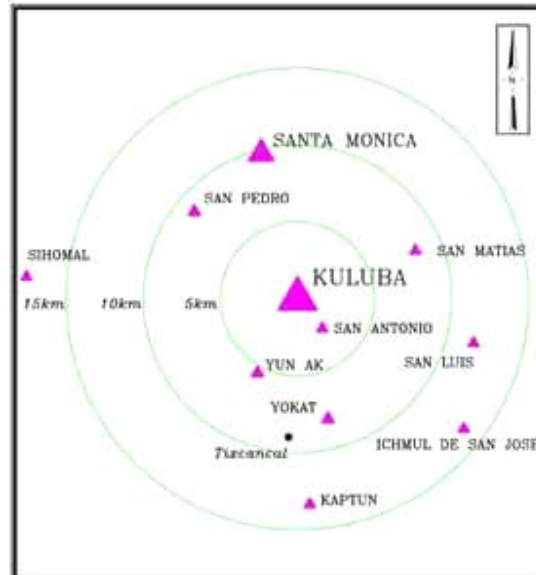


FAMSI © 2003: J. Gregory Smith, Ph.D.

Kulubá Archaeological Project 2001 Field Season



Research Year: 2001

Culture: Maya

Chronology: Late Pre-Classic and Early Classic

Location: Yucatán, México

Site: Kulubá

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Summary

Fieldwork during the summer of 2001 in the Kulubá region of Yucatán has provided valuable data about this Maya polity. The central research question involved how Kulubá was related to Chichén Itzá. Previous research has demonstrated that the site of Kulubá has examples of Chichén-style architecture as well as similarities in portable artifacts such as ceramics and obsidian. To approach the question from a different perspective, focus was shifted away from Kulubá itself and to lower-order centers within its political orbit. In all, the civic centers of 5 sites within 15 km of Kulubá were mapped. None of these sites have any stylistic affiliations with Chichén Itzá. The evidence suggests that Chichén's influence was limited to just the polity capital of Kulubá and not down its settlement hierarchy. It appears that political control on the part of Chichén Itzá at Kulubá was indirect and did not involve territorial consolidation.

Sumario

El trabajo de campo durante el verano del 2001 en la región Kulubá de Yucatán ha proporcionado información de gran valor sobre este sistema de gobierno maya. La pregunta central de la investigación tenía que ver con la manera en que Kulubá estuvo relacionada con Chichén Itzá. Investigaciones anteriores han demostrado que el sitio de Kulubá tiene ejemplos de arquitectura de estilo Chichén, así como similitudes en artefactos transportables como las cerámicas y la obsidiana. Para abordar estas cuestiones desde una perspectiva diferente, cambiamos el enfoque sobre la propia Kulubá para concentrarnos en otros sitios de menor rango dentro de su órbita política. En total, fueron relevados y mapeados los centros cívicos de 5 sitios en 15km a la redonda de Kulubá. Ninguno de todos estos sitios tiene afiliaciones estilísticas con Chichén Itzá. La evidencia sugiere que la influencia de Chichén Itzá estuvo limitada solamente a la capital política de Kulubá, y no a la jerarquía inferior de los

asentamientos. Aparentemente, el control político sobre Kulubá por parte de Chichén Itzá fue indirecto, y no implicó una consolidación territorial.

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Introduction

This report concerns the 2001 field season within the Kulubá region of Yucatán, México ([Figure 1.1](#)). The project was sponsored by the Foundation for the Advancement of Mesoamerican Studies, Inc. (FAMSI grant 00051) and carried out with permission from the Instituto Nacional de Antropología e Historia in both México City and Mérida. The Maya site of Kulubá (also spelled Culubá) is located in the northeastern portion of the Yucatán peninsula at latitude N21° 6' 53" and longitude W87° 50' 48" (UTM coordinates: 16QN2335076, E412084). Kulubá is 32 km east of the city of Tizimín within the Yucatecan municipio of the same name. The study adds to the small list of projects carried out in northeastern Yucatán over the last few years, among these the Ek Balam Project of Bill Ringle and George Bey, the Chikinchel Project of Susan Kepecs, and the Yalahau Project of Scott Fedick and Jennifer Mathews.





Plate 1.1: The Puuc building (11K2a) at Kulubá after the 2000 restorations (El edificio Puuc (11K2a) de Kulubá, después de las restauraciones del año 2000).

**Kulubá
Archaeological
Project**

Photographer:
J. Gregory Smith
Roll 4, Exposure 11

**Ruinas de Kulubá
Municipio de Tizimín
Yucatán, México**

Unlike its large neighbors such as Ek Balam, San Fernando, and Naranjal, the site of Kulubá features a relative abundance of standing architecture ([Plate 1.1](#), shown above). Moreover, architectural studies of these masonry structures have shown that Kulubá has stylistic ties to both the Puuc area and to Chichén Itzá. Since the heart of the Puuc region is over 200km from Kulubá and Chichén is nearly 90km away, this architecture is of considerable interest. It has been the focus of researchers who have visited the site, especially the Chichén-style buildings. The Kulubá Archaeological Project was initiated to better understand the relationship between Kulubá and Chichén Itzá. Most discussions of this relationship have centered on elite-level architectural similarities between the two sites. The 2001 field season approached the problem in a different way by focusing on the lower-order centers in the Kulubá region ([Figure 1.2](#)). Mapping and surface collections at five small sites near Kulubá have revealed a minimal Chichén presence. No Chichén Itzá-style architecture was found at any of the sites we mapped, suggesting that elite ties between the Kulubá and Chichén polities were limited to their respective capitals. The Kulubá Archaeological Project has both increased our knowledge of some heretofore unknown and unmapped sites and has also used this data to examine the Late/Terminal Classic political scene in Yucatán from a different perspective than has been used at Kulubá.

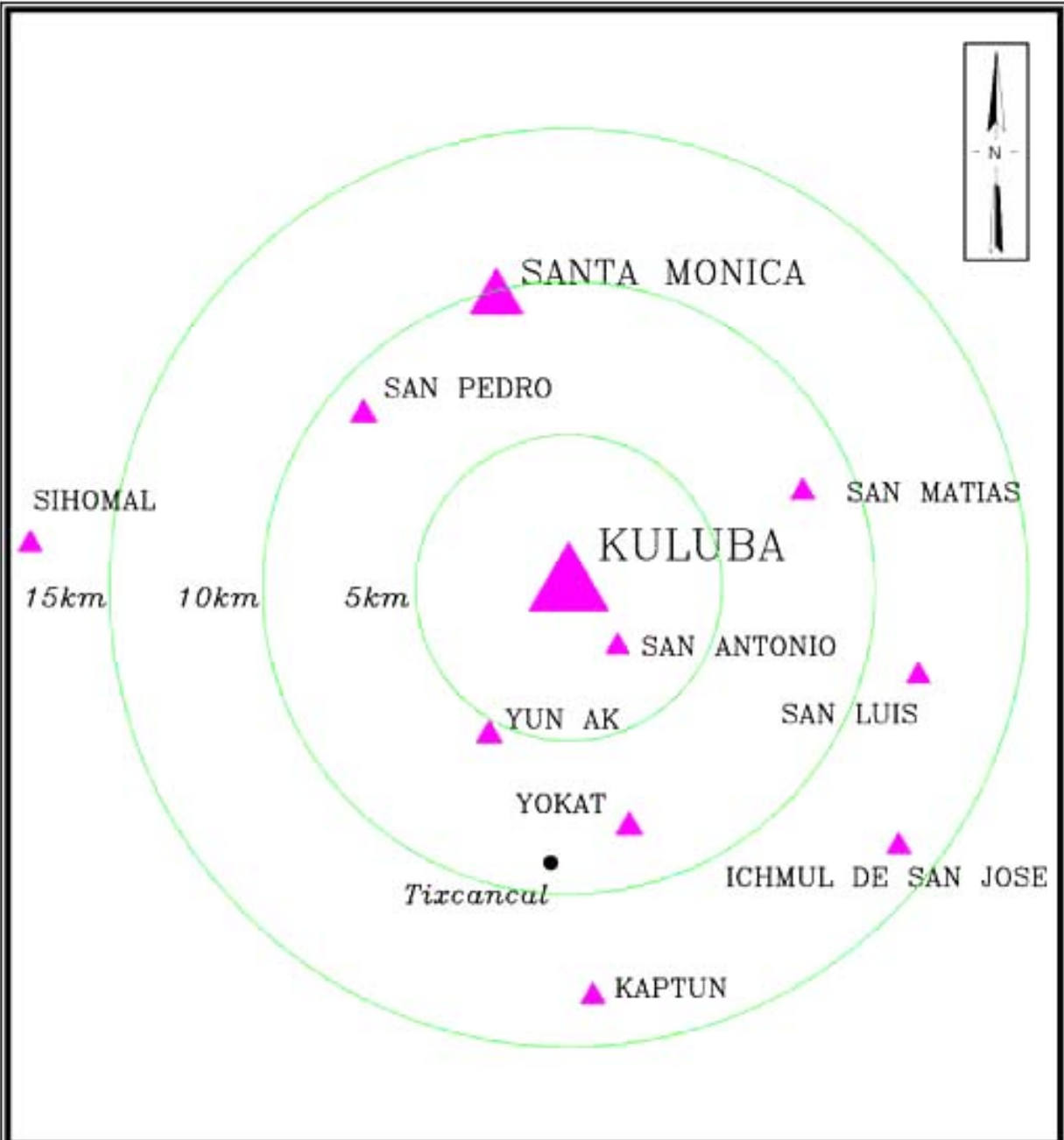


Figure 1.2: The Kulubá Region (La región de Kulubá).

<p>0 5 KILOMETERS</p>	<p>El Region de Kulubá Municipio de Tizimin Yucatán, México</p>	<p>Kulubá Archaeological Project</p>
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Previous Research

Despite being one of the largest and best-preserved sites in northeast Yucatán, Kulubá has until very recently seen a dearth of research. Most work has consisted of brief visits to the monumental architecture at the site. The first professional archaeologist to visit Kulubá and publish his findings was E. Wyllys Andrews IV (1941). Andrews IV visited the site for a day and sketch-mapped what is now referred to as Group C ([Figure 1.3](#)). He noted two buildings that had fallen columns and perceptively noted their stylistic similarity to the colonnaded buildings at Chichén Itzá. In 1970, three students of the Centro de Estudios Antropológicos de la *Universidad de Yucatán* (today the *Facultad de Ciencias Antropológicas*) in Mérida visited the site, took photos, and produced a brief report (Anonymous 1970).

In 1973, E. Wyllys Andrews V visited the site and took numerous photos of the standing architecture. Andrews V subsequently published many of these photos (1979) and emphasized the importance of the site for understanding basic cultural-historical questions in Yucatán. He noted several different styles of architecture at the site and re-affirmed Andrews IV's assertion that least two structures at Kulubá featured Chichén-style architecture (commonly called "Modified Florescent"). In summarizing his observations about Kulubá, Andrews V (1979:17) stated "The presence of at least three and probably four periods of reconstructable masonry architecture at Culubá is unusual, but the strong indications of Modified Florescent colonnaded buildings is even more surprising, for until now practically no Toltec architecture has been reported outside Chichen itself." For purposes of being better able to identify a colonnaded structure in Kulubá's hinterland, we visited the Modified Florescent buildings reported by Andrews V and took notes and photos ([Plate 1.2](#), [Plate 1.3](#)).

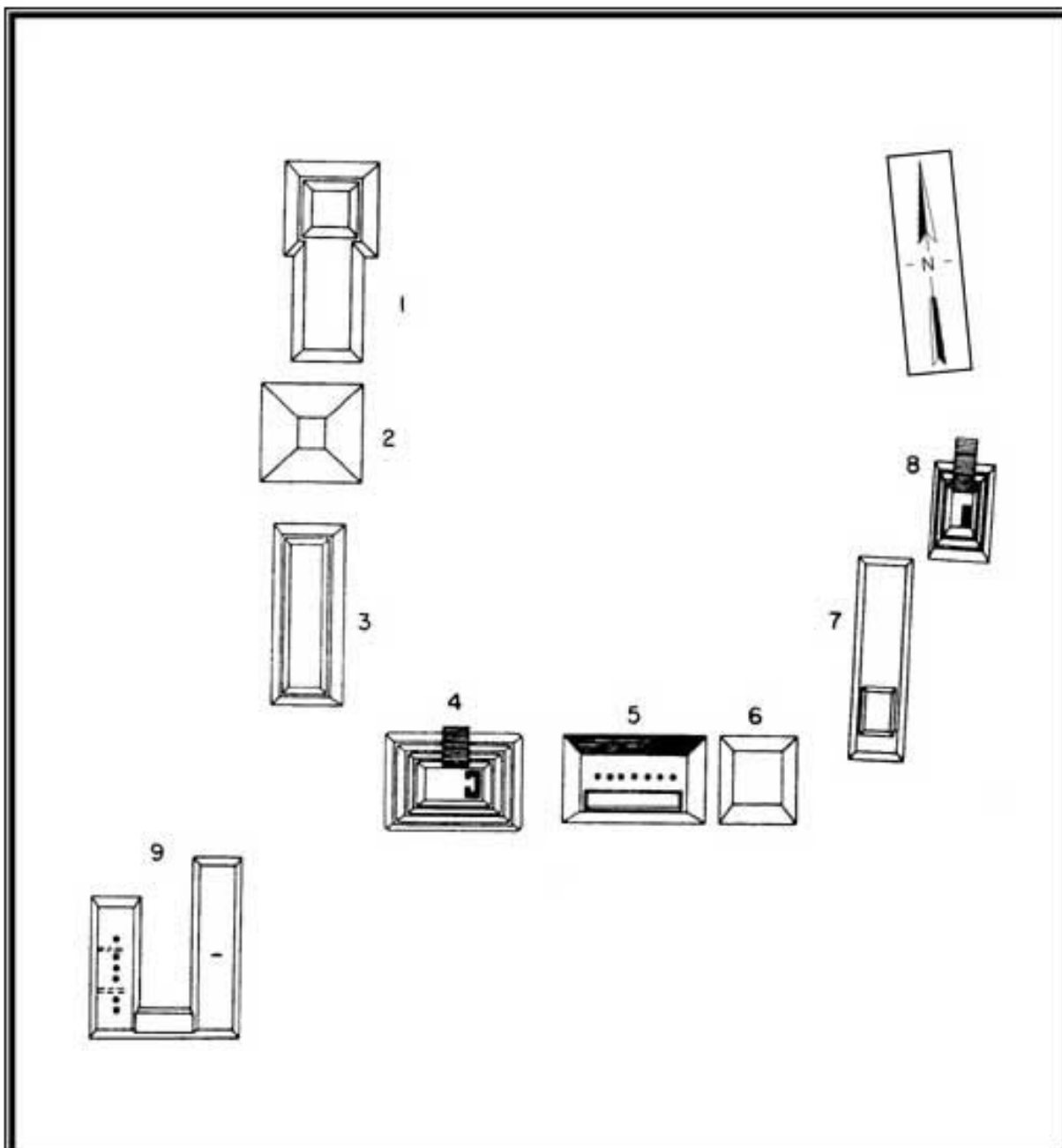


Figure 1.3: Andrews IV's Map of Kulubá Group C [from Andrews IV 1941:14]
 (Mapa de Andrews IV del Grupo C de Kulubá [tomado de Andrews IV 1941: 14]).

0 40
 METERS

Ruinas de Kulubá
 Municipio de Tizimín
 Yucatán, México

Kulubá
Archaeological
Project



**Plate 1.2: Column drum at Kulubá Group C, Structure 7 [Andrews IV's Structure 9]
(Cuerpo de columna en la Estructura 7 del Grupo C de Kulubá [Estructura 9 de Andrews IV]).**

Photographer:
J. Gregory Smith
Roll 5, Exposure 18

**Ruinas de Kulubá
Municipio de Tizimin
Yucatán, México**

**Kulubá
Archaeological
Project**



Plate 1.3: Column fallen en bloc at Kulubá Group C, Structure 11
[Andrews IV's Structure 5] (Columna de la Estructura 11 del Grupo C de Kulubá
caída en bloque [Estructura 5 de Andrews IV]).

**Kulubá
Archaeological
Project**

Photographer:
J. Gregory Smith
Roll 5, Exposure 12

**Ruinas de Kulubá
Municipio de Tizimín
Yucatán, México**

Kulubá was registered as site 16Qe(4):1 in the groundbreaking *Atlas arqueológico del estado de Yucatán* of Garza T. and Kurjack (1980). They assigned Kulubá a Rank III site and their published location is only 500m northwest of the GPS point taken in 2001. In 1980, Ricardo Velázquez Valadez of INAH carried out some basic restoration work at the site, including solidifying some collapsing vaulted rooms. G. Andrews (1995) and Gendrop (1983) made brief mention of Kulubá in their comparative analyses of northern lowland architectural styles. They noted that Kulubá is a far-flung example of the Mosaic Pure Florescent architecture and Modified Florescent architecture.

Alfredo Barrera Rubio (Barrera Rubio et al. 2001) of CRY-INAH has recently initiated a much-needed project at Kulubá and his research has greatly increased our knowledge of the site. Among the primary goals of the project were to study the site's natural environment, map the main civic architectural groups and some adjoining residential settlement, conduct a regional reconnaissance, and initiate a program of architectural restoration. The three main clusters of civic architecture have now been mapped. Group A ([Figure 1.4](#)) features a Puuc building with distinct U-shaped blocks that was photographed by Andrews V (1979). The Mosaic Pure Florescent building ([Plate 1.1](#)), complete with Chac Masks and several geometric elements, is found in Group B ([Figure 1.5](#)). Barrera Rubio's mapping crews also re-mapped Group C, the civic complex where two colonnaded structures are found ([Figure 1.6](#)). Whereas Andrews IV had Group C U-shaped with the northern side open, Barrera Rubio's map has the north side filled in with civic structures. The evidence acquired during Barrera Rubio's test pitting and restoration work has only strengthened the argument that there was a connection between Kulubá and Chichén Itzá. His excavations have yielded significant quantities of Sotuta ceramics and green obsidian; both of which are intimately associated with the Itzá capital.

Despite major advancements in our knowledge of Kulubá the site, a more comprehensive understanding of the entire Kulubá *polity* was, until the 2001 field season, simply an impossibility. The only reconnaissance of lower-order sites in the Kulubá region was the Atlas Project (Kurjack and Garza T. 1980) and Barrera Rubio's Project (Barrera Rubio et al. 2001). However, both of these projects simply recorded the location of the sites they encountered and produced some preliminary sketch maps. While this work was invaluable for us in re-locating these sites, the lower rungs of Kulubá's settlement hierarchy were not the primary focus of these projects. With its explicit regional perspective, the project reported here makes a logical complement with Barrera Rubio's site-centered project and together they provide critical new data about Kulubá and its environs.

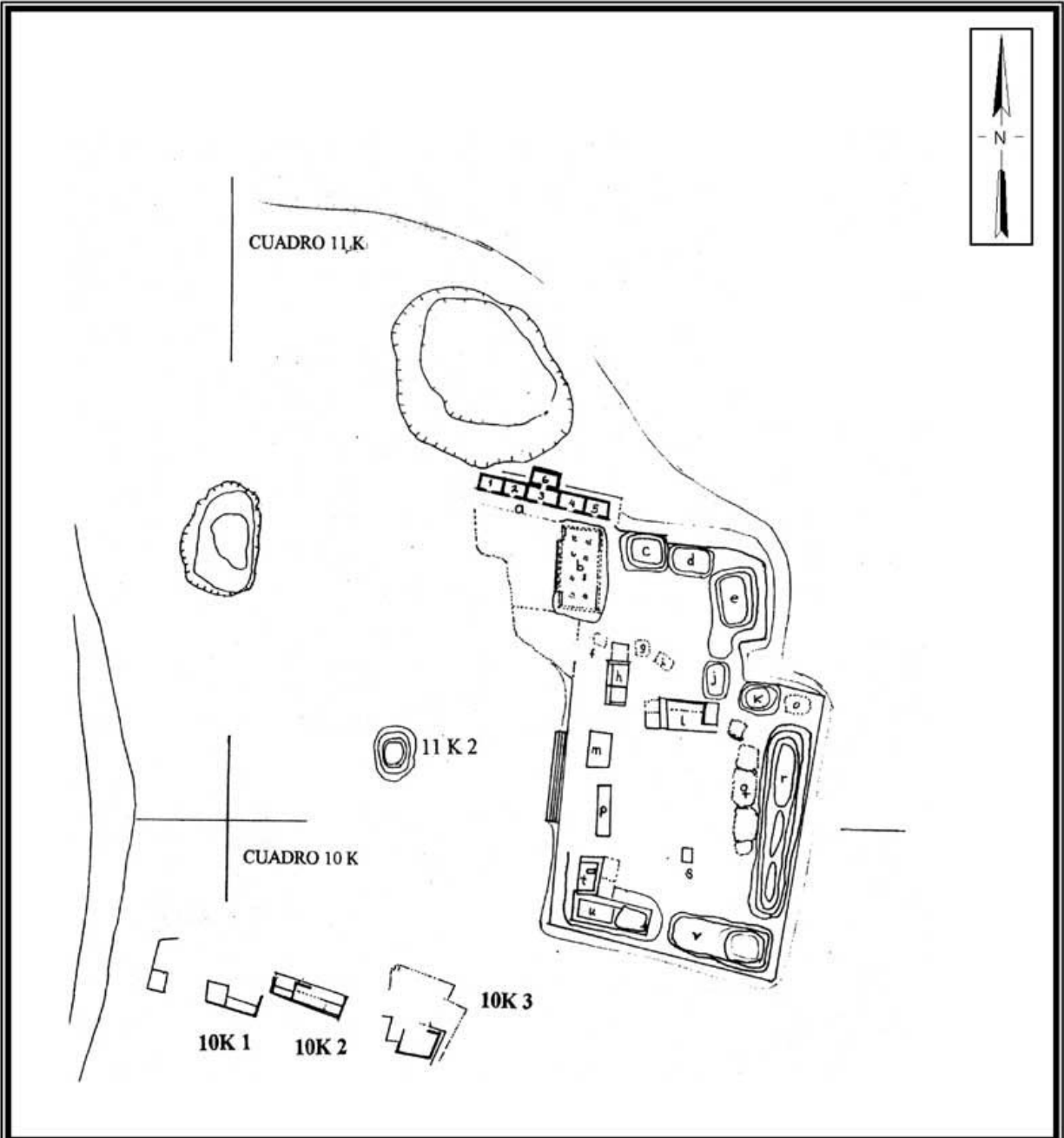


Figure 1.4: Map of Kulubá Group A [from Barrera Rubio et al. 2001:figure 3]
 (Mapa del Grupo A de Kulubá [tomado de Barrera Rubio et al. 2001: figura 3]).

<p>0 35 METERS</p>	<p>Ruinas de Kulubá Municipio de Tizimín Yucatán, México</p>	<p>Kulubá Archaeological Project</p>
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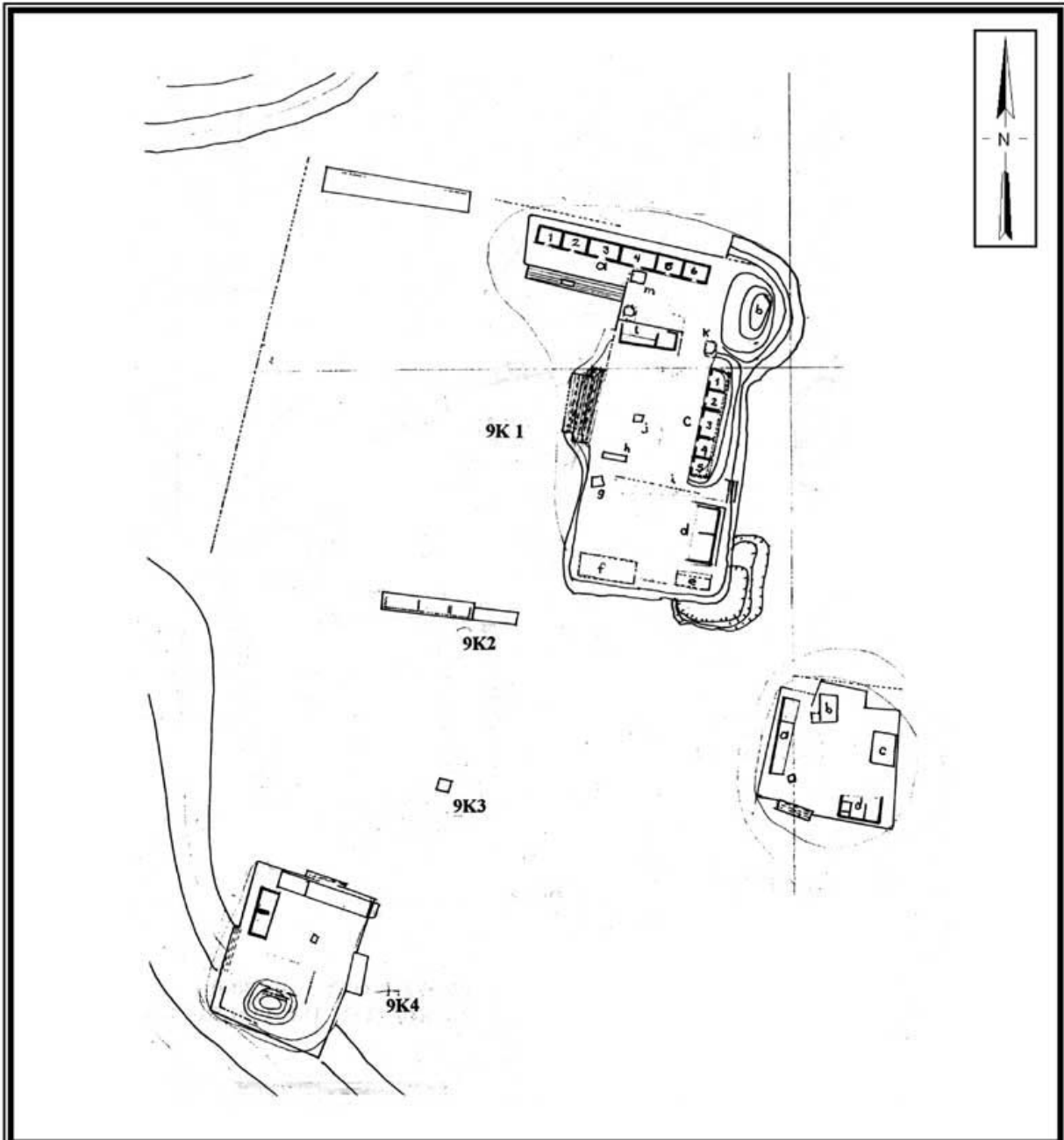


Figure 1.5: Map of Kulubá Group B [from Barrera Rubio et al. 2001:figure 4]
 (Mapa del Grupo B de Kulubá [tomado de Barrera Rubio et al. 2001: figura 4]).

<p>0 40 METERS</p>	<p>Ruinas de Kulubá Municipio de Tizimín Yucatán, México</p>	<p>Kulubá Archaeological Project</p>
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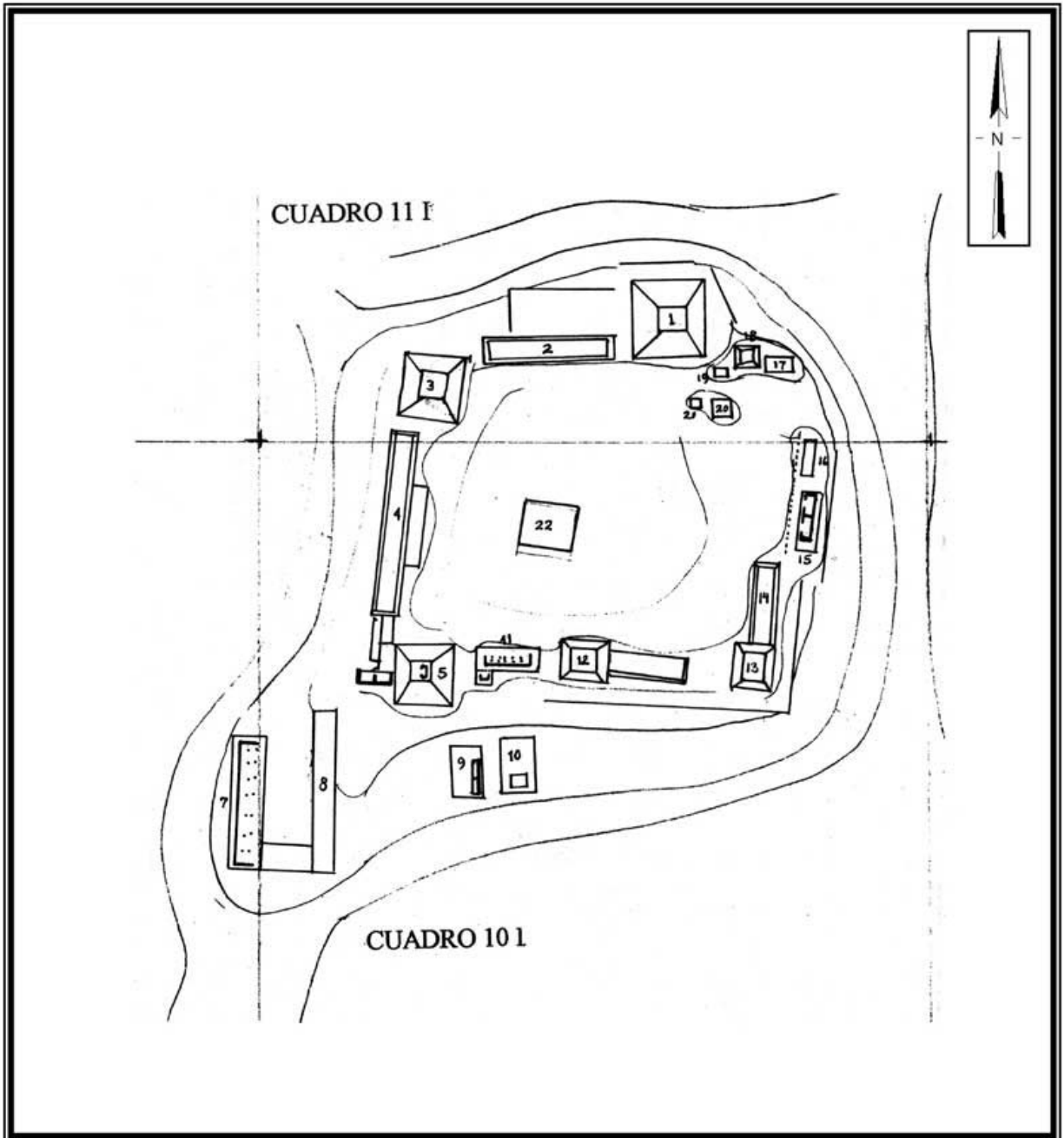
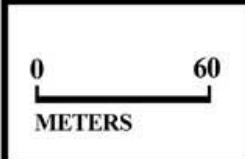


Figure 1.6: Map of Kulubá Group C [from Barrera Rubio et al. 2001:figure 5] (Mapa del Grupo C de Kulubá [tomado de Barrera Rubio et al. 2001: figura 5]).



Ruinas de Kulubá
 Municipio de Tizimín
 Yucatán, México

Kulubá
Archaeological
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Environment

The Kulubá region is found on the karst plains of northeastern Yucatán. The climate in this area of México can be characterized as subtropical monsoon. The annual precipitation is approximately 1000-1200 mm with most of this falling during the summer months. From a regional perspective, this area of Yucatán is devoid of any topographic features. Yet when one begins to look closely at a localized area, many different kinds of rises and depressions are present. The tallest rises are inevitably the mounds of ruined civic buildings. Natural rises in the bedrock are called *atillos* and these were often places where the ancient Maya chose to artificially rectify and level for purposes of creating a platform for their houses. Exposed bedrock, *laja*, can constitute half of the visible ground surface in some areas where the soil is especially thin. Most soils are the reddish *chacluum* or the richer *boxluum* varieties. Three different kinds of sinkholes are often distinguished in Yucatán. Cenotes are usually barrel-shaped and drop from the ground surface vertically to the water table. A dzadz features more sloping sides and has only seasonal water at the bottom of it. *Rejolladas* do not contain standing water but do have a relative abundance of deep, rich soil. Present day farmers often take advantage of this micro-environment and grow specialty crops such as bananas and papayas in *rejolladas*. Several researchers (Kepecs and Boucher 1996; Ringle and Bey 1995) have documented the presence of cacao at the bottom of *rejolladas*, no doubt relict plants from pre-Columbian plots.

There is relatively little forest left in the Kulubá region. The site is found in the ranch zone of Tizimín where extensive clearing of the indigenous vegetation has created a vast expanse of pasture only occasionally broken by vestiges of forest. Trees often form hedgerows between adjacent ranches. Among the trees found in the area include the *ramón*, *chakah*, *ha'bin*, and *balche* varieties. Some of the fauna we encountered in the Kulubá area included mammals such as armadillos (*Dasypus novemcinctus*), deer (*Mazama americana*), rabbit (*Sylvilagus sp.*), and squirrel (*Sciurus sp.*). We were also surprised to spot a lone spider monkey (*Ateles geoffroyi*) at the site of Yokat.

Project Research Questions and Goals

The central theoretical question of the Kulubá Archaeological Project involves delineating the nature of Chichén Itzá's political control in the area. Previous research has established that there was some sort of connection between Chichén Itzá and Kulubá. Andrews IV and Andrews V noted architectural similarities and Barrera Rubio has added ceramics and obsidian sources. While the linkage between Chichén and Kulubá has been recognized, the exact nature of the connection has not been rigorously addressed. How did Chichén politically control Kulubá, if it did at all? Did Chichén Itzá conquer the Kulubá polity and install its own administrators in the region? Or perhaps political leaders at Kulubá advantageously appropriated symbols associated with Chichén Itzá to help legitimize their authority. In this scenario, Chichén did not control

Kulubá at all and the similarities between the two sites were the result of elite emulation. Finally, how would different strategies of political control be reflected archaeologically?

Three models of political control help conceptualize the nature of Chichén Itzá's strategy: territorial, hegemonic, and no control (autonomous). When a polity capital imposes direct control on lower-order centers, secondary elites from the capital are often sent to the provincial center to rule. This strategy is called *territorial* control since the power of the political leaders in the capital is evenly distributed throughout the territory of the polity (Earle and D'Altroy 1989; Hassig 1992:41-44). In the *hegemonic* control strategy, subordinate centers are not controlled directly but instead indirectly (Hassig 1985; Santley and Alexander 1992). Political leaders in the polity capitals often impose demands for tribute from subordinate centers but local elite are left in place. The final model, which can be referred to as the *autonomous* model, occurs when a capital doesn't expend any effort in controlling a particular settlement. In this case, the settlement is left completely autonomous: the capital of its own polity.

One methodological advantage in trying to understand the nature of Chichén Itzá's presence within the Kulubá polity is that Chichén has a distinct archaeological record that is relatively easy to identify. In terms of architecture, not only are elite buildings distinct from other Maya polities but so are commoner dwellings. While most houses in Yucatán have rooms that joined laterally ("row houses"), Chichén dwellings typically have one entrance and a front-back floor plan ("file houses") (Lincoln 1991; Ruppert and Smith 1957). As mentioned above, portable artifacts such as ceramics and obsidian are also distinct at Chichén Itzá. Thus there are several different classes of archaeological data that would indicate some sort of Chichén influence. Given the models of political control outlined above, several bridging arguments were constructed in the original FAMSI proposal:

If Chichén Itzá employed a strategy of *territorial* control in the Kulubá region, then:

Kulubá and its lower-order centers should have elite architecture built in the Chichén style such as colonnaded buildings and another type of Modified Florescent architecture known as a gallery-patio. Gallery-patio structures were almost certainly elite residences (Cobos Palma, personal communication; Freidel 1981) so their presence at Kulubá and lower-order centers would suggest the physical presence of Itzá elites.

Civic architecture in the Kulubá region should be associated with portable artifacts in the Chichén style such as Sotuta ceramics, green obsidian, or "Toltec" bas-relief sculptures.

Commoner residences should have floor plans like those found at Chichén and be associated with portable artifacts in the Chichén style. This would suggest the presence of Chichén commoners and would indicate that Kulubá may have functioned as a colonial outpost of Chichén.

If Chichén Itzá employed a strategy of *hegemonic* control at Kulubá, then:

There should be little evidence of Chichén architecture. The civic centers in the Kulubá region should have some evidence of Chichén prestige goods but an overall predominance of non-Itzá artifacts styles.

The colonnaded buildings documented by Andrews IV and Andrews V and any others discovered at lower-order centers should be associated with artifacts common across Yucatán but not at Chichén Itzá. These artifacts include Cehpech ceramics, non-green obsidian, and bas-relief sculptures in the "Classic" Maya style. This would suggest that the architectural styles were emulated by local elite but were otherwise not involved in the prestige good system of Chichén.

Commoner houses would not be in the Chichén style nor be associated with Chichén style artifacts since the hegemonic format operates at only the elite level: while Kulubá elite would have ties to Chichén, the commoners would not.

If Chichén Itzá exerted no control at Kulubá, leaving this site *autonomous*, then:

There should be a complete lack or very low frequencies of Chichén architecture and Chichén artifacts such as Sotuta pottery and Pachuca obsidian throughout the region.

The colonnaded buildings at Kulubá (and any found at lower-order centers) should date to the Early Classic Period. There are examples of Early Classic colonnaded structures, most notably at the site of Aké in northwestern Yucatán (G. Andrews 1995; Roys and Shook 1966).

Commoner settlement at Kulubá itself and at lower-order centers would lack Chichén style artifacts and houses built in the Chichén style.

With these theoretical constructs and bridging arguments in mind, we entered the field with the overall goal of achieving a better understanding of the Kulubá polity as a whole by shifting the focus of archaeological fieldwork from the capital and into its hinterlands.

Project Methodology

The first step in mapping the lower-order sites in the region was the practical matter of deciding how close a site needed to be to Kulubá in order to be reasonably considered part of the polity. We decided that all sites within 15km of Kulubá were potential targets for our mapping efforts. The main reason we chose this distance was because Dzonot Aké, a large site mapped a number of years ago by Webster (1979), is almost exactly 15km away to the northwest and we reasoned that this site is too large to be considered part of the Kulubá polity.

As much background research as possible was done before heading out to the field. After consulting the Atlas maps, the corresponding files at CRY-INAH in Mérida were consulted. Two sites, San Pedro and Santa Monica, had been located by the Atlas surveys and forms filled out by David Vlcek in 1976 were copied. Since Vlcek was

essentially doing a road survey in this area of Yucatán, it is no coincidence that San Pedro and Santa Monica are near paved roads and easy to find. Barrera Rubio's Project had identified two other sites, Yun Ak and San Matias, and he kindly provided a (then) unpublished map showing the location of these recently recorded sites.

Once at a site, the first objective was taking a GPS point with a hand-held satellite geolocator which gave the UTM coordinates of the site. We used a Garmin GPS 12XL model which has an accuracy range of about 10 meters. Mapping during the 2001 Kulubá Archaeological Project was done using a Nikon NTD-2 manual total station. This instrument features optical angles that are read through a veneer while distance is calculated digitally by bouncing a laser off of a prism mounted on a stadia rod. To begin mapping, an arbitrary origin point was chosen (usually the highest point at the site) and the total station aligned north using a Brunton compass. All subsequent measurements were made relative to this first transit set-up so great care was made to make it as accurate as possible. Most of the sites were located in open ranches so mapping proceeded quite rapidly as visible architecture didn't need to be cleared. In other instances where vegetation covered all or part of a site, a clearing crew consisting of five workers would systematically clear the vegetation off of structures ahead of the mapping team. Once at a freshly cleared structure, pin flags were inserted into the ground to mark the outline of the structure and finer architectural details like wall lines, *metates*, and stairways. These flags were then shot in with the manual total station. The points taken were written down in a field book and this information was then hand-entered into a laptop computer and point plots were available in the program AutoCAD within minutes. These plots were then taken to the field the next day in order to generate accurate sketch-maps of every mapped structure. Point distributions were also entered into the program Surfer in order to generate topographic detail of the mapped sites. Because surface ceramics were so sparse (no doubt due to the extensive trampling action of cattle within the ranches), we conducted "grab" samples of sherds off of individual structures. In sum, mapping done with the manual total station is accurate to within centimeters and provides in some cases micro-detail of some of the architectural features of structures as well as a sense of the general topography of each site. The great advantage of having all of the maps computerized from the start is that it makes for easy editing and rapid analysis-there is no need for time consuming drafting once the computerized map has been generated. Dimensions of structures and the distances between them are all easily calculated with a few keystrokes.

We were unable to work at every site we were interested in. We ran out of time and could not work at Kaptun (previously unrecorded), San Luis (16Qe(4):6), and Sihomal (16Qd(6):12). We were refused permission to work at San Matias, a small site east of Kulubá that was first recorded by Barrera Rubio's Project. Local informants in the pueblo of San Luis Tzuk Tuk led us to a site called San Antonio but this "site" turned out to be only 2.5km southeast of Kulubá's site center. We decided that the residential settlement we saw at San Antonio was likely within the urban zone of Kulubá and opted not to work there. The sites that we did get to map include the Atlas sites of San Pedro and Santa Monica, Yun Ak, a site first identified by Barrera Rubio's Project, and two previously unrecorded sites, Yokat and Ichmul de San Jose. What follows is a

description of the mapping activities performed at these sites, presented in the order in which they were investigated.

San Pedro

UTM Coordinates: N2340742, E0405387

Distance to Kulubá: 8.79km at 129°

San Pedro was registered as *Atlas* site 16Qe(4):5 by David Vlcek on July 22, 1976. Vlcek noted "3 small mounds; one possibly 4m high were spotted from the road"; apparently he lacked the time to visit the site on foot. San Pedro is found on the north side of the road that intersects the Tizimín-Colonia Yucatán road and runs southeast to the town of Tixcancal, near the modern pueblo of San Pedro ([Figure 1.2](#)). Visibility in the ranch where the site is found was excellent, as most vegetation was knee-high at best and did not obscure archaeological remains. While a few *chich* mounds (piles of gravel-sized rocks) might have been overlooked, we are confident that the vast majority of all the settlement remains of San Pedro within the ranch we mapped were located. Within the 71,552 m² ranch we mapped a total of 47 structures. ([Figure 2.1](#))

A shallow *rejollada* is found northwest of the site center which may have provided water for the inhabitants of San Pedro. It has an upper diameter of about 65m and a lower diameter of 30m. Since the *rejollada* is only 3 or 4 meters in depth and certainly did not reach the water table, we looked for remnants of a well but found none. Even if the *rejollada* was not used as a source of water, it did provide rich soils which the inhabitants of San Pedro most assuredly utilized.

Another interesting natural feature associated with the site is a small cave found nearly 100m southeast of Structure 1. Its mouth is approximately 1.2m × 1.5m. Despite this small opening and a dead animal which gave the entrance a rather unsavory smell, we entered the cave with hopes of at least finding sherds larger than the crumbs we had been collecting on the ground surface. Although we didn't have a flashlight, we were able to determine that the cave sloped steeply down from its entrance and opened up into a small interior space no more than 20m² in size with a low ceiling maybe 1.5m in height. No water was encountered. No ceramics were found on the floor of the cave or in the many natural limestone niches along its walls. The walls and ceiling were inspected for any kind of painting but nothing was found. There were darker areas of the cave which we could not see well where cultural materials might be found; what we can say from our brief visit was that if the cave was utilized by the ancient inhabitants of San Pedro, they left very little evidence.

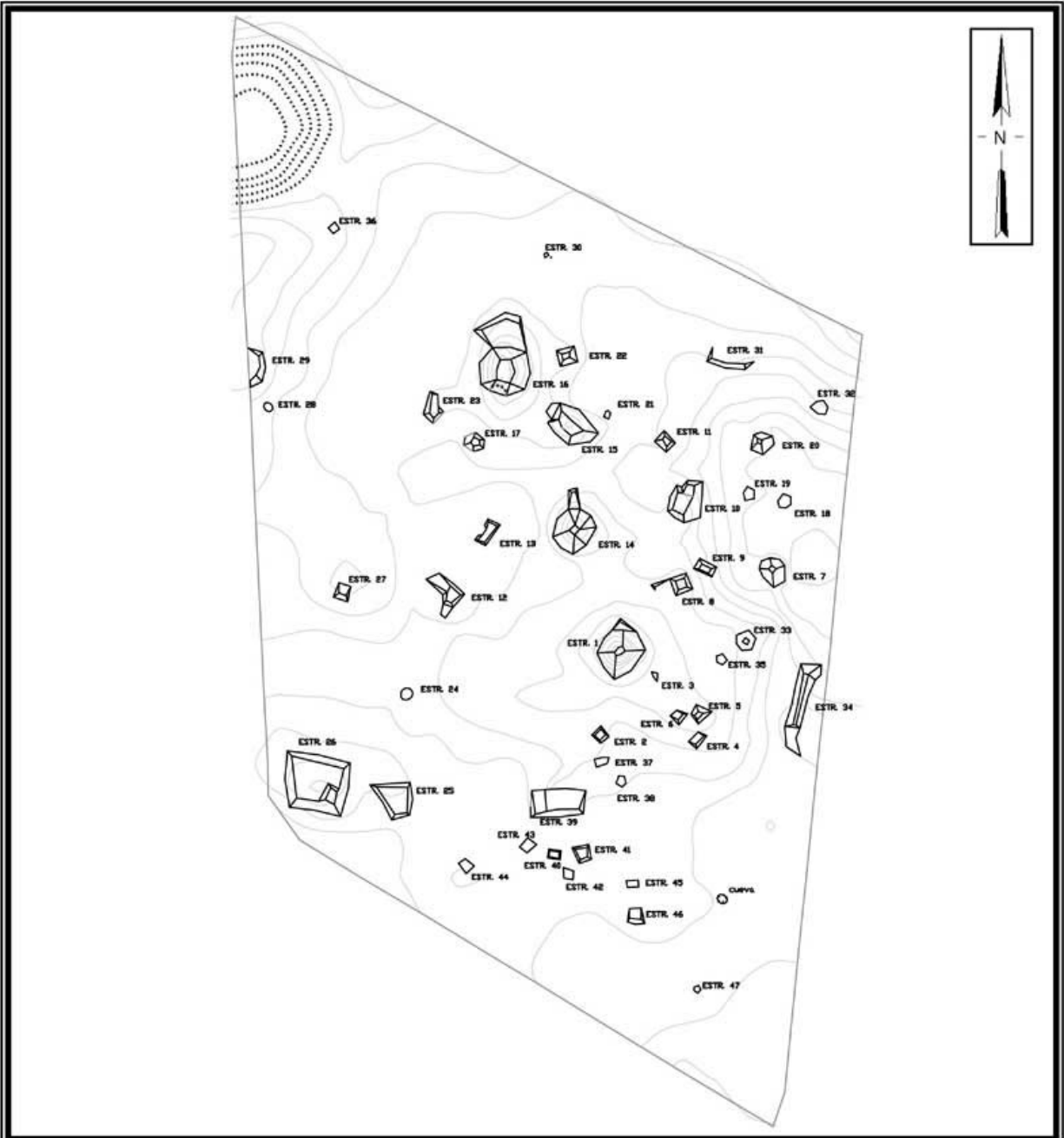


Figure 2.1: Map of San Pedro (Mapa de San Pedro).

<p>0 60 METERS</p>	<p>Ruinas de San Pedro Municipio de Tizimín Yucatán, México</p>	<p>Kulubá Archaeological Project</p>
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Structure Descriptions

Structure 1

This structure is a civic pyramid, the tallest and most voluminous at San Pedro, and undoubtedly one of the mounds spotted by Vlcek in 1976. Structure 1 is about 3m in height and it seems to be oriented NW-SE although it is difficult to say which of these directions it originally faced. The base of the mound is 16m NW-SE × 18m NE-SW and has a small platform extension on the north side. No cut stones were seen; the mound consists entirely of rubble. No evidence of intact superstructures were found on Structure 1's summit.

Lot Number: 00101

Area: 268m²

Volume: 416m³

Structure 2

This small square-shaped structure is found 20m south of Structure 1. It is a low rubble pile about 5m × 5m and has a leveled off upper surface. It seems to have the same orientation as Structure 1 although it is impossible to say if it is oriented NW-SE or NE-SW. There were some aligned larger stones on the structure's northeast face; they may possibly be the remnants of a retaining wall.

Area: 23m²

Volume: 7m³

Structure 3

Found 7m SE of Structure 1, this structure is nothing more than an irregularly shaped rubble pile. The stones here were medium-sized (not small chich stones) and it seems unlikely to have been residential in function. Its odd shape and nearness to Structure 1 suggests that it may be the remains of an aborted construction event but this is little more than conjecture.

Area: 5m²

Volume: 1m³

Structure 4

Structure 4 is on a small *nivelación* (a natural terrace) and forms the eastern side of a small three-piece patio group. It measures 6m x 4m and its eastern side features the most platform fill while the west side grades to ground level.

Area: 24m²
Volume: 2m³

Structure 5

This 5.7m (N-S) x 5.2m (E-W) platform forms the north side of the small patio group. Of the three structures forming the group, this one is the most substantial although still quite small for a residential platform. No remnants of superstructures were noted.

Area: 33m²
Volume: 11m³

Structure 6

Structure 6 is another *nivelación* and forms the west side of the patio group. The structure extends from ground level on the west side towards an artificial terrace on the east side and measures 5.7m N-S x 5.2m E-W. The patio bounded by Structure 6 on the west, Structure 5 on the north, and Structure 4 on the east, has an area of 47m².

Area: 20m²
Volume: 2m³

Structure 7

This appears to be an unusually high chich mound. The mound features an oval-shaped base, 9m NE-SW x 12m NW-SE, and rises a little over a meter in height. No remains of superstructures nor retaining walls were found.

Area: 83m²
Volume: 48m³

Structure 8

This structure is a square (8m × 8m) platform that has a small terrace that extends 7.5m off its northwest corner. No intact retaining walls were recorded and there are no superstructures on the platform's upper surface.

Area: 48m²
Volume: 12m³

Structure 9

Structure 9 is a small rectangular (7.7m E-W × 4.3m N-S) platform. While less than 4m from Structure 8, this platform seems to be oriented differently. Structure 8 is oriented NW-SE while Structure 9 is oriented to "Mesoamerican North", that is, slightly east of north.

Area: 34m²
Volume: 11m³

Structure 10

This structure is a relatively large residential platform which measures 15m N-S × 11m E-W and has an indented northwest corner area. The platform stands about 0.5m above the ground surface and a small line of stones was noted on its upper surface. The stones were shaped but not cut and the alignment was 4.3m long and oriented E-W. No other signs of superstructures were found.

Area: 173m²
Volume: 46m³

Structure 11

This small platform is located almost 14m northwest of Structure 10. It is 7.1m E-W × 5.4m N-S and is unremarkable except that a small amount of surface ceramics was found associated with it and collected.

Lot Number: 00201
Area: 35m²
Volume: 11m³

Structure 12

Structure 12 is an L-shaped platform oriented so its long axis runs NW-SE and its short axis runs NE-SW. The main platform is approximately 40cm high. The northwest part of the structure lacks a clear build-up of platform fill and instead grades gently down to ground level. A rectangular shaped rubble pile extends off the south edge of the main platform; it is 4.6m E-W × 3.0m E-W.

Area: 104m²
Volume: 25m³

Structure 13

Measuring 9.6m N-S and 4.6m E-W, this small structure is oriented so its longest axis lines up with "Mesoamerican North." On its west side, the platform rubble grades to ground level; this may have been the original access route. No superstructures atop the platform were found.

Area: 43m²
Volume: 7m³

Structure 14

At 2.4m in height, Structure 14 is the second tallest civic mound at San Pedro. Like Structure 1, it is difficult to delineate which direction the pyramid originally faced. A small platform extends off the northern side, measuring 8.1m (N-S) × 3.8m (E-W). It could be that this pyramid faced north because Structures 15 and 16 form a plaza with Structure 14 on the south side. If these three structures were constructed as a plaza group then it seems likely that Structure 14 would have been built facing north, towards the plaza.

Area: 210m²
Volume: 262m³

Structure 15

This range structure partially bounds the main plaza at San Pedro on its east side. It is 21m long (NW-SE) and 12m wide (NE-SW) and stands 1.2m above the ground surface ([Figure 2.2](#)). A trapezoidal shaped low mound extends off the NW part of the basal platform. The back (NE) side of the structure features heavy platform rubble and possible corner stone in the NW corner area. Rubble was also particularly heavy with little chich on the SW side of the structure, the side that faced the plaza. Almost assuredly there was a stairway here at one time but no *in situ* risers or balustrades

could be confidently identified. The only preserved architecture found was a line of four shaped stones on the SW upper edge of the platform, they seemed too small to be stairway risers but could be. Another possibility is that they are the vestiges of an altar of some sort that are often found centered on the edge of the platform opposite the location of the main superstructure. Structure 15's main superstructure is now gone but most likely was located along the NE edge of the basal platform.

Lot Number: 00701

Area: 211m²

Volume: 152m³

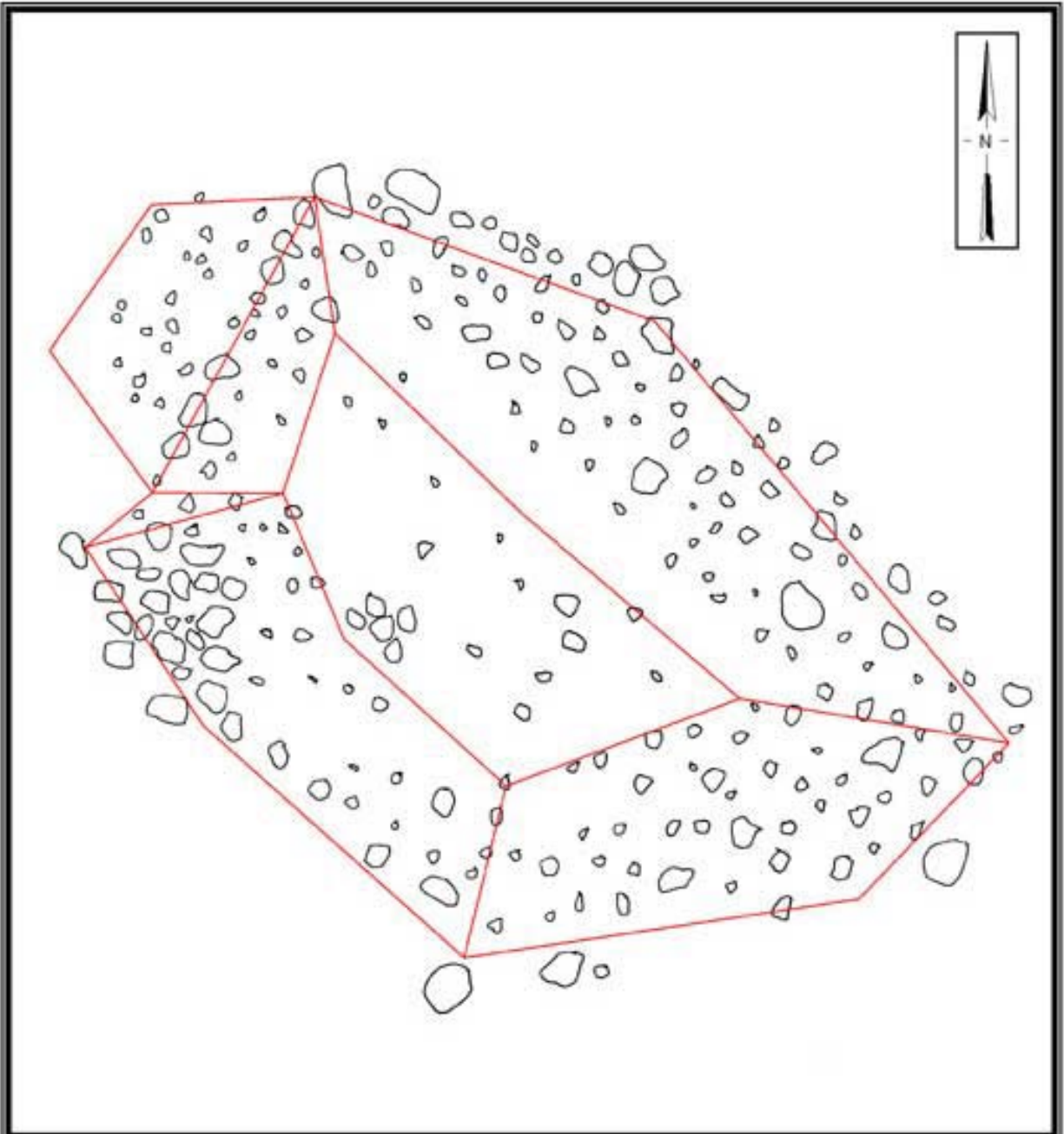


Plate 2.1: View north to San Pedro Structures 16 (l) and 15 (r) from the top of Structure 14 (Vista hacia el norte en dirección a las Estructuras 16 (l) y 15 (r) de San Pedro, desde la cima de la Estructura 14).

Photographer:
J. Gregory Smith
Roll 2, Exposure 8

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**Figure 2.2: Drawing of San Pedro Structure 15
(Dibujo de la Estructura 15 de San Pedro).**

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Structure 16

This structure forms the north side of the San Pedro plaza. It is a 2m high pyramid that has a relatively leveled-off upper surface. The civic structure measures 19m N-S and 20m E-W and features a low platform extension (12.6m N-S × 17.6m E-W) off its north side. The structure seems to be oriented N-S and most likely faced south onto the plaza although there are no identifiable superstructures on its summit to help support this contention. There is also a saqueo (a depression caused by human agents) found on the pyramid's south edge where platform fill has been removed. The plaza formed by Structure 16 on the north, Structure 15 on the east, and Structure 14 on the south, has an area of 1,584m².

Lot Number: 00301

Area: 502m²

Volume: 373m³

Structure 17

Measuring 6.4m² in diameter, this structure has a round shape. However, it was not built circular, as two stretches of retaining wall are not curved. Instead it appears that the structure had more than 4 sides, since the two retaining walls are neither parallel nor perpendicular to each other. The 40cm high mound may partially demarcate the west side of the San Pedro plaza, the most open of its four sides.

Lot Number: 00801

Area: 40m²

Volume: 6m³

Structure 18

Structure 18 is a 5.3m² diameter chich mound. It lacks a level upper surface; instead the low mound rises about 30cm to a single high point roughly in its center.

Area: 21m²

Volume: 4m³

Structure 19

Almost identical to its neighbor, Structure 18, Structure 19 is a low chich mound measuring approximately 4.8m² in diameter. Its highest point is about 25cm higher than the outer edge of the mound. It is difficult to imagine Structures 18 and 19 having a residential function.

Area: 17m^2
Volume: 3m^3

Structure 20

This is a conically-shaped mound nearly 1m in height. A 1.4m long stretch of non-megalithic retaining wall was found on the southwest side of the structure but no other architectural details were noted.

Area: 56m^2
Volume: 27m^3

Structure 21

Structure 21 is located behind the range structure, Structure 15, and is a small chich mound measuring 2m E-W \times 2.6m N-S. It is very low, raising only some 10cm off the ground surface.

Area: 5m^2
Volume: 1m^3

Structure 22

This small (7m E-W \times 6.4 N-S) square-shaped structure is located east of the pyramid (Structure 16). It consists entirely of small rubble and is some 60cm high. No *in situ* architectural details were found.

Area: 45m^2
Volume: 13m^3

Structure 23

Located about 18m SW of Structure 16, Structure 23 is an oddly-shaped rubble pile lacking any architectural detail. It seems that is a square-shaped platform 6.5m E-W that has a northward extension which is 8.1m long. A partial retaining wall was noted along the southeast edge of the structure; it consists of roughly shaped stones but are not particularly large in size. The structure is about 40cm high.

Area: 56m^2
Volume: 16m^3

Structure 24

This is yet another *chich* mound roughly 4.8m in diameter. It is quite low to the ground, rising only some 10cm.

Area: 22m²
Volume: 2m³

Structure 25

Structure 25 is a trapezoidally-shaped platform. Its north and south sides are roughly parallel with the former measuring 15.7m long while the latter is about 7.5m in length. The platform is 13.8m N-S and is about 50cm high. It does not have any remaining superstructures on its surface but it did feature some sherds that were eagerly collected.

Lot Number: 01001
Area: 160m²
Volume: 63m³

Structure 26

This is easily the largest residential platform we mapped at San Pedro. The basal platform rises 70cm off the ground surface and measures 24.7m E-W and 21.8m N-S. A few megaliths were noted on the platform's east edge although it was unclear if they were in situ or not. Likewise, there is a jumble of 3 or 4 megaliths in the northwest corner area of the platform. A saqueo was found centered on the south side which has taken a bite out of the basal platform. A superstructure is found situated in the southeast area of the platform. It is a distinct 20cm rise which is roughly 5.6m N-S and 4.6m E-W. It is unclear if this is the remains of a secondary platform which supported a house or if it is the collapsed remains of the house itself. Unfortunately, no *in situ* architecture was found associated with it. Surface sherds at Structure 26 were relatively abundant although they were not particularly impressive in size.

Lot Number: 00901
Area: 564m²
Volume: 283m³

Structure 27

This is a small nivelación that faces south. The small rubble extends from ground level on the north side and makes a level surface that is about 20cm off the ground on the south side. No architectural details were found on the structure's surface.

Area: 32m²
Volume: 2m³

Structure 28

This chich mound is found 8m SE of Structure 29. It is 7.5m in diameter and about 10cm high.

Area: 12m²
Volume: 1m³

Structure 29

Structure 29 is a fairly large nivelación that faces east. It is 15.3m N-S and 9.8m E-W. The eastern edge features the most rubble build up as here the structure is raised some 50cm off the ground surface. No architectural features such as retaining wall or superstructures were found associated with the structure.

Lot Number: 00601
Area: 78m²
Volume: 14m³

Structure 30

This is a small but interesting structure. It consists of a very low square-shaped accumulation of rubble about 1.4m x 1.4m. Some 1.2m east of this is what appears to be a broken stela. It lacks any intact surface features, as it was either originally coated with stucco or the limestone has eroded to the point where its original sculpture is unrecognizable. The slab seems to be a stela since it has a rounded top although it was either very short or is only the top piece of what was originally a larger monument. The piece found is 100cm wide, 50cm tall, and 25cm thick.

Area: 2m²
Volume: 1m³

Structure 31

This is a relatively large nivelación built on the south-facing slope of an *atillo*. The structure is 15.4m E-W and the greatest build-up of rubble is 50cm high on the south side. No intact retaining walls were found nor were any superstructures located atop the nivelación.

Area: 83m²
Volume: 17m³

Structure 32

This chich mound is approximately 7.2m in diameter. Unlike some *chich* mounds, this one lacks a flat upper surface and instead has a true mound shape which rises to a single point.

Area: 25m²
Volume: 3m³

Structure 33

Structure 33 appears to be a chich mound and is 7.9m in diameter. However, it also seems to have a square-shaped upper surface about 2.2m E-W and 2m N-S. This small upper area features slightly larger rocks than the chich below and might be the remains of a superstructure.

Area: 44m²
Volume: 7m³

Structure 34

This is an unusually long structure oriented so that its long axis is N-S. This axis is 36m long while the structure's average width is only about 7.5m. The long rubble structure is nearly a meter high on its north end; here the rubble extends slightly NE as it nears the north end. The south end of Structure 34 features a very low rubble extension which turns SE from the main N-S axis. The middle part of the structure is about .5m in height. No superstructures were identified on the rubble.

Lot Number: 00501
Area: 209m²
Volume: 36m³

Structure 35

This is a small *chich* mound just to the SW of the larger Structure 33. It is about 6.5m in diameter and features a relatively large stone on its east edge that could be the remnants of a retaining wall. This seems unlikely, though, since the structure is so small and is otherwise a typical mound of *chich*.

Area: 11m^2
Volume: 1m^3

Structure 36

Structure 36 is an isolated mound found southeast of the San Pedro *rejollada*. The mound is quite low, only 10-20cm above ground surface, and roughly 3m square. No superstructures were found within the small-sized rubble.

Area: 10m^2
Volume: 1m^3

Structure 37

This is a rectangular conglomeration of small rubble that is 7m E-W and 3m N-S. Although no traces of frame brace walls were located, the shape of Structure 37 seems to suggest a two-roomed house.

Area: 15m^2
Volume: 2m^3

Structure 38

Structure 38 is a small *chich* mound roughly 4m in diameter. It is quite low in height and lacks any discernable architectural details.

Area: 11m^2
Volume: 1m^3

Structure 39

This platform measures 21m E-W and 12m N-S and as such is one of the larger residential platforms at San Pedro. The structure is built on a gentle south-facing slope and as a result the south edge of the platform features the most rubble build-up. Here the rubble is about 50cm high and this grades to ground surface on the north edge. Traces of a megalithic retaining wall were seen on the west side of the structure as were a few megalithic stones in the northeast corner area. A *saqueo* is found on the south edge of the basal platform near the southeast corner. Atop the platform is an area of dense rubble and chich on the western side. This was some sort of superstructure and extends from the west edge some 4.8m eastward.

Lot Number: 00401

Area: 222m²

Volume: 29m³

Structure 40

Structure 40 is one of many small structures found south of Structure 39. This mound is rectangular in shape and is 5m E-W × 3.5m N-S.

Area: 17m²

Volume: 3m³

Structure 41

Found just a few meters east of Structure 40, this is a roughly square-shaped mound about 5.5m E-W and 6m N-S. It is between 20 and 30cm in height and lacks any superstructures.

Area: 37m²

Volume: 5m³

Structure 42

This is a low rubble outline 4.2m E-W and 3.3m N-S. It is about 3m SE of Structure 40 and 3m SW of Structure 41.

Area: 14m²

Volume: 1m³

Structure 43

Structure 43 is 5m west of Structure 40 and is rectangular in shape: 3.6m E-W × 4.8m N-S. It is quite low, no more than 20cm off the ground surface, and is oriented differently from the nearby large platform Structure 39 and nearby small structures.

Area: 20m²
Volume: 2m³

Structure 44

Oriented NE-SW, this low rectangular rubble mound is 5m NW-SE × 4.5m NE-SW. No architectural details were noted.

Area: 18m²
Volume: 2m³

Structure 45

This rectangular rubble mound is 4.5m E-W × 2.5m N-S. It is quite low and no superstructures are present.

Lot Number: 01101
Area: 12m²
Volume: 1m³

Structure 46

A *nivelación* built on a south-facing slope, this structure is about 30cm high on the south edge. This rubble grades to ground level on the north side. The platform is 7m E-W and 6m N-S and lacks any surface architecture.

Area: 35m²
Volume: 3m³

Structure 47

Structure 47 is a low *chich* mound nearly 3m in diameter. It is quite isolated, found 32m SE of Structure 46.

Lot Number: 01201

Area: 5m²

Volume: 1m³

Santa Monica

UTM Coordinates: N2344526, E0409724

Distance to Kulubá: 9.79km at 164°

The site of Santa Monica is located 30km east of Tizimín along the highway that runs from this town to Colonia Yucatán ([Figure 3.1](#)). In fact, the site is found just south of this highway and the road cut has damaged several platforms. Although some standing architecture was found on the two tallest structures, overall site preservation is generally poor. Many platforms have been sacked for building material for the road (especially Structure 3) and many have also caught the attention of pot hunters.

The site center of Santa Monica is found in an open ranch almost completely devoid of large vegetation. Santa Monica was first registered as *Atlas* site 16Qe(4):4 by David Vlcek in 1976. Accompanied by David Kelly, Vlcek sketch mapped the three largest structures and collected some ceramics, mainly from Structure 3. Kepecs (1999) also visited this site as part of her regional Chikinchel project.

Based on our mapping and visual examination of the vicinity where we lacked time to map, Santa Monica was a populous site. Drawing a radius from the site center to the most peripheral platform we mapped (Structure 20) and calculating the area of the ensuing circle leads to a minimal site area of about 400,000 m². A civic structure was spotted nearly 330m from the site center, indicating that there is at least one far-flung civic complex outside the core area. The residential settlement at Santa Monica is quite substantial with platforms continuing in the ranch we mapped as far as the eye could see from atop Structure 1, the tallest at the site. We simply lacked the time to continue mapping in these residential areas.

There are a few water sources within 250m of the site center although neither one is particularly impressive. About 215m SE of the site center is a shallow depression. Although the center of the depression is too shallow to hold permanent water, along its circumference are a few caves. One of these caves, on the southeast edge of the depression, reaches the water table. The other water source is a more substantial cave found in the parcel adjacent to the cleared ranch. Here there is a water source and definite evidence of Precolumbian use: we collected some well preserved sherds from within the cave (Lot Number: 02601).

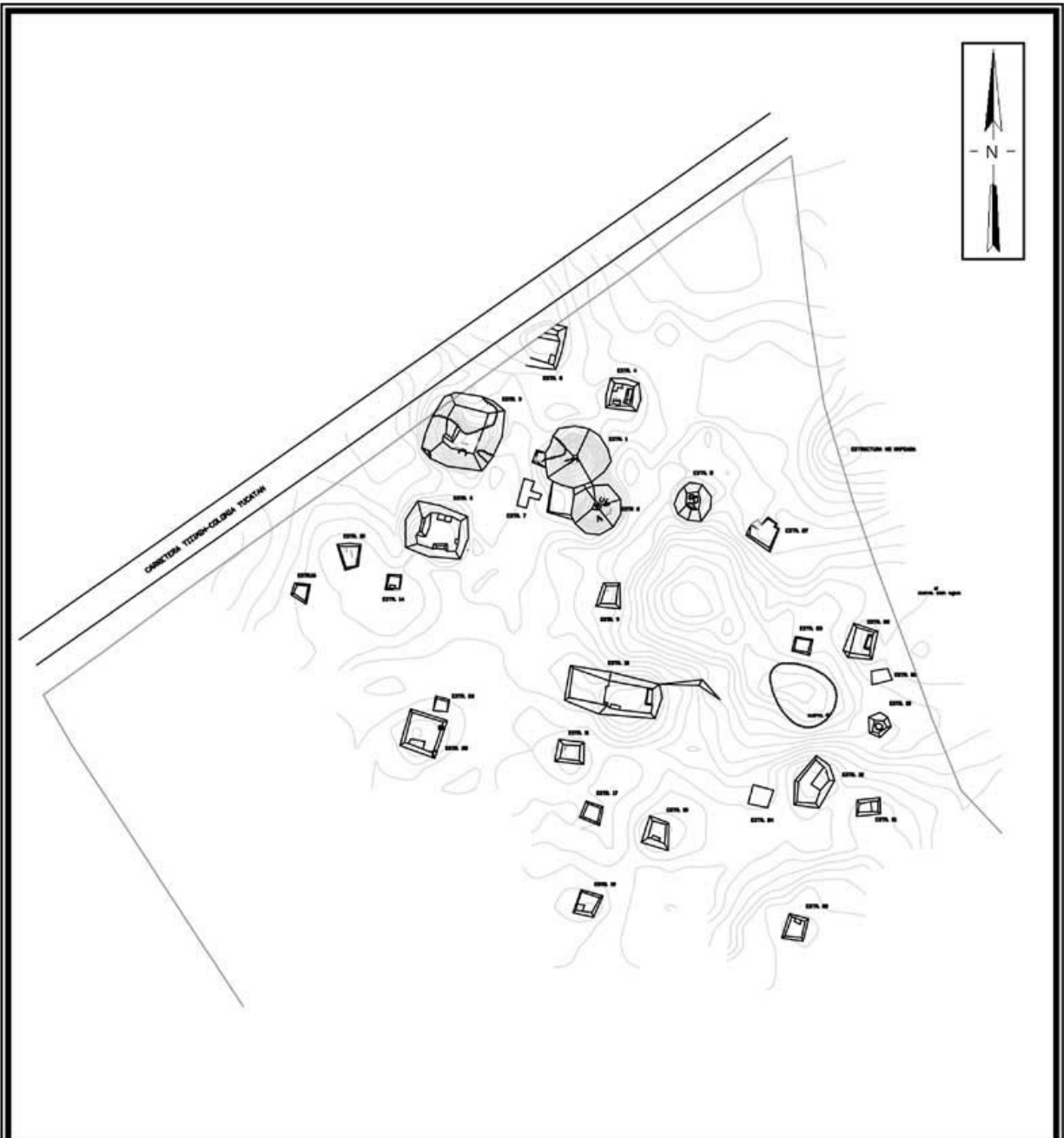


Figure 3.1: Map of Santa Monica (Mapa de Santa Mónica).

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Structure Descriptions

Structure 1

This is the main civic pyramid at Santa Monica, the larger half of a tandem set of civic buildings ([Plate 3.1](#), shown below). It is about 9m in height and has seen extensive stone-robbing on its northwest edge. This saqueo is over 16m wide at the base of the structure and nearly reaches the summit. An 8 × 8m platform extends off the west edge of the structure and features two short *in situ* walls running N-S on top of it. The summit of Structure 1 is heavily looted; two trenches were noted on the south edge of this upper area. Despite the stone robbing and looting, there is some standing architecture still visible on Structure 1 ([Plate 3.2](#), shown below). The stonework features rocks with rounded edges and corners; there is no finely cut Florescent blocks. No one side of Structure 1 has clear indications of a stairway, making the delineation of its original orientation difficult. Its relation to the other large civic structures suggest that it probably faced south onto the plaza formed by it and Structure 2. Another possibility is that it faced west, towards Structure 3.

Lot Number: 01301

Area: 1,314m²

Volume: 5,949m³



Plate 3.1: View east to Santa Monica Structures 1 (l) and 2 (r) from Structure 3 (Vista hacia el este en dirección a las Estructuras 1 (l) y 2 (r) de Santa Mónica, desde la Estructura 3).

Photographer:
J. Gregory Smith
Roll 3, Exposure 4

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**Plate 3.2: Standing architecture on the south side of Santa Monica Structure 1
(Arquitectura aún en pie en el lado sur de la Estructura 1 de Santa Mónica).**

Photographer:
J. Gregory Smith
Roll 2, Exposure 18

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Structure 2

Found SE and abutting Structure 1, at 7m high Structure 2 is a slightly smaller version of its partner. Like Structure 1, Structure 2 has been damaged by relatively recent potting activity. Near the top, two small *saqueos* are found: one on the north side and one on the south side. The level summit area has also been sacked, here a 3m diameter pit is found in the center of the area. Some standing architecture was noted on the east side. Like the examples at Structure 1, the stonework at Structure 2 features slightly rounded stones and no finely cut blocks. A low terrace platform extends nearly 16m from Structure 2's west side and connects up with the south side of Structure 1. This forms the core plaza area of Santa Monica and suggests that Structure 2 faced west.

Lot Number: 02201

Area: 822m²

Volume: 3,376m³

Structure 3

This very large and interesting platform is the third tallest and most voluminous structure at Santa Monica. Sadly, it has been extensively quarried for stone: a full third of the platform's volume is simply gone. This massive *saqueo*, centered on the platform's northwest corner, has been around since at least 1976 as Vlcek noted it during his *Atlas* visit. He suggested that the stones were carted away to be used as building material for the Tizimín-Colonia Yucatán highway. Thankfully, three corners of the platform remain and as a result it is relatively straightforward to reconstruct what Structure 3 looked like before the quarrying took place. The basal platform is nearly square with both the N-S and E-W axes measuring about 47m. In addition to the colossal *saqueo* already mentioned, three much smaller ones are found on the south end of the platform. One has taken a bite out of the SW corner, another is on the east edge of the platform just north of the SE corner. The third is on the south basal platform wall but near the upper surface. What could possibly be the remnants of a stairway riser was found on the upper east edge of the basal platform, this coupled with the placement of the superstructure and other monumental architecture all strongly suggest that Structure 3 faced east. Resting on the 5m high basal platform are at least two superstructures. One is on the south edge of the platform and was some sort of perishable structure that faced north. Two short stretches of north-facing walls were found here; each running E-W and both about 3.6m long. The two wall remnants are offset so that the north one is east of the south. The south wall is 1.2m north of the edge of the platform and is either a bench or the front wall. The north wall, 4m north of the south wall, is either the front wall (if the south wall is a bench) or a terrace step (if the south wall is the front wall). In any case, the rear wall of the superstructure is gone, probably slumped off the south edge of the platform. The second superstructure is a secondary platform which was oriented N-

S along the basal platform's west edge. Unfortunately, this 50cm high platform has been cut roughly in half courtesy of the big quarry. No architectural details were spotted on the secondary platform. The only silver lining to the quarrying of Structure 3 is that this activity exposed a complete 5m high profile of the platform and copious amounts of well preserved sherds. Several areas of the upper part of this profile were clear enough to see two floors about 30-40cm apart separated by platform fill. Interestingly, no obvious substructures were spotted in the profile. The exposed stratigraphy suggests that the basal platform was constructed during one building episode and the upper area of the structure was modified at least twice. The sherds found on the platform and falling out of the profile all conclusively demonstrate that Structure 3 dates to the Late Formative/Early Classic Period (see Section 7.1 for more discussion of chronology).

Lot Number: 01701

Area: 2,069m³ (reconstructed), 1,352m³ (actual)

Volume: 6,898m³ (reconstructed), 4,210m³ (actual)

Structure 4

This residential platform is found 19m NE of Structure 1. Its basal platform is nearly square (20m N-S x 22m E-W) and about 1.2m high. The basal platform consists entirely of medium-sized rubble, no megaliths, *in situ* or otherwise, were noted. Three superstructures are found atop the basal platform. The largest is found along the east side of the platform and therefore most likely faced west. It is a rectangular-shaped conglomeration of rubble lacking any intact walls. Its overall dimensions are 10m N-S x 4m E-W and is a meter offset from the east edge of the basal platform. The south end of the superstructure features a heavy concentration of building collapse but no finely cut stones or vault stones were noted. The superstructure is bisected by a long alignment of stone, which runs the entire 10m length, effectively dividing the superstructure into two parts. The west part is thinner at 1.7m wide and was probably a terrace fronting the actual building. The east half is 2.3m wide and was most likely where the actual rooms were located. Curiously, no interior dividing walls were spotted, suggesting the superstructure may have been one long building. Although no end walls were found, it could be a [-shaped structure (see Bey et al. [1997] for a discussion of this structure type). The second superstructure is found to the SE of the first and is a single room facing north. The room is 4.8m wide (E-W) and 2m deep (N-S) and features a 1.5m deep step fronting it. The front (N) edge of this step is lined with *in situ* cut stones. The third superstructure is an L-shaped rubble outline in the northwest corner area. It is 2.7m wide along both axes and oriented so that its outside corner forms the upper NW corner of the platform.

Lot Number: 01401

Area: 420m²

Volume: 372m³

Structure 5

Structure 5 is located on the north edge of a shallow *bajada* and 35m east of Structure 2. It is either an unusually high platform or a truncated pyramid. It is oval in shape, measuring 22m E-W and 24m N-S, and is some 3m in height. The structure is badly collapsed as no retaining walls are visible. About halfway up the west side of the structure 4 stones were found *in situ*, perhaps the remnants of a stairway. The upper surface of Structure 5 is badly potted. Three large looter pits pockmark the top of the platform, effectively destroying and obscuring any superstructures.

Lot Number: 02301

Area: 455m²

Volume: 819m³

Structure 6

This is an impressive platform which would be even more so were not dwarfed by nearby Structure 3, some 27m to the north. The basal platform of this structure consists entirely of unconsolidated rubble; no intact retaining walls or stairways were noted. The platform is roughly square, measuring 35m E-W x 32m N-S, and is a full 2m in height. Four superstructures are found on the basal platform, one on each edge of the upper platform surface. The first and most substantial of these is found on the west side. It is probably a collapsed masonry building of some sort, although no vault stones were seen in the rubble. It is a meter in height and the base of the superstructure is 16m N-S and 6m E-W. The upper surface of it is devoid of any architectural details and measures 9.5m N-S and 1.8m E-W. The second superstructure is found flush with the south edge of the basal platform. It appears to be a small secondary platform, the base of which is 9m E-W and 3.3m N-S. The rubble rises 50cm in height and features no other architectural details. The third superstructure is a small rectangular-shaped rubble outline along the east side of the platform. It is 3m N-S and 2.2m E-W and is quite low, only perhaps 20cm in height. The fourth and final superstructure is the foundation of what was a two-roomed frame brace house with perishable walls and roof. It is found along the north side of the basal platform and is 3.8m deep. The west room is slightly larger than the east, measuring 5m across whereas the east room is 4m in width. No doorjambs or benches were found associated with the foundation.

Lot Number: 01801

Area: 1,236m²

Volume: 1,875m³

Structure 7

Structure 7 seems to be a staircase that provided access to the small plaza found between Structures 1 and 2 at Santa Monica. The rise of this stairway is quite gentle:

while 14m in total length, there is only an elevation gain about a meter from west to east. The stairway begins on the west side and is 18.1m wide. This width continues 6.5m eastward when it narrows down to 4.1m wide and continues another 7.5m. Curiously, the stairway stops 5.8m short of the platform that is attached to Structures 1 and 2. Only a few of the risers on Structure 7 were clearly identifiable but in all cases the stones within the perimeter of the structure were oriented N-S, consonant with the stairway interpretation.

Area: 145m²
Volume: 28m³

Structure 8

This platform has been largely destroyed due to construction of the Tizimín-Colonia Yucatán highway. Only the east side remains intact, the west side is completely gone and the north side nearly so. A 20m stretch of the south side is still there although it is impossible to guess how long it might have originally been. Since only the SE and NE corners remain, it is not possible to project the platform's original shape. Thus, the area and volume calculations provided below are of what is currently visible and obviously only a portion of what was originally there. The basal platform is 1m in height and the intact east side of the structure is 29m long. Two superstructures are visible on this platform although again there may have been others located on the now-destroyed western side. The first is found on the north edge of the platform, 9m N-S and oriented so its long axis is E-W. It is either a secondary platform or collapsed masonry structure and the rubble which makes up the superstructure is a full meter in height. Only an 8.5m E-W × 3m N-S area of the superstructure's upper surface remains and no architectural details were noted on it. The second superstructure is a small rectangular rubble accumulation in the SE corner area. It is 5.7m N-S × 3.2m E-W and features three *in situ* stones that are lined up N-S along the east edge of the superstructure and face east. They most likely represent the upper edge of the basal platform.

Lot Number: 01601
Area: 501m²
Volume: 425m³

Structure 9

This structure is found 30m south of Structure 2 and is on the west edge of a shallow *bajada*. It is a square-shaped platform that is 70cm in height and measures 16.6m N-S × 13.6m E-W. The basal platform consists entirely of rubble: no intact retaining walls or other details such as stairways were detected. Only one small wall fragment was discovered atop the platform. It is found in the northwest area of the platform and is an alignment of unfaced stones some 2.1m in length, and oriented E-W.

Area: 220m²
Volume: 113m³

Structure 10

Structure 10 is an unusual long platform that features evidence of a significant enlargement project to an already existing platform. The original platform measures 36m E-W x 25m N-S and has an average height of about 1.5m. A long alignment of rubble extends off of the NE corner of the platform, a built up area on the south side of the bajada obviously designed to form a terrace east of Structure 10. The original platform had indented corners, at least on the west side since here their megalithic outline is visible. It was to this west edge of the platform that an extension was annexed to. This extension maintains the original platform's N-S dimension and extends 26m westward. It appears that this large enlargement was never completed. The extension is lower than the original platform, about 60cm in height, and consists of large rough platform rubble. It appears that the builders opted not to build up this extension to the height of the original platform and they didn't cap the rough platform fill with a layer of smaller *chich*. Two superstructures were found atop Structure 10; both on the original platform. The first is found on the east edge of the platform and is a raised up area that measures 10.2m N-S and 4.1m E-W. A trace of a megalithic step was noted on the west edge of the superstructure. Its dimensions suggest a secondary platform although no distinct architectural remains were found on its surface. The second superstructure probably represents the outline of a house and is found on the south edge of the platform. It has dimensions consistent with a two-roomed house, 6.3m E-W x 2.7m N-S, but no interior divider was found in the rubble.

Area: 1,566m²
Volume: 1,513m³

Structure 11

This square platform is found 22m south of Structure 10. It is a typical basal platform whose dimensions are 16.8m E-W x 14.4m N-S x 1m in height. A small portion of the basal platform's upper edge is preserved in the northwest corner area, it begins in the NW corner, runs south for 1.4m and consists of three roughly shaped stones. The only remnant of any superstructures is found 2.3m east of the three aforementioned three stones. Here there is a N-S oriented wall fragment some 3.2m in length and comprised of 5 roughly shaped stones.

Area: 262m²
Volume: 188m³

Structure 12

Structure 12 features an unusually shaped basal platform. While its west, north, and east sides are straight, its south edge features a pronounced bulge in the middle that effectively gives the platform a SW edge and SE edge. The platform's maximal dimensions are 34m N-S x 21m E-W. It stands about a meter in height although it was clearly built on an *atillo*, the bedrock of which is seen off the structure's west edge. The northeast area of the basal platform is where at least one superstructure is situated. There is a large area of dense rubble here, measuring some 7.5m E-W x 12.8m N-S. Within this rubble, on the north edge of the basal platform is the corner of what was a perishable house of indeterminate shape. There is a 2m long E-W frame brace wall and at its eastern end it turns south for another 2.3m. The frame brace wall is odd since it is on the edge of the rubble scatter and has a different orientation.

Lot Number: 01501

Area: 608m²

Volume: 489m³

Structure 13

This small structure has a roughly circular shape about 14.5m in diameter. It probably was not built as a circular structure but rather collapsed in such a way that has obscured the original shape. It sits about 60cm in height and the upper surface is devoid of superstructures, largely due to a large *saqueo* in the center of the platform.

Area: 169m²

Volume: 68m³

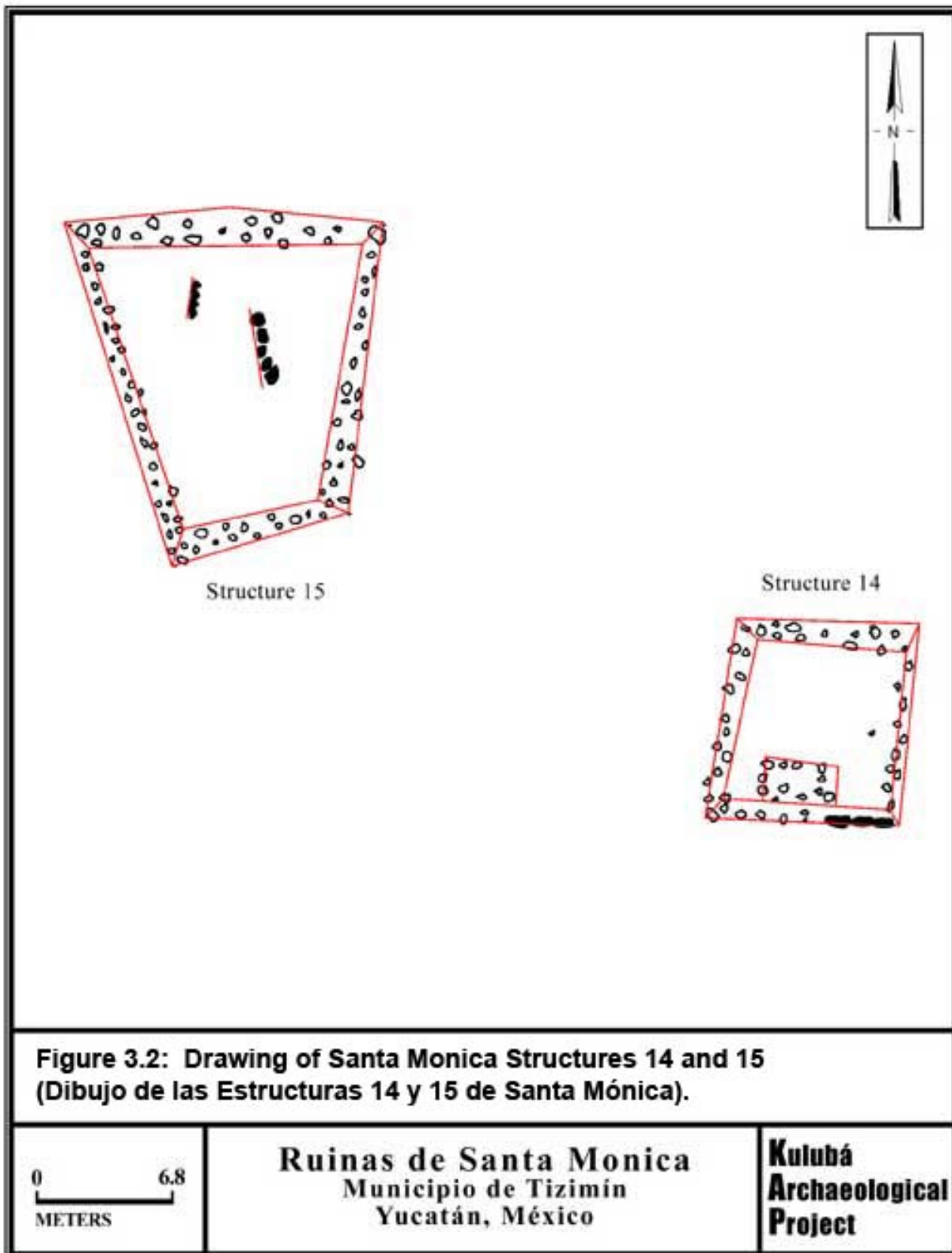
Structure 14

Structure 14 is located 18m SW of the much larger Structure 6 and 19m SE of Structure 15 ([Figure 3.2](#)). It is a low (30cm high) square platform that is 9.9m N-S and 9.1m E-W. A stretch of megalithic retaining wall was noted on the south face of the platform; it originates at the SE corner and three megaliths are laid end-to-end going westward before the wall is obscured by platform rubble. One superstructure is atop the basal platform. It is an accumulation of small rubble centered on the south edge of the platform whose dimensions suggest a small house: 2.1m N-S x 3.6m E-W. No *in situ* walls or doorjambs were found amongst the rubble.

Lot Number: 01901

Area: 92m²

Volume: 23m³



Structure 15

This is a trapezoidal platform that is 15.7m E-W on its north end, 9.2m E-W on its south end, and 16.1m N-S ([Figure 3.2](#)). The basal platform rises 50cm off the ground surface and is devoid of intact architecture save for the northeast corner where a megalithic corner stone stands in situ. There are two stone alignment atop the platform, both of which are oriented roughly N-S. The shorter of the two is in the northwest area of the platform and consists of 4 west-facing stones that make up a 2m long wall. The second line of stones is in the center of the platform and is merely an alignment of unshaped rubble some 3.9m in length.

Lot Number: 02001

Area: 199m²

Volume: 83m³

Structure 16

Much like Structure 15, Structure 16 is a low trapezoidal platform. The platform's west side is 8m N-S while its east end is 13.4m N-S. Its E-W dimension is about 10.7m and the platform is only about 30cm high. No superstructures were found on the platform's upper surface.

Lot Number: 02101

Area: 116m²

Volume: 27m³

Structure 17

This square platform measures 12.9m E-W × 11.9m N-S. Traces of megalithic retaining walls are on all four sides of the platform but the west side is the best preserved. Here, a large megalith marks the SW corner and some 9 megaliths are found laid end-to-end until the wall reaches the NW corner of the platform. Although the platform is in relatively good shape, any superstructures that were once on top of it are not. Only a few megaliths were noted in the southwest quadrant of the platform but these were not aligned in any discernable fashion.

Area: 152m²

Volume: 60m³

Structure 18

Structure 18 is small but relatively high (1m) residential platform measuring some 15.3m E-W and 18.0m N-S. Most of the platform's retaining walls are obscured by rubble but a nice megalithic corner stone was spotted on the NW corner and two megaliths were found on the south side of the platform near the SW corner. There were probably several superstructures on this basal platform but only one of them is distinct. Centered on the south edge of the platform is a rectangular accumulation of rubble that is 5.3m E-W x 2.3m N-S. No walls were found within the rubble but it is probably the remnant of a house foundation. An amorphous accumulation of rubble was noted along the platform's east side and a few larger stones are near the northwest corner area.

Area: 273m²
Volume: 197m³

Structure 19

This is a low square-shaped residential platform whose dimensions are 14.1m E-W x 15.1m N-S x 50cm high. Traces of megalithic wall were spotted at the northeast corner where a large corner stone sits *in situ* as well as the west half of the south side where three megaliths were noted. A possible megalithic corner stone is also found at the SE corner. Atop the rubble platform is a solitary superstructure. It is a 5m E-W x 4.3m N-S accumulation of rubble in the southwest corner area that lacks any intact architecture. Most likely this rubble is the destroyed remains of a house foundation that once supported a perishable dwelling.

Area: 217m²
Volume: 88m³

Structure 20

Structure 20 is found on a relatively high altillo which is about 3m higher than the surrounding ground surface. It is a square platform some 13.5m N-S and 15.8m N-S. The 50cm high platform has a prominent NW corner stone of megalithic proportions and though not *in situ*, some similarly sized stones were located in the SW corner area. A single superstructure is atop this basal platform, centered on the north edge. It is a 4.1m E-W x 2.6m N-S rubble scatter. No intact walls were noted but its shape and size are indicative of a house foundation. An amorphous rubble scatter was also found in front (south) of the superstructure.

Area: 214m²
Volume: 83m³

Structure 21

This rectangular platform is 15.3m E-W × 10.4m N-S and features no intact retaining walls except for the NE corner area where several large megaliths are found. Atop this platform, there is a large concentration of rubble on the east side that is 6.8m N-S × 4.4m E-W. This superstructure lacks any intact architecture.

Area: 161m²
Volume: 61m³

Structure 22

Measuring 18.3m E-W and 21m N-S, this large platform is on average 70cm above ground level and features a jumbled concentration of megaliths in its SW corner; none of which are in situ. The megalithic jumble is unusual since there isn't a cornerstone found where the west and south sides of the platform meet. Another concentration of heavy platform rubble is found along the east side of the platform but again none of these megaliths are in their original place. A superstructure in the form of a low secondary platform is found on the eastern edge of the basal platform. This feature is 3.4m E-W × 9.7m N-S and is curious because no architectural remains were found on top of it.

Area: 375m²
Volume: 204m³

Structure 23

Structure 23 is found about 8m N of a shallow *rejollada*. It is roughly square-shaped (12.1m E-W × 10.6m N-S) and features well-preserved megalithic retaining walls ([Figure 3.3](#)). Vestiges appear on the west and south sides while the east side is nearly completely intact and the north side is only missing one megalith. The intact megalithic retaining walls are unfortunately not associated with similarly preserved superstructures. Atop the 30cm high platform is only a scatter of rubble in the NW corner area and little else.

Area: 119m²
Volume: 29m³

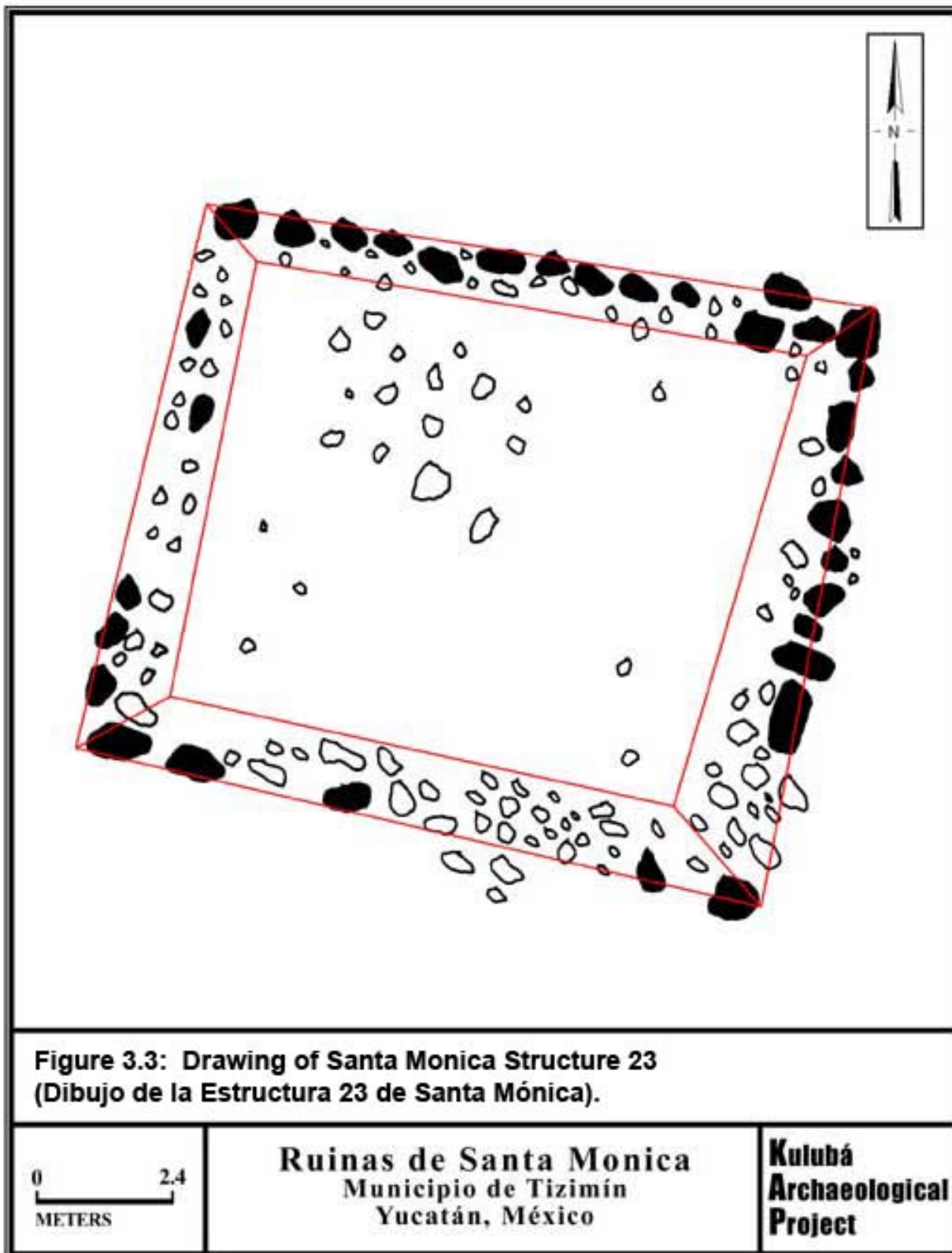


Figure 3.3: Drawing of Santa Monica Structure 23
(Dibujo de la Estructura 23 de Santa Mónica).

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Ruinas de Santa Monica
 Municipio de Tizimin
 Yucatán, México

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Structure 24

Found just to the west of Structure 12, Structure 24 is a very low square-shaped pile of rubble. It measures 12.3m N-S x 13.2m E-W and based on its size and shape seems to be an unfinished basal platform.

Area: 162m²
Volume: 32m³

Structure 25

Structure 25 is a large residential platform that supports a single superstructure. The basal platform is a full meter in height and is nearly square at 25.8m N-S x 24.4m E-W. The platform consists entirely of rubble; no *in situ* retaining walls were spotted. The basal platform has been potted in two places: a *saqueo* is found in the southeast corner and a hole 2.7m in diameter is found near the NE corner as well. The lone superstructure is found along the south edge of the platform and is a rubble scatter some 4.1m N-S x 9.7m E-W. While no wall lines were noted, most likely this was a two- or three-roomed house with perishable walls and roof.

Area: 632m²
Volume: 106m³

Structure 26

Only 4.1m north of Structure 25, Structure 26 is small platform built up on the north side. The south end of this 9.6m E-W x 9.3m N-S structure grades to ground level. No superstructures are on top of this platform.

Area: 83m²
Volume: 11m³

Structure 27

This oddly-shaped structure is found NE of the shallow *bajada* at Santa Monica. Its maximal dimensions are 18.4m E-W x 17.6m N-S although the platform features several indentations and extensions. The south side of the platform is relatively straight and the east side is as well save for a small indentation in the NE corner. The north edge is jagged and the platform rubble grades from over 50cm in the NE area to ground level in the NW area. The west side is also jagged and features a low L-shaped retaining wall. At the southern terminus of this wall, a line of rubble moves up the platform to the east and connects up with the only superstructure that was noted. A

simple wall some 1.7m long and oriented E-W is all that was found on the basal platform.

Lot Number: 02401

Area: 276m²

Volume: 119m³

Yun Ak

UTM Coordinates: N2330254, E0409496

Distance to Kulubá: 5.47km at 62°

The previously unregistered site of Yun Ak is located southwest of Kulubá and 4.6km NW of the modern pueblo of Tixcancal ([Figure 1.2](#)). The site is accessed by a dirt road that begins at the paved road that connects Tixcancal with the Tizimín-Colonia Yucatán highway. The dirt road runs west and forks a kilometer or so from the paved highway. The right fork veers northward and Yun Ak is adjacent to this bumpy dirt road. In 2001, the site of Yun Ak was privately owned by a man from Tixcancal.

Mapping at Yun Ak suggests it was a small site ([Figure 4.1](#)). We mapped a large *milpa* some 68,384m² in area south and west of the site center and found no structures within it. Either Yun Ak was a small site with very little residential settlement or the residential settlement is so dispersed that none of the platforms fell within our large *milpa*.

There is a large 50m diameter *cenote* associated with Yun Ak. It is found in thick *monte alto* and we lacked the time to tie the *cenote* into our base map of the site. However, a GPS reading at the *cenote* gives a reasonable accurate picture of its location relative to the ruins we mapped. The Yun Ak *cenote* is about 260m NW of Structure 1.

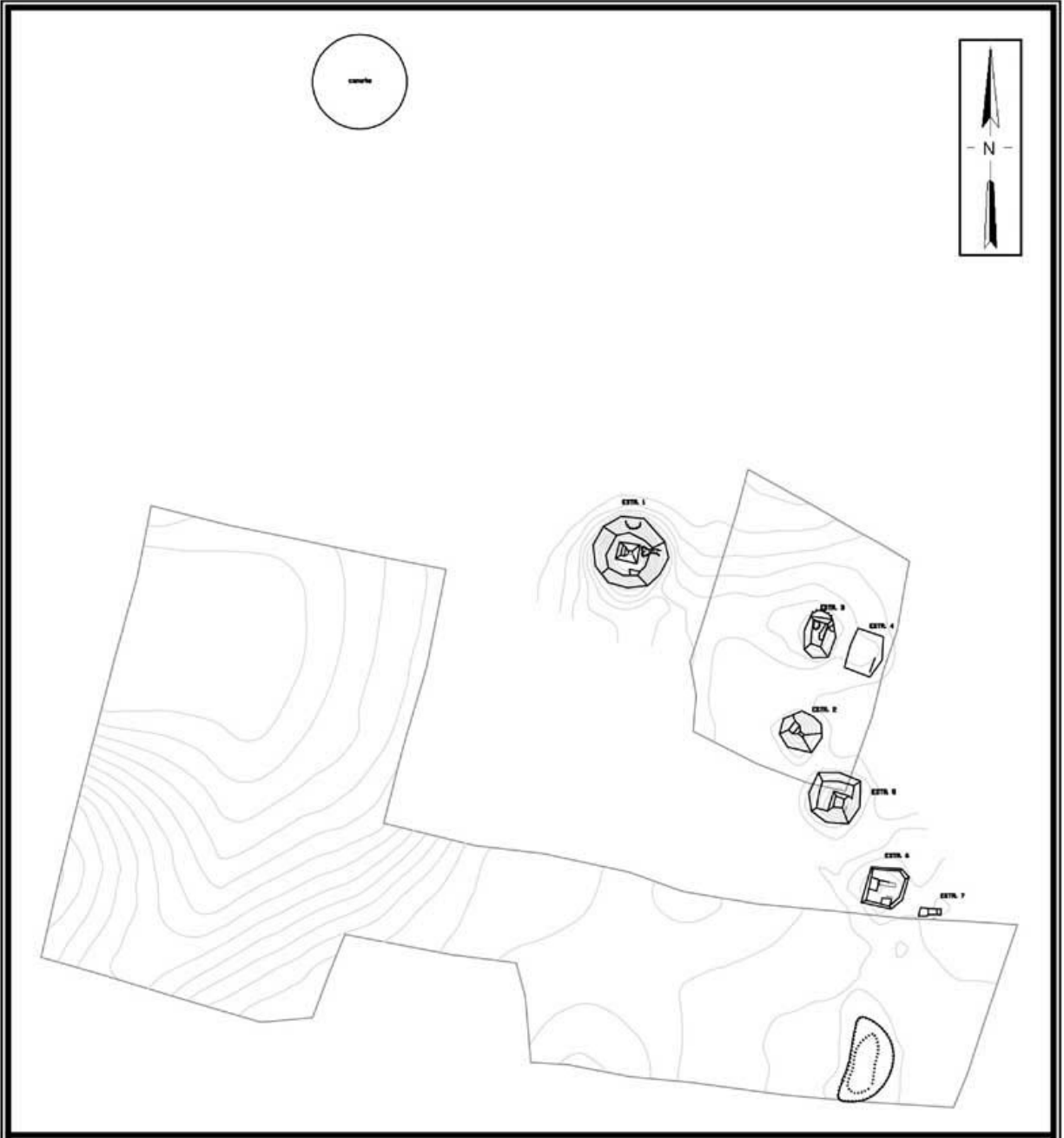


Figure 4.1: Map of Yun Ak (Mapa de Yun Ak).

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Ruinas de Yun Ak
Municipio de Tizimín
Yucatán, México

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Structure Descriptions

Structure 1

This is the main civic structure at Yun Ak. The basal platform of Structure 1 is quite substantial (41.5m E-W × 37.4m N-S) as it is some 4.5m in height. Its appearance is almost circular although it is impossible to tell if it was constructed as a circular platform or if this is just the effect of the basal platform collapsing through time. No intact retaining walls were noted which would help in determining the platform's shape. Two saqueos are found on the platform. One seems to be an area where stone-robbing took place, it is found on the north side of the platform. The other *saqueo* appears to be from looter activity as a meter-deep trench is cut into the basal platform in the NE area of the upper platform surface. A scan of the trench's profile revealed no exposed substructures. Two superstructures are found on the voluminous platform. The first is a rectangular rubble scatter on the south edge of the platform. It measures 2.8m N-S × 5.1m E-W although the NE corner has been disturbed by a large tree. While no walls were seen, its dimensions are suggestive of a two-roomed perishable structure. The second superstructure is a large secondary platform that is found in the center of the basal platform. It is 9m N-S × 11.6m E-W and some 2m in height. The west side of the secondary platform features a narrow terrace about halfway up that is 6m N-S × 1.9m E-W. Atop the secondary platform is a small area 1.7m N-S × 2.5m E-W. The south side of this summit area features an intact wall that consists of five roughly shaped stones that are faced on their northern sides. This was most likely an interior wall and since there is no doorway on this wall it suggests that this is a back wall and the room originally faced north. Some small pieces of stucco were found on the western side of the room.

Lot Number: 03001

Area: 1,122m²

Volume: 3,518m³

Structure 2

Structure 2 is found within a small (12,908 m²) milpa. This *milpa* was freshly burned when we arrived at Yun Ak so the visibility within it was excellent. The structure is a large mound some 3.3m in height but with little surface details. The basal platform consists entirely of rubble slump as no retaining walls were spotted. One interesting feature associated with the basal platform is what appears to be a broken stela some 4m east of the structure. The stela is in two pieces and appears to be lying on its side. It is 1.05m in length, 60cm wide, and has a maximum thickness of 20cm. Upon close inspection of the stela, no relief sculpture could be identified. The basal platform was probably square in its original form but the slump is now almost circular in shape, measuring 21m N-S × 21.9m E-W. The west side of the platform has a 5.7m N-S × 3m

E-W terrace on it and the upper platform surface is a very small area measuring 2.8m E-W x 1.5m N-S. No intact architecture was found on Structure 2.

Lot Number: 02901

Area: 351m²

Volume: 676m³

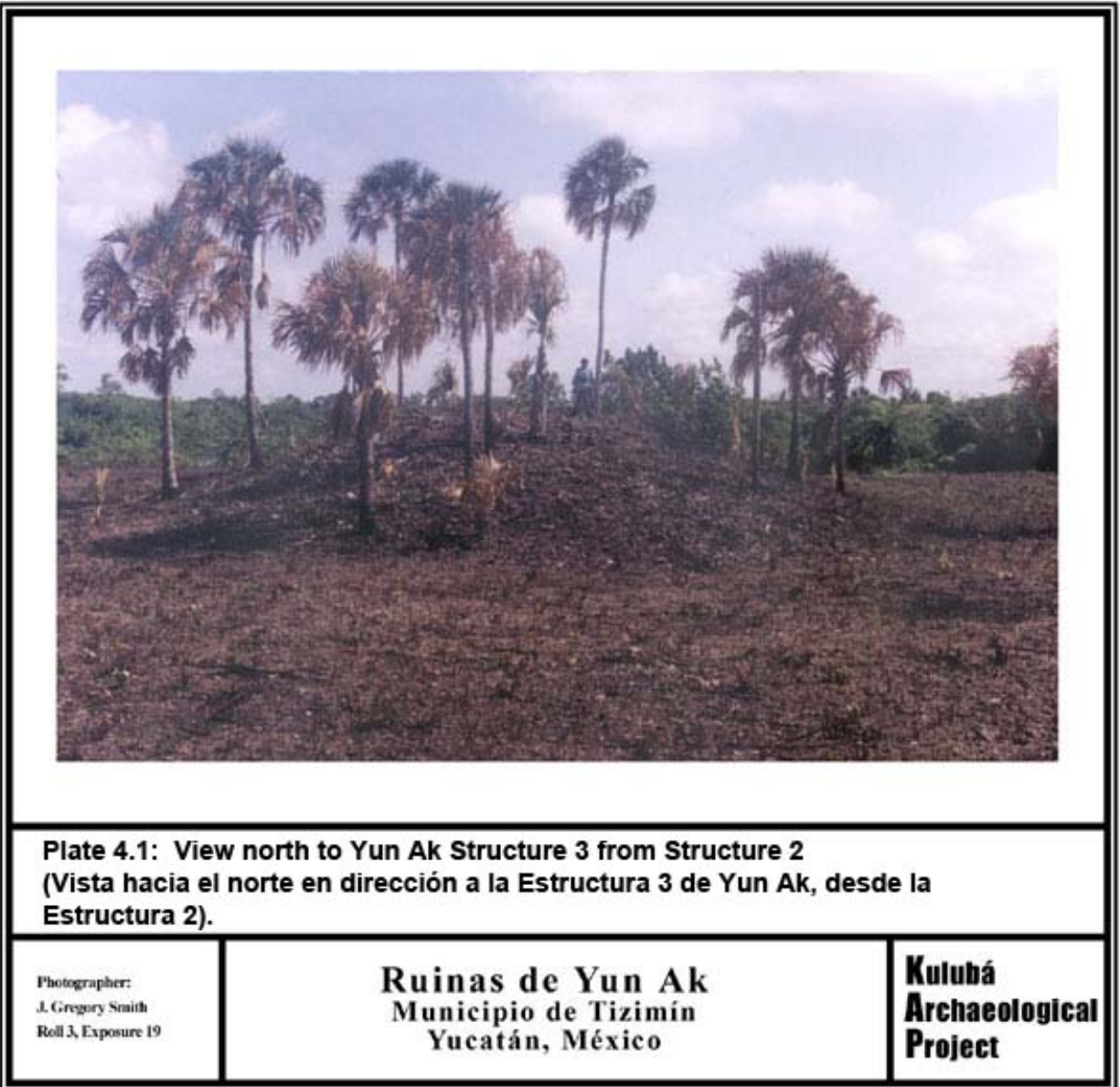
Structure 3

This platform is 19.8m N-S x 16.8m E-W and was built on an *altillo*, the north side of which is exposed. A possible corner stone is in the SE part of the platform and is the only hint of a retaining wall. The basal platform has been heavily looted. A *saqueo* has gouged into the NE corner from the ground level and a trench originating in the NE corner area (just north of the first) continues nearly 10m south into the basal platform. The trench is 2-4m wide and a meter deep. No stucco floors or substructures were noted upon examining the trench's profile. Another *saqueo* is found in the NW corner area; it is an oval-shaped hole some 3.5m in diameter and a meter deep. The only remnant of a superstructure can be found along the west wall of the upper platform surface. Centered on the west edge are three roughly shaped stones that are aligned N-S. These may have been the back wall of a house of some sort that probably faced east.

Lot Number: 02801

Area: 295m²

Volume: 303m³



Structure 4

Structure 4 is quite enigmatic. It is a large rectangular rubble mound measuring 22m N-S x 17.4m E-W that bulges slightly on its eastern side. The structure is aligned parallel with Structure 3 and in fact the area between the two structures is solid *chich* with some sherds and seems to indicate that a plaza floor was once laid down between the two. The rubble that makes up the structure is extremely low, no more than 30cm in height and gives the impression of being an unfinished platform. Yet the eastern side of the structure features a higher density of rubble than the western side. A possible line of roughly shaped stones was found originating in the SE corner area and continuing 8m north. At the terminus of this alignment is a stone oriented E-W and has the appearance

of a jamb. The possibility of there being a superstructure isn't consistent with the interpretation that it is an unfinished platform. Perhaps the builders originally had planned to build a large basal platform and then reconsidered and went ahead and built a house on the unfinished platform.

Lot Number: 02701

Area: 352m²

Volume: 106m³

Structure 5

This large platform has suffered from much collapse, leaving its original square shape with an almost circular appearance. The platform measures 26m E-W × 25m N-S and is a full meter in height. The lone superstructure appears to be a secondary platform some 80cm in height and found in the SE quadrant of the platform. The upper surface of this superstructure is about 5m × 5m square and has no *in situ* architecture. The only stone alignment spotted on the entire structure was found on the eastern side of the secondary platform. It is a 2.2m N-S line of four pillow-shaped stones and could be a segment of retaining wall for the secondary platform.

Lot Number: 03101

Area: 597m²

Volume: 479m³

Structure 6

Structure 6 is easily the best-preserved structure we mapped at Yun Ak ([Figure 4.2](#)). It is a residential platform that is 19.4m N-S and its maximal E-W width is 20.5m. Its NW and SW corners are essentially square but its NE and SE corners are more rounded. The basal platform is on average 60cm above the ground with the west side higher and the east side lower. No stairways were found on the basal platform but three superstructures are found on its surface. The first is a rectangular (6m N-S × 4.3m E-W) conglomeration of rubble centered on the west side of the platform. This was probably a two-roomed house that may have had some masonry walls and a perishable roof. This would explain the high quantity of rubble but absence of vault stones. More rubble is found in the northwest corner area of the basal platform. The second superstructure is a small (3.3m N-S × 4.8m E-W) house foundation found along the south edge of the basal platform. This second superstructure definitely has an interior partition, dividing the house into west and east rooms. The outline of the house is fairly clear and there is more rubble found on the west wall than any other. No doorjambs were noted but a 2.9m long terrace is found 1.1m north of the house. This terrace is formed by six stones laid E-W that form a raised up area behind them (to the south). The third superstructure is the most curious of the three. It consists of a rectangular arrangement of megaliths that are sunk into the basal platform. That is, the tops of these stones are level with the

surface of the basal platform. The rectangle is 9m E-W × 1.8m N-S and no evidence of interior partitions was noted. The west, south, and east walls are almost entirely intact but the north wall is missing a good number of stones on its west side. It seems like the doorway to this presumably residential structure was probably centered on the north wall since the south wall consists of continuous megaliths. Found a few meters north of where the conjectured doorway is a square slab measuring 46cm wide, 48cm long, and 16cm thick. The slab could have been a doorjamb but the stone seems more finely cut than the more roughly cut megaliths of the associated superstructure. A *metate*, the only one found at Yun Ak, was found in the megalithic superstructure's SW corner area.

Lot Number: 03201

Area: 406m²

Volume: 210m³

Structure 7

This is a low, three-roomed house foundation that was built directly on the ground surface. Its overall dimensions are 11.6m E-W × 4.4m N-S. There is little in the way of *in situ* walls but there are differences in rubble concentration that seem to divide the structure into west, central, and east rooms. The west room consists of heavy rubble and is 4.1m E-W. The central room is 4.7m E-W and is largely devoid of rubble but instead smaller *chich*. The east room has more rubble than the central room but less than the west room and it is mostly concentrated in the southern half. The only other thing of note for Structure 7 is a small step found about 2m south of the central room. It consists of four megalithic stones oriented E-W and is nearly 2m in length.

Lot Number: 03301

Area: 41m²

Volume: 8m³

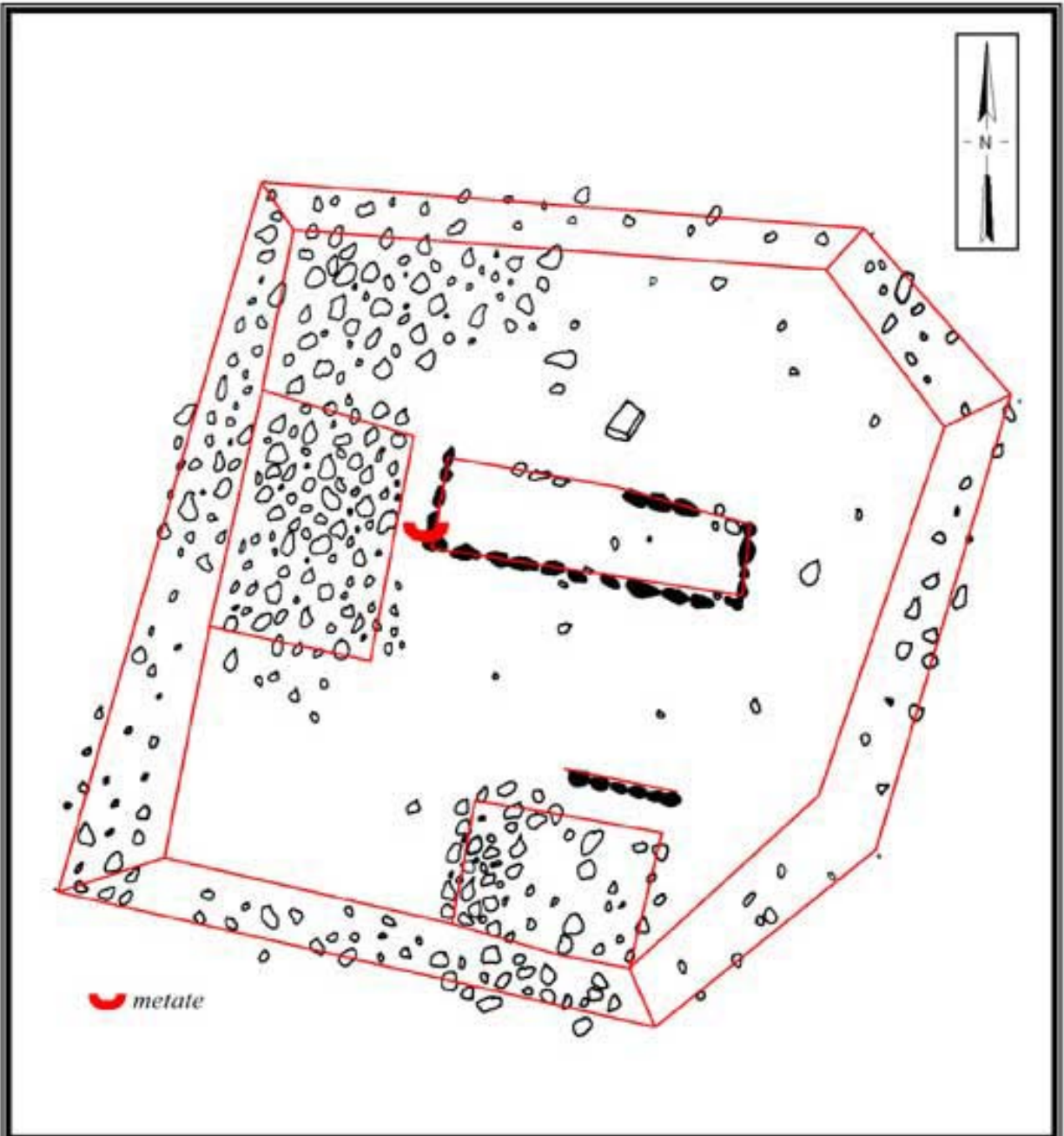


Figure 4.2: Drawing of Yun Ak Structure 6
(Dibujo de la Estructura 6 de Yun Ak).

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Ruinas de Yun Ak
Municipio de Tizimin
Yucatán, México

Kulubá
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Yokat

UTM Coordinates: N2327270, E414063

Distance to Kulubá: 8.05km at 284°

The previously unregistered site of Yokat is found 2km east of the town of Tixcancal ([Figure 1.2](#)). It is accessed by taking the dirt road due east from the zocalo in Tixcancal; the ruins can be seen on the north side of the road.

At the time of our visit, Yokat was found within a ranch that was quite grown over. Corn was waist-high throughout the parcel we mapped. Brush covered many of the larger mounds so we hired a small crew of 5 workers from Tixcancal to help us clear off structures. Like Yun Ak, Yokat appears to have had a small support population. Our mapping coverage extended over 100m to the area south and west of the site center without finding any structures ([Figure 5.1](#)).

A *cenote* found 125m SE of the main civic structure was undoubtedly the primary source of water for the inhabitants of Yokat ([Plate 5.1](#)). Its mouth is elliptical in shape, measuring 25m E-W and 44m N-S. A steep but useable trail down the south side of the *cenote* allowed us to take a point at the water table; this exercise showed that it has an average depth of 16m from the ground surface.

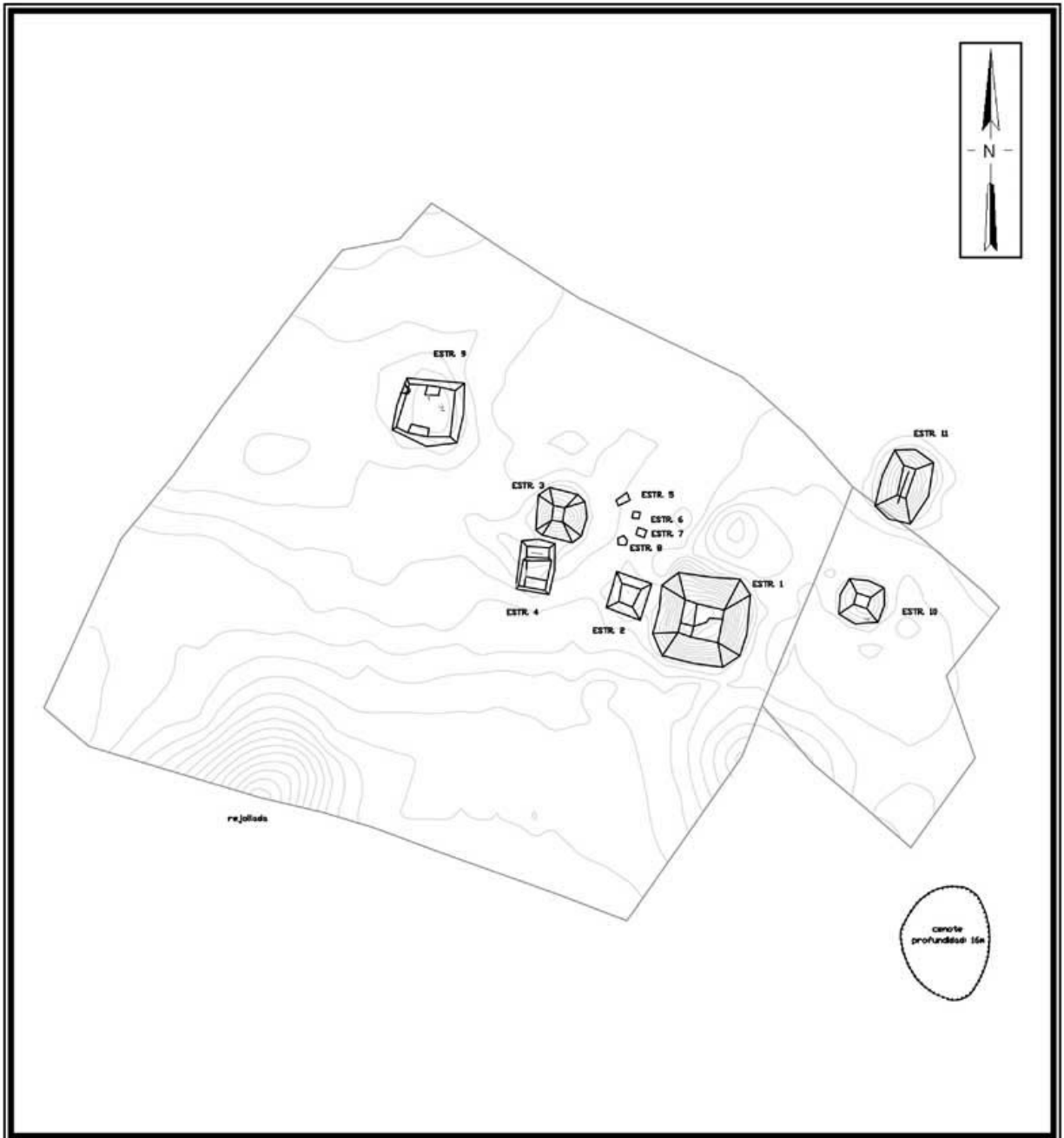


Figure 5.1: Map of Yokat (Mapa de Yokat).

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Ruinas de Yokat
Municipio de Tizimín
Yucatán, México

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Plate 5.1: The cenote at Yokat (El cenote de Yokat).

**Kulubá
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Photographer:
J. Gregory Smith
Roll 4, Exposure 11

**Ruinas de Yokat
Municipio de Tizimín
Yucatán, México**

Structure Descriptions

Structure 1

Structure 1 is the main civic structure at Yokat. It is a substantial truncated pyramid 5.5m in height with a nearly perfect square base: 35.6m E-W × 34.6m N-S. The structure appears to have rounded or beveled corners, as the rubble slump from each side does not meet at right angles. No intact architectural features such as retaining walls or stairways were noted at the base or on the slope of the structure. The upper surface of the structure is 16.4m E-W × 13.4m N-S and features an undulating surface, the result of collapsed superstructures and looting. The northwest and southeast quadrants of the upper surface area are lower than the southwest and northeast areas. Unfortunately, no *in situ* architecture remains on the structure, making it difficult to delineate which way it faced.

Area: 1,157m²

Volume: 3,765m³

Structure 2

This square-shaped platform is found 5.5m west of Structure 1 and is oriented the same way. It measures 14.6m E-W × 14.9m N-S and is 1.8m high. The only intact architecture spotted on the platform was a megalithic stone that marks the southwest corner. Two small *saqueos* are found in the northeast corner area of the upper platform surface.

Lot Number: 03901

Area: 216m²

Volume: 241m³

Structure 3

This structure is a small pyramid that, along with Structure 4, forms part of what Proskouriakoff (1962) defined as a "temple assemblage" ([Plate 5.2](#), shown below). It is about 4m in height and is roughly 18m N-S × 21m E-W. Like Structure 1, this pyramid also appears to feature rounded or beveled corners. No *in situ* remains were found on the structure; rubble is all that is visible. The upper surface of the pyramid measures 6m N-S × 4.6m E-W. No superstructures were found atop the structure. Two things indicate that the pyramid originally faced east. First, the upper surface area is rectangular with its long axis N-S. This suggests that the superstructure that was built on this surface was most likely also oriented N-S. The second line of evidence concerning the building's orientation is the shape of the pyramid's slump. The east side bulges out

somewhat compared to the other three sides and this hints at a stairway that may have ascended this side of the building.

Lot Number: 03401

Area: 344m²

Volume: 26m³

Structure 4

This is the range structure that flanks the pyramid (Structure 3) to the south ([Figure 5.2](#) and [Plate 5.3](#), shown below). Its north side is only 2m south of the pyramid and the structure measures 21m N-S × 14m E-W. The structure has an average height of 1m and was built on an *altillo* as limestone can be seen in the center of the platform. A short stretch of retaining wall was spotted on the west side of the structure near the SW corner and is non-megalithic in character. At least two and possibly three superstructures are found on the basal platform. The first is a secondary platform that is located on the basal platform's north end. This platform has a few exposed retaining wall stones on its south side and also some cut stones on its surface. A 4.1m long line of stones are roughly in the center of the secondary platform and face south. It seems likely that this was the front wall of a house of some sort and the back wall has slumped down the north edge of the platform. The second superstructure runs along the west side and might be a [-shaped structure, the kind of which has been recently studied at Ek Balam (Bey *et al.* 1997). A line of six stones is offset 2m from the west edge of the platform and these stones face east. Like the superstructure on the secondary platform, it seems likely that this line of stones are the remains of the front wall while the back wall has slumped down the west edge of the platform. No end walls were spotted, either. A third possible superstructure is found along the south edge of the platform. Here there is an accumulation of rubble but with no apparent architectural remains. It could be attached to the superstructure to the west, in which case there would be a single L-shaped superstructure. Another possibility is that the rubble is simply the remnants of an unfinished construction project.

Lot Number: 03601

Area: 282m²

Volume: 226m³

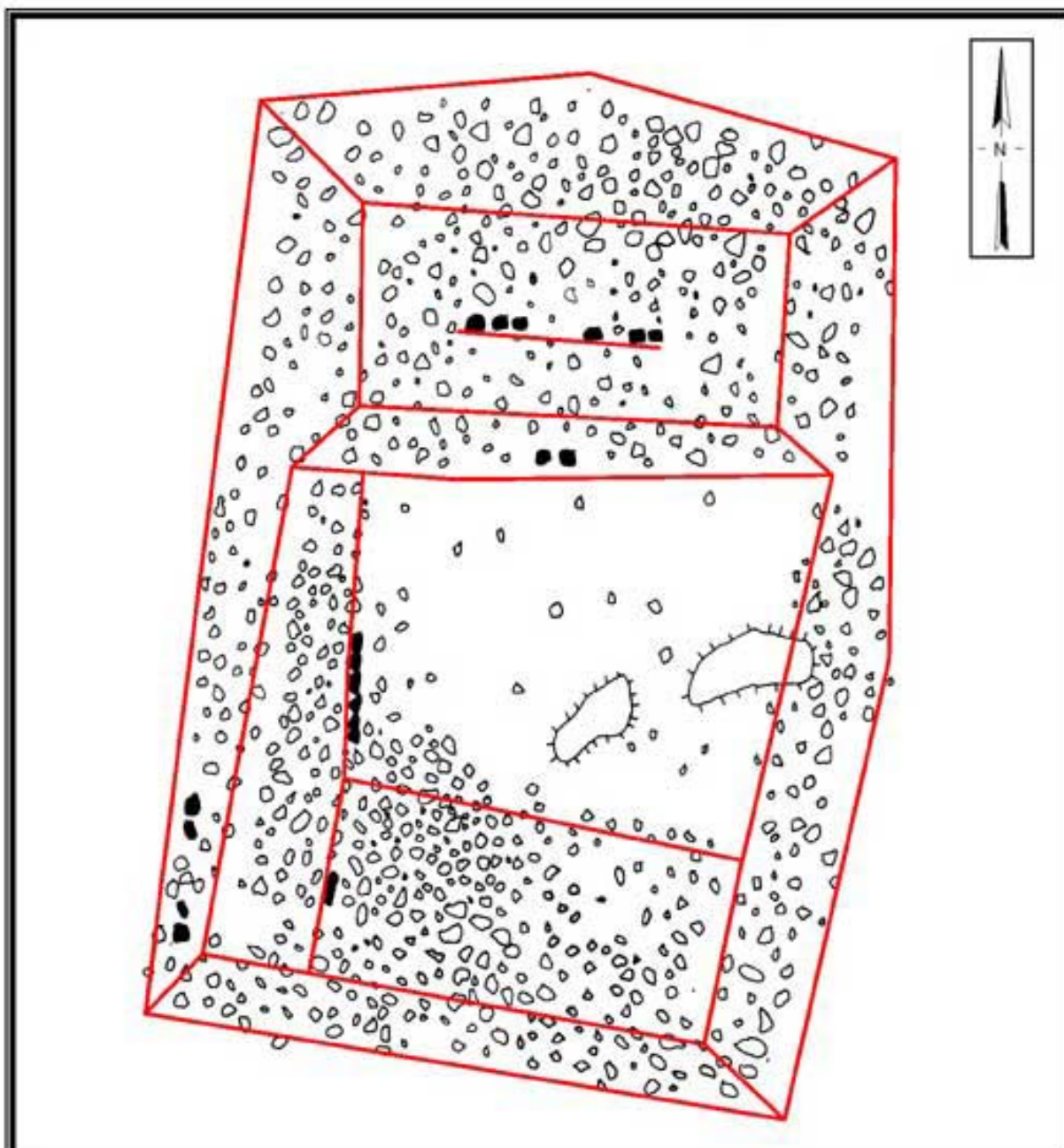


Plate 5.2: View northwest to the Yokat temple assemblage: Structures 4 (l) and 3 (r) from Structure 2 (Vista hacia el noroeste, en dirección al conjunto de templo de Yokat: Estructuras 4 (l) y 3 (r) de la Estructura 2).

Photographer:
J. Gregory Smith
Roll 4, Exposure 20

Ruinas de Yokat
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**Figure 5.2: Drawing of Yokat Structure 4
(Dibujo de la Estructura 4 de Yokat).**

0 3.2
METERS

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**Plate 5.3: View south to Yokat Structure 4 from the top of Structure 3
(Vista hacia el sur en dirección a la Estructura 4 de Yokat desde la cima de la Estructura 3).**

Photographer:
J. Gregory Smith
Roll 4, Exposure 20

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Structure 5

This is a low housemound built directly on bedrock. It is 12m east of Structure 3 and measures 5.3m SW-NE and 2m SE-NW. While it lacks any *in situ* walls, it was probably a two-roomed house. Structure 5, along with Structure 6, 7, and 8, are all found in the Yokat plaza and seem to be out of place. If in fact these structures are housemounds, their location amongst civic architecture hints at a "squatter" settlement, the kind of which has been documented at other Maya sites such as Dos Pilas (Houston 1993).

Area: 14m²
Volume: 3m³

Structure 6

Found 4.7m SE of Structure 5, this housemound is roughly 2.5m square and consists of small rubble. No other details were noted.

Area: 7m²
Volume: 1m³

Structure 7

This low rubble mound is 3.5m E-W and 3m N-S. Due to its rectangular shape, this mound probably had two rooms.

Area: 11m²
Volume: 2m³

Structure 8

The last of the group of four low mounds within Yokat's civic center, Structure 8 is an amorphous mound of rubble about 4m across. While likely the remains of a house, its ambiguous shape makes it difficult to delineate both how many rooms it may have had and its original orientation.

Area: 11m²
Volume: 2m³

Structure 9

Structure 9 ([Figure 5.3](#)) is an impressive residential platform located 38m NW of Structure 3. The basal platform is nearly square (26m E-W × 23m N-S) and a full meter in height. Heavy rubble can be seen on the south, east, and north sides of the platform, while the west side features a few large megaliths. A megalithic stone measuring 1m long, .7m high and .6m wide marks the NW corner. Five more *in situ* megaliths laid end-to-end form a retaining wall along the west side. There is a saqueo between the northern end of the megalithic retaining wall and the NW corner stone. Two superstructures are found on top of the basal platform. The first is centered on the north edge of the structure and is a rectangular (5m E-W × 3.9m N-S) accumulation of rubble. The west side of the superstructure has a few roughly shaped stones that could be *in situ* but otherwise there are no visible wall lines. To the south of the superstructure is a curious line of stones. The line begins at the superstructure's south edge and continues

2.3m south towards the center of the platform. What is odd is that there are at least two courses of stone and the uppermost course is level with the surface of the platform. One plausible interpretation for this is that it is a retaining wall that once marked the edge of the platform and then an expansion project put platform rubble on the other side of it. To the west of the first superstructure is a pile of heavy rubble that could be from the *saqueo* found a few meters to the west. The second superstructure is along the south edge of the basal platform. It is somewhat larger than its northern counterpart, measuring 7.3m E-W × 3.4m N-S. Rubble marks the perimeter of the presumed house, leaving the center of it relatively devoid of stones. No interior partitions were noted, suggesting that it may have had just a large single room. Two broken *metates* were spotted on top of the platform; they are found along the east edge, SE of the first superstructure and NE of the second.

Lot Number: 03801
Area: 619m²
Volume: 505m³

Structure 10

Structure 10 is a pyramid some 2.7m in height. It features a nearly square base (18m E-W × 17.8m N-S). The mound consists entirely of rough platform rubble and the only place where visible architecture was spotted is on the south slope. On the eastern half of the south slope, two perpendicular wall lines meet to form a corner. The E-W wall line is 1.6m long and the N-S wall line is .9m long. The corner stone where the two walls meet is not megalithic in size. If this was the SE corner of the structure, then projecting the wall lines would suggest that the rubble slump has fallen 3-5m beyond the original wall line. Moving to the top of the structure, the upper surface area is 4.4m N-S × 5.7m E-W. Just off the south edge of the upper surface is a large stone (60cm wide × 15cm high × 35cm long) that might possibly be a cornice stone. However, judging by the amount of rubble on the level upper surface, it seems unlikely that there was a masonry building here which would have necessitated the use of cornice stones. If the large stone off the south edge is in fact a cornice stone then perhaps it was taken from another structure and re-utilized. Atop the structure there is more rubble scattered along the east edge of the upper surface than any other area. This hints that there was once a superstructure along the east edge of this surface. If so, then the building as a whole was probably oriented west. One more item of note was found roughly in the center of the leveled area. A chunk of stalactite or stalagmite measuring 60cm long and with a 30cm diameter was found resting on its side oriented NW-SE. Given the abundance of these limestone rock formations in the caves associated with the Yokat *cenote* (found 110m S of Structure 10), it seems likely that this piece was transported here from that location.

Lot Number: 03701
Area: 262m²
Volume: 389m³

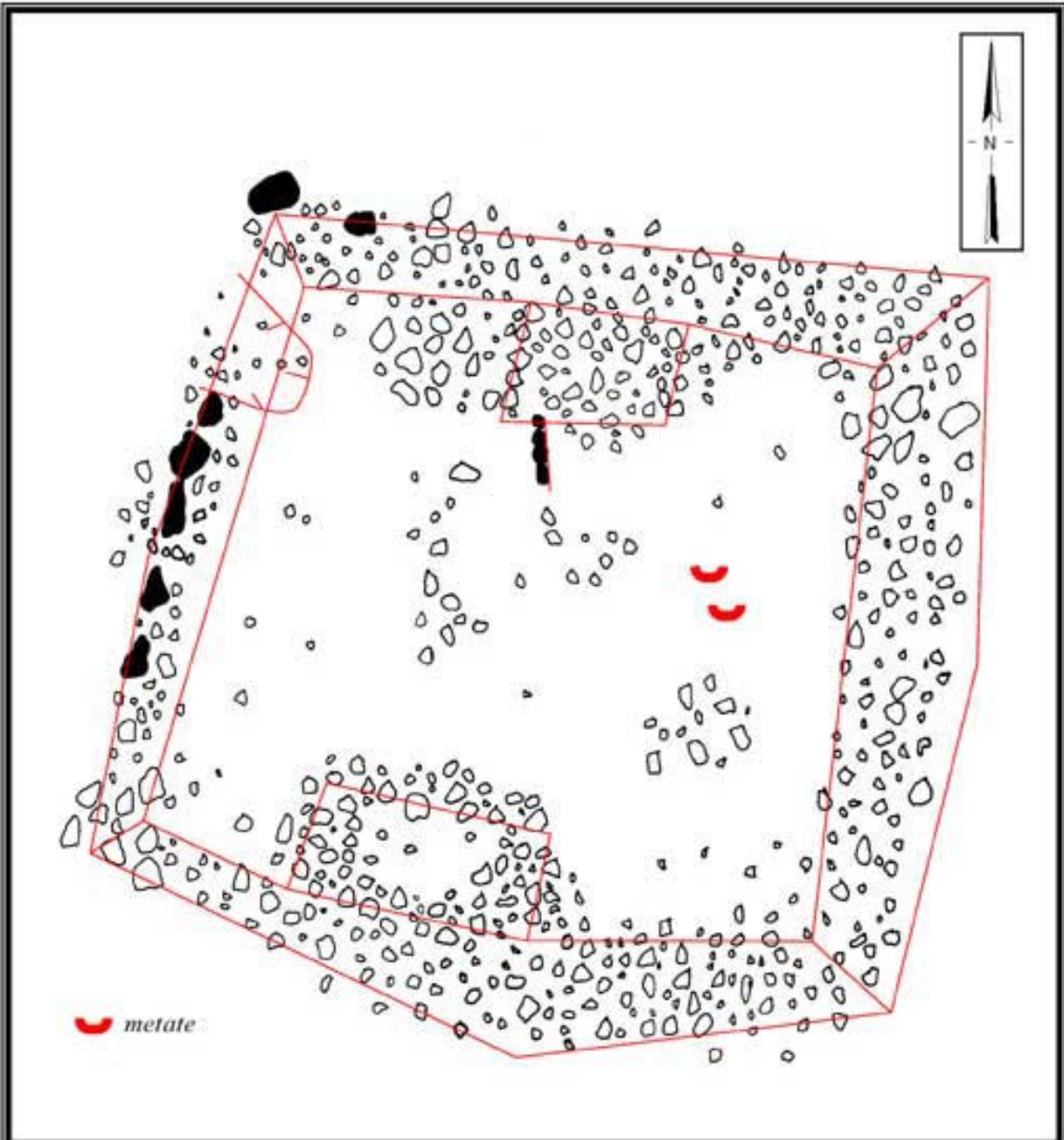


Figure 5.3: Drawing of Yokat Structure 9
(Dibujo de la Estructura 9 de Yokat).

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Structure 11

This is a substantial structure that is rectangular in shape (29m N-S × 20m E-W) and some 3.5m in height. There is little to note about the basal platform save that it consists entirely of rough rubble with no architectural features. The leveled-off upper surface of the structure measures 3.8m E-W × 12.2m N-S. There is little in the way of architecture on this surface. Two *in situ* cut stones were found starting in the NW part of the platform and running south. These two stones are cut on their west side. There are a few other cut stones down the west side of the platform that appear to be in line with the wall fragment just described. The rubble appears to be slightly higher on the eastern half of the platform than the west. This might indicate that there was a back wall of some sort running along the east edge of the platform. If this was the case then perhaps the fragmentary wall line running down the west side of the platform is a front wall or terrace. It would also suggest that the building as a whole faced west.

Lot Number: 03501

Area: 483m²

Volume: 936m³

Ichmul de San Jose

UTM Coordinates: N2326635, E0422862

Distance to Kulubá: 13.7km at 307°

Ichmul de San Jose is located 11.3km east of the modern pueblo of Tixcancal and 8.8km east of the site of Yokat ([Figure 1.2](#)). Previously unrecorded, the site is accessed by a dirt road that begins at a paved road that originates in Chancénote. It continues to the small pueblo of Chable and from here a dirt road runs north into a series of ranches. In 2001, the site of Ichmul de San Jose was privately owned by a man from Chancénote. During the time of our fieldwork, the site center was being used as a corral for cattle. Cows were herded into this corral daily for water and then dispersed into a large ranch for grazing. Unfortunately, Structures 4 and 5 are within this corral and have been extensively trampled.

The visibility at Ichmul de San Jose was excellent. Most woody vegetation in the vicinity has been removed and our workers only needed to clear low brush off of some structures. This allowed us to rapidly map 26 structures in the ranch ([Figure 6.1](#)). The parcel of land to the west of the ranch we worked in, about 230m west of the site center, consists of *monte alto*. The largest structure we encountered at the site, Structure 27, was located on the eastern edge of this forest.

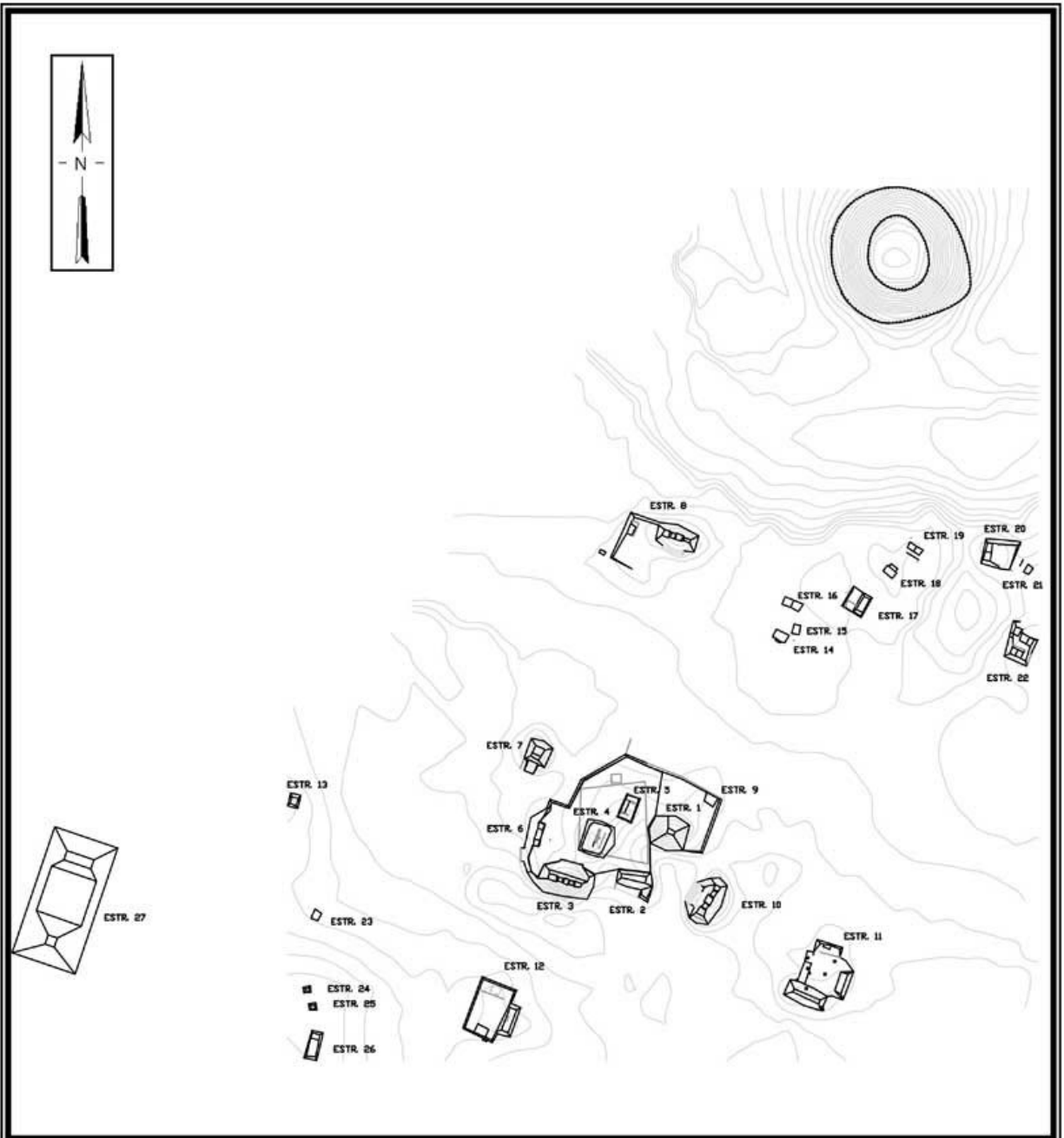


Figure 6.1: Map of Ichmul de San Jose (Mapa de Ichmul de San José).

<p>0 80 METERS</p>	<p>Ruinas de Ichmul de San Jose Municipio de Tizimín Yucatán, México</p>	<p>Kulubá Archaeological Project</p>
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A *dzadz* is found about 115m north of Structure 19. Its upper diameter is approximately 70m. The inside diameter of the *dzadz*, where the slope from the upper rim levels off at the base, is 35m. While no standing water was seen, some wetland grasses were identified at the bottom of the *dzadz*. No specialty crops or wells were noted at the bottom. From the highest part of the upper rim, on the southeast side, to the lowest part of the *dzadz* yields a maximum depth of 10m.

Structure Descriptions

Structure 1

This structure is the tallest (4.5m) one we mapped in the ranch (Structure 27 is taller but is not considered a part of the site center we mapped; see its description below). It is found on the eastern side of a large artificial terrace that supports most of the site center of Ichmul de San Jose. Structure 1 was a civic pyramid of some sort whose base measures 20m E-W x 18.3m N-S. The level upper surface is only 3.9m E-W x 2.3m N-S and lacks any *in situ* architecture. A line of roughly shaped stones was found on the south slope of the mound; it is oriented E-W and is about a meter long. The lack of *in situ* architecture on the structure is understandable in light of the fact that the corral was once centered on this mound and has only recently been shifted to Structures 4 and 5.

Lot Number: 04401

Area: 313m²

Volume: 728m³

Structure 2

This L-shaped mound appears to help form the south edge of a small plaza. The long side of the L-shaped rubble reaches an altitude of 1.5m off the ground surface and is oriented so its long axis (18.5m) is E-W while its short axis (8.6m) is N-S. There was waist-high grass all over this structure when we mapped it so we may have missed some architectural details. Because the upper surface is relatively level, it seems unlikely that there was a vaulted building here. Perhaps it was a high basal platform with a perishable superstructure on top. The short side of the L-shape extends south from the long side's east end. This extension is only 40cm high and measures 5.3m N-S x 5.4m E-W. A line of some 4 megaliths was noted starting at the structure's southwest corner and proceeding south about 3 meters. These stones appear to have been set in the ground but for an unclear purpose: the ground is level on either side of the stones so the configuration isn't a retaining wall. The only other item of interest is a long shaped stone found amongst the platform rubble in the SW corner area. It measures 85cm long, 40cm wide, and 20cm thick and was probably part of the superstructure that has fallen down the side of the platform.

Area: 186m²
Volume: 143m³

Structure 3

Structure 3 dominates the southern end of Ichmul de San Jose's site center. It was built on the southern edge of the large terrace that supports several structures and was once an impressive vaulted structure that faced north. The outline of rubble now measures 29m E-W x 18.5m N-S and is 3.2m in height. The front (north) side of the building features a well preserved stairway. It is 12.2m wide and at least 4 risers of nicely cut stone are visible. The first riser is the best preserved and features the largest cut blocks. At the top of the stairway, where the fourth riser is visible, it grades into platform rubble and it is difficult to delineate where the stairway may have ended and the upper surface of the platform began. In any case, the basal platform supported a vaulted building (17.6m E-W x 3.4m N-S) that probably had at least three and maybe four rooms. The superstructure has an undulating surface, the result of partially *in situ* walls that haven't completely collapsed. Two large saqueos are found on the front (north) of the building and one has exposed a wall with two courses of roughly shaped stones visible.

Area: 438m²
Volume: 779m³

Structure 4

Located within a modern corral, Structure 4 is quickly being destroyed (Plate 6.1, shown below). The slump of the structure is 18.5m N-S x 17m E-W and about 2.5m in height. There is a bulge of slump on the east side of the structure that may indicate there was a stairway here at one point that is now unrecognizable. Set on this base of rubble is the outline of a platform retaining wall that had rounded corners. These rounded corners were noted in the NW, SW, and SE corner areas and they help enclose a platform measuring 15.3m N-S x 11.2m E-W. The stones used to make these rounded corners are high quality cut blocks. On the west side of the structure, between the wall line connecting the rounded corners and the edge of the rubble slump, is a 2.1m long wall line running N-S. This may have been a step that facilitated access to the platform from the ground surface. The superstructure on top of the platform was probably vaulted or at least had masonry walls with a perishable roof. The base of a wall made with nicely cut stones runs 7.2m N-S atop the platform. This wall has two rows of cut stone, one facing outside (west) and the other inside (east) and remnants of a stucco floor were spotted all along the base of this wall. The south end of the wall was the original end since here there are two stones that face south and serve to terminate the wall. The far north end of the wall lacks these end stones, here the wall simply ends. About 1.4m S of the north end of the wall are the remains of a doorway of some sort. Here there is a 1m wide gap in the wall and there are upright jamb stones on either side of the gap. Curiously, there

is another double-sided wall that runs E from about the middle of the main N-S wall. This 1.3m long wall is also made from nicely cut stone although the stones are slightly smaller than those found in the main wall. If this was an interior partition wall then it would make the main N-S wall the back wall and it seems odd that there would be doorway located on it. It could be that the whole masonry structure faced west and that the main N-S wall is the front wall and the back wall is now mostly gone. There is an 8.5m long wall line found between the main N-S masonry wall and the edge of the retaining wall. This was originally interpreted to be the front step of the structure but if the building faced west then this could be the destroyed remnants of the back wall.

Area: 275m²
Volume: 355m³

Structure 5

Like Structure 4, Structure 5 is currently within an active corral and is quickly being destroyed due to the constant trampling of cattle. It is a rectangular platform (13.7m N-S x 8m E-W x 1m high) whose entire northern retaining wall is largely intact as well as some segments on its west and south sides. Atop this platform is an odd I-shaped arrangement of walls and rubble. Two E-W walls form the north and south ends of the superstructure. They are both double walls, that is, they feature an inner and outer face of cut stone. The two walls are 7m apart and are joined by a line of raised up slump that connects to each of them roughly at their midpoint, forming an I-shape. The placement of the two E-W walls in relation to the platform seems to suggest that the superstructure faced east but this is less than certain.

Area: 109m²
Volume: 97m³

Structure 6

This structure is found on the west edge of the large terrace that supports most of the site center of Ichmul de San Jose. It consists of a foundation for a three-roomed house that had perishable walls and roof. Its overall dimensions are 12m N-S x 3m E-W and undoubtedly faced east, onto the main plaza. No *in situ* walls were found but the arrangement of rubble made it quite clear that there were three rooms to the house. The whole house is 3m deep and the north room is 3.1m wide, the middle room 5.6m wide, and the south room 3.3m wide. The small end rooms consist of heavy rubble while the middle room is relatively devoid of rubble in its interior. A *metate* is found within the rubble of the south room and a square slab (90cm x 100cm x 20cm) is located 5m east of the middle room.

Lot Number: 04301
Area: 38m²

Volume: 8m³



**Plate 6.1: View west to Ichmul de San Jose Structure 4 from Structure 1
(Vista hacia el oeste en dirección a la Estructura 4 de Ichmul de San José, desde la Estructura 1).**

Photographer:
J. Gregory Smith
Roll 4, Exposure 23

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Yucatán, México

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Structure 7

Structure 7 is a 2.5m high pyramid that faces south. Its base measures 12.3m E-W x 11.7m N-S and features a rubble extension off of its south side. This extension is almost certainly the remains of a stairway although no risers are visible. The destroyed

stairway extends 6m from the south side of the main mound and is 6m wide. An odd megalithic wall extends 5.1m south from the SW corner of the mound; it may have acted to create a terrace for the stairway but there doesn't appear to be much elevation difference on either side of it. The upper surface of the structure measures 6.7m N-S x 5.2 E-W. Some sort of perishable superstructure was built on the back (north) side of this upper surface and encompasses the entire 5.2m width and is 4.2m deep (N-S). A 65cm deep *saqueo* was noted on the eastern side of the superstructure.

Lot Number: 04201

Area: 179m²

Volume: 237m³

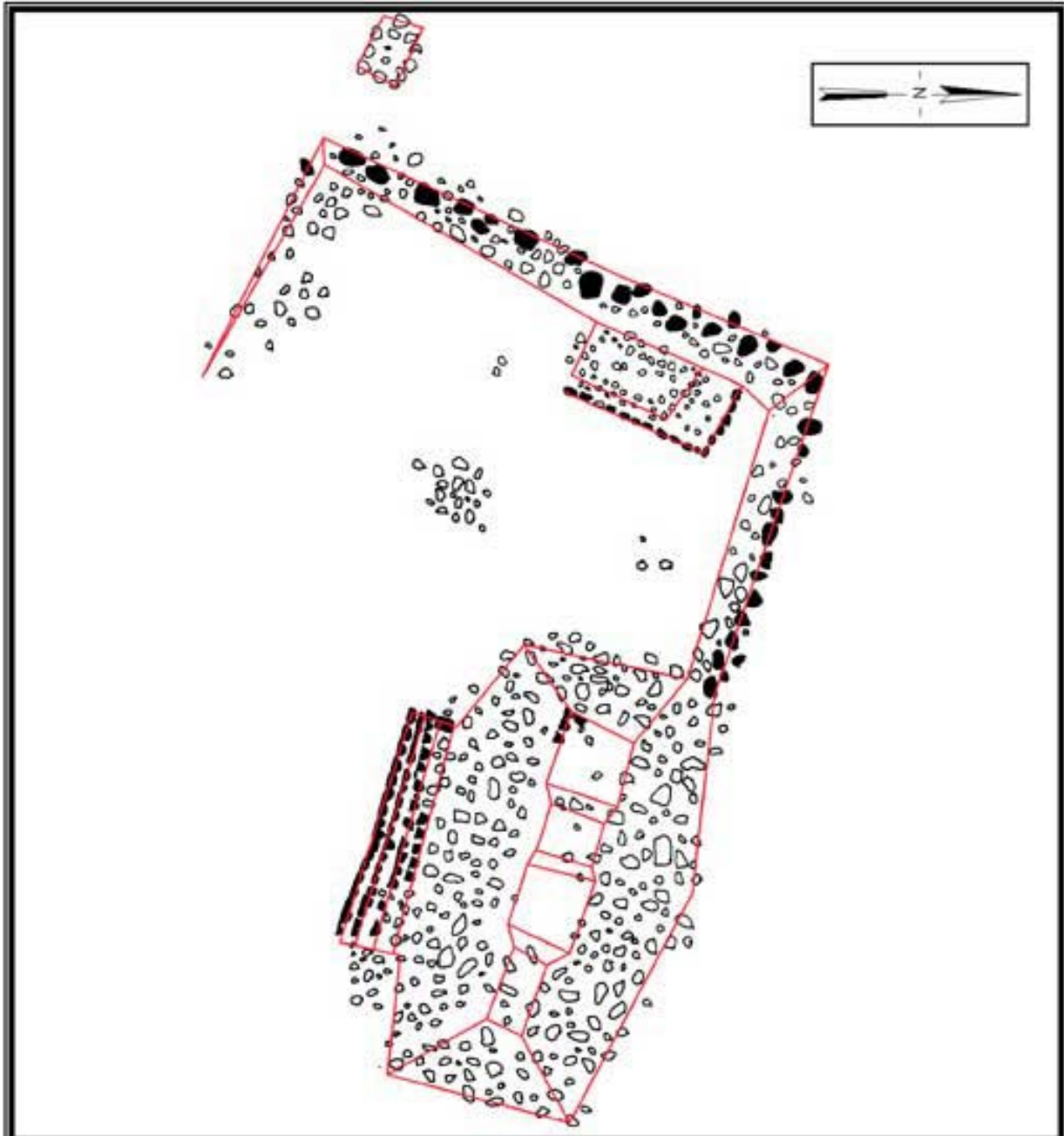
Structure 8

This is an impressive complex featuring a vaulted building with some outbuildings and a substantial terrace ([Figure 6.2](#)). The terrace consists of large megaliths and was built on the west side of a low *altillo* in order to create a level habitation surface. It begins on the NW corner of the main superstructure and continues W 16.2m where it turns south for 26.1m. At the SW corner it turns E and runs 12.7m E until it peters out as it reaches the already level ground surface. The most substantial part of this terrace is the NW corner area where the rubble is over a meter in height. There is a small structure that features megalithic walls off the SW corner of the terrace. It measures 1.8m N-S x 2.8m E-W and may have been a non-residential storage structure of some sort. The main superstructure was once vaulted. The rubble collapse measures 21.5m E-W x 12.3m N-S and is a full 2.5m high. This building features a well preserved stairway some 11.3m wide with 5 rows of risers visible ([Plate 6.2](#), shown below). The stones used to make the stairway are nice cut blocks which are 20-40cm tall and 40-100cm wide. Atop the superstructure is a hummocky surface of high and low areas. High areas are probably where interior divider walls crossed the long building N-S. The building measures 14.9m E-W x 3.3m N-S and originally had 3 or maybe 4 rooms. A few large cap stones were spotted in the rubble on both the back side (N) and front side (S) of the building, removing any doubt that the structure was once vaulted. West of this vaulted building, on the large artificial terrace, are the remains of a perishable house. The house foundation measures 5m N-S x 2.9m E-W and lacks intact walls. There is an L-shaped step associated with the house that is offset 80-100cm from it. It runs along the front of the house then turns west to run parallel with the north side of the house. A *metate* was spotted in the SW corner area of the large basal terrace, indicating some domestic activities took place here.

Lot Number: 04601

Area: 750m²

Volume: 722m³

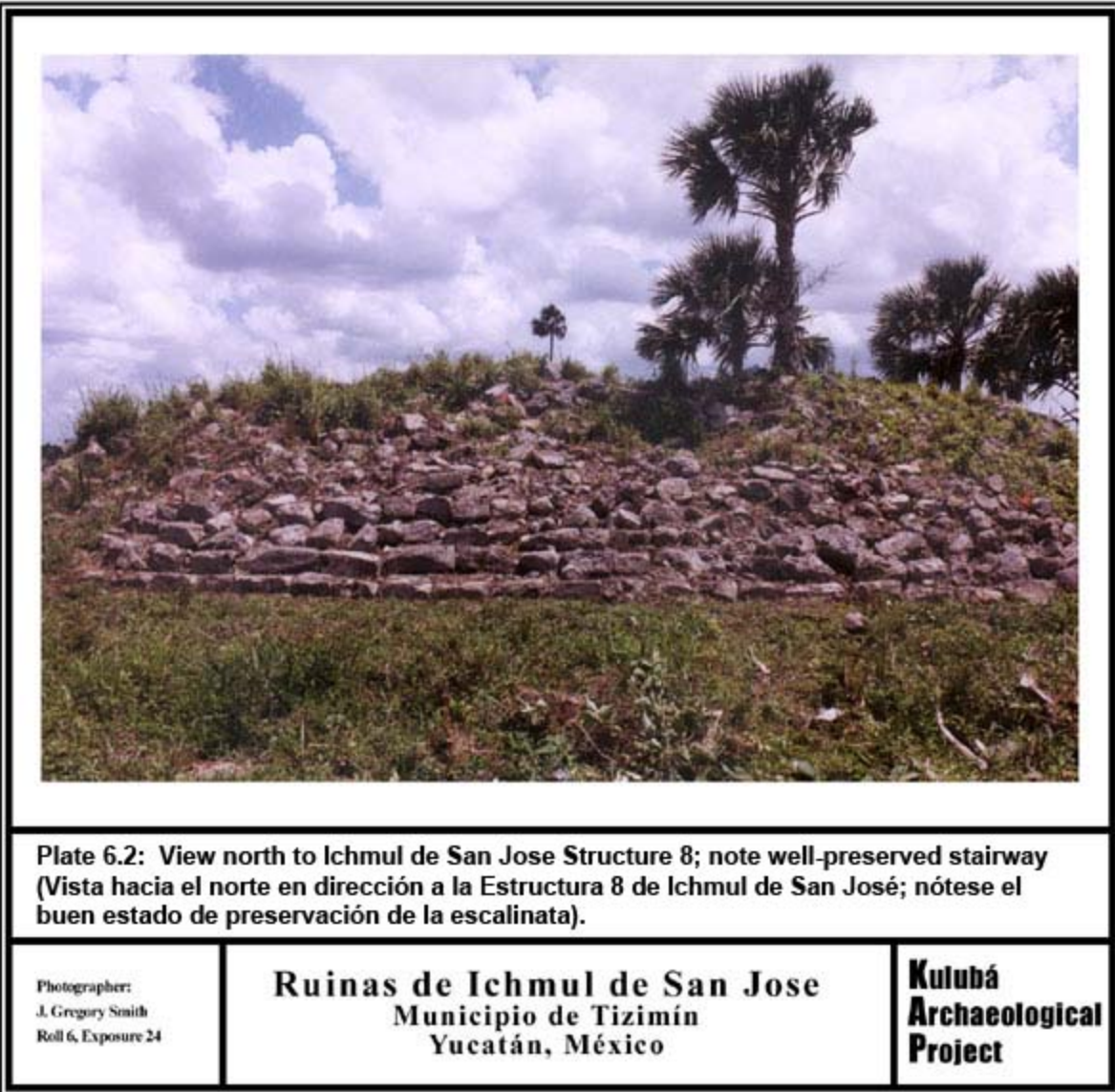


**Figure 6.2: Drawing of Ichmul de San Jose Structure 8
(Dibujo de la Estructura 8 de Ichmul de San José).**

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Structure 9

This is a rectangular rubble outline located near the northeast corner of the large terrace that supports the site center of Ichmul de San Jose. It is 6m E-W x 4.8m N-S and lacks any wall lines or other architectural details. While most of the large terrace at the site is delineated by a noticeable rubble outline, the north edge of it is defined by an *in situ* retaining wall. Beginning at its northeast corner, very near Structure 9, it runs some 43m westward before it disappears into platform rubble that continues another 12.4m to the terrace's NW corner.

Area: 30m²
 Volume: 6m³

Structure 10

Like Structures 3 and 8, Structure 10 is a long masonry building that was once vaulted and features a partially intact frontal stairway. The building faces west and forms the eastern boundary of the site's main plaza. The outline of slump measures 26.3m N-S x 17.7m E-W and is 3m in height. The frontal stairway is 11.2m wide and there are 5 risers visible. As with the other stairways at the site, the first riser is the best preserved and features the largest cut stone blocks. Both ends of the stairway have partially intact balustrades in the form of long shaped stones oriented perpendicular to the risers. Behind (east) of the uppermost riser is a 3m wide terrace and then there is another step that was made with smaller cut stones than the main stairway. Behind this step is the rubble of the main superstructure. The 17.5m N-S x 3.7m E-W superstructure is a collapse vaulted building. There isn't much visible architecture atop the rubble but its undulating surface suggests collapsed vaults. Two large square slabs were spotted in the rubble in the NE corner area; one measures 1.4m x .6m x .2m and could be a lintel.

Area: 375m²
Volume: 657m³

Structure 11

This is an interesting residential platform some 50m SE of Structure 10. The structure consists of four superstructures that all face a common patio ([Figure 6.3](#)). This patio is about 20m N-S x 15m E-W and is raised up about 50cm from the ground surface. The first superstructure, on the south side of the patio, is the most substantial. It is most likely a collapsed vaulted building and its rubble outline is 21.6 E-W x 10.5 N-S and 2.5m in height. Atop this rubble, towards its eastern end, are the remains of a wall. Three cut stones, 1.2m in total length, are oriented N-S and face east. This is probably an interior wall that separated the far east room to a middle room. Scattered on this superstructure and across the structure as a whole are cylindrically-shaped cut stones. At first these were interpreted as columns but upon careful inspection, we determined that these are colonnetes that once adorned the façade of the vaulted superstructure. A total of 9 colonnetes were spotted and examined: 4 are associated with the vaulted building and 5 are distributed across the patio of the structure. The size of these stones is fairly uniform: between 35-75cm long and 26-31cm in diameter. Often these stones are rough on one side, obviously the side of the colonnete that was originally attached to the façade. The second superstructure is found on the west side of the patio. It is a perishable structure that faces east onto the patio. The rubble outline suggests that there were two and perhaps three rooms. The third superstructure is found on the northern end of the structure and faces south onto the patio. It is a *nivelación* that is 14.2m E-W x 6m N-S and features a built-up back side that is 50cm off the ground surface. The front (S) end of the superstructure is marked by a step some 10.7m in length that runs E-W. Centered on the back of this terrace is 3.6m E-W x 1.7m N-S

accumulation of rubble. While quite small, this rubble probably marks the outline of a room that had perishable walls and roof. The fourth and final superstructure on Structure 11 is on the east side of the patio and is a *nivelación* that is built up on the east side. The terrace is 16.1m N-S × 6.2m E-W. Atop the terrace is a rectangular rubble outline that measures 10.6m N-S × 3.8 E-W. Although there are no clues in the form of wall lines, this was probably a two-roomed perishable house that faced west onto the patio. Two metates were mapped on Structure 11: one on the front side of the vaulted superstructure and another near the SE corner of the third superstructure.

Lot Number: 04701

Area: 789m²

Volume: 479m³

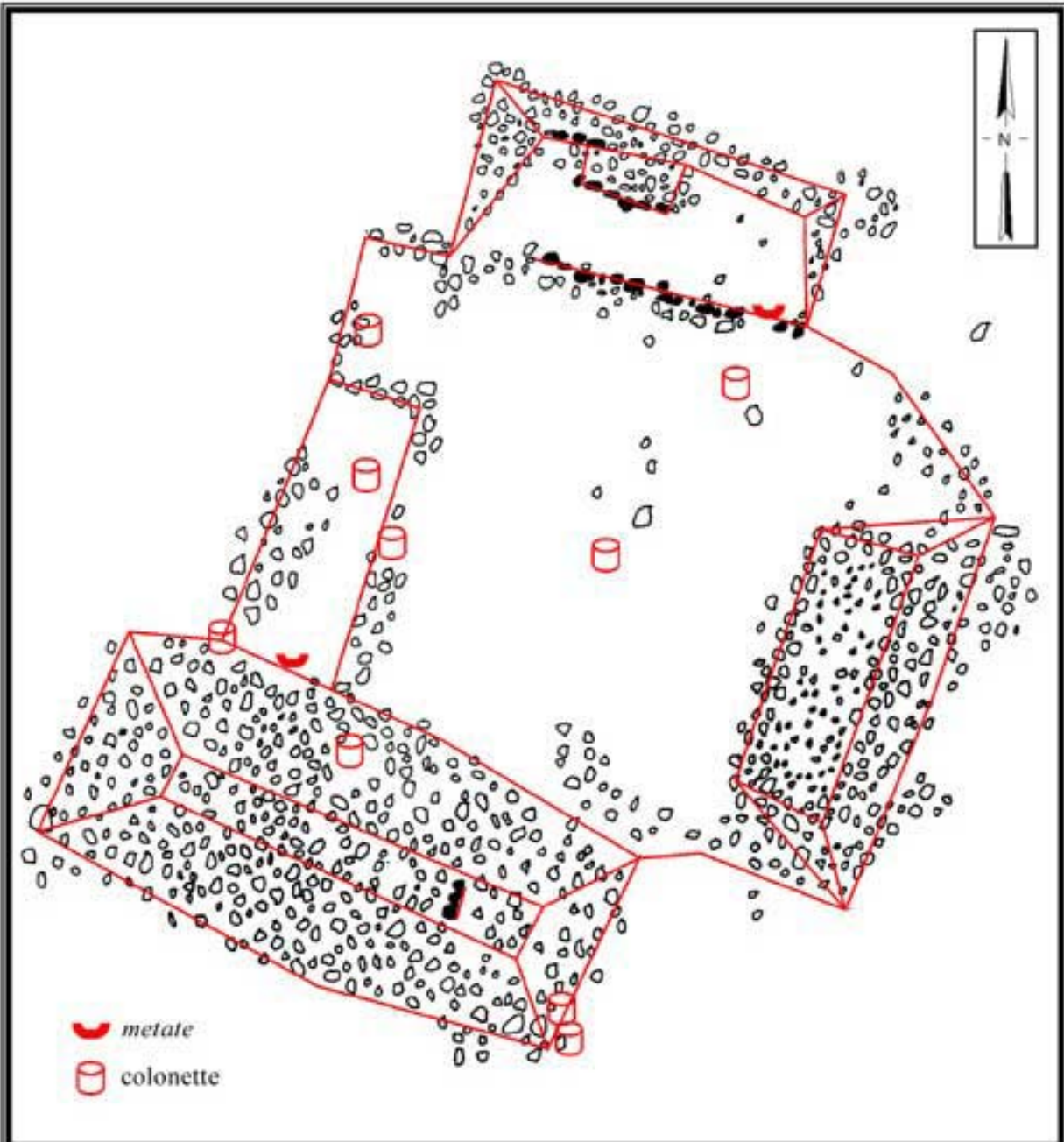
Structure 12

This structure features an impressive megalithic platform that supports three superstructures ([Figure 6.4](#)). The rectangular platform is 29m N-S × 19m E-W and creates a surface that is some 70cm above the ground. Large megaliths, some over a meter in length, are found on all four sides of the platform. A small extension (2.3m E-W × 1m N-S) is found off the south edge of the platform and could be the remains of a small stairway. The eastern side of the platform has a sizeable extension that protrudes 6.8m E of the megalithic retaining wall and is some 16m long. This extension appears to have been annexed onto the original rectangular platform but also features some megaliths on its eastern side. A line of stones was set on the extension's west side that acts as a step from the platform surface. Atop the extension was a superstructure of some sort. The upper surface of the extension is 12.5m N-S × 3.6m E-W and features little in the way of intact architecture. A single wall line running N-S for 2.7m is found in the center of the extension. Clearly there was a perishable structure here that faced west, onto the platform, but its foundation is largely gone. The second superstructure is found on the basal platform's southern edge. It is an outline of rubble 6.5m E-W × 4.5m N-S. The front (N) side of the superstructure has a few *in situ* stones, including a possible door jamb. This was probably a house with perishable walls and roof. The third superstructure on the megalithic platform is centered on the northern edge. This was a house that had a megalithic foundation, 4.8m E-W × 4.1m N-S, with perishable walls and roof. A 1.4m-wide gap in the front (S) wall indicates a doorway. A 12.7m long line of stones is just in front of the megalithic house and serves to act as a step. Despite the obvious residential function of this structure, no metates were found here.

Lot Number: 04501

Area: 660m²

Volume: 434m³

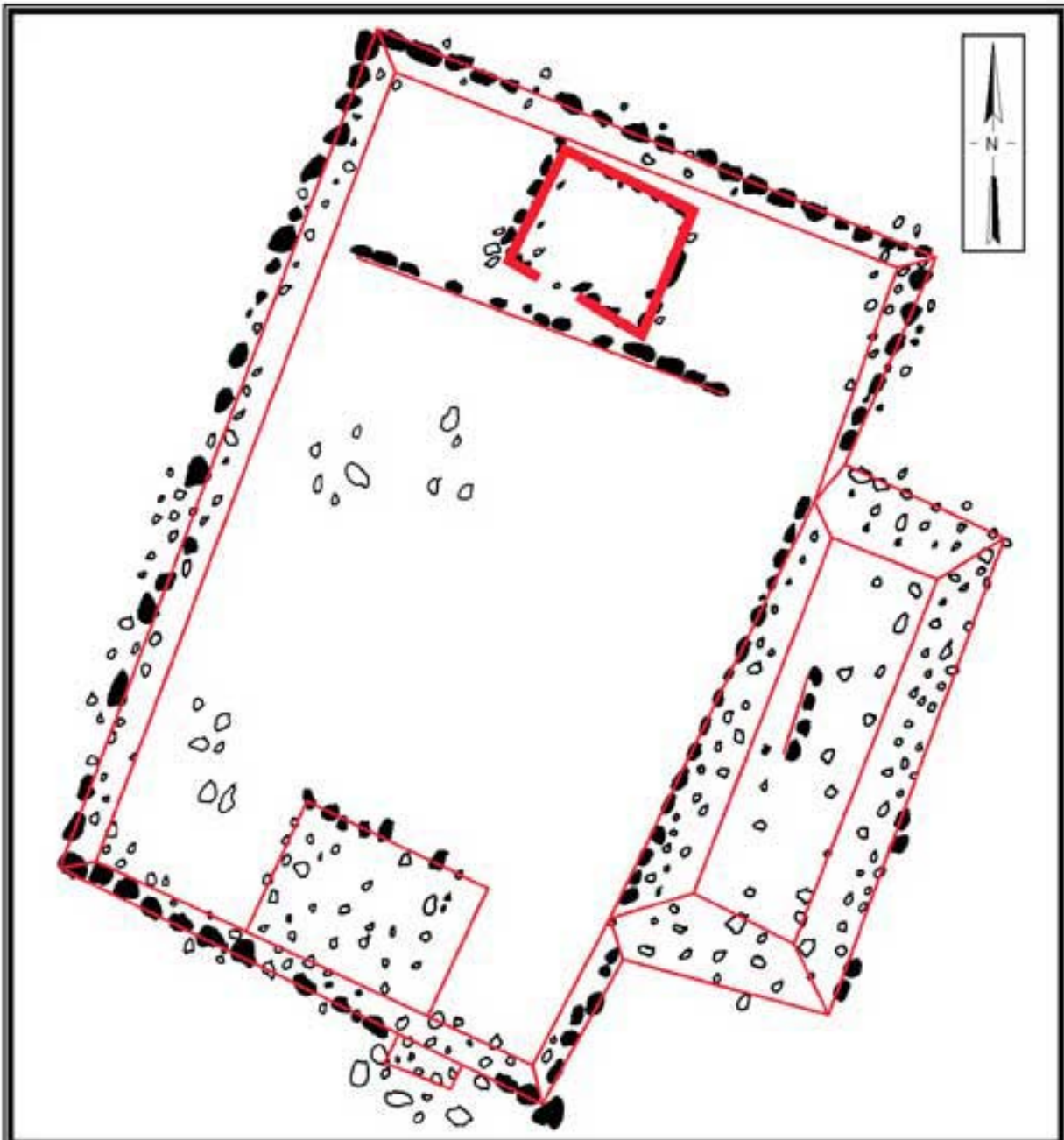


**Figure 6.3: Drawing of Ichmul de San Jose Structure 11
(Dibujo de la Estructura 11 de Ichmul de San José).**

0 5.8
METERS

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**Figure 6.4: Drawing of Ichmul de San Jose Structure 12
(Dibujo de la Estructura 12 de Ichmul de San José).**

0 4.9
METERS

Ruinas de Ichmul de San Jose
Municipio de Tizimín
Yucatán, México

Kulubá
Archaeological
Project

Structure 13

This isolated mound is over 120m W of the great terrace at the site center. It is a small (7m N-S × 5.6m E-W) but fairly substantial (80cm high) platform that is entirely devoid of any preserved architecture. It was built on an *altillo* and was probably a single-roomed house.

Lot Number: 04001

Area: 38m²

Volume: 21m³

Structure 14

Structure 14, along with Structures 15 and 16, form a small residential patio group ([Figure 6.5](#)). This is a very well preserved house foundation ([Plate 6.3](#), shown below) that measures 7.2m E-W × 4.3m N-S. It has a two-riser stairway that is centered on the south side of the house; it is 3m wide (E-W) and 80cm deep (N-S). Although this stairway is clearly associated with Structures 15 and 16, the presence of this stairway on the structure's south side indicates that the house faced south, away from these other houses. A *metate* is found 3m E of Structure 14.

Area: 36m²

Volume: 7m³

Structure 15

This house foundation is found on the east side of the common patio shared with Structures 14 and 16 ([Figure 6.5](#)). It is 4.8m N-S × 3.6m E-W and lacks *in situ* wall lines. Despite this, the regular arrangement of rubble makes it clear that this was a one-roomed perishable house.

Area: 18m²

Volume: 4m³

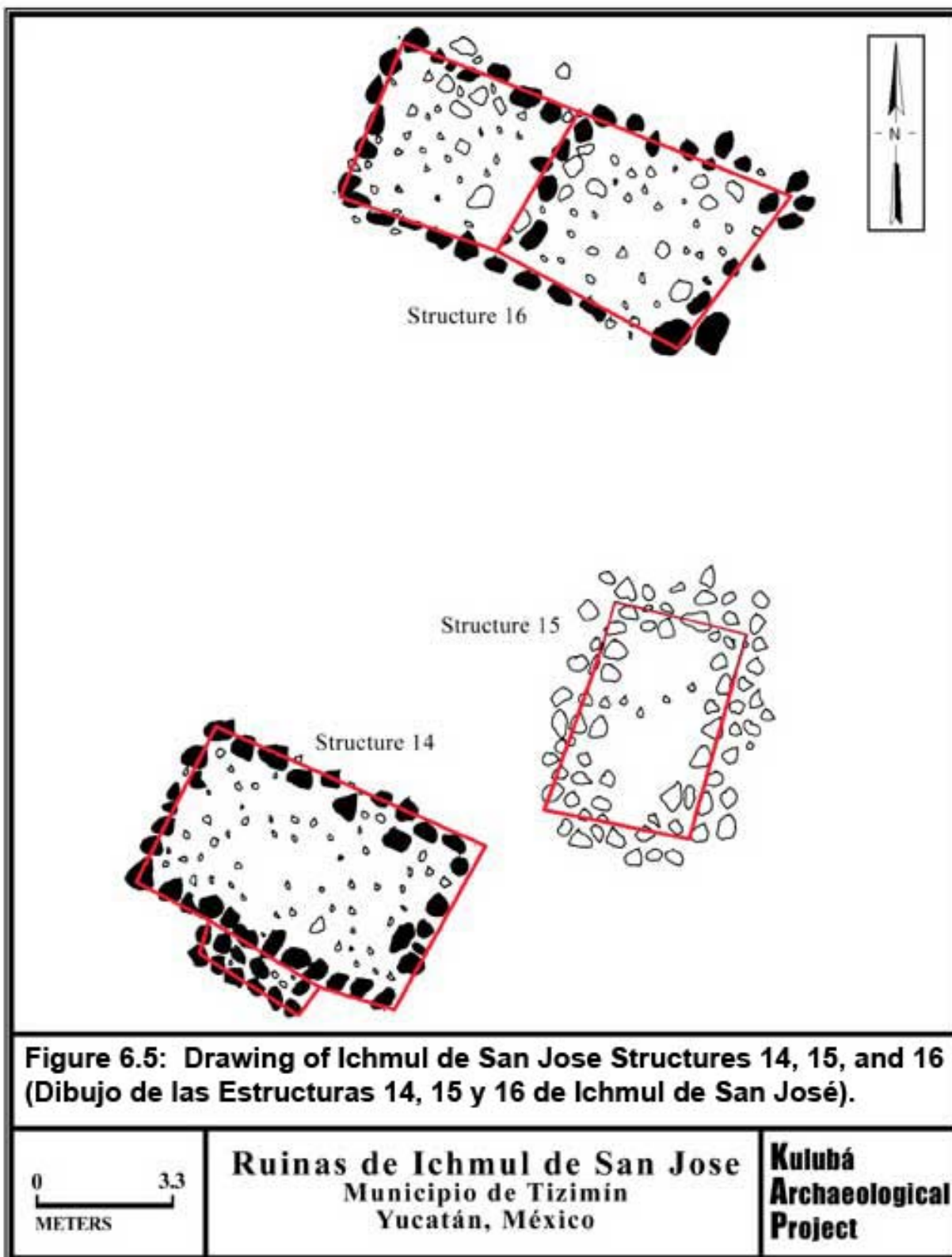


Figure 6.5: Drawing of Ichmul de San Jose Structures 14, 15, and 16 (Dibujo de las Estructuras 14, 15 y 16 de Ichmul de San José).



Structure 16

This two-roomed frame brace bounds the north side of the patio shared with Structures 14 and 15 ([Figure 6.5](#)). Its SE corner is 7m N of Structure 15's NW corner. Its overall dimensions are 10m E-W x 4.2m N-S. An interior divider runs down the center of the structure, forming west and east rooms. While no door jambs were found, it seems likely that the house faced south, towards the patio.

Area: 42m²
Volume: 8m³

Structure 17

Structure 17 is a nearly square basal platform (11.9m E-W × 12m N-S) that is 50cm in height. It consists of platform rubble although traces of megalithic retaining walls can be seen along the south, east, and north edges. A curious L-shaped arrangement of megaliths is atop the platform—it might be the foundation of a megalithic house or, less likely, an old retaining wall from a substructure. The short side of this L-shape begins near the SW corner of the platform and runs N for 3.7m and then turns E for 4.9m until it abuts the superstructure. This superstructure covers the entire eastern side of the platform. It is 12m N-S × 3.3m E-W and features a retaining wall all along its front (W) side. The superstructure appears to be the remains of a long building that had at least one interior partition towards its southern end. This divider is 3m north of the southern edge and thus creates a 2m wide room south of the divider and a 10m wide room north of it. Two *metates* were recorded on Structure 17: one on the platform near the west edge and the other is off the platform, 3m west of the first.

Area: 140m²
Volume: 62m³

Structure 18

This megalithic house seems to be paired with Structure 19 as the two are about 10m apart and face one another. Structure 18 features a megalithic foundation (6.3m E-W × 4.1m N-S) that pens in solid *chich*. Centered on the northern side of the house is a step extension that is 4.4m wide (E-W) and 1.8m deep (N-S). This step suggests that the house faced north.

Area: 32m²
Volume: 6m³

Structure 19

This two-roomed frame brace has a megalithic step on front of it that indicates the house faced south. The house is 3.1m deep (N-S) and is divided into two rooms: the west room is 4m wide and the east is 3.7m wide. Some 2.2m in front (S) of this foundation is a megalithic step that is 7.3m long. The easternmost megalith in the wall is 1m × 40cm × 60cm. Two *metates* were recorded here, one southwest of the west edge of the megalithic step and the other north of the NW corner of the house foundation.

Lot Number: 04101
Area: 26m²
Volume: 5m³

Structure 20

Structure 20 is a rectangular platform that supports a single superstructure. The basal platform is 17.1m E-W × 14.6m N-S and averages about 80cm in height. The NW corner marks the highest point of the platform while the platform rubble tapers out to ground level near the SE corner. Most of the platform consists of heavy rubble but a few megaliths were found along the eastern side near the NE corner. A single superstructure is found on the basal platform and it was built along the west side of it. It is a two-roomed foundation that is 3.3m (E-W) deep. The interior divider bisects the rectangular house into a north room that is 4.5m wide and a south room some 4.9m wide. The back wall of the house is largely destroyed and has fallen down the slope of the west platform edge. Three *metates* were found on Structure 20: one a few meters east of the north room, one near the south edge of the platform, and the third less than a meter from the platform's SE corner.

Area: 248m²
Volume: 162m³

Structure 21

This small structure may very well be an outbuilding of Structure 20. It is square-shaped accumulation of rubble that measures 4.2m N-S × 3.2m E-W. It was obviously a house built directly on bedrock. The fact that a 3.4m-long retaining wall step is found 3.3m W of the foundation suggests that this small building faced west, towards Structure 20.

Area: 14m²
Volume: 3m³

Structure 22

Although the basal platform for this structure is relatively small (19.7m N-S × 13.8m E-W × .8m high) it supports three packed-in superstructures. The platform is built on the south side of an *altillo* so most platform rubble is on the southern edge while the north end grades into the natural terrain. Beginning at the SE corner of the platform and running 6.3m northward is a stretch of megalithic retaining wall. A jumble of megaliths on the west side of the platform arguably looks like the remnants of a stairway. If this is in fact a stairway, it is about 2.6m wide. The first superstructure is found along the south edge of the platform. It is a two-roomed house fronted by a megalithic terrace. The line of megaliths is 6.9m long and is offset from the front of the house some 1.1m. The house consists of a distinct rubble outline and is 3.6m deep. A divider running N-S through the house separates the interior space into a 3.1m wide west room and a 3.3m

wide east room. The second superstructure is along the north side of the platform. Like the first superstructure, it is a two-roomed house. It is 3.8m deep with its west room some 3.8m wide and its east room 2.6m wide. The west room is relatively clear of heavy rubble and instead has small *chich*. Meanwhile, the east room is filled with solid rubble. No door jambs were noted but this house most likely faced south onto the platform. The third superstructure is only 1.4m west of the second. It is a single-roomed foundation measuring 4.1m N-S × 3.2m E-W. The room seems unusually crammed onto the structure between the platform's west and the second superstructure. The lone *metate* mapped on Structure 22 was found 1.1m E of the third superstructure's NE corner.

Area: 241m²
Volume: 153m³

Structure 23

Structure 23 is a single-roomed house that was built directly on bedrock. It measures 4.8m N-S × 3.9m E-W. The stones here are small rubble (no megaliths) and there is a lack of wall lines or jamb stones.

Area: 19m²
Volume: 4m³

Structure 24

This structure is 3.9m E-W × 3.1m N-S and is about 30cm in height. It appears to be the remains of a single-roomed house. The rubble lacks any architectural details.

Area: 12m²
Volume: 2m³

Structure 25

Found 6m S of Structure 24, Structure 25 is virtually identical to its neighbor. It measures 3.8m E-W × 3.6m N-S and is the foundation of a single-roomed house. Like Structure 24, it lacks any *in situ* wall lines.

Area: 14m²
Volume: 3m³

Structure 26

This rectangular structure features a basal platform measuring 14.9m N-S × 6.6m. The rubble stands 50cm high and does not feature any intact retaining walls. One superstructure is found on top of the platform. It is found along the north side of the platform and is a rectangular rubble outline (4.5m E-W × 3m N-S). This is probably the remains of a house that had perishable walls and roof.

Area: 96m²

Volume: 38m³

Structure 27

Structure 27 is an enigma. When we started our fieldwork at Ichmul de San Jose, our local work crew alerted us that there was a *nohoch mul* ("big mound") in the heavily wooded ranch adjacent to where we were working. We only had time to visit the structure for an hour or so and make a rudimentary sketch map. We used the GPS to tie in the location of Structure 27 with our main map. What makes this structure unusual is that it dwarfs any of the structures at Ichmul de San Jose's site center. We had a tape and compass while we were sketching and thus our measurements of the mound are relatively accurate. A substantial basal platform some 2m in height supports two large superstructures, one on either end. On the north end of the basal platform is a rubble mound that rises 4m off the platform and creates a leveled-off upper surface 15m E-W × 5m N-S. The superstructure on the south end of the basal platform is even larger than the first. This is a pyramid that rises 6m off the basal platform (giving the structure as a whole a maximum height of 8m from the top of the southern superstructure to the ground) and comes to a small square-shaped upper surface (5m × 5m). We did not notice any standing architecture but the structure was found in *monte alto* that provided less than desirable visibility. How this huge structure relates with the site center some 220m to the east is perplexing. It could be that "real" site center is entirely concealed in the forest, save for Structure 27, and the civic buildings we mapped in the ranch are actually an outlying civic group. Another hypothesis is that Structure 27 predates the site center and these smaller civic buildings were built in the shadow of an older civic structure. At this point we tend to favor this latter hypothesis. We know that the Pure Florescent stone work and slateware ceramics indicate that the site center we mapped was occupied in the Late/Terminal Classic. While we did not collect any ceramics at Structure 27, no finely cut stone was observed. Our visual inspection of the structure reminded us of the large civic buildings we mapped at Santa Monica that we have tentatively dated to the Late Formative/Early Classic. Only a more thorough exploration of the forest to the west of the ranch we mapped can begin to resolve the puzzle presented by Structure 27.

Area: 2,450m² (estimate)

Volume: 6,703m³ (estimate)

Conclusions

As this report is primarily concerned with presenting the raw data that the Kulubá Archaeological Project acquired, conclusions presented here should be considered preliminary. Perhaps the biggest surprise in terms of field conditions was the dearth of surface artifacts. This meant that establishing a ceramic chronology for the sites rather difficult. It also rendered many of the ideas on how portable artifacts might pattern in different scenarios of Chichén presence in the area moot. The lack of evidence means these arguments must be temporarily shelved. Thus our analyses and interpretations are based on the surface mapping we successfully carried out. Since the principal architectural groups of Kulubá have been mapped and published (Barrera Rubio *et al.* 2001), comparisons between this site and the ones we mapped are based mostly on attributes of civic centers.

Chronology

The attempt to sketch out a preliminary chronological framework for the Kulubá region is based on the collected surface ceramics and stylistic attributes of the intact architecture we mapped. Surface potsherds were rare and, when found, small and eroded. Nevertheless, we were able to make some preliminary observations on the sherds we found using the standard set of references for northern lowland pottery (Brainerd 1958; Robles C. 1990; Smith 1971). Time did not allow for a full analysis of the ceramics and we must wait until they are fully analyzed before more elaborate discussions of chronology can be made.

The few diagnostic pieces of pottery we found at San Pedro point to a Late Formative/Early Classic date for this site. Even when eroded, Slateware from the Late/Terminal Classic Period is easily identified. No Eroded Slateware was found in any of our surface collections. A cursory examination of the material led to the identification of Sierra Red, a common Late Formative type. Architectural evidence also points to an early dating of the site. No cut stone, good evidence of Late/Terminal Classic construction and/or Postclassic reutilization, was found associated with any of the 47 structures we mapped at San Pedro.

It appears that Santa Monica dates primarily to the Late Formative/Early Classic period. At Structure 3, large pieces of pottery were collected from the 3m high profile created by extensive quarrying activity. Diagnostic sherds included Huachinango Bichromes and Sierra Red, two types common during the Late Formative/Early Classic. The few examples of standing architecture point to the same period as no Florescent blocks were found. Some megalithic retaining walls suggest a Late Formative/Early Classic occupation as Mathews (1998) has demonstrated that this style of architecture generally dates to this period.

The chronology of Yun Ak is far from clear. The ceramics we collected here were very small and eroded. The collection has yet to be fully analyzed but some slateware and

Postclassic sherds were identified. The only structure that had any kind of intact architecture that might provide stylistic clues was Structure 6. This platform had a megalithic superstructure on it. Two other superstructures lacked both megaliths and cut blocks. The megaliths present hint at a possible Early Classic date but this is certainly not conclusive. Based on the ceramic and architectural evidence, Yun Ak's occupation might span from the Late Formative through the Postclassic.

Like Yun Ak, the chronology for Yokat is uncertain. The ceramics here were even scarcer than at the other sites we mapped. Structure 4 features some cut stone, suggestive of a Late/Terminal Classic date. That one superstructure is [-shaped lends further weight to this chronological placement since Bey et al. (1997) have demonstrated that these structures are generally late. On the other hand, the west side of Structure 9 has some of the largest megaliths we saw during the field season. If the megalithic style can be confidently placed in the Late Formative/Early Classic, then perhaps Yun Ak dates to both this period and the Late/Terminal Classic.

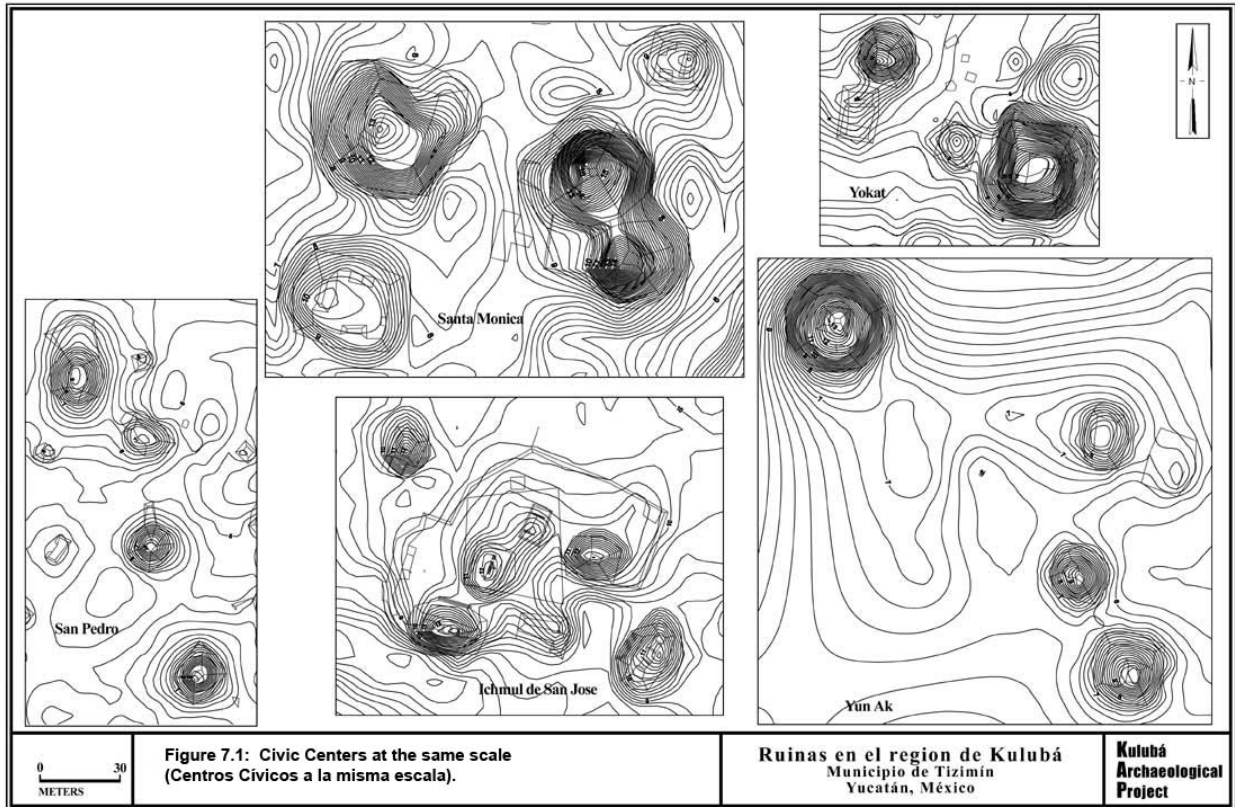
Both ceramics and architecture point to a Late/Terminal Classic date for Ichmul de San Jose. Numerous sherds of slateware were noted in the ceramic assemblage. Several structures have finely cut stone blocks incorporated in them, indicating the Late/Terminal Classic date. Structure 11 has several colonnetes, an architectural ornament common on Puuc style buildings. There is some evidence of an earlier occupation. Structure 12 has a largely intact megalithic retaining wall. Structure 27 is so out of sync with the rest of the Late/Terminal Classic site center that it is tempting to suggest this monumental building was built earlier.

All of the sites mapped in 2001 were at least partially contemporaneous with Kulubá. While Kulubá's main period of occupation was during the Late/Terminal Classic, Barrera Rubio et al. (2001) have documented a ceramic sequence beginning in the Late Formative/Early Classic through the Postclassic period. The available evidence makes it clear that at least some of the sites were probably past their prime when Kulubá rose to regional prominence in the Late/Terminal Classic. If Santa Monica and San Pedro were both primarily Late Formative/Early Classic sites, it appears that Kulubá was able to out-compete these centers as the Late/Terminal Classic began. This left Yokat, Yun Ak, and Ichmul de San Jose as Kulubá's lower-order centers during the Late/Terminal Classic. Overall, we were left with the impression that Kulubá has a lower density of small satellite sites than other polities in northern Yucatán such as Chichén Itzá and Ek Balam (Smith 2000) and those in the Puuc region (Dunning 1992).

Civic Architecture

The analysis of civic architecture in the Kulubá region depends on generic methods such as volumetric calculations and distributional studies ([Figure 7.1](#)). A much-utilized bridging argument in Maya archaeology holds that the volume of a civic building corresponds to its political importance (Garza T. and Kurjack 1980; Turner et al. 1981). [Table 7.1](#) compares the volume of each site's largest civic structure. The surprising

thing that emerges from this exercise is that the main pyramid at Santa Monica is more voluminous than the largest analogous structure at Kulubá. Granted, there are more civic pyramids at Kulubá than at Santa Monica so the total civic volume is greater at the former site. Nevertheless, it is noteworthy that Kulubá does not have a monumental civic building that dwarfs anything found in its lower-order centers. It is also interesting that Santa Monica isn't the only site whose civic volume is comparable to Kulubá: the main civic structures at Yokat and Yun Ak are also quite large.



Another aspect of civic centers that can be compared is plaza area. Civic plazas of the ancient Maya were clearly multifunctional and were almost certainly the location of large gatherings for ceremonial purposes and places where trade and exchange took place. Many authors (Adams and Jones 1981; Turner *et al.* 1981) have also suggested that plaza size is a reliable indicator of a site's political importance. One way the political power of a particular leader can be measured is by estimating the number of followers the leader had. If commoners massed in plazas to attend elite-sponsored events, then the size of the plaza should indicate the potential size of the gathering. Thus, comparing the size of plazas from one civic center to the next can be used to infer the relative number of followers the elite at each center had.

TABLE 7.1 Comparative Civic Volumes	
Site – Structure	Volume (m ³)
Santa Monica – Str. 1	5,949
Kulubá – Str. 10i5*	4,361
Yokat – Str. 1	3,765
Yun Ak – Str. 1	3,518
Ichmul de San Jose – Str. 1	728
San Pedro – Str. 1	416
*calculated using the descriptions and maps in Andrews IV (1941) and Barrera Rubio <i>et al.</i> (2001).	

Turning this argument upside down, Ringle and Bey (2001:276) have suggested that the focus of elite court life may well have been on open plazas instead of within the confined spaces of buildings. In this view, plazas were not necessarily areas where commoners massed to witness state-sponsored events wherein the elite were performing on or inside civic architecture. Instead, civic architecture served as a backdrop for elite activities that took place on the plazas. Thus, the size of a civic center's plaza can be argued to be roughly proportional to the size of the elite group that once occupied it.

[Table 7.2](#) shows that Kulubá has a much larger plaza than any of the sites mapped in 2001. If there is a relationship between political power and plaza area, this exercise demonstrates that this power was concentrated at Kulubá and not more evenly distributed throughout the polity. The plaza at Kulubá's Group C even bests the main plaza at Ek Balam, which measures 9,690m² (Smith 2000).

We are also interested in the arrangement of civic architecture, what Ashmore (1991) calls site planning principles. We were curious to see if there were any "Chichén template" civic plans were present at the sites we mapped. The "Chichén template" consists of main civic pyramids (the Castillo at Chichén) placed conspicuously in the center of plazas (the *Gran Nivelación*). Looking at the site centers of each site, there does not appear to be any cases wherein the main civic structure was placed within the center of a plaza. The only remote possibility for this is at Ichmul de San Jose ([Figure 6.1](#)). Here, Structures 4 and 5 seem to have been built in the center of a large artificial terrace enclosed by Structures 1 and 3. Yet while arguably found within the main plaza, these two structures were obviously not the main civic constructions at the site. It should also be noted that Kulubá lacks the "Chichén template" civic plan. Instead, its major architectural groups, especially Group C, tend to feature civic buildings ringing central plazas.

TABLE 7.2 Comparative Plaza Areas	
Site	Area (m ²)
Kulubá (Group C)	14,310
Santa Monica	4,503
Yun Ak	4,229
Ichmul de San Jose	2,817
San Pedro	1,584
Yokat	1,577
*calculated in maps in Andrews IV (1941) and Barrera Rubio <i>et al.</i> (2001).	

None of the civic builds we mapped appeared to be obvious examples of radial pyramids such as the Castillo at Chichén Itzá. All of them either had clues as to a dominant side such as stairways or superstructures on their summit. The only civic structure for which we obtained stylistic clues is Ichmul de San Jose Structure 11. The numerous colonnetes here indicate that this building was built in the Puuc style. Needless to say, none of the distinct "Toltec" style architecture or iconography found at Chichén Itzá was found in Kulubá's hinterlands.

Domestic Architecture

The domestic architecture we mapped ranged from frame brace houses built directly on bedrock to vaulted houses built on substantial basal platforms. As is the case with the rest of the peninsula, platforms were often built on *atillos*, natural rises in the limestone bedrock. Like the civic architecture we examined, the domestic architecture at our sites was not well preserved. Most residential platforms featured unrecognizable rubble alignments on their surface; *in situ* foundation walls were relatively rare. The ones we did see were usually single-roomed houses. Houses with more than one room were attached laterally in what has been called the "row house" plan. No front-back house plans (or "file houses"), which are common at Chichén Itzá, were found during our residential mapping. Likewise, gallery-patio structures were not found at any of the sites we mapped. We also did not note any tandem plan houses, common at Postclassic Mayapán.

There was a curious lack of *metates* associated with residential platforms. Not one was found at either San Pedro or Santa Monica. It could be that the ancient residents of the

Kulubá hinterlands processed their corn with something other than a *metate*. Another explanation which we feel is more plausible is that ranchers have systematically picked over the ruins on their property and removed metates in order to use them as ready-made water troughs. We spotted several *metates* at the numerous ranches we visited being used in this manner.

The Kulubá Polity and Chichén Itzá

Returning to some of the original research questions that concerned the nature of Chichén Itzá's presence in the Kulubá area, there certainly is no overt and obvious archaeological evidence of a strong Chichén presence here. Not a single column drum was found during the 2001 field season, a strong indicator that there was little or any colonnaded structures in Kulubá's hinterland. The spread of this particular style of architecture apparently spread from Chichén Itzá to Kulubá but not further down the settlement hierarchy.

Re-visiting the models of political control outlined by Ross Hassig (1985, 1992), there is little reason to believe that Chichén employed a strategy of territorial control in the vicinity of Kulubá. Territorial control entails the removal of local elite and the installation of an administrative apparatus from the conquering capital. The fact that there is no Chichén-inspired architecture in the Kulubá hinterlands indicates that local elite had the ability to construct civic buildings in the local styles. The hegemonic model of political control appears to be more relevant for the case of Chichén Itzá and Kulubá. In the hegemonic format, the capital leaves local elite in place. Ties between the capital and hegemonically controlled areas come in the form of tribute payments and elite-level intermarriages. If Kulubá were controlled hegemonically by Chichén, one would expect to see evidence of interaction on the elite level and limited to just the site of Kulubá itself. This situation fits with the available archaeological evidence.

Based on the evidence gathered in 2001, it appears that the site of Kulubá had little in common with its hinterland. Instead, Kulubá seems to be more closely linked to distant Chichén Itzá than it was with settlements a half days' walk away. This pattern can be interpreted using the theoretical framework presented by Richard Blanton and his colleagues (Blanton et al. 1996). In their view, there are two political-economic strategies that the elite may employ: corporate and network. One can critique the reduction of all political-economic strategies into two binary models. Nevertheless, Blanton et al.'s work can serve as a starting point for thinking about how the case of Kulubá can be viewed in these more general theoretical models. To briefly recap the two strategies, in the corporate mode rulers emphasize collective identity and rely on local connections and local production as their primary source of power. In the network strategy, leaders tend to emphasize individual glorification, extra-local connections, and prestige good systems. The apparent dissimilarity between Kulubá and its hinterland and its strong connection to Chichén Itzá points to the network strategy. This suggestion clearly deserves more detailed consideration in the future.

The lower-order sites in the Kulubá region would obviously benefit from further research. In addition to the sites we were unable to work at, clearly there are more sites in the area that have yet to be registered at all. More reconnaissance and mapping of these sites would allow for a more comprehensive comparison of Kulubá with its hinterland. Test excavations would be another logical step for further research to take. Basic ceramic chronologies could be established and more classes of data could be used to test some of the interpretations reached here. While the 2001 Kulubá Archaeological Project represents a major step forward in understanding the Kulubá region, much work remains to be done.

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