Andean Past

Volume 4 Article 5

1994

Recent Excavations at Hacha in the Acari Valley, Peru

Roger W. Robinson

Follow this and additional works at: https://digitalcommons.library.umaine.edu/andean_past

Part of the Archaeological Anthropology Commons, and the Architectural History and Criticism Commons

Recommended Citation

Robinson, Roger W. (1994) "Recent Excavations at Hacha in the Acari Valley, Peru," *Andean Past*: Vol. 4 , Article 5.
Available at: https://digitalcommons.library.umaine.edu/andean_past/vol4/iss1/5

This Article is brought to you for free and open access by DigitalCommons@UMaine. It has been accepted for inclusion in Andean Past by an authorized administrator of DigitalCommons@UMaine. For more information, please contact um.library.technical.services@maine.edu.

RECENT EXCAVATIONS AT HACHA IN THE ACARI VALLEY, PERU

Roger W. Robinson
Antelope Valley Community College, California

Introduction

The Hacha site is located in the Acarí Valley on the southern coast of Peru, 23 km from the Pacific coast. The site is situated on a long sandy terrace above the east bank of the Acarí River approximately three kilometers south of the small town of the same name, and has been given the numerical designation PV 74-6 (see Figure 1). The site was first recorded on April 21, 1954 by Francis Riddell and Dorothy Menzel who were told about it by Jorge Esparza, a young Peruvian who had worked with Duncan Strong. At the time, Riddell and Menzel were assisting Victor von Hagen with his Inca Highway Project (von Hagen 1975). They prepared a brief description of the site and made a limited surface collection of lithics and ceramics, but no further investigation was attempted at that time except to show the site to John Rowe a few weeks later.

In the late 1950s and early 1960s the Hacha site was visited by several investigators including Larry Dawson, Dorothy Menzel, Thomas Patterson, and John Rowe (Menzel and Riddell 1986:117; Menzel, Rowe, and Dawson 1964:258; Rowe 1956, 1963, 1967:19, 24-30). These visits resulted in additional collections of surface artifacts and the partial excavation of at least one of the structures visible at the surface of the site (Structure 2, this report). Midden accumulations found eroding out of the surface of the hillside in the vicinity of the structure were also excavated.

Preliminary analysis and comparison of the surface ceramics and two radiocarbon dates on materials collected from the refuse middens (see Figure 18) led John Rowe, in 1962, to assign the Hacha site to the Initial Period in south coast chronology. The basis of this assignment was the similarity in ceramic style between Hacha and the site of Erizo in the Ica Valley. Radiocarbon dates obtained in the early 1960s placed the site of Erizo at approximately 4,000 years before present. The radiocarbon dates for Hacha of approximately 3,000 years B.P. were recognized as being too recent for a consistent fit, and Rowe suggested the possibility that the dates may be in error (Gayton 1967:1; Rowe 1967:30).

Subsequent to these visits, Máximo Neira, of the Universidad Católica de Santa María, Arequipa, visited the Hacha site several times and made additional collections of surface artifacts including pottery, projectile points, and *hachas* (literally, "axes", an implied functional determination). However, between Rowe's limited test excavations in the early 1960s and the summer of 1984, a period of over twenty years passed with no further excavation at the Hacha site. The site remained essentially unexcavated, the pottery undescribed, and the radiocarbon data somewhat confusing. Nevertheless, the Hacha site has found its way into major syntheses of Peruvian prehistory (Burger 1992:103; Fung Pineda 1988:83; Lanning 1967:81, 83-84, 93; Lumbreras 1974:52, 54, 96; Willey 1971:111, 188 note 111). Based essentially on the early interpretations of Rowe and others, the Hacha site is generally cited as a primary example of Initial Period occupation on the south coast of Peru.

In 1984 archaeological investigation resumed at the Hacha site (see Figures 2, 4). This recent effort was centered on a program of excavation designed to provide information about the internal, or sub-surface, structure and composition of the site. Such data were seen as essential for properly addressing questions of site integrity and chronology. These investigations took place during southern hemisphere winters (June through August) from 1984 through 1990.

Several brief progress reports and general discussions of this research have appeared (Kowta 1987:20-21; Riddell 1986:5-9, figures 1, 10-15, 1987:15-24, figures 1, 3, 10-14; Riddell and Valdéz C. 1988:10, 103, figures 8-13). The present paper grew out of a

ANDEAN PAST 4 (1994):9-37.

progress report I presented at the 1991 meeting of the Society for American Archaeology in New Orleans. Although much work remains to be done at the Hacha site, this paper summarizes the new evidence and suggests some interpretations. Plans are underway for the resumption of research in June of 1994. Many of the questions generated in this paper will be addressed in future work.

Part of the difficulty in understanding the fundamental nature of the Hacha site and its place in south coast prehistory was compounded by two obvious factors. First, the lack of any large-scale excavation made it impossible to evaluate properly the assumed associations among artifactual materials limited to the clearly unstable surface of the site. Secondly, the Hacha site lies very close to several other archaeological sites representing different time periods and cultural affiliations, including badly vandalized cemeteries. Artifactual contamination of the site surface is obvious, but the specific details of that contamination are difficult to ascertain. In some cases ceramics and other artifacts are clearly assignable to late periods. In other cases, however, such relationships are not obvious and it can be very difficult to determine what is, and what is not "Hacha". Subsurface excavation was obviously necessary to identify and distinguish "Hacha" components. It was hoped that subsurface investigation would provide additional samples for radiocarbon analysis to refine the site's chronology. It was also felt that the many improvements in radiocarbon dating since the early 1960s would clear up some of the earlier confusion about the age of the site.

The single largest methodological difficulty faced in excavating at Hacha is the fact that the entire site is covered by dunes and flows of loose, windblown sand. While at first glance this sand covering appears relatively stable, it is easy to observe that the entire surface of the site is in motion during most afternoons, when strong winds move up the valley. It is equally easy to observe that no features of the site, including architectural remains, rise more than a few centimeters above this surface. It is apparent that anything that might once have stood above the sand has long since been planed off at the surface by this moving sand. This action has undoubtedly had an impact on the distribution of surface materials.

The difficulties of excavating in this sand are nearly insurmountable because it is completely unconsolidated and uncemented. It is impossible to maintain vertical excavation walls, and the work involved in completing an excavation increases significantly with depth. With virtually no stability in the deposit, the maintenance of vertical and horizontal controls is also made more difficult. For these and other reasons, progress has been slow. To date, five excavations have been undertaken at Hacha, each focusing on a single structure (architectural feature) visible at the surface. Figure 3 shows the relative locations of these five structures. The great distances separating some of the individual structures combined with the nearly featureless surface of the site make accurate mapping nearly impossible.

Archaeological data

Archaeological data collected from these excavations as well as from the surface of the site can be classified into eight general categories: (1) architectural remains, (2) hachas, (3) projectile points, (4) ceramics, (5) refuse middens, (6) interred human remains, (7) textiles, and (8) radiocarbon dates. In addition to these categories, the Hacha site has also yielded a variety of generally non-diagnostic lithic debitage, artifacts of shell and bone, ground and polished stone, and various other objects which have not yet been subjected to analysis. Biological remains collected largely from the refuse middens are currently being studied by Jonathan D. Kent, Metropolitan State College, Denver.

Architectural Remains

Architectural remains at the Hacha site are currently known through the partial excavation of five structures. Additional architecture is known to exist at the site, but has not yet been examined. All five excavated structures appear to be domestic buildings of between one and three rooms, possibly with associated yards or compounds. Walls are constructed of packed mud (*tapia*) and generally measure between 30 cm and 40 cm in

thickness at the bottom, becoming slightly thinner at the top. No evidence of roofing has been discovered. Individual descriptions of the five structures follow.

Structure 1. This structure consists of a single large rectangular room, the walls of which have been destroyed to approximately 20 cm above the floor. The floor consists of relatively clean adobe approximately 10 cm thick resting on a base of sand. There is a single fire pit against the north wall, supported by an adobe slab elevated 10 cm above the floor (see Figure 5). No diagnostic artifacts or significant features have been found associated with this structure. A single uncorrected radiocarbon measurement of 2970 ± 60 BP (UCR-2086) was obtained from a charcoal specimen from this fire pit.

Structure 2. This is the most complex and best preserved of the five structures investigated thus far. It consists of three distinct rooms separated by walls somewhat less than two meters in height (see Figures 7, 8). The three rooms are quite distinct. Room 1, the smallest room, measures 3 m by 3.5 m, and contains an elevated platform dominating most of the floor space. The platform rises approximately 25 cm above the floor and is made of puddled and smoothed adobe. Room 1 is connected to the other two rooms by well-made trapezoidal doorways. One of these openings was walled up with large, loose "chunks" of adobe. This doorway opened into a long, narrow room (Room 2) measuring 3.5 m by 6.5 m with a poorly formed floor littered with charcoal, shell, bone, and other midden components. An opening in the west wall of this room seems to lead to the outside of the structure. This opening is not a well-formed doorway of the type described above, but a simple intentional discontinuation of the west wall. Room 3 measures 4 m by 4 m and is connected to Room 1 by a very well-formed doorway. This room might best be interpreted as the "kitchen" or "family room". A second doorway opens to the outside of the structure to the north. There is apparently no connection between Rooms 2 and 3. The floor of Room 3 is of well-made compacted adobe and contains two fire pits, as well as what appears to be a narrow room divider of adobe. Midden components similar to those found in Room 2 litter the floor. The entire west wall of this room is no longer standing, although several large amorphous blocks of adobe found in this area suggest that the room was originally enclosed. Three radiocarbon measurements have been obtained from this structure. An uncorrected measurement of 2990 ± 70 BP (UCR-2088) has been obtained from charcoal collected from Room 3, Pit 1, a well-made molded fire pit built into the floor. A second uncorrected measurement of 2810 ± 60 BP (UCR-2087) has been obtained from charcoal collected from the floor of Room 2. A third uncorrected measurement of 2730 ± 70 BP (UCR-2089) has been obtained from charcoal collected from Room 3, Pit 2, a fire pit that appears to have been added to the room well after the construction of the floor. Pits dug into the floors of the structure at some point in the modern era clearly indicate that the structure was constructed on a base of sand. No temporally diagnostic artifacts were discovered in direct association with this structure.

Structure 3. Investigation of this structure has only begun, and nothing can be said now about its overall configuration and composition. The structure is not illustrated for this reason. In all major respects, Structure 3 appears similar to the others, although two interesting features can be reported. First, the initial excavation at this building revealed the existence of a short adobe wall rising no more than 60 cm above the floor. The top of this wall was obviously smoothed and finished, while the other walls have been planed by the shifting sands of the site surface. This wall may be an interior divider, although this cannot be demonstrated at present. There are at least two overlapping structures in the area of Structure 3. Second, two thin wooden posts were found protruding out of the finished wall-top and may be remnants of a shed-like construction once supported by the wall. A single uncorrected radiocarbon measurement of 3150 ± 80 BP (BETA-23912) was obtained from one of these posts. This is the oldest date yet associated with the Hacha site with the single exception of one of Rowe's dates run in the early 1960s.

Structure 4. This structure was, in many ways, the most interesting of the five. A single section of adobe wall marking the southern and eastern margins of the structure rises approximately 120 cm above naturally consolidated mud (Figure 9). This deposit was encountered both inside and outside the wall. Outside the structure, an excavated pit was encountered in this naturally consolidated mud deposit. It contained numerous hand- and footprints, apparently associated with the building of the structure. The most interesting characteristic of Structure 4 was the fact that several middens containing temporally diagnostic ceramics were discovered in direct association. Structure 4 has also yielded the only human interments so far associated with the Hacha site. The significance of this structure in the interpretation of cultural and chronological relationships at Hacha is discussed below.

Structure 5. This structure is almost completely destroyed. In fact, it may not be a structure at all, but rather a "yard" area of rather intense activity. Wall fragments are few, and several superimposed floor surfaces are covered by heavy concentrations of charcoal and other midden components. Few diagnostic artifacts have been discovered, and much additional work remains to be done before this feature can be properly understood. Again, this structure cannot be meaningfully illustrated at this time.

Hachas

These unusual artifacts are one of the most interesting attributes of the Hacha site. The site was named for them, and at least at present, they appear to be unique to the southern coast of Peru. They are made from large split cobbles of basalt and felsite. A chipped and battered constriction appears approximately two thirds of the way along the blade formed by splitting the cobble. The edge of the flake is then unifacially chipped to provide a rough cutting and/or chopping edge, as well as a general symmetry (see Figures 10, 11). It is assumed that the implement was hafted in some way, using the constriction. All of the *hachas* in the current collection are from the surface of the site and have been subjected to severe sand-blasting. This makes an accurate interpretation of their use and function all but impossible. The unifacial working edge, however, would certainly argue against their being used as *hachas* or general chopping tools. Employment as adzes or hoes seems most likely.

Projectile Points

Several projectile points have been collected from the surface of the Hacha site by the writer of this report (see Figures 12, 13). Most of these are of obsidian although specimens of basalt and colored cryptocrystaline silicates are also present. Projectile points can be easily divided into two distinct types based on their basal morphology. Some points have a flat, or slightly convex, base and an overall triangular or notched-triangular configuration. Others have rounded or leaf-shaped bases. It is not known at present if these two types represent differences in function, cultural affiliation, or chronological placement. One leaf-shaped projectile point was associated with Burial 1 (see below).

Ceramics

Ceramics are the largest artifact category in the collections from the Hacha site. Until the recent excavation of Structure 4, the entire collection consisted of surface specimens. In the following discussion, surface ceramics are treated separately from those associated with the excavations.

Surface Ceramics. Although this category has been considered the most diagnostic part of the Hacha collections and has been used in discussions of cultural affiliation and chronological placement, the "type" itself has never been formally described in print. Such a description is difficult because all of the diagnostic sherds are from the surface of the site. Without stratigraphic position and other aspects of provenience, meaningful divisions of the material are impossible. Furthermore, because these artifacts have spent as many as two thousand years lying on the exposed surface of the site, wind and sand damage has diminished their value considerably. All of the specimens are small in size, making the reconstruction of vessel form and function difficult and tentative. Almost all specimens have one or both surfaces completely destroyed by erosion. Painted designs, slips,

etc. are difficult to detect, and even incised designs are badly damaged. These problems are to be kept in mind when reading the description that follows.

This analysis of the Hacha surface ceramics is based on ninety-four sherds considered by the writer of this report to be diagnostic specimens of the style. Several hundred sherds were rejected in this analysis because (1) they were completely non-diagnostic; (2) they were too badly damaged to be identifiable; and/or (3) they could not be clearly identified as belonging to the Hacha style. The significance of Hacha material to south coast chronology demands an attempt at formal description. The following applies to the ninety-four diagnostic specimens. All of the ceramics mentioned here represent collections made in association with the current research project.

Pastes are relatively fine in texture with inclusions of natural quartz sand grains. The quantities of such inclusions varies vary from less than 1 percent to 20 percent or more. Interior and exterior paste color ranges from the "reddish browns" to "greys" (5YR to 7.5YR) in the Munsell Soil Color Classification.

Specimens tend to be thin-walled (4 mm to 8 mm) and quite hard, averaging between 3.0 and 4.5 on the Mohs Hardness Scale. Firing temperatures were probably fairly hot. Identifiable vessel forms include necked jars, neckless jars, open bowls and plates, small double-spouted jars, and ring-based cups. Due to the fragmentary nature of the specimens, this list of vessel forms is probably far from complete.

Decoration consists of simple geometric patterns of incised lines and punctations. These incisions are often poorly executed with apparently little effort made to achieve uniformity in line width or punctation size. The use of appliqué and red slip characterizes some of the finer specimens. Interior surface textures are much rougher than exterior surfaces. Polishing and/or burnishing is common on exterior surfaces. Figures 14, 15, and 16 illustrate selected specimens of Hacha surface ceramics.

Similarities can be seen between the surface ceramics at Hacha and the pottery of other areas. Soon after his first visit to the Hacha site, John Rowe tentatively assigned the site to the Initial Period in Peruvian chronology based on similarities with the ceramics of Erizo in the Ica Valley (Rowe 1967:30). Edward Lanning (1967:86, figure 5 a-h) illustrates "Guañape Style" pottery from the Virú Valley which bears a striking resemblance to the Hacha material. Karen Mohr Chávez reports a similar ceramic style from Marcavalle in the Cusco Valley and from Pikicallepata in the Vilcanota Valley (Chávez 1977:1038-1041, 1983:320-332). Joel Grossman's Muyu Moqo ceramics from the site of Waywaka near the town of Andahuaylas, Apurímac, also appear to be similar (Grossman 1983:54-58, 104-109, figures 6-45). Furthermore, Donald Lathrap (personal communication, January 1987) reported comparable pottery from the eastern Andes, and Thomas Patterson (personal communication, April 1991) describes similar pottery from the Ancón Shellmounds on the central coast. Somewhat closer to Hacha, the site of Cahuachi has produced a few examples which appear to be of this Hacha style (Kowta 1987:20; Rowe 1956:146). Although the dating of these apparently comparable ceramics varies somewhat, all can be seen as roughly in keeping with the Initial Period - Early Horizon transition (*i.e.,* approximately 2500 to 3000 years ago).

It must be made clear that the above comparisons depend primarily on written or verbal descriptions and upon published illustrations. To date, a direct physical examination and detailed comparison of all the specimens described and illustrated in these reports has not been done. An attempt to conduct a thorough examination of all reported occurrences of Hacha style ceramics will be made in the near future. Because Hacha is the only site known so far with a significant concentration of these materials in a relatively exclusive context, the full extent of the distribution of this ceramic style remains to be determined.

Subsurface ceramics. During the 1986 season work focused on Structure 4. Among the many surprises associated with that excavation was the discovery of ceramics in a

buried midden lens in contact with both the floor and wall of the structure. This was the first discovery of diagnostic ceramics below the surface of the site. The most unusual feature of this pottery was the distinct difference between it and the surface material.

Only four ceramic vessels could be identified out of approximately two dozen fragments. Three of these vessels are made of a fine-textured soft paste of a rich, dark brown color. Exterior surfaces are highly polished. One kind of vessel is known from a single sherd and appears to be a small cup. A second vessel is clearly a small cup with a slightly raised ring base (Figure 17B). The third vessel is a large rectangular cup over 20 cm in height (Figure 17A). The fourth vessel is a low-walled rectangular plate decorated on the exterior with a geometric pattern of incisions and punctations (Figure 17C). The specimen has a badly eroded surface and cannot be compared to the other three in terms of texture or color.

Two problems must be faced in comparing these four ceramic vessels with the surface materials. First, the sample is very small. Conclusions based on four specimens must be tentative. Second, the buried specimens have not been exposed to the surface modification and deterioration common to the specimens found on the ground. Nevertheless, the buried examples, taken as a lot, appear to represent a recognizably different ceramic group. Three of the four specimens exhibit a surface texture and color unknown in those recovered from the site's surface. Two of the four specimens are rectangular in form, a shape absent from the surface sample. The typical incision/punctation design elements noted on the surface specimens are found on only one of the buried specimens, one with a rectangular shape. There are significant similarities between the buried and surface specimens, certainly, but there are also significant differences. Tentatively, then, we suggest that the buried ceramics represent a different and earlier ceramic group. For the sake of convenience, this earlier ceramic group will be called "Hacha 1"; the surface ceramics will be called "Hacha 2".

Refuse Middens

Small refuse middens occur in several areas of the site as lenses buried in the sand fill. These midden "lenses" are usually not more that 30 cm in thickness and generally cover an area of 10 to 30 square meters. They are composed of silty soil (quite distinct from the sand fill), ash, charcoal, vegetal remains, and artifactual materials. Most of the middens so far investigated appear to be directly associated with individual structures. In cases where middens are identified as being in direct contact with the floors and walls of structures, cultural associations can be safely assumed. Thus far, with the exception of charcoal, the only diagnostic artifacts found in these middens have been textiles and Hacha 1 ceramics.

Human Interments

The skeletons of five individuals have been discovered at the Hacha site since 1984. All were discovered during the excavation of Structure 4. Individual Burial Numbers (1-5) were applied to these remains in the order in which they were found. All five burials were found in loose sand approximately 30 cm below the current surface of the site but well above the structure's floor. All of the skeletons were badly decomposed and severely desiccated. The bone sample submitted for analysis at the University of California Riverside Radiocarbon Laboratory contained such highly degraded collagen that the measurement had to be made on total protein content. The extremely poor condition of the specimen is further indicated by the recognizable presence of only two of the normal 20 amino acids (Dr. Lewis A. Payen, personal communication, April, 1987). Collecting intact remains during excavation was impossible. The one radiocarbon measurement obtained from the analysis of this material must be considered questionable, and an intended second sample was never processed.

Burial 1. This is a relatively complete skeleton located inside Structure 4 in the sand fill just below the surface of the wall. The body was that of an adult male interred in a loosely flexed position lying on his back and facing upwards. The individual represented by Burial 1 was the only one of the five in-

terred with artifacts. A necklace of 267 circular beads of green/black stone was found around his neck. One long polished bone ornament (or tool), one lump of a pink/red pigment, and one leaf-shaped obsidian projectile point were found near the left shoulder. All of these artifacts clearly represent grave goods. A dusty textile impression was found on the individual's right arm. This impression was photographed, but could not be preserved.

Burials 2, 3, and 4. These interments are a single group of three adult crania lying together at approximately the same level in the sandy fill as Burial 1, but outside the walls of Structure 4. No post-cranial remains were found. Although the frontal and basal modifications commonly associated with "trophy skulls" were not observed on these remains, the possibility of an early origin of head collection is certainly implied by this discovery.

Burial 5. The individual represented by Burial 5 was an adult woman. She was placed in roughly the same manner as Burial 1 but in a more loosely flexed position. Her skeleton was recovered inside the structure, well above the floor, at approximately the same level in the sand as Burial 1. A textile impression in the dust around the pelvic girdle was noted, but could not be preserved. No other artifacts were found with this burial.

Textiles

A number of textiles and textile impressions have been collected at the Hacha site. Most of these specimens consist of small fragments recovered from the midden lenses or from the structure floors. A. H. Gayton published an analysis of some of the specimens collected in late 1950s and early 1960s (Gayton 1967). Grace Katterman has described and analyzed several of the more recently collected specimens (1994 [this volume]).

Radiocarbon Dates

A total of ten radiocarbon measurements now exists for the Hacha site. Two of these were reported by John Rowe in 1967. The remaining eight were made on materials collected since 1984, and shed much-needed light on the chronological problems associated with the site's interpretation. Figure 18 summarizes all of the radiocarbon data so far collected.

Beta-23912, at 3150 ± 80 BP, is the oldest of the eight recent measurements. This date comes from a wooden post taken from the wall of Structure 3. Unfortunately, the excavation of Structure 3 is not yet finished, and the significance of this date cannot yet be properly addressed. UCR-2207, at 2590 ± 200 BP, is perhaps the youngest of the eight recent measurements. This date represents Burial 1, an intrusion into the natural sand fill above Structure 4. As an intrusion from higher up, perhaps from the surface, this recent date is to be expected. Furthermore, the degraded condition of the skeleton may offer reason to question the applicability of the date. The rest of the more recent radiocarbon dates are fairly consistent and place the site rather firmly at between 2700 and 3000 years before present.

Of the ten radiocarbon dates so far collected from the site, five are from features directly associated with structures, four are from refuse middens apparently associated with structures, and one is from the intrusive human burial (see above). A firm association between structures and refuse middens seems clearly implied, although the precise locations of Rowe's samples could not be determined. It should be noted here that none of the radiocarbon dates necessarily applies to any of the other components of the site. Rowe's dates from the early 1960s are not particularly out of place in this sequence, although UCLA-154 is clearly the oldest date obtained so far. All radiocarbon dates presented here represent uncorrected measurements.

Analysis and interpretation

The most recent assessments of south coastal chronology place the Initial Period/Early Horizon border at approximately 600 B.C. (Burger 1992:230) to 900 B.C. (Keatinge 1988:xv). The radiocarbon series from Hacha certainly clusters near these figures. Kowta (1987:20) suggests that the Hacha site should be placed at the end of the Initial Period. The site is described as "Paracas and pre-Paracas" and placed in the Initial

Period by Menzel and Riddell (1986:117). Riddell and Valdéz C. (1988:10) describe the temporal placement of the site as "Pre-Paracas Horizonte Temprano". We must conclude, therefore, that Hacha represents a site occupied near the Initial Period/Early Horizon border. As such, the site may hold answers to significant questions of culture change and evolution on Peru's south coast.

The study of stratigraphy at the Hacha site is beset by serious problems. Of greatest importance is the fact that there are no stratigraphic continuities throughout the site. Individual structures and refuse midden lenses are small in size and non-contiguous. With the exception of Structure 4 and its associated midden, structures and middens are often horizontally separated by fifty to one hundred meters. With everything floating loose in the sand fill, it is impossible to relate stratigraphic relationships in one area directly to those of another. Aside from the broadest kinds of stratigraphic relationships, stylistic similarities among artifacts and radiocarbon dates currently provide the only possibilities for directly relating one structure to another.

Stratigraphic relationships can be meaningful, however, when limited to a single structure and its surroundings. Close proximity can lend a degree of reliability to apparent stratigraphic relationships. The best example of this known so far from the Hacha site is Structure 4. The walls of the building are clearly attached to a consolidated mud surface that forms a natural base to the sand covering the site. This surface can be identified both inside and outside the structure's walls. Furthermore, at least one refuse midden is clearly in contact with both the consolidated mud surface and the building's walls.

Figure 19 uses Structure 4 as a model for understanding stratigraphic relationships at Hacha. Incorporating these data with data from other parts of the site allows several important observations. Structure 4, rising out of the consolidated mud base, would appear to be a basal element in the overall composition of the Hacha site. It might be assumed that the other structures are equally early components of the site. The radiocarbon dates from Structures 1, 2, and 3 would certainly support such a conclusion.

The lower of the two refuse midden lenses associated with Structure 4 is in contact with both the consolidated mud surface and the wall of the structure. It should, therefore, date to the first use of the structure. This midden has yielded an uncorrected radiocarbon date of 2760 ± 90 BP (BETA-23910), in keeping with the dates on the other structures.

Both of the refuse midden lenses associated with Structure 4 have yielded ceramic specimens distinctly different from those previously known from the Hacha site. Hacha 1 ceramics occur in the refuse middens in direct association with Structure 4. They are dated by association with charcoal samples collected from these middens. Hacha 2 ceramics, on the other hand, have never been found in buried refuse middens or in association with the floors of any structures.

The human burials found in close proximity to Structure 4 all occur well above the floor of the structure in the loose sand fill. They may intrude from the current surface of sand. One obsidian projectile point was found in direct association with Burial 1. This is the only known case at the Hacha site of a projectile point occurring beneath the surface. Prior to the present excavation campaign, obsidian from the surface of the Hacha site was subjected to neutron activation analysis and x-ray fluorescence. Four types of obsidian were present (Burger and Asaro 1977 [1979]:297, cuadro 3, 304, 310,).

Perhaps the most surprising observation of all is the fact that after four summers of work at Hacha and the complete or partial excavation of five separate structures, not one *hacha*, projectile point (with the single exception mentioned in association with Burial 1), or Hacha style sherd, has been found below the present surface of the sand. All of these critical artifact categories are limited to the surface of the site.

Recognizing the fact that the only diagnostic ceramics collected from the middens associated with Structure 4 are distinctly different from the surface ceramics, we must conclude that Hacha is a double component site. It certainly appears that the two stratigraphic components at Hacha represent two

rather different cultural units separated in time by at least a few hundred years and characterized by rather different material manifestations. Several questions remain unanswered, however, and such a conclusion might seem premature. It should suffice simply to distinguish between the buried component and the surface component.

The buried component consists of the structures and at least some of the buried refuse middens and their contents, including a new and distinct ceramic variety, Hacha 1. In short, the buried component contains all of the datable elements of the site with the single exception of the intrusive burial. By contrast, the surface component is made up of most of the classic elements that have been used in the past to define the site. *Hachas*, projectile points, and Hacha 2 ceramics are all confined to the surface component. In the absence of any reason to suggest that this stratigraphic relationship has been reversed, we must consider the surface component to be later in time than the buried component. It is not yet possible to offer an accurate date for the later component. The only datable association at this time is the projectile point associated with Burial 1. This burial is in such a poor state of preservation that its date of 2590 ± 200 must be considered questionable. Nevertheless, the burial is obviously an intrusion, probably from the surface, and is definitely not temporally associated with the structure.

It is particularly troubling to note that while the datable elements of the Hacha site clearly place it at the Initial Period/Early Horizon boundary, the Hacha 2 ceramics originally used by Rowe and others to assign the site to the Initial Period represent the later component in the Hacha sequence. Hacha 2 ceramics are not only floating free on the sand fill at the site, but are currently floating in time as well.

References

Burger, Richard L.
1992 *Chavín and the Origins of Andean Civilization.* London: Thames and Hudson.

Burger, Richard L. and Frank Asaro
1977 Análisis de rasgos significativos en la obsidiana de los Andes Centrales. *Revista del Museo Nacional* 43:281-325. [1979].

Chávez, Karen L. Mohr
1977 *Marcavalle: The Ceramics from an Early Horizon Site in the Valley of Cuzco, Peru, and the Implications for South Highland Socioeconomic Interaction.* Unpublished Ph.D. dissertation, University of Pennsylvania, Philadelphia.
1983 The Archaeology of Marcavalle, An Early Horizon Site in the Valley of Cuzco, Peru. Part III. *Baessler-Archiv*, Neve Folge. Band XXIX [1981], Heft 2:241-386. Berlin: Museums für Volkerkunde Berlin, Verlag von Dietrich Reimer.

Fung Pineda, Rosa
1988 The Late Preceramic and Initial Period. In *Peruvian Prehistory*, edited by Richard W. Keatinge, pp. 67-96. Cambridge: Cambridge University Press.

Gayton, A. H.
1967 Textiles from Hacha, Peru. *Ñawpa Pacha* 5:1-14.

Grossman, Joel Warren
1983 Demographic Change and Economic Transformation in the South-Central Highlands of Pre-Huari Peru. *Ñawpa Pacha* 21:45-126.

von Hagen, Victor W.
1975 *Highway of the Sun: A Search for the Royal Roads of the Incas.* Chur, Switzerland: Plata Publishing Ltd.

Katterman, Grace L.
1994 Early Cotton Textiles from Hacha, Peru. *Andean Past* 4:39-51.

Keatinge, Richard W.
1988 *Peruvian Prehistory.* Cambridge: Cambridge University Press.

Kowta, Makoto
1987 *An Introduction to the Archaeology of the Acarí Valley in the South Coast Region of Peru.* Sacramento: California Institute for Peruvian Studies.
Lanning, Edward P.
1967 *Peru Before the Incas.* Englewood Cliffs, New Jersey: Prentice-Hall.
Lumbreras, Luis G.
1974 *The Peoples and Cultures of Ancient Peru.* Translated by Betty J. Meggers. Washington D.C.: Smithsonian Institution.
Menzel, Dorothy, and Francis A. Riddell
1986 *Archaeological Investigations at Tambo Viejo Acarí, Peru, 1954.* Sacramento: California Institute for Peruvian Studies.
Menzel, Dorothy, John Howland Rowe, and Lawrence E. Dawson
1964 The Paracas Pottery of Ica, A Study in Style and Time. *University of California Publications in American Archaeology and Ethnology* 50. Berkeley, California.
Riddell, Francis A.
1986 *Report of Archaeological Fieldwork Acarí and Yauca Valleys, Arequipa, Peru, 1985.* Sacramento, January.
1987 *Report of Archaeological Fieldwork Acarí and Yauca Valleys, Arequipa, Peru, 1986.* Sacramento: California Institute for Peruvian Studies.
Riddell, Francis A. and Lidio Valdéz Cárdenas
1988 *Prospecciones Arqueológicas en el Valle de Acarí, Costa del Perú.* Sacramento: California Institute for Peruvian Studies.
Rowe, John Howland
1956 Archaeological Explorations in Southern Peru, 1954-1955. *American Antiquity* 22(2):135-150.
1963 Urban Settlements in Ancient Peru. *Ñawpa Pacha.* 1:1-28.
1967 An Interpretation of Radiocarbon Measurements on Archaeological Samples from Peru. In *Peruvian Archaeology: Selected Readings*, edited by John Howland Rowe and Dorothy Menzel, pp. 16-30. Palo Alto, California: Peek Publications.
Willey, Gordon R.
1971 *An Introduction to American Archaeology: Volume Two, South America.* Englewood Cliffs, New Jersey: Prentice-Hall.

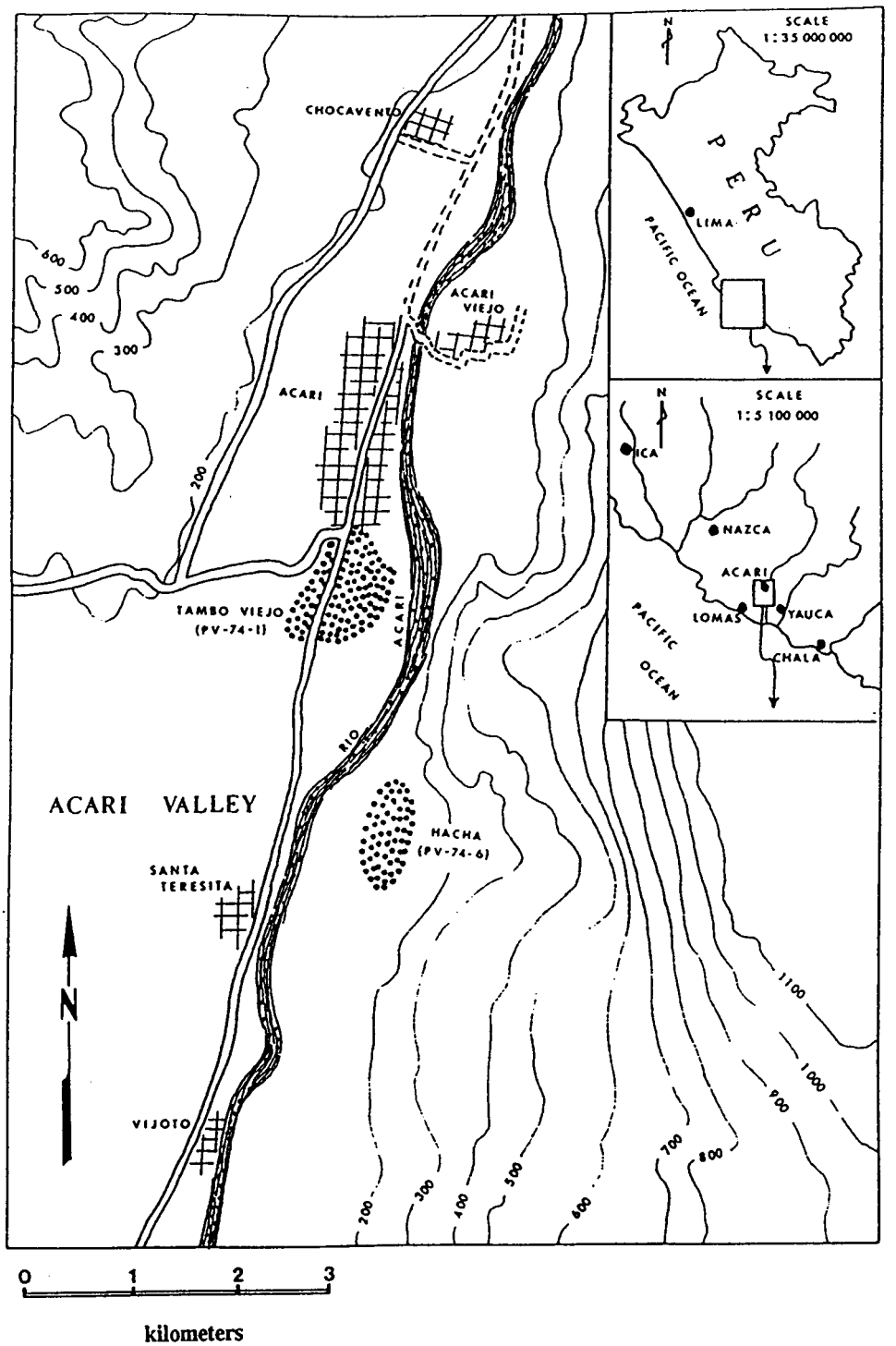

Figure 1. Map of a portion of the Acarí Valley showing the locations of modern communities and significant archaeological sites including Hacha. After Riddell 1986:figure 1.

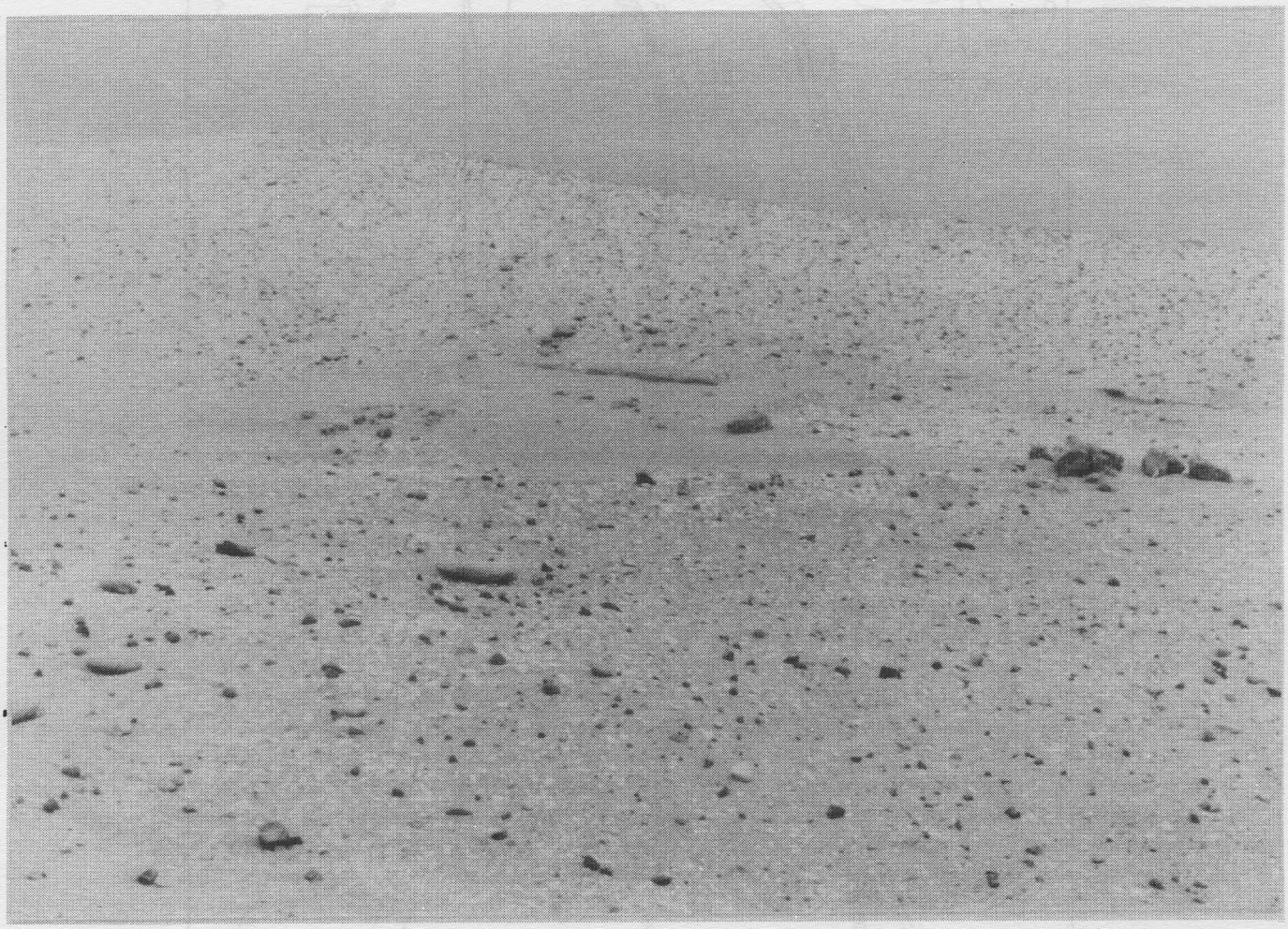

Figure 2. Photograph of the Hacha site prior to excavation. View from the west.

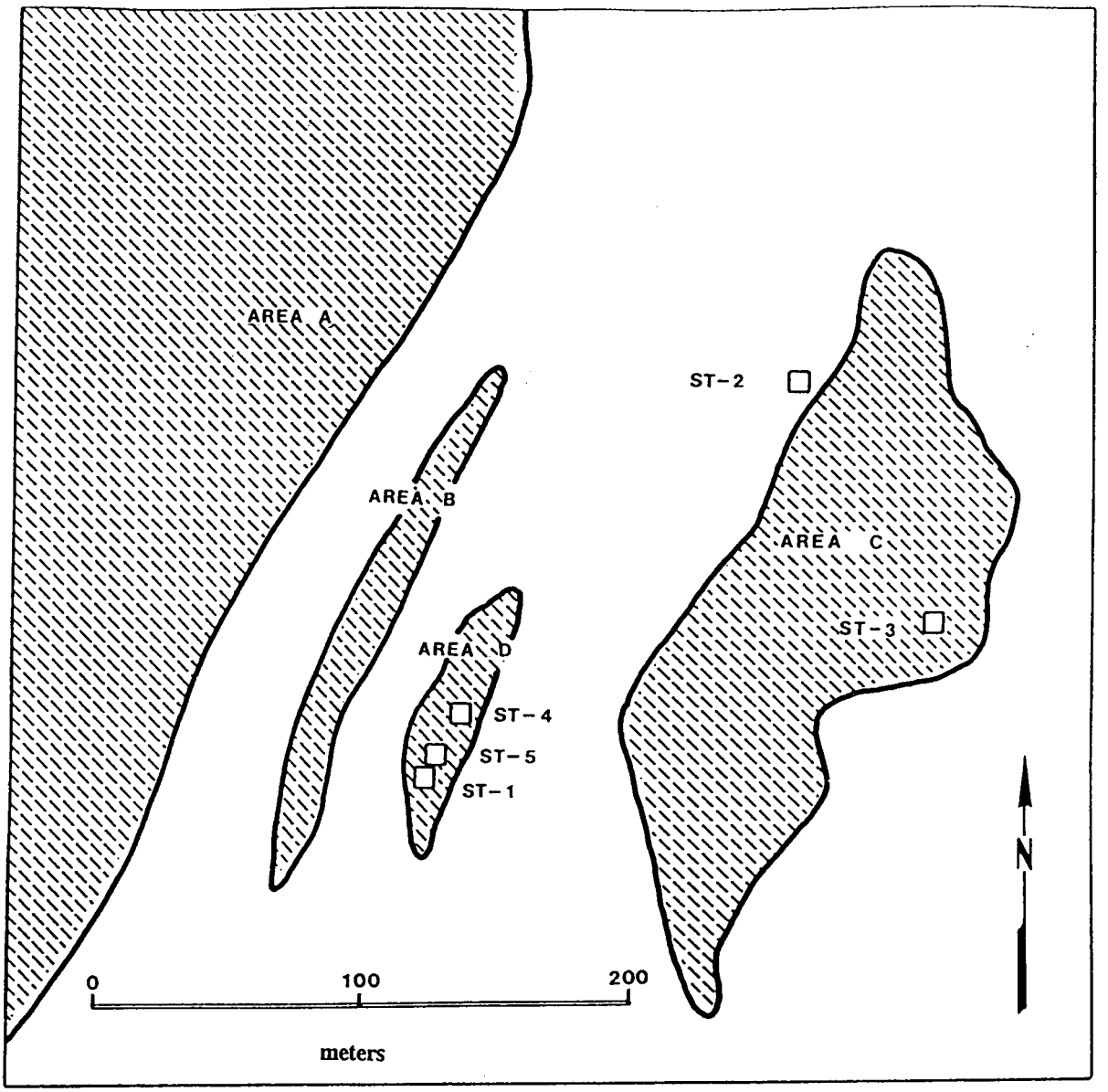

Figure 3. The Hacha site: areas of surface archaeological materials and the five known architectural structures are indicated. John Rowe's 1962 excavation took place in the vicinity of Structure 2. After Riddell 1987:figure 10.

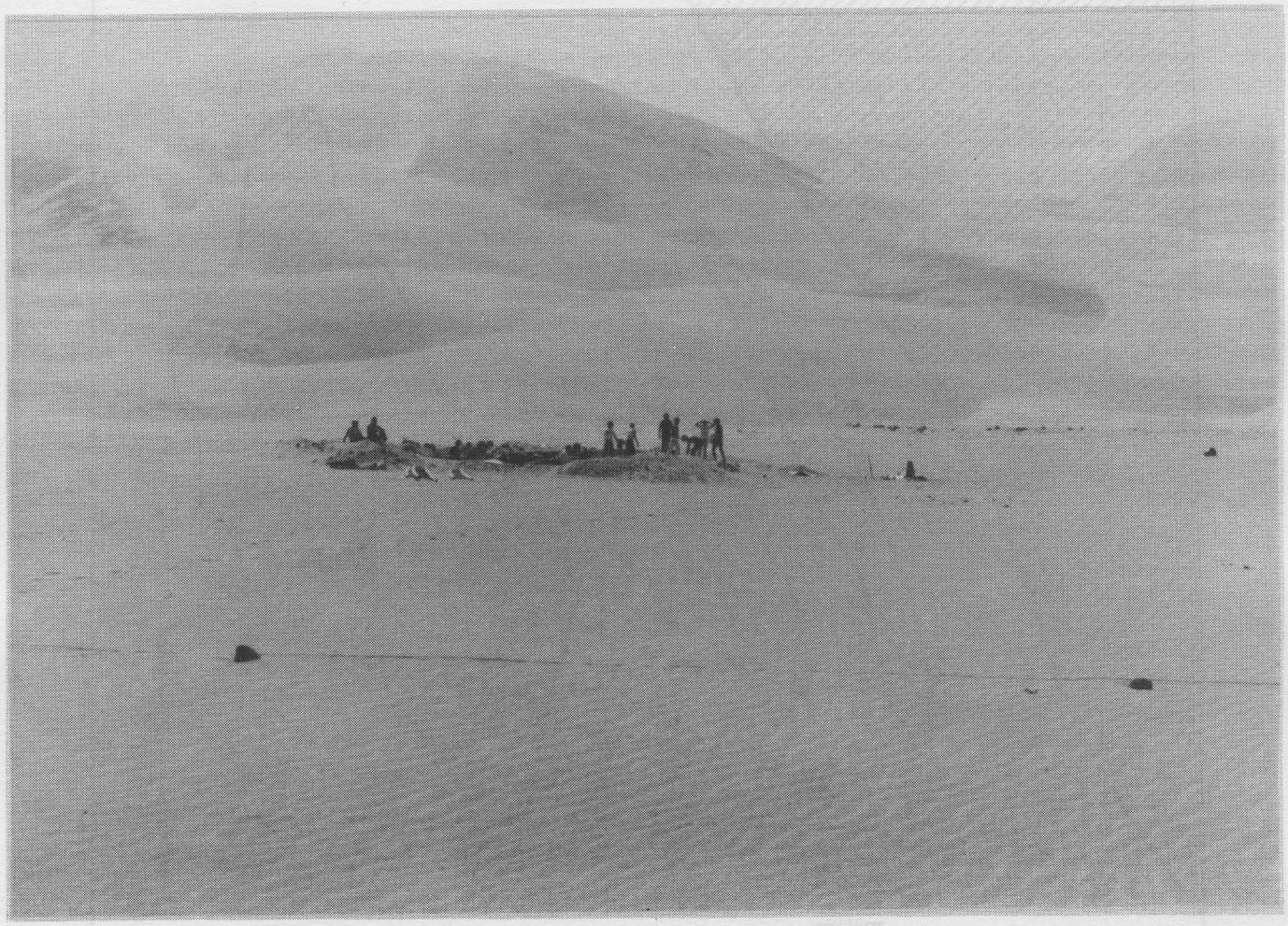

Figure 4. View of the Hacha site from the southwest. Excavation of Structure 2 in progress.

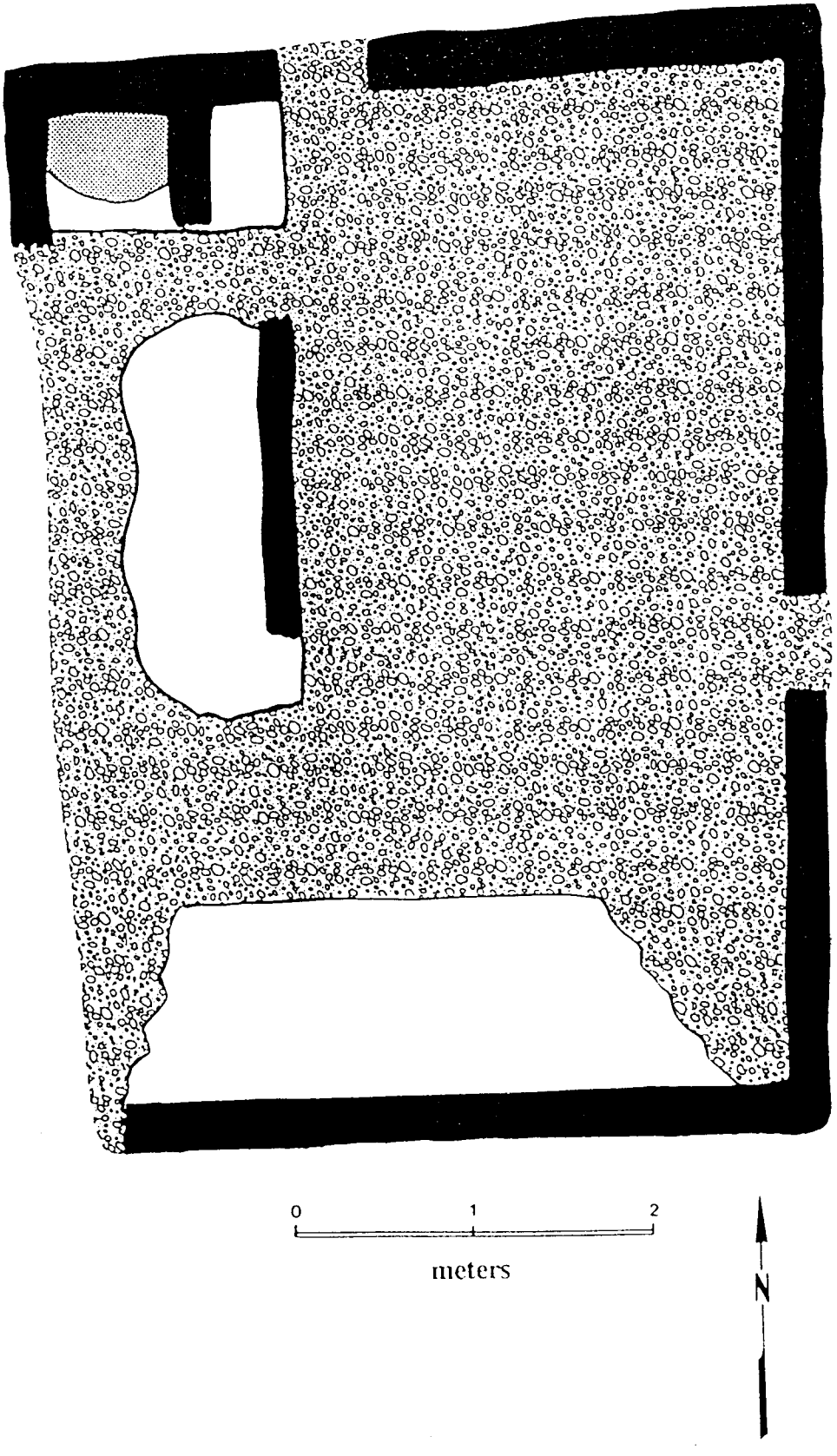

Figure 5. Plan of Structure 1. After Riddell 1986:figure 10. Black = Adobe Walls; White = Adobe Floor; Irregular Pattern = Sand Substratum; Stippling = Charcoal Concentration.

Figure 6. Structure 2 prior to excavation. View from the west.

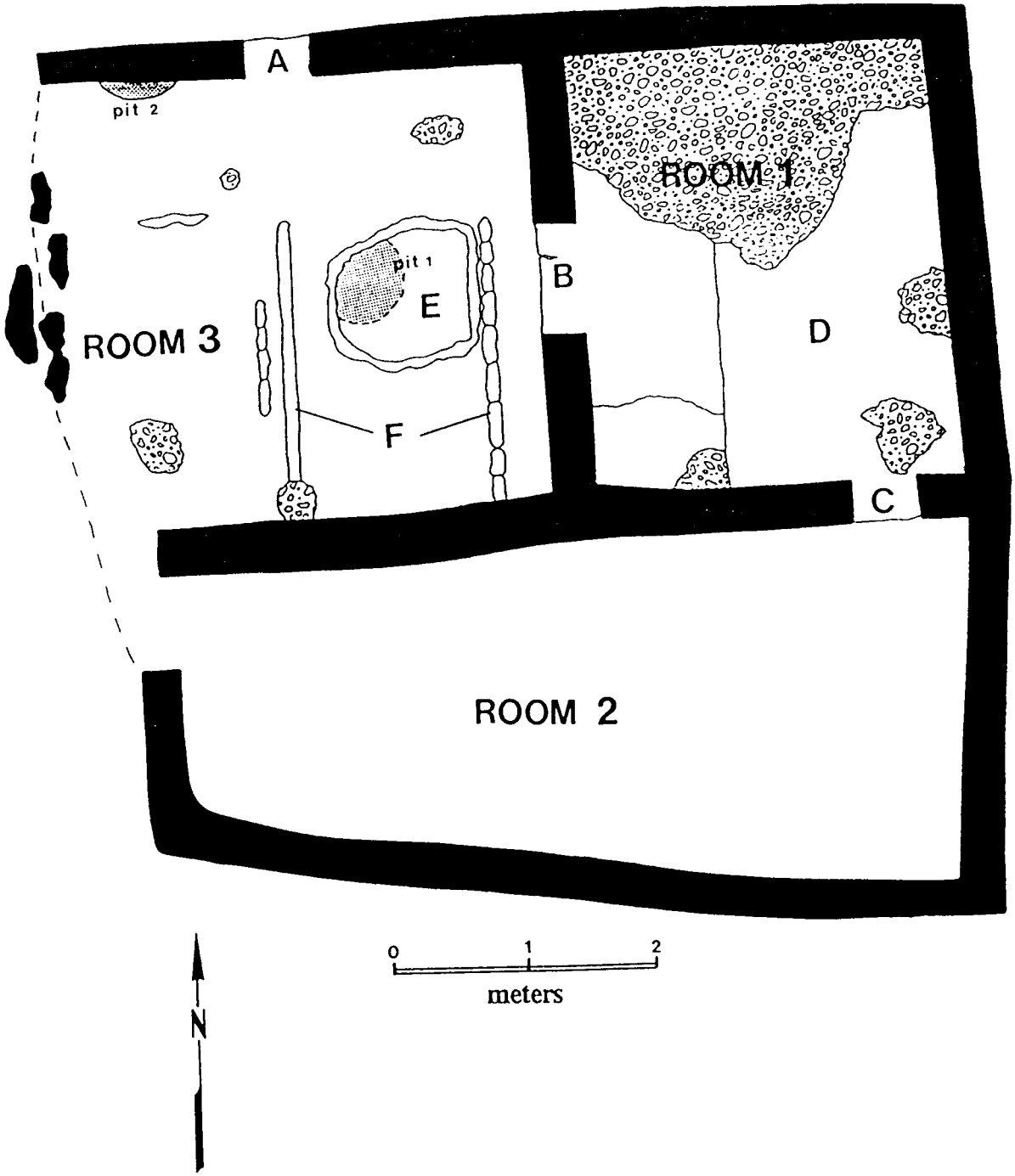

Figure 7. Plan of Structure 2. After Riddell 1986:figure 11. Black = Adobe Walls; White = Adobe Floor; Irregular Pattern = Sand Substratum; Stippling = Charcoal Concentration; A - C = Trapezoidal Doorways; D = Raised Adobe Platform; E = Fire Hearth in Floor; F = Interior Walls (dividers).

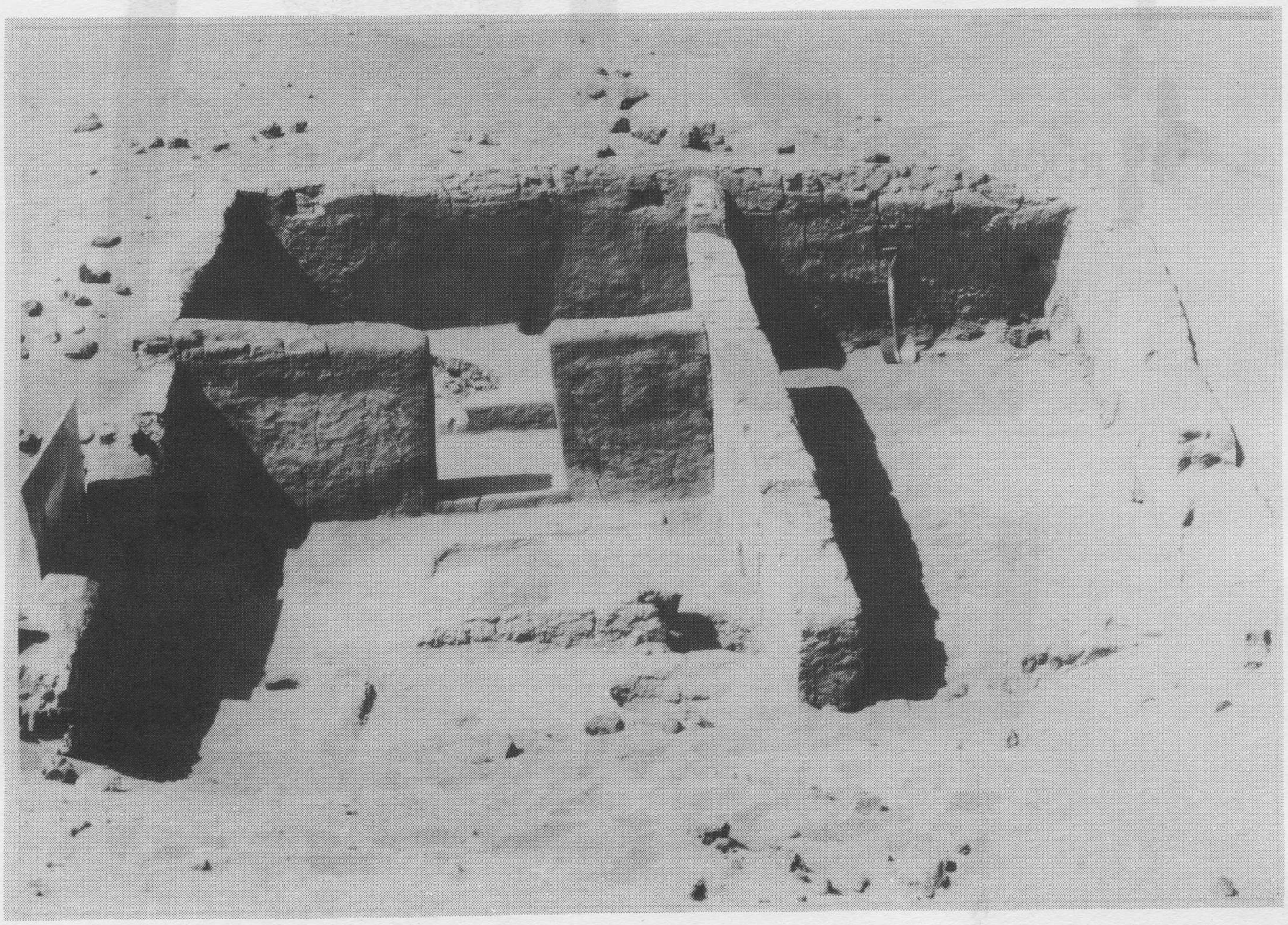

Figure 8. Structure 2 after excavation, viewed from the west.

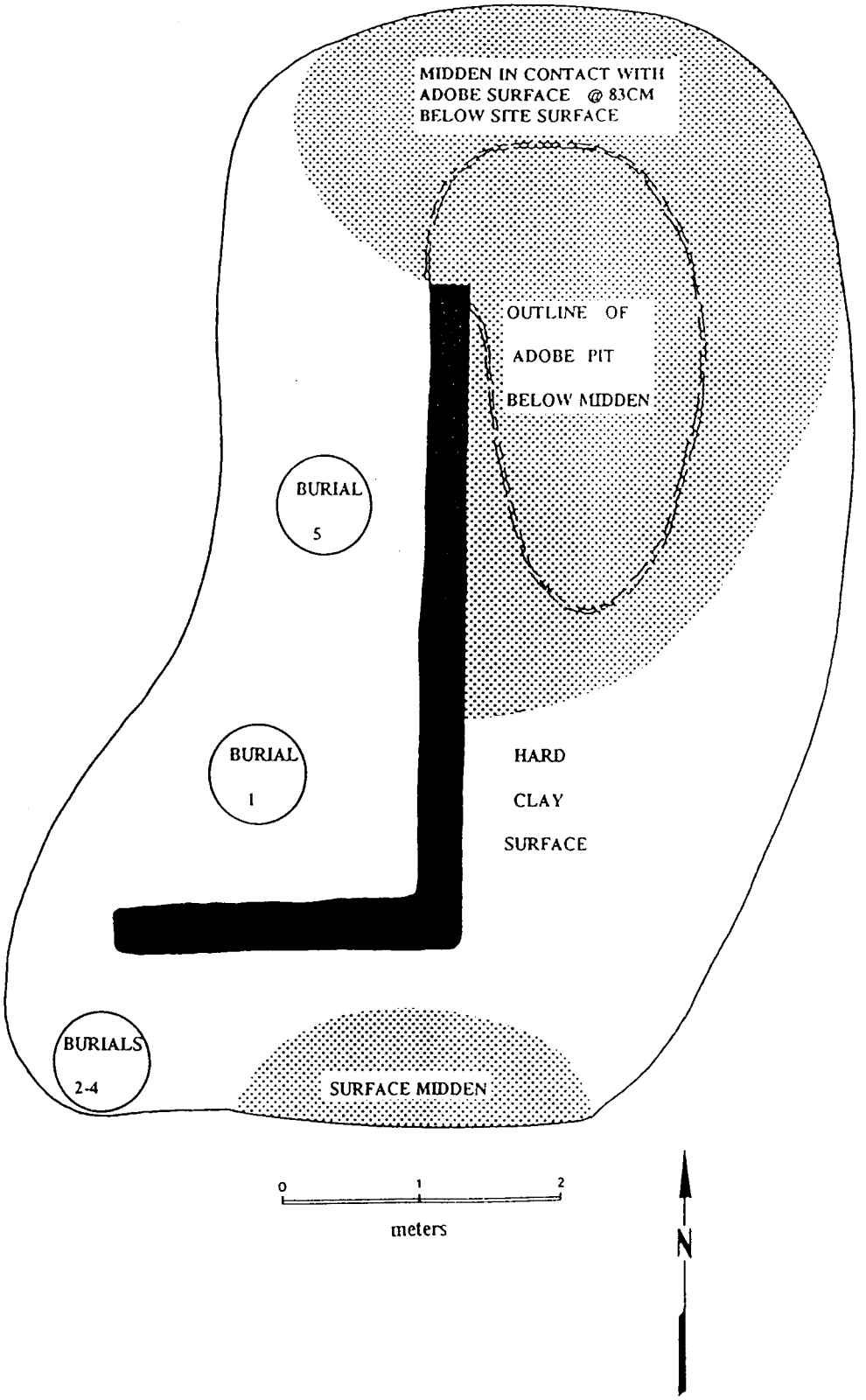

Figure 9. Structure 4. After Riddell 1987:figure 12. Black = Adobe Walls; White = Adobe Surface; Stippling = Middens. Solid line indicates the approximate limits of the excavation.

Figure 10. Hachas. Photograph of seven specimens typical of the Hacha collection. All from surface.

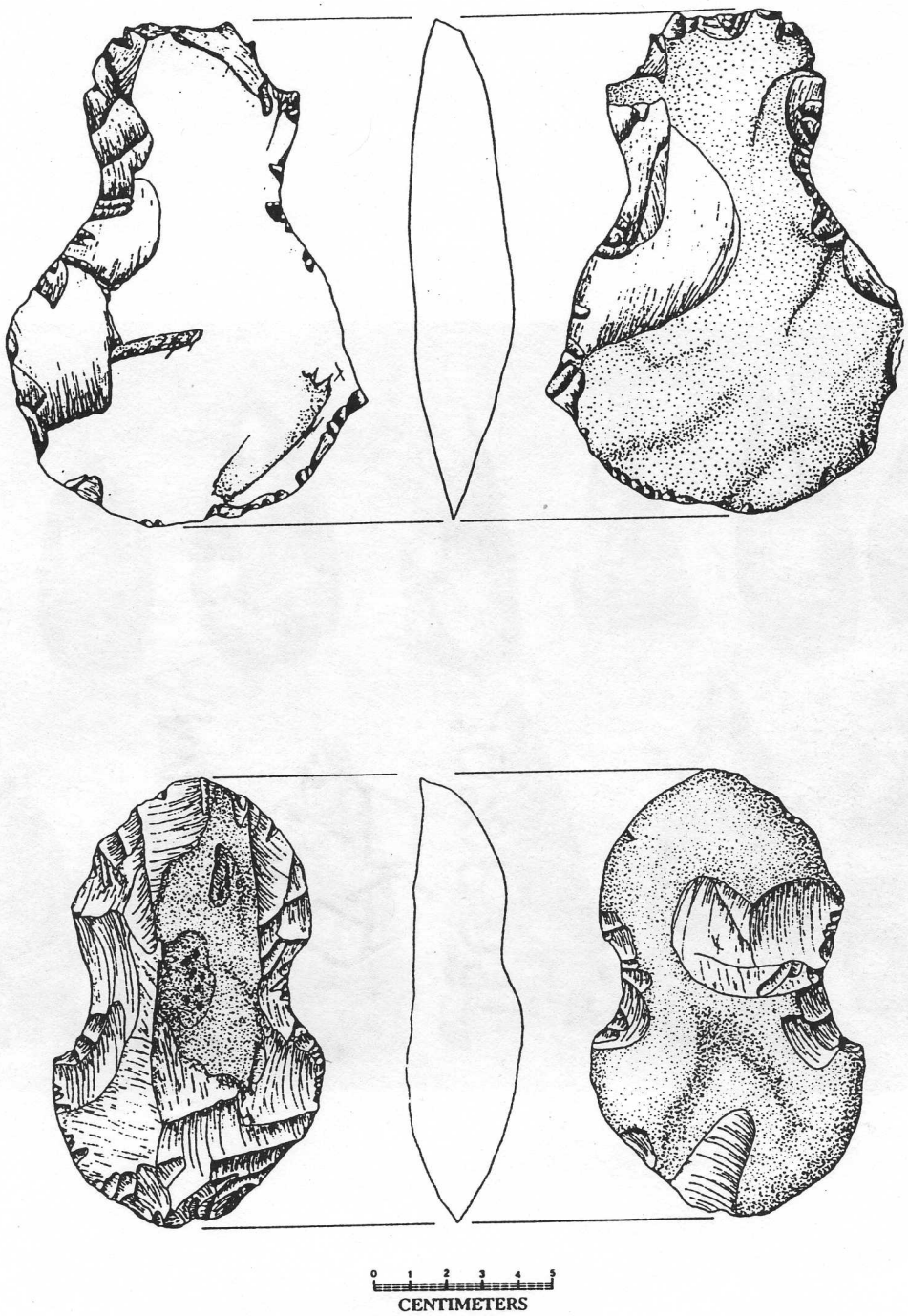

Figure 11. Hachas. Drawings of two specimens typical of the Hacha collection.

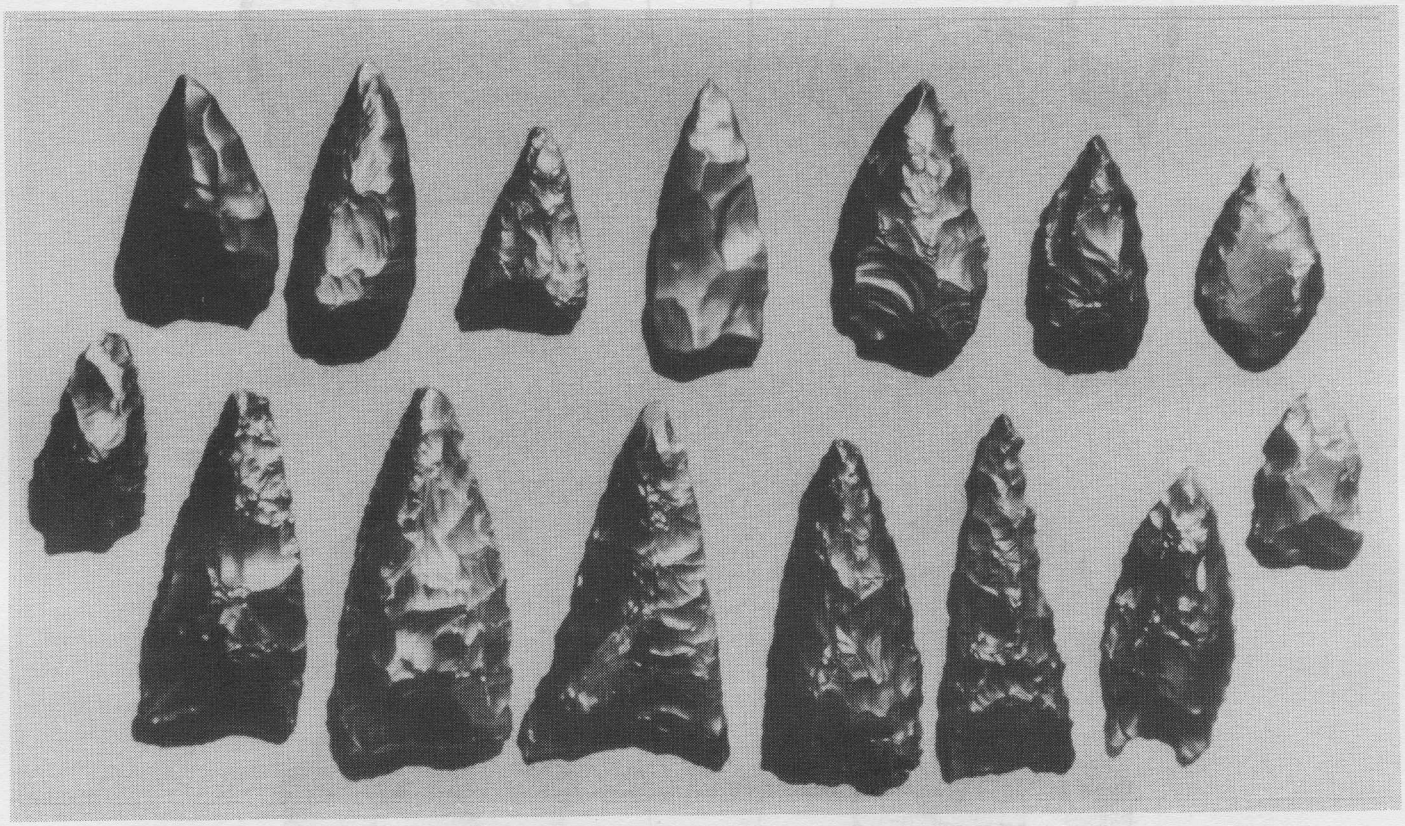

Figure 12. Projectile Points. Photograph of 15 specimens typical of the Hacha collection. All from surface.

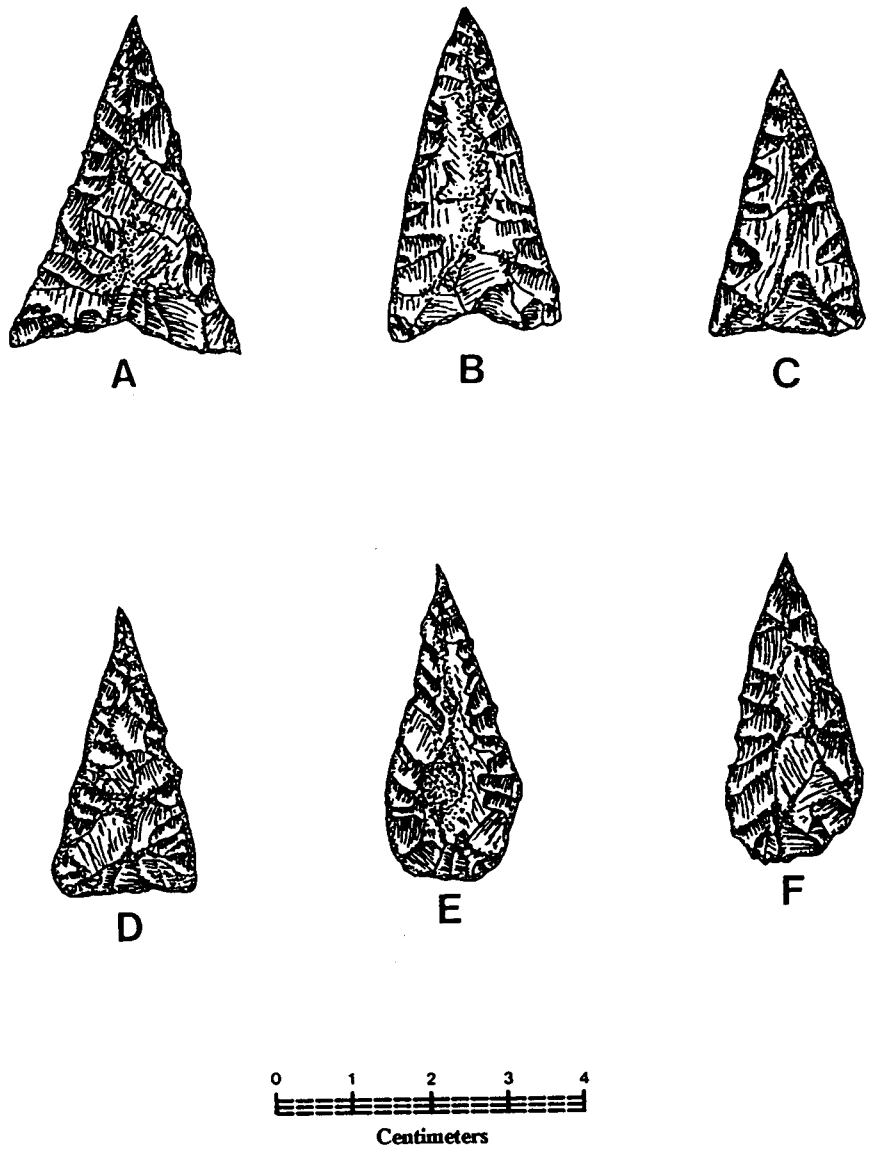

Figure 13. Projectile Points. Drawing of six specimens typical of the Hacha collection. A-D: triangular or notched-triangular points. E, F: leaf-shaped points.

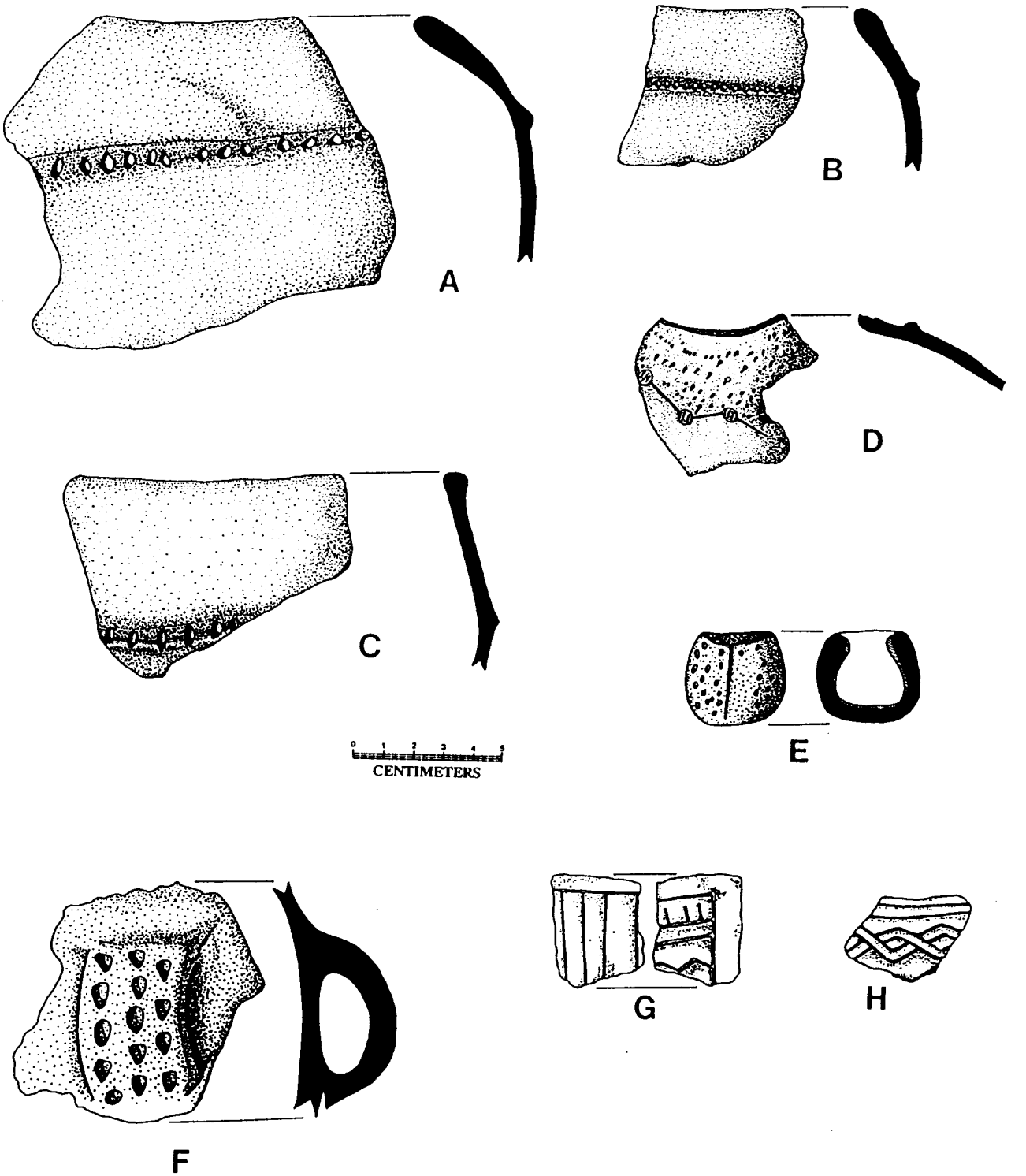

Figure 14. Hacha 2 ceramics. A-C: these specimens exhibit a single raised band running horizontally below the rim. Punctations occur along these bands. D: this specimen exhibits small appliqué bosses connected by a fine zig-zag line. Randomly placed punctations occur above this line. E: this specimen consists of a small, complete cup with a lime-encrusted interior. Its function is assumed to be associated with coca use. F: this specimen represents the only Hacha 2 handle in the collection. G, H: these specimens exhibit well-executed incised line patterns similar to some Paracas specimens.

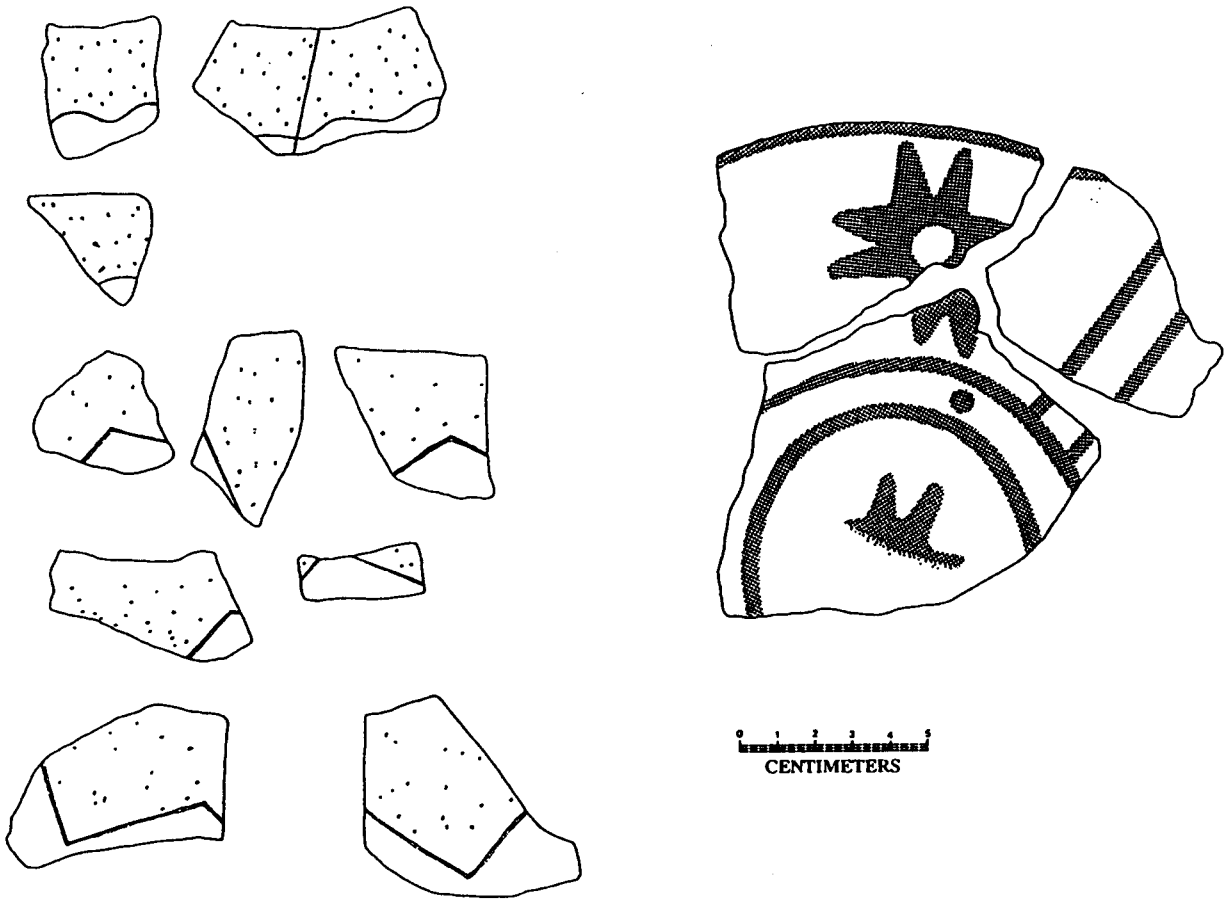

Figure 15. Hacha ceramics. The group at the left represents the most common design element in the Hacha 2 collection. A fine incised line runs in a curvilinear or zig-zag manner horizontally below the jar opening. Randomly placed punctations occur above this line. The plate at the right is a regional interpretation of an Inca plate (Dorothy Menzel, personal communication, 3 June 1992). Its presence indicates contamination of the surface, perhaps through the discarding of material from nearby graves excavated by pot-hunters. The interior design is painted in dull brown over a light tan background.

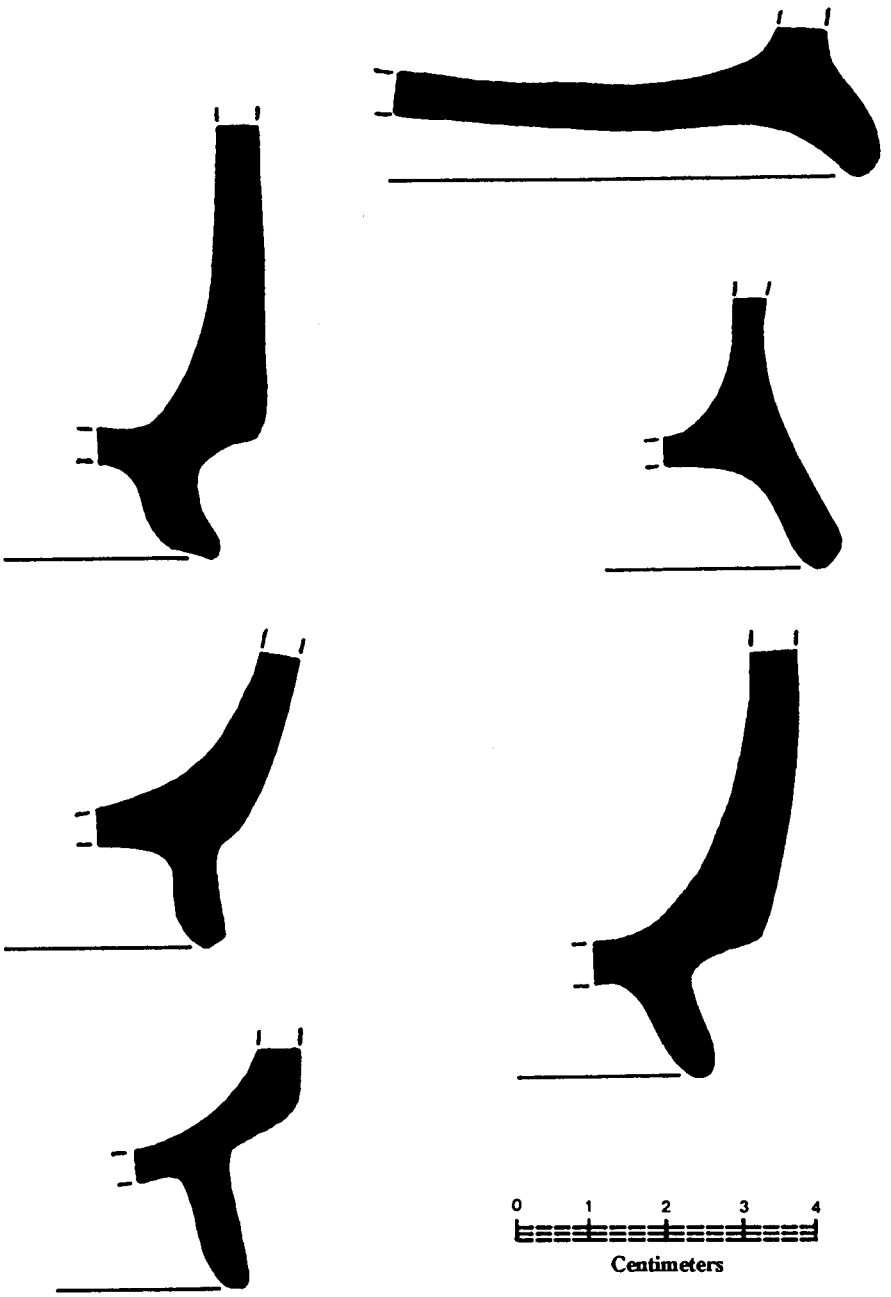

Figure 16. Hacha 2 ceramics. Six fragmentary specimens of "ring base" or "raised base" cups.

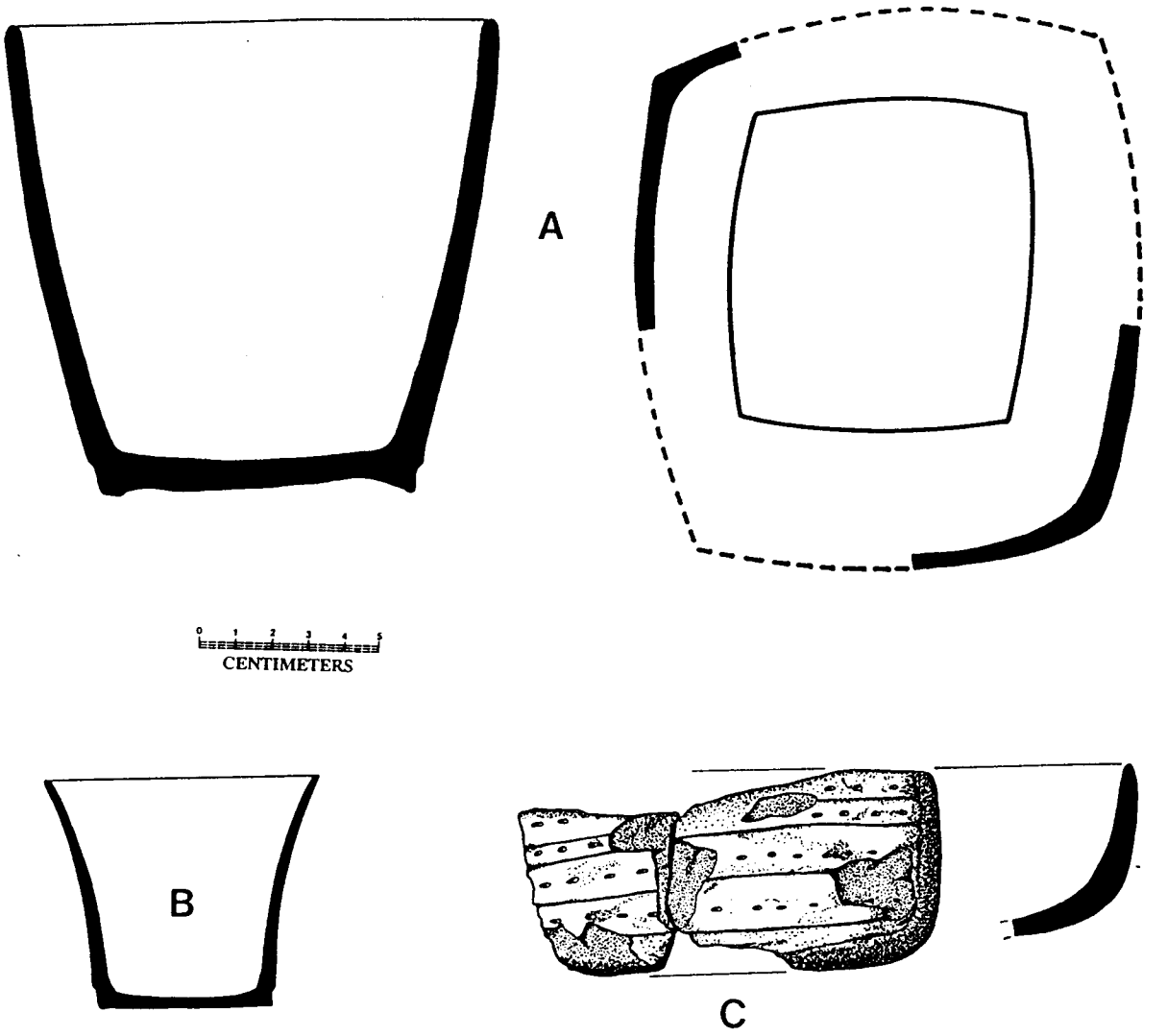

Figure 17. Hacha 1 ceramics. A: roughly rectangular vase or jar. B: Small vase or drinking vessel. C: flat, open, rectangular plate or "tray" with exterior design.

Lab. No.	*Radiocarbon Years BP*	*Comments*
UCR-2207	2590 ± 200	Human bone from Burial 1, Structure 4. Collected in 1988.
UCR-2089	2730 ± 70	Charcoal from Structure 2, Room 3, Pit 2. Collected in 1985.
Beta-23910	2760 ± 90	Charcoal from buried refuse midden, Structure 4. Collected in 1986.
UCR-2087	2810 ± 60	Charcoal and other organic material from floor surface, Structure 2, Room 2. Collected in 1985.
Beta-23911	2820 ± 90	Charcoal from buried refuse midden, Structure 4. Collected in 1988.
UCLA-153	2960 ± 90	Charcoal from refuse midden at site surface. Collected by John Rowe in 1962.
UCR-2086	2970 ± 60	Charcoal from floor hearth, Structure 1. Collected in 1985.
UCR-2088	2990 ± 70	Charcoal from Structure 2, Room 3, Pit 1. Collected in 1985.
Beta-23912	3150 ± 80	Wooden post from wall of Structure 3. Collected in 1988.
UCLA-154	3260 ± 80	Charcoal from refuse midden at site surface. Collected by John Rowe in 1962.

Figure 18. Radiocarbon dates from Hacha.

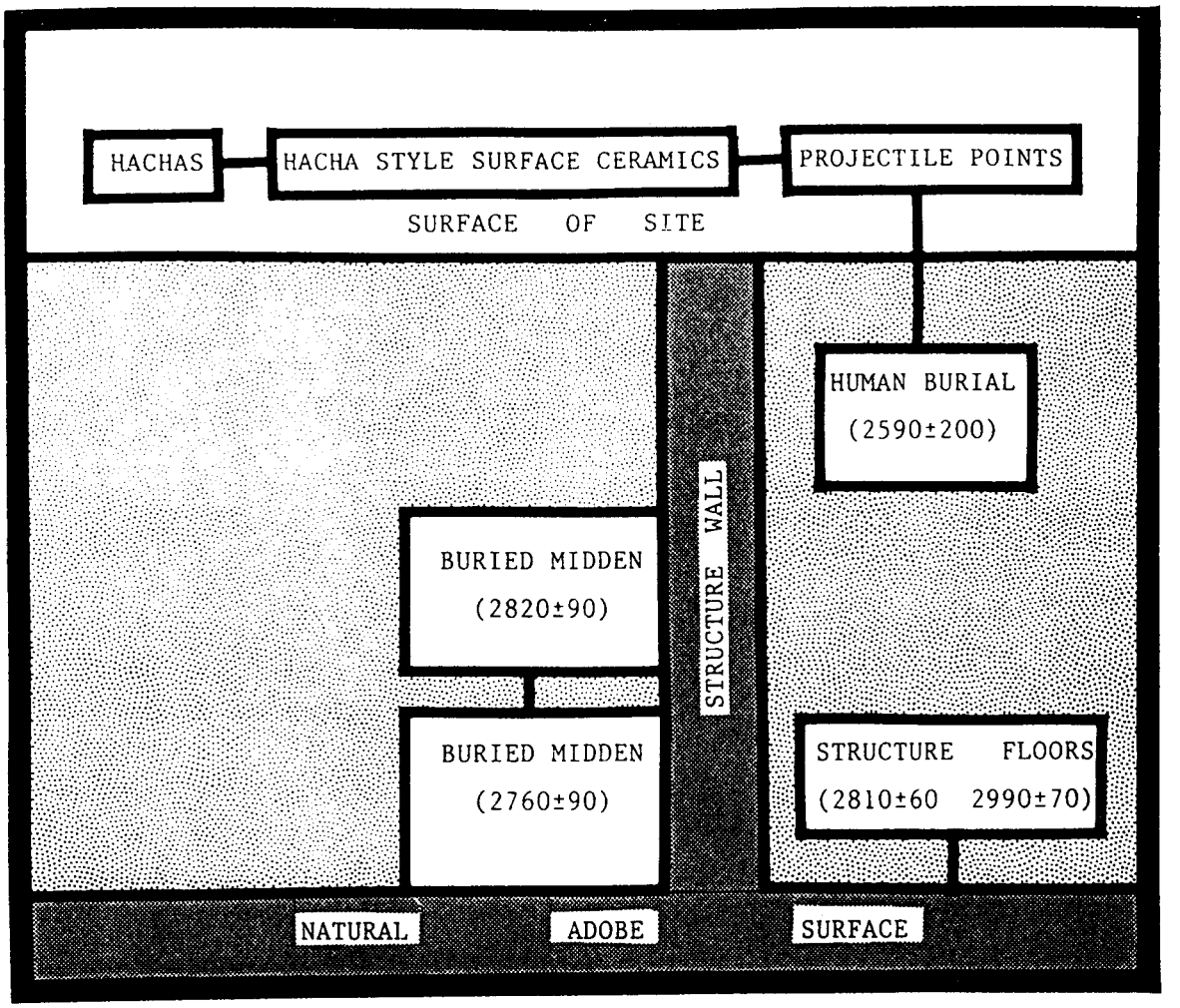

Figure 19. Site stratigraphy. This Figure represents a stylized summary of stratigraphic relationships at the Hacha site, based on the actual stratigraphy recorded in relationship to Structure 4. The surface component, Hacha 2, consisting of all hachas, projectile points, surface ceramics, and possibly human burials, is shown as separate and distinct from the buried component, Hacha 1, consisting of structures, buried middens, and the naturally consolidated mud surface.