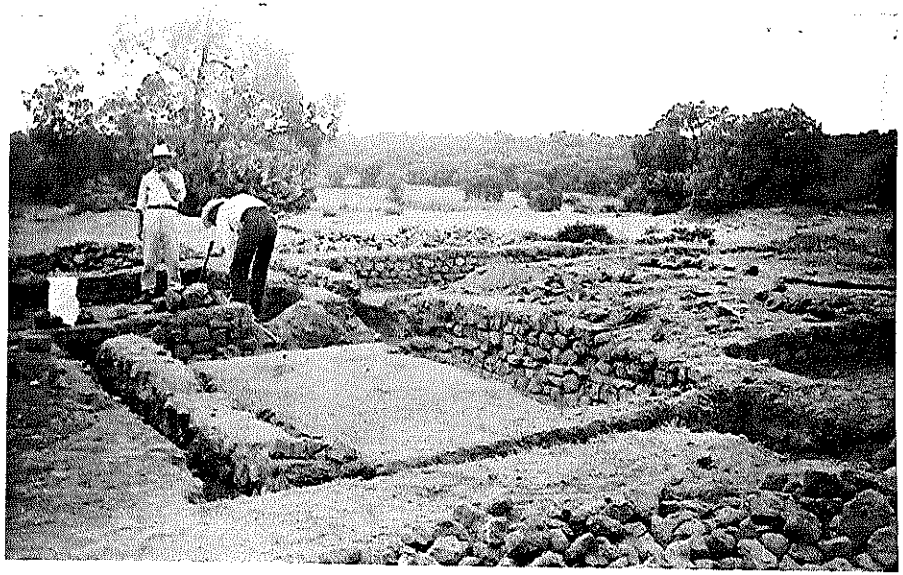
B

C

Plate 135



A



B

C

Plate 136

A

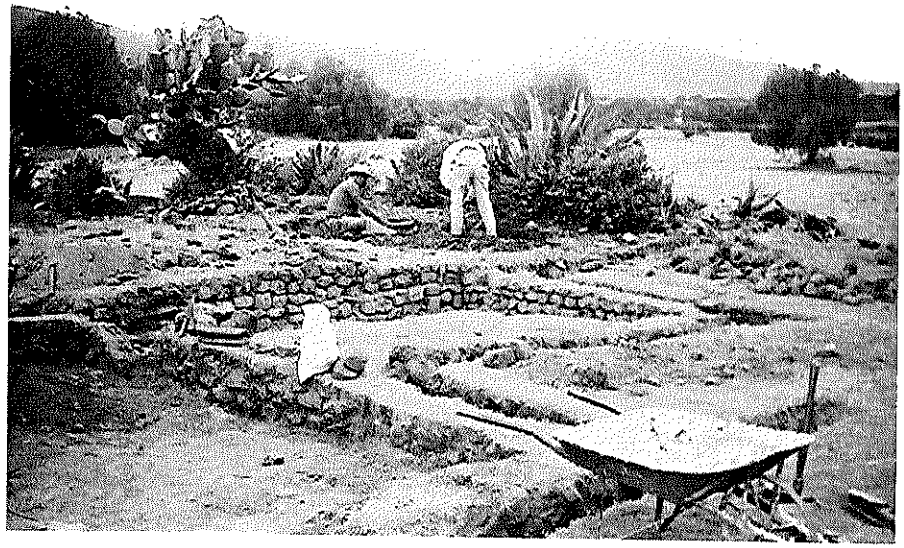
B

C

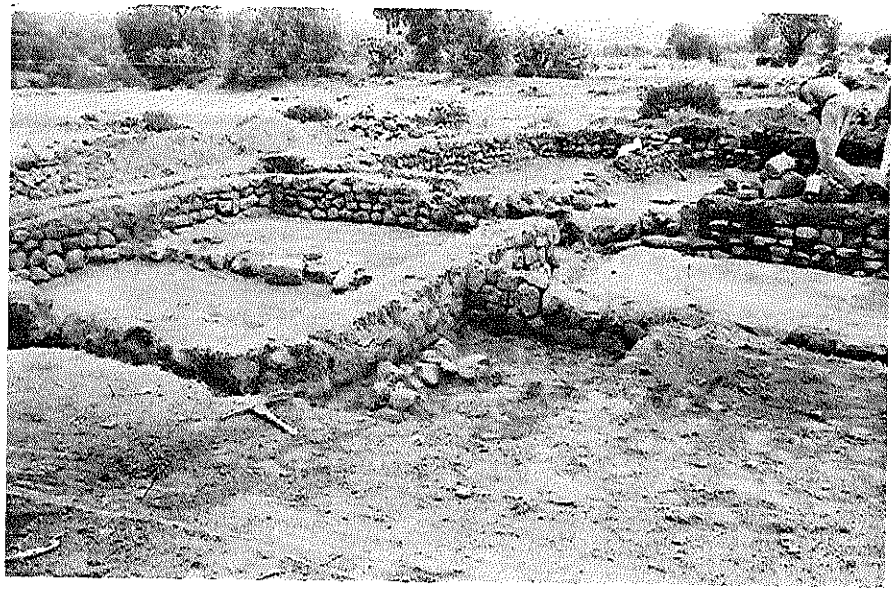
D

Plate 137

A



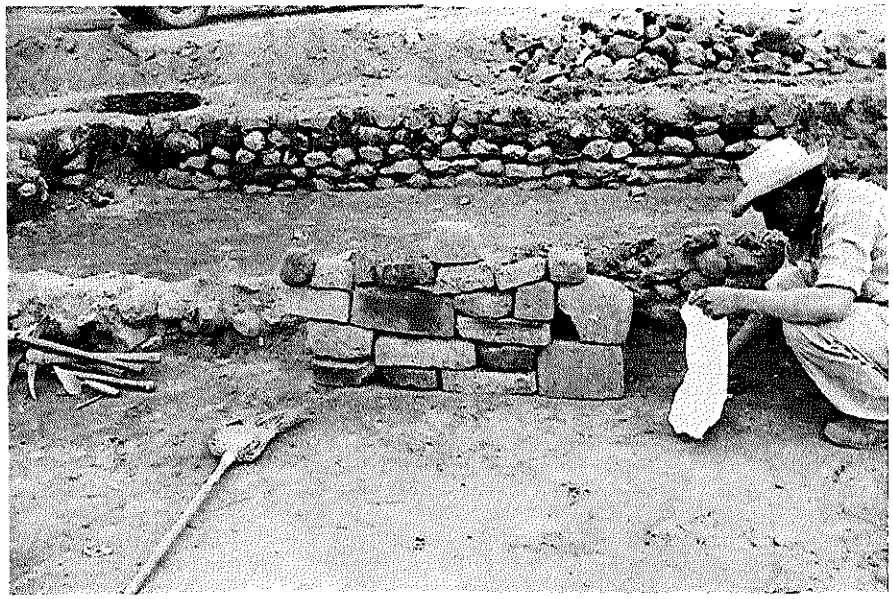
B



C

D

Plate 138



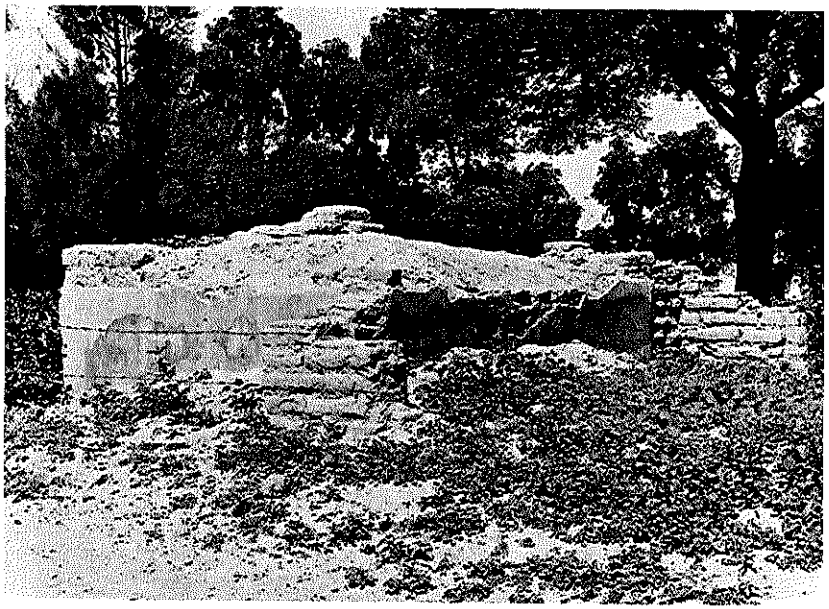
A

B

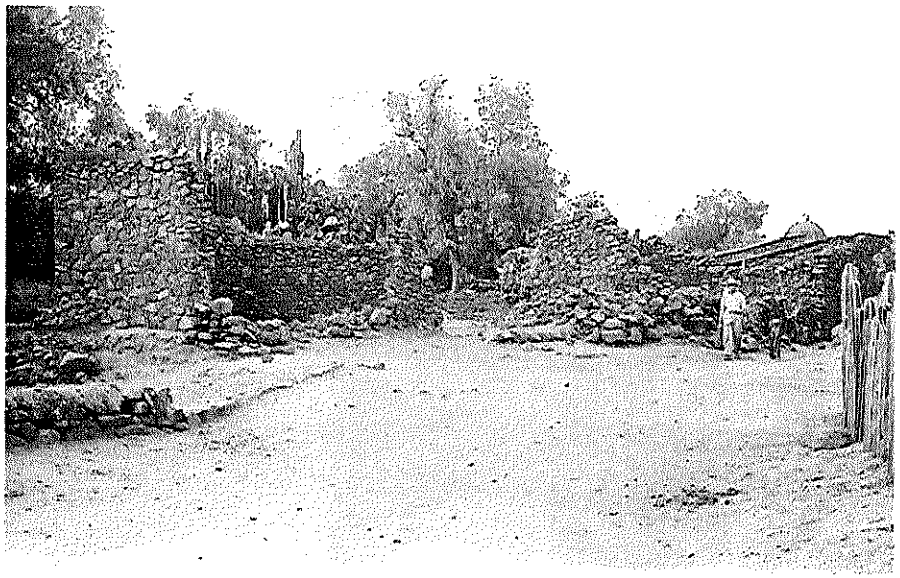
C

D

Plate 139



A



B

C

D

Table 82: Ceramic Frequencies at T.A. 40

	Trenches	A-General	A-I	A-II	B-I	B-II	B-III	C-I	C-II	C-III	D-I	D-II	D-III	E-I	E-II
Type	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
ORANGE WARE A. Black/Orange Type Form Classes															
1. Upright-Rim Bowl															
Rims II	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
III	4 3.7	- -	- -	- -	- -	- -	- -	1 5.0	- -	2 11.1	2 3.5	1 1.9	- -	2 1.3	- -
IV	2 1.8	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 .7	- -
Bodies II	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
III	- -	- -	&ü300Ð	- -	- -	- -	- -	2 10.0	- -	- -	- -	- -	- -	- -	- -
IV	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
3. Incurved-Rim Bowl															
Rims II	- -	- -	2 7.7	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
III	2 1.8	- -	- -	- -	4 22.2	3 13.0	- -	1 5.0	2 15.4	2 11.1	6 10.5	1 1.9	- -	- -	- -
IV	- -	- -	- -	- -	1 5.5	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Bodies II	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
III	- -	- -	- -	- -	- -	2 8.7	- -	3 15.0	- -	- -	- -	- -	- -	- -	- -
IV	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
5. Molcajetes															
Rims II	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
III	2 1.8	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	2 8.0	2 1.3	- -
IV	4 3.7	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 1.8	- -	- -	5 3.2	- -
Bodies II	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
III	1 .9	- -	- -	- -	- -	- -	- -	1 5.0	- -	- -	- -	- -	3 12.0	6 3.9	2 5.1
IV	1 .9	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -			3 1.9	- -

Table 82 (Continued)

	Trenches	A-General	A-I	A-II	B-I	B-II	B-III	C-I	C-II	C-III	D-I	D-II	D-III	E-I	E-II
Type	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
ORANGE WARE A. Black/Orange continued															
6. Dishes															
Rims II	1 .9	- -	- -	2 15.4	- -	- -	- -	- -	- -	- -	1 1.8	- -	- -	- -	- -
III	26 23.9	- -	3 11.5	2 15.4	1 5.6	8 34.8	1 16.7	4 20.0	4 30.8	6 33.3	12 21.1	15 28.8	6 24.0	30 19.4	18 46.2
IV	12 11.0	1 25.0	5 19.2	2 15.4	6 33.3	4 17.4	- -	- -	- -	- -	6 10.5	4 7.7	1 4.0	33 21.3	3 7.7
Bodies II	- -	- -	- -	2 15.4	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
III	26 23.9	1 25.0	6 23.1	- -	4 22.2	5 21.7	- -	8 40.0	2 15.4	5 27.8	20 35.1	16 30.8	11 44.0	9 5.8	10 25.6
IV	14 12.8	- -	5 19.2	3 23.1	- -	1 4.4	- -	- -	1 7.7	1 5.6	1 1.8	9 17.3	1 4.0	5 3.2	1 2.6
8. Jars Tecomates															
Rims III	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 .7	- -
13. Unattached Slab Supports															
Closed	3 2.8	2 50.0	2 7.7	2 15.4	- -	- -	1 16.7	- -	2 15.4	1 5.6	3 5.3	3 5.8	1 4.0	15 9.7	5 12.8
Open	2 1.8	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	5 3.2	- -
13a. Attached Closed Slab Supports															
PL/O Dish	2 1.8	- -	- -	- -	- -	- -	1 16.7	- -	- -	- -	- -	1 1.9	- -	- -	- -
III Dish	1 .9	- -	1 3.9	- -	- -	- -	2 33.3	- -	- -	- -	3 5.3	- -	- -	6 3.8	- -
PL/O Molcajete	- -	- -	2 7.7	- -	- -	- -	1 16.7	- -	- -	- -	- -	1 1.9	- -	2 1.3	- -
III Molcajete	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	4 2.6	- -

Table 82 (Continued)

	Trenches	A-General	A-I	A-II	B-I	B-II	B-III	C-I	C-II	C-III	D-I	D-II	D-III	E-I	E-II
Type	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
ORANGE WARE A. Black/Orange continued															
15. Copa															
Bodies	- -	- -	- -	- -	- -	- -	- -	- -	1 7.7	- -	2 3.5	1 1.9	- -	- -	- -
16. Miniatures Inc. Rim Bowl															
Rims III	- -	- -	- -	- -	2 11.1	- -	- -	- -	1 7.7	1 5.6	- -	- -	- -	- -	- -
Jars	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Rims III	1 .9	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Bodies III	5 4.6	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
17. Unidentified															
Bodies II	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 .7	- -
Bodies III	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	22 14.2	- -
Bodies IV	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	3 1.9	- -
TOTAL BL/OR	109 99.9	4 100.0	26 100.0	13 100.0	18 100.0	23 100.0	6 100.0	20 100.0	13 100.0	18 100.0	57 100.0	52 100.0	25 100.0	155 100.0	39 100.0

Table 82 (Continued)

	Trenches	A-General	A-I	A-II	B-I	B-II	B-III	C-I	C-II	C-III	D-I	D-II	D-III	E-I	E-II
Type	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
ORANGE WARE B. Plain Orange Type Form Classes															
1. Bowls and Basins															
A. Upright/Flaring Walls, Direct Rims															
Rims	103 8.1	10 14.1	11 6.5	18 12.3	17 4.9	23 6.7	- -	40 6.5	30 7.0	19 5.5	73 13.2	79 8.5	31 6.6	305 17.6	47 7.9
Bodies	29 2.3	- -	- -	2 1.4	2 .6	6 1.7	- -	5 .8	8 1.9	4 1.2	8 1.4	16 1.7	5 1.1	30 1.7	12 2.0
B. Incurved Rim															
Rims	3 .2	1 1.4	- -	- -	1 .3	- -	- -	3 .5	1 .2	- -	2 .4	3 .3	4 .9	- -	2 .3
Bodies	1 .1	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
K. Miniature Bowls															
Rims	44 3.5	- -	3 1.8	5 3.4	3 .9	6 1.7	- -	11 1.8	9 2.1	7 2.0	27 4.9	28 3.0	5 1.1	3 .2	1 .2
Bodies	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
L. Molcajetes															
Rims	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	23 1.3	- -
Bodies	10 .8	- -	2 1.2	- -	6 1.7	2 .6	- -	4 .6	3 .7	4 1.2	1 .2	7 .8	3 .6	26 1.5	3 .5
2. Jars															
A. Straight-Neck and B. Flaring-Neck															
Direct Rim															
Low Neck	3 .2	1 1.4	- -	- -	1 .3	- -	- -	1 .2	1 .2	3 .9	1 .2	2 .2	2 .4	7 .4	3 .5
High Neck	8 .6	- -	- -	1 .7	3 .9	2 .6	- -	2 .3	7 1.6	1 .3	3 .5	2 .2	5 1.1	6 .3	5 .8
Indeterminate	12 .9	- -	1 .6	- -	6 1.7	7 2.0	- -	18 2.9	2 .5	1 .3	18 3.3	11 1.2	10 2.1	4 .2	2 .3

Table 82 (Continued)

	Trenches	A-General	A-I	A-II	B-I	B-II	B-III	C-I	C-II	C-III	D-I	D-II	D-III	E-I	E-II
Type	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
ORANGE WARE B. Plain Orange - Continued															
2. Jars - Continued															
Beveled Rim															
Low Neck	2 .2	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 .2	- -	- -	- -	- -
High Neck	2 .2	- -	- -	- -	- -	- -	- -	- -	- -	1 .3	1 .2	- -	- -	2 .1	- -
Indeterminate	4 .3	- -	1 .6	1 .7	1 .3	1 .3	- -	2 .3	- -	4 1.2	20 3.6	8 .9	3 .6	4 .2	5 .8
Bodies	388 30.5	10 14.1	26 15.5	10 6.8	137 39.1	100 29.1	2 40.0	122 19.7	144 33.4	46 13.3	48 8.7	160 17.3	91 19.4	35 2.0	35 5.9
C. Tecomate Rims	3 .2	- -	1 .6	1 .7	2 .6	- -	- -	- -	- -	4 1.2	3 .5	- -	1 .2	1 .1	3 .5
D. Miniature Jars	- -	- -	- -	- -	- -	- -	- -	1 .2	- -	1 .3	5 .9	1 .1	1 .2	- -	5 .8
3. Comal															
Rims	88 6.9	5 7.0	14 8.3	12 8.2	29 8.9	19 5.5	2 40.0	50 8.1	30 7.0	34 9.9	77 13.9	50 5.4	15 3.2	104 6.0	34 5.7
Bodies	181 14.2	13 18.3	36 21.4	41 28.1	82 23.4	76 22.1	- -	79 12.8	63 14.6	61 17.7	93 16.8	210 22.7	80 17.0	198 11.4	150 25.3
4. Ladle	1 .1	- -	- -	- -	1 .3	- -	- -	- -	- -	- -	- -	- -	2 .4	1 .1	- -
5. Handles															
Loop	30 2.4	2 2.8	5 3.0	1 .7	5 1.4	4 1.2	- -	20 3.2	5 1.2	2 .6	9 1.6	8 .9	7 1.5	31 1.8	3 .5
Strap	4 .3	- -	- -	- -	3 .9	1 .3	- -	4 .6	1 .2	3 .9	- -	1 .1	4 .9	6 .3	1 .1
Lug	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 .2	2 .2	- -	- -	- -
Unid.	- -	- -	- -	1 .7	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Mini. Loop	3 .2	- -	- -	1 .7	- -	- -	- -	- -	- -	- -	- -	3 .3	- -	- -	- -

Table 82 (Continued)

	Trenches	A-General	A-I	A-II	B-I	B-II	B-III	C-I	C-II	C-III	D-I	D-II	D-III	E-I	E-II
Type	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
ORANGE WARE B. Plain Orange - Continued															
6. Unattached Supports															
Slap	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	4 .2	- -	- -
Spider	3 .2	- -	1 .6	- -	- -	1 .3	- -	2 .3	- -	- -	1 .2	4 .4	1 .2	3 .2	- -
Nubbin	1 .1	1 1.4	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Ring	2 .2	- -	- -	1 .7	- -	- -	- -	- -	2 .5	- -	- -	- -	- -	6 .3	- -
Annular	- -	- -	- -	- -	- -	1 .3	- -	1 .2	1 .2	1 .3	1 .2	- -	- -	- -	- -
Flat Base	6 .5	- -	- -	- -	2 .6	2 .6	- -	2 .3	5 1.2	- -	2 .4	7 .8	6 1.3	74 4.3	9 1.5
7. Unidentified															
Rims	1 .1	- -	1 .6	- -	- -	- -	- -	- -	- -	- -	- -	5 .5	- -	- -	2 .3
Bodies	340 26.7	28 39.4	66 39.3	51 34.9	49 14.0	93 27.0	1 20.0	251 40.6	119 27.6	149 43.2	159 28.8	318 34.4	194 41.3	865 49.8	270 45.6
TOTAL	1272 99.9	71 100.0	168 99.9	146 100.0	350 99.9	344 100.0	5 100.0	618 99.9	431 100.0	345 100.0	553 99.9	925 99.9	470 99.9	1738 100.0	592 100.0
ORANGE WARE C. Incised Orange Type															
1. Jar-Direct Rim															
High Neck	- -	- -	- -	- -	- -	- -	- -	- -	1 10.0	- -	- -	- -	- -	- -	- -
Bodies	3 100.0	- -	- -	- -	- -	1 100.0	- -	- -	9 90.0	- -	- -	- -	- -	- -	- -
TOTAL									10 100.0						
D. Purple-and-Black-and-White/ Orange Type															
Bodies	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 100.0	- -	- -
TOTAL	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 100.0	- -	- -

Table 82 (Continued)

	Trenches	A-General	A-I	A-II	B-I	B-II	B-III	C-I	C-II	C-III	D-I	D-II	D-III	E-I	E-II
Type	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
ORANGE WARE E. Cream-Slipped Type															
1. Jars															
A. Straight Neck and															
B. Flaring Neck															
Direct Rim															
Low Neck	- -	- -	- -	- -	1 1.9	- -	- -	- -	1 2.9	- -	- -	- -	- -	3 33.3	2 12.5
High Neck	- -	- -	- -	- -	1 1.9	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Indetermin.	5 8.2	1 25.0	1 4.5	- -	1 1.9	- -	- -	1 1.6	2 5.7	1 20.0	1 2.1	2 3.2	- -	1 11.1	6 37.5
Bevelled Rim															
Low Neck	- -	- -	1 4.5	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Indetermin.	2 3.3	- -	- -	- -	- -	- -	- -	- -	4 11.4	- -	- -	1 1.6	- -	1 11.1	- -
Bodies	53 86.9	3 75.0	20 90.9	6 100.0	49 90.7	31 100.0	- -	57 93.4	25 71.4	4 80.0	34 91.9	60 95.2	18 94.7	4 44.4	7 43.8
C. Tecomate Rims	- -	- -	- -	- -	- -	- -	- -	- -	2 5.7	- -	- -	- -	- -	- -	- -
5. Handles															
Loop	1 1.6	- -	- -	- -	1 1.9	- -	- -	3 4.9	- -	- -	1 2.7	- -	1 5.3	- -	1 6.3
Strap	- -	- -	- -	- -	1 1.9	- -	- -	- -	1 2.9	- -	1 2.7	- -	- -	- -	- -
TOTAL	61 100.0	4 100.0	22 100.0	6 100.0	54 100.0	31 100.0	- -	61 100.0	35 100.0	5 100.0	37 100.0	63 100.0	19 100.0	9 100.0	16 100.0
RED WARE A. Black/Red Type															
2. Copa Rims	3 3.7	- -	- -	- -	1 5.3	1 5.9	- -	- -	2 9.5	- -	- -	2 4.8	- -	- -	- -
3. Simple Bowls															
Rims	32 39.0	- -	6 54.5	3 50.0	11 57.9	12 70.6	- -	16 59.3	9 42.9	20 71.4	26 51.0	11 26.2	13 54.2	22 42.3	11 45.83
Bodies	47 57.3	1 100.0	5 45.5	3 50.0	7 36.8	4 23.5	- -	11 40.7	10 47.6	8 28.6	25 49.0	29 69.0	10 41.7	30 57.7	13 54.2
5. Jar-Direct Rim	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 4.2	- -	- -
TOTAL Black/Red	82 100.0	1 100.0	11 100.0	6 100.0	19 100.0	17 100.0	- -	27 100.0	19 100.0	28 100.0	51 100.0	42 100.0	24 100.0	52 100.0	24 100.0

Table 82 (Continued)

	Trenches	A-General	A-I	A-II	B-I	B-II	B-III	C-I	C-II	C-III	D-I	D-II	D-III	E-I	E-II
Type	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
RED WARE B. Plain Red Type															
1. Simple Bowl															
Rims	7 16.3	1 25.0	1 50.0	2 66.7	5 31.3	1 10.0	- -	3 15.0	1 6.25	2 13.3	10 38.5	5 10.4	4 28.6	16 28.6	3 12.5
Bodies	36 83.7	3 75.0	1 50.0	1 33.3	11 68.8	9 90.0	1 100.0	17 85.0	15 93.8	13 85.7	16 61.5	40 83.3	10 71.4	38 67.9	21 87.5
2. Copa Bodies	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	3 6.3	- -	- -	- -
3. Handles															
Loop	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 1.8	- -
Strap	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 1.8	- -
TOTAL Plain Red	43 100.0	4 100.0	2 100.0	3 100.0	16 100.0	10 100.0	1 100.0	20 100.0	16 100.0	15 100.0	26 100.0	48 100.0	14 100.0	56 100.0	24 100.0
C. Black/White/Red Type															
1. Simple Bowl															
Rims	19 52.8	- -	3 75.0	2 66.7	7 43.8	3 30.0	- -	12 54.5	3 75.0	8 50.0	9 52.9	8 25.8	5 33.3	5 29.41	13 59.1
Bodies	17 47.2	2 100.0	1 25.0	1 33.3	9 56.3	7 70.0	- -	9 40.9	1 25.0	8 50.0	8 47.1	23 74.2	10 66.7	11 64.7	9 40.9
3. Copas															
Rims	- -	- -	- -	- -	- -	- -	- -	1 4.5	- -	- -	- -	- -	- -	- -	- -
Bodies	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 5.9	- -
TOTAL Black/White/Red	36 100.0	2 100.0	4 100.0	3 100.0	16 100.0	10 100.0	- -	22 100.0	4 100.0	16 100.0	17 100.0	31 100.0	15 100.0	17 100.0	22 100.0
Low Frequency Red Ware Types															
D. White/Red	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	2 100.0	- -	9 64.3	- -
E. Yellow/Red	2 100.0	1 100.0	- -	- -	2 100.0	- -	- -	- -	1 100.0	- -	1 100.0	- -	2 100.0	5 35.7	2 100.0
F. Black/Yellow/Red	- -	- -	- -	- -	- -	- -	- -	1 100.0	- -	- -	- -	- -	- -	- -	- -
TOTAL Low Frequency	2 100.0	1 100.0	- -	- -	2 100.0	- -	- -	1 100.0	1 100.0	- -	1 100.0	2 100.0	2 100.0	14 100.0	2 100.0
FABRIC-MARKED WARE															
TOTAL	14 100.0	- -	3 100.0	2 100.0	5 100.0	5 100.0	- -	11 100.0	7 100.0	3 100.0	4 100.0	9 100.0	2 100.0	6 100.0	18 100.0

Table 82 (Continued)

	Trenches	A-General	A-I	A-II	B-I	B-II	B-III	C-I	C-II	C-III	D-I	D-II	D-III	E-I	E-II
Type	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
CROSS-HATCHED WARE															
TOTAL	3 100.00	- -	- -	1 100.0	4 100.0	1 100.0	- -	2 100.0	2 100.0	3 100.0	2 100.0	4 100.0	- -	2 100.0	3 100.0
TEXCOCO MOLDED-TEXCOCO FILLETED WARE (CENSERS)															
A. Texcoco Molded Type															
Rims	- -	- -	- -	- -	- -	- -	- -	1 10.0	- -	- -	- -	- -	1 50.0	- -	- -
Bodies	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	2 33.3	- -	- -	1 5.9	- -
B. Texcoco Filleted Type															
Rims	1 14.3	- -	- -	- -	- -	1 10.0	- -	1 10.0	- -	- -	- -	5 26.3	- -	- -	- -
Bodies	1 14.3	- -	- -	- -	1 10.0	2 20.0	- -	- -	- -	1 100.0	1 16.7	1 5.3	- -	- -	2 28.6
C. Plain															
Rim	1 14.3	- -	- -	- -	1 10.0	2 20.0	- -	2 20.0	2 25.0	- -	2 33.3	3 15.8	1 50.0	2 11.8	1 14.3
Bodies	1 14.3	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	2 11.8	- -
D. Red															
Bodies	- -	- -	- -	- -	- -	- -	- -	- -	1 12.5	- -	- -	- -	- -	- -	- -
E. Handles	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Plain	3 42.9	- -	1 50.0	1 100.0	1 10.0	- -	- -	- -	4 50.0	- -	1 16.7	10 52.6	- -	12 70.6	4 57.1
Red	- -	1 100.0	1 50.0	- -	- -	- -	- -	- -	1 12.5	- -	- -	- -	- -	- -	- -
White	- -	- -	- -	- -	2 20.0	- -	- -	1 10.0	- -	- -	- -	- -	- -	- -	- -
TOTALS Texcoco Wares	7 100.0	1 100.0	2 100.0	1 100.0	5 100.0	5 100.0	- -	5 100.0	8 100.0	1 100.0	6 100.0	19 100.0	2 100.0	17 100.0	7 100.0

Table 82 (Continued)

	Trenches	A-General	A-I	A-II	B-I	B-II	B-III	C-I	C-II	C-III	D-I	D-II	D-III	E-I	E-II
Type	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
MISCELLANEOUS WARES															
D. Red/Buff	1 100.00	- -	- -	- -	- -	- -	- -	- -	- -	- -	3 100.0	- -	- -	- -	- -
CHALCO-CHOLULA															
POLYCHRONE	8 100.0	- -	3 100.0	1 100.0	- -	1 100.0	3 100.0	- -	3 100.0	- -	1 100.0	5 100.0	- -	4 100.0	2 100.0
HUASTEC TRADE WARE	1 100.0	- -	- -	- -	- -	- -	- -	- -	1 100.0	- -	- -	- -	- -	3 100.0	- -
NON-AZTEC. MAZAPAN	3 100.0	- -	- -	- -	1 100.0	- -	- -	2 100.0	4 100.0	2 100.0	5 100.0	4 100.0	5 100.0	3 100.0	2 100.0
NON-AZTEC: TEOTIHUACAN	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	8 100.0	- -	- -	- -	- -
UNIDENTIFIED	278 100.0	16 100.0	33 100.0	19 100.0	134 100.0	46 100.0	- -	221 100.0	37 100.0	89 100.0	152 100.0	140 100.0	66 100.0	273 100.0	100 100.0

Table 83 Artifact Frequencies at T.A. 40

	Trenches	A-General	A-I	A-II	B-I	B-II	B-III	C-I	C-II	C-III	D-I	D-II	D-III	E-I	E-II
Type	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Clay - Figurines	10 59.0	- -	- -	1 33.3	2 40.0	3 60.0	- -	8 61.5	6 100.0	- -	9 100.0	6 60.0	2 66.6	9 47.4	3 75.0
- Temple Model	- -	- -	- -	- -	1 20.0	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
- Molds	1 5.9	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
- Malacates	3 17.6	- -	- -	- -	1 20.0	1 20.0	- -	4 30.8	- -	- -	- -	- -	- -	2 10.5	1 25.0
- Sherd discs	1 5.9	- -	- -	1 33.3	1 20.0	1 20.0	- -	- -	- -	- -	- -	4 40.0	1 33.3	- -	- -
- Pipes	2 11.8	- -	- -	- -	- -	- -	- -	1 7.7	- -	- -	- -	- -	- -	2 10.5	- -
- Balls	- -	- -	- -	1 33.3	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
- Bells	- -	- -	1 100.0	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	3 15.8	- -
- Whistles	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 5.3	- -
- Stamps	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	2 10.5	- -
TOTAL	17 100.0	- -	1 100.0	3 100.0	5 100.0	5 100.0	- -	13 100.0	6 100.0	- -	9 100.0	10 100.0	3 100.0	19 100.0	4 100.0
Ground Stone															
- Manos	1 5.5	- -	- -	- -	1 50.0	- -	1 100.0	- -	- -	1 33.3	3 33.3	1 50.0	- -	- -	- -
- Metates	1 5.5	- -	- -	- -	- -	- -	- -	- -	- -	1 33.3	- -	- -	- -	1 10.0	- -
- Pestles	5 27.8	1 100.0	- -	- -	- -	- -	- -	1 100.0	3 60.0	- -	1 11.1	- -	- -	1 10.0	- -
- Mortars	2 11.1	- -	- -	- -	- -	- -	- -	- -	1 20.0	- -	- -	- -	- -	- -	- -
- Grinding Stones	- -	- -	- -	- -	- -	1 100.0	- -	- -	- -	- -	1 11.1	- -	- -	- -	- -
- Balls	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	2 22.2	- -	- -	- -	- -
- Drain	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 10.0	- -
- Unid.	9 50.0	- -	- -	- -	1 50.0	- -	- -	- -	1 20.0	1 33.3	2 22.2	1 50.0	- -	7 70.0	- -
TOTAL	18 100.0	1 100.0	- -	- -	2 100.0	1 100.0	1 100.0	1 100.0	5 100.0	3 100.0	9 100.0	2 100.0	- -	10 100.0	- -

	Trenches	A-General	A-I	A-II	B-I	B-II	B-III	C-I	C-II	C-III	D-I	D-II	D-III	E-I	E-II
Type	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Obsidian															
- Blades	25 76.0	3 100.0	4 100.0	1 50.0	6 66.6	8 66.6	- -	7 63.6	6 66.6	5 71.4	3 100.0	20 80.0	2 50.0	31 67.4	7 53.8
- Scrapers	1 3.0	- -	- -	- -	1 11.1	- -	- -	- -	3 33.3	2 28.6	- -	2 8.0	1 25.0	12 26.1	5 38.5
- Points	1 3.0	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
- Flakes	2 6.0	- -	- -	- -	1 11.1	4 33.3	- -	3 27.3	- -	- -	- -	3 12.0	1 25.0	2 4.3	1 7.7
- Cores	4 12.0	- -	- -	- -	- -	- -	- -	1 9.1	- -	- -	- -	- -	- -	1 2.2	- -
- Labrets	- -	- -	- -	1 50.0	1 11.1	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
TOTAL	33 100.0	3 100.0	4 100.0	2 100.0	9 100.0	12 100.0	- -	11 100.0	9 100.0	7 100.0	3 100.0	25 100.0	4 100.0	46 100.0	13 100.0

Artifacts

I have listed in Table 83 the numbers and frequencies of artifacts encountered per provenience unit. Analysis involved the establishment of three industries according to the material used, and then the description of the forms occurring within each industry. More detailed analyses of three materials have not been conducted and consequently information on specific figurine types, spindle whorl (malacates) sizes, and obsidian colors, as well as specific attributes of many other forms, is not available. However, the data presented do contribute significantly to our understanding of the function of the T.A. 40, Tl 15 site.

CHAPTER 9

EXCAVATIONS AT CHICONAUHTLA

by

George C. Vaillant and William T. Sanders

1. INTRODUCTION

The ruins at Santa Maria Chiconauhtla, Estado de Mexico, are located in the Barrio de Casas Reales, at the east of the modern town, and stretch along the west side of the Colonial road to Vera Cruz (see site description and illustrations pp. 102-111 in Part 1). The northern part of the site is completely ploughed down, but to the south, mounds and floors are to be seen. Houses are built on part of these remains, and a road, connecting Santa Maria with the rancheria of Atlaumpán, divides the northern third of the site from the remainder. It was this northern third we submitted to examination, since not only were there no houses, but also the land belonged to a single individual, thus removing the vexations of identifying owners and getting permissions to dig.

Work was begun on February 11, 1935, with four men, and was continued with a force gradually increased to twenty-two, until April 27, 1935. During Easter Week, no excavations were made, because of the holiday season.

The essential problem was visible at the outset. The northernmost part of the property yielded Mazapan remains, the mounded section at the south produced Aztec debris. The chronological relationships of the Aztec remains to the Mazapan became the original focus of the work. Two trenches therefore were made, one into the Mazapan refuse, the other into the Aztec Mound. The first excavation provided a simple analysis of refuse, the second led to a complicated dissection of buildings, which must be considered at length.

2. THE MAZAPAN MOUND

We had no means of knowing the original state of this mound. The owner of the land said that it originally had been much higher but that he had ploughed it down to distribute the soil over his fields. He spoke also of digging up skeletons and ollas, but mentioned nothing of walls, floors, or other evidence of an architectonic character. Our own excavations of some 20 m2 confirmed the owner's information as to the character of the mound. There were no traces of walls, unless the occurrence of small stones be so construed. The earth was soft, and owing to the levelling operations, nowhere more than a meter in depth. The sherds were large, animal bones abundant, and considerable fragments of broken tools were recovered, evidence indicative of a refuse mound, in connection with a village site.

Presumably the ploughing down of the mound had left only the bottom part of the center, so that skeletal remains were few. We found traces of five burials.

201: Young adult male, flexed on left side, head south, graphite block on polished red bowl at feet, burial in fair condition.

202: Disturbed bones of an adult male.

203: Adolescent, sex indeterminate, semi-seated, head southwest, face northwest. No furniture, fair condition.

204: Baby, under one year, too disturbed to note position.

205: Baby, about one year, buried in olla.

The pottery was numerous, some twenty cement-bags being filled in ten days digging. The affiliation of the sherds was almost exclusively Mazapan. A few Aztec II fragments were found, but there is great doubt as to their contemporaneity. Further consideration of the ceramics must be deferred until our second report on the pottery of Chiconauhtla. However, we may tentatively say that the Mazapan ceramics were unmixed with any strong Teotihuacan elements, and that the Aztec elements found associated with them may be the result of later dumping on the same spot.

3. THE AZTEC MOUND

The Aztec mound in its ultimate phase was a large platform or a united series of platforms, bearing houses (Figures 205-209). Although the road prevented analysis of the relationship of these structures to the larger complex of buildings at the south, the unit with which we dealt measured 60 meters at each side. As is so often the case, the latest buildings had been almost completely destroyed by ploughing and by erosion, and the earlier structures alone produced a fair idea of the plan of the houses. There was nothing to suggest a unit building like a pyramid, and a dwelling place is naturally subject to constant change as a result of necessity or whim. It seems, therefore, more logical to treat of this building in sectors or traverses, tracing the steps in their construction up to the time of their inclusion in the latest platform.

The unit of designation employed was the traverse, since each sector excavated was explored by a trench or traverse. As rooms' walls were developed, the enclosed areas were cleaned out, and the trenches continued forward to explore new localities. Thus at the south of the mound, the South Traverse was begun. The rooms as defined became entitled ST-1, ST-2, etc.

At the west of the mound there are two such units of excavations, the WT (west traverse) House and the WP Platform. At the north and east of the mound there is a complex series of constructions, the NT (North Traverse) House, which epitomizes the probable architectural history of the mound. Southeast of these rooms is another series of rooms, the ET (East Traverse) House equally complicated in its history. Ranged along the north and east of the NT and ET Houses is a series of sustaining walls that belong to the NT and ET units proper, nonetheless are integral to the history of those sectors, and will be there considered. In the angle between the NT and ET Houses is the ET Patio highly important in synchronizing building periods.

At the southeast of the mound is the ST (South Traverse) House, with its later period additions, and in the central part of the mound is a complicated series of platforms, the CT (Central Traverse) series of constructions. The ultimate evaluation of this sector could not be attained, owing to the road which was cut into the heart of this complex.

Since in the type of house architecture encountered at Chiconauhtla there are no strong stylistic criteria, the question of level and wall sequence is highly important. Thus the division of the material into sectors for individual treatment will render the data more susceptible of analysis

West Traverse and West Platform

The original structure seems to have been the rooms WT-1, 2, and 3 (see Figure 205). These rooms quite clearly faced the east, and originally had no other rooms to the west or north. To the south, there may have been other series of rooms, but the excavation of the road and the presence of modern houses across it made it impractical to define The plan of the WT rooms is peculiar, since WT-1 is the only large room, WT-2 is hardly more than a corridor, and a large block of masonry intrudes on the northern part of WT-3.

The building was built over Aztec II refuse, which may well have been redeposited A low platform of unfaced stone, built to *tepetate*, sustained this heap at the west and north At the east no traces of such a revetment were found

The room walls had been very obviously razed, and a platform erected above the floors, filled with chunks of moistened earth and occasional buttresses of stones (see Figure 206) A considerable amount of large chunks of charcoal were scattered over the floor, suggesting charred rough beams. A few human bones, charred also, occurred sporadically in the dump, which produced a certain proportion (as yet undetermined) of Aztec II.

The east face of this platform was reached by a long flight of steps, of which traces of three could be discerned At the west stretched a smooth, sloping wall, thick and composed of stones, set either with the flat surface out or so dressed as give the same effect. We were unable to gather data on the south wall, but at the north we uncovered the rough stone revetment of the WPS (West Platform South) Structure.

This revetment rested within the inner face of the north walls of Rooms WT-1 and 2, and was made of stones laid dry Since the west face of the WPS (west platform south) Structure was composed of carefully laid, roughly dressed blocks of lava and tepetate, it proves that WPS was constructed after the destruction of WT-1-3, and simultaneously with the platform erected above those rooms (see Figure 206).

This WP Platform was not aligned with that built over WT-1-3, its west wall being set some 3 m east of the face of the latter platform. Also the rooms built on the WPS foundation extended east of the eastern extension of the WT-3 Floor. Destruction was too great to ascertain much of the plan of the WP rooms Entrance to them was gained by stairs at the south, which connected with those at the east of the platform over WT-1-3, and which ran east as far as the NT complex of buildings.

The limits of the WPS House were not clear. At the west there was the carefully faced wall

mentioned above, its southwest and northwest corners carefully bonded by slabs of dressed stone. At the south was the dry revetment, obviously not intended to be seen and part of the platform over WT-1-3. At the east, our pits, revealed no wall, and at the north the wall, beyond the corner, was not unlike the revetment at the south.

The rooms and platforms of WPN (West Platform North) under such conditions, would seem to be merely a northern extension of WPS, as the platform erected over WT-1-3 was a southern extension, were it not for several factors. First the west platform wall of WPN was built against the northwest outer corner of WPS. Second, the floors of the WPN rooms are lower than WPS and the dimensions of the rooms seem smaller. Third, there is no obvious communication between WPN and WPS, and fourth, there was a double wall at the south of WPN-3 and the north of WPS-3. Fifth, Aztec III sherds come from the fill of WPN (see Figure 207).

Again, to complicate further this latter assumption is the presence of a west wall, behind or east of the true west platform wall of WPN, that if prolonged, would make a corner with the eastern end of the faced portion of the northwest corner of WPS. However, whatever the actual details of the construction of WPN, it must have been built after WPS.

The plan of WPN also offers perplexities. Three rooms are readily traceable, through well preserved floors and walls that sometimes reach as much as a meter above the floor level. Rooms WPN-1 and WPN-3 have fireplaces and open into a larger living room WPN-2. Notable is the use of burned brick instead of dressed stone to tie together the south of the door between WPN-1 and WPN-2. East of these rooms there is solid fill of redeposited refuse rivetted by stones laid crudely in adobe, an indication that the area east of these rooms, parallel to rooms WPS1 and 2 was occupied by a second story, or, at least, rooms at a higher level, than WPN-1-3. Thus, how was access gained, not only to these upper rooms, but also to the preserved group WPN-1-3, which have no ingress at the east or south?

Two lines of stone revetments built against the north platform face may have been the remnants of a stair but for two objections. The revetment overlaps the limits of the WPN Platform to the east but does not extend far enough to give a symmetrical approach at the north to the wide platform, NT-4. Also, the northern wall of WPN-1 is closed and the revetment does not extend west of those limits.

It is not reasonable to assume a stair at the south, where the WT-1-3 rooms would block ingress. There was possibly a stair at the east, but destruction and erosion have played such havoc that we can never know one way or the other. On the west side there is enough of the building to be assured that there was no stair there. However, just east of the northwest corner of the WPN Platform there are certain possibilities that a stair might have existed.

A great deal of stone and wall fill is found at this point. A block of masonry is set within the northern limits of WPN-2, overlapping the northern limits of WPN-1. This might well have marked the stair leading up over the roof of WPN-1 to the upper story, at the east. Another flight might have turned north and connected with the ground. Destruction by later builders was great at this point, so that this detail is hypothetical.

The final chapter in the history of the WPN House and incidentally the west sector was the filling in of Rooms WPN-1-3 and WPS 1-3 in order to make a larger and higher platform (see Figure 208, 209). The walls bounding WPN and WPS at the west were covered by a fill two to three

meters thick, sustained by a faced wall, which abutted on the projecting north face of WT-1. On the north, a second wall was built over the previous north face of WPN. The northwest corner of WPN was taken out, and the worked slabs were presumably reutilized to make a drain, for such a construction was found, made in that manner, opposite the portion between WPN-1 and 2. We were unable to trace it any distance, however.

This last platform may have been ceremonial in purpose, for in the zone around the northwest corner of this last addition, there was an abundance of charcoal, obsidian blades and censers, as well as fragments of the big tiles which, like crenellations, adorned the tops of temples Many elongated cones of stone and baked clay were found in this sector, suggesting that the structure must have been quite high to merit so much binding. An inexplicable feature at the northwest corner was a deep deposit of gravel outside the walls. It was banked too high to have been emitted by the drain.

The samples of pottery include material from the fill and beneath the floors of WT-1-3, from the fill and beneath the floors of WPS and WPN, three cuts embodying the refuse anterior to WPS and N, contemporary with those platforms, and from the fill above them, and a large body of data from outside the platform walls.

The succession of periods in the west sector seems to be:

I. Accumulation of refuse under all buildings

II WT-1-3

III WPS, platform over WT-1-3 and Stairs

IV WPN

V. Construction of platform over WPN and WPS.

The North Traverse House

The NT (North Traverse) House (Figure 205) consists of two main elements, a platform (NT-4) and a house (NT-1-3, 5, 11) At a subsequent period, the house was partially razed and another structure, LT, was erected upon the filled-in rooms of the earlier house. In examination of the construction of this unit one is conscious of the gradual changes that result from a growing population with increased needs for housing.

The platform NT-4 is a large oblong with its long axis east and west Later constructions have wrought havoc with the original limits A single corner, the northeast, is the only terminal marker left This has the regular worked slab tie of the corners of WPS. The north wall is well-preserved and is part of the original north wall of WPN. No trace of the west wall could be located, and the east wall had also disappeared. Since the west side of NT-4 abutted on WPN and WPS and the east side on the NT house proper, the absence of walls was perhaps due to expansion of building units in either direction. The south face of NT-4 was the same stair that gave access to WPS

The fill of the platform was rubbish, Aztec 2 in date, reinforced by sustaining walls of uncut

stones, either laid up dry or in adobe. Considerable charcoal was scattered in this refuse

The platform apparently was originally open, for no traces of walls were to be discerned over its greater extent. To judge from the thinness of the refuse it remained largely in this condition until the end of the occupation, when in connection with the construction of the LT house a buttress and perhaps a stair were run out, over the eastern edge of NT-4. The room NT-8, standing isolated at the southeast quarter, may well belong to this period, as it is built against the outer west wall of NT-9 and against a sloping wall that may have been the east wall of the stairs to LT-1

At the same time as the construction of LT-1, another stair parallel to those giving access to NT-4 was constructed 3 m to the south, thereby enlarging the whole building

The chronological position of NT-4 in respect to the west sector buildings depends on the earlier stair which, as we have mentioned above, overlaps WPS. Three steps are left and to attain the level of NT-4, six would be necessary The steps are one unit deeper to the east of WPS than at directly opposite The floors of WPS are higher than that of NT-4. Consequently there is some evidence to show that the stair to NT-4 was synchronous with its construction, and that NT-4 and WT-1-3 were contemporaneous. When WPS was built and WT-1-3 revamped into a platform the stair was extended to give access to WPS and its extension over WT-1-3. The disappearance of the west wall of the platform of NT-4 is in accordance with a custom often observed at Chiconauhtla When additions were made to platforms, the stone on the side added to was often ripped out to provide either revetments or facing for the new addition.

Samples of pottery were obtained from two long trenches made into NT-4 at the east, from a pit at the west (at the juncture between NT-4 and WPS), and from outside the first and second flights of stairs.

The building sequence with reference to the west sector would be·

WEST SECTOR	NT-4
I. Accumulation of Refuse	Accumulation of Refuse
II. WT-1-3	a. NT-4;
	b, link to NT-9 and stair
III WPS Platform over WT-1-3 & Stair	Extension west of stairs
IV WPN	
V. Construction of Platform over WPN and WPS	a. Stair II;
	b. NT-8

The NT House in its original form consisted of Rooms NT-1-2, 3 North, 5, 11, and UT(under traverse house)-1-2 (see Figure 205), which were interlocked along an oblong platform. The north wall of this platform was a prolongation eastward of the north wall of NT-4 and extended

beyond the end of the east wall of UT-1-2, to the width of UT-3-4. It had been plastered and had a rough floor of plaster at its base. The east wall of the platform was part of the east wall of the UT-3-4 foundation. There was no west wall to the platform since the east wall of the NT-4 Platform had been removed and the foundation for this platform was extended east. The south wall, in contrast to the north and east walls, was not faced, and extended the length of NT-11 until UT-2 where it became a stair of two steps. This stair in turn made contact with a stair leading to UT-3-4. The platform was made of Aztec II refuse, reinforced with occasional revetments of stone roughly laid in adobe.

Entrance to the house was gained by the stair at the south. One passed into UT-1, a sort of anteroom, unwalled on the south, whence a wide door in the north wall gave access to UT-2. This room, like UT-2, had its long axis east and west, and had a sunken hearth.in the center of its north wall. The east wall of the room was solid, but a partition set at right angles to the north wall, and extending most of the way across the room, created a corridor at the west of UT-1. At the northwest corner of the corridor, a door and step led into the corridor, NT-3 north. This narrow space led west into a space, NT-2, that undoubtedly was unroofed originally, since the three rooms, NT-5, NT-11, and NT-1 that gave onto it would have otherwise been without light. In the northwest corner of NT-3 north stood a shallow circular construction of plaster. Too shallow for a cistern or a bath, it might have been a bin for the sorting of beans or kernels of corn. Opening west of NT-2 lay NT-1, completely enclosed with a hearth at the center of the west wall. This hearth was the only one we found complete. The door presented an interesting structural feature, in that the jambs were stepped back, at a distance of 30 cm above the floor. The surfaces were finished in plaster with the same care as the walls.

NT-5 opened from the east of the enclosure, with a with door similar to that of NT-1. It also had a hearth, against the east wall opposite the door. The northwest outside corner of the room (where the corridor debouched into NT-2) was made of burned brick. NT-11 was long and narrow and occupied the southern length of the house. Entrance was gained by a narrow door with vertical jambs at the juncture of the south wall of NT-2 with the east wall of NT-1. Another door with a stepped jamb led to the south, either to the later group of rooms NT-6-10 or possibly to a narrow corridor connecting with the stair. At the northwest corner of NT-11, a beehive-shaped corn bin was found, built of rings of straw, and liberally coated with mud.

These rooms were all well-preserved. The walls were built of small stones and much plaster for a height of 60 to 80 cm, and adobes were used above to complete them. The whole was coated with plaster. At no point in the ruin did we find a wall high enough to estimate the height of the roof.

The next step in the construction of the NT House was the building of NT-6-7, 9-10 (see Figure 206). In constructing the platform, much material was utilized which must have emanated from a destroyed house, since broken adobes and fragments of plaster abounded. Apparently fearing that this material would settle, the builders put in many revetments, and before laying the floor, first made a level surface which they covered with a thin layer of plaster. (Could this destroyed building have been WT-1-3?)

NT-7 and 9, the southernmost rooms, have a straightforward plan. A flight of four steps leads up to NT-7, a room with two columns opening east. In the west wall a door gives access to NT-9, a room completely closed with a hearth against the west wall. NT-6 and NT-10 have been almost completely destroyed by the foundations for the LT House; since there is no access from NT-

9 to NT-10, we may well assume that their plan was similar to NT-7 and 9. However, there was no stair to these rooms since access could be gained from the portico NT-7. A perplexing feature is a sunken drain or canal that runs along the edge of the partition dividing NT-6 from NT-7.

The building of the addition south of the first block of the NT house made a corridor (NT-3 South) between the south face of this platform wall and the north face of the CT Platform. A floor of tramped earth was laid down and a shallow drain constructed, that led along the side of the CT Wall.

The third phase of the NT Building consisted of raising the level of the UT rooms to the floor of NT-1-3. This was accomplished by cutting the UT walls to a height of 50 cm, adding two steps to the stair, and carving out a floor. At the west the original two stairs were slightly shortened. Other rooms were similarly erected at the east of UT-1 and 2. We have little or no data on the plan of this new structure, owing to later razing of walls and modern agriculture.

Since the higher floor level over the UT rooms gave easy access to NT-6-7, 9-10, the stair to these rooms was blocked. A new floor was laid down in the corridor NT-3 South, covering the drain.

A fourth phase of building followed this. A new terrace wall was laid up against the facing of NT-6 and 7, and carried east to mask part of the UT stairs. The north face of the platform of the UT NT house was carried north some 3.5 m. A north-south wall following the line of (and founded on) the partition at the west of UT-2 was run from the north addition of the platform to the end of the wall masking the UT stair. Partition walls were built to create the rooms ET-3 and 4, which opened east, and in the case of ET-4, possibly south as well (see Figure 208).

Probably in connection with this operation, although at a subsequent time, the floor of the ET Patio was raised by laying a honeycomb of adobes on edge and filling them with sand. To correct the line of the terrace in from of NT-6-7, another facing was added founded on this Floor II of the ET Patio.

A buttress of rammed earth faced with plaster was constructed north of the stairs at the south of the ET Patio and above them. The floor was raised in NT-3 South to the level of ET Patio Floor II and to afford access to the ground, steps were built in alignment with the northwest corner of the CT Platform. Previous to this construction, the corridor NT-3 South had opened west. Now at right angles to the stair leading to NT-4 at the eastern end, a wall was run out and ended in line with Stair II in the west sector. The fourth phase of construction in the NT sector can be synchronized with the fifth phase of the west sector.

This great activity in reconstructing platform levels should be paralleled in house construction. In excavating architectural material, one can see the succession of construction fairly readily, but it is more difficult to correlate the intervals of building. Thus while we assign readily enough the transformation of the NT Platform to the fourth phase of building, it is difficult to know whether this change was to prepare the foundations of the LT House, or whether the LT builders at a later epoch took advantage of the fourth period transformation. However, as the second stair of the west sector corresponds with the last period of major construction of the buildings of that quarter and also ties in with the NT Platform construction, we can assume that the LT House also correlated with this last building period. A condition substantiating this belief is the final terrace to NT-6 and 7 which, founded on ET Patio Floor II, extends upward above the floors of the rooms (see Figure

208).

The foundation of the LT House was obtained by razing the walls of the rooms NT 1-3, 5, 11 to within a meter of their floors, and filling in the space with wall fill and adobes. These adobes were laid up with especial care at the openings to the rooms. A secondary floor of tramped earth was applied and over this a fine thick floor of plaster. NT-6 and 7, having one side open with columns supporting the roof, did not present the ready-made cells made by the truncated walls of the earlier house. In this case, the LT builders ripped out the flimsy plaster and small stone walls, and built vertical tiers of dry stone to give a firm foundation. The corridor, formed by the east walls of NT-5 and 11, and the west wall of ET-3 and 4, was blocked by a wall of cut tezontle, sustaining fill of adobes and stone.

Being among the last structures of Chiconauhtla, these buildings were vulnerable to destruction from erosion and agricultural leveling. We can trace the plan of two rooms with an intervening corridor, parts of a third room. The absence of much debris over NT-4 suggests that the house cannot have extended to the west but there is evidence of a stair foundation from that side. To the north and south, erosion has taken its toll, but at the east over ET-3 and 4 we find equivalent structures but not so well built.

This ET-3-4 construction, although probably of the same epoch as the LT house, was later in date, if we have read correctly the testimony of the ET patio. In the Patio there was a refuse heap levelled by Floor III, plastered at the east, that connected with the original NT and UT house stairs. We have seen that a second floor, II was constructed perhaps in connection with the eastern terrace of the LT House. Some 50 cm above Floor II is a third floor, I, really a bare living surface, on which rests the south wall of ET-4. The west wall of ET-3 and 4 seems to be founded upon the NS Transverse wall erected at the time of the shortening of the stairs to the UT rooms. The north wall of ET-3 is set within the outer limits of the UT House. Entrance was from the east. The floors of ET-3 and 4 were of tramped earth, laid above the previous surface. The north wall of ET-3 extended two room widths to the east, in connection with floors at the level of Stair 4 in the UT sector. It could not be ascertained on the basis of direct evidence whether or not these ET-1-2 floors represented a phase anterior to the ET-3-4 floors just described. We shall defer consideration of these levels until we have analyzed the ET sector.

The relationship of intervals between the north and west sectors is as follows:

WEST SECTOR	NT-4	NT AND UT HOUSE
I Accumulation of refuse	Accumulation of refuse	Accumulation of refuse
II. WT-1-3	a. NT-4 ET Patio III	NT-1,2,3 north, 5, 11, UT-1-2, UT Stairs 1-2 .
	b. Stair I and link to NT-9	NT-6-7, 9-10, NT-3 South Floor 4, UT3-6 and stairs to UT3
III. WPS platform	c. Stair and link to WPS	Raise level UT-1-2, block west of UT stairs, add Stairs 3 & 4, NT-3 South Floor 3

IV. WPN	Block Stairs NT-6-7
V. Construction of platform Stair II ET Patio II NT-8 over WPN and WPS	NT-3 S Corridor Floor 2 and change of direction, terracing east of NT-6-7 further block of UT stairs LT House . BT House upper floors

The East Traverse House

The original ET (East Traverse) House consisted of rooms UT-3-4-5-6 Sub (Figures 206, 207). They were built on a walled-up mass of refuse and this foundation was a part of the platform sustaining the earlier NT rooms and UT-1 and 2. A slightly different structural practice marked this building operation from that previously encountered in NT. The surface of the mound was levelled off and tramped down. Under the floor of UT-4 and 6, remnants of a plaster floor were found, and between this construction surface and the plaster floor of these early ET rooms lay a cache of broken but nearly complete pottery vessels, mixed with large chunks of charcoal.

The plan of the rooms was straightforward. There were two units each comprising an enclosed room with a hearth, opening into a vestibule with pillars. The vestibules faced west and access was gained from Floor III of the East Patio by a flight of two steps which connected at the north with the eastern termination of the UT stairs.

At the north of these rooms was a space without a trace of buildings. This area was bounded on the north and east by the platform wall of the original UT, NT, ET Sub Platform, on the south by the north wall of UT-3 and 4 Sub, on the west by the east wall of UT-1 and 2. There is no explanation for this space, unless it were occupied by adobe buildings.

The next phase discernible in the structural history of the ET House, was the razing of the U-3-6 Sub rooms down to the level of the floors. The face of the platform to the East and South was also torn out in places, and extensions were made to build a more ambitious edifice. A new set of floors was built 40 cm above the old, and a third step was added to the stairs giving access to the rooms. An open terrace ETS (since no column bases were found) stretched between the top of the new step and the west walls of the rooms, which were roughly aligned with the partitions between the vestibules and the rooms of the earlier house. The northernmost room of this series, ET-6, was large and had two columns, the bases of which were of dressed stone. The back wall was aligned with the east wall of the new platform. Next came ET-7 and 9. ET-7 was a large room with a hearth against the east wall. Its outer door opened in the middle of the west wall. At the northern end of the east wall a narrow door with a shallow step led to ET-9, a narrow room whose west wall was a prolongation of that of ET-6. ET-8 and 10 had a similar arrangement, but were not exactly centered on the rooms north of them. ET-8 was built on a southern extension of the ET Platform, built perhaps at some period intermediate between the UT House and this later ET structure. ET-10, however, extended over the ET addition (see Figure 208).

These rooms, ET-8 and 10, had their own stair of three steps set back from the line of the flight leading to the terrace ETS. The stair was built subsequent to the platform under ET-8, since the west wall of the platform was destroyed.

North of ET-5 and 6 there was the northeast portion of the UT Platform which had no vestiges of buildings. In the ET period abundant traces exist. Not only is there a network of sustaining walls, but at the east can be discerned the floor of a room with a hearth. West of this room additional traces of floor connect with the level of the fourth step of the NT-UT stair at the north of the patio. The level, therefore, of the ET-1-2 floors is slightly higher than those of ET-5-10, since the north flight of stairs has four steps in contrast to the three giving access to the terrace ETS. This evidence suggests that ET-1-2 belongs to the NT building block.

The platform east of the ET House was further enlarged in two subsequent epochs. The first consisted of building a terrace wall and retaining wall, that possibly were not intended to support buildings. These walls abutted on a prolongation of the UT Platform, east of ET-1. At a later date the outer precinct wall of the whole structure was added.

In connection with this expansion east, we find that the ET House was partially razed and filled in with stone and adobe. Retaining walls were built over the ET-5 terrace, but farming and erosion have completely destroyed the house (see Figure 209).

Whereas in our consideration of the NT structure we were able to trace a very definite relation between buildings and floors of the ET Patio, the rhythm is less marked in the ET House Floor III ties in with UT-3-6 without doubt. Floor II aligns with the tread of the second stair. The top of the second stair (which originally was part of the UT vestibule floors) is much wider than would be the case, were the complete flight used in connection with the ET House. Therefore it would seem that ET-5-10 was built synchronously with a rise in level from Floor III to II of the ET Patio. On Floor II near ET-5 is the altar.

Floor I in all probability was the patio level of the house built over ET-5-10, and makes a link between this construction and ET-3-4 Super. In that case the outer precinct wall probably ties in with this latest construction and the pair of inner walls connects with the ET house proper. The relationships between the buildings in this eastern sector with northern buildings are as follows:

NT HOUSE	ET PATIO	ET HOUSE
I. Refuse under platforms	Refuse under floor	(1) Refuse under platforms
II. NT 1,2,3 north, 5, 11 UT 1-2	Floor III	(2) Platform under UT 3-6
		(3) UT 3-6, Platform north
IIIa NT 6,7,9,10, NT 3 south Floor IV b. Raise level of UT 1-2, block west of UT Stairs, add Stairs 3-4, NT 3 south floor 3 c. Block Stairs NT 6-7		(4) ET 1-2 and foundations on North Platform
IVa. NT-3 S corridor, Floor II and change of direction Terracing E of NT 6-7 Further block of UT stairs b. LT House	Floor II	(5) ET 5-10

c ET 3-4	Floor I	(6) Fill of ET 5-10, and final platform face

The East Traverse Patio

The floors of this patio have been mentioned frequently in accordance with our analysis of buildings. These levels key together great sections of the structural history of Chiconauhtla The tepetate under the ET Patio tilts from east to west. Originally there was a heavy layer of Aztec II refuse, which was graded down to form Floor III. Floor III was bounded on the north by the UT 1-2, on the west at first by nothing, but later NT 6-7, and at the east a plaster floor extended under UT 3-6, upon which the UT House was later erected.

Floor III at first was open to the south. Later a platform or buttress was run out from the northeast corner of the CT Platform. Perhaps coincident with the construction of NT 7 and 9, a substantial addition was made to the north of this platform, and a stair of two steps with a balustrade at either side was laid up, along the northern face. The stairs UT 3 abutted on the eastern balustrade The surface of this addition was floored with plaster and a wall made a prolongation westward of the south wall of UT-5 and 6.

At the time of the building up of the terrace, east of NT-6-7, and the construction of ET-5-10, the level of the patio was raised until it was flush with the top of the southern platform All buildings on this foundation were razed and the third step added to the eastern stair to give access to ET-5 was prolonged to the edge of the inner face of the south wall of the former house on the now-covered platform At the west of the platform, a wing of rammed earth and plaster was built over the former floor, from the former face of the CT extension to the western balustrade. By this structure the north mouth of the NT 3 South corridor was preserved.

The fill between Floors III and II was quite carefully laid down. A honeycomb of adobes set on edge was laid out in the north half of the patio and filled with sand and rammed earth. The former north mouth of NT-3 South was blocked with a wall of stone. An altar was built on Floor II near the southeast corner of Floor I.

The final chapter in the history of the ET Patio was the raising of the surface to the level of the ET rooms, thus creating Floor I. The altar apparently was retained in use, for the meeting point of the plaster on the walls of the shrine, with Floor I, could still be discerned.

ET PATIO	ET HOUSE
Fill under Floor I	Refuse under platforms
II Floor I	Platform under UT 3-6
III. Buttress E of CT Addition and stair south of patio	UT 3-6 and stair

IV.a. Floor II ET 5-10

Buttress closing north mouth of NT 3 S floor II

b Altar

V. Floor I

House over ET 5-10

The South Traverse House

The ST (South Traverse) House lay in a matrix of platforms at the south of the precinct defined by our operations (Figures 205, 206). The best preserved of all the houses in the group, it is one of the most difficult to correlate with the succession of buildings at the north. Like the earlier structures WT-1-3 and the Platform under UT-3-6, it rested on a low platform of Aztec II refuse, flimsily retained by a wall of tepetate chunks.

The road connecting the old Veracruz highway with Chiconauhtla has sliced off a section of the building but enough remains to leave a fair estimate of the plan.

The east side of the house disclosed two units, ST-4 and 5 and ST-6 and 12, each consisting of a room with a fireplace and a vestibule with columns. ST-12 had the additional feature of a door leading to the narrow rooms, ST-13, at the north, the east and west walls of which aligned with the east wall of ST-12 and the columns of ST-6. West of ST-13, ST-10 extended in the same east-west axis. The floor of this room was raised slightly higher than the preceding. The south side, save for two columns, was completely open and gave on the slightly sunken court ST-3 and the unroofed portion of ST-6

Along the west side of this court were the vestiges of two rooms, ST-9 and 14, which had been badly destroyed before being filled in. They were so placed as to leave a common entrance to the north. These rooms, although shorter than ST-10, corresponded to it in width. There was, however, no trace of columns, but the shortness of the rooms would make such support unnecessary. South of ST-14 and extending further west were two rooms ST-1 and 2, which were badly destroyed by the cutting of the road. Enough remained of ST-2 to know that it was a vestibule with columns and corresponded to ST-4 which it opened onto at the east. ST-1 was too badly gutted to show its construction. Only the northern wing wall for the door remained. However, it seems more than likely that this was a room with a hearth corresponding to ST-5 These rooms, ST-1-2 must have overlapped the wall which sealed the southern extremity of ST-3,4,5 to the south The road, however, made it impossible to trace the further relationships of ST-1 and 2 to the structures south of the road.

Like all the Chiconauhtla buildings, the ST House underwent changes. The first reconstruction involved the building of a revetment of tepetate which screened the open part of ST-14 and 9 and was extended north to make a northeast outer corner in line with the northwest outer corner of ST-10. The north and west walls were laid up outside the limits of ST-9 and 14 The south wall utilized the north wall of ST-1 and 2 with considerable packing and reinforcement of

stone and adobe. The fill of this platform was rammed dirt chiefly, with an admixture of Aztec II sherds, very much broken, as if the packing had been carried from some previous rubbish heap. To this platform a wing wall was run east from the partition between ST-2 and ST-14.

As a part of this same platform building operation, two other platform units or cells, ST-15, 16, were also added to the west of ST-11 (see Figure 208). The inner limits of ST-15 were traced out on its inner faces. ST-16 was left unexcavated. The space between the south wall of ST-15 and the prolongation of the north wall of ST-1 was probably a solid stone and adobe fill. Jutting out from the west face of the unexcavated platform cell ST-16, were two walls with plaster inner faces and a badly disintegrated plaster floor. This room, ST-17, may have been part of another room series. The curve of the road and agricultural grading in modern times barred analysis of this sector.

The third building operation in the ST House seems never to have been really carried out to its logical end. All the rooms that faced on the sunken court ST-3, with the exception of ST-9 and 14 (already converted into a platform) were filled with ash and large sherds of Aztec III-IV date. So large were the sherds that the dump may well have been a ceremonial dump after the completion of a cycle. A few dry stones were laid up in a half-hearted effort to build construction cells. In ST-13 at the northeast of the house, a 30 cm earth fill preceded the dump, as did the blocking with stone of the north passage between ST-10 and the platform ST-11. So loose was this fill that the roots of a pirule tree (obviously post-Conquest in date) were able to push out the terrace wall along the east face of ST-9 and 14. This fill, from the evidence of sherds and the lack of packing, must have been one of the latest building operations in this sector of Chiconauhtla (see Figure 209).

Evidence supporting this conclusion was obtained at the north and east of the ST House. The outer face of the last precinct wall closed in a large sector east of the house. Outside the east wall of ST-5 erosion had taken a heavy toll, but east of ST-13 and 12, the house walls were higher. It was possible to see the same Aztec III-IV dump, composed of large sherds and ash, spreading outside the rooms just as it did within. The base of the deposit was on a level with the floors of the house, at what must have been the outer living surface. Therefore, the ST House must have been used up to a very late in the history of Chiconauhtla. This dump ended abruptly with the northeast outer corner of the ST House.

Between the north wall of the ST House and the south wall of the ET Platform stretched a zone most difficult of analysis. North of ST-10 and 13, this area revealed a layer of Aztec refuse below the level of the outer living surface of the ST House. Above this refuse lay a meter of fallen wall, evidently debris of destruction from the ST House. Above that stratum, tilting north away from the wall, was a layer of silt. The presence of an ash bed like that east of ST-13 ending so abruptly, would suggest that this debris of destruction found north of ST-13 represented the construction of a terrace prior to the laying down of the Aztec III-IV dump.

This hypothesis is bolstered by several other factors. This area is bounded on the west by a sloping terrace wall, prolonging northward the line of the west wall of ST-10. This wall ends, although not in a corner, with the line of the stairs to ET-8. A trench cut along the southern face of the ET House revealed (at its eastern extremity) the latest precinct wall, and further west two additional walls, also running north and south, which had served as the East face of an earlier platform facing. Below these walls was an Aztec II deposit, and two layers of adobes, giving a foundation to the platform surface. Above these adobes was a thick layer of debris of destruction, containing a sandy washed fill, with big chunks of plaster. Intermingled with this deposit were

plentifully distributed large sherds of Aztec III-IV type. A high platform wall facing east was encountered on a line with the east wall of ET-8. A prolongation of this wall (which we did not have the opportunity to lay bare) would have connected with the east wall of the ST House. Behind this wall was a small ash bed, with sherds, and the general fill was of rammed earth with few sherds.

We have, then, considerable evidence that a platform had been built connecting the ST House with the ET House, which form respectively its south and north ends. At the east a wall had been built prolonging the east face of the ST House until it met the platform wall under the east wall ET-8. There were few traces of construction above this platform, although fragments of plaster floor were abundant. A very significant feature was a secondary platform wall that ran from near the north wall of ST-13, due north past ET-8, nearly bisecting the platform. Opposite the north door jamb of ET-8, it stepped west, until it aligned with the destroyed house wall, on top of the northeast annex to the CT House. This wall is unquestionably part of the foundation construction associated with Floor I of the ET Patio, and the razing and filling of the ET House.

Thus the ST House reveals four periods which only at the end and the beginning tie in with the history of the NT, UT, and ET Houses.

ET HOUSE	ET PATIO	ST HOUSE
I. Aztec II refuse	Aztec II refuse	I. Aztec II refuse .
		II. ST House
Periods II-IV uncorrelated with ST House		III. Fill of ST-9 & 14, construction of platform cells
		ST-11,15,16 & perhaps ST-17
V. House over ET-5-10	Floor I	IVa Destruct of ST House
		b. construct. of north platform
		c. Fill into ST House

The Central Traverse Platform and Annexes

The CT (Central Traverse) Platform (Figures 205-209) is a large structure of rammed earth, connected by annexes and floors with most of the buildings we have just described. Erosion and agricultural levelling have completely denuded it of any buildings it might have had, depriving us of much evidence that might connect the structural history of Chiconauhtla into an orderly whole.

The CT Platform differs from most buildings in that there are very few sherds in its fill It is bounded on the west by the West Patio, on the north by Corridor NT-3 South, on the northeast

by the East Patio, on the east by the platform north of the ST House, and on the south by the western construction cells of the ST House.

The original construction was a rough square, the north face of which was roughly aligned with the south face of the platform under NT-7 and 9 (see Figure 206). The north face was plastered and a drain was built at the same time as the south block of the NT House, since there would be no need to construct a drain except to shed water from a narrow space, like the corridor NT-3 South. A revetment wall paralleled this north face some 2 m south of it. The west and south walls of the CT Platform seem to have been of very flimsy construction, since they were traceable only by the remnants of a plaster coating which had covered a cement wall. Possibly these faces had been constructed at a later date on the site of earlier walls of stone, but such a conclusion has little probability since no foundation walls were found, buried by the gradual accretion of soil and refuse.

The south wall at its western extremity was built massively of stone. Less than a meter from the southeast corner the wall was set back, suggesting that the east face of the CT Platform (made of well-laid stone with a pronounced batter) was an addition. However, the north face of the building, as we have seen, produces no equivalent condition.

The second construction phase was the northeast annex. This structure as we have seen in our consideration of the East Patio, must have been built before the block of rooms occupied by UT-3-6.

A third construction consisted in building the platform cells of the Southeast Annex south of the east half of the south wall (see Figure 207). This addition projected east and the resulting northeast and southeast corners were neatly tied with worked stone.

The west face of the annex was plastered, but it disintegrated a few meters from its junction with the original south wall of the building. It had the same construction as the original west wall of CT. A huge piece of plaster several meters in diameter lay tilted against the central wall of the construction cells within the annex, indicative perhaps of extensive destruction for agricultural in modern times.

A perplexing feature of this southeast annex of CT was its relationship to the west platform cells of the ST House. The north wall of the platform cell ST-11 passed south of the finished southeast corner of the CT Annex, indicating that the latter building had been completed prior to ST-11. On the other hand the central north-south wall of the construction cells in the CT Annex passes south without a break, and the north and south walls of ST-17 are built against it. Possibly the additions to the two buildings were carried out more or less simultaneously, and the builders found that they could combine the two operations to achieve a single end.

Presumably at this time a deep pocket was graded and levelled off. This end was attained by dumping in rock and refuse and building a low east-west terrace. This, although partially destroyed, connects when prolonged with the south end of the stairs to ET-8. East of the southeast annex three low revetments were laid to make a sound floor in this quarter.

The fourth stage in the history of the CT House was intimately connected with the raising of the ET Patio level from Floor III to Floor II. This operation consisted of expanding the east side of the original CT House until it made an unbroken line with the east face of the southeast annex (see

Figure 204). At the same time a buttress of rammed earth faced with mortar was run north to preserve the north mouth of the Corridor NT-3 South. The razing of the buildings on the northeast annex and the covering of the UT and the ET stairs have already been described. South of the annex the ground (which dipped east and south) had to be brought up to the level of the ET Patio Floor II. On the former living surface created at the time of the southeast annex, construction cells were built of adobe, in the same manner used in the ET Patio. The patio just west of ET-8 was also built up in connection with the new level. Then a low wall was built to face the extension at the level of the new living surface.

The final chapter in the history of the CT building took place at the time of the creation of the ET Patio Floor I and the unification of the different buildings into a single great structure. This involved filling in the hole left between the east wall of the South East Annex of the CT Platform and the west face of the platform built north of the ST House and connecting with ET-8, and again raising the level of the patio west of ET-8. It was a simple process. The north entrance to the ST House was blocked and refuse was dumped in until the desired level had been reached (see Figure 208).

The interarticulation of periods is arranged as follows:

I. Aztec II refuse			
II. Original CT House	ST House	NT-6,7,9,10	Floor III
III. North East Annex		North East	
			Annex Stair
UT-3-6			
IV. South East Annex	Platform Cells		
		W or ST House	
ET-8-10			
V. East Addition		Floor II .	
VI. Fill east of addition	Platform north of ST House	Floor I	

4. METHODS, MATERIALS, AND CHRONOLOGY OF CONSTRUCTION

A study of methods of construction at Chiconauhtla must be based on the surviving examples of architecture. Structures of adobe must have existed, but no examples were preserved. The houses that sheltered the Mazapan population and the people who formed the first refuse dumps beneath the

Aztec structures have been lost completely. Whether of adobe, wattle and daub, or thatch we have no means of knowing.

Foundations

The foundations of existing houses fall into two divisions, the platform proper and the terrace. Both methods of forming a level surface were employed at the same time, although the platform was more generally employed at the end of the occupation than at the beginning Since these walls were meant to confine the levelled surface soil, it depended on the distribution of the earth, whether or not these revetments were founded on tepetate or bedrock. Terrace walls were made of basalt boulders excavated from the pockets in the tepetate and were usually laid up dry. These were seldom more than a meter in height.

Platforms were more ambitious. Although the greatest height we were able to compute was the 3 m of the substructure beneath LT-1-3, a meter and a half seems to have been more general. The essential feature of each platform was an earth core. On this the house rested. There was a constant danger of side slipping and of settling. If the platform was large, a honeycomb of stone or adobe walls was laid within to guard against the displacement of too great masses of earth. Excess settling was avoided by constructing a subsidiary floor of tamped earth and a half meter foundation of crushed copings and adobes of destroyed walls. The weight of the house was evenly distributed by founding the house walls and partitions on the levelled surface. The stone facing of the platforms usually had a slight batter, and rested against the earthen hearting. Seldom was a platform wall made to stand alone.

Facing

The material of the facing was usually stone, but in places (such as the west and south walls of the CT Platform and the north addition to the same foundation) rammed earth was coated with plaster The general rule was to use either lava boulders or chunks of *tepetate* roughly dressed and lay them up as firmly as possible. Although the rule is very variable, the corners were usually formed by dressed slabs of stone which were set alternately on end and on the side, making a rough bond for this exceptionally vulnerable part of the structure. Adobe bricks were commonly used for hearting walls, but were almost never used as facing.

In certain localities, usually near the higher platforms, many elongated cones or clavos (nails) were found, made occasionally of basalt but usually of baked clay. Three of these were found actually incorporated in the wall. In these cases a wall of rough boulders was laid up against the hearting and a small stone facing was placed in front to give a smooth and symmetrical face. The cones were used to bind the outer facing to the inner. Whether this is a secondary use of the cones is problematical. They are often found projecting from the faces of ceremonial platforms as if to give projections to which the plaster coating could grip.

A plaster coating was found on several of the platform faces, but never on those of the low terraces. It would be natural to presume that as the platform was an inherent part of a building its exterior treatment would correspond to that of the buildings

Floors

Floors fall into several groups: house and platform floors, construction surfaces, and patio floors and living surfaces. House floors varied in thickness between 2 and 6 cm They were constructed usually of one part lime to two parts sand. The surface was smooth and brown in color The base was set on a layer of tezontle. Below the tezontle was a foundation of stone and broken adobe which rested on the smoothed off top of the platform hearting. In Rooms ET-3 and 4 Super, the floors were of tamped adobe.

When a platform, like NT-4, was designed to be a plane surface without buildings, the floor was constructed as in the rooms. However, when the platform was to serve as a foundation for rooms, the surface was pounded hard, and very rarely a thin coating of plaster was spread across it As was very often the case in the later periods at Chiconauhtla, when houses were wholly or partially razed, the rooms were transformed into cells by the construction of cross walls of adobes or stone, and the interiors of the cells were filled in with loose earth or wall fall. Usually a foundation or construction surface of tamped earth was spread across the hearting before the plaster floor was laid down

The usual method of forming a patio or living surface was to remove inequalities, and by means of terraces, create plane surfaces and avoid the more violent aspects of erosion In some cases, as for example north of the platform wall of UT-1 and east of the northeast annex of the CT Platform, and the east of Floor III of the ET Patio, there was some attempt to spread a thin layer of plaster over the earthen surface. Yet it is possible that this was a halfhearted process to consume the surplus of plaster made to coat the house and platform walls.

In two cases, somewhat more pretentious attempts were made to create a level patio surface. When the level of the ET Patio was changed from Floor I to II, a rise of 60 to 75 cm, cells were constructed of adobes set on edge and sand was extensively employed as filling medium When the stairs of the south addition to NT-4 were joined with the stairs of the WPS Platform, the patio thus created was raised and levelled by the use of sand

Houses were usually built as units, rather than expansions of a central core. Foundations and floors we have already described, and there was no general rule as to the invariable use of a platform to support a house. However, in the later periods at Chiconauhtla, there was a tendency to build all houses at the same general level, which was taken from the top of earlier platforms.

Walls

Walls were founded on the construction surface of the platform or the smoothed earth surface The floors were laid after the wall foundations had been set As a result all walls extend slightly below the floor surfaces. Perimetral or exterior walls are set on foundations sunk sometimes as much as 30 cm if built directly on the ground. Exterior walls, when built on platforms, rest on the construction surface of the mound and are usually set somewhat with the facing of the platform, as that stone veneer might easily slide out.

Walls are not tied or bonded at the corners, and are divided into vertebral walls which usually carried the roof beams, and costal or partition walls which divided up the rooms. In this way a wall had usually to bear the weight of only one set of roof beams.

The walls were variously constructed. The most common method was to cement small stones about twice the size of a baseball in plaster. Another method was to use roughly dressed tepetate blocks, or small basalt slabs. Again one finds walls, the bottom of which are of plaster and small stone, and the upper sections of adobe. There seems to have been no particular practice as to which method was used Room NT-1 had a south wall of tepetate blocks, a west wall partly of tepetate blocks, partly of small stones and masonry, a north wall of small slabs, the east walls of dressed small stone and plaster. The inner surface walls were also plastered and probably the outer as well. Corners were usually not bonded. In one or two cases of outside angles slabs probably filched from the corners of destroyed platforms were used (the added wall in ST-3), but quite common was the use of burned brick, made smaller than the commoner adobe (portion between WTN-1 and 2, northwest outer corner of NT-5). Ends of projecting walls like those enclosing porticos were often faced with stone slabs or burned brick, which seems to have been developed as a substitute for worked stone.

Roofs

Few traces were found of roofs. In the ST House chunks of adobe were found that might well have been part of the coating of a roof made in the common manner of laying across the roof beams light poles and twigs and covering these with a thick layer of adobe. However, in several rooms the bases were found for pillars. These were rectangular, usually oblong, in form The construction of small stones laid in plaster suggests that these were the bases for flat-sided wooden pillars, and a variant in Room ET-6 where blocks of dressed stone were used for this purpose, makes it almost certain that the pillars were not entirely of masonry.

Doorways

Entrance to the rooms was gained by means of several types of doors, which also provided light and ventilation. The commonest form consisted of leaving one side of the room open and setting up two columns. Then from this portico or antechamber a wide door opened into a more completely enclosed chamber. In the north and earlier block of the NT House (Rooms 1, 2, 5, 11) we found a variation of the Tau-shaped door of the southwestern United States. In this case, a plastered step, some 30 cm above the floor, was set against either jamb I can discern no utilitarian purpose, for the doors proper are from 1 m to 1.5 m wide, so that the reason for the "southwestern" door (namely to provide an entrance wide enough for burden-bearers but small enough to be easily blocked against the entrance of dogs and turkeys) cannot be adduced. Nowhere else did we find examples of this type of door, but most of the rooms, with the exception of the ST House, were too destroyed for such a determination. In the ET rooms the main doors were not of the portal types, which may well have been abandoned at the last periods of Chiconauhtla. Doors leading to back rooms, especially in the ET House were as narrow as was consistent with access.

Stairs

Many of the houses were reached by stairs, which had an average 25 cm dimension for the tread and riser, the length varying according to the dictates of architectural symmetry. These were usually made of small stones and plaster with a thick plaster coating of dressed stones. Often slabs were used as curbs for the junction between the last riser and the floor. Slabs may have been even

more commonly used but stone was hard to work and dressed stone must have been always at a premium. The construction of the stairs was flimsy, so that it was always difficult to recover traces. The highest computable stair was the first flight of NT-4 South.

The *Tlequil*, or Hearth

The most consistent feature of every block of rooms was the tlequil or hearth. This structure is usually located against the back wall of the room facing the door. It is lined with slabs sunk through the floor and projecting somewhat above it. There is generally a sandy fill which is floored with slabs. A bed of ash, often the fine white ash of burned maguey pencas, usually remained The only *tlequil* found complete was that in Room NT-1. This had a revedos made of two burned bricks, set with the long axis upright, and tilted against a support of small pebbles and plaster In the others, often because of destruction, also perhaps by design, these vertical slabs were missing. The *tlequils* seemed to give a good index to the units of habitation and also gave strong evidence for the belief that the part of Chiconauhtla excavated by us was domiciliary.

Other Built-In Features .

Two other secondary constructions were found in rooms. In the northwest corner of NT-2 (which probably was an unroofed court, to judge from the two rooms with hearths opening off of it), there was a shallow circular basin built of pebbles and plaster on the floor. Its use is problematical although its shallowness suggests a greater utility for winnowing or husking operations than for the storage of grains or liquids. In the northwest corner of NT-11 was found a beehive-shaped contrivance made of coils of mud-covered rings of fibre. This probably was a small edition of similarly shaped bins found in several parts of Mexico.

Architectural Change and Chronology

The plans of the houses and the use and the relationship of rooms is more significant historically than the individual structural practices at Chiconauhtla. There seem to be several major styles. The earliest house is apparently WT-1-3. This consists of WT-1, a large room with pillars The other two rooms, WT-2 and 3, may have been roofed at their north and south sides with an aisle open down the middle to permit light to enter the otherwise dark WT-1. The projections at either arm of the west wall of WT-2 suggest some such method of roofing requiring the placing of the beams north and south The solid angle at the northwest of WT-2 and 3 has no obvious function, unless there has been a raised room.

The room series WPS-1-3 (which was a part of the structural changes involving the razing of the WT House) had a plan very similar to that of WT-1-3. The southwest portion of WPS-1 and 2 was badly destroyed, but the conjectural restoration of the plan suggests that WPS-2 was perhaps a court and WPS-1 and 3 might well have had *tlequiles*

The WPN group of rooms offers a more symmetrical plan Here we have two rooms, WPN-1 and 3, both with *tlequiles* still preserved, opening into the larger rooms WPN-2. Unless WPN-2 were open, it is difficult to see how the rooms with hearths could have been lighted. An alternative possibility is that the block of unfloored space north of WPN-2 may have been occupied by a stair,

in which case WPN-2 could have been roofed.

East of the WPN rooms is a large area which produced no floors that might indicate rooms. Consequently we are faced with the problem of a second story. According to the Codex Florentino there were such constructions. At Teotihuacan there were not, but the problem of ventilation and admitting light to windowless rooms was solved by building houses at different levels. At Chiconauhtla the walls did not seem sturdy enough to bear the weight of a second story, and the great use of masonry construction suggests also that wood was little employed. The heaving of planks for flooring must have been an extremely difficult task, and perhaps rarely attempted. The explanation for the unfloored zone east of the WPN rooms that involves the smallest number of hypothetical considerations, is that a raised foundation occupied this zone, and supported another block of rooms with a court. Access could have been gained either by the hypothetical stair to WPN-2 or from NT-4.

From the typological point of view, the north or earlier block of the NT House would represent the next step in the evolution of a ground plan. We have the two rooms with *tlequiles* (NT-1 and NT-5) opening into a patio NT-2, but added are several features not to be discerned in the western range of rooms. One of these is the anteroom NT-11, which runs along the south of NT-1, 2, and 5. This had no hearth, but did have a bin. It could not have been entirely a storage place, because of a well made door giving on, first to a narrow terrace, and later to the south block of the NT House. A second new conception was the corridor NT-3 North, which led into a third new trait, the hearth room UT-1 and portico UT-2, which were reached by a stair from the ET Patio. From the plans of later rooms of this character (like the south block of the NT House and rooms UT-3-6) it is conceivable that there were pillars in UT-2, but we did not clear the room sufficiently to see.

The effect of this early NT-UT range is an ingenious fitting together of rooms, giving adequate light and ventilation. If the presence of a hearth means a living room, then three family units were housed in this structure. The court, NT-2, seems to have been a feature of the less complex plans described previously, but the portico UT-2, and the anteroom NT-11 suggest in the provision of space not directly assignable to utilitarian purposes, a social function more advanced than in the previous room blocks.

While we cannot yet be certain of the chronological relationship between the buildings just discussed, there is considerable reason for basing a typological development in the order we have followed in this description. The succeeding stages in the architectural evolution occur historically and stratigraphically in the same order.

Rooms NT-6-7, 9-10, were built as a southward extension of the NT House. They represent, in the presence of two units of a hearth room fronted by a portico, a concept of planning different from the dovetailing of rooms around a central court. The southern unit NT-7 and 9 had a stair leading from the ET Patio. Such a house plan provided better light and ventilation and, from the modern point of view, more pleasant living conditions, than the central court idea, which during the rainy season offered serious disadvantages in the flooding of living quarters. Rooms UT-1 and 2 probably offer the genesis of this scheme.

Apparently this new plan found general favor, for opposite these southern NT rooms, a similar block, UT-3-6, was constructed. There is no means of knowing whether a similar range of rooms facing south was laid up east of UT-1-2 at this same time.

The most complex development of the hearth room and portico plan was in the ST House, which was probably built at this time. Here we have the fundamental conception with three units, ST-1-2, 4-5, 6-12, facing on the court ST-3. Yet just as in the north block of the NT House, these were elaborations to the court house plan, so here in the ST House we find additional rooms which do not exist in the essential plan. The unit ST-6-12 has a storage room ST-13 reached by a small door from the hearth room. Opening on the sunken court ST-3 and the forecourt of ST-6 is the curious portico room ST-10, which might have been an altar or perhaps a throne room. Scarcely larger than a Pullman berth and open on one side, it could hardly have been a bedroom, since there was too much ventilation for Indian taste and this same open side would make the room unsuitable for storage. Two other rooms on the west side of the patio were slightly smaller, and had traces of a wall or curb on the patio side. The absence of columns suggests a different purpose from that of ST-10. But there was no internal evidence to suggest weaving sheds, storage rooms, and they were too big perhaps for *temascales* (sweatbaths).

These orderly house plans make it possible to speculate gingerly on the type of house surmounting other platforms constructed at this same general period. The CT Platform constructed at the same time as the south block of the NT House is just the right size for two similar hearth room and portico units, also facing east. However, there were no traces of a stair. The platform at the south of the ET Patio which was added to the northeast annex of CT, shortly before the construction of UT-3-6, would give space for one unit of the ST-4-5 type, with its back wall superimposed on the existing vestiges of a wall. The platform created by the filling-in of ST-9 and 14, and the building of construction cells to the north and west would allow for a portico, hearth room, and storage room of the same size as the unit ST-6, 12, 13. Such speculation, however, is necessarily highly unreliable, and serves chiefly to complete the record.

The next shift in house plan involved a modification of the hearth room and portico idea, and the stratigraphical position of ET-5-11 (which was founded on the razed rooms of UT-3-6), and correlated the developmental and chronological aspects of the situation. In these rooms, the portico was abandoned for a large hearth room with a wide door. Behind the back wall of the main apartment a narrow room was placed and access was gained by a narrow door set at the end of the partition. One room, ET-6, differed from the other two units, ET-7 and 9, 8 and 10, by having no storage room, and the roofing of so large an area was obtained by two pillars set in the center of the room. An unroofed terrace, ET-5, stretched in front of ET-6 and 7, reached by a conversion of the UT-3-6 stair. This terrace extended with a slight setback in front of ET-8, but three steps were built especially to connect with the living surface between the ET House and the CT Platform.

This ET-5-11 House is the best preserved block of buildings of the late period at Chiconauhtla. The LT House, founded on the NT rooms, was so destroyed that only the complete outline of one room and parts of two others and a passage were preserved. This plan suggests an approximation between the large rooms of the ET-5-11 series and the early NT House dovetailing. Perhaps the confusion of plan due to erosion is increased by a plan which involved a room series connected by the passage LT-2 and facing in two directions, in contrast to the earlier plans, the rooms of which were arranged to open out in one direction only.

The rooms ET-3-4 super and 1-2 Super, which may possibly be as late as the Colonial period, revealed two small rooms opening into a large forecourt, which may or may not have been roofed. If covered, no trace remains of the pillar foundations.

5. SUMMARY REMARKS

Our excavations in the palace of the chief of Chiconauhtla, a fief of Texcoco, revealed interesting data on the growth of a chiefly establishment. This palace was continually being rebuilt and expanded to meet the demands of a growing population and richer economy. Patios were arranged at different levels, according to the plan described above. The earliest rooms had the congested quality of a Teotihuacan plan, but the later chambers were more spacious and open to sun and air. Each renovation called for more space so that, allowing a family of five to each hearth, the entourage of the chief more than trebled in a century and a quarter. (Vaillant 1966:143-144)

6. EDITOR'S NOTES

This report is a slightly edited version of a 46 page manuscript, dating from 1935, on file at the American Museum of Natural History. We appreciate the cooperation and encouragement of the American Museum of Natural History in making this manuscript available for publication, and thank Craig Morris and Belinda Kay of the Museum's Department of Anthropology for their help in this regard.

The initial stage of the plan drawings of the Chiconautla buildings that are included in this version of the 1935 report were made by Carson Murdy, and working from the much-reproduced Bradley 1938 version (that depicted the NT, UT, CT and ST sectors of the complex; Vaillant 1966:Plate 42a), and from J.R. Parsons' copy of Vaillant's field drawings. In preparation for this volume, Sharon White prepared the final versions of the maps for publication. The scale on the plans in this volume is an approximation; it is our extrapolation from a remark Vaillant made in the text concerning the width of doorways (see page 797). To our knowledge, no other more accurate scale exists. Kubler presented a reproduction of Bradley's drawing that included a scale (Kubler 1962:55), but this is of unknown derivation, and would result "in a structure roughly the size of the base of the Pyramid of the Sun" (Evans n.d., Note 4).

During the process of producing this volume we became aware that Christina Elson had written a Master Thesis, presented at Hunter College, City University of New York, on Vaillant's Chiconauhtla excavation. Her thesis focused on the artifacts recovered in the excavation and the reader is referred to her thesis (see bibliography), and a summary of it, written as a paper published in Latin American Antiquity, Vol. 10, No. 2, June 1999 (see bibliography). In Chapter 13 we present a summary of the results of her analysis based on this publication.

Table 84 Sequence of Construction

PHASE	WEST SECTOR	NT-PLATFORM	NT-HOUSE	LT-HOUSE	UT-HOUSE	ET-HOUSE	ET-PATIO	CT-HOUSE	ST-HOUSE
I	Aztec II refuse	Aztec II refuse	Aztec II refuse	———	Aztec II refuse	———	Aztec II refuse	Aztec II refuse	Aztec II refuse
IIa.	WT-1,2,3 built	NT-4 built, Stair I built (limited to NT-4)	NT-1,2,3 North, 5, and 11 built	———	UT-1 and 2 built; Stairs to UT-1; built, UT-Platform built	———	Floor III laid	CT-house and NE-Annex built	ST-1,2,3,4,5,6, 9,10,12,13,14 built
IIb.	WT-1,2,3 raised; WP-Platform, WP-Stairs, and WPS-1,2,3 built	West wall of platform raised; Stair I extended	NT-6,7,9,10 and Stairs to NT-7 built; NT-3 South Floor IV laid	———	UT-3,4,5,6 and Stairs to UT-3 built	adobe rooms on UT-Platform (?)	(no change)	(no change)	(no change)
III	WPN-1,2,3 and 2nd Story of WPN built	(no change)	NT-7 stairs blocked; NT-3 South Floor III laid	———	UT-1 and 2 elevated; UT-3/6 House Platform extended east	———	(no change)	SE_Annex built	ST-9 and 14 raised; ST-11 built
IVa.	WPN and WPS houses raised; Platform built over WPS/WPN	NT-8, Stair II and Stairs to LT-House built	NT/UT platform extended north; NT-3 South Floor II laid; NT-1,2,3 North, 567,9,10 and 11 raised; Corridor between NT-5/11 and UT-1/2 filled	LT-1,2,3 built	UT-House Raised	ET-1,2,3,4,5,6,7,8,9,10 and Stairs to ET-8 built: Patio west of ET-8 built	Floor II laid; Altar built; Rammed-earth buttress built	East addition built; SE-Annex cells built; NE-Annex building(s) raised	ET-St Platform built, Cells ST-15, 16 and 17 built
IVb.	(no change)	(no change)	———	(no change	———	ET-3 and 4 Super and ET-5/10 Super built	Floor laid; Outer Precinct Wall built	Terrace east of SE-Annex built	ST-house destroyed; Dump created; Wall running north built

Correlation of construction events across the site of Chiconauhtla as determined from reading Vaillant's text. (Phases I-IVB do not necessarily correspond to those given by Vaillant). Phases IIa-Va of ST-House are "technically" unconnected to the remains of the site, but we have used the sequence of events to fit them in.

Figure 205 (Phase IIA)

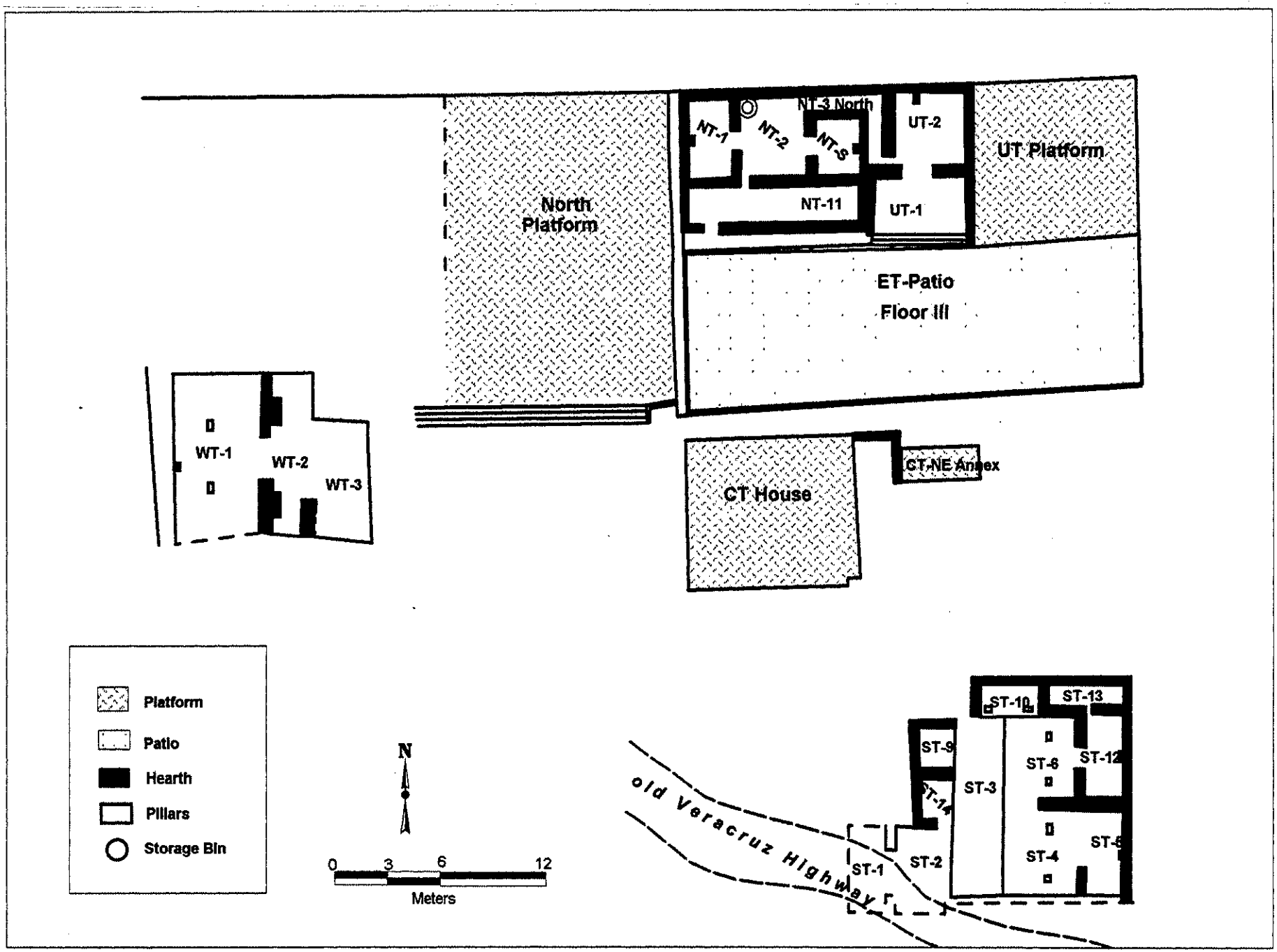


Figure 206 (Phase IIB)

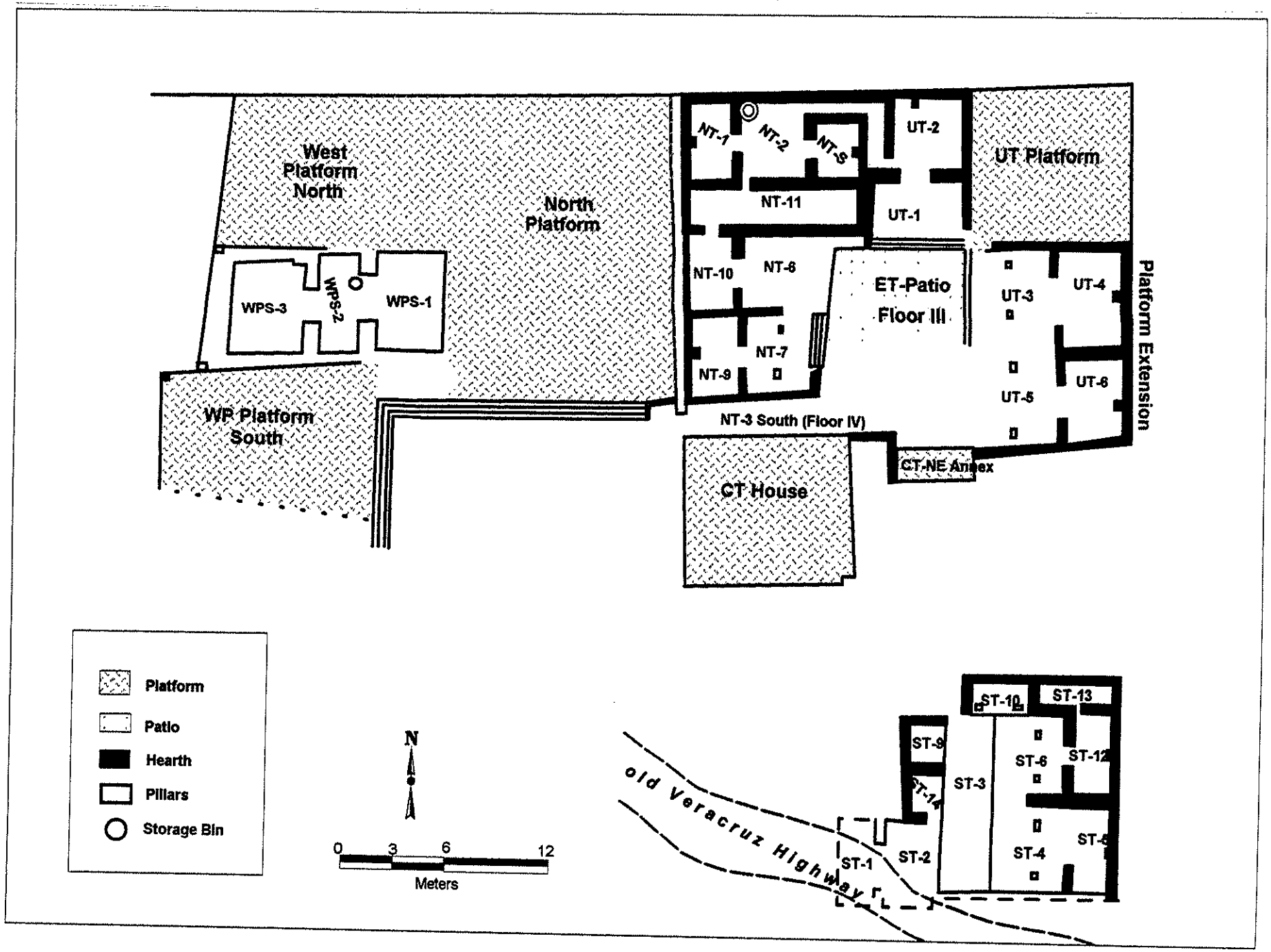


Figure 207 (Phase III)

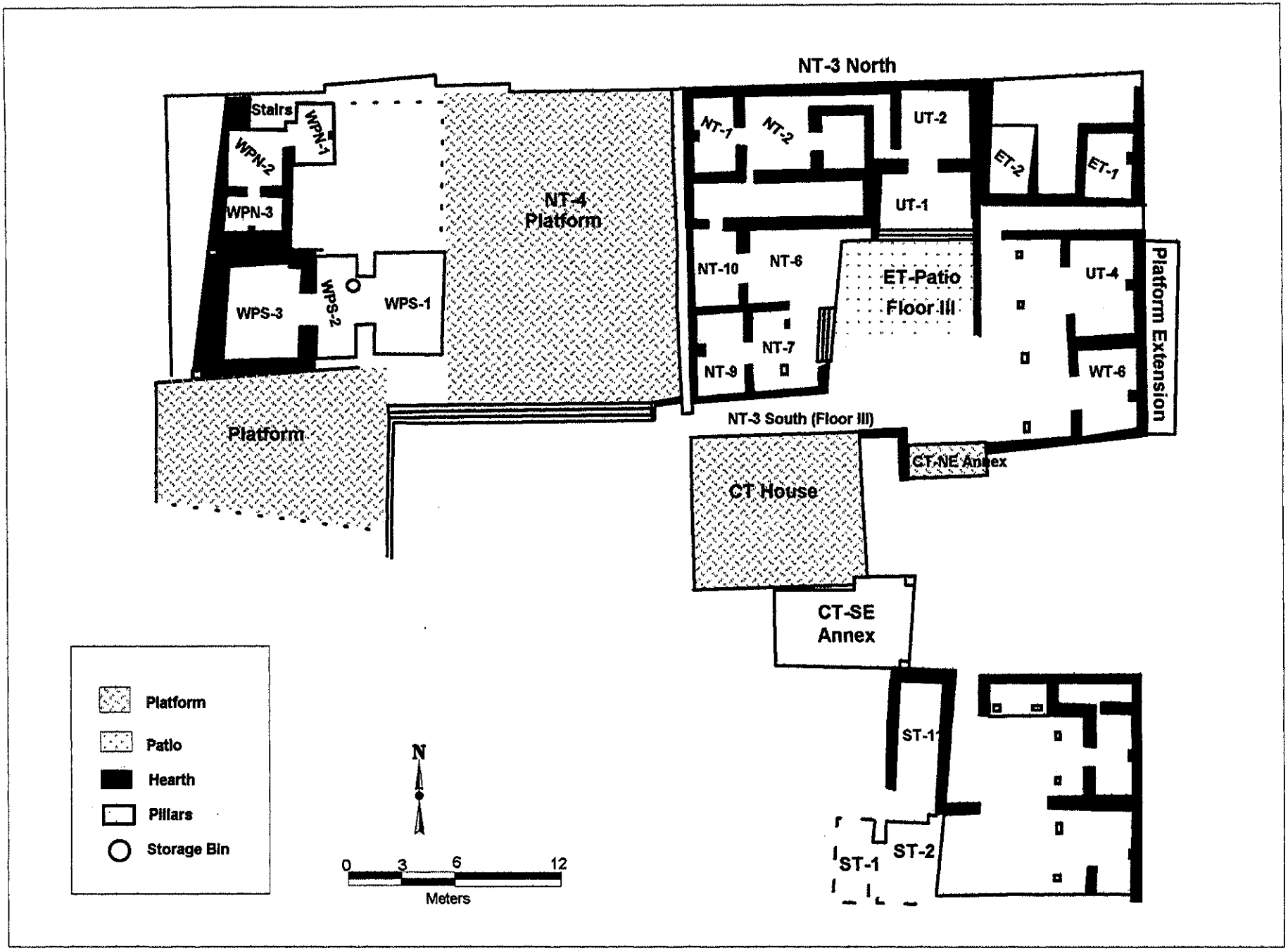


Figure 208 (Phase IVA)

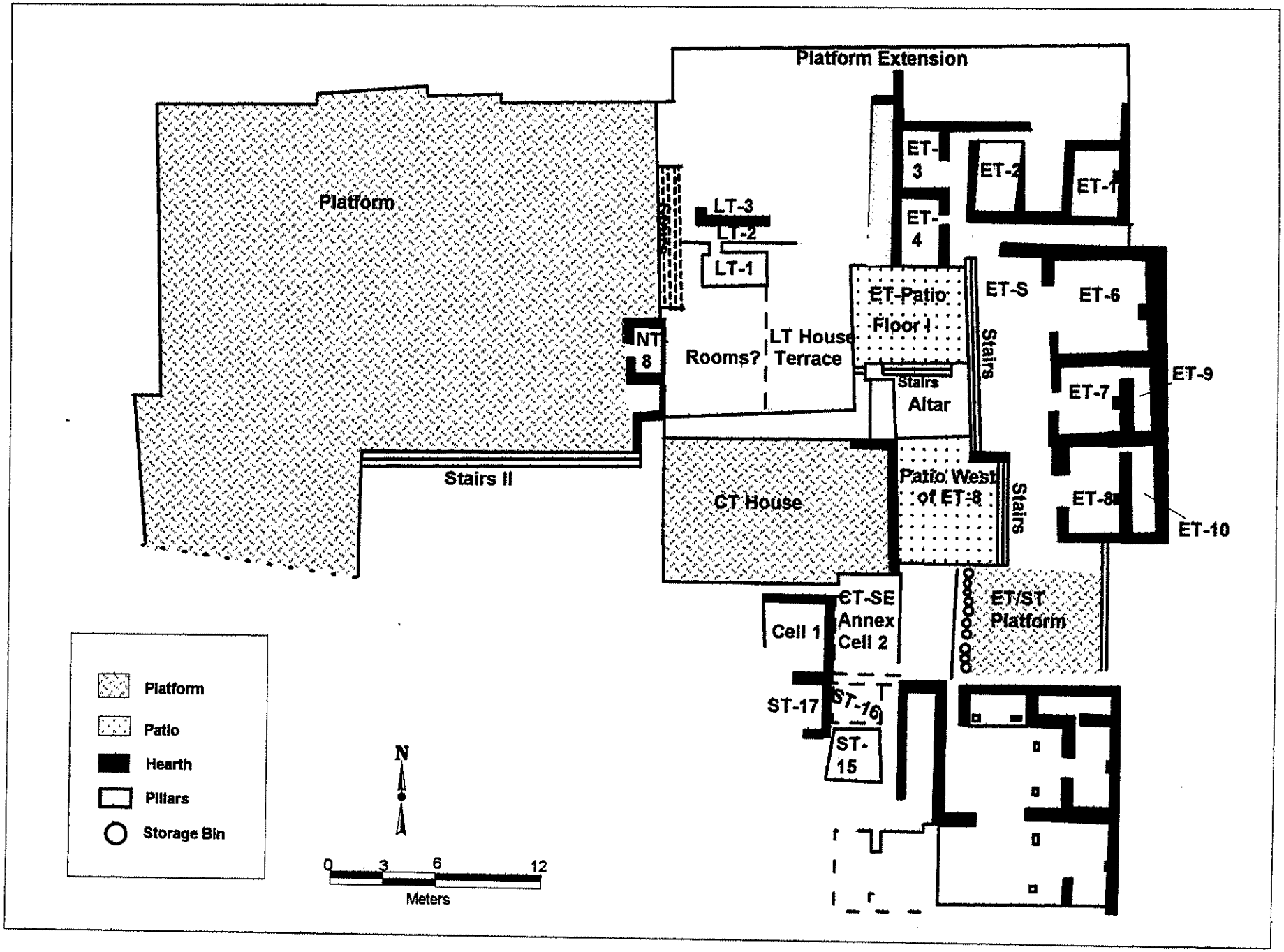
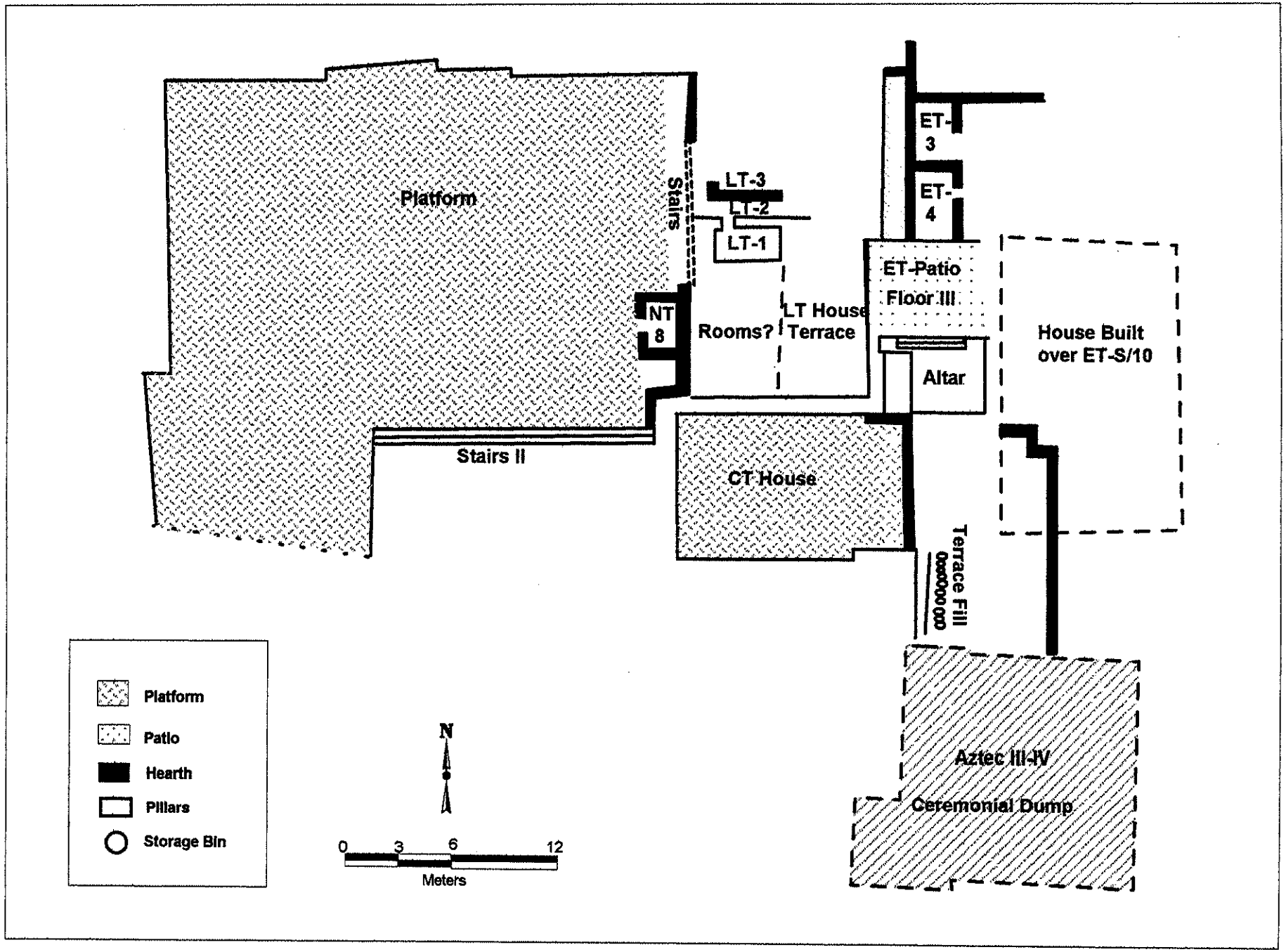


Figure 209 (Phase IVB)



CHAPTER 10

RESEARCH AT CIHUATECPAN (T.A. 81) IN 1984: A SUMMARY

by

Susan Toby Evans

1. INTRODUCTION

Research at Cerro San Lucas was undertaken to expand our knowledge of the lifeways of the peasantry of the Aztec period. At the beginning of the sixteenth century, the Basin of Mexico was the core of a vast tribute domain, and the Aztecs were the last ethnic group in the fully indigenous cultural sequence to extend their effective dominance over much of Mesoamerica. Although our understanding of the life of the elites in this society is fairly sound, we know little of the country people whose labor fueled the whole cultural system.

The lack of archaeological investigations focusing on the Aztec period peasantry can be explained by a number of factors: rural village sites are generally less culturally visible and imposing than are the monumental sites that capture public attention; their very homeliness militates against their having the attractive glamour of rich and exotic settings. Furthermore, the rural sites of the Aztec period in the Basin of Mexico have been so numerous that their commonness argued against a high priority of investigation in a research setting of limited means and many goals. The richness of ethnohistoric data sources has also acted to instill a sense of complacency with regard to excavations of rural sites, since, through the many accounts, a vivid general sense of the culture has been gained.

Yet, important research problems bearing an Aztec period culture history and process could not be addressed without information about lifeways of the peasant villagers, information of the type supplied by excavation. Parsons recently pointed out a number of issues that remain to be resolved about central Mexico in the Postclassic period, including the nature of inter- and intraregional political relations, demographic trends, and economic organization (Parsons 1987:28-36). Clearly, important features of Aztec period society could be elucidated through archaeological research focused on one particular village.

With these thoughts in mind I began doing intensive research on Aztec sites (T.A. 60-62) on the south slope of Cerro Gordo, just behind the Classic city of Teotihuacan. The first step was to locate and plot the size and distribution of the mounds in this fairly well-preserved stretch of terraced settlement (Evans 1985, also see Chapter 7 this volume). Next, I proposed to excavated certain of the housemounds, attempting to assess possible special function structures, as well as investigating domestic settings. The proposed research gained the support of the National Science Foundation, and the approval of the Instituto Nacional de Antropologia e Historia of Mexico, and this report would have been a description of the excavation of Cerro Gordo site, if that site had not rather suddenly and unexpectedly been destroyed along with many others, by extensive bulldozing over the ancient terrace systems of the Teotihuacan Valley and Texcoco region. In a program designed to establish profitable nopal and maguey plantations on marginal lands (thus strengthening the economic base of rural areas), heavy equipment was used to remove topsoil and break up the underlying tepetate (calcified compacted volcanic ash; culturally sterile), and the loose soil was shoved to the sites of the new orchards. The archaeological remains of the Cerro Gordo site's nearly two hundred houses, which had survived nearly half a millennium of neglect, lay heaped with soil and rubble in a long tidy pile. This situation was echoed all over the valley, and the common villages of the common Aztecs were now members of an endangered archaeological species.

Using a survey map of Aztec period settlement locations made by the Teotihuacan Valley Project, Elliot Abrams and I immediately began to investigate other alternatives. Although the destruction was widespread, we found that T.A. 81, a fairly large and complex site surrounding Cerro San Lucas, was relatively undamaged by bulldozer action (see Plate 140 and Figure 210). We shifted our research focus,

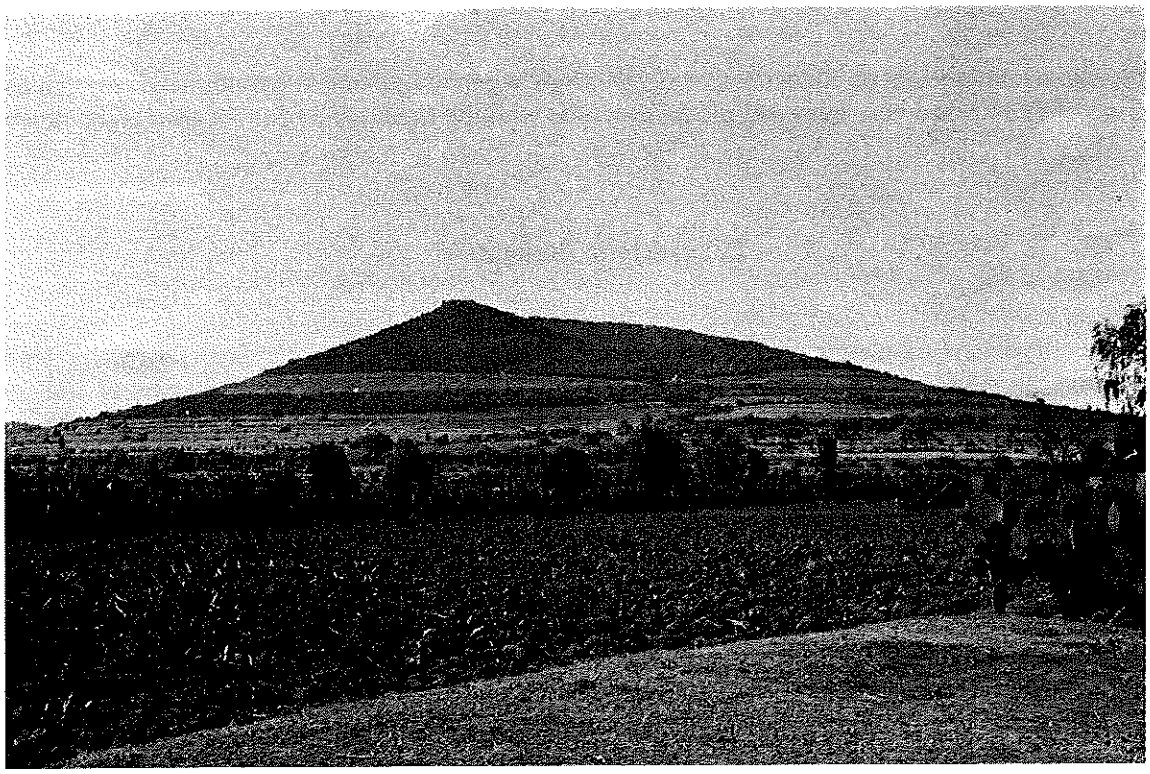


Plate 140: Cerro San Lucas, from the Southwest

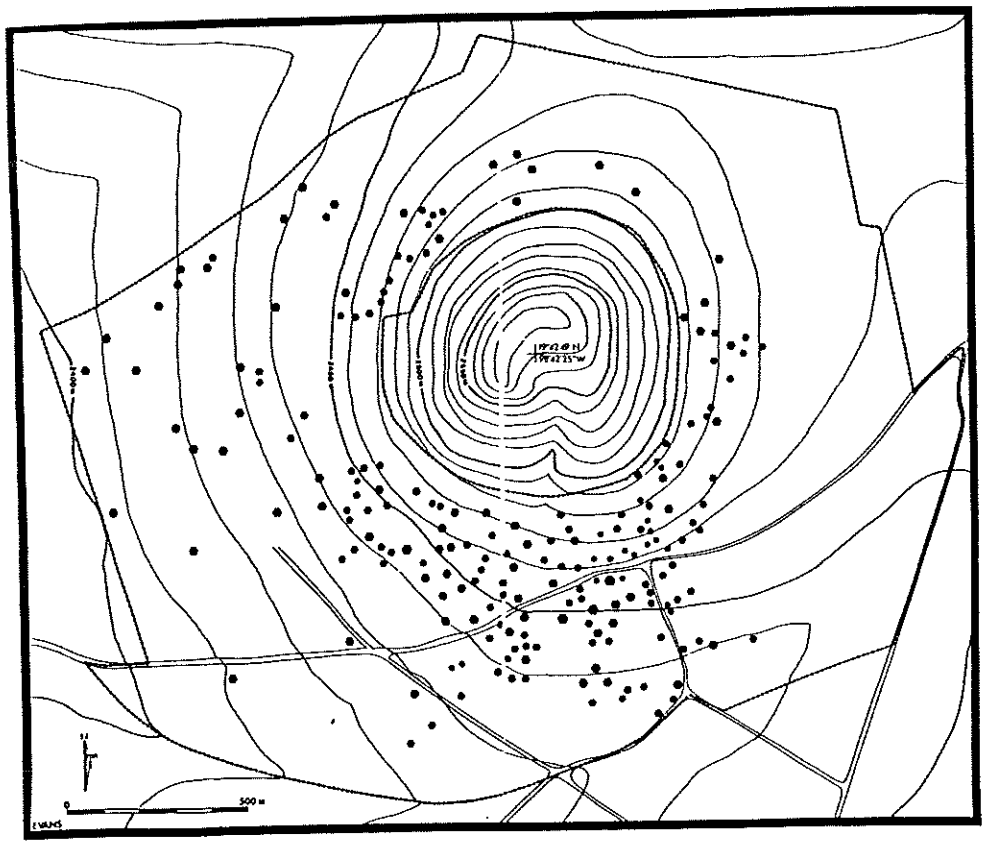


Figure 210: Cerro San Lucas and the Aztec Period Village of Cihuatecpan Hexagons indicate housemounds.

and with the encouragement of our sponsoring institutions began to implement our adjusted research plans. The spring of 1984 was a very busy and productive time with the excavation of more than eight structures at T.A. 81.

Ethnohistoric Background

Following the Spanish Conquest in 1521, the first Spanish colonial economic policy with far-reaching effects on the native populations was that of encomienda, "the official consignment of groups of Indians to privileged Spanish colonists . . . [who] were entitled to receive tribute and labor from the Indians delegated to them" (Gibson 1964:58). Cortes assigned himself as encomendero of Otumba, among other towns in the Basin, but in 1528 these were taken from him and reassigned, and in the 1530s Otumba was declared a crown province (Gibson 1964:60).

The dependent communities of the Otumba parroquia, are listed in the 1571 Arzobispado de Mexico (Paso y Troncoso 1905:82-83), and the listing includes "Sant Lucas, media legua [de Otumba]" as having 210 "vecinos" (a term which roughly corresponds to heads-of-households, and whose conversion value into total population figures involves the multiplier of 2.8, according to Borah and Cook 1960; this would give a total population for the village in 1571 of 588, a decline of roughly 50% from our Aztec period estimate). The league, as used in colonial Spanish documents, is a notoriously uncertain value (see Hassig 1984.288 for a discussion of its various meanings) and the distance from Otumba to Cerro San Lucas, minimally 4 km, does not conform to any of the known measures of half a league. However, within the list of towns in the Doctrina de Otunpan, all towns which are half a league from Otumba are, in fact, roughly the same distance from it (for example Oxtotipac and Axapusco), and Cuautlantzingo, half that distance from Otumba, is quarto de legua, which tends to confirm that the Sant Lucas in question refers to the Aztec village under study

It is perhaps ironic that we know "our" Cihuatecpan's name from the congregation order which condemned it: the village is lifted from historical anonymity by its death warrant. But the fact that it was ordered to be abandoned in 1603 should not be taken as proof of its demise at this point. Gibson notes that, even when abandonment orders were carried out, some people returned to their original towns, and "many communities that were originally scheduled for removal survived as occupied sites" (1964:285), and Cline cites 1607 legislation which permitted some villagers "to return to their old sites by special permission" (1949.351) The effectiveness of the practice of congregating villages no doubt depended on many factors, including the zeal of local colonial authorities and the greed of colonial landholders. Local authorities were instructed to oversee the process, including "wrecking the old houses in order to make use of the wood and other materials useful in the new construction, as well as in order to destroy entirely the old village and not leave any occasion for the Indians to return to it; and if they do so or absent themselves, they shall . [be punished] for their correction and as a warning to others" (Congregación in the Province of Tlanchinol, described in Simpson 1934:96-105).

The state of the structural remains at Cihuatecpan strongly suggests that the buildings were partially dismantled by removal of wooden structural elements in the roofs, entries and (possibly) walls, and then the

remaining walls collapsed onto the floors. The high value of timber in the area probably necessitated the removal of wooden beams and planks, so that these could be reused elsewhere. Thus our material evidence from architecture would substantiate a scenario of enforced abandonment. Evidence from datable ceramics, however, suggests that use of the site continued onto well into the Colonial period, albeit at a much attenuated level.

Using the known ceramic chronology to interpret the extent of occupation at the site does not necessarily resolve all such issues. The problem of disentangling "Aztec" from "Colonial" period occupation in the Upper Teotihuacan Valley has long been a focus of Charlton's interest, and he projects that it is almost one hundred years to 130 years after the actual military conquest that settlement patterns, demography, ecology and ceramics reflect that event in the eastern Teotihuacan Valley. Only the church and the cemetery appeared earlier indicating outside influence (1972b:7).

He has found that ceramics dated to the Chimalpa phase (Aztec 3, traditionally accepted as preconquest) persist in sites around Otumba "until at least 1650, and possibly to 1720," while. ceramics considered . . . diagnostic of Aztec 4 (Teacalco Phase), and dating to 1520, appeared during the second half of the sixteenth century, persisted into the early part of the seventeenth century, and disappeared. They coexisted with Aztec 3 materials through that time (1972a:111).

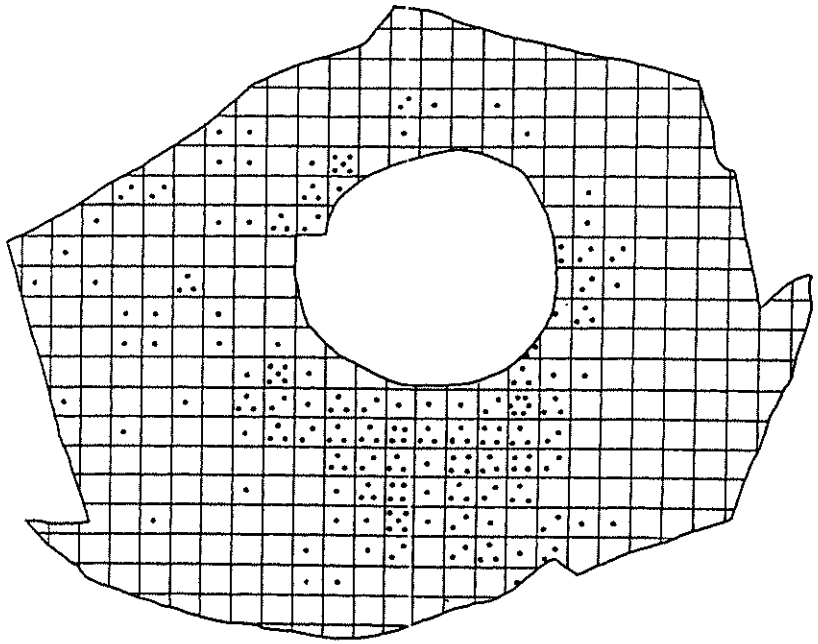
Preliminary analysis of Black/Orange decorated wares from excavated contexts at Cihuatecpan shows a predominance of Aztec 3 wares, a significant number (about 13% of all Black/Orange) of Aztec 4 wares, and glazed wares occurring in small numbers in most of the excavated structures (though usually as part of the plowzone component), and having an overall frequency of 0.03% of all sherds.

We assume that the site was completely abandoned in the seventeenth century (with possible intermittent reuse of some buildings), and the land has since been used for pasture and cultivation. Charlton's point that we must see Aztec culture as persisting well beyond the time of conquest is well taken. The calamitous destruction of Tenochtitlan meant that, at the capital, Spanish colonial culture was strongly established early on, but the conservative nature of peasant lifeways, and the preservation of rural peasant villages, resulted in a much more gradual transformation. Basic economic practices continued on unchanged. The sociopolitical structure had, of course, been radically altered in terms of the ruling elite, but from the perspective of the peasants this represented the substitution of one set of overlords for another, with demands which were of the same general type as before.

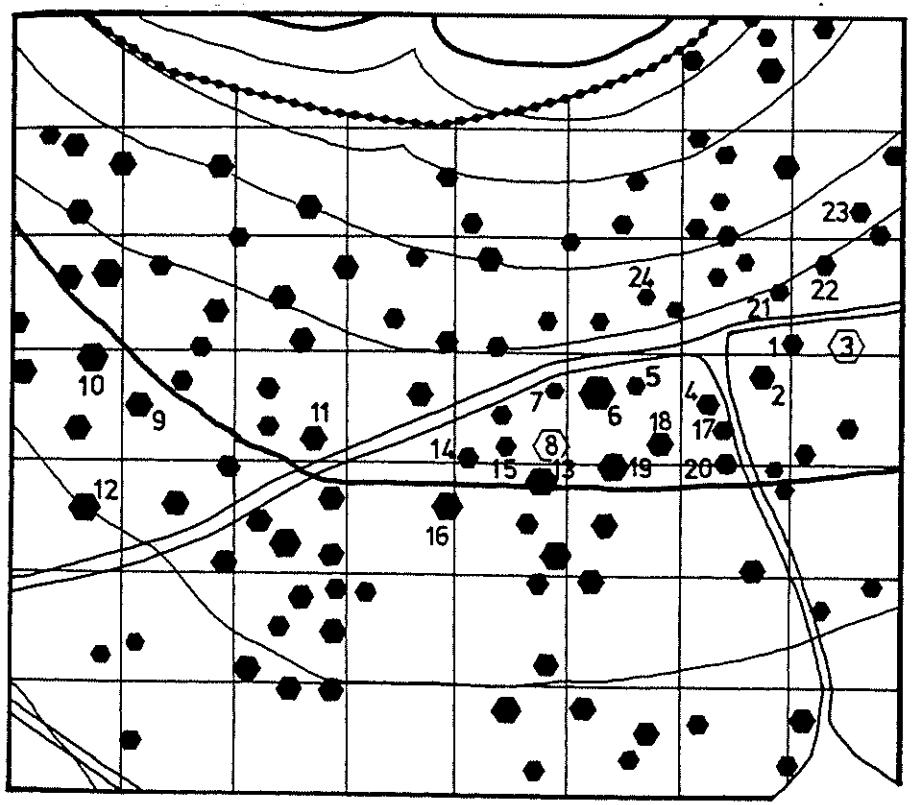
Archaeological research in 1984 provided some exciting results, giving us an opportunity to fit ethnohistorically-derived models of rural village life to the material evidence. Of particular interest are the architectural and artifactual remains. The latter permit a broad-spectrum view of the material life of the village, but did not fulfill the promise of revealing fine-grained information about variability among the families of the village, or about specific activities in their behavioral contexts. This is largely due to the conditions of site abandonment (discussed above); virtually all artifactual material is derived from fill rather than from the context of its use and therefore its explanatory power is limited. The architecture, on the other hand, gives us a good view of intravillage variability, with a range of variation in structure types, sizes, and quality of construction. In spite of fairly homogeneous collection of artifactual remains (in terms of the comparison of "assemblages" on a house-to-house basis), the architecture shows a high degree of diversity in affluence, and also, in Structure 6, provides an example of what is probably a public-function structure (in this case, the tecpan or village headman's house; Evans n.d.b.).

Thus, while the lack of architectural evidence has generally been a chronic problem for interpretation of Aztec period life, here at Cihuatecpan structural features are crucial pieces of evidence. Obviously, the

Figure 211



A. Housemound Density on Cerro San Lucas, by Hectare



B. Housemounds on the South Slope of Cerro San Lucas
(Each grid cell = one hectare

artifactual evidence from the village will offer insights into the social, economic, and ritual life here, but the limitations imposed by scarcity of contextually sound artifactual data must be made clear.

The following discussion of the finds at Cihuatecpan, begins with a look at the architecture, then turns to a general view of the artifactual remains, with an interpretation of the chronology of the site based on the ceramic sequence.

2. ARCHITECTURE

> It is unfortunate that when we want to speak of Aztec architecture, we must be guided by the old Spanish chronicles rather than by its material remains. Not a temple or a palace . . . escaped brutal and systematic destruction at the hands of the proud conquistadors or sacrifice to the missionaries' religious zeal (Heyden and Gendrop 1973:257).
>
> Little is known of the domestic architecture of the Aztecs immediately before the Spanish Conquest of Mexico on the basis of archaeological investigation (Robertson 1977:11).
>
> Of the common habitations we know very little (Margain 1971·90).

The lack of material evidence of architecture of the Aztec period has long been noted, and a major contribution of the Cihuatecpan project is information about its buildings. This discussion of site architecture will encompass the distribution of houses over the slopes of Cerro San Lucas, the nature of architectural features, and the interpretation of variation in architecture.

Distribution of Housemounds within Cihuatecpan

It is clear from the map of housemounds (see Figure 210) that they are distributed over the entire circumference of Cerro San Lucas, and that there is some fairly strong clustering, with the density of habitation on the south slope being much higher than elsewhere (the clustering is graphically illustrated in Figure 211) Some adjacent housemounds seem to form deliberate groupings (eg., #4 and #17; #34, #35, and #36), possibly sharing a common plaza, but houses were not arranged in contiguous patio groups of separate apartments, such as were found at Teotihuacan, at Tula (Healan 1977), or are depicted for some sections of Tenochtitlan (Calnek 1974). Each of the houses at Cihuatecpan forms an integrated unit of rooms, often internally linked by hallways and an interior courtyard.

The variation in density of houses around Cerro San Lucas brings up the question of whether quality of architecture covaried along these spatial lines; that is, is there a gradient of architectural quality here, with small, poorly built houses on the north slope contrasting with the affluent dwellings in the village's center? Based on evidence gathered in the process of mapping the site, the answer is a qualified yes. Mounds on the north side of the Cerro are smaller, with less rubble and artifactual debris. However, this area also shows the effects of more severe erosion and greater destruction by plowing, so we would expect disproportional destruction of archaeological evidence. The question of a qualitative spatial gradient can really only be addressed by extending the sample of excavated structures to include houses all around the Cerro. Structures 9 and 10 are several hundred meters away from the most densely settled area, and display

features of good quality architecture - columns (10), extensive use of cut stone (9) - thus demonstrating the persistence of such traits on the edge of the core of the site.

Let us now consider some of the features with characterize the structures at Cihuatecpan, and their distribution.

Features of Architecture

Sample: Of the 206 mounds at the site, nine were excavated, revealing the remains of more than eight structures (plus another constructed feature, Operation 3, the reservoir or jagüey). These were Structures 1, 2, 4, 5 West, 5 East (very fragmentary), 6, 7, 9, and 10. East of these excavations uncovered virtually the whole structure, where possible, and tested rooms down to sterile tepetate. Figure 212A depicts these structural remains in a highly simplified fashion, permitting ready comparison of the size and layout of these buildings, and Table 85 summarizes the traits considered.

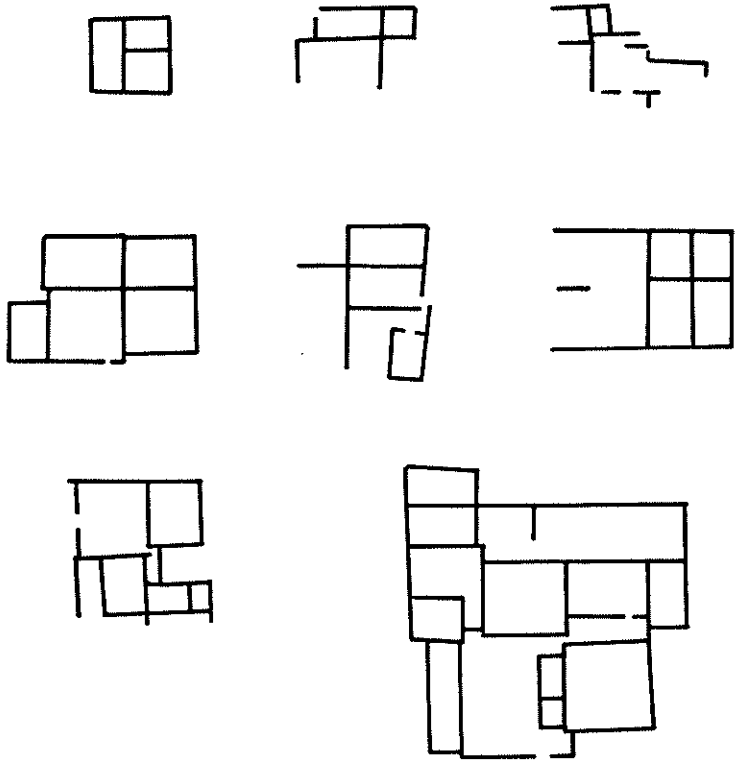
Orientation: In the Aztec period, houses featured unroofed entry courtyards, where many of the daily activities of the household took place. The Nahuatl word for this type of courtyard is *quiahuac*, and it denotes a semi-public space. The logical orientation of the quiahuac would be toward the southwest, to take greatest advantage of natural heat and light (and the fact that they were walled would ensure the household some privacy and also serve as a windbreak). This sensitivity to the natural landscape is expressed at Cihuatecpan in the orientation of entry rooms of the structures (see Figures 213, 214B, 215-217), all between 30 and 50 degrees west of south.

Another aspect of architectural sensitivity to landscape relates to slope, and in the following section, on house plans and layout, this is discussed in regard to the multi-level aspects of these structures. Ideally, a house at Cihuatecpan would place the courtyard downslope (taking advantage of natural downslope drainage to channel water and trash from the rooms to the courtyard, and then outside), and take advantage of the climate at the same time. Seen from the perspective of house layout and comfort, it is no wonder that the south slope was the most densely occupied area of the village. Since these houses are all on the south slope of Cerro San Lucas, the entrance to each house was downslope and sunny, and these factors worked together well.

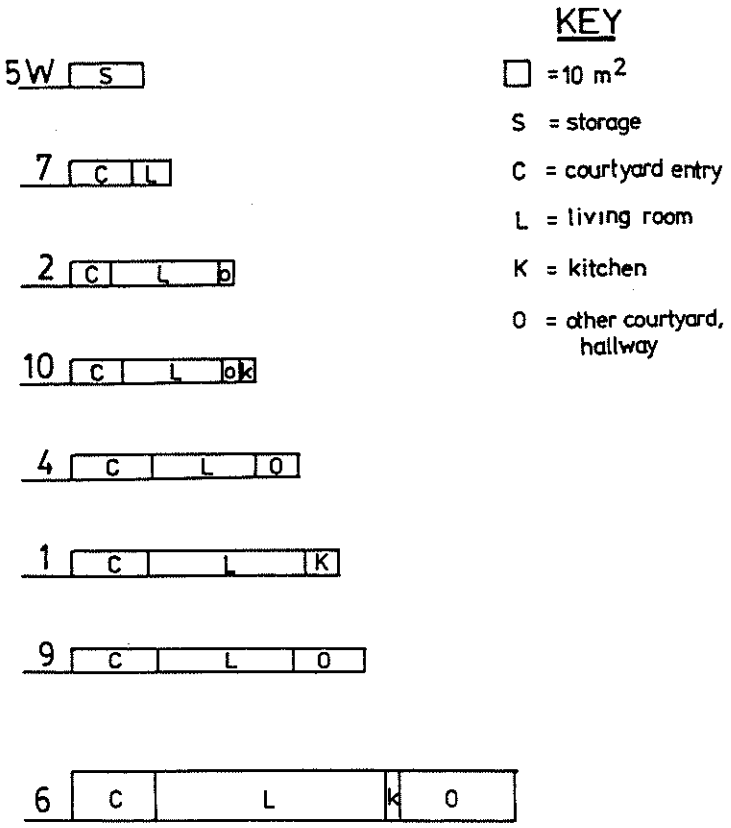
Plan: The structures at Cihuatecpan display a diversity of plans as shown in Figures 213, 214B, 215-217, suggesting that individual and family taste and choices determined the layout of the house and its special features Describing a Moche V village in the Moche Valley of Peru, Bawden notes that although considerable diversity in affluence among houses was obvious, they followed what appeared to be a single structural type, a main room with raised benches, a kitchen, and one or more storage rooms (Bawden 1982). The Cihuatecpan situation is very different, with highly individualized house plans, all executed within the constraints of location and a limited repertoire of construction media

A glance at the diagram, Figure 212B, comparing structural layouts (also see Table 85) reveals that each structure comprised a varied set of rooms, and though some design parallels certainly exist, nothing here is standardized. Each building is composed of rectangular rooms, constructed in an additive fashion and resulting in a somewhat eccentric exterior design with breaks in the linear extent of exterior walls. Examples of Aztec period architecture excavated by Charlton show similar characteristics (n.d. 1972b). There are, however, some general patterns.

Figure 212



A
Plans of Excavated Structures



B
Comparison of Size and Function of the Various Structures at Cihuatecpan

One of these is that the largest component space (the apparent quiahuac or entry courtyard)[1] of the structure is generally on the southwest side, and has evidence of a exterior doorway in its southwest wall. This was true of Structures 1, Room D; 4, Room J; 6, Room V; 7, Room C; and 10, Room E, (in the other cases, no clear entryway was discernible). Other rooms led off from this entry hall or courtyard. In the case of Structure 6, the pattern is of suites of rooms, on three sides of this courtyard. Structure 1 seems to express a simplification of this pattern, and 4, 7, and 10 are variants of it. At Structure 4, the rooms are clustered on the east side of the courtyard, and another entrance, nicely detailed with a staircase studded with pumice cones, faced the southeast and an adjacent house just downslope (Mound 17).

Another pattern common to the layout of rooms is the use made of the natural landscape, in that each house was a multi-level structure, the levels generally conforming to the slope of Cerro San Lucas (see Plate 141). Floors were made by cutting and filling, and we found that on the upslope side of the room the lowest floor level was at tepetate, or slightly dug into it. The multi-level aspect of house design was often used to aesthetic advantage; in Structure 1, for example, the entry courtyard opened on to three rooms, each at a slightly higher level, reached by a cut stone step under a doorway which was nicely centered along the wall.

The multi-level aspect of these structures was expressed within rooms as well as between them. While a formal doorway divides space into separate rooms, insuring maximum privacy between two adjacent areas, space can also be divided in a less formal way, by introducing different levels into the same room. This means of breaking up the interior space of rooms is accomplished by building platforms or room-length benches (Structure 6's complex of rooms, MNPQ, illustrates the combination of use of steps, doorways, and platforms to divide up space). In these cases, the area of the room is divided up so that the condition of privacy (or lack thereof) is not altered, but functional specialization within the room is encouraged. These factors would suit a small nuclear family sharing a room as a living space, and serve to substantiate (in an impressionistic way) the reconstruction of the Aztec period house as the residence of several related nuclear families, each with its own room and sharing a common patio.

The multi-level room also shared with the house, as a whole, an additive manner of construction. The construction histories of the MNPQ complex of Structure 6 and the adobe platform in Room A of Structure 4 shows shifting relative levels of platform and room floor. It is clear from the MNPQ complex, however, that the room was a multi-level construct from the beginning. While these platforms are generally low and seem more like different floor levels within a room, they resemble the room-spanning benches commonly featured in Maya houses, in serving to provide functionally different areas within a room. Evidence of platforms from Cihuatecpan therefore extends the temporal and spatial boundaries of this

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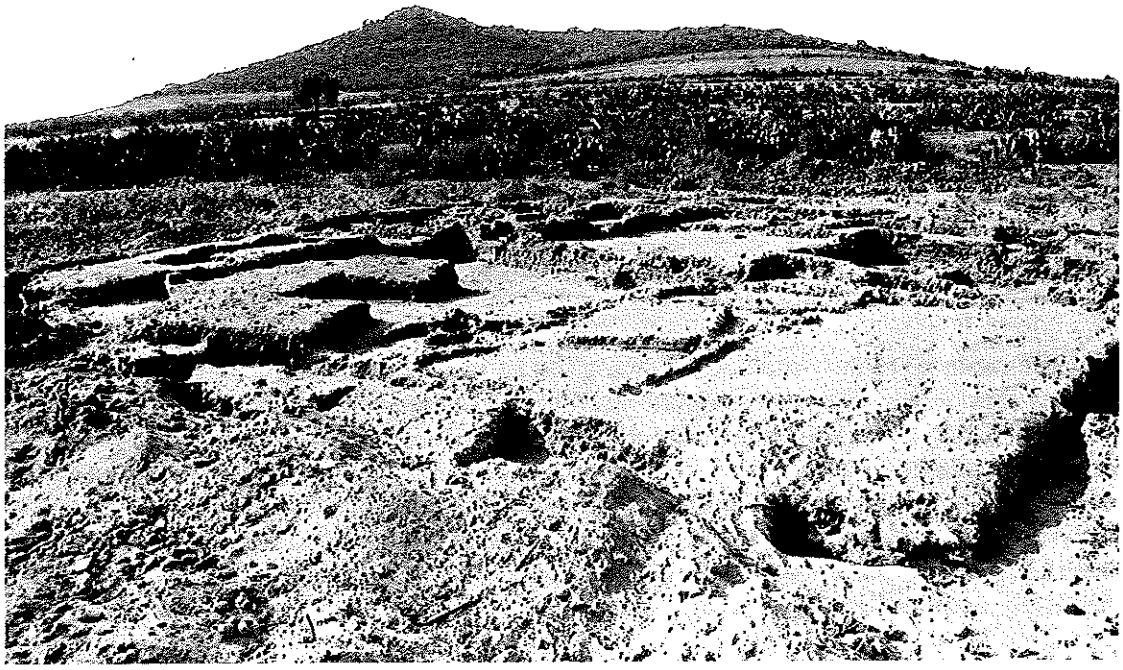
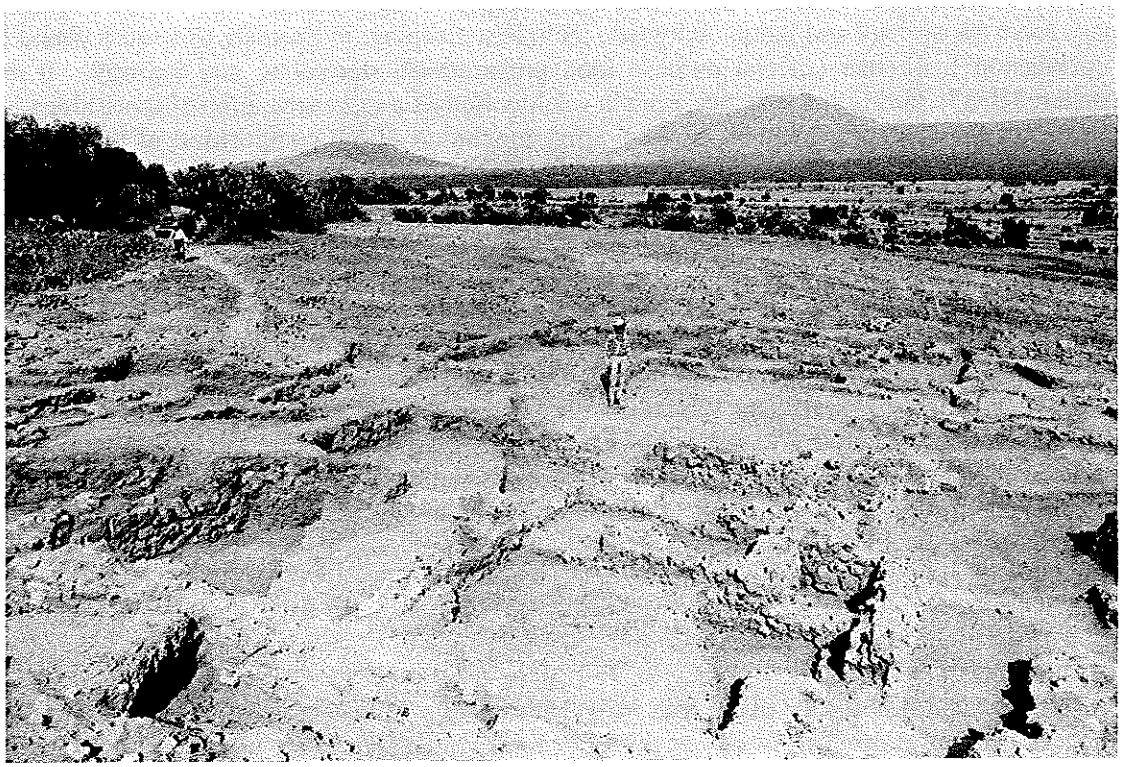
[1]McAndrew (1965) discusses the atrio as a feature of sixteenth century Mexican churches that has a clear native antecedent in the courtyard of public buildings. Although McAndrew is referring to courtyards such as the enclosure surround the temples at Tenochtitlan, the quiahuac as an architectural feature plays a role at all levels of scale, from that of the civic ceremonial center of the capital, through the tecpan (see Evans 1991; Arenas 1611/1982:23 defines "tecpanquiahuac" as "plaza", underscoring its semipublic function), down to the level of the family home. Calnek (1972:109) describes chinampa houses at Tenochtitlan as consisting of "a number of separately entered dwelling units which faced inward on an open patio space."



A Operation 6 Overview from the Southeast



B Operation 6 Close-up of Room Patterning View to the West

architectural feature, adding an arcane but interesting architectural detail to the Mesoamerican cultural trait list.

Size and Complexity: There are various ways to measure and compare these buildings, and in Table 85 are presented measurements of gross exterior dimensions, interior area (combined room space), and number of rooms. Probably the most revealing measurement and the one which reflects most accurately the range of variation, is that of interior area. Of the eight structures measured, the average interior space is 111.93 m^2. Six of the structures are reasonably close to this mean, forming a cluster ranging from 41.83 m^2 through 119.65 m^2 (Structures 2, 10, 4, 1, and 9, and 7). Of the two others, one (Structure 5W at 28.28 m^2) is one-quarter the size of the mean, and the other (Structure 6, at 363.07 m^2) is three times as large as the mean. This huge building obviously skews the average value considerably, and if we ignore both Structure 6 and its counterpoint, 5W, then the mean falls to 84.02 m^2, a value lying between the two median values, which are for Structures 10 and 4.

The count of rooms within a building gives an idea of complexity, particularly when functional diversity is considered. The most straightforward means of determining a room's function is, of course, a careful examination of the artifact assemblages within it. Since such artifactual evidence is uncommon at Cihuatecpan, we infer function mostly from the room's size, shape, details of finishing, and location within the building. The range in number of rooms per building is from 3 (Structures 5W and 7) to 21 (Structure 6; see Table 85).[2] Variation in number of types of rooms, by ascribed function, ranges from one type (Structure 5W) to 6 types (Structure 6). (A comparison of size and functional diversity among structures is graphically presented in Figure 212).

Room types include the following: entry courtyard (the quiahuac, probably unroofed, used for work, play, meetings, meals, rituals, etc.; Lombardo de Ruiz 1973:185), other courtyard (probably unroofed, workspace, sometimes a temascal was located here), family-living room (by this, I mean a roofed, general purpose room for storage and indoor activities, including sleeping; in Spanish, this room would be called the "habitación"), kitchen (special purpose food preparation), storeroom, and hallway. It should be remembered that in traditional societies, even in wealthy houses a strict separation of space along functional lines was not the rule, any more than was a strict regulation of the composition of the household. In general, various rooms would have had multiple uses, depending on the time of day and year and nature of the coresiding group at the point. These types have been determined by the criteria mentioned above (size, shape, location), and by identifying features of architecture, and by the nature of the artifacts found within the rooms.

An example of how the complexity of structures is revealed through their functional diversity is found in the comparison of Structures 5W and 7. Each has 3 rooms, but the arrangement is quite different. Structure 7 looks like a simplified version of the "typical" house pattern, with an entry courtyard and adjacent rooms, but Structure 5W, with no discernible doorways connecting the internally divided spaces, and no orientation revealed in its stone box shape, does not give the impression of functionally distinct rooms opening on to each other. Rather, the rooms seem to replicate each other, and it is difficult to see how this structure could have functioned as a home.

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[2]An interesting contrast can be made with early 15th century Florence, where "the finest private houses seldom consisted of more than twelve or thirteen rooms, while five or six was much more usual" (Origo 1963:228).

Table 85

Comparison of Structures at Cihuatecpan

	Structure								
	1	2	4	5E	5W	6	7	9	10
Feature orientation of entrance	40° W of S	unknown	50° W of S (I)	unknown	unknown	30° W of S	30° W of S	unknown	30° W of S
Site: gross external (m)	10 7 x 16 4	11 5 x 12 75	11 2 x 12	unknown	6 8 x 7	24 x 25	6 8 x 10 2	14 55 x 9 8	9 x 13
combined interior (m^2)	108 76	65 3	92 84	unknown	28 28	363 07	41 83	119 65	
no of rooms/no of room types	5/3	5+/3	8/4		3/1	21/6	3/2	6/2-3	
Architecture quality of wall construction	good	poor	very good	poor	good	excellent	poor	very good	poor
wall surfacing	mud plaster pumice cones	unknown pumice cones	mud plaster pumice cones	unknown	unknown pumice cones	mud plaster whitewash red pain pumice cones	unknown pumice cones	mud plaster whitewash red paint pumice cones	mud plaster
floor surfacing	whitewash	cascajo	whitewash cacajo adobe paving stone paving	unknown	cascajo	whitewash cascajo adobe paving	unknown	cascajo	cascajo
drainage	roof tiles	rooftiles	roof tiles floor drain	unknown	roof tiles	roof tiles floor drain	roof tiles	roof tiles trenches	roof tiles
cooking	hearth	unknown	hearth	tlequil	unknown	hearths tlequil oven	unknown	tlequil	hearth tlequil
benches	round stone	unknown	round stone square adobe	unknown	unknown	square adobe	unknown	unknown	unknown
other						burial poss temascales	burial		pillars poss temascal

Basic Features of Construction and Materials: In general, the buildings at Cihuatecpan were of stone, adobes, timber, and packed earth or clay. Walls and floors were finished with other materials, for enhanced practicality or aesthetic value, and other features added to the comfort of the structures.

Foundations and Fill: In the course of sounding the subfloor fill of these structures to tepetate, we came across interesting examples of techniques to insure structural integrity. While some of the wall stubs encountered in such excavations may have represented the partially destroyed wall bases of previous building episodes, it seems clear that the short wide subfloor walls running perpendicular to the front walls of Structures 4 (under Room D) and 6 (under Room S) were designed to stabilize the fronts of these buildings. Some of the wall bases of Structure 6 were significantly thicker than the wall above the floor; along the northwest side of the building, a 20 cm wide "skirt" strengthened the wall base.

Most of the fill of the structures were undifferentiated soil, with varying densities of sherds and obsidian. In structure 4's Room A we came across one rather thick level of fill which was a homogeneous conglomerate of dirt and crushed calcified tepetate, reminiscent of Molina Montes's description of an innovation in the architecture of Tenochtitlan, "a very hard, compact, concrete-like fill" in the last stages of rebuilding the Templo Mayor (1987:105).

Walls: The walls of buildings at Cihuatecpan had masonry foundations, with upper walls of stone and adobes, and packed earth floors (often surfaced with a finishing material). The stone wall bases probably functioned to protect the construction from the effects of drainage from torrential rainstorms (Diehl 1983:95 describes similar construction techniques at Tula). The wall bases were laid on tepetate, or just above it, or, sometimes, in shallow trenches dug into the tepetate. Trenching into subfloor fill in some cases revealed earlier construction episodes, and in other cases, exposed wall stubs that may have been built as structural support members, insuring the stability of large buildings on sloping ground (examples include subwalls under Rooms C and D of Structures 4, and under Rooms L and V of Structure 6).

Our evidence of the construction of upper walls is entirely circumstantial, from wall fall found in the fill of adjacent rooms, but of wall bases we found many excellent examples. From the range of these, I would characterize the typical exterior wall base as being about 45 cm wide, of basalt and tezontle cobbles (15 to 30 cm long), with cornerstones of cut basalt. The range of variation in quality of stone working in external walls was wide. It encompassed wall bases which were entirely of faced or cut stone (the exterior northeast wall of Structure 9, for example). This recalls Hawks's 1572 comment that the "walls of the houses of the Indians are but plain, but the stones are laid so close that you shall not well perceive the joints between one stone and another" (1972:158). At the other end of the quality continuum were wall bases made of rounded cobbles, and the most common were those composed largely of cobbles, with cut stone corners. On Table 85, the quality of walls in a building is judged as excellent if the walls are well built and use a high proportion (up to 30%) of cut and faced stone, judged as good if solidly built of cobbles, with cut stone corners, and judged as poor if no cut stone is in use (see Plate 142). These judgements do not take into consideration the effect of erosion processes, and, of course, there is compounded effect in cases of poorly built walls that are also exposed to damage.

The bases of interior walls were thinner, sometimes less than 30 cm wide. Quality of these was also variable; the highest quality example is the northwest interior wall of the main courtyard of Structure 6, which made extensive use of cut and faced stone. The wall was laid so that bands of projecting cut stones would have formed moldings. This particular wall was then mud-plastered, lime-plastered, and painted red

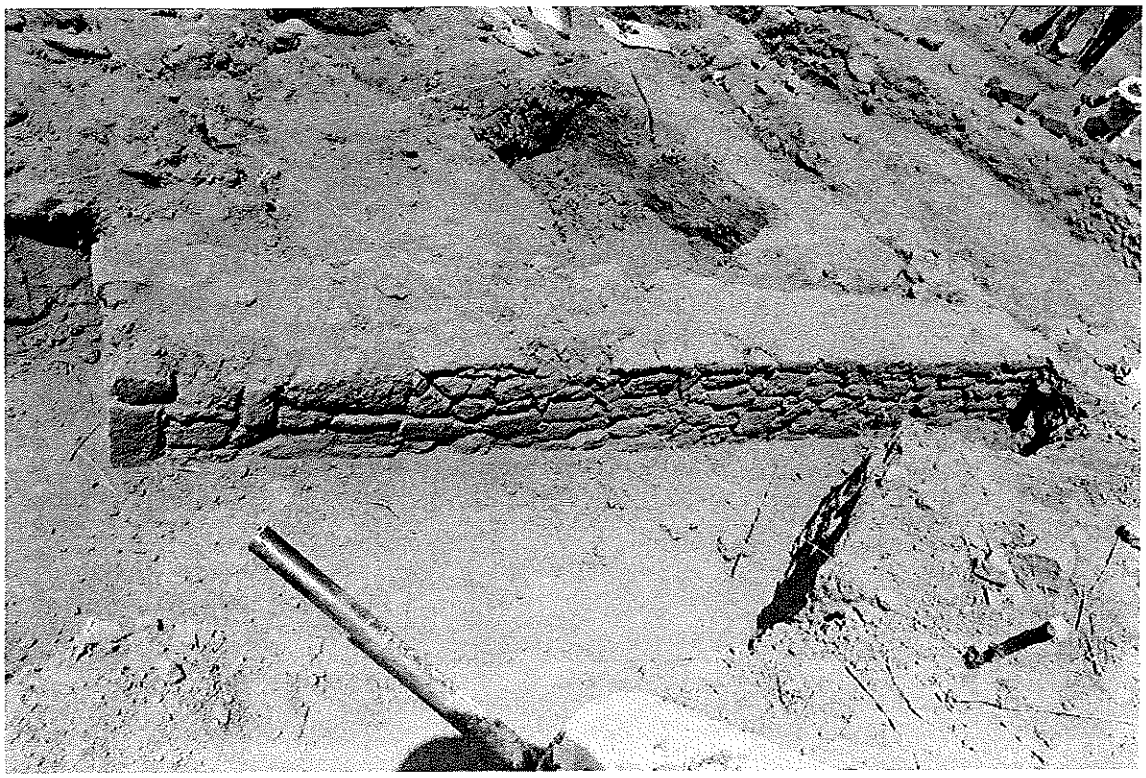
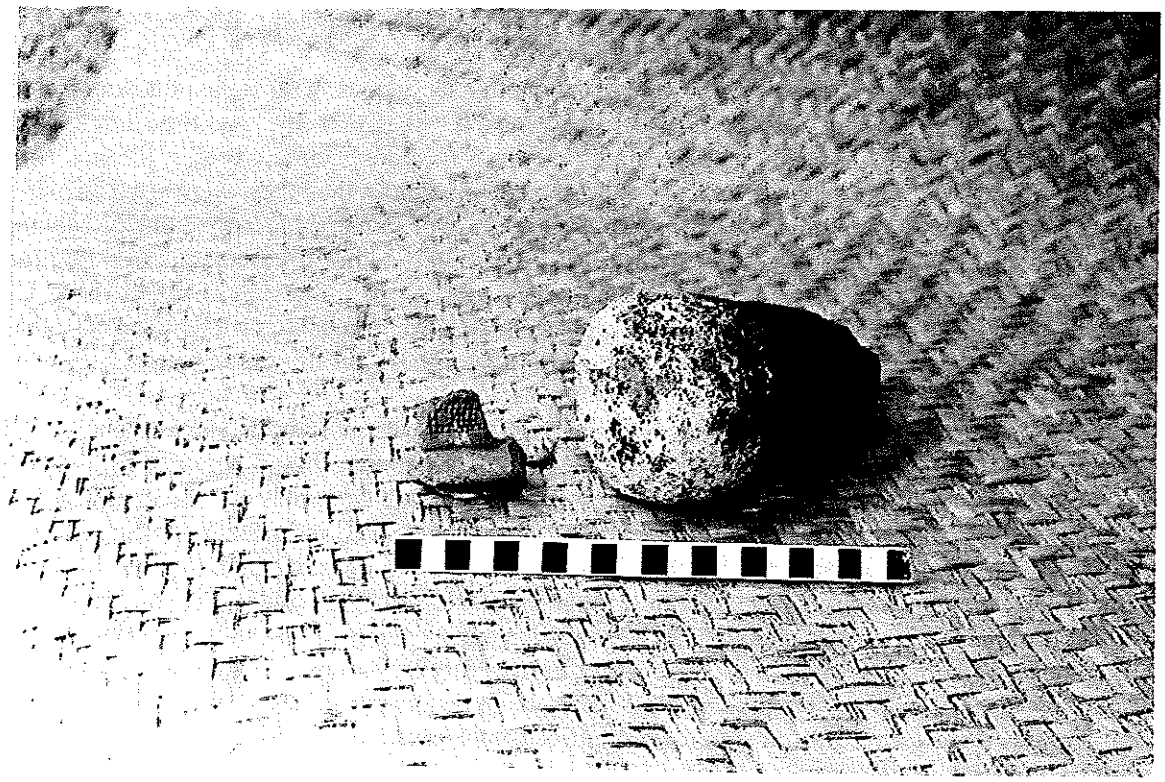


Plate 142
T.A. 81 Operation 9, Exterior Wall (East corner of building, Room B)

Upper walls, above the wallbases, were usual of stone or adobes, with some rare examples of solid walls of adobe conglomerate (the XY wall of Structure 6). It is possible that fired bricks were also incorporated into upper walls, though no examples exist in situ. Fired ceramic bricks, or thick tiles, were widely found at Cihuatecpan in fill and on the surface. I assume that they were used in upper wall construction, though it is possible that they were used in the roofs. Cortes described one of Moctezuma's houses as having "roofs . half covered with tiles" (1986:111) Other fired ceramic building materials include squared, U-shaped drainage channels, and rounded U-shaped drainage channels, both found in interior and exterior fill. These two types are hypothesized to have served two different drainage functions, the former being a floor drain and the latter a roof drain, and these are discussed below

Pumice cones, 20 to 30 cm long and about 10 cm wide, were used as decorative tenons Vaillant, noting their presence in his excavations at Chiconautla, suggested that they functioned to bind the outer facing of the wall to the inner core (1935) (see Plate 143). In situ examples at Cihuatecpan were found studding the side walls of staircases (Structures 4 and 6) and embedded in lower walls (Structure 6). The heads of the cones were daubed with plaster, and these extended 3 to 5 cm out from the wall surface. These are interesting features, possibly frought with symbolic meaning, and their appearance here at Cihuatecpan helps us understand what this meaning might be. Heyden and Gendrop noted that the roof of Santa Cecilia Acatitlan has a "nailhead" motif, a reconstruction based on other sources, including figurine models of temples in which the heads of cones alternate with skulls in decorating the front of a high roof (1973 243-246). These cones are also illustrated in the Florentine Codex version of Sahagun's General History of the Things of New Spain, again as roof decorations (Book 11, drawings 885-888). The cones would have lent

A Operation 4 Southeast Side Tezontle Cones



B Figurine: Temple Model Roof and Construction Cone with Daubed with Plaster

a bas-relief effect to a facade (or staircase wall), unlike the other common circular decorative motif on buildings, the "chalchihuitl" circle (discussed, in terms of its occurrence at Teotihuacan, by Marquina and others, and in terms of its occurrence in ethnohistoric literature on Aztec architecture by Evans, 1991), which was incised into a wall and then painted. As Sahagun illustrates both of these in Book 11 (Earthly Things), they are markers of high status or public function buildings, but not necessarily, in either case, of a particular type of building. This vagueness of symbolic meaning is no doubt due to the phenomenon mentioned by Garza, who says that governmental and religious buildings depicted in the sources are difficult to distinguish from each other in terms of motif, since they share an integrated role of importance to the people (1982:251).

Examples of such pumice cones were found in the excavations in the old aqueduct from Chapultepec to Tenochtitlan, but they weren't found in a behavioral context (Torres and Cervantes 1966). Vaillant's work at Chiconautla, cited above, is often referred to as a "palace" structure, but we must bear in mind that there is no documentation for this assumption, and that our sample of Aztec period houses (large or small) is only slightly less pitifully small than it was in 1935. More examples of pumice cones found in walls are necessary before their full range of use can be understood, but here at Cihuatecpan they are found in residential contexts.

Doorways: As I mention elsewhere, the explicit policies of congregación demanded the dismantling of buildings, so the materials could be used in new construction and also to reduce temptation to return to the old villages. Wood, especially, was a valuable commodity in this area, and wooden parts of houses included the roof beams and structural timbers outlining windows and doors. The removal of uprights and lintels explains, in part, why these buildings have so few clues as to the location of doorways. Granted, the combination of building orientation (the downslope, southwest aspects) and the shallowness of the overburden have combined to make most downslope wall remains less well preserved than the upslope sides. Thus, the side of the room, or building, where we would logically expect to find doorways is also the side most subject to damage. Another reason why doorways are difficult to detect is the apparent practice of having a fairly high doorsill, to prevent dirt or water from entering the building. We do have some cases where the door pattern is clear (the door in the CD wall of Structure 6 is a good example) and others where it can be readily inferred from such factors as cut stone steps or an unusually low part of the wall.

Use of fired ceramic building material of any kind is unusual in prehispanic Mesoamerica. The number of occurrences of fired bricks found at sites is small; the best known examples are Comalcalco (the westernmost Maya site, on the Gulf Coast), Tula, and Tizatlan, in the Tlaxcala region. Since Cihuatecpan had a fairly long post-conquest occupation (probably the better part of a century), it could be argued that fired ceramic building material is a post-conquest introduction, and not representative of Aztec period traditions. I would argue for a prehispanic use of these materials, from several points of view. First, our sample of domestic architecture dating from the Aztec period is so small that to denote a trait as "typical" or not is a haphazard operation, at best. Second, precedents occur, in the general area (in regions adjacent to the northern Basin of Mexico, on either side) for use of such materials. Third, while most of these materials at Cihuatecpan were not found in context, the fired ceramic floor drainage tile in Structure 4 was, and we have no reason to believe that this house was a post-conquest construction (a general discussion of chronology will be found below). Fourth, these fired ceramic materials are standardized only in a very general way, their range of sizes indicating that they were not mass produced according to the European use of wooden frames for shaping many bricks of the same size, a method which later became widespread.

Wall finishing: Of wall surfacing, a few examples remain. Margain states categorically that coating stone walls with mud or other plaster was "a peculiarity common to all Mesoamerican architecture: the rock

was never allowed to display its own color or texture but always received a veneer of varying thickness" (Margain 1971:52). This omnipresent protective wall coating is familiar to us from presentday stone and adobe architecture in the U.S. Southwest, for example; it protects the structure from incursions by weather and vermin. We would assume the basic coating to be mud plaster, and the extent to which lime plaster or whitewash would have further mantled these structures is not known. Remains of mud plaster were found in Structures 1, 4, 6, and 9, and the last two also showed remains of whitewash and red paint. In Structure 9 this was a fragment, but to Structure 6 several rooms gave evidence of this surface treatment, most spectacularly, the entry courtyard, in which at least one wall, stretching almost 10 m, was an expanse of brilliant red. The pigment here is probably derived from iron oxide, widely in use in Mesoamerica because of its cheapness, as well as for ideological reasons (Boone 1985:181) (see Plate 144).

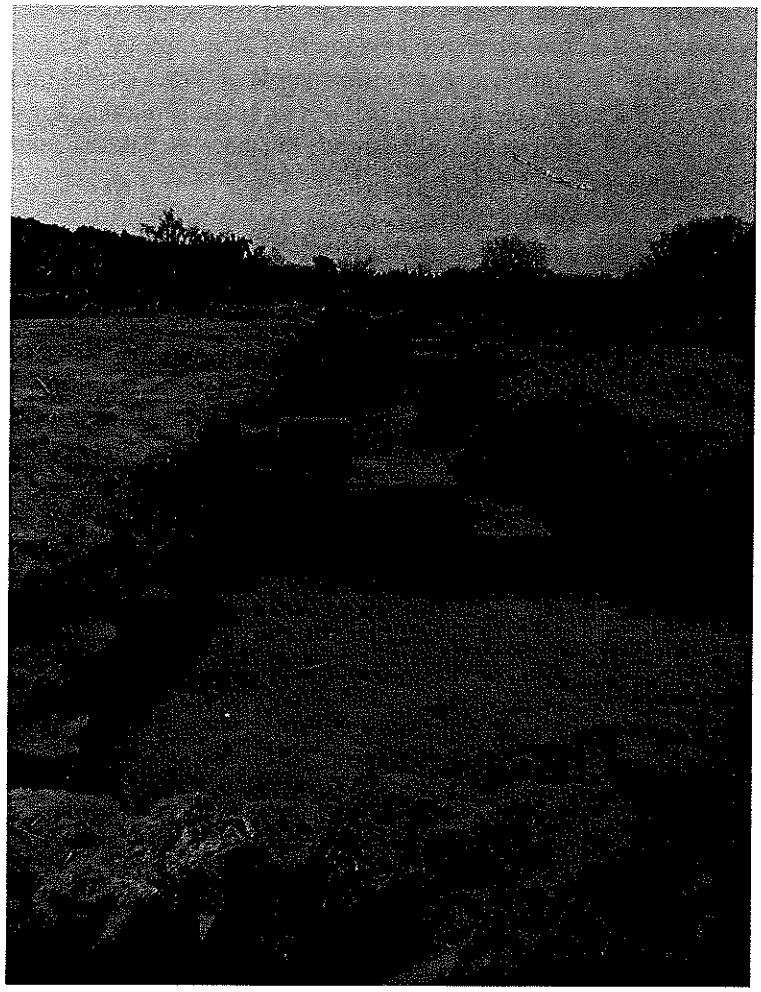


Plate 144
Operation 6 West Wall of the Entry Court

Though we lack archaeological evidence of the upper construction of doorways, the ethnohistoric sources are replete with door depictions. Many are found in the glyph for "house," the Nahuatl calli; as a day sign, a year sign, and a common element of typonyms, this symbol almost invariably shows a doorway

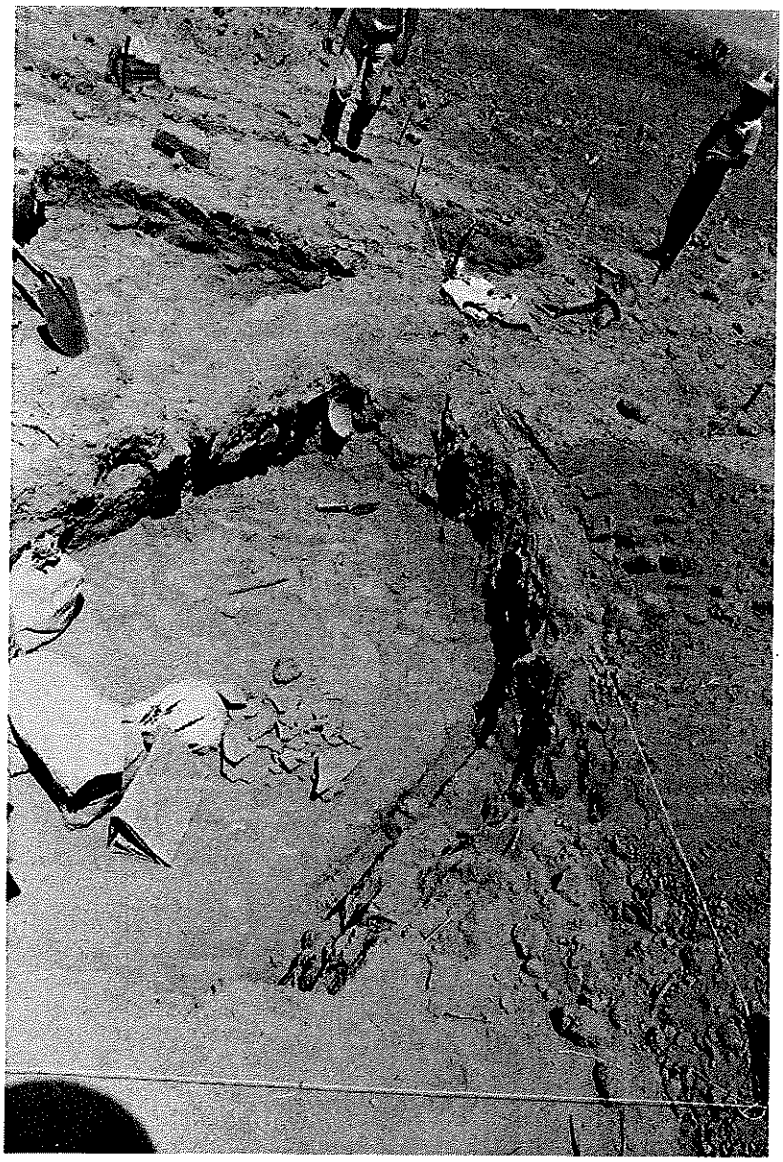
with post and lintel construction, the members usually painted red against the white or beige of the house. The doorways at Cihuatecpan were no doubt of similar type.

Floors: All floors were of packed earth, which was sometimes surfaced with cascajo gravel (grey or pink) or lime whitewash. When these surface finishes are noted on Table 85 it indicates that at least a trace was found, on at least one floor surface of one room. The use of cascajo gravel was not limited to interior surfaces, but also paved exterior expanses of flat surface (such as near Structure 6). There were a few cases of the use of adobes or stone as paving. In the central room of Structure 6, an open hearth (tlequil) was centered against the back wall, and stretching off to each side was band of adobes, installed to be at the same height as the floor (see Plate 147).

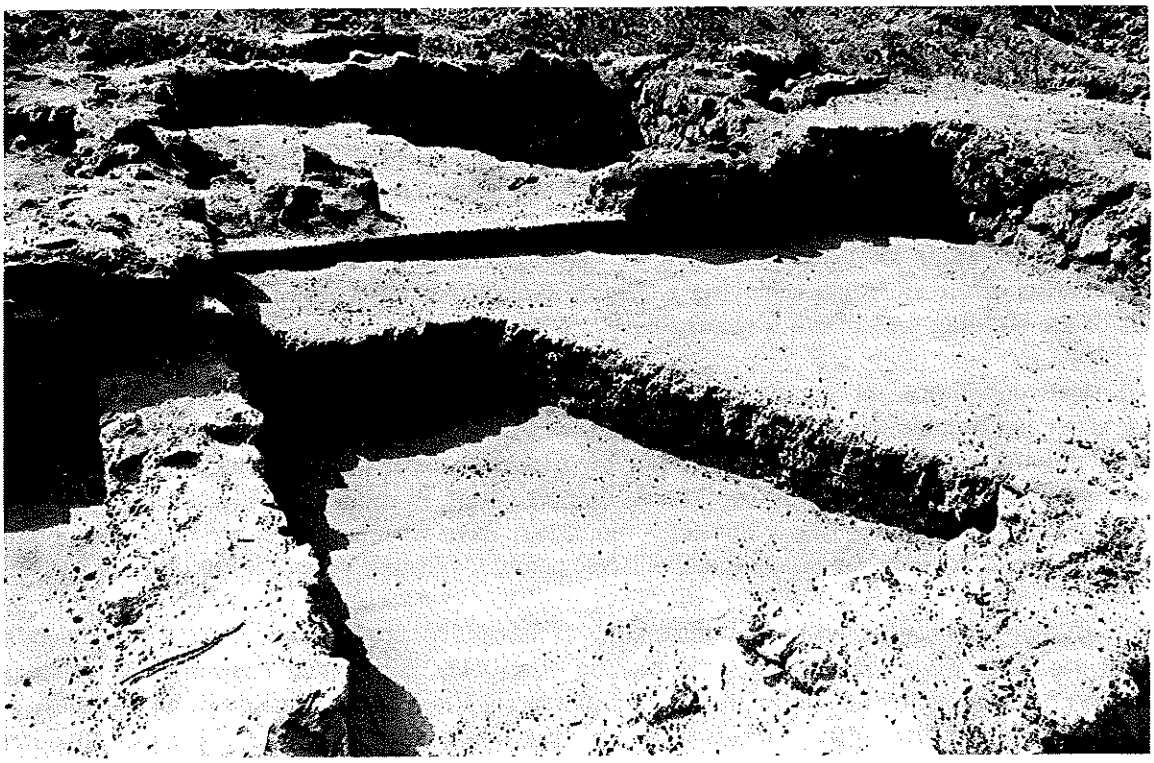
Drainage: In discussing the incidence of fired ceramic construction materials I mentioned the drainage channels apparently used as drains for the floor and roof. An example of a squared, fired brick channel was found in situ at floor level, penetrating the exterior (southwest) wall of Room J of Structure 4 (Other in situ examples of floor drains were the same shape, and served the same function - see Plates 145 and 146, but were made of stone). All are roughly 60 cm long, 20 cm across and 10 cm high. They are formed of two parts: a squared, U-shaped channel and a flat top. Another kind of drainage feature, the trench dug into the ground, was found within the upslope from Structure 9. These trenches were both 12 cm across and 10 cm deep.

Plate 145
Operation 4, Room V, Drain

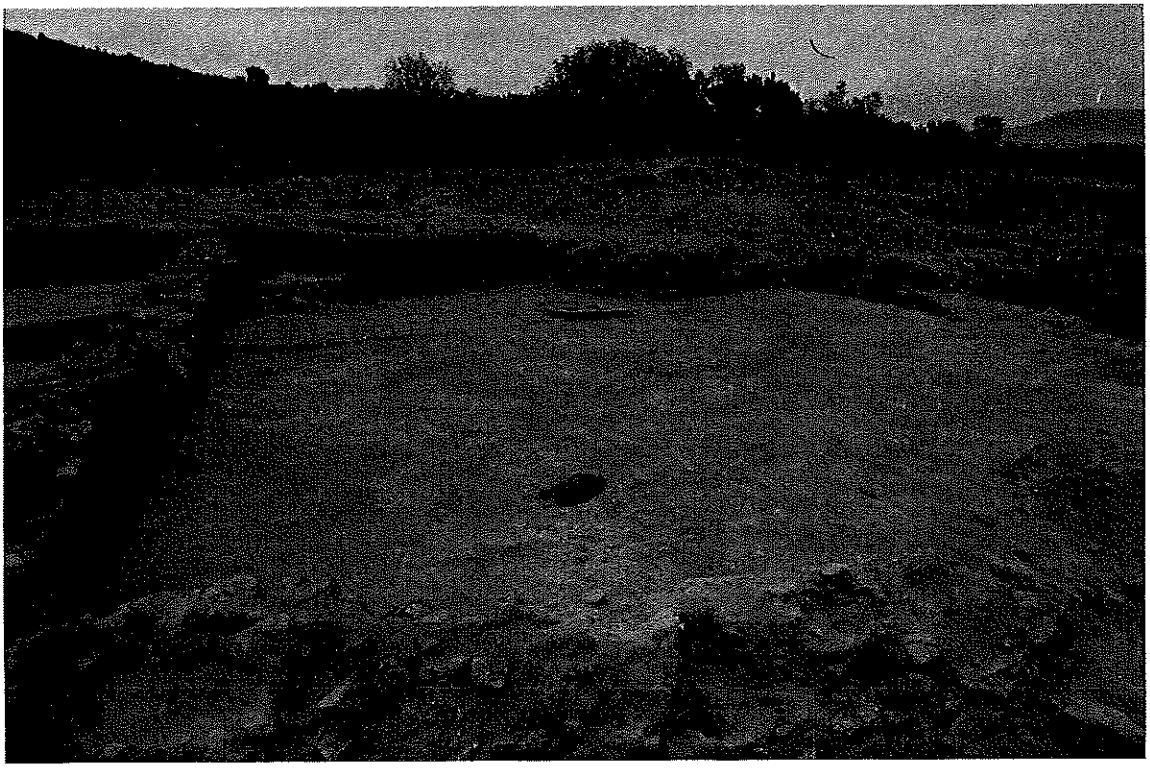
Plate 146



Operation 9, Drain Feature North of Northeast Wall



A Operation 6, Room D and C



B Operation 6, Room L

Roofs: As I mentioned above, the roofs are assumed to have been flat; our only material evidence substantiating this assumption is that of curved drainage tiles which would have been used on such a roof. These tiles were found in the fill of all structures except the fragmentary remains of 5E. There were no in situ examples of these rounded ceramic tiles, which is not surprising since no roofs were found intact. Reasoning from ethnohistoric sources that mention flat roofs in this region (Relación Geográfica de Teotihuacan, Paso y Troncoso 1979) I assume that flat roofs were the pattern here at Cihuatecpan and therefore the use of U-shaped drainage tiles to channel water off the roof make sense. In the central highlands of Mesoamerica, the flat roof was a pole and beam construction, packed with clay with a high straw content (Margain 1971:56). It was slightly sloping, to facilitate drainage, and its level differed over different areas of the structure, achieving a terraced look which must have reflected the variety of floor levels of the building underneath it (Margain 1971:63).

Determination of interior areas that may have been unroofed results from extrapolation from the size of the room and its function. Descriptions of entry courtyards in ethnohistoric sources indicate that these were often unroofed, with awnings used to provide protection from weather (Diaz 1963:215). We found one example of the possible use of columns to support a roof, in room E of Structure 10. Flat, circular stones, symmetrically placed inside this entry room, may have been used to support wooden uprights, or columns of plastered stone (as Sisson found at Aztec period Coxcatlan Viejo; Sisson 1973) (see Plate 148).

Cooking Facilities: There were three kinds of features for cooking, and these also no doubt served to heat rooms as well: hearths made of a circle of cobbles, rectangular hearths made of cut stones (tlequiles), and an oven made of stone and mud mortar (in Room T of Structure 6, and possibly a post-conquest feature, see Plate 149). In addition, portable heat sources, braziers, were widely used, judging from the ubiquity of fragments of these large vessels. Rooms designated as kitchens were smaller than living rooms, and had ash lenses at floor level; we assume that general food preparation took place in these small workrooms, and in the courtyards, but the food was commonly heated (or reheated) over braziers in the various living rooms and the quiahuac. Millon cites such use of these "portable ceramic stoves . . . placed directly on plaster floors" at Classic period Teotihuacan (1981:203).

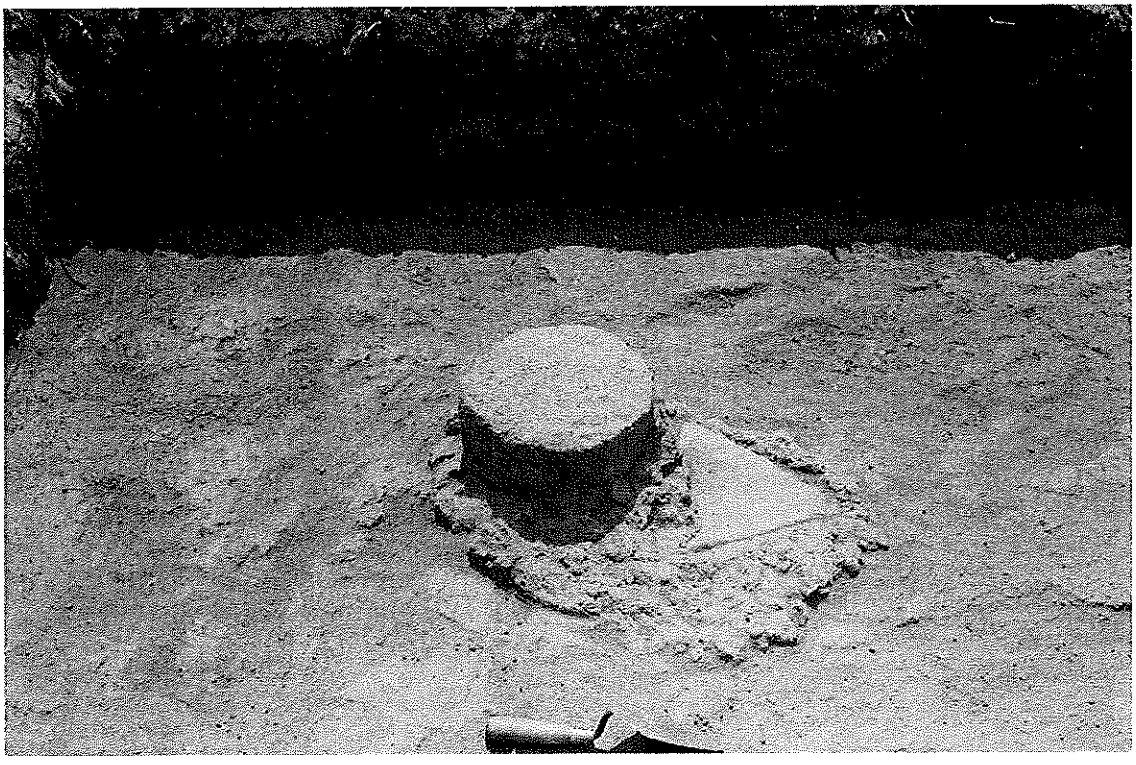
Benches: In the discussion of the layout of the house I noted that some rooms were built in split levels, possibly engendering functional diversity within the space of the room. There are examples of other constructed features which seem to resemble furniture rather than spatial divisions, though I use the term "furniture" in a very guarded fashion, agreeing with Aguilera that the furniture of prehispánic times was low, light, movable, and limited in terms of type and examples (1985:15). Rybczynski makes the point that world cultures are divided between sitters and squatters (1987:78). Modern western culture hunkers squarely down on the site of the sitters, and most of the rest of the world, including prehispanic Mesoamerica, are squatters. Even the nobility, the rulers of Mesoamerica, sit on mats; the mats are elaborate, with backs, but they are not chairs.

This habitual squatting notwithstanding, the furniture of houses at Cihuatecpan reveals a new dimension of Aztec period home life. Most interesting of all are platforms made of adobes, hardly more than 10 cm high, and roughly 2 x 2 m (see Plate 150A). Examples were found in Structures 1, 4, and 6, in rooms conforming to the "living room" type. The size of these features indicates that they would have served nicely as beds, though low platforms could, of course, serve many purposes.

We also found several examples of round stone benches. Investigation of these revealed that they were solid and bore no traces of ash or other evidence of other use. Found in unroofed courtyards in Structures 1 and 4, these round features were only a few courses high, their upper courses apparently having been destroyed by the action of the plow (see Plate 150B).

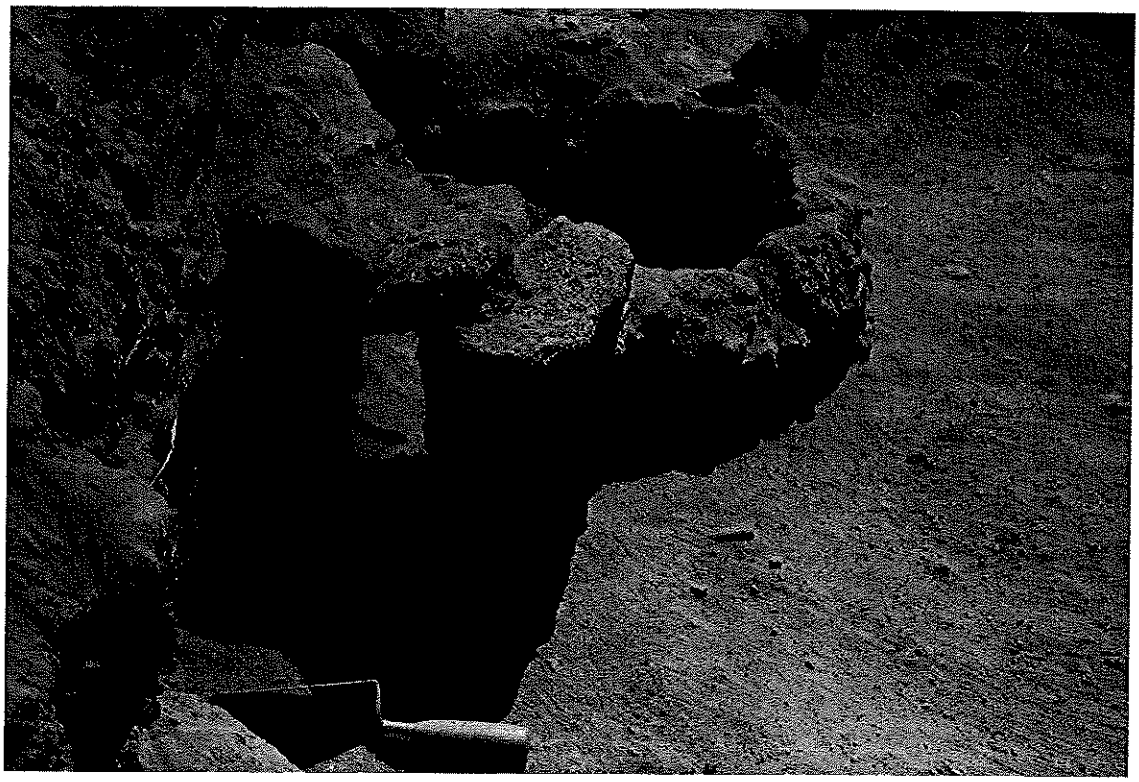
Plate 148

A Operation 10, Room E, Entry Column

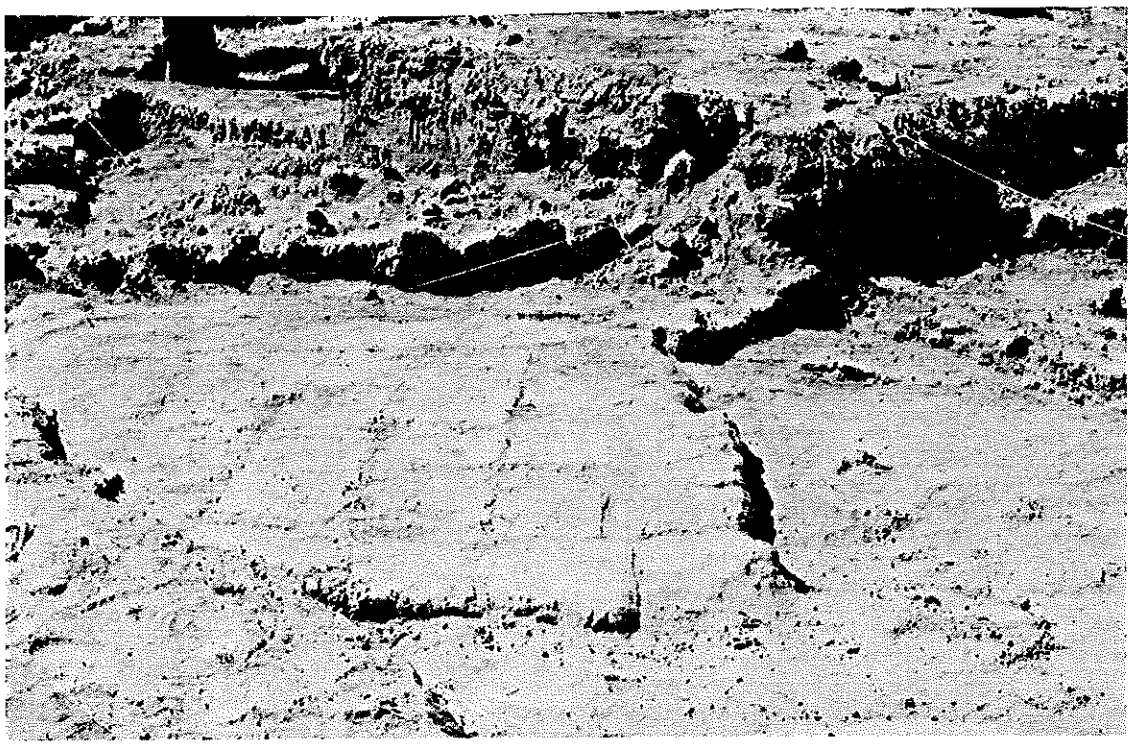


B Entry Column Closeup

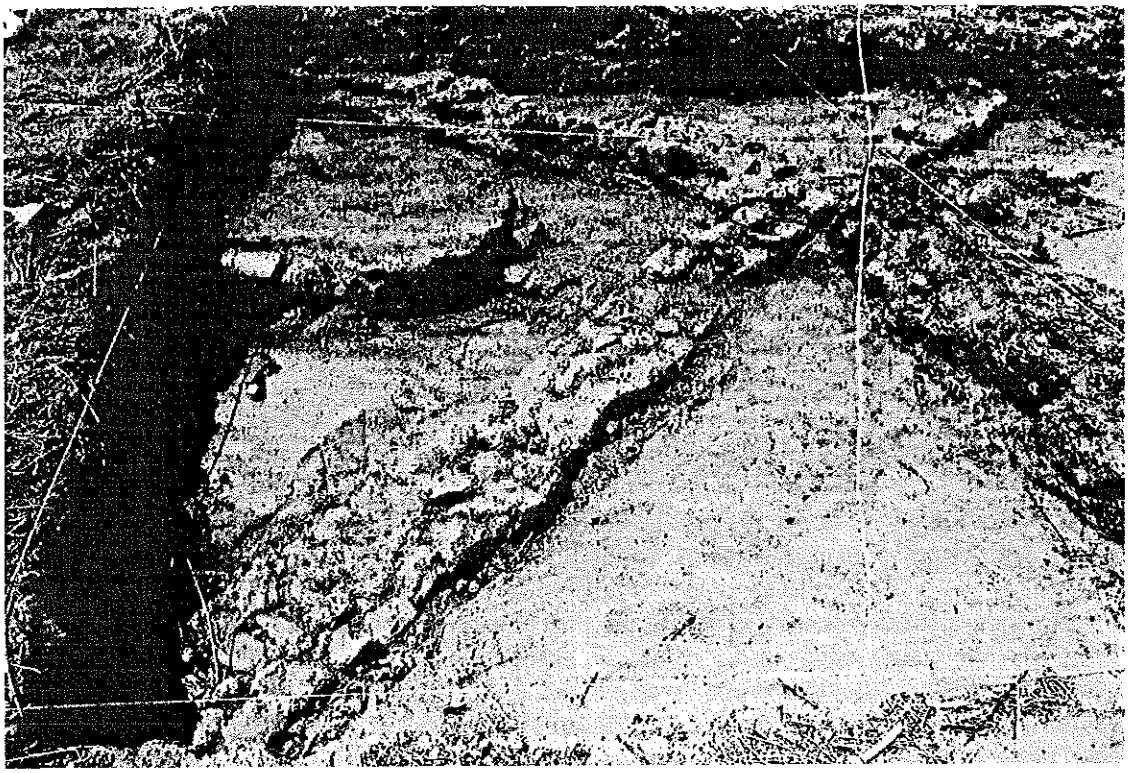
A Operation 6, Room T, Oven, Partially Excavated



B Operation 6, RoomT, Oven Excavated



A Operation 1, Room B, Closeup of Adobe Bench



B Operation 1, Rooms C and D, Round Feature in Room D

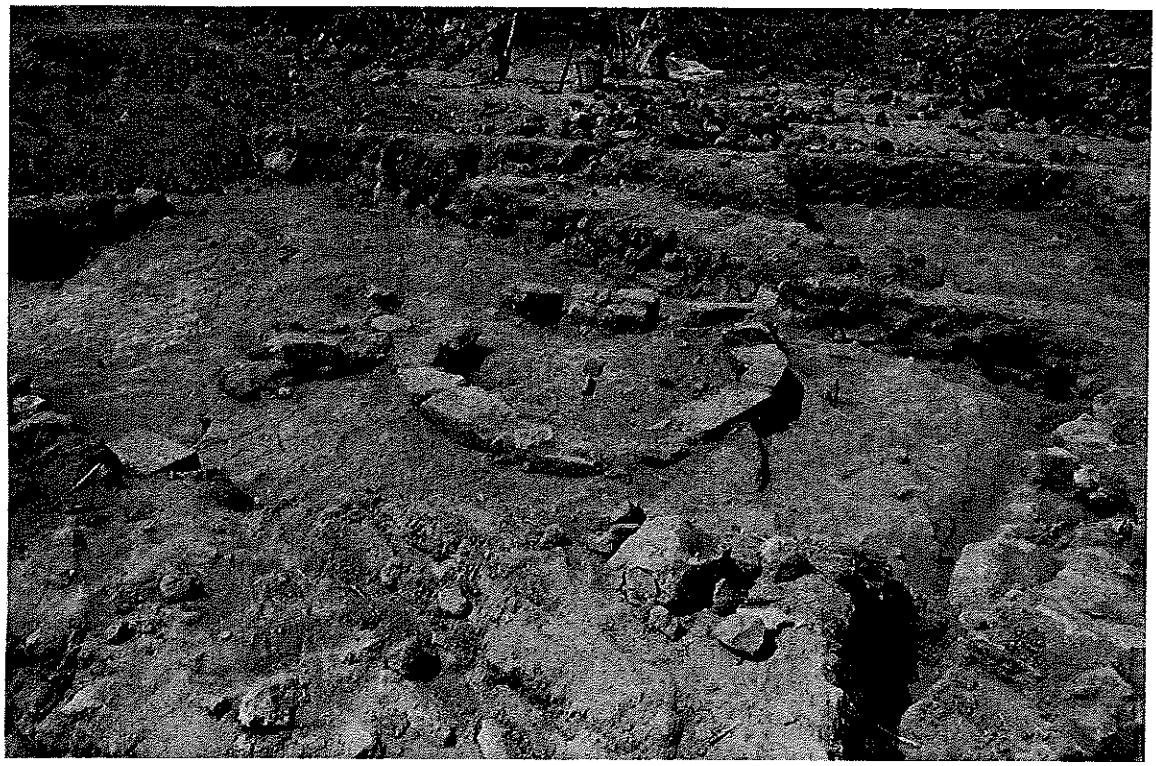


Plate 151 Operation 6, Room A, Temascal

Temascales: The sweat-bath was a regular fixture of Aztec period life, a necessity for health and well-being. Every village had at least one, and in fact the usual pattern was probably for many houses within the village to have attached temascales. Prototype temascal forms are found in ethnohistoric sources (Codex Magliabechiano 65; in Costumbres, Fiestas, Enterramientos y Diversas Formas the Spanish annotator expresses revulsion at the temascal, strongly suspecting it of being a locus of lewd behavior), and ethnographically known cases (see Cresson 1938). While no remains at Cihuatecpan correspond exactly to known plans of temascales, three "problematical round features" in Structure 6 and 10 could well have served this function. These were found in the courtyards of these buildings, and consist of circles of cobbles. The two examples in Structure 6 measure 1.43 m (Room A, with cobbles one course high, and an opening in the northwest side) and 1.92 m (Room K, a ring of cobbles three courses high, ca 36 cm), and in neither case could we detect evidence of use for storage or as an oven or kiln (see Plate 151) At Structure 10, a quarter-round arc of stones one course high, resting on the floor, had a projected diameter of 1.75 m Again, there was no evidence of other use, but this building was very damaged by plowing

The operation of a temascal requires an enclosed space into which heated rocks can be brought, and then doused with water. Our problematical round features could have served this purpose.

Middens· Common sense dictated to me that trash middens would be located on the downslope sides of houses, most convenient to the entrances, but we found trash piled up against all sides of these structures, and sometimes the trash probably originated at another house, upslope. Such a "midden" would have resulted from natural causes despite its cultural content, but it is difficult to determine how much deliberate human action was involved in creating some of these seemingly illogically placed trash

concentrations. Sometimes garbage was obviously not thrown very far beyond the entrance to the building (Structure 1 is a good example). Characterized by fairly dark soil and a high density of sherds and other debris, the middens that were clearly constructed by humans were particularly valuable, in light of the lack of meaningful behavioral contexts within the structures. The midden on the downslope side of Structure 2, for example, revealed such treasures as our only reconstructible Chalco-Cholula ware vessels, an omichicahuaztli (musical notched rasp, made from a human thighbone), and a copper sewing needle.

Burials: Ethnohistoric sources indicate that the normative mode of disposal of the dead in this cultural setting was cremation, but there were standard exceptions to this, for example, those under 17 years old, or those dying a violent death, or succumbing to incurable disease (Harvey 1981:159). The final resting place of the remains of such individuals may have been a formal cemetery or under the floor of the house. We found two interrments: one was an adolescent, probably female, in the fill of Room L of Structure 6, and the other was an infant, found in Structure 7.

Interpretation of Variation in Architecture

The set of architectural features we have considered is shared by the structures in the classically polythetic manner, making it impossible to produce a simple rank ordering of buildings which yields the same hierarchy on all bases. While Structure 6 is by far the largest, most complex, and most elaborately finished of all, the ranking of the six other houses is less easy. A glance at Table 85 (a compilation of various data from the structures) and Figure 212 shows how such factors as size and complexity are broadly, but not invariably, linked.

This variability is a critical element of the view of Aztec rural life presented by Cihuatecpan, because it reveals the rich complexity, and individuality of the lives of these villagers. We see clearly that these families, living in one community, had quite different levels of access to resources, different standards of living, and were able to choose to invest their resources in style as well as substance, consuming conspicuously as well as facing basic matters of subsistence. Pumice tenon cones, expanses of adobe parquetry on the floor, walls of carefully cut and matched stone, surfaced with plaster, and then painted - these are features which have no impact on the soundness of the building, on the house"s ability to provide adequate shelter. They are features which express pride of ownership and sense of style, and reveal dimensions of the Aztec period rural peasantry that have been heretofore ignored because no evidence of them existed.

3. ARTIFACTS

Artifactual material has been categorized and classified in a general way; the materials coming from these excavations will provide the basis for further study in the future. In this section, I briefly describe the finds by categories of material: ceramics (vessels, spindle whorls, figurines, other items) and lithics (chipped stone and ground stone artifacts, and other items).

Ceramics

The lack of good behavioral contexts at Cihuatecpan was a nagging problem, demanding that interpretations of lifeways be based on extrapolations and inferences from a range of data sources (architecture, artifacts in fill and in middens, ethnohistoric descriptions of lifeways). As if in compensation for this lack, the ceramic artifactual evidence displayed characteristics which enhanced the interpretive process. Aztec period ceramic vessels are of high quality ("often ringing like porcelain when struck" Sanders etal. 1979:471), and show chronologically sensitive stylistic variations. Chadwick notes that the Black on Orange types "are indebted to the Mixteca-Puebla tradition from which they seem to evolve" (1971:252). Another common decorated ware is "Aztec polychrome" or "Texcoco Black on Red", and this and "Chalco-Cholula" ware have fine and often complex designs on the exterior of simple bowls Séjourné 1983 illustrates the former). Other important ceramic artifacts are spindle whorls (which constitute virtually our only material evidence of textile production) and figurine fragments (our most important source of information about the ritual life of the villagers).

Ceramic Artifacts for Food Preparation and Service: Almost 100,000 sherds were collected in the course of excavations and surface survey (see Tables 87, 88). Our preliminary analysis of these has consisted of sorting them into "fine" and "utility" wares, the former being serving dishes, and the latter, cooking and storage vessels (this basic dichotomy is the same as Parsons' and Whalen's they use the terms "service" and "utilitarian" wares (Whalen and Parsons 1982:386). Within these broad categories, further distinctions are made. Utility ware sherds were sorted, where possible, by functional type. Fine or service ware sherds were sorted by manner and style of decoration. It must be noted that this preliminary categorization is not intended to be the final analysis of the sherd collection, but merely to reveal general characteristics of the different vessel forms and wares in use at the village. In this discussion, frequencies are presented in Tables 87 and 88. The ratio of fine to utility wares from excavated contexts in structures was consistently 1:2. Excavations in Operation 3, the jagüey, collected sherds in a 1:3.85 ratio, reflecting the practice of filling water transport/storage vessels there. Sherds from surface collections (Mounds 11-24, and much of the material from Operation 8; see Table 86 showed a radically different pattern, with fine ware sherds must more abundant than utility. This is perfectly understandable, given the much higher visibility of fine wares (as Table 87 shows, the fine ware material from Operation 8 and Mounds 11-24 is overwhelmingly [96% to 99.5%] decorated).

Fine Wares: Nearly half the fine or service ware sherds were from plain orange vessels, and the rest were from decorated vessels (painted, slipped, glazed, or embossed). We include in this general summary sherds from Texcoco Fillet ware, which is "probably ceremonial in function" (Parsons 1966:454; see also general description in Parsons 1966:253-256); these vessels are probably incense burners. Another functional type that is not strictly a "service vessel" included in the sherd counts of Table 1.3 is the molcajete or grinding bowl, in design and size identical to other footed bowls in Plain Orange or Black on Orange, but having a scored base. Molcajete sherds are included with other Plain Orange and Black on Orange serving vessels in the general count, and with Black on Orange bowls and plates in the breakdown of types.

Chronological Markers: Black on Orange design types serve as a crucial set of chronological markers. Work done by Parsons (1966), Parsons and Blanton (1971), Whalen and Parsons (1982), Vega Sosa (1975) and Charlton on these types was invaluable for our preliminary breakdown of designs. I wish to emphasize that the analysis of Cihuatecpan materials presented here is preliminary, that we analyzed only molcajetes, dishes, and plates, and that we lumped these vessel forms together, by design type. Therefore, although significant numbers of vessels with exterior Black on Orange designs were found, their description

and analysis is a project for the future.

The Black on Orange sherds from molcajetes, bowls, and plates whose designs could be categorized amounted to 30% of Black on Orange sherds. The chronological breakdown of these types by Parsons (1966) groups them into three broad time periods (dates of archaeological phases are from Sanders etal. 1979:93): Aztec 2, the Zocango phase of the Teotihuacan Valley sequence (ca. A.D. 1150 to 1350-1400), Aztec 3, The Chimalpa phase of the Teotihuacan Valley sequence (ca. A.D. 1350-1400 to 1500), and Aztec 4, the Teacalco phase of the Teotihuacan Valley sequence (from ca. 1500 into the Colonial period).

Molcajetes A and B, and dishes and plates A, B, and C date from the Zocango phase (A.D. 1250-1400; Parsons 1966:310-311). Our sample includes 147 sherds from this phase (8% of known Black on Orange types; see Figure 1.7). Another feature of Zocango phase pottery is the solid conical supports on dishes and molcajetes, and these occurred in frequencies double those of the later, slab type (see Table 87).

Chimalpa phase diagnostics include molcajetes of types C, D, and E, and dishes of types D and E (Parsons 1966:315-316). Types D and E account for 79% of identifiable Black on Orange sherds (see Figure 1.8 for examples). The final phase, Teacalco, includes molcajetes and plates of type F, and dishes F, G, and J (Parsons 1966:319). These types account for 13% of this sample.

Glazed wares are, of course, post-Conquest, and 1.4% of fine ceramic sherds were glazed. Most of these came from Structure 6.

It was noted earlier that the dating of these phases is approximate, and that Charlton has interpreted the later ceramic phases as extending well into the Colonial period in the rural parts of the central highlands. At the time of excavation; the phasing of Black on Orange types of Parsons and Charlton gave us our strongest guidelines on site establishment and occupation.

Extrapolating only from the Black on Orange ceramic analyzed so far, and from knowledge of the presence of other diagnostics such as Mazapan wares and glazed ceramics, I would posit a Late Toltec time of establishment of this village, with greatest occupation in the fifteenth and sixteenth centuries, and scattered occupation in the seventeenth century. The ceramic evidence coincides with the general historical model of population movements and settlement patterns in the Late Postclassic. Pioneering Cihuatecpanecos may have been displaced agriculturalists from the area north of the Basin of Mexico (perhaps, in turn, descended from displaced agriculturalists who migrated out of the Basin at the end of the Classic period). Since no structures of Mazapan date were uncovered (see the discussion above), the size of this original population cannot be determined. However, the widespread presence of Aztec 3 type "D" argues for the greatest extent of population (roughly 1,000 in the village's 200 houses) in the fifteenth and sixteenth centuries.

It should be emphasized that, beyond generating these very broad generalizations, relative proportions of various Black on Orange types cannot be used to calculate relative population sizes of the phases under study. Fully two-thirds of identifiable Black on Orange sherds were of type "D", and it may have been manufactured in greater quantities than others, and for a longer stretch of time, overlapping the temporal extent of the other types.

Utility Wares: Sherds from utility vessels accounted for 69% of the sherds collected. As Table 88 shows, of the 67,727 sherds in this sample 9796 (14%) could be categorized as to vessel type. The vessel types under study here include comales (griddles, accounting for 45% of identifiable types), basins (large, heavy-duty bowls, 18%), jars (28%), braziers (portable heat sources, 3%), and salt-production vessels (6%;

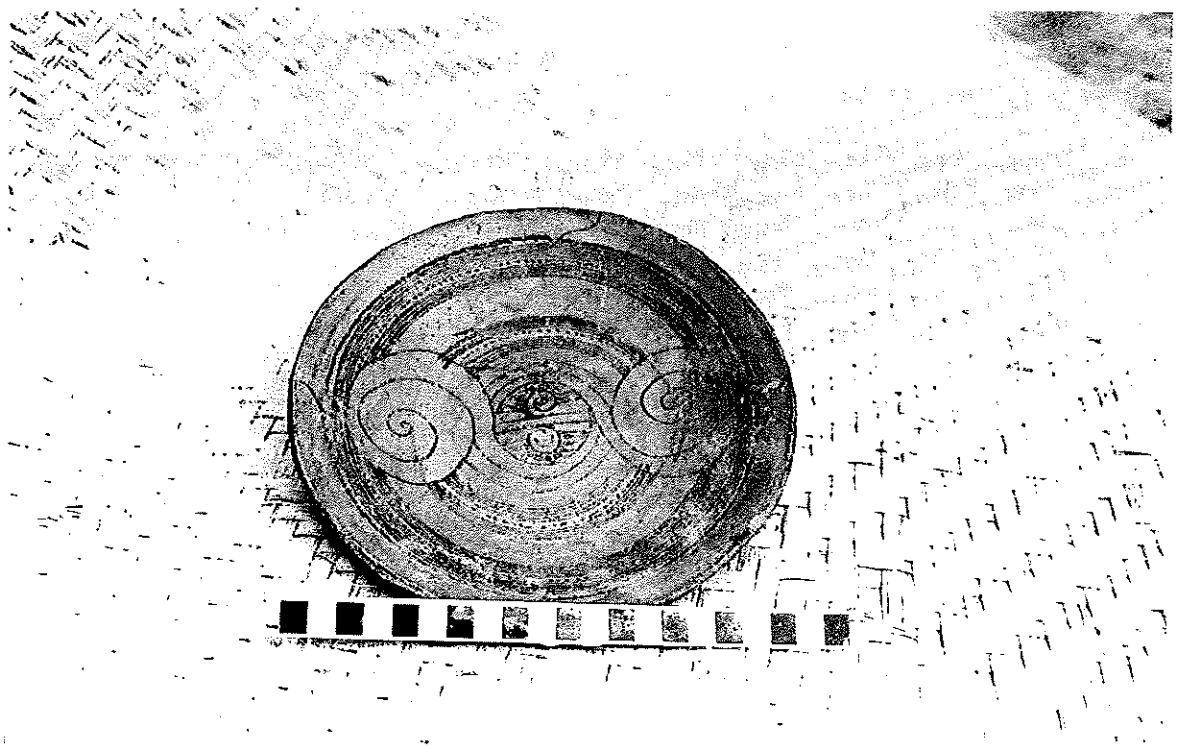


Plate 152 Operation 6, Plate Black on Orange III from a Cache

these are sherds from Texcoco fabric-impressed pottery, which may have been used in rendering, trading and storing salt; see Parsons 1966:247-249, and Charlton 1969 for discussions).

The frequencies of these types, like those for the fine wares, include both body and rim sherds that could be identified; these frequencies are offered to facilitate comparison of one building with another, rather than to indicate values useful in further interpretation (such as the delineation of broadly defined areas of activity of one sort or another). The high proportion of sherds from comales, for example, probably results from their distinctiveness (body sherds are completely flat, roughened on one side and very smooth on the other), which makes them easy to recognize and categorize, rather than from an actual preponderance of this type. On the other hand, it is more difficult to distinguish the body sherds of jars from those of basins, and more of the sherds from these vessels were classified as "unknown."

Utility wares were often used for cooking, and for soaking dried corn in water mixed with lime, and these activities are evidenced in charring on the outside of vessels, and a calcium coating within them (some vessels had both). These features were found on 7335 sherds (see Table 88).

Other Ceramic Artifacts: Worked Sherds: Sherds were sometimes reused in antiquity; their edges would be abraded away, and these worked sherds would assume a rounded shape, and served as markers, or, with a hole drilled through, as pendants or spindle weights. Ethnohistoric sources attest to the popularity of the patolli game (something like parcheesi), and though no examples of game boards were found at Cihuatecpan, some worked sherds may well have served as markers for this or other games. Some worked sherds were perforated, and may have functioned as spindle whorls or wheels on toys. Sherds from many different kinds of pottery types were worked and reused; no pattern of preference for a particular type, even for decorated wares over plain, emerges from the sample of 82 worked sherds.

Spindle Whorls: These ceramic artifacts served to weight the spinning staff as the yarn was wound onto it. There are two basic types: large, probably for spinning maguey fiber, and small, probably for spinning cotton. In a study of modern maguey utilization by the Otomi, Parsons and Parsons found substantiation of this assumption, in the direct relationship between spindle whorl size and thread thickness (1985:35c). Charlton (personal communication) notes the establishment of wool production in the upper Teotihuacan Valley in the Colonial period, and suggests that the small spindle whorls may also have been used to produce wool thread and yarn. Both large and small whorls display a wide variety of styles, and M.H. Parsons has studied the significance of this stylistic variation in terms of the extent of trade in these items. The 133 spindle whorls found in 1984 divide 41%:59% between the large and small types.

Figurines: A total of 480 figurine fragments were found (and no complete figurines were recovered). These include fragments of both hollow rattle and plaque types, and represent a large range of sizes (from a body a few centimeters long to two fragments - a face and a foot - that were life size). Like the spindle whorls, the figurine collection from Cihuatecpan represents an important trove of information, and further analysis will provide us with insights into the religious life of the villagers.

Seals: Fragments of these were found in Structures 1, 6, and 10. The designs are stepped-fret, and a possible floral design (similar to Enciso 1953:52,vii, an example from Texcoco). The function of the seals is something of a mystery. Their purported uses include the application of designs to pottery, to clothing, to paper and to the skin, but Field (1967) points out that the evidence is very fragmentary, and they may have served as markers of signature or ownership.

Cones: Small ceramic cones (no more than 6 cm long, and 2 across) were found in Structures 6 and 7 (Plate 154). Several had skeletal heads incised into the broad end. Their function is not known.

Lithics

Obsidian: At Cihuactecpan, there are two sets of obsidian data: the tools used by the villagers in their everyday life, and the waste byproducts of the local tool manufacturing industry.

The two obsidian detritus dumps at this village are striking in their extent and the quantity of waste they contain, and indicate the economic importance of exploiting this key local resource. The 692.98 kg of obsidian we collected from Operation 8 (see Appendix C) are waste materials from the production of grey-black obsidian bifaces and scrapers.

Another set of obsidian artifacts were excavated from the other research operations. A total of 11,310 pieces of obsidian were recovered, with grey-black to green in a 3:1 ratio. This important collection will be further studied as to the proportions of tools of various kinds, in the two types of obsidian. We assume the sources of these to be local outwashes (for cobbles) and the Estetes mine 3 km away for the grey-black (this is T.A. 79, discussed in Spence 1985:83, and Spence and Parsons 1972), and the Pachuca mines in Hidalgo (for the green obsidian) but source analysis should be performed on a small sample to confirm this (see Cressey 1975 for a full discussion of the kinds of obsidian in use in the upper Valley during the Aztec period, and the tools made from them).

The counts of obsidian per operation include tools, tool fragments, flakes, and debitage. Much of the green obsidian was in the form of prismatic blades, while the grey-black was used for a much wider range of tools, including prismatic blades (both "flake blades" and "fine blades" [Spence 1984:91], but not very many, because this local obsidian has a fairly rough texture; see Fraunfelter 1972:31 for the geophysical

reasons), bifacial artifacts, end scrapers (these were useful in the production of maguey sap), and cones. There were also several small earspools found in the plowzone of Room J of Structure 6. Another special find in this structure was a plain orange bowl on the adobe paving of Room L, containing 21 fine grey-black prismatic blades (Plate 153).

Concerning projectile points, our findings concur with those of Cressey, who studied obsidian from sites in the upper Teotihuacan Valley, and says that "No other tool type is so poorly represented within the sites of this study," comprising only 0.11% of the sample (1975:103). At Cihuatecpan, several projectile points were found.

Other Chipped Stone: Several small (3 cm diameter) chert flakes were found on survey and in excavation. Otherwise, all chipped stone material was obsidian, an overwhelming ratio in favor of the local, and readily available material. In contrast, 34% of the chipped stone artifacts at Aztec period Xico, in the southeastern Basin of Mexico, were of chert (but <1% of chipped stone artifacts at Huexotla; Brumfiel 1986:253).

Quartz: The symmetry and scintillation of quartz crystals hold a strong aesthetic attraction for people of many cultures, though the function of these crystals in Cihuatecpan village life remains a mystery. In Aztec times, quartz was included in luxury tribute as gemstones already set in jewelry (Berdan 1987:164-165), but crystals were not categorized as fine stones, being sold with the lesser stones in the marketplace (Berdan 1987:177). Cook de Leonard notes that quartz occurs naturally in various forms in the Teotihuacan Valley, but that little is known of it archaeologically from the Classic period (1987:214). The crystals found at Cihuatecpan were recovered from flotation samples, and are the size of grape seeds, and almost 80% of the 63 specimens come from Structure 6. At present, I could only speculate as to their use, and I include a functional attribution from the U.S. Southwest, Barnett's assumption that crystals "are though to have been carried by medicine men in their pouches or bundles as charms of good fortune, and were employed in their practices, or other sacred rites. They were supposed to have been symbolic of light, and . . . were also considered by some to be symbolic of fire" (1973:46).

Ground Stone: Manos and metates were found as fragments, and not in great numbers. I attribute this relative dearth to the same circumstances of gradual site abandonment that account for other lacunae in the artifact record. Manos and metates conform to Tolstoy's (1971:288) expectations for this period: the latter are quadrangular and usually tripod and the former are loaf-shaped, sometimes "dog-bone" style from hard use. Stone bowls and stone beaters and pestles were also found.

Scrapers of fine-grained basalt were common at the site. These are shaped like modern hoes, but apparently did not serve that purpose (most agricultural implements were probably fire-hardened wood; see Rojas Rabiela 1984). These scrapers probably were used to process maguey leaves into fiber. Soustelle suggested this use in 1937, and Parsons and Parsons' recent ethnographic work among the Otomi included successful experimental use of a prehispanic tool of this kind to process fiber (the Otomi today use a tool of similar shape, made from a metal leaf spring from an automobile; Parsons and Parsons 1985:17,26). The abundance of these basalt tools at Cihuatecpan underscores the importance of maguey in the local economy.

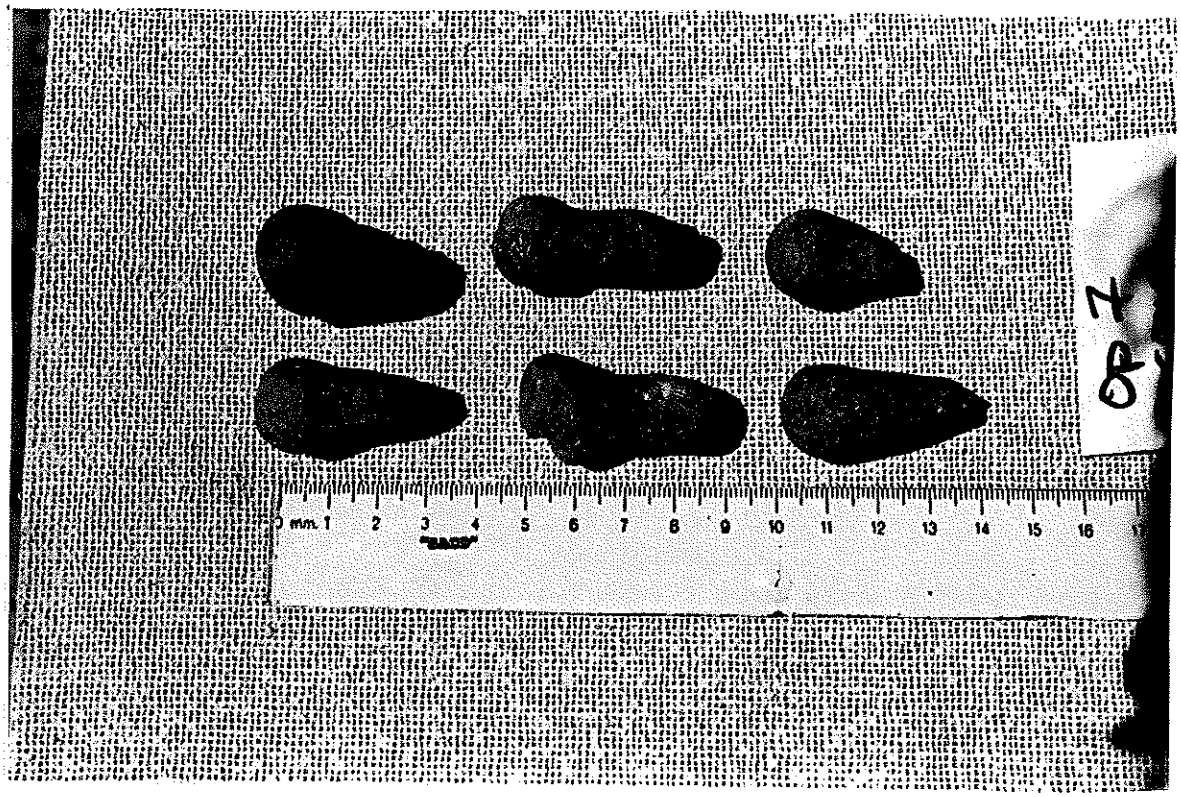
Plate 153 Operation 6, Room L, Obsidian Blade Cache

Metal: We found a number of postconquest metal artifacts (bottle caps, coins, part of a spur) and one probably preconquest item, a copper needle (described in the discussion of Structure 2). Preconquest copper was worked by hammering (Noguera 1971:268), and Gamio lists copper artifacts among those things manufactured in the Teotihuacan Valley in preconquest times, but the material was imported, and the needle was no doubt not of Cihuatecpan manufacture (Plate 155A).

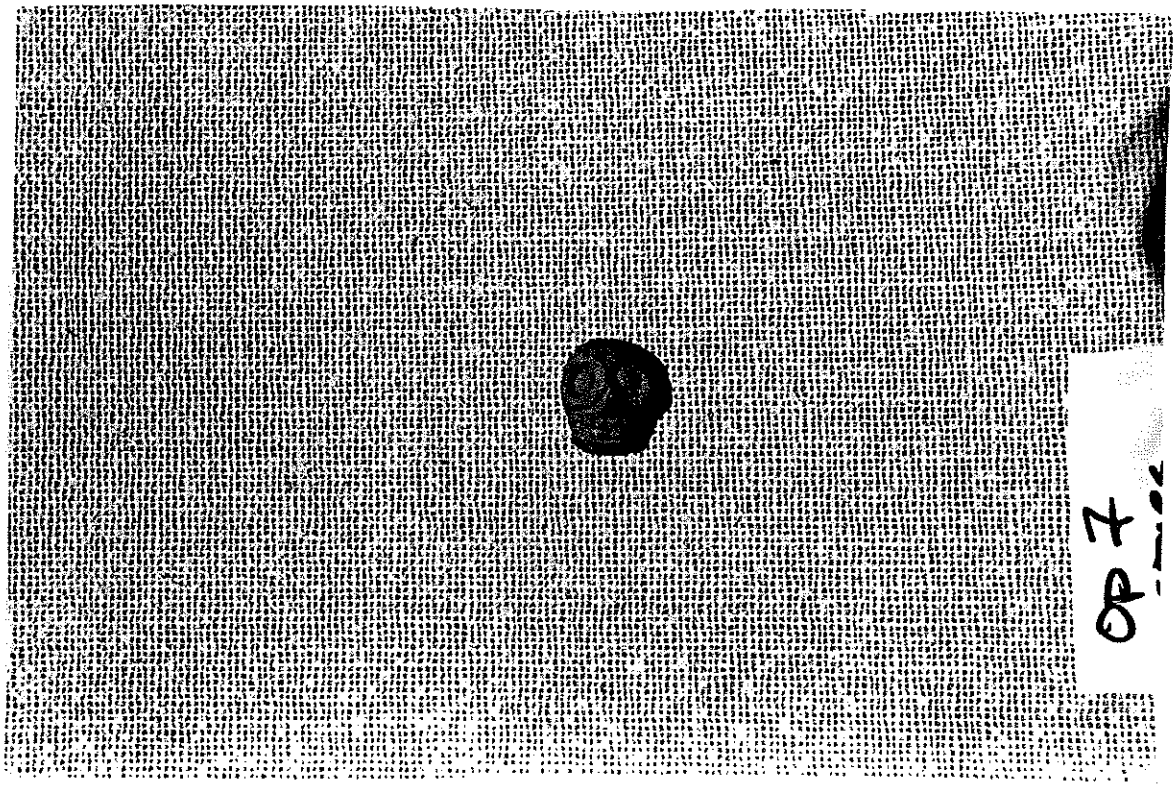
Bone and Shell

Several fragments of bone needles were found, but the most exciting bone artifact (Plate 155B,C) was the omichicahuastli, a musical rasp. Several small whole shells were found, but the only shell artifact was a nacre ornament (only about a cm across), possibly a small nose ornament.

Plate 154 Tezontle Cones

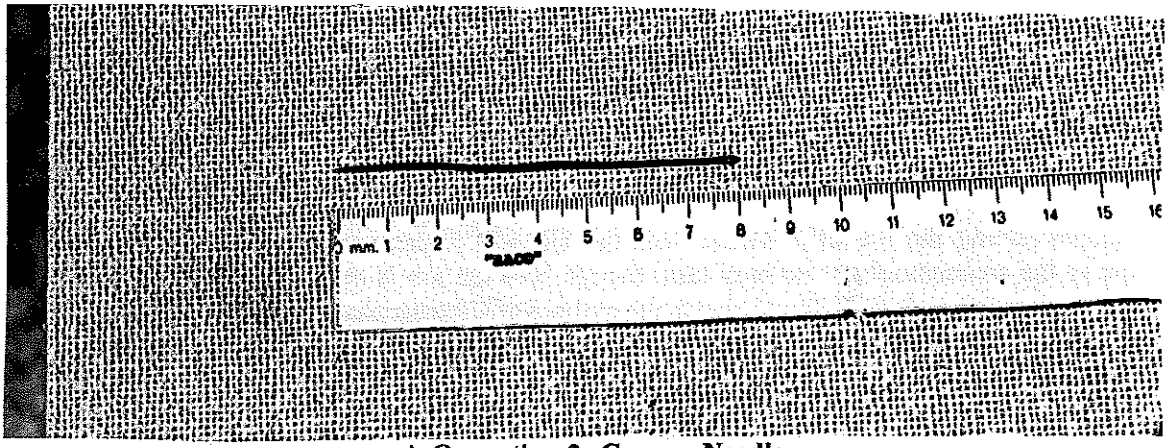


A

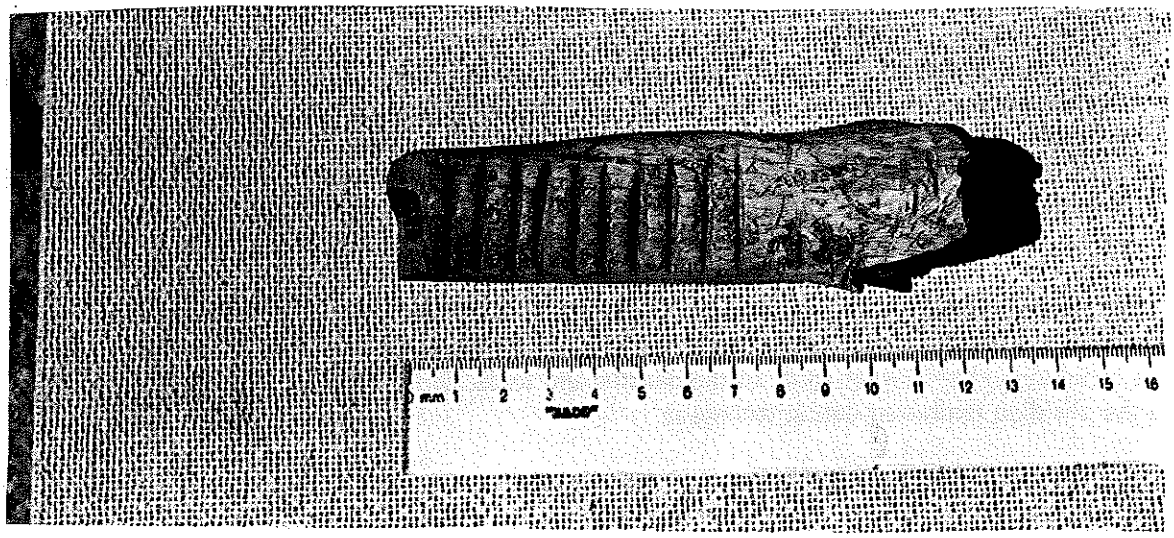


B

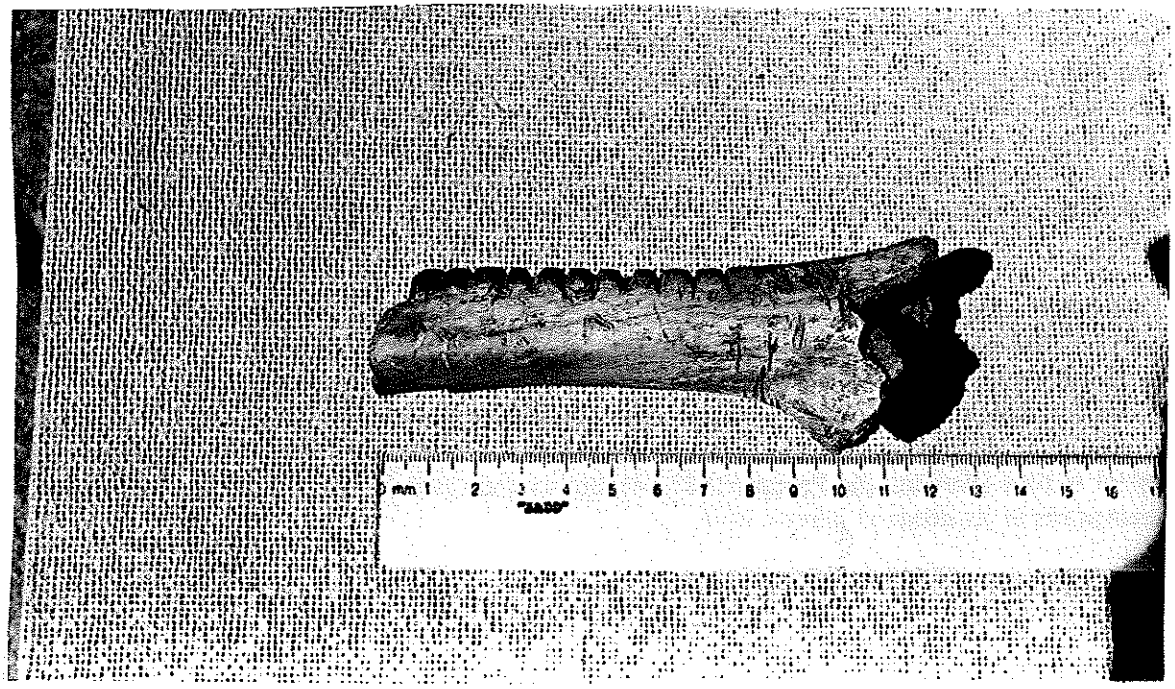
Plate 155



A Operation 2, Copper Needle



B Operation 2, Carved Human Femur



C Operation 2, Carved Human Femur

4. CIHUATECPAN: MATERIAL EVIDENCE AND LIFEWAYS

Reconstructing the life of a village from the bits and pieces undestroyed by the centuries and perceptible to the archaeologist is no easy task, though here the job is made easier by the ethnohistoric record. In the discussion which follows I sketch the outlines of Cihuatecpan's way of life, and I assume that future research, both on materials already gathered, and on new data, will enhance and alter these generalizations.

From the distribution of chronologically sensitive ceramic types, it seems clear that the circum-cerro pattern of settlement of the village was established, on a modest scale, in the Early Aztec phase, Zocango, (probably twelfth century). This pattern would indicate an early commitment to terrace agriculture, given the dispersed house lot pattern so familiar from archaeological, ethnohistoric, and ethnographically known cases. A concomitant of this pattern is the mixed cultivation of maguey and seed crops (and here our flotation evidence of amaranth as well as maize provides some substantiation of the Codex Mendoza tribute requirements from the Teotihuacan Valley). The establishment of this pattern of house lots and this pattern of agricultural exploitation indicates that major elements of the village life styles were the basis of its growth and prosperity: seed crops for subsistence and for tribute, and maguey, for its multitude of uses.

The exploitation of local obsidian resources (the Estetes mine and the cobbles lying exposed in nearby gullies) was another major specialization, one which probably developed as the village grew. This issue can be addressed by further study of the detritus and tools, particularly establishing the chronology through the obsidian hydration dating technique.

The obsidian detritus from biface and scraper production was localized in two dumps. The proximity of these dumps to each other, and the strong pattern of localization of the waste material, may shed light on the nature of the village's obsidian manufacturing industry. Healen found that in Tula, "obsidian working was essentially a cottage industry" (1986:143), with workers living and working in the same space. The dumps at Cihuatecpan may simply result from accumulated refuse brought to particular spots from a larger number of work contexts in houses throughout the village, or they may indicate that tool production was localized in a few areas, adjacent to the dumps. We should note that both dumps are fairly close to the largest housemounds, including Structure 6. The speculation that the work areas may have been localized does not necessarily entail the notion that some individuals were full-time craft specialists here; even if workshops were present, they could have been staffed on a part-time basis by the men of the community.

Obsidian working is not seasonally tied, but the rhythms of the agricultural cycle put definite constraints on time allocation. These work in different ways, depending on the crop. Seed crops have yearly cycles but other crops demand careful attention on a day-to-day basis throughout the year. Maguey exploitation, for example, involves daily attention for at least three months, and the plants mature throughout the year. Since the plants take at least 6 to 8 years to achieve maturity, only about 2 to 3% are productive at any point in time (Parsons and Parsons 1987:84), but so great is the plant's value that humans readily adapt themselves to its needs at harvest time.

> It hath near forty kinds of leaves, which serve for many uses, for when they be tender, they make them conserves, paper, flax, mantles, mats, shoes, girdles, and cordage. On these leaves grow

> certain prickles so strong and sharp that they use them instead of saws: from the root of this tree cometh a juice like unto syrup, which being sodden will become sugar. You also make of it wine and vinegar . .. The rind roasted healeth hurts and sores, and from the top boughs issueth a gum, which is an excellent antidote against poison. (Gage 1648/1958:76).

Despite certain misunderstandings on Gage's part, his description conveys the wonderful range of uses of the plant: few cultigens feed, cloth, house, cure, and intoxicate, and then provide fuel for a warming fire. Motolinía praised maguey as a "thistle" of "great virtue" (1950:272), and devoted a chapter to its uses.

Parsons and Parsons have found that the exploitation of the plant's uses in turn plays a role in structuring human lives, and in establishing a pattern of sexual division of labor which no doubt marked the lives of the Cihuatecpanecos. The timetables of maguey sap and fiber extraction are such that the demands of extracting the sap and delivering it fresh preclude also being involved with fiber processing, and consequently "it is not surprising to find a well-defined division of labor within the . . . household with respect to the two main . . . products: the husband oversees the pulque operation, and comprises its principal labor force; the wife is comparably concerned with the maguey fiber; the teen-aged children provide secondary assistance in both domains" (Parsons and Parsons 1985:18). Furthermore, maguey exploitation demands the dispersed settlement pattern, since the extraction of sap and the processing of fiber cannot take place far from the workplace (Parsons and Parsons 1985:27), which is presumably adjacent to the house.

The lives of men in the village would be anchored in their agricultural duties, with the seasonal needs of seed and other crops, and the constant needs of the maguey plants. In addition, there would be manufacturing activities of all sorts: the obsidian industry would produce important commodities for trade, but other items in household use, wooden tools, for example, would probably be produced in each home, and men would form work cadres for tribute duties and community and family projects.

The lives of the women would focus on childbearing and rearing and textile production (with the daily processing of corn into masa using several hours of time; see Isaac 1986:14-15 for a general discussion). It is no wonder that the "goddess" representations of womanly sexual live, fertility and safe childbearing, and weaving are so closely related (Anawalt 1981:13; Sullivan 1982); these activities formed the continuing foci of life.

The processing of maguey fiber, materially evidenced by the scrapers and the large spindle whorls found in all parts of the village, produced fabric and cordage used at Cihuatecpan and possibly traded away. Other aspects of the local textile industry involve more exotic goods: the small spindle whorls are our evidence of cotton fiber production. The cotton would have been purchased at the marketplace, imported from the warmer climates to the south and east (Rodriquez 1982). Since the tribute requirement (see the discussion of the Codex Mendoza) is in mantas and clothing rather than in thread, we can safely assume that weaving was also part of the processing, although no loom parts survive from Cihuatecpan. Some of the cotton may have been locally used, by the tecpan household, but most Cihuatecpanecos would have been forbidden by law to wear cotton clothing. Fine fiber can also be produced from the heart of the maguey, but this is not spun (Kelly 1944-45).

Yet another textile-related product which may have figured significantly in the local economy is cochineal. This dye was a valuable export from Mexico to colonial times as well as prehispanically (Cook de Leonard 1971:219-220). Made from the bodies of scale insects infesting nopal cactus, it was a product well adapted to the arid conditions of the upper Teotihuacan Valley. In fact, cochineal production in the Basin was centered "in the northeast, between Otumba and Cempoala" (Gibson 1964:354), so cochineal

exploitation at Cihuatecpan was probable. Unfortunately, the high value of the dye and the method of processing as we know it leave few clues as to possible archaeological evidence. The insects were boiled (presumably in a vessel of common type) and their bodies ground in a mortar and pestle. These are carefully rinsed out during the dyebath, so as to save even the slightest residue of the dyestuff. If used locally, the implements of dyeing would probably not be visible archaeologically, and if exported, the manner of transport was probably of pouches of dried bugs. Here is a case of a commodity which may have figured significantly in the local economy, but which is known to us only through ethnohistoric and ethnographic record.

These economic activities form the basis for the village's prosperity. The affluence in the village is evidenced in architecture and in artifacts, and seems to have been fairly widely shared, at least among the families in the core area. As I mentioned above the houses we excavated demonstrated the villagers' ability to invest in aesthetics as well as basic needs, and we must assume that the surplus available to them was their net worth, after taxes. The tribute of the village was organized by the local teuctli, the headman and presumably resident of Structure 6. The teuctli was responsible to the next higher level of administration (probably the tlatoani of Otumba) for gathering and remitting tributes, and he would have discussed the obligations with the heads of household, gathering them into Room V of Structure 6 (where, with a little jostling, all 200 of them would meet) and addressing them from this central room (L). The teuctli would also arbitrate disputes, celebrate rituals and rites of passage, and hold the land maps for the villagers. The tecpan, his residence, housed his family (probably with several wives [Anonymous Conqueror 1530/1917:77], their children, other kin) and some of his retainers (Carrasco 1964, 1971, 1972, 1976 discusses elite household size in the early postconquest period), and many have stored village goods gathered for tribute and grain stored against possible future hard times (Rojas 1986:55). Structure 5 West may also have served as a storehouse.

The differences in affluence among the houses would seem to bespeak opportunities for socioeconomic mobility. Perhaps this is, in part, related to degree of closeness to the teuctli, but houses some distance from Structure 6 show evidence of affluence. It is probable that in Cihuatecpan as in innumerable other peasant villages over the world and through time, hard work and good fortune sometimes combined to make some families better off than others.

The size and structure of families here at Cihuatecpan has not been studied in depth, but extrapolation from surveys based on ethnohistoric sources of the Early Colonial period in the Basin of Mexico (Harvey 1985) and elsewhere (Spores 1984) would suggest that the size of the average household was probably five, six, or seven persons, and that household composition was not rigidly fixed, but may have involved several married couples and their children, and several generations of the same family.

This brief look at the lives of the Cihuatecpanecos has been illuminated by the combined resources of their material remains, the accounts of lifeways in general by Early Colonial observers, and by the lives of presentday people still sharing some of their practices. The data gathered by the 1984 season of the Cihuatecpan project will be further analyzed, permitting more detail to emerge, and a clearer general picture of the life of the rural Aztecs.

Table 86 OPERATIONS 1 through 24 - ARTIFACT SUMMARY

CONTEXT	total sherds	total utility	total fine	figurines	Supports				Obsidian pcs		Ground Stone		
						Conical							
					slab	sol	hol	oth	black	green	mano	metate	other
Structure 1 (58 104 m^3)	12405	9476	3929	49	22	33	12	9	581	320	4	9	
Structure 2 (50 12 m^3)	5146	3242	1904	20	23	21	11		201	174	2	1	4
Operation 3 (12 6 m^3)	194	154	40			2			20	5			
Structure 4 (70 81 m^3)	9243	6262	2981	33	14	43	6		565	321	5	2	13
Structure 5W (24 99 m^3)	5552	3590	1962	33	28	50	4		231	137			5
Structure 5E (18 68 m^3)	7455	5102	2353	29	21	64	5		535	236		1	12
Structure 6 (209 6949 m^3)	37328	26259	11069	148	82	158	35		5077	977	3	3	9
Structure 7 (28 31 m^3)	5468	3915	1553	29	4	21	1		466	125	2		3
Operation 8 obsidian dump	371	12	359						SEE REPORT				
Structure 9 (57 3472 m^3)	6215	4852	1363	40	18	19	9		456	201	8	1	5
Structure 10 (35 39 m^3)	7875	5805	2070	28	2	28	2	1	456	226			9
Surface Collection 11-24 (9,200 m^2)	1058	94	984	71	48	56	3				7	3	4
Totals	98320	67753	30567	480	262	495	88	10	8588	2722	31	11	73

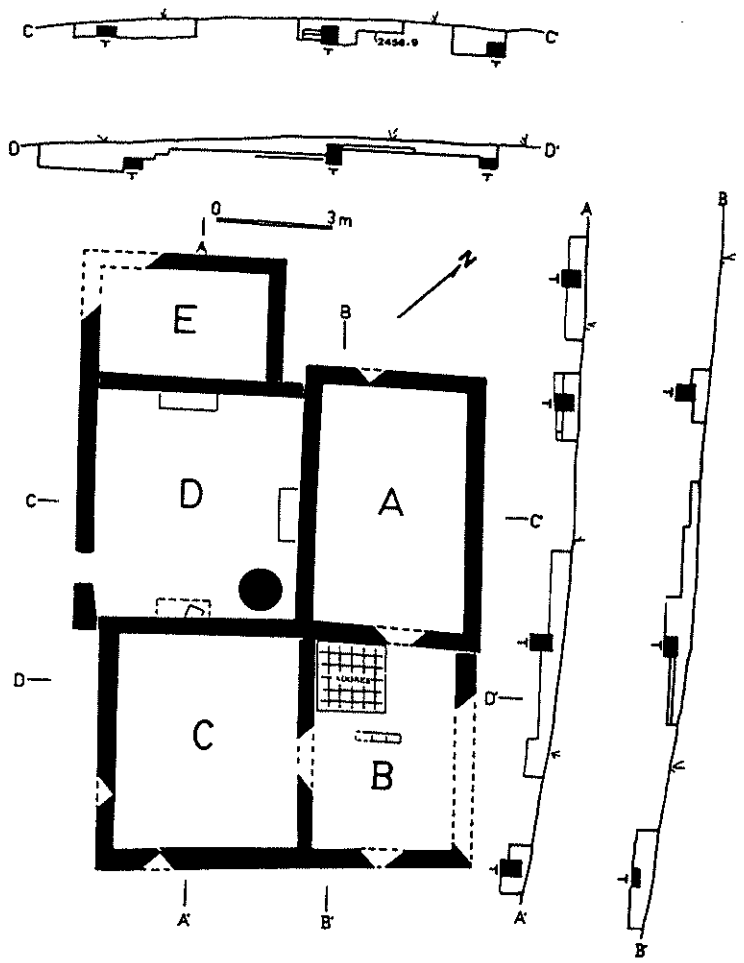
Table 87 OPERATION 1 through 24 - FINE CERAMICS

Context	total fine	plain orange	Black on Orange															
			tot	A	B	C	D	E	F	G	H	J	glazed	plain red	black/ red	blk/wht red	Texcoco fillet	Chalco Cholula
Structure 1 (58 104 m³)	3929	2131	681		9		94	44	15		11		2	331	507	37	86	12
Structure 2 (50 12 m³)	1904	906	428		2		111	34	16		6		1	151	302	35	38	38
Operation 3 (12 6 m²)	40	22	12				1				1			5	1			
Structure 4 (70 81 m³)	2981	1579	567	6	18		131	16	13		15	7	9	295	499	59	27	2
Structure 5W (24 99 m³)	1962	902	466		2		73	8	6		2			179	355	25	10	6
Structure 5E (18 68 m³)	2353	1109	532		5		28	1						183	468	26	19	3
Structure 6 (209 69449 m³)	11069	4887	2018	3	54	1	391	53	29		30		354	1109	2088	183	355	2
Structure 7 (28 31 m³)	1553	697	318	1	20		46	5	9		1		11	149	338	15	11	5
Structure 8 obsidian dump	359	2	140	2	2		58	6	6		2				98	26	12	3
Structure 9 (5 7 3472 m³)	1363	803	224		1		30	7	11		10	6	7	138	160	8	12	11
Structure 10 (35 39 m³)	2070	1213	311		1		87	11	10		2		2	154	288	3	89	
Surface Collection 11-24(9.200 m²)	984	37	513	4	15	1	204	47	17		21	2	45	9	208	49	31	12
Totals	30567	14288	6210	16	129	2	12542	232	132		101	15	431	2703	5322	466	690	94

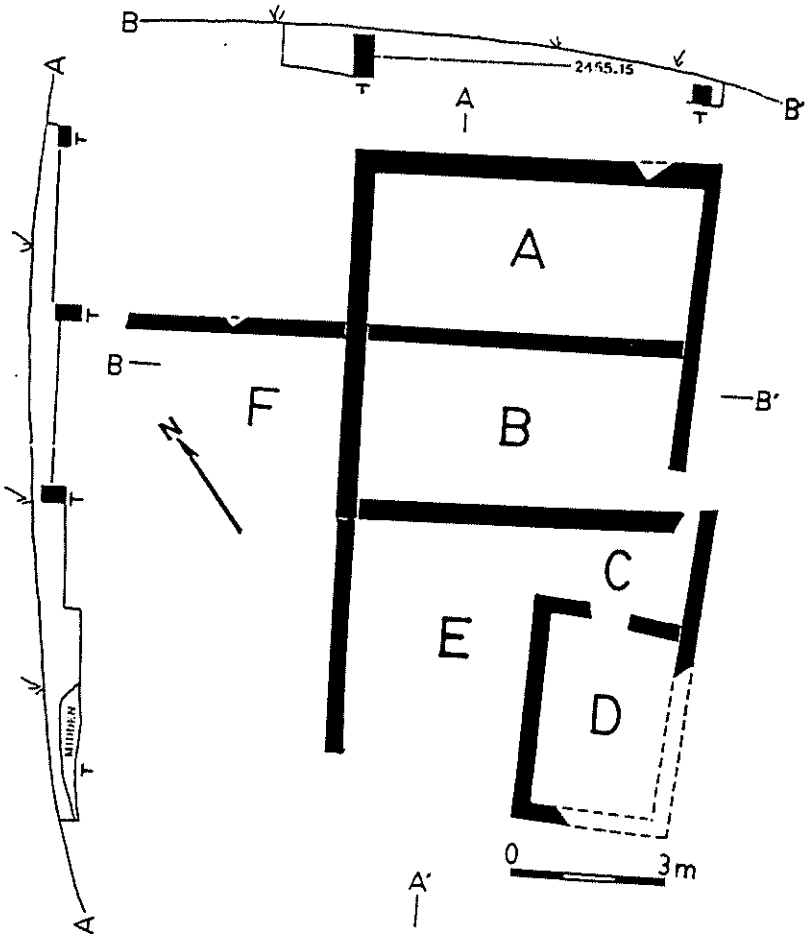
Table 88 OPERATIONS 1 through 24 - UTILITY CERAMICS

		Vessel Type						Use			Handles		Spindle Whrls		
CONTEXT	total utility	comal	basin	jar	brazier	salt	unknown	calc	burn	both	loop	strap	small	large	worked sherds
Structure 1 (58 104 m^3)	8476	797	1182	581	29	72	5515	180	330	64	101	23	7	5	5
Structure 2 (50 12 m^3)	3242	268	59	131	13	52	2719	95	224	36	47	17	4	3	5
Operation 3 (112 6 m^3)	154	1		6		1	146	2	6		11			1	2
Structure 4 (76 81m^3)	6262	448	37	192	14	90	5481	119	661	34	110	33	5	2	14
Structure 5W (24 99 m^3)	3590	240	40	192	22	10	3086	163	387	65	89	8	1	4	4
Structure 5E (18 68 m^3)	5102	452	27	161	25	44	4393	70	546	74	129	40		5	2
Structure 6 (209 6949 m^3)	26259	1467	260	841	131	237	23323	502	2201	151	373	89	23	28	27
Structure 7 (28 31 m^3)	3915	209	41	115	10	41	3499	65	155	12	44	16	2	3	2
Operation 8 obsidian dump	12			1			11						2	5	2
Structure 9 (57 3472 m^3)	4852	252	93	139	8	28	4332	117	532	56	51	20	5	6	2
Structure 10 (35 39 m^3)	5805	243	8	122	18	23	5391	125	357	6	50	16	4	3	3
Surface Collection 11-24 (9,200 m^2)	84		1		48		35						2	13	17
Totals	67753	4377	1748	2781	318	598	57931	1438	5399	498	1005	272	55	78	83

Figure 213

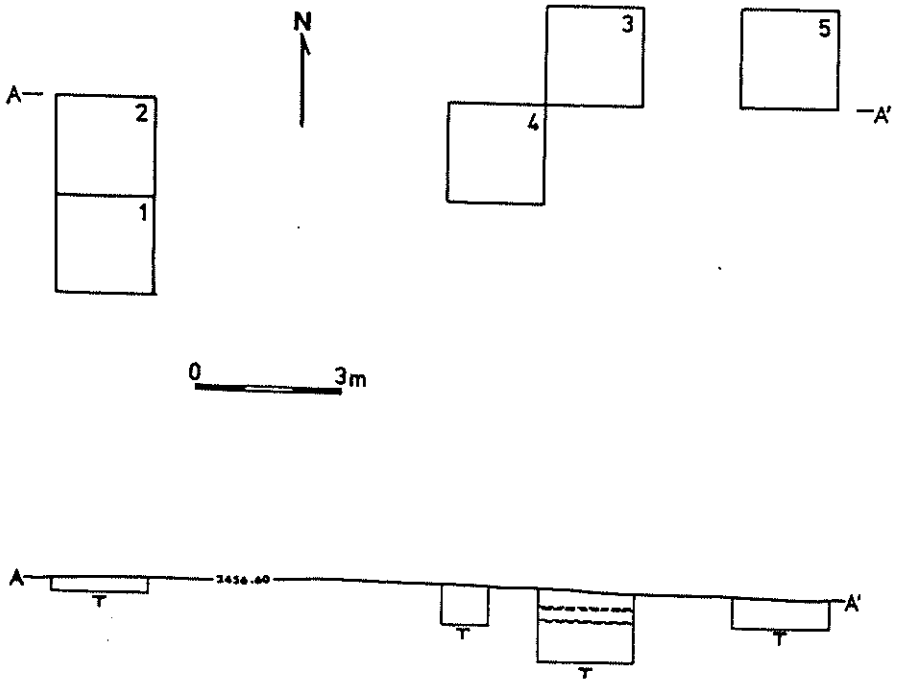


A
Cihuatecpan, Structure 1
(Dashed Line Indicates extrapolation; "T" indicates Tepetate

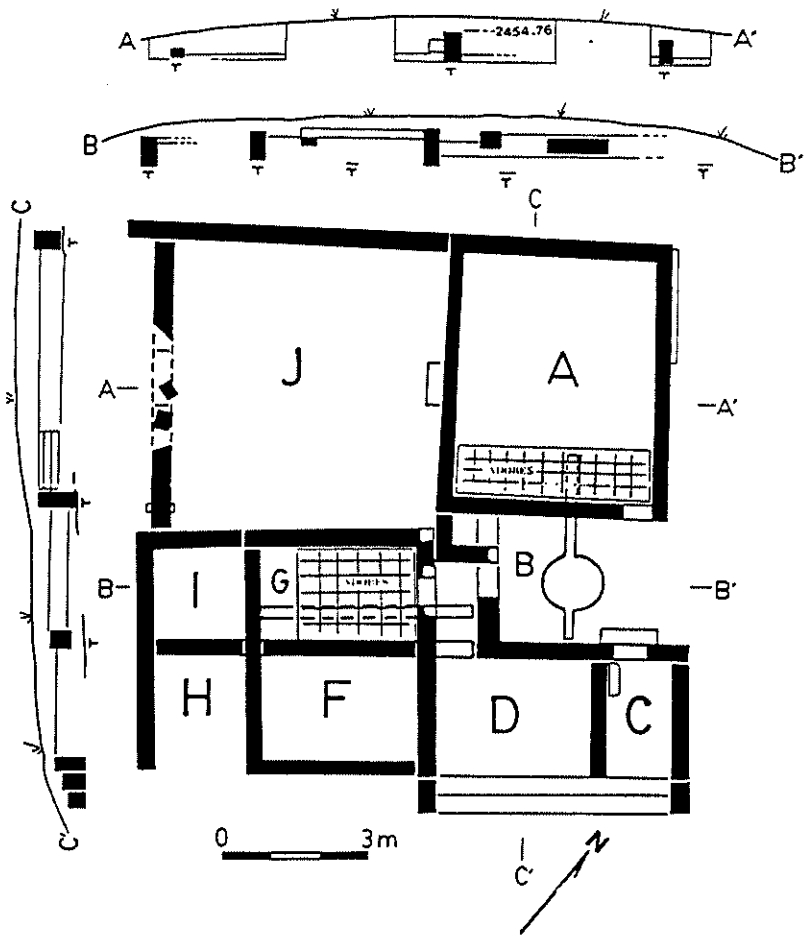


B
Cihuatecpan, Structure 2
(Black areas indicate solid constructions;
dashed lines indicate extrapolations, "T" indicates Tepetate.)

Figure 214

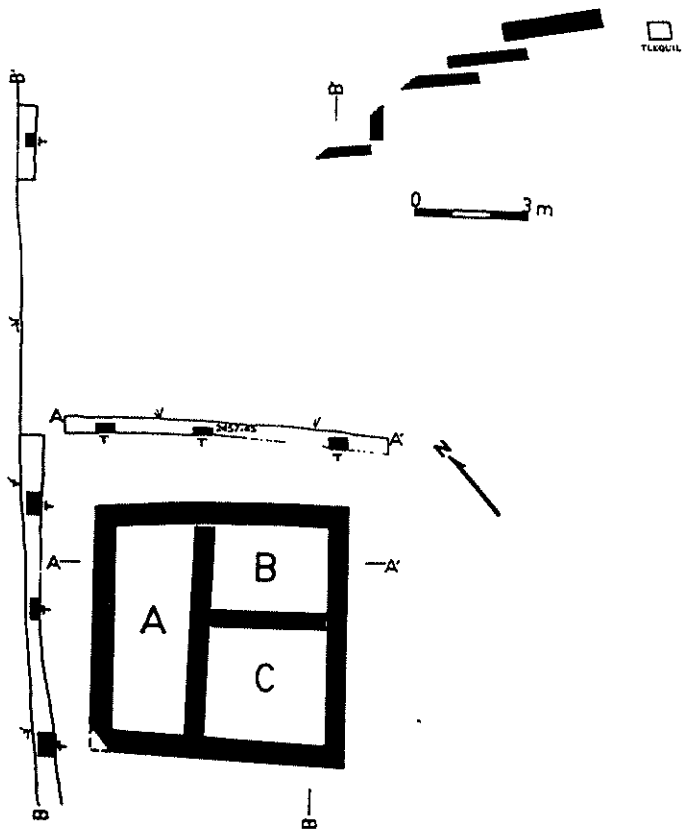


A
Cihuatecpan, Operation 3 (probable Jagüey)
(Above distribution of test trenches: below: section diagram)

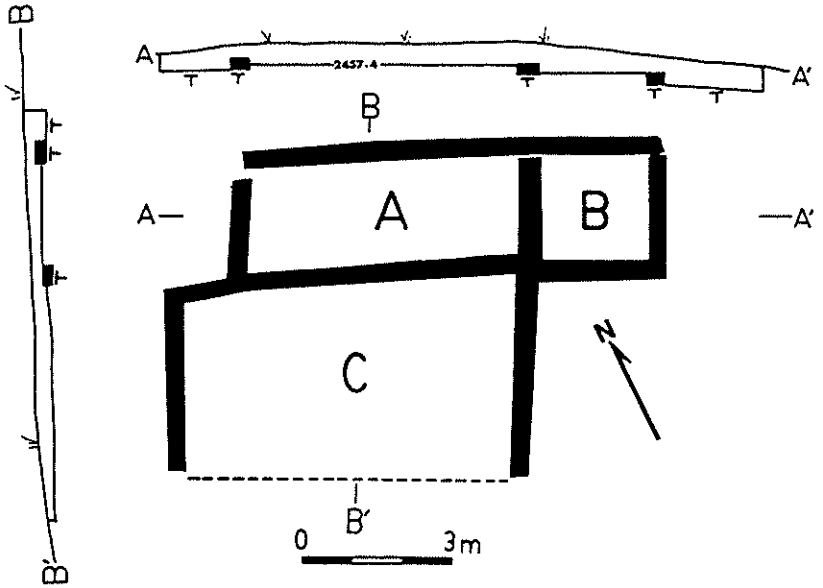


B
Cihuatecpan, Structure 4
(Black area indicate solid construction; dashed lines indicate extrapolation; "T" indicates tepetate)

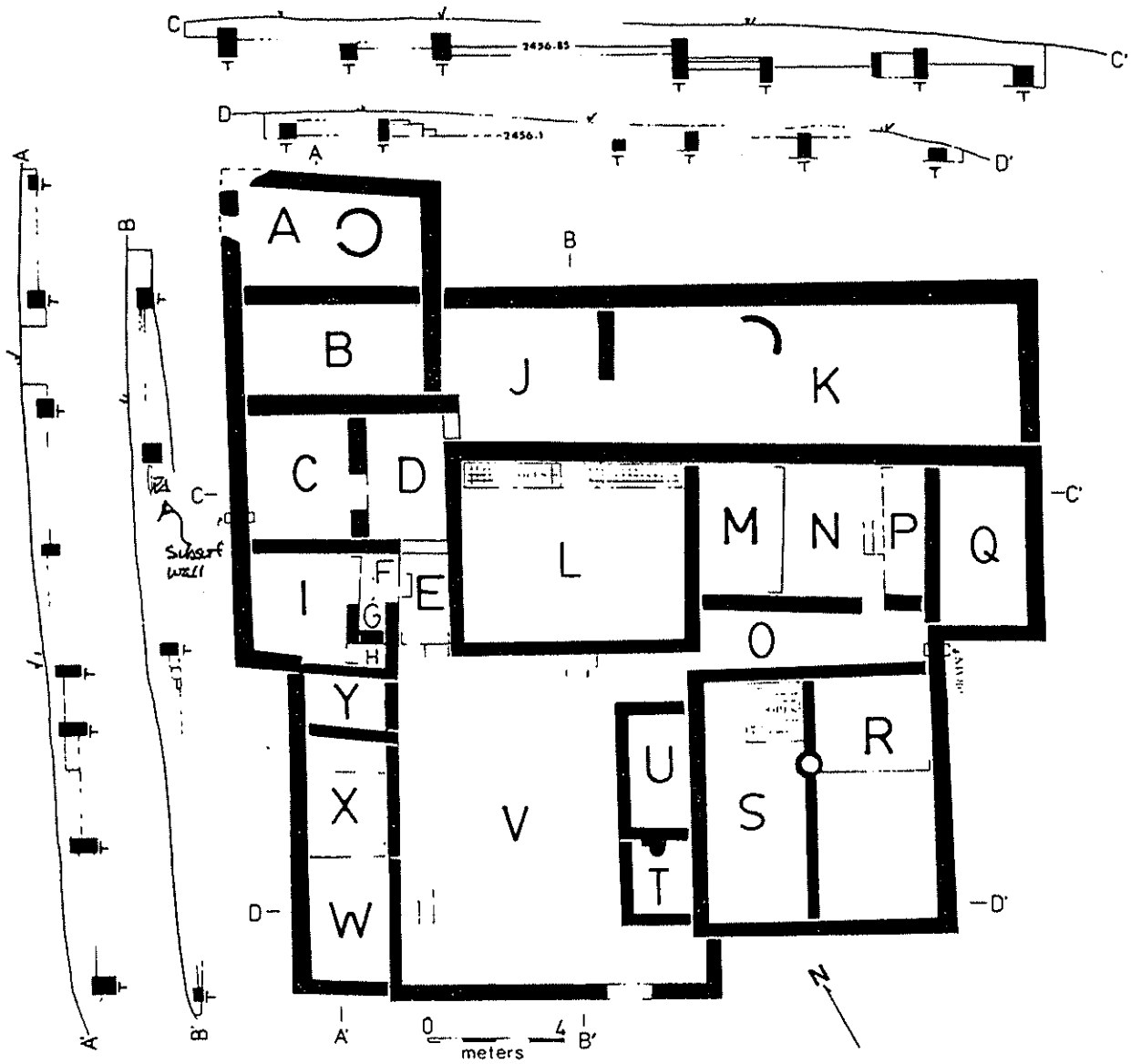
Figure 215



A
Cihuatecpan, Structures 5 East and 5 West
(Black areas indicate solid construction; dashed lines indicate extrapolation; "T" indicates tepetate.)

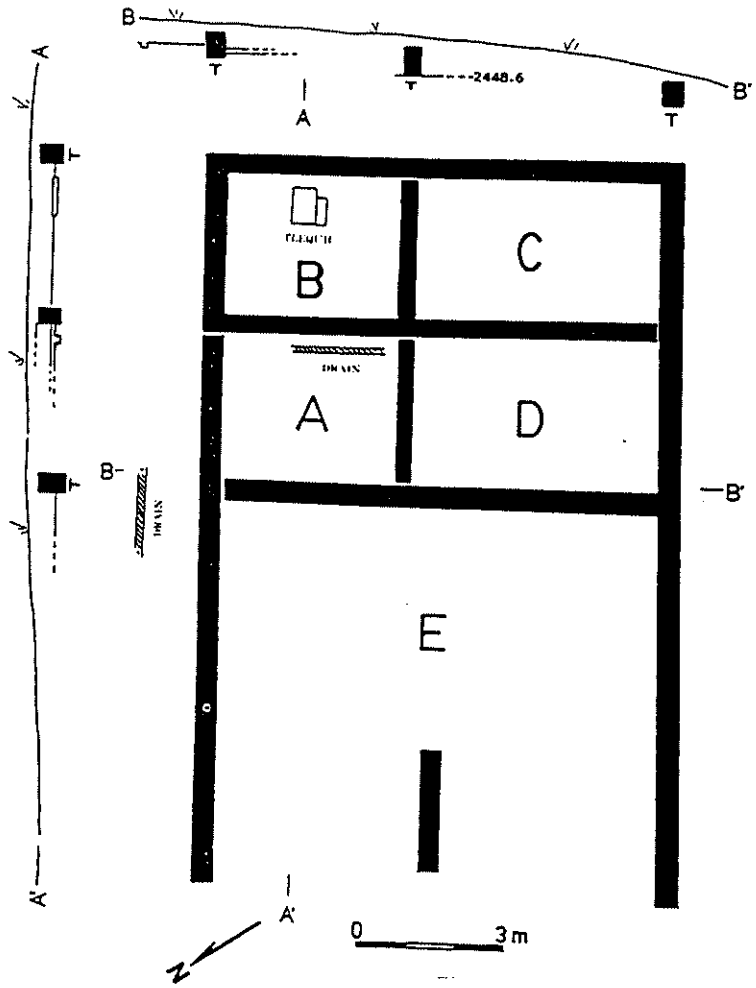


B
Cihuatecpan, Structure 7
(Black areas indicate solid construction; dashed lines indicate extrapolation; "T" indicates tepetate.)

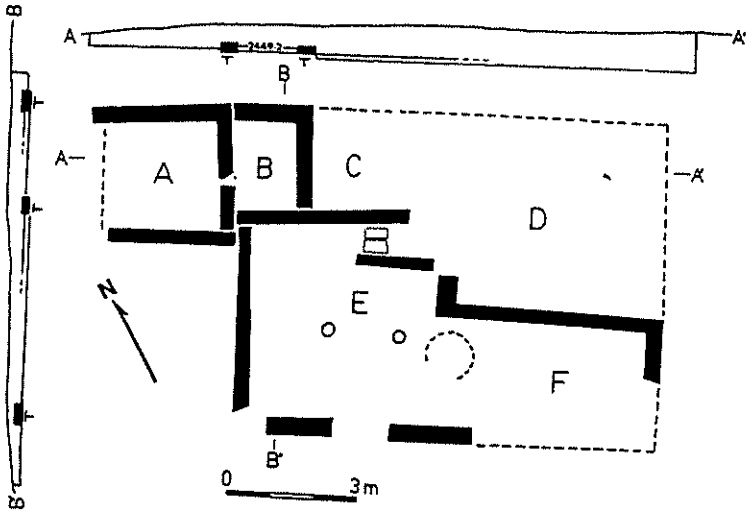


Cihuatecpan, Structure 6
(Black areas indicate solid construction; dashed lines indicate extrapolation; "T" indicates tepetate.)

Figure 217



A
Cihuatecpan, Structure 9
(Black areas indicate solid construction; dashed lines indicate extrapolation;"T" indicates tepetate.)



B
Cihuatecpan, Structure 10
(Black areas indicate solid construction; dashed lines indicate extrapolation;"T" indicates tepetate.)

APPENDIX C
INVESTIGATION OF AN OBSIDIAN MIDDEN AT CIHUATECPAN, MEXICO

by

Elliot M. Abrams

In the course of conducting the settlement survey and excavation of structures and features at the Aztec village of Cihuatecpan in 1984, two dense concentrations of obsidian debitage were encountered, and one of these, designated Operation 8, was investigated further. Operation 8 was located on the same broad terrace as were five of the excavated structures (Operations 4, 5 [two sets of structural remains], 6, and 7), and was just northeast of Operation 15 (a housemound which had, unfortunately, been reduced by half in the course of terrace embankment building using bulldozers). The conspicuous nature of this feature, as well as its obvious value in adding to our understanding of the economic structure of Cihuatecpan, strongly encourage investigation.

The concentration was distributed over an oval area roughly 25 x 35 m. This was gridded off in 2 m^2 units, and surface collected; two of these units were excavated to tepetate, about 40 cm below surface. The obsidian collected has not yet been analyzed except for a preliminary size breakdown. It is of the local grey-black type, and the nature of the debitage and broken tools suggests a biface blade industry. The debitage collected from the surface of this area and from the two shallow test pits weighs 692.98 kg and no doubt represents the manufacturing midden from an important village activity, the manufacturing of utility knives and scrapers from the obsidian mined from the Barranca de los Estetes outcrop in the hills 3 km to the south of the site.

Setting

Unlike most other operations, Operation 8 did not involve any architectural excavation rather, it involved the surface collection and test excavation of a discrete and dense scatter of primarily grey-black obsidian. Located 60 m southwest of Operation 6 and covering a surface area of 464 m^2, Operation 8 covered portions of both the main terrace as well as a contiguous portion of the abutting southern terrace, these terraces being separated by an intrusive bancal. In addition to the bulldozing involved in the construction of this bancal, this area is seasonally prepared for planting by the landowner, and in fact was being plowed as we finished collecting data from this operation.

Method

Work on Operation 8 was conducted between May 5 and May 11, 1984. As a result of the methodology employed and the fact that the field season was drawing to a close, the size of our crew was variable, with an average of 12 men.

Data collection in Operation 8 was divided into two stages: surface collection and test excavation. Surface collection involved first establishing an appropriate datum from Operation 7. From this datum a 2 x 2 m grid was laid. The boundary of the site was demarcated on the basis of the perceived drop-off in the quantity of surface obsidian, confirmed by the surface collections. A crew of two workmen/unit then carefully and thoroughly collected every artifact - both obsidian and non-obsidian - visible on the surface. All artifacts were collected by hand and by gentle prodding with trowels, although no digging took place. As a result of this technique all artifacts from the 464 m^2 surface area were collected. There was initial concern that, by collecting 100% of the surface artifacts, we had in essence "destroyed" the feature; this concern, however, was allayed after the next rain, which exposed an essentially equal number of artifacts as had been collected.

The second stage of investigation involved the test excavation of the feature, the goals being to

obtain an obsidian sample which could then be used to project a comparative estimate of total density of obsidian, as well as to test the results of the surface collection. Two 2 x 2 units were selected for excavation, one located within an area of high obsidian density, the other located within an area of low density. Excavation was conducted within 20 cm levels, with tepetate being reached at depths of 50 cm and 40 cm.

Obsidian

The results of the above methodology clearly indicate that Operation 8 was a large obsidian midden intermixed with relatively few non-obsidian artifacts. The total weight of the surface obsidian is 306.14 kg. This figure does not discriminate between grey-black and green obsidian, although preliminary analysis indicated that the obsidian is almost exclusively grey-black. The distribution of the surface obsidian reveals two loci of particularly heavy deposition - in the northwest and southeast section of the total scatter. Despite the post-deposition transformations associated with plowing and bulldozing, the surface concentration of obsidian are confirmed by the subsurface testing - the test pit placed in the area of high surface concentration yielded very high amounts of obsidian (353 kg), while that placed in the area of low surface concentration yielded proportionately low amounts of obsidian (34 kg). The distribution of surface obsidian seems to indicate the greatest concentrations of obsidian to be on two sides of Mound 15, with density decreasing as distance from the mound increases. This suggests a behavioral association between Mound 15 and the obsidian deposit yet does not preclude additional association with other structures at the site.

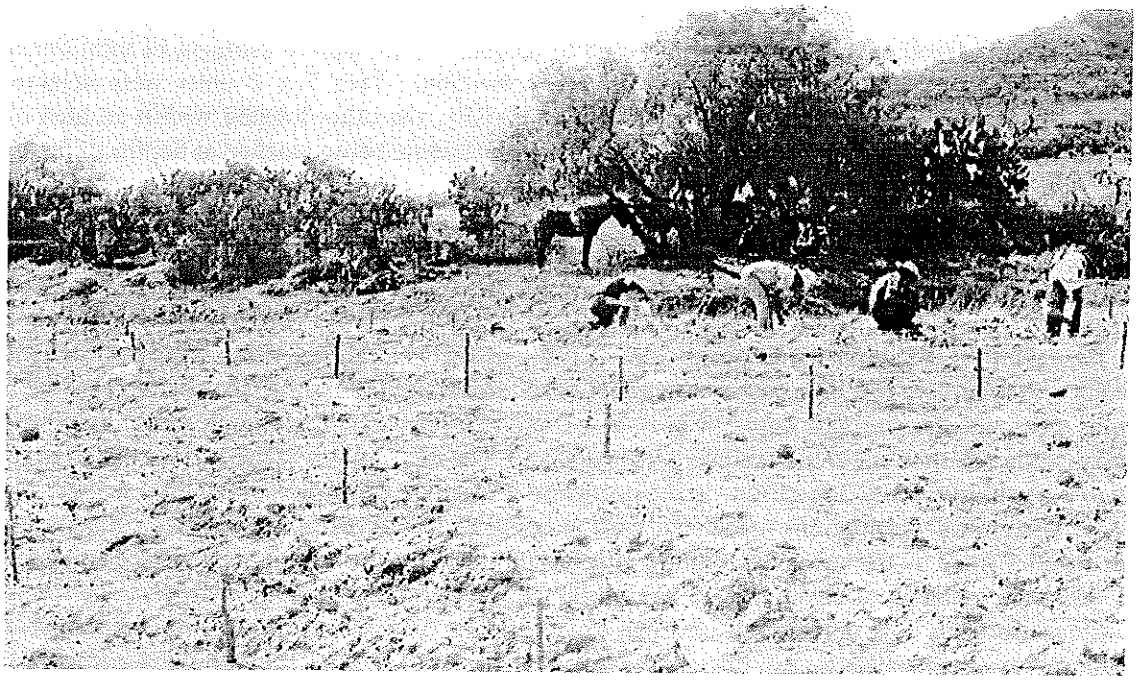
Based on these data, a rough estimate of total obsidian for the deposit can be offered. The surface deposition suggests that about 20 of the 117 units had "high" amounts of obsidian - since 353 kg were recovered from the high density test pit, we can project an estimate of 7,060 kg of obsidian from the areas of highest obsidian depostion. The test pit placed in an area of relatively low deposition yielded a total of 34 kg and thus the remaining 97 units suggest a deposition of 3,298 kg of obsidian, for a projection of total obsidian deposited in this feature of 10,358 kg. Given an average depth of 45 cm, the density of obsidian is then projected to be about 50 kg/m^3.

At present, a complete description and classification of the obsidian remains to be done; however, preliminary analysis suggests that all stages in the reduction process of obsidian bifacial tool production are present.

Non-Obsidian Artifacts

The inventory of non-obsidian artifacts is quite interesting when viewed in comparison with other samples recovered. Relatively few non-obsidian artifacts were present in this feature. Only 371 sherds were collected, a surface density of 0.8 sherds/m^2 Also, of the total number of sherds found, 359 (97%) were fine sherds. This contrasts with the approximate 30% proportion of fine sherds found at excavated operations, and is similar to the high proportion (93%) of fine sherds from the surface collections of Operations 11-24. Some of these fine sherds were imported into the Teotihuacan Valley. Finally, 7 spindle whorls (2 small, 5 large) and 2 worked sherds were found. Chronologically, Operation 8 dates primarily to the Aztec 3 period, based on the higher percentage of Black/Orange Type "D" sherds.

Plate 156



A Surface Collecting of Obsidian

B
Laying Out of the
Surface Obsidian Grid

Interpretation

Based on current data, several interpretative remarks concerning Operation 8 can be offered The quantity of obsidian, both in absolute weight and in density, clearly indicates that this feature was a midden deposit primarily of grey-black obsidian The overwhelming presence of pressure and percussion flakes in the midden indicates that it served as the refuse area in the production of grey-black obsidian bifacial tools The proximity of the deposit to Mound 15, with the areas of highest density being closest to the mound, suggests that the occupants of Mound 15 may have been responsible for producing, or overseeing the production of, grey-black obsidian tools. The fact that the source of this obsidian is only 3 km south of the site, in the flanking Sierra de Malpais, further suggests that procurement and production of this obsidian resource was controlled on a local level.

Editors Note· Material presented in this chapter is abstracted from a more extended publication by Susan Toby Evans entitled Excavations at Cihuatecpan· an Aztec village in the Teotihuacan Valley (1988). The reader is referred to the original publication for a more detailed presentation of the data generated from this project. Some of the material has been slightly modified to better accommodate it to the present volume

CHAPTER 11

THE OTUMBA PROJECT: A REVIEW AND STATUS REPORT

by

Thomas H Charlton, Deborah L Nichols, and Cynthia Otis Charlton

1. INTRODUCTION

Between 1987 and 1989 the Otumba project undertook new archaeological investigations at the site of Otumba (TA-80), the capital of the Aztec city-state of Otumba, (Figures 218-219) and several of its rural dependencies in order to investigate further the history and nature of agricultural practices and craft production in the city-state These investigations were integrally related to an evaluation of alternative models of the evolution and organization of central Mexican city-states during the Middle and Late Postclassic periods (A D 1150-1519)

The first phase of the project began with a systematic re-survey of the Otumba site (TA-80) in January 1987 conducted by Thomas H Charlton, Cynthia L Otis Charlton, and Evaristo Tenorio Coronel Based on this survey they produced detailed maps of the site and its then-current condition The 1987 survey and maps formed the basis for the second phase of the project which included additonal fieldwork consisting of intensive surveys, systematic surface collections, and exploratory excavations directed by Thomas H Charlton and Deborah L Nichols from June, 1988 until June, 1989 Many of the results of these two phases of fieldwork are described in previous publications Analyses are continuing

The specific investigations carried out included
1 Intensive and systematic surface survey of additional areas along the periphery of the Otumba site (TA-80) to define more precisely the extent of the Aztec occupation,
2 Systematic surface collection within Otumba using a combination of probabilistic and non-probabilistic sampling strategies,
3 Intensive and systematic surface survey combined with systematic surface collection of a sample of extant rural sites that were tributary to Otumba,
4 Excavations of workshops (figurine, obsidian core-blade, and lapidary), irrigation features, and of residential and ceremonial constructions in the nucleated core of Otumba

Both the previously available archaeological data (Charlton 1994, Mather 1968) and the results of the 1987-1989 investigations in the city-state of Otumba indicate that the intensity of craft production there differs in quantity and quality from that described for other recently investigated city-state centers in the Basin such as Huexotla and Xaltoc n Otumba has the largest number and greatest variety of craft workshops yet identified archaeologically at any Aztec center, provincial or metropolitan Excavations also confirmed the presence of a long sequence of agricultural intensification through floodwater irrigation at Otumba Data from the nucleated core permit a correlation of craft and agricultural intensification with the development of the city-state center

Theoretical Context

When we began this research project in the late 1980s two general models had been proposed to account for the initial development and functioning of Postclassic city-states in the Basin (Charlton et al 1991 98-99, Nichols and Charlton 1988) One, building on Sanders's concept of economic symbiosis, and on Basin of Mexico survey results, as proposed by Sanders and his colleagues (Evans 1980, Sanders 1956, 1965, Sanders et al 1979, Sanders and Santley 1983) argued that initial city-state developments (A D 1150 - ca 1350) were based on the role the city-state played in coordinating the production and the distribution of both agricultural and non-agricultural craft goods within their local area associated with an increasing population In this model city-state capitals in their function and organization foreshadowed, albeit on a much smaller scale, the imperial capital of Tenochtitlan-Tlatelolco

Subsequently, (ca A D 1350 - 1430) through warfare and alliances, these units became integrated into increasingly larger state systems that culminated in the Triple Alliance macro-state system, however, the city-state centers remained the local centers of production and distribution

The other model is based on Brumfiel's (1976, 1980, 1982, 1986, 1987) surveys and surface collections at Huexotla and Xico Those surveys failed to recover evidence of intensive craft production In order to account for

Figure 218

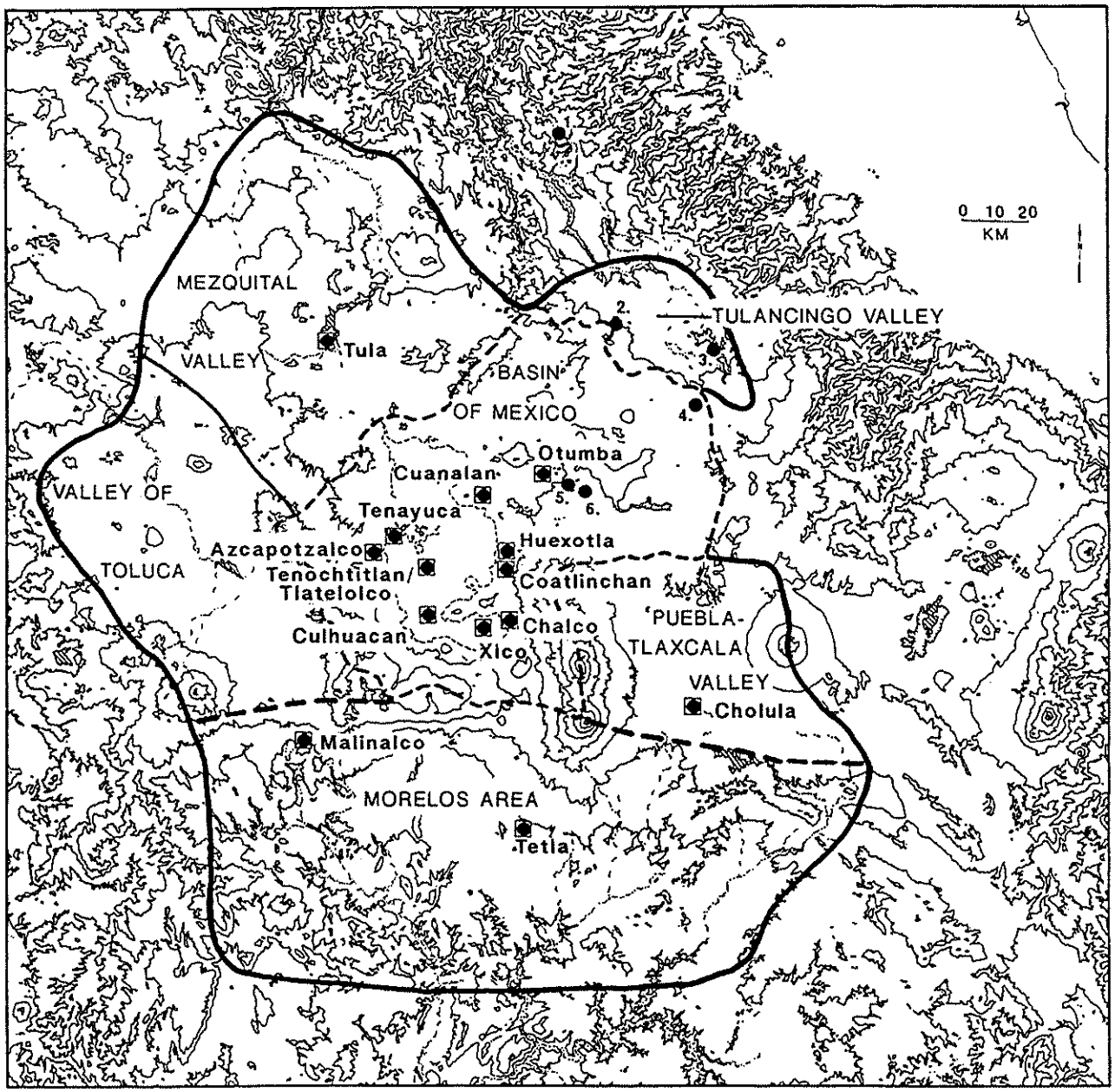
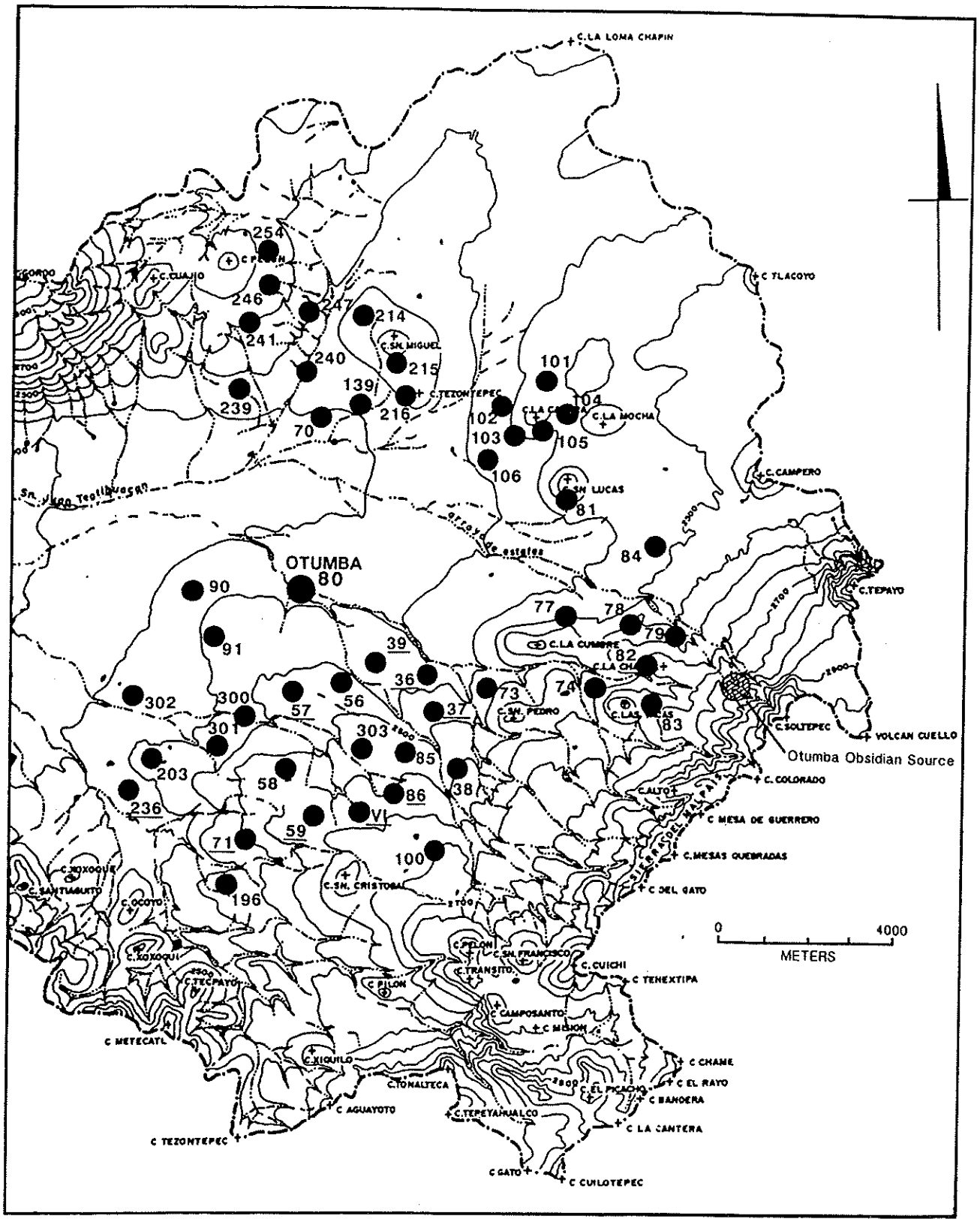

0 10 20
KM
MEZQUITAL
VALLEY
Tula
BASIN
OF MEXICO
TULANCINGO VALLEY
1.
2.
3.
4.
Otumba
Cuanalan
5.
6.
VALLEY OF
TOLUCA
Tenayuca
Huexotla
Azcapotzalco
Tenochtitlan/
Tlatelolco
Coatlinchan
Culhuacan
Chalco
Xico
PUEBLA-
TLAXCALA
VALLEY
Cholula
Malinalco
MORELOS AREA
Tetla

Figure 219


C.LA LOMA CHAPIN
C TLACOYO
C.CAMPERO
C.TEPAYO
C.SOLTEPEC
VOLCAN CUELLO
Otumba Obsidian Source
C. COLORADO
C MESA DE GUERRERO
C.MESAS QUEBRADAS
C DEL GATO
C.CUICHI
C TENEXTIPA
C CHANE
C EL RAYO
C BANDERA
C LA CANTERA
C CUILOTEPEC
C GATO
C TEZONTEPEC
C METECATL
C AGUAYOTO
C.TEPEYAHUALCO
C.TONALTECA
C.XIQUILO
C.SN. CRISTOBAL
C.SN. FRANCISCO
C.TRANSITO
C.CAMPOSANTO
C.MESON
C.PILON
C.TECPAYO
C.OCOYO
C.SANTIAGUITO
C.XOXOQUI
C.SN. MIGUEL
C.TEZONTEPEC
C.LA MOCHA
C.SN LUCAS
C.LA CUMBRE
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this lack of correspondence between the cultural symbiosis model and the data obtained in her research Brumfiel raised important questions about the degree of economic differentiation within these centers and the significance of economic symbiosis with regard to both their development and their roles within the Triple Alliance To account for the lack of data supporting the economic symbiosis hypothesis Brumfiel proposed an alternative hypothesis that craft activities were either non-specialized or only part-time activities at Huexotla and Xico, "an established pattern that the political integration of central Mexico during the Aztec period did little to alter (Brumfiel 1987 109) Within the Triple Alliance additional city-state centers developed as a result of decisions from the top down to create local administrative units necessary for the administration of complex trade and redistribution networks (Sanders et al 1979 156)

Although the city-state was the basic political unit both before and after the rise of the Triple Alliance, Brumfiel questioned the extent of its economic role during both periods In this model neither the initial development of autonomous city-states nor their subsequent incorporation into larger political units was associated with local symbiosis involving full-time specialization She argued that the small city-states of the Basin never had full-time craft specialists producing non-comestibles Full-time specialization was restricted to the imperial capital and to the manufacture of elite or wealth goods

The economic rationalization for such a situation during the post-A D 1428 period was conditioned by two situations

1 the dumping by the elite of craft goods received from imperial tribute which depressed prices for such locally produced commodities and consequently reduced the incentive for their local production,

2 the massive population growth, which coupled with logistical limitations on the transport of comestibles (Cowgill 1993 Drennan 1984a, 1984b, Sluyter 1993) required a local solution to food production which was attained by encouraging a reorientation of the rural core-zone of the Basin to specialize in agricultural production as opposed to craft production

Rather than oversimplify the conceptualization of such models as an "either or" situation (e g Brumfiel 1987a, 1987b, Smith 2000 588) we proposed a "both and" scenario which takes into account the complexities of the Late Aztec situation We have argued, as described below, that each model may describe different aspects of exceedingly complex developments (Charlton et al 1991 109, Charlton and Nichols 1997, Nichols and Charlton 1988)

State evolution in Postclassic central Mexico involved militaristic tributary city-states, the organization of alliances and confederacies, imperial expansion, intensification of primary production, economic specialization and exchange, along with population growth and movements, ethnicity, and dynastic struggles

We have suggested that during the Early Aztec period political and economic functions were concentrated in city-state centers each associated with a solar market system (Smith 1983, Hassig 1985 73, Hodge 1997) Local production and distribution of craft and agricultural products within each city-state may have been the rule at this time with non-local goods such as obsidian, salt, and cotton entering each solar market system horizontally, circulating at a sub-regional (Charlton and Spence 1983, Nichols and Charlton 1988) and possibly confederation level (cf Hodge 1992, 1996, Hodge et al 1992, 1993, Hodge and Minc 1990) Regional ratios of agricultural and non-agricultural production within each city-state varied, depending on local resources and the agricultural productivity of the land City-states in the agricultural periphery and those with regionally restricted raw materials such as obsidian had a greater emphasis on non-subsistence craft production

Following the formation of the Triple Alliance, and the associated flow of agricultural products and luxury goods into the Basin from tribute and long-distance trade, the Basin economic system underwent significant changes We have pointed out (Nichols and Charlton 1988) that the archaeological data suggest there was a core-periphery dichotomy focused on Tenochtitlan and possibly also on Texcoco Excepting Tenochtitlan and possibly Texcoco, the city-states within a radius of 30-35 kilometers of the center of Lake Texcoco in the central and southern lake system began to intensify agricultural production at the expense of craft production through increased labor input and through the extension of terracing and irrigation technology Such non-agricultural production as

remained focused on salt

Within the center of Tenochtitlan, and possibly that of Texcoco, there were locally produced utilitarian and elite goods which entered the market system along with such goods from tribute and pochteca trade, being reflected in an increased volume of regional goods such as obsidian at sites within the core (Charlton and Spence 1983 70-74) Thus economic relations between city-state centers and their hinterlands became redefined with reference to the imperial cities that were also the largest market centers

During the same time population increased significantly in the agriculturally more marginal north central and northeastern Basin of Mexico In this periphery, the Otumba city-state coped with such an increase in part through the intensification of agricultural production through xerophytic cultivation and terracing, (Evans 1990, Parsons and Parsons 1990), and the elaboration of floodwater irrigation systems (Charlton 1990, 1994) Similar expansion of hydraulic systems including chinampas has also been reported from Cuauhtitlan and Xaltocan (Armillas 1971, Nichols and Frederick 1993, West and Armillas 1950) in the north central Basin of Mexico, thus confirming initial observations at Otumba Otumba's other strategy was to intensify production of utilitarian craft items such as obsidian cores and prismatic blades, groundstone tools, spindle whorls, figurines, ceramics, and cloth, and elite lapidary craft items A complex system of production and distribution focused on these activities (Charlton, Nichols and Otis Charlton 1996, Otis Charlton et al 1993)

Historical Background and Cultural Context

From the breakup of Tula ca A D 1150 to the conquest of the Aztecs under the leadership of Cortes, 1519-1521, complex and rapid evolutionary changes took place in central Mexico By at least A D 1250 the Basin of Mexico was occupied by between 15 and 20 militaristically competitive city-states (Brumfiel 1983 266,268-270, Charlton 2000, Charlton and Nichols 1997, Hodge 1997, Sanders et al 1979 154) some of whom through alliances and leadership built up small-scale conquest "empires" in the Basin of Mexico and in surrounding regions that were unstable and short-lived (Bray 1977 376, Brumfiel 1983 268-270) Despite the political fragmentation, there is evidence for some degree of regional economic integration (Charlton and Spence 1983, Charlton 2000)

During the last half of the fourteenth century, "this period of political fragmentation ended with the formation of the Tepaneca and Acolhua hegemonies" (Sanders et al 1979 150) and other poorly understood predecessors of the Triple Alliance or Aztec empire (Berdan et al 1996, Hodge 1984 139, Offner 1979) Essentially these two ethnically-based polities began expansion on a grander scale than had been previously attempted Yet they retained the political fragility and instability of their predecessors all too often emerging during competition for leadership upon the death of a *tlatoani*

Their ultimate defeats, the Acolhua at the hands of the Tepaneca in A D 1418 and the Tepaneca at the hands of the Mexica Aztecs allied with Tlacopan, the Acolhua, Tlaxcala, and Huejotzingo in A D 1428, established the conditions that gave rise to the Triple Alliance After A D 1430 the 15-20 city-states, along with about 35 new local centers, became semi-autonomous administrative units within the expanding domain of the Triple Alliance Each city-state, governed by a hereditary ruler(s) (*Tlatoani, pl Tlatoque*) was comprised of rural dependencies, with the center of government and tribute collection in the capital town/city with major temples, marketplace, palace, and occupational specialists and about one-third of the total population of the city-state (Berdan 1982, Bray 1972, 1977, Calnek 1978, Gibson 1964, 1971, Hodge 1984, 1996, 1997, Lockhart 1992 14-28)

The Otumba City-State

The Otumba city-state is located in the eastern end of the Teotihuacan Valley in the northeastern Basin The archaeological site of Otumba - the capital of the Late Aztec city-state - covers ca 220 ha and is situated on the edge of a gently sloping piedmont just above the alluvial plain, 12 km east of the Classic period city of Teotihuacan (Figures 218-221) The site contains a nucleated core of about 40 ha with large mounds and other indications of elite

Figure 220

38 – Well defined mound

8 – Mound

X – Isolated perforator

– Concentration

BAS – BAS = Basalt

MAJ – MAJ = Majolica

MAL – MAL = Spindle whorls

OBS – OBS = Obsidian

PIZ – PIZ = Slate

A – Very heavy ceramic concentration

– Concentration of water-rolled obsidian from the barranca

– Areas with continuous-occupation: heavy ceramics and artifacts: deep deposits

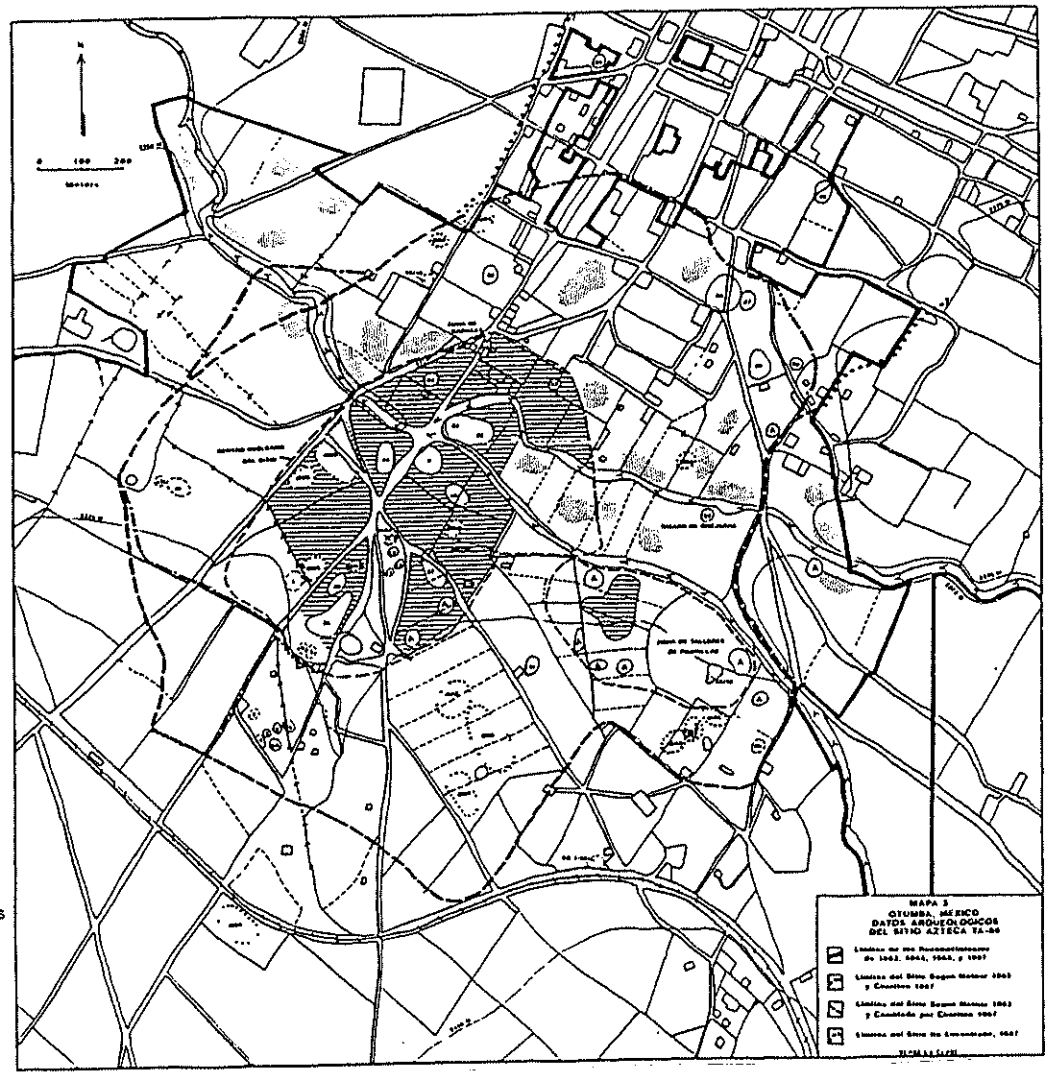
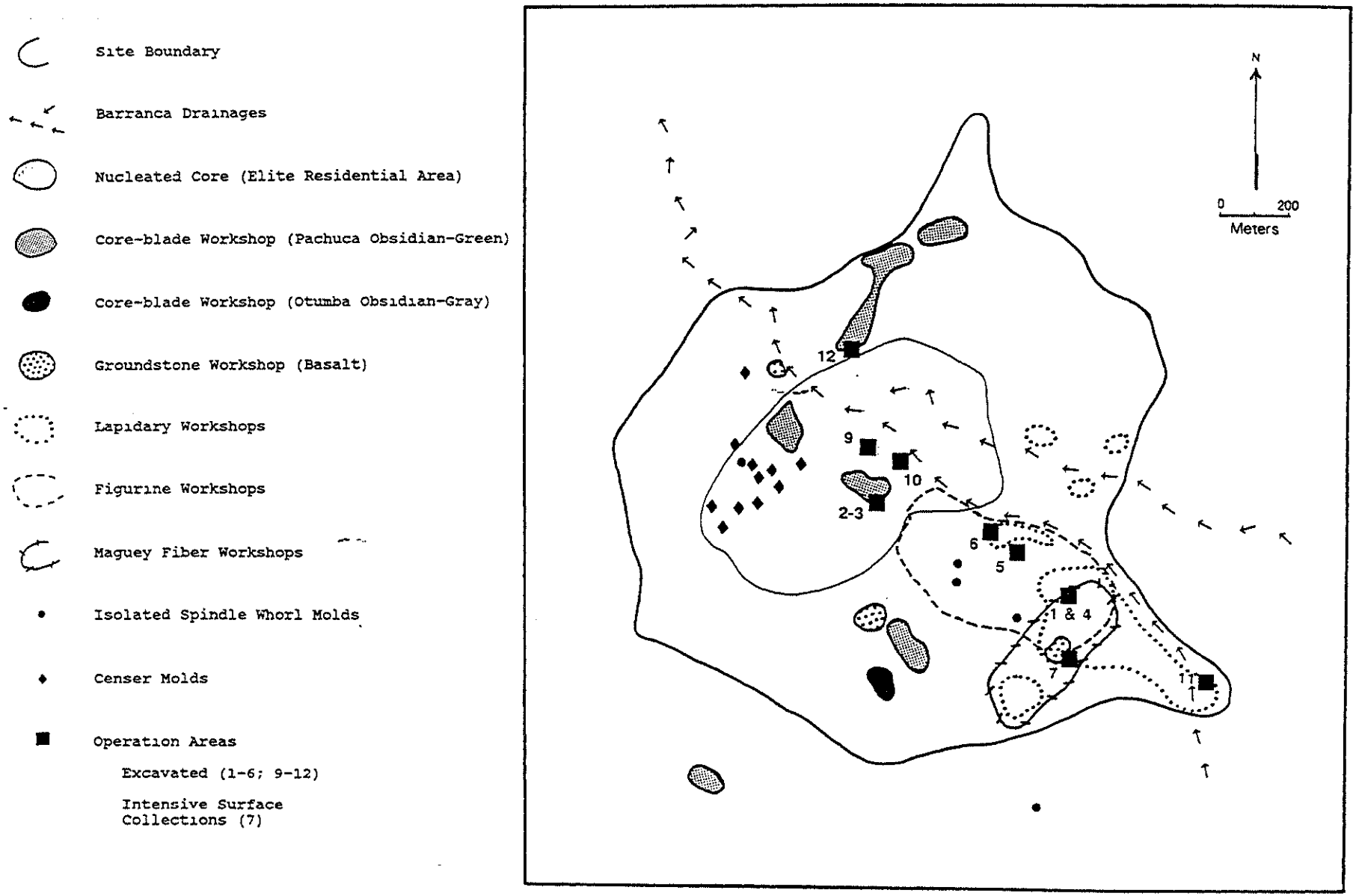


Figure 221



Distribution of Identified Craft Industries at TA-80 (Otumba). EXCAVATIONS: Operations 1, 4, 5, and 6-Figurine Workshop Zone; Operations 2 and 3-Obsidian Core-Blade Workshop; Operations 9 and 10-Nucleated Core; Operation 11-Lapidary Workshop; Operation 12-Irrigation Features. INTENSIVE SURFACE COLLECTIONS: Operation 7-Fiber Spinning Workshop (Maguey).

occupation (Charlton 1988, Charlton and Nichols 1992, Mather 1968, Pohlman 1995) and a dispersed residential zone making up the rest of the site where most mounds have been reduced by erosion and plowing to concentrations of building rubble and domestic artifacts Dependent tributary settlements and interspersed *calpixqui* districts under the control of Texcoco (Evans 1980 284) occur on the piedmonts to the north, east, south, and southwest of Otumba The city-state territory includes the Otumba obsidian source area, one of the major sources of obsidian in central Mexico (Charlton and Spence 1983 39-50)

Pre-Conquest and Early Colonial Ethnohistory

Documentary sources make only brief mention of Otumba and nearby communities (cf Evans 1980) Few of the references place the communities earlier than the reign of Techotlalatzin [A D 1357-1409] (Dibble 1980, Ixtilxochitl 1965 I, II, Offner 1979) who permitted Otomi refugees fleeing Xaltocan, defeated by Azcapotzalco in 1395, to settle at Otumba (Otompan) (Gibson 1964 10, Ixtilxochitl 1965 I 167-168, II 82-83) At least two battles took place in the area in the early A D 1400s (A D 1415 and 1418) as the Acolhua confederation, centered in the eastern Basin at Texcoco, Huexotla, and Coatlinchan, and the Tepaneca in the western Basin, centered at Azcatpotzalco and Tenayuca, along with their allies from Tenochtitlan, vied for control of the area (Hassig 1988 146-140, Davies 1982)

The defeat of Azcatpotzalco in 1428 "set the stage for the formation of the Triple Alliance" (Hassig 1988 144, also Brumfiel 1983 271-276) and Nezahuacoyotl's subsequent consolidation of the Alcolha domain, including Otumba, in the early 1430s (Offner 1983 87-88) Details about Otumba and other small city-states are sketchy since documents written in the fifteenth and sixteenth centuries usually represent the viewpoint of the major Triple Alliance centers (Nicholson 1978) Otumba became the largest Late Aztec polity in both area and population in the Teotihuacan Valley (Evans 1980 281) and an important administrative center of Texcoco's domain (Offner 1983 110) The Otumba city-state persisted into the Early Colonial period, but in modified form (Charlton 1991, Charlton and Fournier 1991, Charlton and Nichols 1997, Charlton and Otis Charlton 1994a, 1994b, Genotte 1994, 2000, Gibson 1952, 1964, Lockhart 1991, 1992 - see discussion in Chapter 12)

Implications

On the basis of previous studies (Charlton 1994, Charlton and Nichols 1992, Mather 1968), two major residential areas had been identified at Otumba (1) a small nucleated core (with remains of several large mounds, including a probable temple-pyramid and plaster floors) where the ruling elite resided, and (2) a zone of more dispersed residences Along the northern edge of the nucleated core are irrigation features some of which may date to 100 B C (Figure 221) Manufacturing areas are concentrated in the southeast section of the dispersed residential zone Mather's surveys and collections (1968) indicated that the items produced there included obsidian cores and blades, and ceramic figurines and molds Charlton's surveys and collections (1994 233-236) confirmed and extended obsidian core-blade production to the nucleated core and the northwest corner of the Otumba site as well as adding production of obsidian earspools and labrets, maguey fibers, and ground stone tools in the southeast section It is highly unusual to find in a single Aztec site such extensive and abundant evidence of craft production

These data suggested that craft production was a significant component of the economic system of Otumba The Otumba project surface collections and excavations defined these craft industries in more detail and recovered evidence of additional craft industries

2. THE SURVEY

The Otumba project had its roots in William Sanders's Teotihuacan Valley Project (Sanders 1965) Although Vaillant examined the northern edge of the site in 1934 (William J Parry, personal communication, 1999),

and Tolstoy (1958 72) visited the archaeological site of Otumba in 1953-54 making two collections there, Mather's survey in 1963 as part of the Teotihuacan Valley Project was the first to report evidence of craft specialization at this Aztec city-state capital and to make systematic collections there (Mather 1968 163, Sanders 1965) In addition to mapping the site, Mather recorded three obsidian core-blade workshops and one large area of figurine molds Between 1968-1978, three projects directed by Charlton collected additional information on the Otumba city-state (Brodkey 1978, Charlton 1971, 1972, 1975, 1977, 1981, 1994, Wiltfang 1975) indicating substantial craft production associated with the Late Aztec occupation and a long sequence of floodwater irrigation

1987 Otumba Resurvey

In January 1987 Thomas Charlton, Cynthia Otis Charlton, and Evaristo Tenorio Coronel carried out an intensive field by field resurvey of the Otumba site area (Charlton 1988) (Figure 222) Although they took no collections they did confirm the presence of a nucleated center and peripheral zone of more dispersed residences and expanded the evidence of intensive craft production in both areas, including those previously noted as well as several additional areas

Evidence of fiber spinning remained the same in extent but was noted to be associated with a heavy concentration of notched green obsidian prismatic blades and fragments of basalt *hachas* or *desfibradores* (Charlton 1988 10) suggesting the use of the latter in *maguey* fiber removal from *pencas* (see Montell 1937 308, 312, Serra Puche 1988 171-188, Serra Puche et al 1982, Tolstoy 1971 289)

The presence of the identified earspool workshop was confirmed and additional evidence for lapidary production was noted both south and north of the barrancas

The previously known core-blade workshops were also confirmed In the dispersed residential zone an additional three areas of heavy obsidian debris were noted north of barrancas In the core four similar concentrations were mapped Outside of the site area a concentration originally located in 1968 was added The majority of these concentrations appeared to be from core-blade manufacturing

The area of figurine production, with molds and heavy concentrations of figurines, was expanded to cover almost 10 ha suggesting an entire *barrio* of households specializing in figurine manufacture

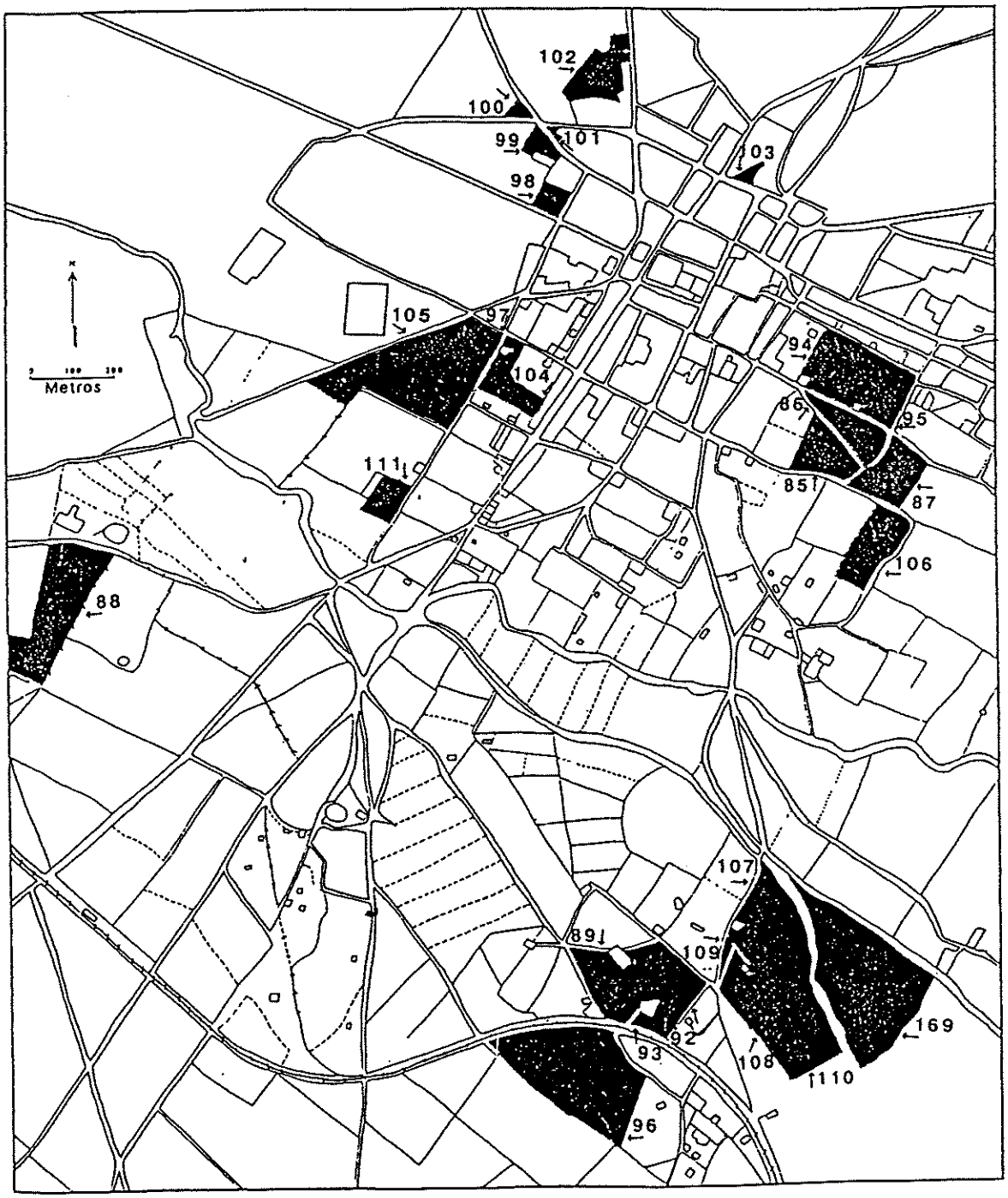
Two previously unreported concentrations of chipped basalt flakes and fragments of groundstone pestles, mortars, manos, and metates were located suggesting the presence of a new craft activity, groundstone implement manufacturing

Craft production was clearly important at Otumba covering about 10 percent of the site area based on the 1987 survey In addition evidence from previous investigations documented agricultural intensification through floodwater irrigation To relate this evidence to models of sociopolitical developments during the Postclassic period, however, we needed to go beyond the Stage I survey data Additional information on the nature of craft activities and irrigation through time was required, both in relation to population growth and decline in the city-state and in relation to the development of the nucleated core of Otumba To obtain such data systematic surface collections and excavations were carried out

Sampling Rationale and Design

The purpose of the 1988-1989 program of surface collection was to obtain representative and comparable artifact samples from different, previously identified parts of sites (e g , nucleated core versus dispersed residential zone, workshops, and mounds) and to define more precisely the occupational history of the city-state and the significance of craft production during the Aztec periods, including relations between Otumba and its dependencies Both the town site and its tributaries are well suited to this type of archaeological investigation. Vegetation is sparse

Figure 222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Metros

and consists primarily of weeds and cacti or cultigens (maize, barley, beans, nopales, and maguey) In many areas the soil cover is shallow (i e , less than 0.5 m) Moreover, erosion and farming practices, including disc and chisel plowing, have brought artifacts to the surface. Finally, Otumba and its dependencies are primarily single-component Late Aztec and Early Colonial period sites This reduced substantially the problem of dating nonceramic artifacts in surface collections

In addition to the surface collections, we also carried out surveys in areas for which we had no recent information At Otumba (TA-80) we expanded slightly the area resurveyed in 1987 (Figure 222)

The surface collection program involved a combination of probabilistic and purposive sampling At the Otumba site, where most collections were made, a stratified, systematic unaligned sampling design was employed, supplemented by non-randomly chosen samples where appropriate We had intended to carry out intensive survey and to make randomly chosen collections at three of the sites tributary to Otumba When we examined the present condition of the rural sites, however, we determined that for various reasons (site destruction primarily and very occasionally permission) we would not be able to follow the same survey and sampling strategy within the context of complete sites

Many sites or large portions of sites have been destroyed in recent years by chisel plowing and reforestation At outlying sites the sampling design had to be modified, and a purposive rather than probabilistic sampling program was used For both the randomly selected samples at the Otumba site and purposive collections at dependent settlements, however, the size of the sampling units and collection procedures were identical, so the samples are readily comparable

The intensive surface collection program at Otumba employed a stratified random sampling design to ensure an even distribution of samples from all parts of the site This also controlled for differences in ground conditions (for example, cultivated versus fallow fields) that, in addition to the experience of the collectors, can affect the visibility of artifacts Moreover, new strata could easily be added to the sampling domain, and this was an important consideration along the site's boundaries

The site map, based on Charlton's resurvey of the site in 1987, was divided into 50 by 50 m sampling strata (Figures 223-226) This was a convenient size for the scale of the site map (made from a 1 5,000 aerial photograph), yet small enough to control for different field conditions One 5 by 5 m square (or a one percent sampling fraction) from each stratum was randomly selected using a table of random numbers Each unit selected for the one-percent sample received its own number between one and 999

In the the southeastern section of the site where Charlton had noted that concentrations of artifacts from craft activities are heavy (Charlton 1988) we decided to collect an additional four-percent random sample Thus the total sampling fraction for this part of the site is five percent (Figures 225-226) Squares collected as part of the additional four-percent sample are numbered between 4,000 and 4,900 This sampling program provided additional data to permit a more precise definition of the industries (figurine, spindle whorls, pottery, maguey fiber, groundstone, and lapidary) concentrated in this part of the Aztec town

Occasionally mounds, workshops, or other unusual artifact concentrations were inadequately sampled by the randomly chosen squares In these cases we purposively selected additional squares to collect The squares were the same size as the randomly chosen squares (5 by 5 m) and were collected in the same manner Non-randomly selected squares were assigned a number between 1,000 and 1,100 to distinguish them from randomly chosen collection units In addition, we collected artifacts from the backdirt of four deep holes previously dug illicitly into the *tepetate* bedrock, these collections were designated as Surface Features 1 through 4

Since we were unable to collect randomly chosen samples from three rural sites as originally proposed we defined three zones at varying distances and directions from Otumba that included substantial preserved sections of rural sites Within these zones we took purposive collections equivalent in size to those at Otumba from mounds and artifact concentrations

Figure 223

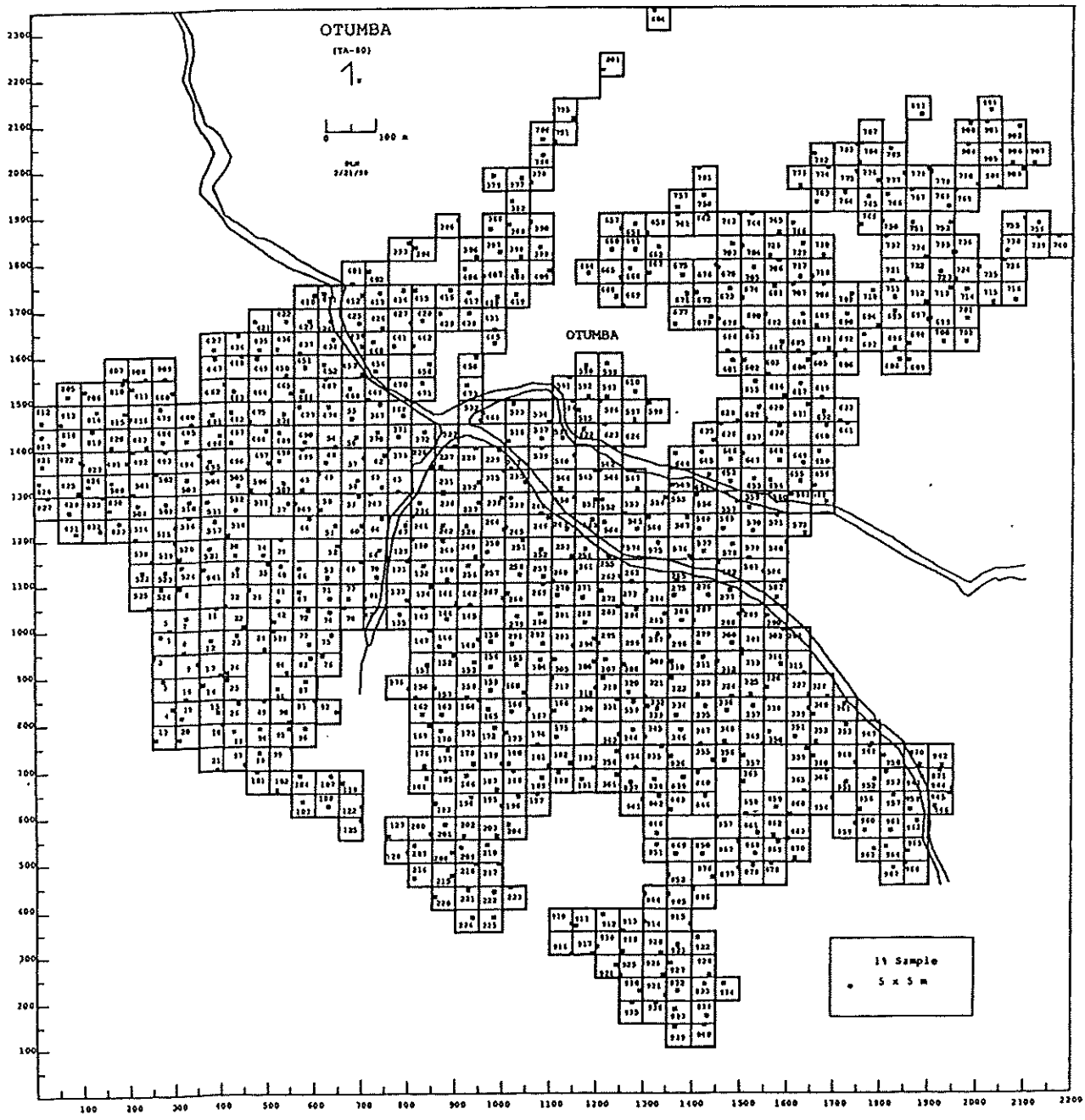


Figure 224

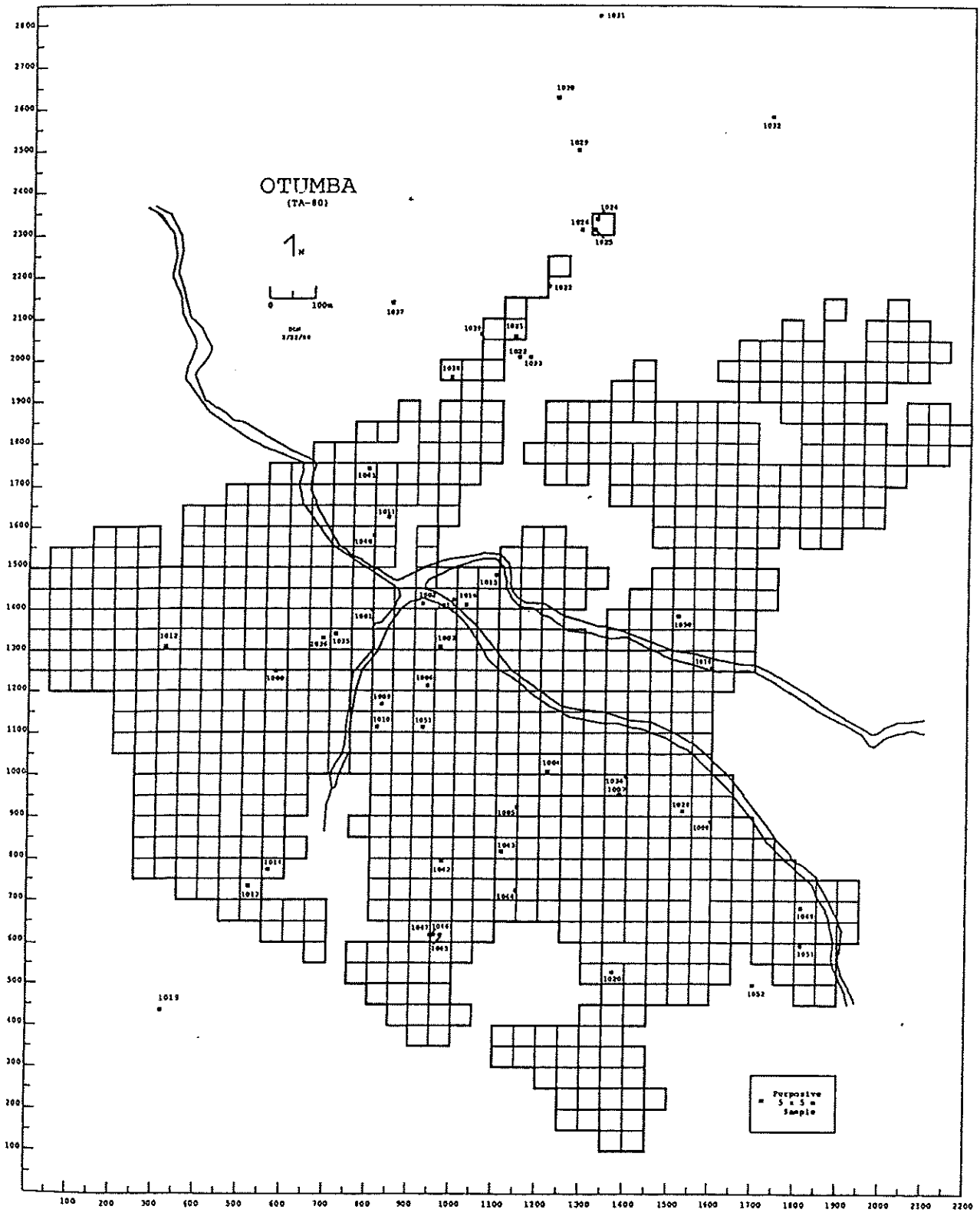


Figure 225

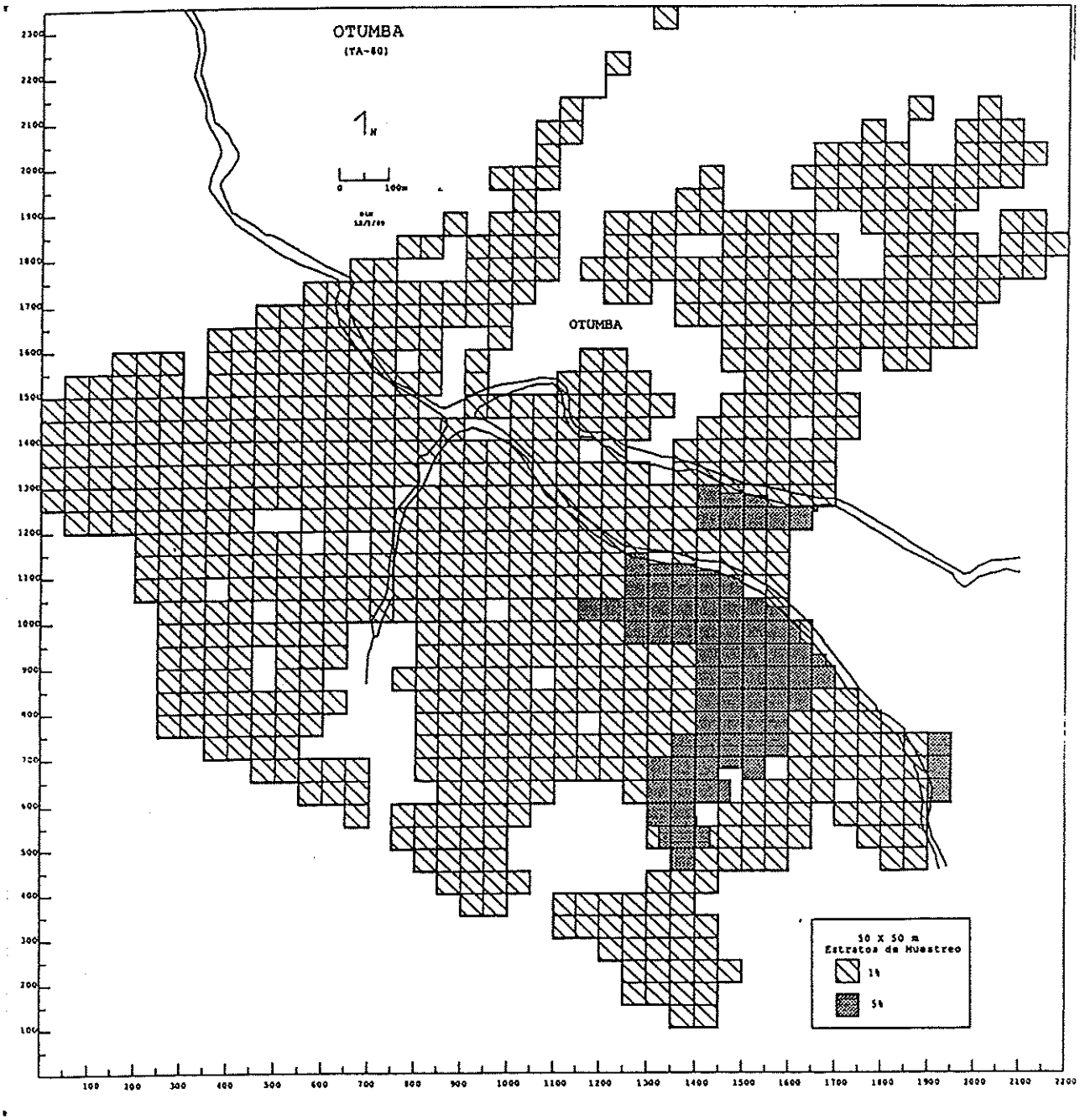
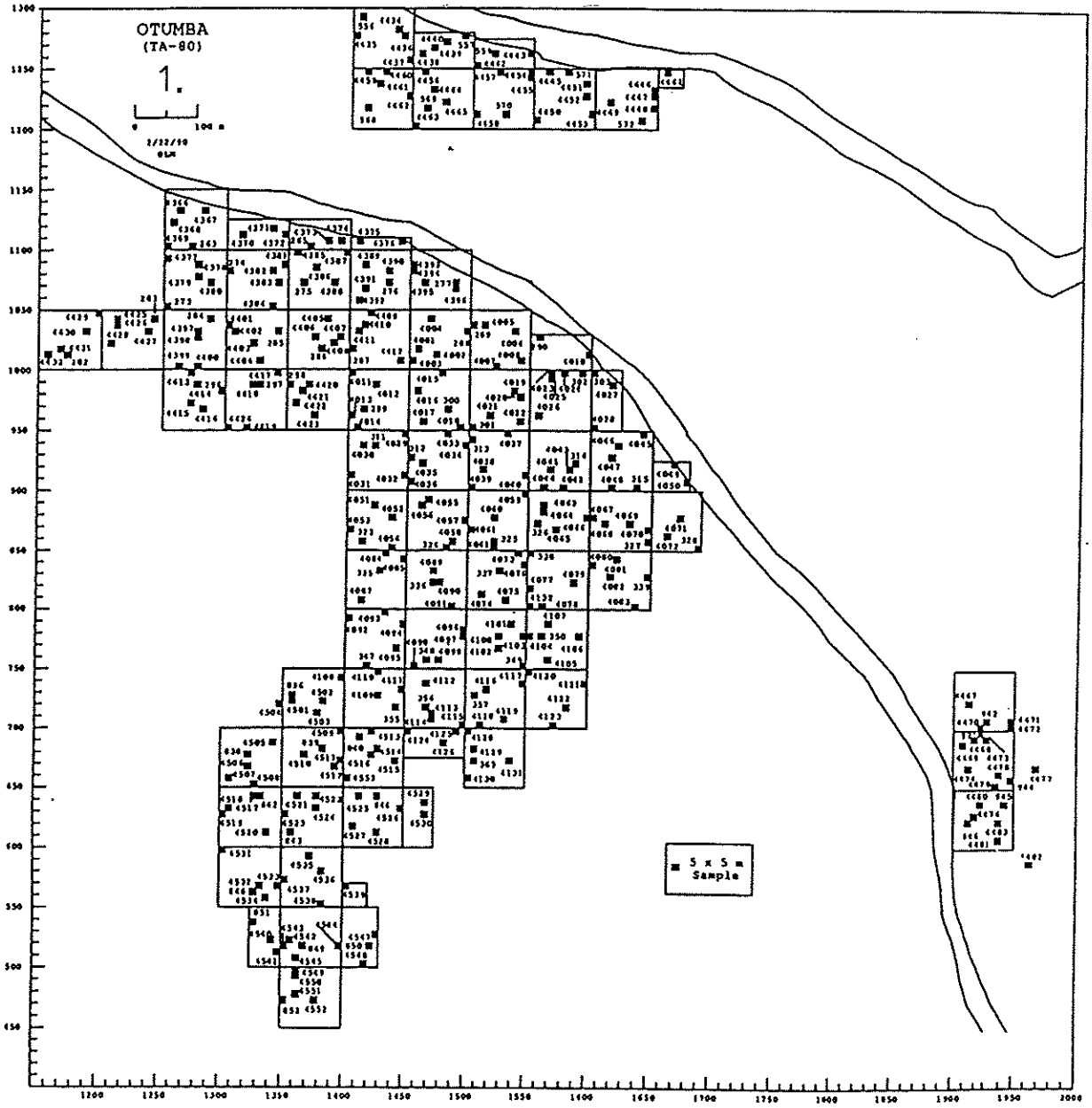


Figure 226



A standard form was completed on each collection unit and information was recorded on environmental conditions, landuse, artifact types and densities, and the presence of mounds or any other special features

Intensive Survey and Collections at Otumba (TA-80)

From the 1987 survey by Charlton and the 1988 surface collection program it became obvious that we needed to expand the areas surveyed around the Otumba site to confirm or adjust its boundaries We have noted the areas surveyed in 1987 (Figure 222 - survey units 85-89, 92-93, 95-111, and 169) Survey procedures involved a crew of from three to five persons systematically walking over the area in parallel transacts about five m apart Information on artifact densities was recorded on 1 5,000 air photograph A standard form was completed for each field These surveys helped clarify the boundaries of the site

A total of 1,150 different 5 by 5 m squares was collected at Otumba One 1% collection square was collected twice (1,151) In addition surface collections were made at four surface features for a total of 1,155 collections (Table 89)

The site map was divided into 972 50 x 50 m sampling strata, each with one 5 x 5 m square (1%) randomly selected through a table of random numbers Collections were made in 794 of the 972 units The total of 798 5 x 5 m squares collected in the 1% sample includes in addition to those 794 one 5 x 5 m square collected twice, one stratum with a second 5 x 5 m square collected, and one stratum with two additional 5 x 5 m squares collected

The 794 strata collected, excluding the one duplicate and three extra collections which would add 100 m^2 to the total (19,950 m^2) of the site area was sampled and a total area of 19,850 m^2 was collected at the 1% sampling level The sampling domain did not include all of Aztec Otumba- previously estimated to cover about 220 ha- because it was not always possible to make collections in occupied house lots or in some fields (principally in the south-central part of the site) due to occasional landowner recalcitrance and dense stands of *nopales* Further it was impossible to make collections in roads and barrancas Alternative units within such strata were not chosen

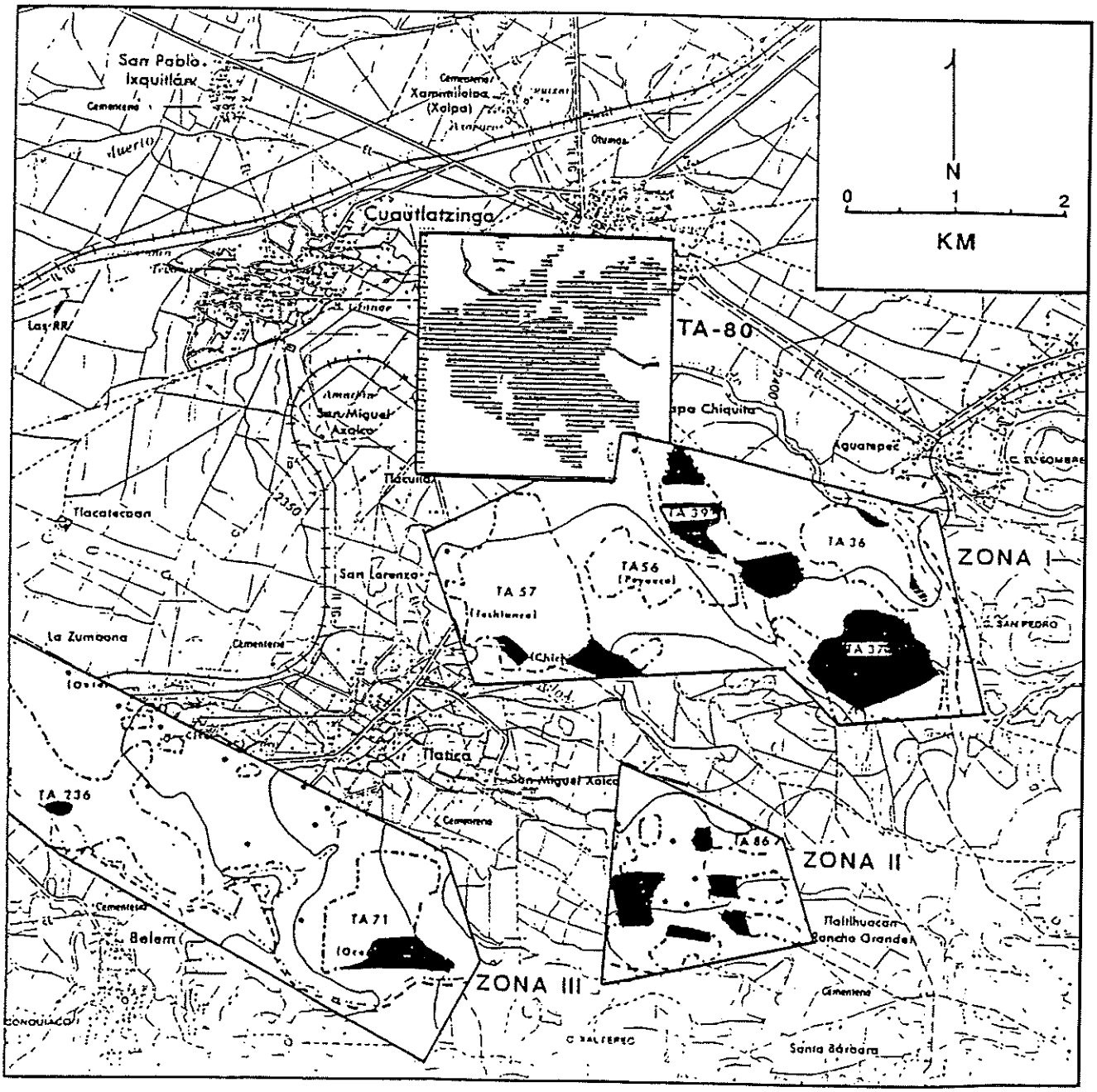
The collection of an additional 4% sample for a total of a 5% sample in part of the site coincided for the most part with the strata sampled into 1% sample However collections did extend into 10 additional strata not sampled by the 1% collections thus resulting in a total of 804 strata collected (2 01 km^2) by 1% and 5% sampling procedures An additional 9 strata were collected with non-random samples (813 strata, 2 0325 km^2) Excluding only the Surface Features, 1,151 samples were collected from 813 strata with a total collected surface area of 28,875 m^2 from 2,032,500 m^2 (813 strata) for a total sampling fraction within the 813 strata accessible to us of 1 42%

Table 89 1988-1989 Surface Collections from Otumba (TA-80) (5 x 5 m collection units)

1 Percent Random Sample	5 Percent Random Sample	Non-Random Sample	Surface Features	Total
798	296	58	4	1,155

We recognized from the outset that a sampling fraction of between one and two percent was not adequate for discovery-mode sampling of small localized artifact concentrations, yet a higher sampling fraction would not have been feasible given our resources for fieldwork and analysis Survey intensity, however, plays an equally important role in the identification of small archaeological remains (Plog et al 1978, Schiffer and Wells 1982, Nance 1981, 1983) Mather's and Charlton's systematic surveys had already identified numerous workshop concentrations and mounds (Charlton 1994), and much of the area was rewalked during our collections Indeed, few Aztec sites of this size have been subject to so many pairs of archaeologically trained eyes Given the intensity of survey at Otumba, we thought our objectives would best be met by combining the surface collection program with excavations of workshop areas and deeper deposits in the nucleated core

Figure 227


N
0
1
2
KM
TA-80
ZONA I
ZONA II
ZONA III
TA 39
TA 36
TA 56
TA 57
TA 37
TA 86
TA 71
TA 236
San Pablo Ixquitlán
Cuautlatzinga
Tlacatecpan
San Lorenzo
La Zumaona
Tlatica
Belem
Aguanepec
Tlalthuacan
Santa Bárbara

Survey and Collection of the Dependent Sites

Another objective of our investigations was to obtain comparable economic data from rural Aztec sites that were tributary to Otumba and thus to focus on the question of the economic relations between the *cabecera* and its *sujetos* Our choice of sites to investigate was constrained by several factors, primarily the recent partial or complete destruction of many sites by chisel plowing and reforestation and the expansion of modern settlements, and very occasionally the opposition of landowners to our collecting even on those preserved site fragments In essence our proposed strategy to investigate three whole sites had to be modified to an investigation instead of three zones at varying distances and directions from Otumba, each of which included substantial preserved portions of rural sites within which we took intentional collections

Our surveys consisted primariliy of systematically relocating mounds and artifact concentrations identified by previous projects We also noted new data that had not been previously recorded For each mound and artifact concentration, artifacts were collected from at least one 5 by 5 m square (the same size unit employed at Otumba), and if the mound or artifact concentration was large, then more than one square was collected

Surface collections were carried out at the following sites TA-36, TA-37, TA-39, and TA-57 to the east of Otumba, TA-59 and TA-VI (a series of small dispersed Late Aztec sites), southeast of Otumba, and TA-71 and TA-236, which are situated south and southwest of Otumba (Figures 219 and 227) (Table 90) The sites in our sample had all been surveyed, mapped, and collected in the mid-1960s as part of the Teotihuacan Valley Project (Sanders 1965, also Part 1and Part 2 Chapter 4 this volume) and during Charlton's Colonial and Trade-route studies Our goal was to supplement these earlier investigations and to obtain artifact samples comparable to those from Otumba Additional excavated and surface collections had been made east, northeast, north, and northwest of Otumba during previous projects (Charlton 1972, 1975, 1976, 1994, Evans 1988)

Procedures for laying out the squares and recording them were identical to those at Otumba Unlike the sampling procedures employed at Otumba, samples from the outlying sites were not randomly chosen because we lacked the necessary resources to undertake a comparable, large-scale sampling program

Table 90 1988 Surface Collections Made at Outlying Sites

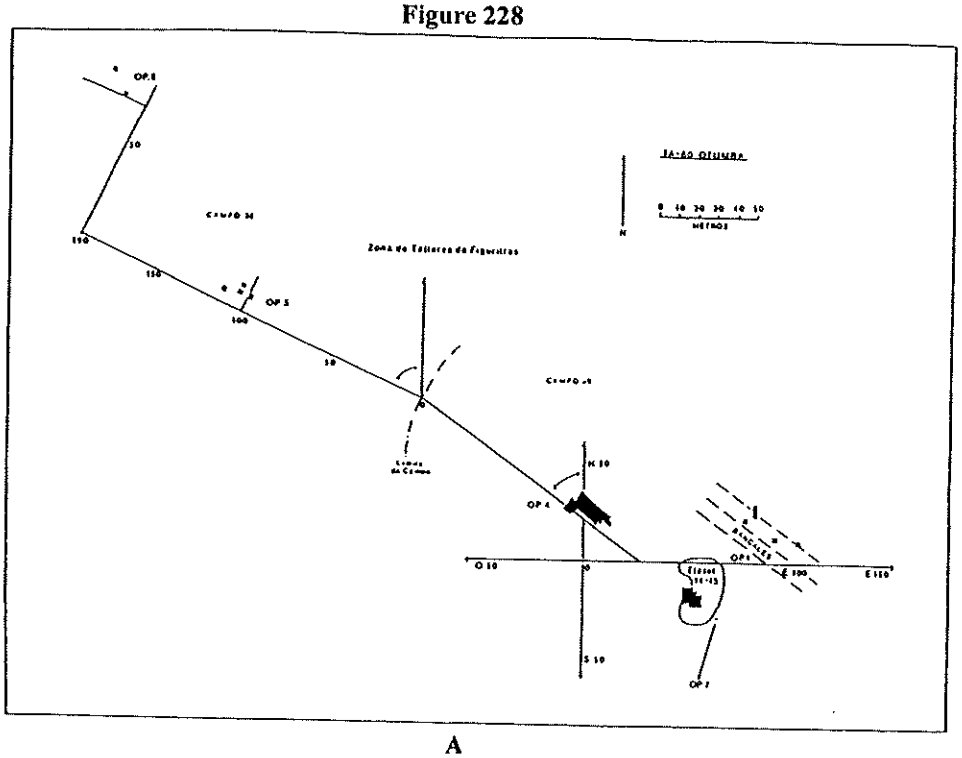
Site Number	Number of Collections
TA-36	2
TA-37	66
TA-39	49
TA-57	22
TA-59	1
SS-VI	23
TA-71	23
TA-236	3
TOTAL	189

at these sites. However, the Aztec occupation of these sites is very dispersed, with mounds or mound remnants separated by areas of sparse artifact densities In terms of our objective of obtaining information on specialized production at rural sites and rural consumption of goods, relatively little additional information would have been gained by sampling unoccupied zones

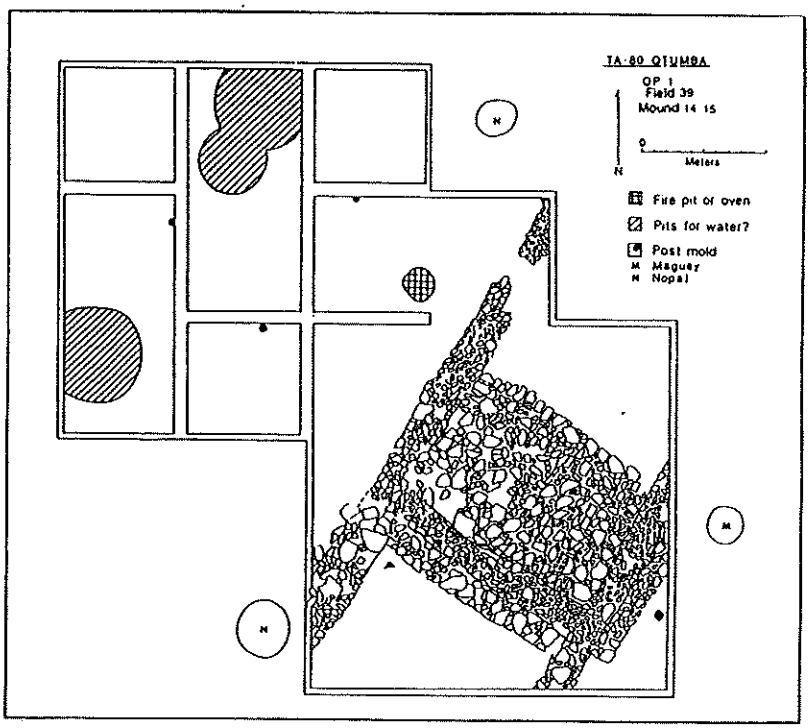
3. EXCAVATIONS AND INTENSIVE COLLECTIONS

We proposed a series of excavations as part of the interrelated research activities of the Otumba project

Figure 228

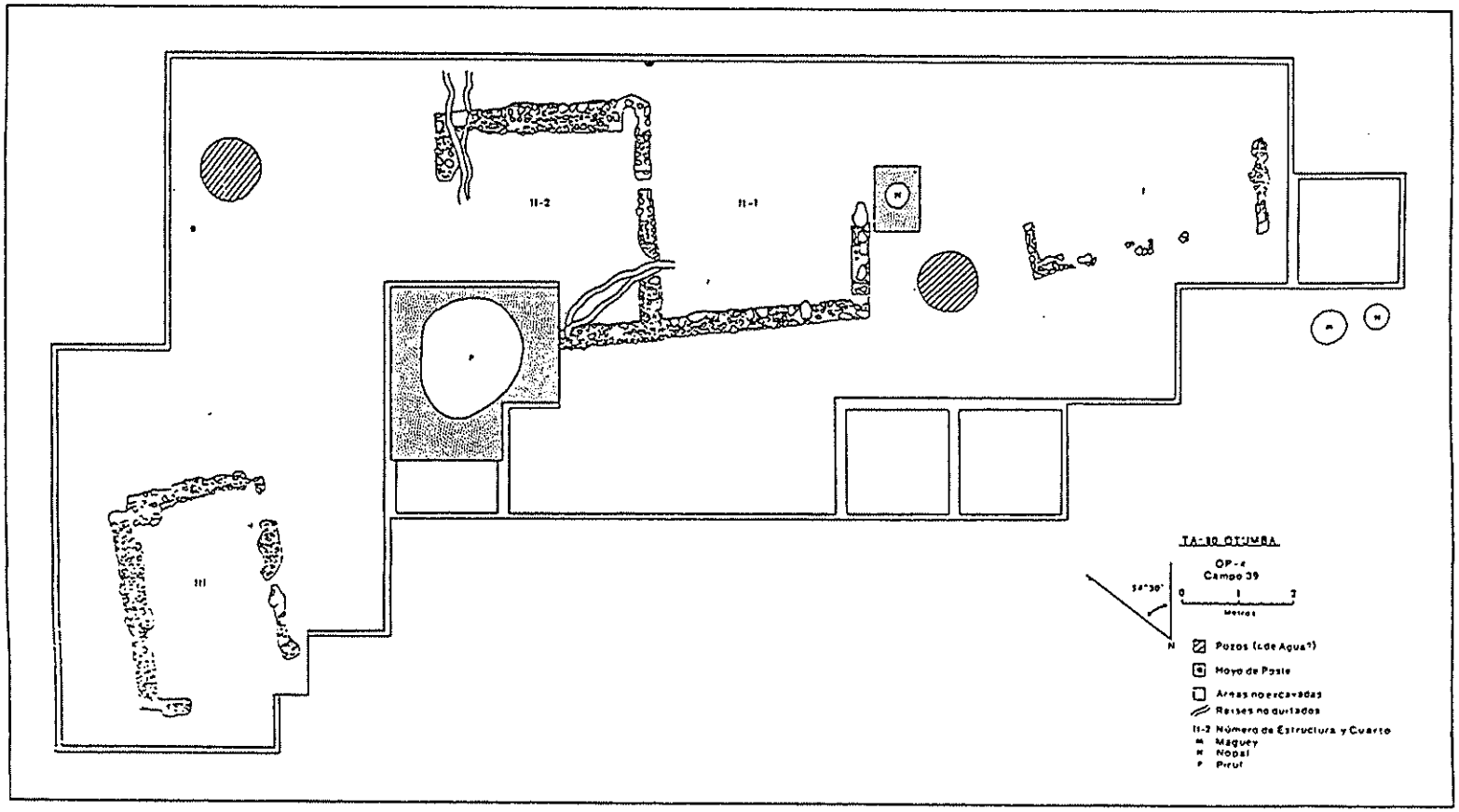


A



B

Figure 229


II-2
II-1
III
TA-30 OTUMBA
OP-4
Campo 39
Metros
Pozos (¿de Agua?)
Hoyo de Poste
Áreas no excavadas
Restos no quitados
II-2 Número de Estructura y Cuarto
M Maguey
N Nopal
P Pirul

Ten operations involving excavations were carried out (1-6, 9-12). In two cases (1 and 11) these were supplemented by intensive surface collections Where warranted (Operation 7) only such collections were carried out Operation 8 was not used (Figure 221)

Craft Production Area Excavations OPs 1, 2/3, 4-6, 11

The excavation of manufacturing areas in the city-state center (Otumba) was carried out to clarify the organization, chronology, and importance of non-agricultural production to the city-state economy

Operations 1, 4-6 investigated figurine manufacturing, Operations 2-3 looked at obsidian core-blade production, and Operation 11 studied lapidary production (Figures 229-234)

Although each operation was set up with a separately established grid system each investigation began with a series of test pits either 1 x 1 m or 2 x 2 m These were usually amplified when *in situ* remains were encountered In Operations 2/3 both trenches 1 m wide and of varying lengths as well as 3 x 3 m test pits were used In other cases test pits measuring 2 x 2 m were used along with 1 m wide trenches of variable lengths Excavation was carried out with trowels in levels of 10 cm (Operations 1, 4-6 and 11) or with one or more initial levels up to a depth of 50 cm from the surface depending upon results from preview pits, and followed by subsequent levels of 10 cm (Operations 2/3) With the exception of the upper level(s) in Operations 2-3 all soil was screened Excavation proceeded in 10 cm levels or until natural/cultural features were encountered, whichever occurred first, thus applying a combination of arbitrary and natural/cultural levels according to the contexts All excavations were continued until sterile soils were encountered and verified We also took flotation samples from middens and from undisturbed contexts

Figurine Barrio (Operations 1, 4-6) (Figures 220, 228, 229)

We focused our excavations on areas of deep deposits within the zone of figurine manufacture as defined by surface survey and collections Our interest was in determining whether the proposed workshops were associated with domestic residences a finding which would support the organization of figurine production within a household context Although we examined several sections of the proposed zone or *barrio* of figurine workshops we found undisturbed Aztec/Early Colonial deposits with such evidence present only in Operation 4 Several other excavations revealed that modern cultivation methods - chisel plowing and tractor discing - have greatly modified the archaeological deposits (Operation 1 *bancales*, Operations 5 and 6) Those excavations provided data on figurine production - but from mixed deposits One other excavation, Operation 1 Mounds 14-15, revealed a Late Colonial period ranch with traces of Aztec occupation beneath it, and mixed Aztec/Colonial period materials associated with it

Operation 1 - *Bancales*

Nature of Excavation - two series of 2 x 2 m test pits (6)
Architectural Remains - none preserved, large amounts of rock rubble
Artifactual Remains - large amounts of rock rubble, ceramics, molds, and figurines
Condition of Deposits - heavily disturbed and mixed
Chronology - Late Aztec/Early Colonial, Late Colonial

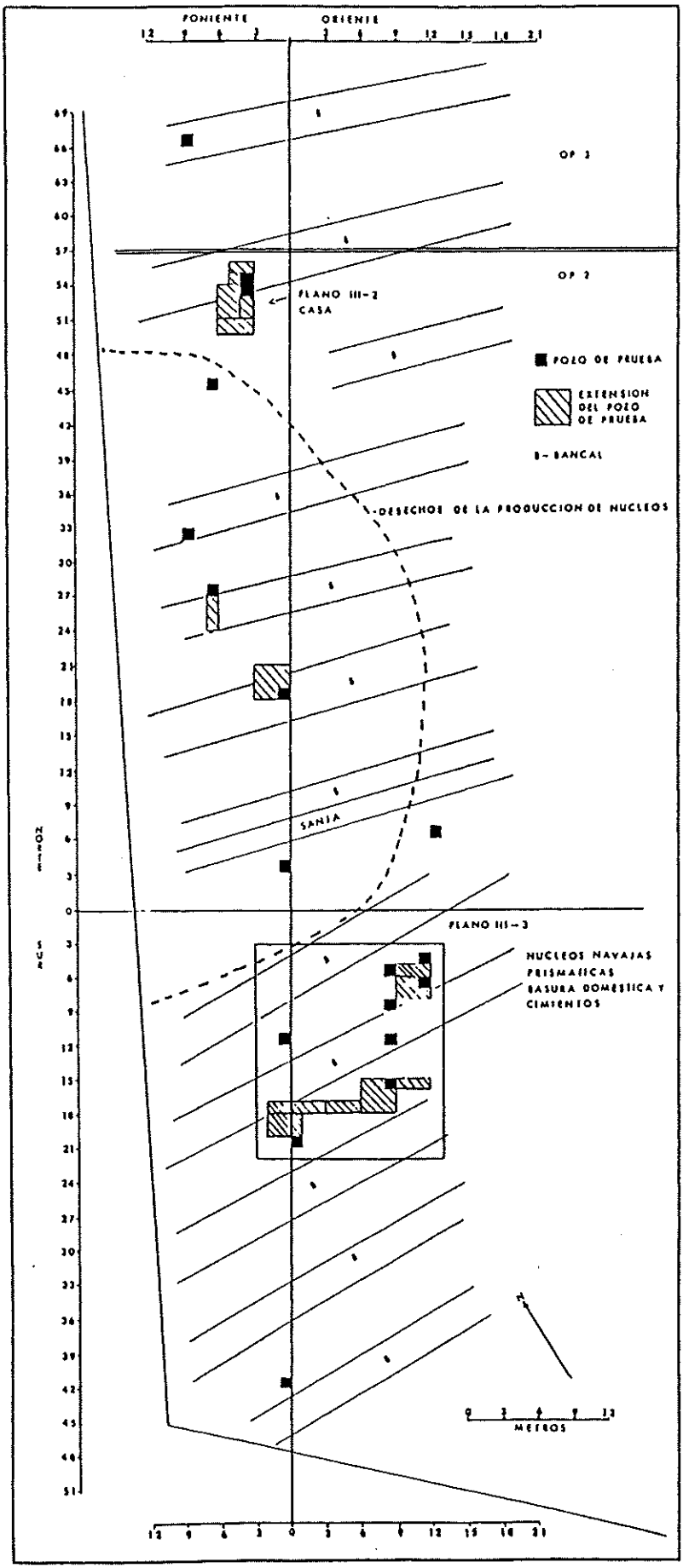
Operation 1 - *Mounds 14 and 15*

Nature of Excavation - 18 2 x 2 m test pits on and near two mounds
Architectural Remains - late 18th century ranch stable and corral, wall bases, stone floor and post molds, possible Aztec kiln base
Artifactual Remains - large amounts of rock rubble, ceramics, molds, figurines, marbles, Type I spindle whorls, and lapidary production debris
Condition of Deposits - variably disturbed, some mixture
Chronology - Late Aztec/Early Colonial, Late Colonial

Operation 4 - *Residence/Workshop*

Nature of Excavation - 41 2 x 2 m test pits, 3 1 x 2 m units, and 1 1 x 5 m unit

Figure 230



Zone 1

Zone 3

Zone 2

Figure 231

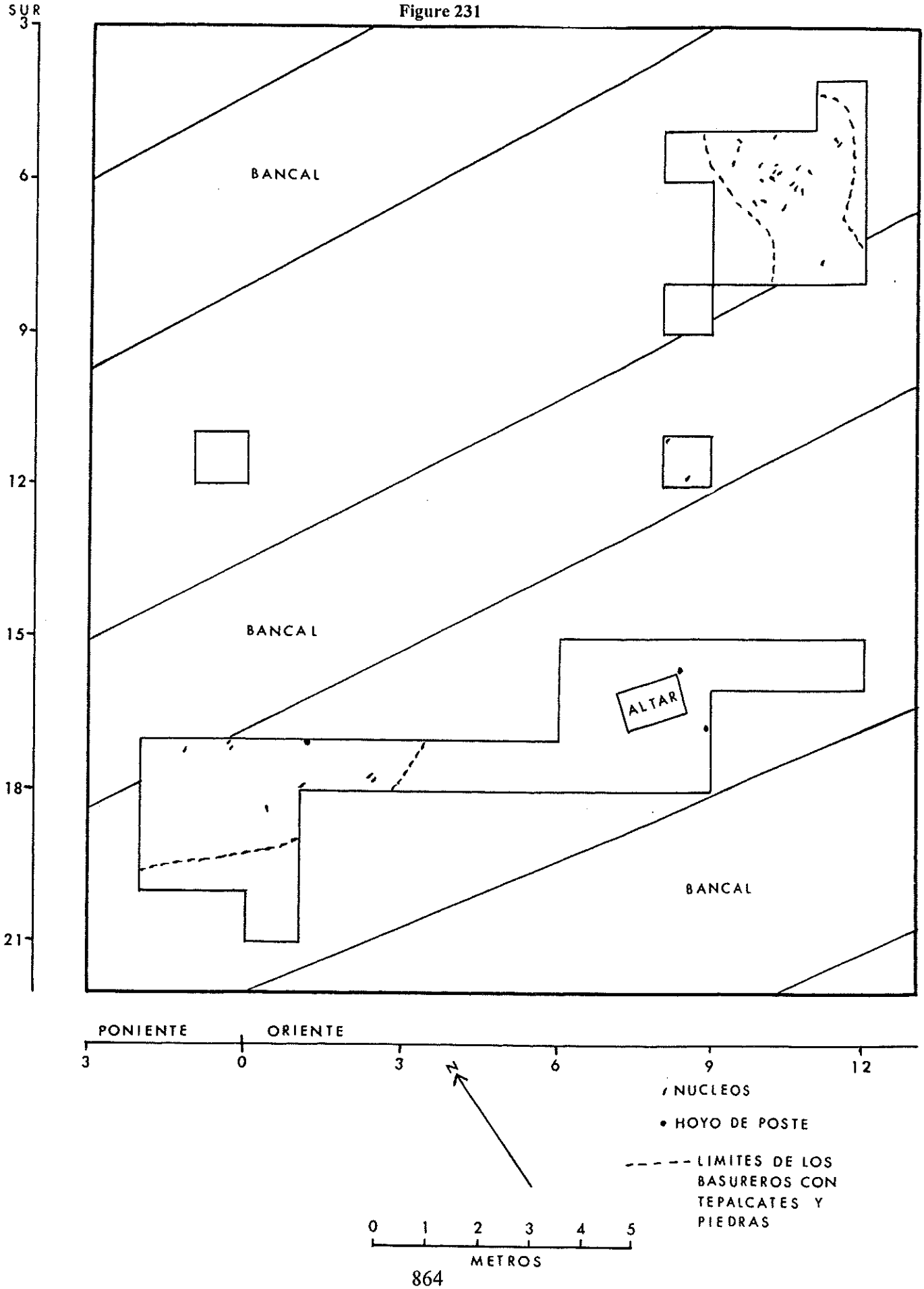
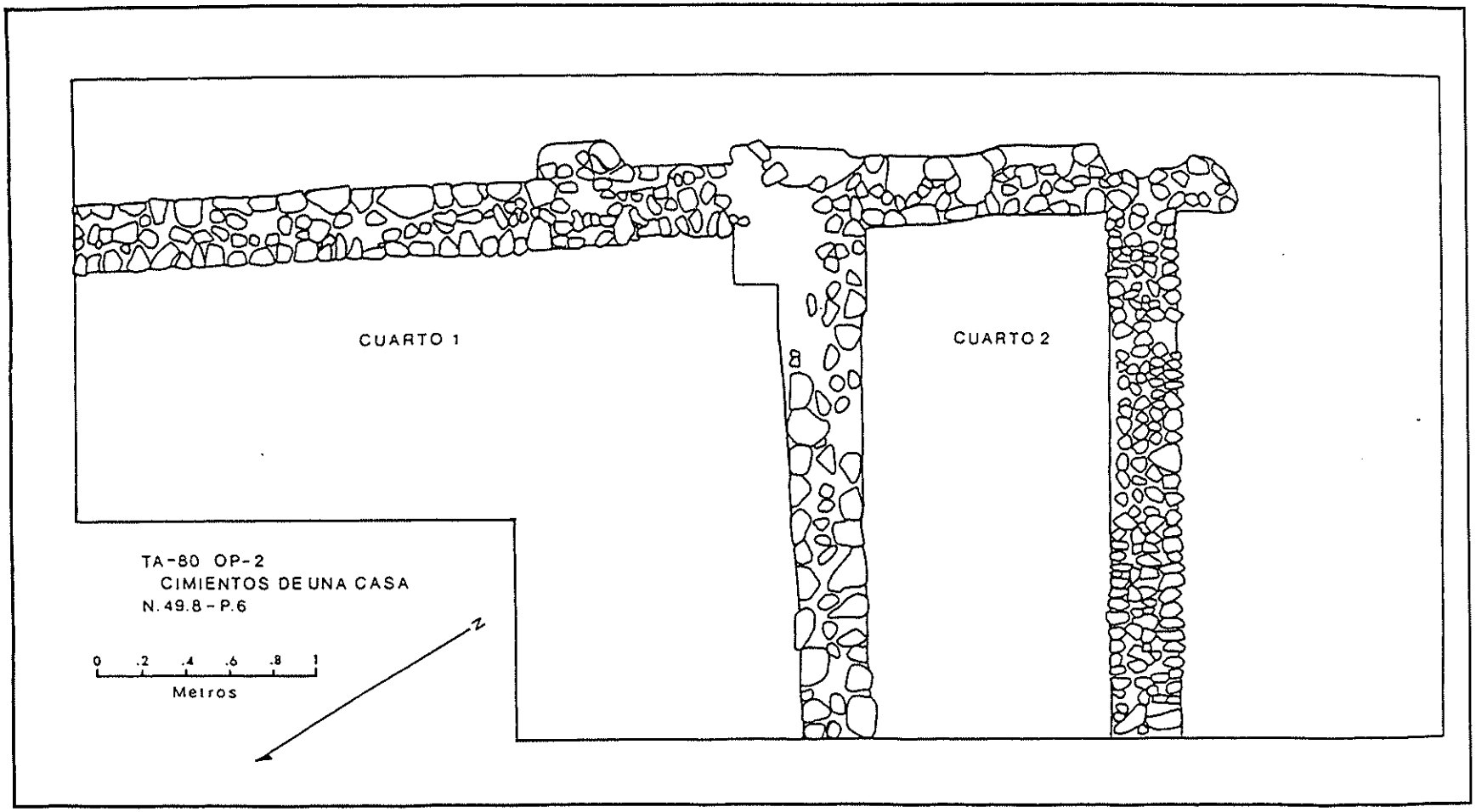

SUR
3
6
9
12
15
18
21
BANCAL
BANCAL
BANCAL
ALTAR
PONIENTE
ORIENTE
3
0
3
6
9
12
N
NUCLEOS
HOYO DE POSTE
LIMITES DE LOS BASUREROS CON TEPALCATES Y PIEDRAS
0
1
2
3
4
5
METROS

Figure 232


CUARTO 1
CUARTO 2
TA-80 OP-2
CIMIENTOS DE UNA CASA
N. 49.8 - P.6
0 .2 .4 .6 .8 1
Metros
N

Architectural Remains - wall bases from portions of three separate domestic structures, floor and wall fragments of *cascajo*, *tepetate*, lime, and *tezontle*
Artifactual Remains - household debris, ceramics, molds, figurines, marbles, spindle whorls, clay artifact production debris and lapidary production debris
Condition of Deposits - variably disturbed, some well preserved
Chronology - Late Aztec/Early Colonial

Operation 5 - *Workshop Dump*
Nature of Excavation - 4 2 x 2 m test pits
Architectural Remains - none preserved, rock rubble Artifactual Remains - household debris, ceramics, molds, figurines, marbles, spindle whorls, clay artifact production debris and lapidary production debris, dump area
Condition of Deposits - heavily disturbed
Chronology - Late Aztec/Early Colonial

Operation 6
Nature of Excavation - 2 2 x 2 m test pits
Architectural Remains - none preserved, rock rubble
Artifactual Remains - household debris, ceramics, molds, figurines
Condition of Deposits - heavily disturbed
Chronology - Late Aztec/Early Colonial

Obsidian Core-Blade Nucleated Core Workshop (Operations 2-3) (Figures 220, 230-232)

Since many of the concentrations of obsidian debris in Otumba derived from obsidian core-blade production were located in areas with demonstrably shallow soils we directed our excavations to such a concentration within the nucleated core where deep soil contexts appeared to exist (Figures 221, 230-232) The 1987 survey identified a zone directly south of several large mounds, in the western part of a modern field Survey and collections in 1988 expanded the area of the concentration and confirmed its origins

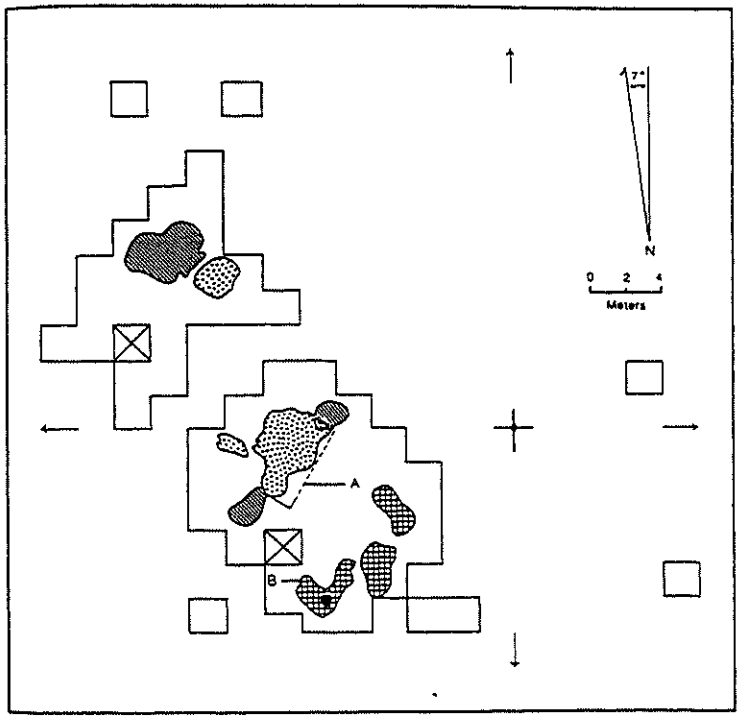
In addition to the obsidian concentration there was basalt and *tezontle* building rubble scattered over the field and in a retaining wall some stones with red and white painted plaster still adhering These remains suggested the possible presence of structures, some of high status families, of importance in our quest to locate connections between obsidian craft production, domestic residences, and high status individuals, as well as the development of the industry and the sequence of occupation in the nucleated core of the city

Our test pit program revealed that although many of the deep soil contexts were recent deposits made during the 19th and 20th centuries and had been further disturbed by recent plowing they had, nevertheless, covered and protected undisturbed archaeological deposits but of non-uniform extent The program gridded the proposed workshop zone into 3 x 3 m squares, excavated a 1 x 1 m preview pit within several of these, and expanded those excavations where deposits of interest were encountered On the basis of the excavated test units, the surface collections, and the surveys, the archaeological remains encountered can be divided into three distinctive zones

Zone 1 - *Concentration of Flakes from the Production of Cores* (OP 2)
Nature of Excavation - 6 1 x 1 m preview pits, 1 3 x 3 m pit, 1 1 x 3 m trench
Architectural Remains - one wall foundation fragment
Artifactual Remains - domestic household debris, flakes and debitage from preparation of prismatic blade cores
Condition of Deposits - variably disturbed to *tepetate* in south end with some midden and calcic subsoil preserved to the north
Chronology - Late Aztec/Early Colonial

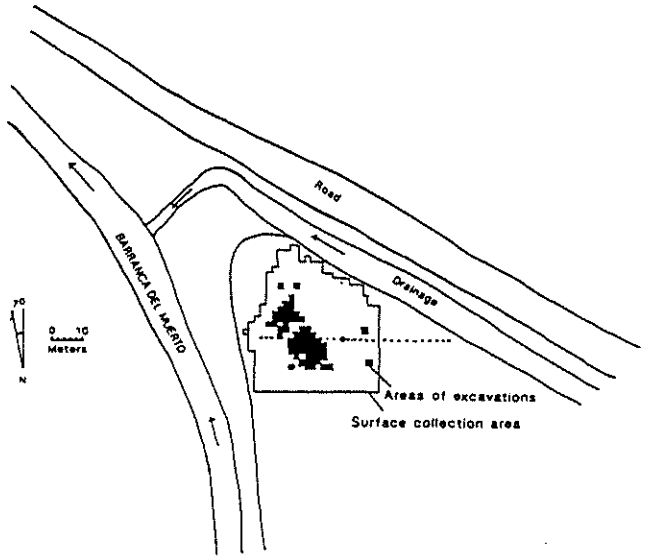
Zone 2 - *Concentration of Cores, Prismatic Blades, Domestic Refuse, and an Altar Foundation* (OP 2)
Nature of Excavation - 8 1 x 1 m preview pits, 2 3 x 3 m pits, 1 2 x 3 m pit, 1 2 x 2 m pit, 4 1 x 3 m trenches, 2 1 x 2 m trenches
Architectural Remains - much rock rubble, pieces of plaster, and 65 cm x 72 cm altar foundation, three post holes
Artifactual Remains - heavy domestic debris, heavy blade-core reduction debris, prismatic blade cores

Figure 233



A

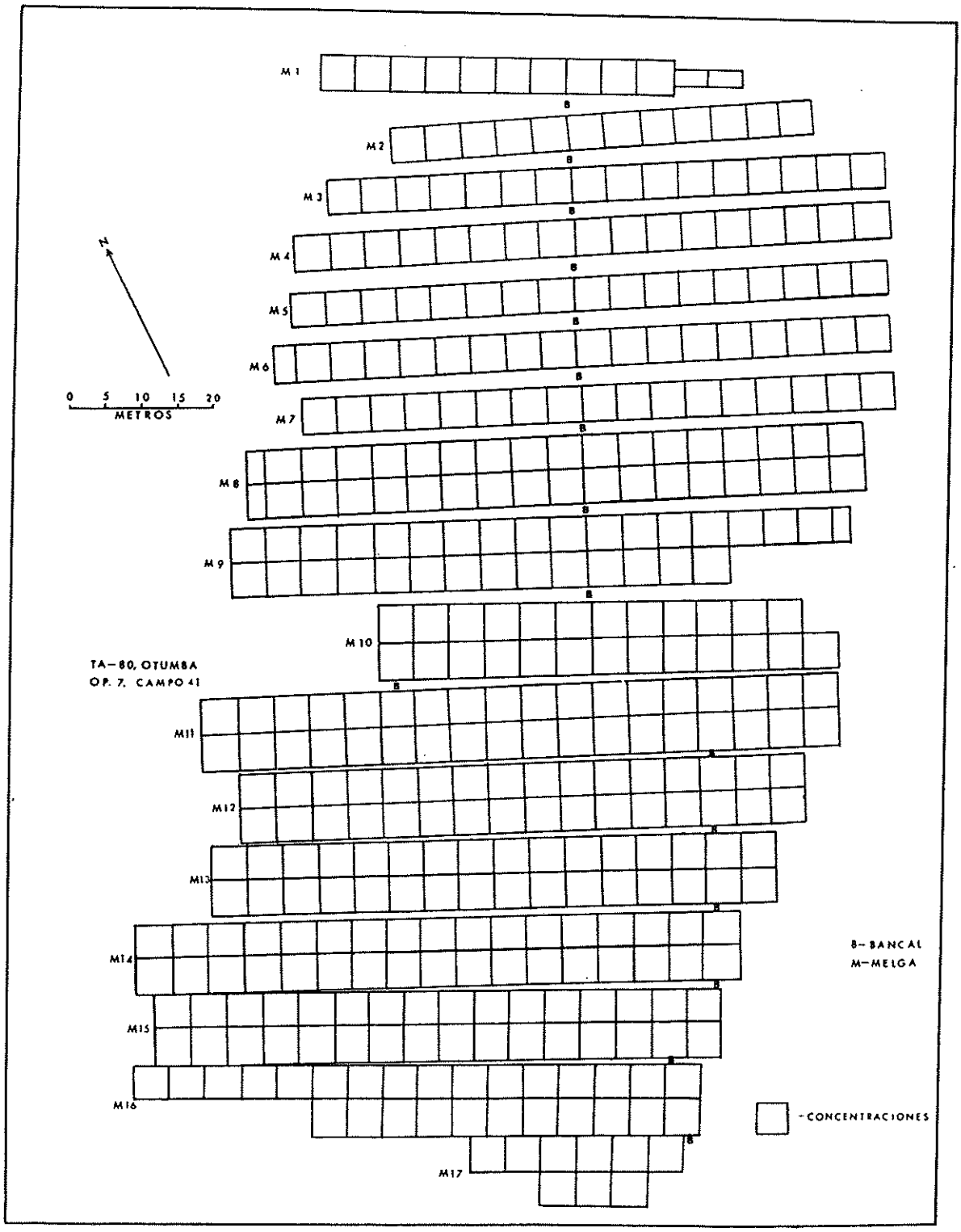
T.A. 80, Operation 11, Lapidary Workshop, Detailed Plan of the Excavation, Diagonal Hatching - Aztec 2 Debris; Cross-Hatching - Aztec 3 Domestic and Lapidary Workshop Debris; Stipping -Melted Adobes, Aztec 3; Solid Black - Hearth; A - House, Aztec 3; B- Workshop Activity Area.



B

T.A. 80, Operation 11, Lapidary Workshop, General Plan of the Excavations and Intensive Surface Collections

Figure 234


M 1
M 2
M 3
M 4
M 5
M 6
M 7
M 8
M 9
M 10
M11
M12
M13
M14
M15
M16
M17
B
N
0 5 10 15 20
METROS
TA-80, OTUMBA
OP. 7, CAMPO 41
B- BANCAL
M-MELGA
- CONCENTRACIONES

Condition of Deposits - variably disturbed to *tepetate*, good preservation of midden and calcic subsoil
Chronology - Late Aztec/Early Colonial

Zone 3 - *Residential Zone* (OPs 2-3)
Nature of Excavation - 3 1 x 1 m preview pits, 1 1 x 1 pit, 2 1 x 2 m trenches, 1 1 x 3 m trench, 1 2 x 3 m trench
Architectural Remains - wall foundation of house with at least two rooms
Artifactual Remains - domestic household debris, no obvious evidence of obsidian production near the walls or to the north
Condition of Deposits - well preserved midden contexts associated with the structure
Chronology - Late Aztec/Early Colonial

Lapidary Workshop (Operation 11) (Fig 233)

We focused our excavations on an isolated concentration of waste from lapidary production found during the surveys and surface collections of 1988 (Figures 221, 233 A, B) In Field 169, Mound 41, there were basalt polishers with obsidian tools and debitage from lapidary production The area had Aztec/Early Colonial ceramics (II-IV) but no earlier or later occupations. Nor were there traces of chisel plowing or recent cultivation Our interest was in determining whether the workshop was associated with a domestic residence A positive finding would support the organization of lapidary production within a household context In addition we wanted to determine the chronology of lapidary craft development as well as the tools, techniques, and stages of such production

A grid of 2 x 2 m squares was laid out on and around Mound 41 One 2 x 2 m pit was excavated in each quadrant to locate precisely the major concentrations of subsurface cultural deposits Subsequent excavations were concentrated in the northwest and southwest quadrants In the northwest quadrant two distinct and separate pits each filled with various types of refuse were located One contained domestic refuse with Aztec II ceramics but no materials from lapidary production while the other contained broken adobes and sparse Aztec III ceramics In the southwest quadrant lapidary production debitage and tools were associated with a small domestic structure, Aztec III ceramics with traces of Aztec II and Aztec IV, and a probable workshop activity zone (Otis Charlton 1990 177, 1993 232-233)

Southeast Quadrant - *Non-Lapidary Production Area*
Nature of Excavation - 1 2 x 2 m test pit
Architectural Remains - none
Artifactual Remains - light domestic household debris, traces of lapidary debitage
Condition of Deposits - variably disturbed
Chronology - Late Aztec/Early Colonial

Northeast Quadrant - *Non-Lapidary Production Area*
Nature of Excavation - 1 2 x 2 m test pit
Architectural Remains - none
Artifactual Remains - light domestic household debris, traces of lapidary debitage
Condition of Deposits - variably disturbed
Chronology - Late Aztec/Early Colonial

Northwest Quadrant - *Non-Lapidary Production Area*
Nature of Excavation - 1 2 x 2 m test pit, 24 2 x 2 m pits
Architectural Remains - Aztec II refuse filled pit, Aztec III adobe filled pit
Artifactual Remains - moderately heavy Aztec II and Aztec III domestic debris
Condition of Deposits - variably disturbed but with well preserved contexts
Chronology - Early Aztec, Late Aztec/Early Colonial

Southwest Quadrant - *Lapidary Production Area*
Nature of Excavation - 1 2 x 2 m test pit, 39 2 x 2 m units, 1 1 x 2 m trench
Architectural Remains - 2 Aztec II refuse filled pits, 3 Aztec III efuse filled pits, 1 hearth, fragmentary stone wall southeast corner of structure
Artifactual Remains - isolated Aztec II domestic refuse, heavy Aztec III domestic refuse associated with

lapidary production tools and debitage
Condition of Deposits - variably disturbed but with well preserved contexts
Chronology - Late Aztec/Early Colonial

Craft Production Area Intensive Surface Collection (OP 1 Mds 14-15, OP 7, OP 11) (Figures 222, 233, 234)

In addition to the surface collections previously described we also took surface collections from each unit excavated or under consideration for excavation In two instances we expanded the surface collections to include a larger area around the excavated zone(s) (Operation 1, Mds 14-15, Operation 11) and in one instance substituted the surface collections for excavations (Operation 7)

Operation 1 - *Mounds 14 and 15*

The 2 x 2 m grid system included 119 2 x 2 m squares which were collected Of these 18 were subsequently excavated A provenience and level form was filled in for each collection made The collection techniques were the same as those used for the TA-80 and Dependencies surface collections

The artifacts indicated a mixture of Late Colonial and Late Aztec/Early Colonial materials, including clay working (figurines, molds, marbles), debris from lapidary working, and Type I spindle whorls

Operation 7

In Operation 7 we used controlled surface collections. Instead of excavating within this area of unusual artifact concentrations (spindle whorls, *desfibradores*, obsidian blades, and lapidary items) we made controlled intensive surface collections throughout the entire survey unit We based this decision on our observations of the extent of preserved stratigraphy - minimal - and projections on the availability of personnel to direct the excavations. The field was divided by rows of *magueyes* (*bancales*) into small narrow fields (*melgas*) (Figure 234) In order to avoid damaging the *magueyes* we laid out 5 x 5 m squares following the angle of each *melga* When necessary squares smaller than 5 x 5 m were used (5) Three hundred and ninety-eight 5 x 5 m squares, two 2 x 5 m squares, and four 2 5 x 5 m squares were collected All collections were made with the same procedures used in the TA-80 and Dependencies surface collection programs

The artifact collections indicate the Late Aztec/Early Colonial specialized protection of maguey fiber and the spinning of maguey fiber thread There is also evidence for spindle whorl and spindle production, figurine production, and lapidary production A small concentration of basalt flakes suggests the production of basalt grinding tools in one part of the field The field also had heavy rock rubble and associated domestic refuse

Operation 11

The 2 x 2 m grid system included 481 squares from which surface collections were made Of these 67 5 2 x 2 m squares were also excavated The collection techniques were the same as those used for the TA-80 and Dependencies surface collections Provenience and level forms were completed for the surface collections from each square excavated

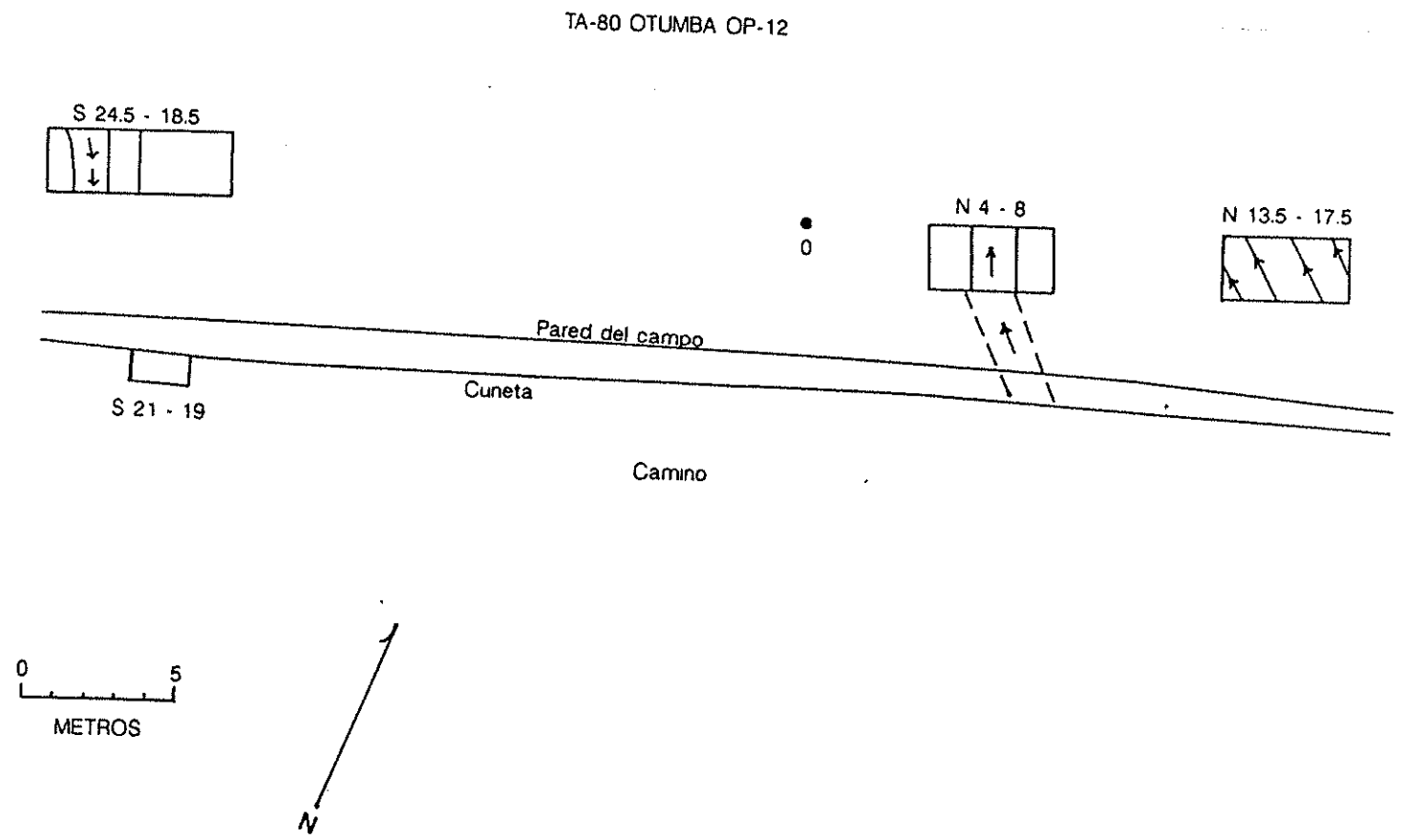
The analyzed artifacts indicate a dominant Aztec III ceramic assemblage with some Aztec II and Aztec IV ceramics present Obsidian and basalt fragments indicate the tools and debitage associated with lapidary production activities (Vasquez Lom 1995)

Hydraulic System Excavations (OP 12) (Fig 235)

The excavation of the hydraulic system in the city-state center was carried out in order to reconstruct its morphology, development, and chronology, and its importance for agricultural production

In this investigation (Figure 235) we began with two separate trenches each measuring 4 x 2 m and one

Figure 235


TA-80 OTUMBA OP-12
S 24.5 - 18.5
0
N 4 - 8
N 13.5 - 17.5
Pared del campo
Cuneta
S 21 - 19
Camino
0
5
METROS
N

trench measuring 3 x 2 m Subsequently we extended the 3 x 2 m trench with an additional 3 x 2 m trench (total size 6 x 2 m) These trenches were located so as to explore projected positions of irrigation features such as field surfaces and canals previously known from road cuts and roadside exploratory excavations

We started at the surface of a relatively undisturbed field behind the road cut Excavation was carried out with trowels with one or more initial levels up to a depth of 50 cm from the surface depending upon the thickness of the plow zone Below the plow zone excavation proceeded in 10 cm levels or until natural/cultural features were encountered Depending upon the nature of the deposits we used a combination of arbitrary and natural/cultural levels With the exception of the upper level(s) all soil was screened All excavations were continued until sterile soils were encountered and verified We also took flotation samples and samples to determine soil grain size for sedimentation studies

North Trench N 13 5 - 17 5 - *Field Surface*
Nature of Excavation - 1 4 x 2 m trench
Architectural Remains - no structures, field surface canal furrows
Artifactual Remains - waterrolled ceramics and obsidian, worked and unworked
Condition of Deposits - well preserved stratigraphy
Chronology - Late Aztec/Early Colonial
Center Trench N 4 - 8 - *Main Canal*
Nature of Excavation - 1 4 x 2 m trench
Architectural Remains - no structures, floodwater irrigation canal
Artifactual Remains - waterrolled ceramics and obsidian, worked and unworked
Condition of Deposits - well preserved stratigraphy
Chronology - Mazapan, Late Aztec/Early Colonial
South Trenches S 18 5 - 24 5 - *Upper Field Surfaces, Lower Natural Water Course*
Nature of Excavation - 2 3 x 2 m trenches
Architectural Remains - no structures, upper field surfae, lower natural water course
Artifactual Remains - waterrolled ceramics and obsidian, worked and unworked
Condition of Deposits - well preserved stratigraphy
Chronology - Upper Late Aztec/Early Colonial, Lower Late and Terminal Formative

Nucleated Core Excavations (OPs 9 & 10) (Fig 236)

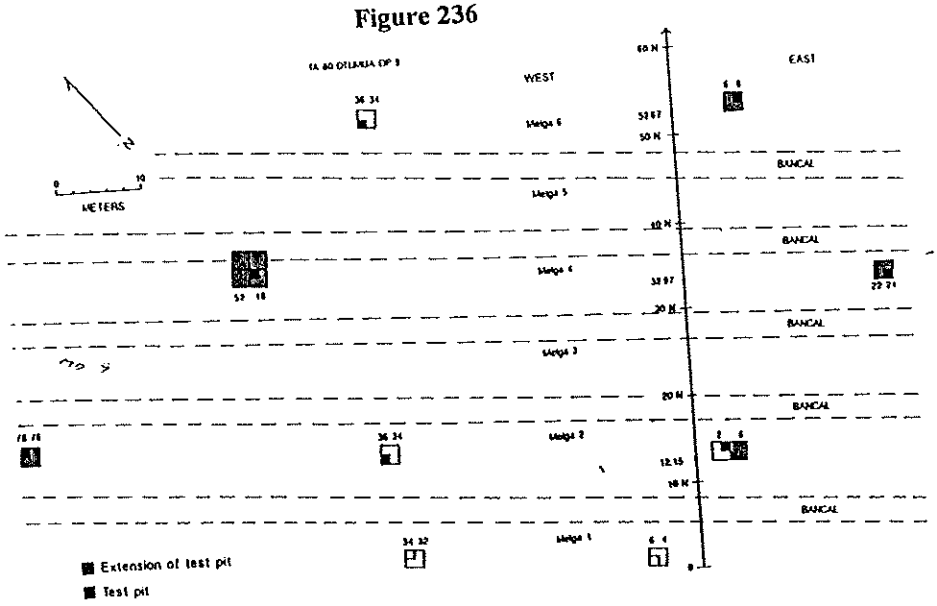
Excavations within the nucleated core of the city-state center were conducted to clarify Otumba's occupational history and the nature of the articulation between Otumba, Texcoco, and the Triple Alliance

In these investigations each operation was set up with a separately established grid base line (Figures 236,237) Investigations in each began with a series of preview pits 1 x 1 m, each placed within the corner of a 2 x 2 m square These preview pits were expanded into the 2 x 2 m square or augmented with a complete 2 x 2 m square if *in situ* remains of interest were encountered One trench (Op 9) measuring 3 77 x 1 2 m was used to clear a profile exposed by the construction of a modern floodwater irrigation canal

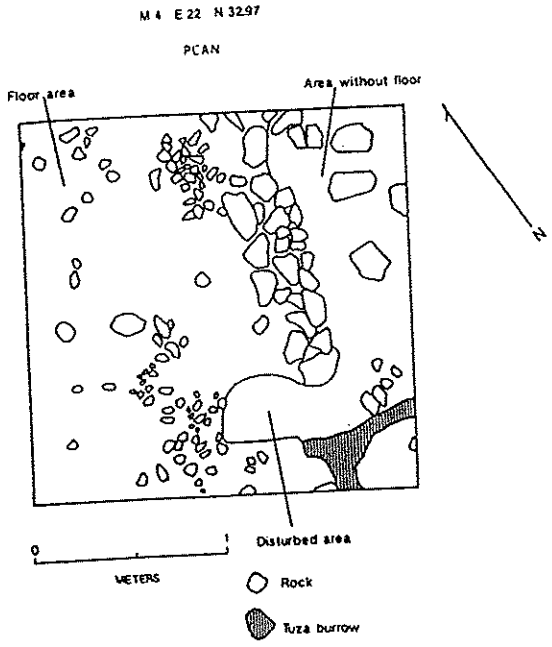
Excavation was carried out with trowels with the initial plow zone level being 20 cm in depth With the exception of the upper level all soil was screened Excavation proceeded in 10 cm levels or until natural/cultural features were encountered Depending upon the nature of the deposits we used a combination of arbitrary and natural/cultural levels All excavations were continued until sterile soils were encountered and verified We also took flotation samples from middens and from undisturbed contexts

Operation 9 - *West Side, Mound 9*
Nature of Excavation - 2 1 x 1 preview pits expanded into 2 2 x 2 m squares, 3 2 x 2 m squares
Architectural Remains - no *in situ* structural remains from mound top, some elite building debris such as plastered walls and floors, some adobe mound fill

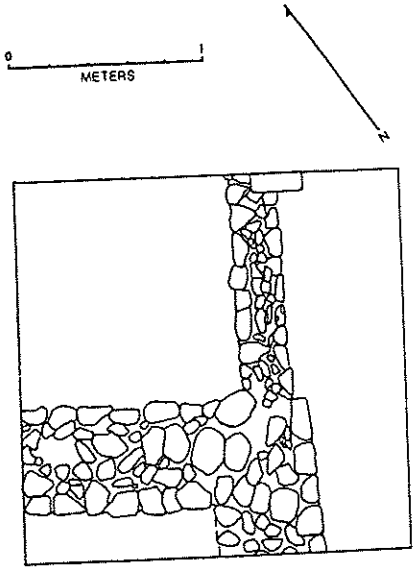
Figure 236



A

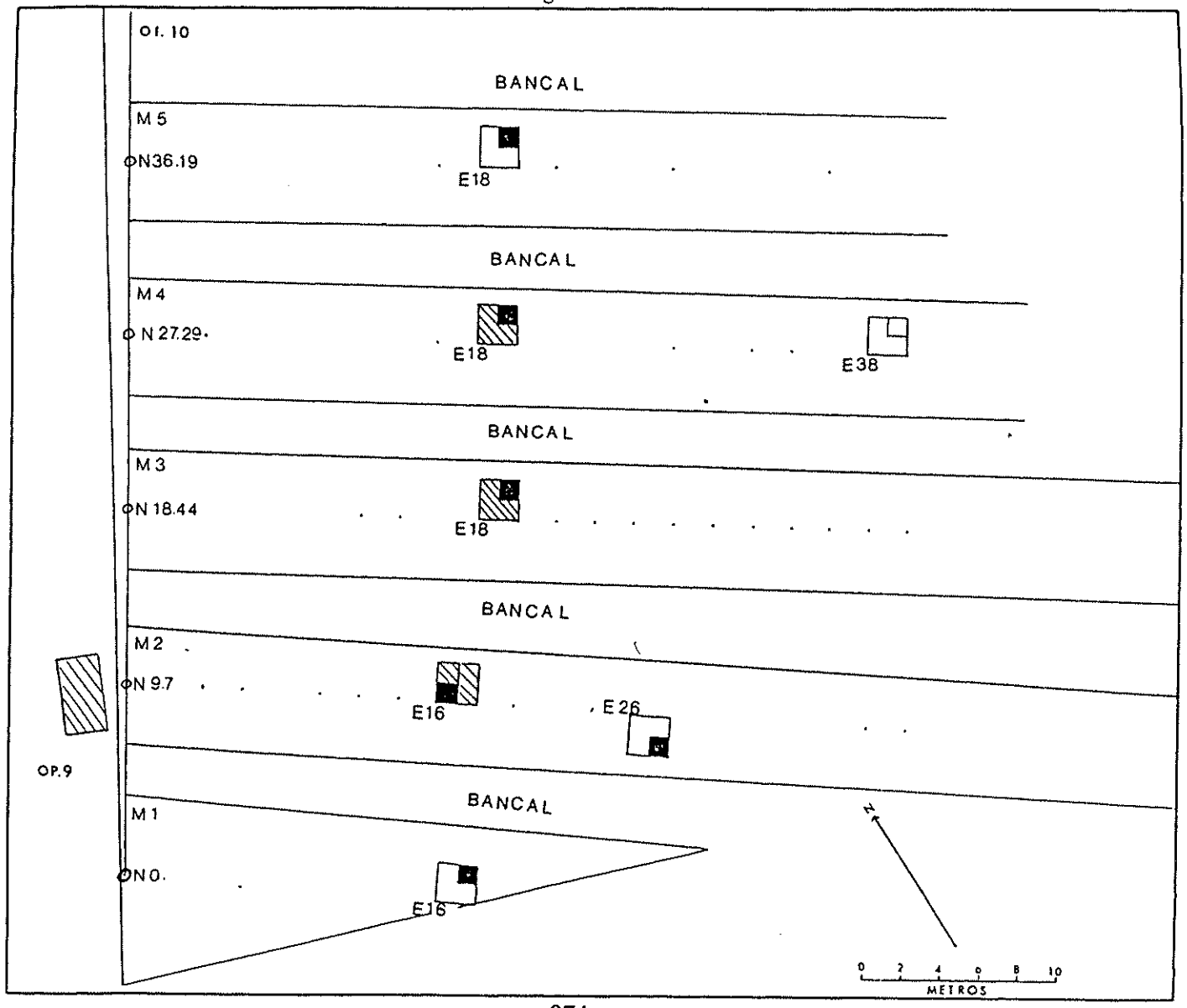


B



C

Figure 237


OP. 10
BANCAL
M 5
N36.19
E18
BANCAL
M 4
N 27.29
E18
E38
BANCAL
M 3
N 18.44
E18
BANCAL
M 2
N 9.7
E16
E 26
OP. 9
BANCAL
M 1
N 0.
E16
N
0 2 4 6 8 10
METROS

Artifactual Remains - heavy ceramics and other household residue, elite status artifacts such as ear spools and jaguar warrior headdress
Condition of Deposits - well preserved stratigraphy, upper structures destroyed
Chronology - Late Aztec/Early Colonial

Operation 9 - *West Side, Area between Mounds 9 and 10*
Nature of Excavation - 1 2 x 2 m square surface collection, 2 1 x 1 preview pits expanded into 2 2 x 2 m squares
Architectural Remains - none
Artifactual Remains - few ceramics or other artifacts from non-occupied inter-mound area
Condition of Deposits - well preserved stratigraphy,
Chronology - Late Aztec/Early Colonial

Operation 9 - *East Side, Mound 10*
Nature of Excavation - 1 3.77 x 1 2 m trench, 2 1 x 1 m preview pits expanded to 2 x 2 m squares, 1 1 x 1 m preview pit, 1 2 x 2 m square
Architectural Remains - one adobe platform, plastered floors, heavy rock rubble
Artifactual Remains - heavy domestic household residue
Condition of Deposits - well preserved stratigraphy, upper deposits destroyed
Chronology - Late Aztec/Early Colonial

Operation 10 - *Mound 10 (Fig 237)*
Nature of Excavation - 1 2 x 2 m square surface collection, 3 1 x 1 m preview pits, 3 1 x 1 m preview pits expanded to 2 x 2 m squares
Architectural Remains - massive walls, plastered floors, heavy rock and adobe rubble, adobe platform, mound fill capped with adobes
Artifactual Remains - heavy domestic household residue
Condition of Deposits - well preserved stratigraphy, upper deposits destroyed
Chronology - Late Aztec/Early Colonial

4. RESEARCH RESULTS

The 1988 surveys and collections at Otumba revised the site boundaries, expanded the areas of known craft activities, identified new production locales, and clarified the boundary between the Aztec town and the Colonial settlement (Figures 221, 222) Analyses of artifacts and other materials recovered from the surface collections and excavations began in 1988 and under Charlton's direction, the analyses were expanded to incorporate materials collected during his earlier surveys of three major trade routes that connected the Teotihuacan Valley with regions to the north and east (Charlton 1978, 1994) Results of the field investigations and on going analyses have been presented in a number of publications and the following is a summary of the research

Occupational Chronology

The predominant prehispanic occupation at Otumba occurred during the Late Aztec period (Nichols and Charlton 1996) Terminal Formative pottery occurs at very low frequencies in portions of the site Widely dispersed Mazapan ceramics in surface collections from Otumba represent a Middle Postclassic occupation beginning around A D 900 Aztec II ceramics are widely but lightly distributed in the surface collections although areas with heavy Aztec II ceramics were collected in 1968 (Charlton and Nichols 1992) Radiocarbon dates from an Aztec II trash-filled pit (Operation 11) are tightly clustered in the late A.D. 1200s Aztec 3 ceramics domate the surface collections and represent the main occupation of the town and based on radiocarbon ages they date to A D 1300+50-1521, although Aztec 3 ceramics continued in use into the Early Colonial period associated with the newly produced Aztec 4 style

Table 91 Radiocarbon Dates from Otumba

Lab No.	Context	Uncalibrated Age	$\delta^{13}C$	Calibrated Age[1]	Calibrated 1-sigma range	Calibrated 2-sigma range
	Aztec II Ceramics					
Beta-80079[2]	TA-80 Sample # 18: Op 11, W20/N8, L. 12 Loose charcoal from trash-filled pit	970±50 B.P (A.D. 980±50)	-9.6	A.D. 1035	A.D. 1015–1065 and A.D. 1075–1155	A.D. 990–1195
Beta-80080[2]	TA-80 Sample # 19: Op 11, W20/N8, L. 13 Loose charcoal from trash-filled pit	670±60 B.P. (A.D. 1280±60)	-24.6	A.D. 1300	A.D. 1285–1325 and A.D. 1340–1390	A.D. 1260–1410
Beta-80081[2]	TA-80 Sample # 20: Op 11, W12/N0 Loose charcoal from trash-filled pit	770±60 B.P (A.D. 1180±60)	-25.3	A.D. 1270	A.D. 1225–1290	A.D 1175–1305
Beta-80082[2]	TA- 80 Sample # 21. Op 11, W12/N0, L. 7B Loose charcoal from trash-filled pit	730±60 B.P (A.D. 1220±60)	-24.7	A.D. 1285	A.D. 1260–1300	A.D. 1215–1325 and A.D. 1340–1390
	Aztec III Ceramics					
Beta-80075[2]	TA-80 Sample # 7· Op 9, E4/N12.15, L. 2B Loose charcoal from platform fill	840±100 B.P (A.D. 1110±100)	-23.7	A.D. 1220	A.D. 1045–1105 and A.D 1115–1280	A.D. 1005–1310 and A.D 1365–1375
Beta-80076[2]	TA-80 Sample # 8: Op 9, E4/N12.15, L. 3 Loose charcoal from platform fill	900±80 B.P (A.D. 1050±80)	-19.4	A.D. 1170	A.D. 1030–1235	A.D. 995–1280
Beta-80078[2]	TA-80 Sample # 12: Op 9, W52/N34.97, L. 8 Loose charcoal from feature in subsoil at base of Aztec III/IV midden	710±60 B.P (A.D. 1240±60)	-24.7	A.D. 1290	A.D. 1270–1305	A.D. 1225–1400
Beta-80346[2]	TA-80-Sample # 14: Op 10, E19/N19.44, L. 7 Loose charcoal from sub-mound fill	360±100 B.P (A.D. 1590±100)	-25.0	A.D. 1505, A.D. 1595, A.D. 1620	A.D. 1440–1655	A.D. 1410–1680 and A.D. 1745–1805 and A.D. 1935–1950
Beta-80347[2]	TA-80 Sample # 17· Op 10, E18/N18.44, L. 8 Loose charcoal from sub-mound fill	680±90 B.P (A.D. 1270±90)	-21.3	A.D. 1295	A.D. 1270–1400	A.D. 1205–1425
Beta-105949[3]	TA-80 Sample # 1. Op. 2, E6S18, L. 3, 2292-00-030 Loose charcoal from small altar-platform	500±50 B.P (A.D. 1450±50)	-26.7	A.D. 1425	A.D. 1415–1440	A.D. 1400–1455
Beta-105950[3]	TA-80 Sample # 2: Op. 2, 2530/32, L. 7 Loose charcoal from below room of house, floor destroyed	1180± 130 B.P (A.D. 770^{+}130)	-23.3	A.D. 880	A.D. 690–1000	A.D. 635–1065 and A.D. 1075–1155
Beta-105951[4]	TA-80 Sample # 3: Op. 2, W2S20, L. 4. Loose charcoal from midden	440±50 B.P. (A.D. 1510±50)	-24.4	A.D. 1450	A.D. 1430–1475	A.D. 1415–1520 and A.D. 1570–1630
Beta-105952[4]	TA-80 Sample # 4: Op. 2, 2250-00-070, L. 7 Loose charcoal from midden	400±50 B. P (A.D. 1550±50)	-24.9	A.D. 1470	A.D. 1445–1515 and A.D. 1585–1625	A.D. 1425–1640
Beta-105953[4]	TA-80 Sample # 5: Op. 2 , 2530, Room 1 Loose charcoal from below room wall	610±50 B. P (A.D. 1340±50)	-25.3	A.D. 1325, A.D. 1340, A.D. 1390	A.D. 1300–1410	A.D. 1290–1425

Table 91 (continued)

Beta-105954[4]	TA-80 Sample # 6: Op. 2, E9S9, 2702-00-040, Feature 1. Loose charcoal from midden with concentration of obsidian cores	680±50 B. P (A.D. 1320±50)	-25.6	A.D. 1295	A.D. 1285–1310 and A.D. 1355–1385	A.D. 1265–1400
Beta-105957[3]	TA-80 Sample #13: Op. 9, W52/N34.97, F. 1, L. 8 Maize cob from pit in subsoil at base of Aztec III/IV midden	220±40 B.P (A.D. 1730±40)	-25.8	A.D. 1665	A.D. 1665–1675 and A.D. 1770–1800 and A.D. 1940–1950	A.D. 1640-1690 and A.D. 1735-1815 and A.D. 1925–1950
Beta-105958[3]	TA-80 Sample #15: Op. 10, E18/N18.44, L. 7 Loose charcoal from sub-mound fill	640±80 B.P (A.D. 1310±80)	-26.5	A.D. 1310, A.D. 1365, A.D. 1375	A.D. 1285–1410	A.D. 1250–1435
Beta-105959[3]	TA-80 Sample #16: Op. 10 , E19/N19.44, L. 9 Loose charcoal from submound fill	830±100 B.P (A.D. 1120±100)	-24.7	A.D. 1225	A.D. 1055–1090 and A.D. 1150–1285	A.D. 1010–1310 and A.D. 1355–1385
Beta-105961[4]	Ta-80 Sample #23: Op. 11, Mound. 41, W8S8, L. 7B Loose charcoal from trash-filled pit.	470±50 (A.D. 1480±)	-24.3	A.D. 1435	A.D. 1420–1455	A.D. 1405–1495
Beta-105969[3]	TA-80 Sample #22: Op. 11 Mound 41, W8/S10, L. 8 Loose charcoal from midden/trash pit	660±90 B.P (A.D. 1290±90)	-24.5	A.D. 1300	A.D. 1275–1405	A.D. 1220–1435
	Aztec III/IV Ceramics					
Beta-80077[2]	TA-80 Sample # 11. Op 9, W50/N33.97, L. 12 Loose charcoal from midden	330±60 B.P (A.D. 1620±60)	-25.4	A.D. 1525, A.D. 1560, A.D. 1630	A.D. 1475–1650	A.D. 1445–1670
Beta-105955[3]	TA-80 Sample # 9· Op.9, W52/N32.97, Level 11B Loose charcoal from midden	320±70 B.P (A.D. 1670±70)	-26.4	A.D. 1535, A.D. 1545, A.D. 1635	A.D. 1475–1655	A.D. 1440–1675 and A.D. 1770–1800 and A.D. 1940–1950
Beta-105956[3]	TA-80 Sample #10: Op. 9 W50/N33.97, Level 10 Loose charcoal	490±50 B.P (A.D. 1460±50)	-26.1	A.D. 1430	A.D. 1415–1450	A.D. 1400–1475

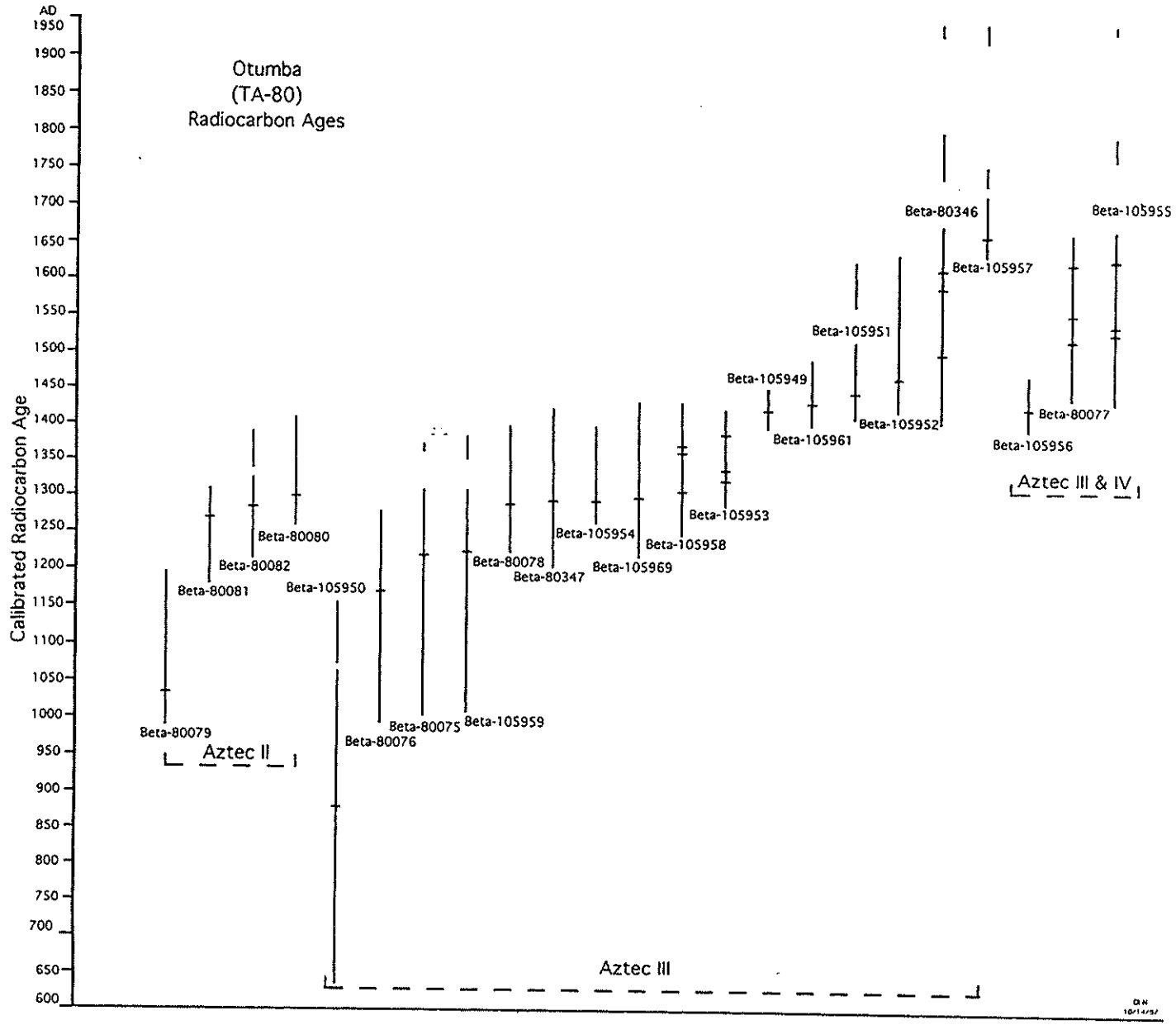
[1]Calibrations determined by Beta Analytic Inc. using the Pretoria Calibration Procedure Program.

[2]Standard radiocarbon determination made in 1995 (see Nichols and Charlton 1996).

[3]Standard radiocarbon determination made in 1997

[4] AMS determination made in 1997

Figure 238


Otumba
(TA-80)
Radiocarbon Ages
Calibrated Radiocarbon Age
AD
1950
1900
1850
1800
1750
1700
1650
1600
1550
1500
1450
1400
1350
1300
1250
1200
1150
1100
1050
1000
950
900
850
800
750
700
650
600
Beta-80079
Beta-80081
Beta-80082
Beta-80080
Beta-105950
Beta-80076
Beta-80075
Beta-105959
Beta-80078
Beta-80347
Beta-105954
Beta-105969
Beta-105958
Beta-105953
Beta-105949
Beta-105961
Beta-105951
Beta-105952
Beta-80346
Beta-105957
Beta-105956
Beta-80077
Beta-105955
Aztec II
Aztec III
Aztec III & IV

The T A 80 site continued to have a substantial occupation after the Spanish conquest until the early seventeenth century, ca A D 1600/1620 when most of the Aztec town was abandoned and the focus of settlement shifted north of the barrancas to the present-day location of the town of Otumba. Three mounds in the northwest part of the site may have formed a colonial barrio while some *ranchos* were located within the former Aztec site boundaries It appears that there was no sudden disruption in settlement over much of the area in the years immediately following the conquest This is true of sites throughout the city-state area

Radiocarbon Dating

We submitted 23 samples for radiocarbon age determination in 1995 and 1997 These samples were selected to refine the site's occupational history and the development of its craft industries They came from deposits containing Aztec II, Aztec III, or Aztec III/IV ceramics (Table 91 and Figure 238)

Based on the ceramic evidence, problematic obsidian hydration dates, and the ten initial radiocarbon determinations in 1995, Nichols and Charlton (1996) initially proposed that the widely separated concentrations of Mazapan ceramics found at Otumba in surface collections represent a middle Postclassic occupation beginning ca A D 900 The cluster of radiocarbon dates from anAztec II trash pit in OP 11 and hydration and radiocarbon dates in the A D 1100s to 1200s from OPs 9 and 10 suggested that the Aztec II occupation, might have begun as early as A D 1200 and lasted until A D 1400 We once proposed that Aztec III, the main occupation at Otumba and throughout the city-state, dated from A D 1350+- 50 to 1521, although Aztec III ceramics continued in use into the early Colonial period The larger sample of dates now available from Aztec III contexts suggests a slightly earlier onset of Aztec III ceramics, A D 1300 and continuing to A.D 1600/1620

The suggestion of a partial chronological overlap between the Aztec II and Aztec III ceramic complexes at Otumba is strengthened by the dates The intercept dates for one-half or eight of the sixteen radiocarbon determinations from Aztec III contexts at Otumba date on or before A D 1300 and six dates have 2-sigma ranges that fall entirely before A D 1400 and completely overlap the dates from the Aztec II trash pit

Radiocarbon dates associated with Aztec III ceramics from the trashpit and submound and platform fill in OPs 9 and 10 indicate that construction in the nucleated core began by the A D. 1300s Obsidian core-blade production and lapidary working in household workshops there and in the dispersed residential zone probably also began by the same time, as did other craft activities, such as figurine production There is limited evidence for craft production at Otumba during the Mazapan and Aztec II occupations.

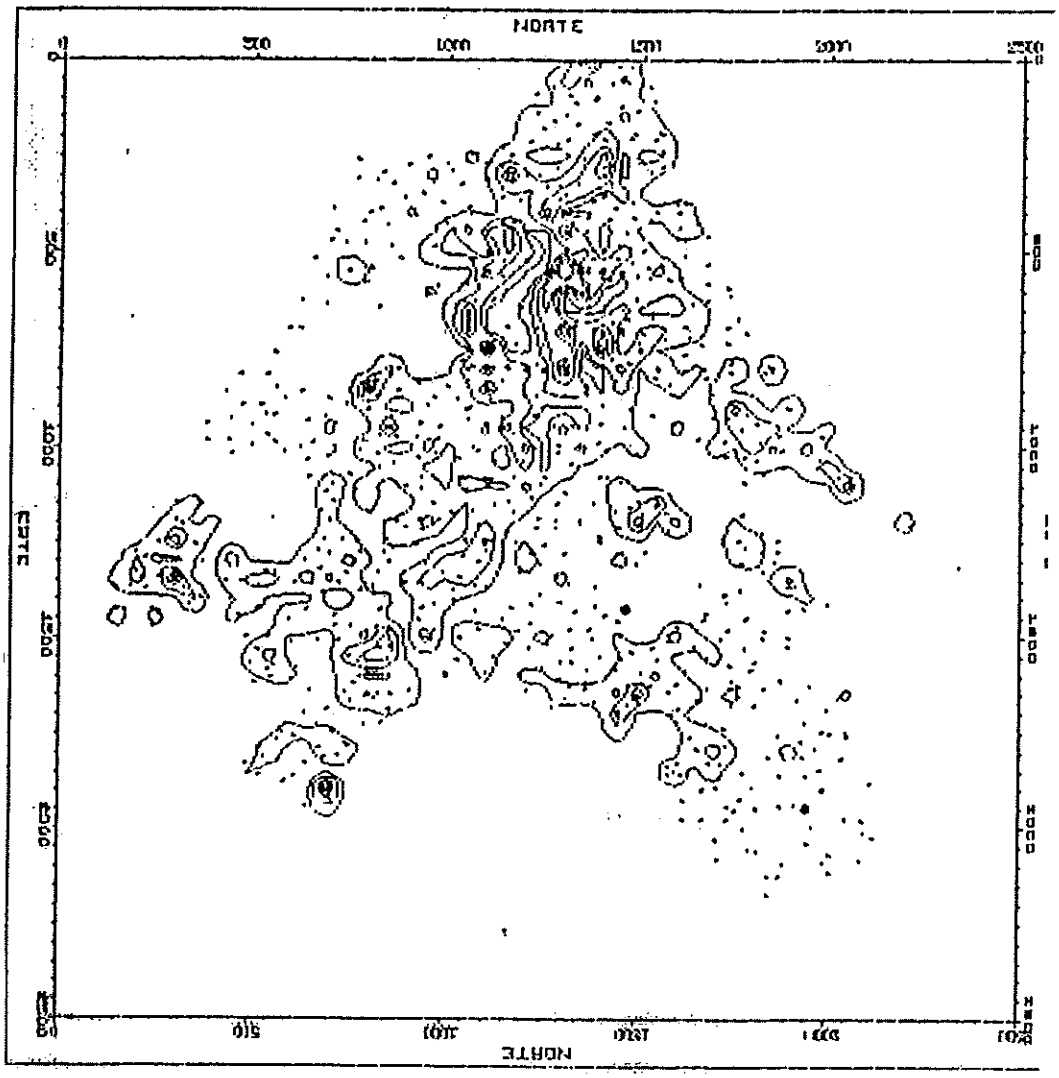
Aztec III ceramics and craft production at Otumba continued after the Spanish conquest at which time Aztec IV was added along with introduced glazing technology and quite late in the sixteenth century in the form of imports from Asia

The Environment

We know that to-day the Otumba city-state area is located in a dry region of the Basin of Mexico Our archaeological investigations into the flood water irrigation features (OP 12) at Otumba suggest significant modification of *barranca* depth by down-cutting after the conquest lowering the bed of the water flow well below the Aztec period level and leaving the canals high and dry Genotte's study of the *Mapa de Otumba* (1994) has documented several other potential hydraulic features such as canalized *barrancas*, canal systems, catchment basins, and one masonry dam Together with the canals and field furrows excavated in OP 12 the dam confirms the use of the two *barrancas* flowing through Otumba for floodwater irrigation during the Aztec period and possibly into the Early Colonial Period

Genotte also cites some glyphs which emphasize water and some toponyms which describe native flora, fauna, and mineral resources Of the vegetation he cites - oak, river willow, *nopal*, thicket, and wild sorrel - the first

Figure 239



two are much more restricted while the last three are found widely throughout the area Wheat, an introduced domesticate, also mentioned, is not grown in the area to-day as it requires more rainfall than what is currently available

McClung de Tapia and Aguilar Hernandez (2000) suggest that environmental reconstructions in the Teotihuacan Valley place the Otumba city-state in a zone transitional between grassland and xerophytic scrub below 2400 m, which then gradually changed into oak-pine woodlands up to 2600 m This accords well with Genotte's data from the *Mapa de Otumba*, Colonial documentary descriptions (Charlton 1991, Evans 2000), and contemporary observations Their analyses of macrobotanical remains are consistent with these descriptions and suggest very modified environment through millennia of cultivation Although they express concern regarding downward migration of uncarbonized materials into the archaeological deposits it should be noted that samples were taken under McClung de Tapia's instructions only from well-sealed deposits with no evidence of mixture or disturbance

Thus, the Otumba city-state environment appears to have been similar to that present to-day with the exception of the severe down-cutting of the *barrancas* and the extensive sheet erosion on the piedmont and hills The aridity was similar but possibly less if wheat were actually grown Floodwater irrigation was definitely used to direct water to the productive Middle Valley alluvial plain The presence of direct evidence for *nopales* and *agave* suggests the cultivation of xerophytic vegetation It is with reference to this unpromising area, a region which had never held a large population or independent political unit until Otumba developed, that we need to explore the growth, dynamics, and organization of the social, economic, and political structures

Urban Center Size and Layout

How big was the urban center and how was it organized? We have repeatedly used a figure of about 220 ha for TA-80 based on the amount of land incorporated within the site boundaries, as determined through Mather's and our survey data Since the completion of the analyses of the 1% random collections from TA-80, as well as the non-random collections and an initial analysis of the 4% collections , we think it would be useful to examine the concentrations of ceramics and then attempt to delineate site area as well as zones within the site

An initial attempt used the total Aztec ceramics from 782 collections with such pottery and applied the GRIDZO program to generate weighted frequency-density distributions The 98,880 sherds are concentrated on the south side of the *Barranca del Muerto*, especially in the nucleated core which extends further west than was noted on survey Smaller and lighter clusters occur to the east, as well as north of the barranca system (Figure 239)

The administrative center of the site, based on surface and excavated materials, appears to be in the western section, south of the *barranca* system Elite residences, administrative buildings, religious complexes, incense burner manufacturing, and obsidian core-blade workshops, are found there and on the peninsula between the branches of the *Barranca del Muerto* where a ceremonial complex/residence is present, relatively difficult to access from other areas of the site We have not been able to identify any area as a market place The roads which run into and through the city-state must be checked against known Aztec, Colonial, and Republican period road systems

Although one obsidian core-blade workshop, one heavy obsidian tool consuming area (personal communication, William J Parry), and two lapidary workshops are located north of the *barranca* system, and one lapidary workshop is on the peninsula (Figure 221), the majority of such workshops stretch from west to east along the south side of the *barranca* system Two well-defined core-blade workshops fall within the nucleated core while three others are in the periphery to the southeast Some of these latter may be dumps Incense burner bowl molds are found in the southwestern part of the nucleated core Other clay manufacturing - figurine, spindle whorls, toys, musical instruments - took place in a large *barrio* of clay workers to the east which slightly overlaps with two other *barrio*-like concentrations of lapidary workshops and maguey spinning workshops One concentration of basalt flakes lies to the west of the nucleated core, two others are in the southeast

The small nucleated core of Otumba contains several well preserved mounds, including Mounds 22-23, probably the main Aztec temple-pyramid with associated residential compound The presence of high-status residences is indicated by fragments of red and white painted plaster in the surface collections. Even within the nucleated core, however, settlement was not tightly packed. This impression is supported by the results of excavations in OPs 2-3, 9 and 10 where structural remains are widely scattered (Otis Charlton, Charlton, and Nichols 1993)

Outside the nucleated core is a zone of dispersed residences that contains most of the workshops Erosion and plowing have levelled most mounds However the presence of structures is indicated by scatters of *tezontle* and basalt rubble and localized artifact concentrations To the north of the nucleated core, on the edge of the deep soil plain where the colonial/modern town of Otumba is centered prehispanic artifact densities are light except for a cluster of mounds in the northwest corner of the site We have examined, when the opportunity presents itself, profiles exposed in sewer trenches in this area. In addition in Op 12, we have excavated to a depth of two meters The few deposits containing prehispanic artifacts were located just below the surface

Defining the limits of Aztec Otumba is somewhat problematic along the eastern edge, where only a short distance (less than 0 5 km) separates Otumba from another Aztec site, designated by Parsons as TA-39 This site might have been a detached *barrio* of Otumba In general, the residential zone surrounding the core contained well spaced houses that become more dispersed as one moves away from the center The artifact density correspondingly declines to scanty as one reaches the limits of the prehispanic occupation (Figure 239) There are, however, hot spots within areas of low artifact density

Today Otumba appears rather unimpressive in terms of architectural preservation compared with Huexotla, the other large, well-preserved Aztec city-state capital that is not entirely covered with modern occupation Yet Otumba does contain impressive evidence of craft production with an unusually large number and variety of craft activities represented

Craft Production in the Otumba City-State

In our discussions of craft production we have in the past (Charlton, Nichols, and Otis Charlton 1991, Otis Charlton 1993, Otis Charlton, Charlton, and Nichols 1993) presented both quantitative and qualitative data and analyses to support our identification of household-based craft production at Otumba We have defined craft activities in archaeological terms at Otumba on the basis of the raw material worked, the tools used, the amounts and types of debris left behind, the final products, the skill involved, and the spatial distribution of the archaeological remains (Otis Charlton, Charlton, and Nichols 1993) The weighting assigned to each of these is industry specific From these attributes, we are able to infer and characterize aspects of the organization of production along multiple dimensions

The term workshop has been used to define the location, size, and organization of production units that range from an individual person, to a kin-based unit, to a factory and a number of typologies have been proposed linking these with the concentration and intensity of production to characterize the organization of production (Clark 1986, Clark and Parry 1990, Costin 1991, Costin and Hagstrum 1995, Lackey 1982, Peacock 1981; Reiff Katz 1977, Santley et al 1989, Sinopoli 1988, van der Leew 1976, Vargas-Barǿn (1986) Rice (1991, 1996a,b) distinguishes between specialization, i e skill and/or the concentration of production and intensification or the increased investment of labor and resources She argues for a broader consideration of specialization as one such mode that has different archaeological manifestations_e.g , site specialization, resource specialization, functional specialization, and producer specialization

We have used both approaches in considering the manufacturing activities in the Otumba city-state, depending on the particular industry and the questions we are asking (Charlton et al 1991, Nichols 1994, Otis Charlton et al 1993) At Otumba specialization is reflected in both the context and concentration of production and the skill involved in production The workshops discussed below are defined in an archaeological context on the

basis of concentrations of manufacturing debris-tools, manufacturing waste productions, and products in various stages of production depending upon the particular industry In all cases the manufacturing debris is associated with domestic refuse indicative of household-based workshops and kin-based production units Even in cases where we have not identified the precise workshop loci, the presence and amounts of manufacturing debris in the refuse dumps indicates specialized production Some of these household-based workshops occur in clusters suggesting wards or *barrios*, similar to *calpulli* organization described in ethnohistoric documents, while others are isolated units, a few of which occur in the nucleated, elite core of the town of Otumba For purposes of this discussion, the term workshop refers to this household-based production unit

Obsidian

Several industries produced items made of obsidian biface workshops using the local Otumba gray obsidian occur at dependent sites while core-blade and lapidary workshops are found only at Otumba except for one lapidary workshop at TA-39 adjacent to Otumba Obsidian workshops were defined by unusually high concentrations of manufacturing debris in both relative and absolute terms (Parry 2000) e g , a typical ratio in residential areas of Otumba is one piece of obsidian per 10 unglazed sherds vs two to 94 pieces per 10 sherds in workshop concentrations

Bifaces

Biface manufacturing took place primarily at dependent sites-TA-36,TA-37, TA-236, and TA-81, Cihuatecpan, studied by Evans (1988 - see a summary of this research in Chapter 10) Although finished or broken bifaces are rare at rural sites and at Otumba, the density of manufacturing debris (e g , preforms and retouch flakes) at these dependent sites is high and Parry concludes that most of this production was for export outside the city-state The amount of debris, however, in each workshop could have been made by a single worker producing a few items at a time on a part-time basis The only evidence of biface production at Otumba-using gray obsidian as at rural settlements-came from Otis Charlton's (1993) excavations of an Early Aztec (Aztec II) household midden and it apparently represents "small-scale biface production" (Parry 1993 3)

Core-Blades

At Otumba there are at least five concentrations of core-blade manufacturing debris with two others represented by small samples (In 1998 Parry identified a third from a small collection in the one-percent random sample) All the core-blade concentrations are quite localized and range in size from about 0 25 to 0 75 ha In addition to a high density of obsidian, the core-blade workshops include large amounts of debris from core preparation, errors, and rejuvenation flakes The core-blade workshops are scattered throughout the site rather than grouped into wards It is possible that some, but certainly not all, of these workshops represent dumps rather than the actual workshop loci (Clark 1986) Excavation of one core-blade concentration in the nucleated core (Operation 11) found the manufacturing debris in midden deposits with domestic refuse and no evidence that the deposits had been deliberately transported or moved for use as construction fill Green obsidian from the Pachuca Source Area dominates all but one of the core-blade concentrations that used the locally available gray obsidian from the Otumba Source Area (Charlton 1981)

The workshops occur in both the nucleated core and dispersed residential zone The presence of green core-blade workshops in the town's nucleated core suggests some association with elites as most other workshops at Otumba occur in the dispersed residential zone Lapidaries, in the case of the workshop excavated by Otis-Charlton (1993), also produced some cores and prismatic blades, as well as recycling and consuming them

Lapidary

Highly skilled lapidaries at Otumba fashioned lip plugs and ear spools from exhausted prismatic cores (Otis Charlton 1993, 1994) Other forms of obsidian jewelry were also made at the workshops, including finely crafted pendants Charlton previously identified a concentration of obsidian earspool blanks on the peninsula and in 1987 found additional such evidence. During the 1988 field season we found that evidence of obsidian earspool manufacturing is quite extensive at Otumba Concentrations of earspool/labret manufacturing debris were also found along the southeastern periphery of the site All the earspool concentrations are associated with Late Aztec residential mounds Earspool blanks, perforators, and basalt grinding tools were also found in the southern part of

the figurine workshop zone and in the large maguey fiber workshop, which lies to the south of the figurine workshop zone Thus the total area over which lapidary manufacturing debris occurs is about 10 ha, making this the largest area of archaeologically documented obsidian lapidary production at any Late Aztec site

The workshops include manufacturing debris consisting of cut sections of prismatic blade cores that had been reused as earspool blanks and many of the obsidian, chert, and basalt tools to make these ornaments along with beads and some possible secondary products (Otis Charlton 1993) The household-based lapidary workshops at Otumba occur both as isolates and also in a loosely defined cluster in the southeast section of the town where they appear to form their own *barrio* Although none of the workshops occurs in the nucleated core, the frequency of decorated black-on-orange serving vessels in the excavated lapidary workshop is similar to that from an elite residential midden in the core and higher than in the excavated figurine and obsidian core-blade workshops (Pohlman 1995)

The lapidary workshops were linked to the core-blade workshops through the recycling of their exhausted cores, which the lapidaries used as raw materials for tools and products Few earspools or labrets have been found at Otumba or its dependencies indicating that they were highly valued and not discarded casually and that production was geared to export Lapidary products would have been distributed through the tribute system to Texcoco or Tenochtitlan-Tlatelolco (Otis Charlton et al 1993) and also through the market system Obsidian earspools were exported from the Basin by *pochteca* on trading expeditions and some *pochteca* are reported to have been based at Otumba (Sahagun 1979 IX 18)

Chert

Obsidian dominates the chipped stone assemblages in the Otumba city-state (Parry 2000) The lapidary workshops excavated by Otis-Charlton included chert micro-blades and no similar industry has previously been reported from central Mexico (Otis Charlton 1993) Parry has suggested that the micro-blades-microdrills were part of the lapidary tool kit

Basalt

Anomalous small (ca 0 25 ha) concentrations of basalt debris, along with stone working tools-picks and abraders used to make manos and metates (Hayden 1987) were found in three widely separated locations in the dispersed residential zone at Otumba The labor and skill required to make supported metates that became common in Aztec times also indicate producer specialization (Biskowski 1994, 1997) In addition, thin tabular, "slate-like" basalt was used to make scrapers to remove fibers from maguey plants and polishers for lapidary products These tools were made either in the groundstone workshops or in the lapidary and maguey workshops where they were used All the basalt concentrations lie in areas heavily disturbed by plowing so none was excavated, but in each case the basalt debris was intermixed with domestic artifacts

Ceramic Industries

We identified ceramic industries, which occur only at Otumba, through the presence of molds and in some cases manufacturing errors, tools, and finished products figurines, censers, Otumba Polished Tan-a local pottery type characterized by a polished dark gray or dark gray brown surface and suchforms as ladles, basins, and bowls

Figurines

The figurine workshops cluster in a 10-12 ha area of the southeastern part of Otumba, just east of the lapidary workshops (Otis Charlton 1994) Within this area, the artifact concentrations are not continuous and each concentration probably represents a house similar to the one Otis Charlton excavated (Operation 4) Figurine workshops are characterized by heavy concentrations of figurine and mold fragments (67-98 figurine fragments/m^2) that include some manufacturing errors Otis Charlton's excavations of one of the densest surface concentrations recovered figurine fragments, molds, some finishing tools, and small amounts of fired and unfired clay intermixed with domestic refuse in and around remains of a domestic residence confirming our inference from the surface artifact associations that the concentrations represent household-based workshops

The primary product of the figurine workshops was the Type III flat figurine made with an open-backed mold These workshops produced a variety of other mold-made ceramic items marbles, clay balls, rattle balls, stamps, molded disks, whistles, cotton (Type III) spindle whorls, and maguey fiber (Type I) spindle whorls and perhaps serpent handled censers Analysis of the excavated pottery from one workshop (Operation 4) revealed that Otumba Polished Tan was also produced there-Otumba Polished Tan accounted for 15 percent of the pottery from that excavation compared to one-two percent from excavations elsewhere at Otumba (Pohlman 1995 95)

In the southeast corner of the figurine workshop zone, evidence of earspool production is associated with figurine molds and fragments To the best of our knowledge, the figurine workshops at Otumba represent the largest archaeologically documented concentration of Aztec figurine molds and fragments recorded in the Basin of Mexico These data confirm that the Otumba town site was a regional manufacturing and distribution center for figurines and possibly molds

Censers

Molds used to make bowls of two styles of long-handled censers are found in low densities within a restricted area of the southwestern part of the nucleated core of the town No manufacturing errors have been noted from the surface collections, but a dense concentration of possible censer rejects with no molds was encountered in an excavation within the figurine workshop zone The low-level of firing and poor finish of the censers is consistent with part-time and much less intense production than in the case of the figurines There is some evidence from the excavated figurine workshop that serpent headed censers were made there, which would have required more skill The concentration of two types of censer molds in the nucleated core in an area of elite residences suggests production might have been regulated in some way by elites

Spindle Whorls

Molds to produce the large (Type I) spindle whorls used to spin maguey fibers and the small (Type III) spindle whorls to spin cotton also occur at Otumba In addition to the molds some manufacturing errors have also been found The spindle whorl molds occur primarily in the southeast section of the site and the primary loci for manufacturing the maguey whorls were the maguey fiber workshops that form a cluster or ward where there is a dense concentration of molds and spindle whorl fragments Cotton spindle whorls might have been primarily made in the figurine workshops Although some maguey spindle whorls were decorated with incised designs, they are relatively simple to manufacture and would not require a high level of skill

Maguey and Cotton Fibers

Cotton spindle whorls occur as low density isolated finds intermixed with domestic artifacts in all parts of Otumba and its rural dependencies (cf Charlton 1971) which accords with chroniclers' accounts that spinning, and possibly dyeing, and weaving cloth was done by virtually all women in a household context (Sahagun 1950-1969 10 41) Cotton does not grow in the Basin of Mexico and raw cotton would have been imported from Morelos entering Otumba through the tribute and market systems and returning through the same linkages

Maguey fiber processing, spinning and weaving cloth were common household activities at rural sites in the Otumba city-state and maguey (Type I) spindle whorls occur at a low density at tributary settlements At Otumba and adjacent TA-39 (Charlton 1971, Wiltfang 1975) maguey spindle whorls and molds are present in high densities in four or five concentrations clustered within the southeastern section of the site associated with maguey fiber processing tools and high densities of heavily worn used obsidian prismatic blades (Charlton 1988)

The association of the manufacturing debris and tools with domestic debris indicates they were household based, probably similar to workshops described by Parsons and Parsons (1990) The clustering of the concentrations of maguey fiber and thread manufacturing debris in a restricted part of the site suggests that these household-based specialists were probably organized as a ward or *calpulli* similar to the figurine and lapidary specialists (Otis Charlton, Charlton, and Nichols 1993) Berdan (1987) and Hicks (1994) have both argued that processing fibers, spinning, and weaving were non-workshop, household activities To the best of our knowledge

the maguey fiber workshops at Otumba and TA-39 are the only such workshops yet reported in central Mexico

There is some evidence from the maguey workshops for limited manufacture of figurines, and lapidary items and there is also some overlap among the wards of maguey, figurine and lapidary workshops in the southeastern part of the town This may reflect contemporary secondary production activities in these workshops or changing production emphases through time

Intra-Urban Diversity at Otumba and Teotihuacan

Part of city-state definition involves differential access to social, economic, and political power on the part of different sectors of the population We have assumed a two part split in the population at Otumba, a small elite with socioeconomic and political power and a much larger group of plebeians who had less power but who provided the bulk of the labor force. Such a division is reflected in the size and quality of house construction as evidenced the nucleated core and the periphery of the site As we have mentioned previously there is a distinct possibility that mutually exclusive residential zones may not have existed

Garraty (2000) has carried out an interesting series of analyses based on Aztec ceramics in an attempt to identify differences in occupants in Aztec Teotihuacan His evaluation of not one, but a series of indices there provides for some very strong conclusions even though his sample is relatively small His results suggest a spatially decentralized distribution of powerful families

Sarah Stanley (1996) placed a value on each of 290 Black-on-Orange sherds in 14 of the collections made at Otumba by William G Mather in 1963 She followed Feinman, Upham, and Lightfoot (1981) in the Production Step Index but also incorporated what Garraty has called the Decorated Index and the Motif Diversity Index She evaluated vessel finish and firing quality, along with the quality of execution of the painted designs and their complexity to arrive at a score for each sherd Values were calculated for each collection as a whole and average values were calculated for each collection. She concluded that those collections in or adjacent to the nucleated core had higher average values than those from more distant locations This tends to suggest separation

This is coherent with McClung de Tapia and Aguilar Hernandez's findings (2000) of differences in the macrobotanical remains between OP 9 in the core and OP 11 in the periphery and with Hodge's position (1997) Yet it runs counter to the findings and inferences Biskowski (2000) has presented, especially with reference to the possibility of patches of lower status households in the core and, as Pohlman has pointed out, the high status of lapidary workers in the periphery based on their ceramics but not their architecture (Otis Charlton 1993, Pohlman 1995) Pohlman used ceramics from OPs 2-3, 4, 9, and 11 She used the percentage frequencies of various wares and types as defined under the typology proposed by J R Parsons (1966) used by the project She also used form-function categories, serving wares, utilitarian wares, and other, to compare the complexes

She found that using cluster analyses that the ceramics fell into two recognizable groups, based on differences in frequencies of serving as opposed to utilitarian wares, and to the presence of trade wares OP 4, the figurine *barrio* workshop, was in one cluster with low trade wares and low serving wares The nucleated core sites, OPs 2-3, and 9 were in the other with OP 11, the periphery lapidary workshop excavation

Finally, we should mention that ethnicity - the elusive Otomis of *Otompan*- has not yet been systematically explored although Otis Charlton has noted a high frequency of *Ehecatl* figurines and temples and Biskowski has suggested the possible correlation of an Otomi dietary preference with the *mano* and *metate* distribution pattern Although Brumfiel, Salcedo, and Schafer (1994) have argued that the style of lip plug found at Xaltocan might indicate Otomi ethnicity very few finished examples of this style occur at Otumba and those only from the excavated workshop (Otis Charlton 1993). There is no evidence of ethnic identification in the spindle whorl designs (Nichols, McLaughlin, and Benton (2000)

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