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**Palisades and Ditches: Defense and Development of Yaxchilan's Polity**

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**Research Year:** 2007

**Culture:** Maya

**Chronology:** Preclassic to Classic

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## **Excavations at El Kinel, South Group: Operation EK-03A, 2007 Season**

*By: Ana Lucía Arroyave*

### **Introduction**

During the last season (2006) we started excavation work through test pits on structure L9-3, which is located in the south sector of the site which is divided geographically by the so-called "kinel". This structure was seriously damaged by a looter's trench going through the upper part of this structure on its east side. We could see on the surface a mound of roughly 3-4 m in height, of quadrangular shape.

In the previous season we outlined three units, one on the axis (Unit 1), another one to the east following and cleaning the looter's trench (Unit 2), and a third unit to the south of Unit 1 (Pérez and Arroyave 2006: 40). This time we re-opened Unit 1 --since we had not performed the excavation of a feature which apparently pertained to a burial-- as well as Unit 2, in which we had found during the previous excavations human remains pertaining to an adult disturbed by the looters. The main goal for this season (2007) was to recover more remains from this individual (identified as Burial 1 last year), as well as to clean the area of Unit 1 which suggested the presence of another burial.

We will make a general description of the previously outlined units and of those new ones which were necessary in order to define the archaeological features presented below ([Figure 26](#), 3.2).

### **EK-03A-1**

This unit was re-opened and outlined on an axis over the structure, ending up with the following dimensions: 1 m east-west by 2 m north-south. We used a single *datum* located to the south of Unit 1, on a mango tree which was on the structure and was marked at 0.50 m from the mound's surface. That said, Lot 6 was located at a depth of 1.38 m to 1.90 m ([Figure 28](#), 3.4).

#### *EK-03A-1-6*

We started recording from Lot 6. This stratum consisted of a fill that had been somewhat removed previously, with a mud-sand texture of a dark yellowish-brown color

(Munsell 10YR 4/4) where we found 133 potsherds, 14 flint flakes, 12 bivalve shells, and a small bead made of worked shell. Due to the amount of material we suggest this was part of a midden, located on the front of the wall of L9-3-Sub.1, described below (see EK-03A-Unit 5). The material was dated toward the Late Classic (Tepeu 1) with some samples from the Early Classic (Tzakol 3).

#### *EK-03A-1-7*

This lot is located at a depth of 2.24 m from the *datum*, consisting of a fill of the same texture as Lot 6, but mixed with a little limestone gravel which seems to outline an eroded floor. Inside the fill we found as many as 24 potsherds, as well as a flint flake and 15 fragments of bivalve shells. This material was concentrated to the south of the unit where we could go deeper. As well as the previous lot, it seems to be from the Late Classic, although samples from the Early Classic are more abundant.

#### *EK-03A-1-8*

This is located directly below Lot 7. As discussed above, only in the south half of the unit could we go deeper with a test pit in order to know the structure's stratigraphy. This fill consisted of sandy earth mixed with medium-sized river stones (no bigger than 10 cm in diameter), as well as limestone rocks located in the unit's SW corner, the latter of bigger size. There was also carbon. This lot was found at a depth of 2.57 m; from it we recovered 54 potsherds from the Early Classic (Tzakol 3), five flint flakes, 19 fragments of bivalve shells, a possible polisher made of river stone, some wattle-and-daub remains, and a small fragment of stucco with a flat side --apparently part of the façade of a wall.

#### *EK-03A-1-9 (Burial 10)*

In this unit we found part of a limestone cist pertaining to a burial, which was designated Burial 10 ([Figure 30](#)). The cist is made of limestone, covered with flat slabs with an approximate orientation of 320° N.

Upon doing the complete extension to uncover the burial, part of the burial was found in Unit 7 as well (to be described below); we also saw that the burial was disturbed by the Maya, since this was a sealed context and we noticed that part of the cist was missing, therefore, it was obvious that there would be some missing bones. Upon lifting the slabs we proceeded to clean the bone remains, once this step was finished we confirmed our suspicion that there would be missing bones: shinbones, fibulae, and whole feet. Curiously, the individual did have the rotulas, which means that it had been lifted with care by the ancients.

Burial 10 pertains to an adult individual, which was found in very good state of conservation, being able to observe each and every one of his or her parts. The individual was found in supine position with the arms flexed over the chest, with an east-west orientation. An offering of a tripod dish was found upside down over the individual's

face. It is difficult to date this dish, because there are no materials around it and the chronology is therefore not clear. The dish is polychrome orange without cream base, it has reddish paste and curved-divergent walls with a small basal flange and conical hollow supports. The thing is that it could belong to a very early stage of the Late Classic (Tepeu 1) or it could even be from the Early Classic, if it is associated with the previous lots.

### **EK-03A-2**

This unit was outlined during the 2006 season, taking advantage of the excavation since this was a looter's trench with the same direction as the structure's axis. From this point the looters disturbed what appeared to be a burial because we still could recover human bones. We decided to re-open the unit in order to clean it more thoroughly and to recover more remains. Its dimensions on the east-west axis are 2 m and 1 m on the north-south axis. This is directly to the east of Unit 1.

#### *EK-03A-2-4*

From Lot 4 on we considered the context to be more reliable, although there still were parts with disturbed earth. Twelve potsherds were recovered, which probably belong to the Late Classic. This lot had a depth of 1.55 m from the *datum*.

#### *EK-03A-2-5*

At a depth of 1.71 m we saw human remains which certainly belonged to a burial disturbed by looters. This is to say that this stratum had been altered. We obtained 11 potsherds from the Late Classic, five bivalve shells, and one fragment of obsidian blade.

### **EK-03A-4**

This unit was outlined to the southwest of Unit 2, to the southeast of Unit 1, and to the northeast of Unit 3, which was excavated last year. Its dimensions were 1 m x 1 m ([Figure 31](#)).

#### *EK-03A-4-1*

Lot 1 consisted of the material that was recovered from the humus or surface, which is very altered by agricultural activities constantly performed over L9-3. We recovered the amount of 170 potsherds dated toward the Late Classic and/or Tepeu 2, three flint flakes, and two fragments of obsidian blades. This lot had a depth of only 0.05 m.

#### *EK-03A-4-2 (Burial 7)*

Upon picking up the potsherds Burial 7 appeared in a fill of mud-sandy earth or humus (Figure 32, Figure 33). Regrettably the long bones were not preserved, just some teeth and skull bones. Through them it was determined that this was an infant. The depth was 0.64 m from the *datum*. Four vessels were found on top of the teeth; because of their *in situ* position we assumed that they were placed upside-down. The head of the individual was oriented toward the north, but we don't know in what direction the body was placed. Among the vessels two monochrome tripod dishes were found, with a basal flange with impressed decoration, and divergent walls, as well as a jar with outside thickened rim and a small bowl. This burial was dated toward the last stage of the Late Classic. Around this burial we recovered 49 potsherds with ceramic groups and types which are similar to those from central Petén, although there are some types from the region and similar to the ones found in Piedras Negras.

#### *EK-03A-4-3*

At a depth of 1.16 m from the *datum* we recovered 71 potsherds from the Late Classic and four flint flakes. This material was in a fill of mud-sand earth of a dark yellowish-brown color (Munsell 10YR 4/4).

#### *EK-03A-4-4*

The maximum depth recorded for this lot is 1.66 m. This is a fill of mud-sand earth mixed with limestone gravel, surely this was a floor covered by stucco, but due to the terrain's constant humidity it was degraded. In this fill we found 113 potsherds dated toward the Late Classic (Tepeu 1).

#### *EK-03A-4-5*

This lot was defined as a midden on account of the presence of plenty of material, just on top of the wall of L19-3 Sub.1, exactly to the east of the same. We found 106 potsherds of Tepeu 1 and a conch shell, among a fill of compact earth with limestone gravel.

#### *EK-03A-4-6*

We went a little further down after withdrawing the potsherds from the midden, recovering 52 potsherds more from between the brown earth with compact consistency, therefore the potsherds are linked to the midden, and are dated toward the Late Classic and part of the Early Classic.

#### **EK-03A-5**

This 1 m x 1m unit is located to the west of Unit 1. It was outlined in order to follow the wall found in Unit 1, which we initially thought was a stone alignment pertaining to a cist, but it turned out to be part of a wall in an earlier stage of L9-3.

#### *EK-03A-5-1*

Lot 1 consisted of humus of a brown color (Munsell 10YR 4/3) of a mud-sand texture and very fertile, the stratum is almost 0.20 m thick. We recovered 15 potsherds from the Late Classic.

#### *EK-03A-5-2*

This included 56 potsherds and two flint flakes, found in a stratum of dark yellowish-brown earth (Munsell 10YR 4/3) of compact consistency, although it has a mud-sand texture. Among the mixture we saw river gravel and some limestone rocks in the unit's north profile, perhaps forming part of the architecture of the structure's last stage. This stratum had a depth of 1.15 m from the *datum*, with a thickness of 0.13 m. The pottery was dated toward the Late Classic (Tepeu 2).

#### *EK-03A-5-3*

This lot had 36 Tepeu 2 potsherds, in a stratum of compact earth of sandy texture mixed with small river stones. The color of the stratum is dark yellowish-brown (Munsell 10YR 4/3) with a thickness of 0.10 m at a depth of 1.35 m.

#### *EK-03A-5-4*

This is a stratum of compact, dry earth of sandy consistency mixed with limestone gravel of a dark yellowish-brown color (Munsell 10YR 4/3) with a thickness of 0.45 m at a depth of 1.57 m. We recovered 72 potsherds, six flint flakes, one lithic polisher, a fragment of bivalve shell, three animal bones, and an obsidian blade fragment. This material seems to be earlier than the one from previous lots; it could be placed in the Tepeu 1 phase or possibly Tzakol 3 or Early Classic.

#### *EK-03A-5-5*

This lot pertains to the wall of L9-3 Sub.1 (Figure 27). This wall was found at a depth of 1.31 m to 1.97 m from the *datum* (0.50 m). This is a masonry wall without a formal façade, the limestones were slightly cut or even uncut, but they were placed on top of each other forming a wall with three rows reaching a height of 0.60 m with a total length of 3.40 m and an orientation of 300° from the north.

We saw a possible disturbance made by the Maya, associated with the alteration that was also suffered by Burial 10. This consisted in part being destroyed, but the stones that formed part of it were placed somewhere else. It is as if in order to enter this space they removed stones from the wall instead of entering from above. This is to say that the burial was introduced inside the ancient platform of L9-3. This is confirmed because the wall starts from the same level of the burial and has the same orientation. Therefore, we could suggest that the structure's exterior façade was the south part of the wall. We found a concentration of potsherds, which is not numerous but remarkable, especially of

utilitarian ware, as well as a conch shell, at the end of the wall on its east side (see EK-03A-4-5).

#### *EK-03A-5-6*

Dark yellowish-brown earth with a mud-clay compact texture mixed with limestone gravel, with a thickness of 0.11 m to a depth of 1.99 m. We recovered 38 potsherds, three flint flakes, two shells, and an obsidian blade fragment. This material also seems to belong to the Early Classic, although there are some examples from the Late Classic.

#### *EK-03A-5-7*

This lot pertains to L9-3 Sub. 1, it is the part of the wall that was replaced after being disturbed and is at the same level as the wall, it even still has two rows, that is to say one stone on top of the other, which were picked up together.

#### **EK-03A-6**

This unit is 1 m north-south by 0.50 m east-west. It was outlined from the fact that in the west profile of Unit 5 we saw human remains, for this reason we decided to extend the unit toward this direction ([Figure 34](#)).

#### *EK-03A-6-1*

This pertains to the material recovered from the humus stratum. We collected nine potsherds dated toward the Late Classic and a fragment of obsidian blade. This stratum had a thickness of 0.09 m.

#### *EK-03A-6-2*

Stratum of loose earth, disturbed by the activities of a gopher. We obtained material at a depth of 1.23 m (*datum* 0.50 m from surface). The color of the earth was brown (Munsell 10YR 4/4).

We recovered 18 potsherds from the Late Classic (Tepeu 2), a fragment of pumice stone, a flint flake, and human remains. The materials were certainly already part of the offering of this burial. We took a sample of earth with specular hematite.

#### *EK-03A-6-3 (Burial 8)*

This lot pertains to Burial 8, previously seen in the west profile of Unit 5 ([Figure 35](#)). This is an infant, which was determined by the teeth. It was found at a depth of 0.85 m from the *datum*, in a stratum of sandy but compact earth of a dark yellowish-brown color (Munsell 10YR 4/3). The burial had an offering, although it had been disturbed by the



gopher's tunnel. As part of the offering we recovered the fragments of three possible vessels, of which only one bowl was complete but quite eroded. Because of its shape it was determined to belong to a date from the Late Classic (Tepeu 2). The dish was of similar decoration to the ones found in Burial 7 (see EK-03A-4-3).

#### *EK-03A-6-4*

These materials were found in a stratum of earth mixed with baked clay, this may be a wattle-and-daub floor, we also saw small remains of limestone gravel. This stratum was quite compact and dry. It was located at a depth of 1.40 m from the *datum* (0.50 m). We recovered 19 potsherds and one flint flake. The material was dated toward the Late Classic.

#### *EK-03A-6-5*

This stratum reaches down to 1.86 m, with a thickness of approximately 0.10 m. We found 28 potsherds, nine flint flakes, a bivalve shell, two obsidian blade fragments, and a bone from Burial 8. The fill is of mud-sand earth with compact parts and wattle-and-daub, as well as limestone gravel. The color of the earth is dark yellowish brown (Munsell 10YR 4/3).

#### *EK-03A6-6*

Compact earth mixed with limestone gravel, we recovered six eroded potsherds which may belong to the Early Classic. This lot was located at a depth of 1.97 m from the *datum* (0.50 m from the surface).

#### **EK-03A-7**

This unit was 1.40 m east-west by 0.60 m north-south ([Figure 36](#)). It was outlined with the goal of extending the cist of Burial 10 described in EK-03A-1-9.

#### *EK-03A-7-1*

This consisted of the humus where 11 sherds were found, which date toward the Late Classic. It had a thickness of 0.10 m.

#### *EK-03A-7-2*

This material was collected from a fill of earth with limestone gravel and several limestones which are a little bigger, belonging to the last building stage of L9-3. This had a depth of 0.79 m and a thickness of around 0.10 m. We collected 32 potsherds with a date from the Late Classic (Tepeu 2).

### *EK-03A-7-3*

Compact fill of sandy texture mixed with very small limestone gravel. It was located at a depth of 1.67 m with yellowish brown color (Munsell 10YR 5/4). We found 186 potsherds, six flint flakes, and a figurine fragment. The ceramic material was dated toward the Late Classic and Early Classic. Because of the amount of material we suggest this was a midden.

### *EK-03A-7-4*

This is the last stratum of this unit, is the one pertaining to Burial 10. It was found at a depth of 1.97 m. No material was recovered here.

### *EK-03A-7-5*

This pertains to Burial 10, described on EK-03A-1-9.

## **EK-03A-8**

In the north profile of Unit 5 we saw remains of human bones, therefore Unit 8 was outlined, which finally measured 0.50 m on the east-west axis by 1.30 m north-south.

### *EK-03A-8-1*

Dark grayish-brown humus (Munsell 10YR 4/4) of 0.10 m in thickness, at a depth from the *datum* of 0.60 m. We found a human tooth.

### *EK-03A-8-2*

Midden recovered in humus mixed with limestones which very likely were part of the structure's last pavement. The depth over the stones is 0.61 m to 0.82 m from the *datum*. We recovered 169 potsherds dated toward the Late Classic and some examples from the Early Classic.

### *EK-03A-8-3*

Surely this is still part of the midden from the upper level, although it was regarded as another lot because of a slight change in the texture of the earth, which was softer and sandier. The materials are associated to Burial 9. We recovered 22 potsherds from the Late Classic (Tepeu 2). The depth of this lot is 1.25 m.

### *EK-03A-8-4 (Burial 9)*

An infant's skeleton was found at 1.24 m (measured from the skull) ([Figure 37](#)) without an apparent grave. The state of preservation of the bones was relatively good. We saw in its anatomy parts of the skull, some feet bones, ribs, vertebrae, the left humerus, and

long bones from the lower extremities, of which the right one is flexed outward. From the head to the last bone it measures 0.64 m by 0.30 m wide. The head was oriented to the east with the feet to the west and the face probably upward. It was found in a dorsal decubitus position.

As part of the offering we recovered a bowl with negative orange-on-cream decoration, dated toward the Late Classic. The offering was found on the chest of the infant. A great tuber root that grew over the body disturbed the offering. Under the burial a midden was found as part of the burial. The infant was placed on a layer of potsherds and other materials. This feature is very similar to the one found during the 2003 season in EK-03B-Burial 4 (Pérez and Arroyave 2006: 46). We found 183 potsherds dated toward the Late Classic (Tepeu 1) and some examples from the Early Classic.

#### *EK-03A-8-5*

This pertains to more materials from the previous midden. We found 24 potsherds from the Late Classic (Tepeu 1). This was regarded as another lot because the texture of the earth was slightly different from the stratum above.

#### **EK-03A-9**

Small test trench at the west of Unit 8, it was outlined with the goal of looking for more bone remains and ceramic materials, because we saw the presence of a possible midden described in EK-03A-8-4.

#### *EK-03A-9-2*

Level 1 was not detected because this level 2 is also part of the humus. We recovered 10 potsherds from the Late Classic.

#### *EK-03A-9-3*

Fill in which we found 11 potsherds from the Late Classic and an animal tooth.

#### *EK-03A-9-4*

At a depth of 1.40 m from the *datum* we found three potsherds and two small quartz cubes. From the paste and shape the pottery was defined as Late Classic.

#### **EK-03A Ceramics**

From a total of 1,939 potsherds recovered from all units we analyzed 1,370, therefore 569 potsherds were discarded from the analysis (but not from the sample).

This material was separated by excavation unit and stratigraphic level, ending up with the following recovered potsherds: Unit 1: 257 potsherds; Unit 2: 18 potsherds; Unit 4:

607 potsherds; Unit 5: 209 potsherds; Unit 6: 90 potsherds; Unit 7: 228 potsherds; Unit 8: 398 potsherds, and Unit 9: 17 potsherds. Regrettably, because part of the architecture of the mound was not preserved, it is not possible to infer with certainty whether this was the structure's front or rear end. What's certain is that most materials were recovered from the peripheral units, except for Unit 1.

The ceramic analysis was conducted on the basis of the type-variety system, separating the material according to chronology on the basis of ceramic groups, types, and varieties identified. Most of the material is from the Late Classic (Tepeu 2) for those strata not deeper than 1.25 m from the *datum*; from this point down to 1.97 appeared types from the Early Classic, although Tepeu 1 is the most frequent one. We saw no material from the Terminal Classic, but we found some very late materials, such as brown monochrome tripod dishes with divergent walls, and with an incised basal flange (Burials 7 and 8). Utilitarian types like *Encanto Estriado* and *Cambio sin Engobe* are very frequent, above all in jars and water jars, as well as *Tinaja Rojo* and *Máquina Café*. Polychromes were also frequent, mostly of the type *Zacatal Crema Policromo*. It is important to mention that this material is similar to the one from the central Petén rather than to Piedras Negras or Yaxchilán, although some potsherds with negative decoration on cream and orange are similar to Piedras Negras (Santa Rosa Group), but not to any specific type. Among the Early Classic samples were seen potsherds of the following types: *Quintal sin Engobe*, *Triunfo Estriado*, *Balanza Negro* and *Águila Naranja*. Like in the last season, the material seems to behave in the same way, that is to say, there were no diagnostics from the Terminal Classic but rather from the Early Classic, as we saw in this season. It should be noted that we just excavated a small part of El Kinel's south sector, and we can't or shouldn't generalize the history of this site on the basis of a single mound.

## Discussion

It was very difficult to identify purely cultural strata in these earthen mounds of a single color without the existence of preserved floors or walls, although it was possible to see a masonry wall in L9-3 Sub. 1.

This suggests that this type of masonry was also used in the building's last stage, although many of these mounds were dismantled by the modern inhabitants in order to construct the platforms on which their houses rest.

Furthermore, because this land is better suited to agriculture due to the nearby river and the flatness of the terrain, it is very likely that those settlers who were dedicated to agriculture and to activities linked to the river lived here.

This is suggested by the dearth of "special" objects or fine ceramics from the Terminal Classic, therefore it is likely that they continued living in this sector during this time, but without having access to these goods. On the other hand, these settlers could have abandoned the area and by the Terminal Classic other groups arrived to occupy El Kinel's north sector.

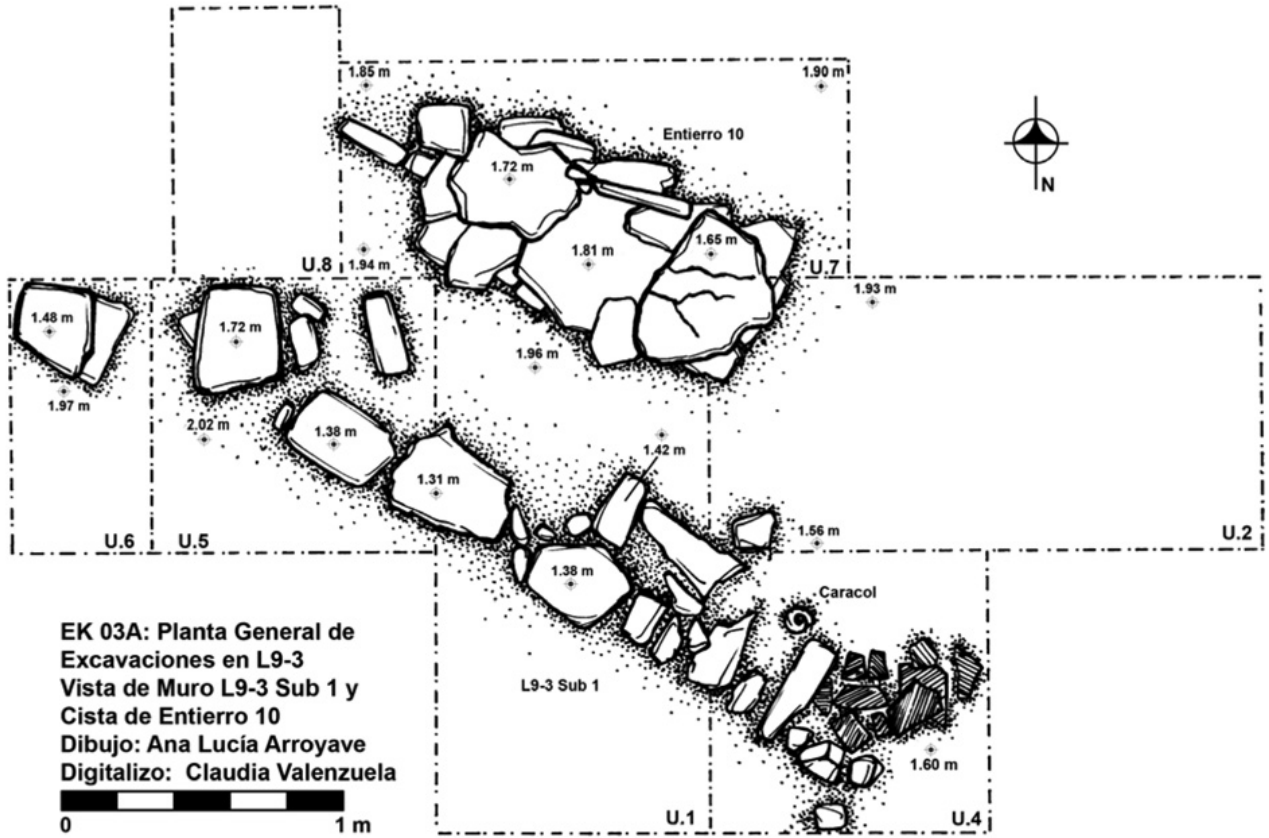


Figure 26. General plan of Operation 3A, excavations in L9-3.

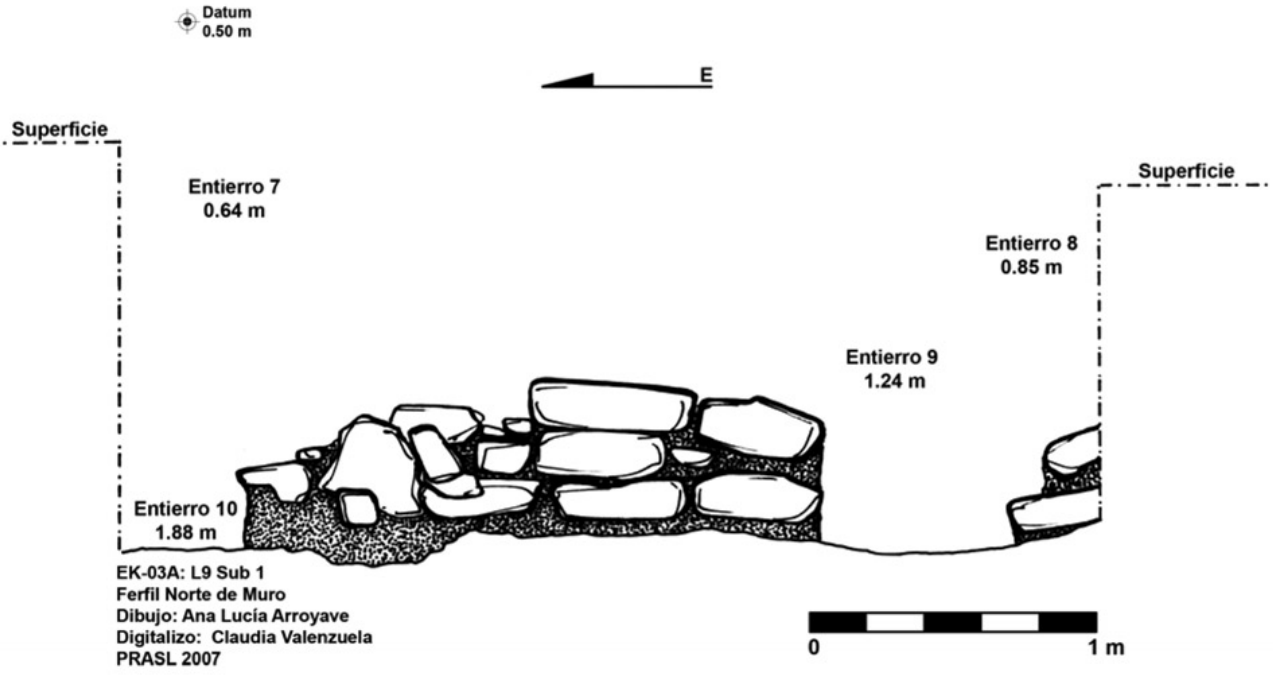


Figure 27. Profile of Operation 3A, looking from L9-3, Sub. 1.

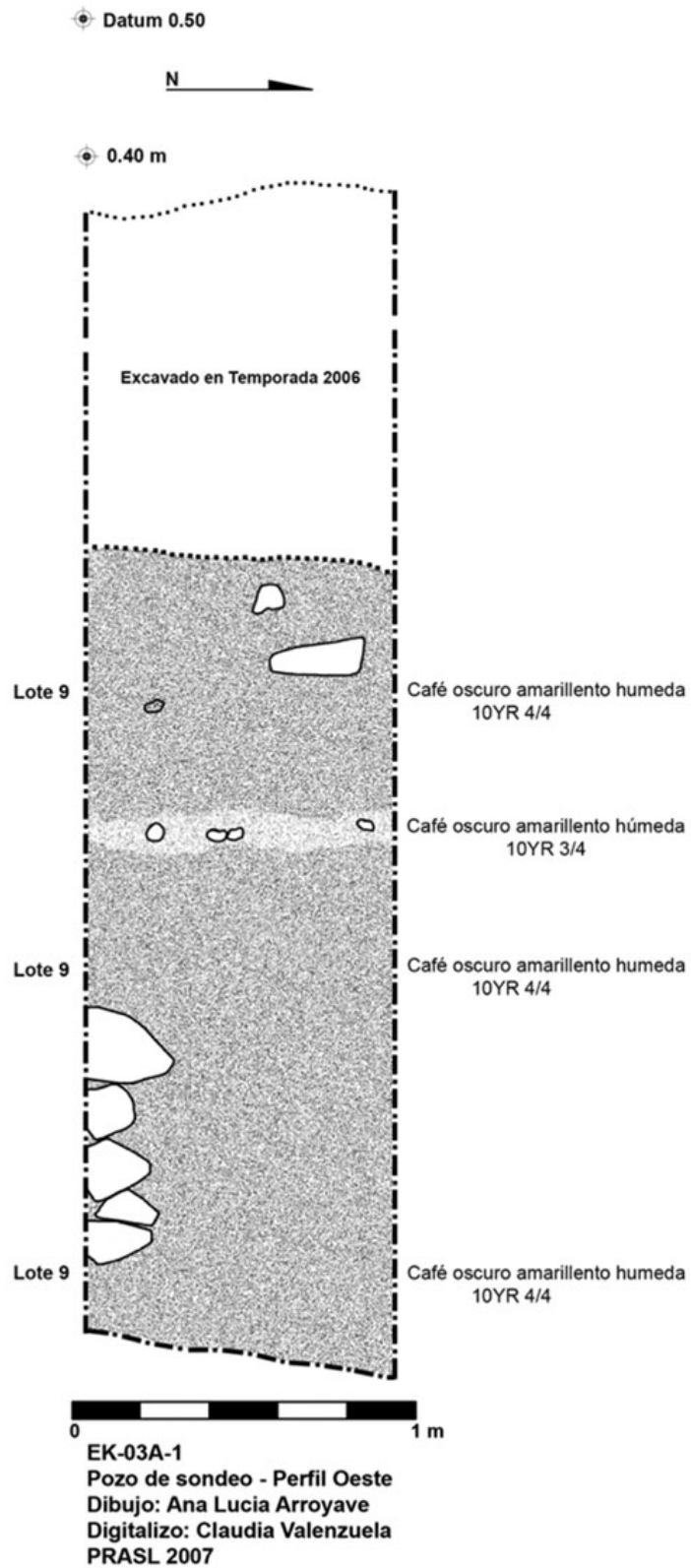
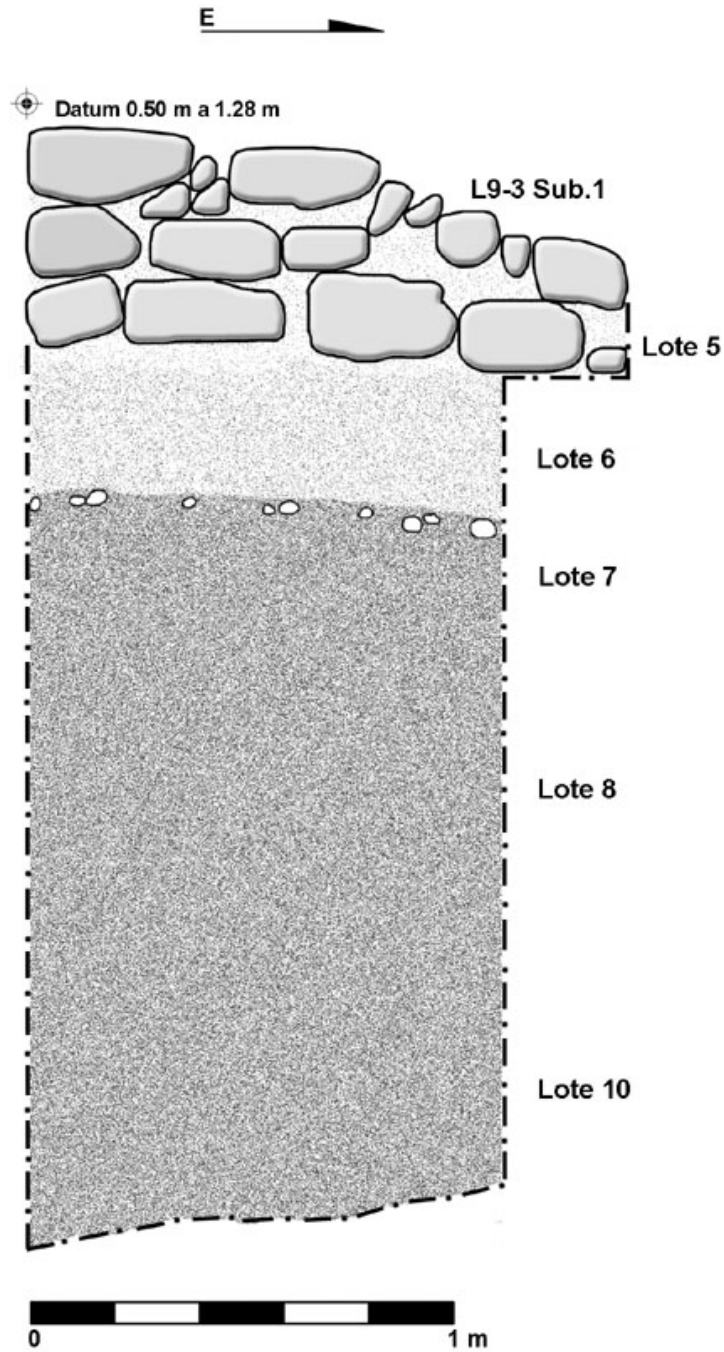


Figure 28. West profile of EK-03A-1.



EK-03A-1  
 Pozo de sondeo - Perfil Norte  
 Dibujo: Ana Lucia Arroyave  
 Digitalizo: Claudia Valenzuela  
 PRASL 2007

Figure 29. North profile of EK-03A-1.



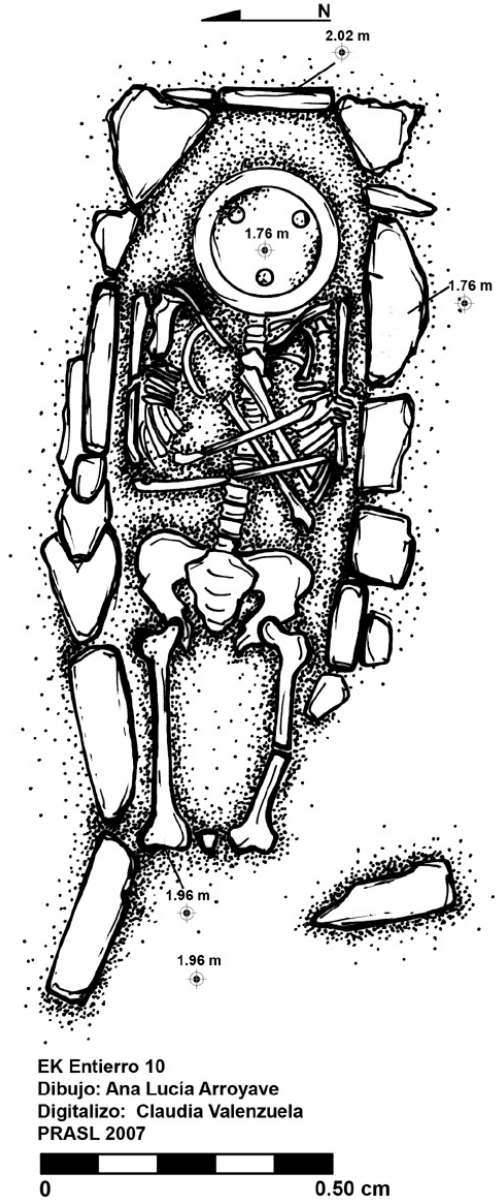


Figure 30a and 30b. Burial 10 EK-03A-1-9 and -5-7).

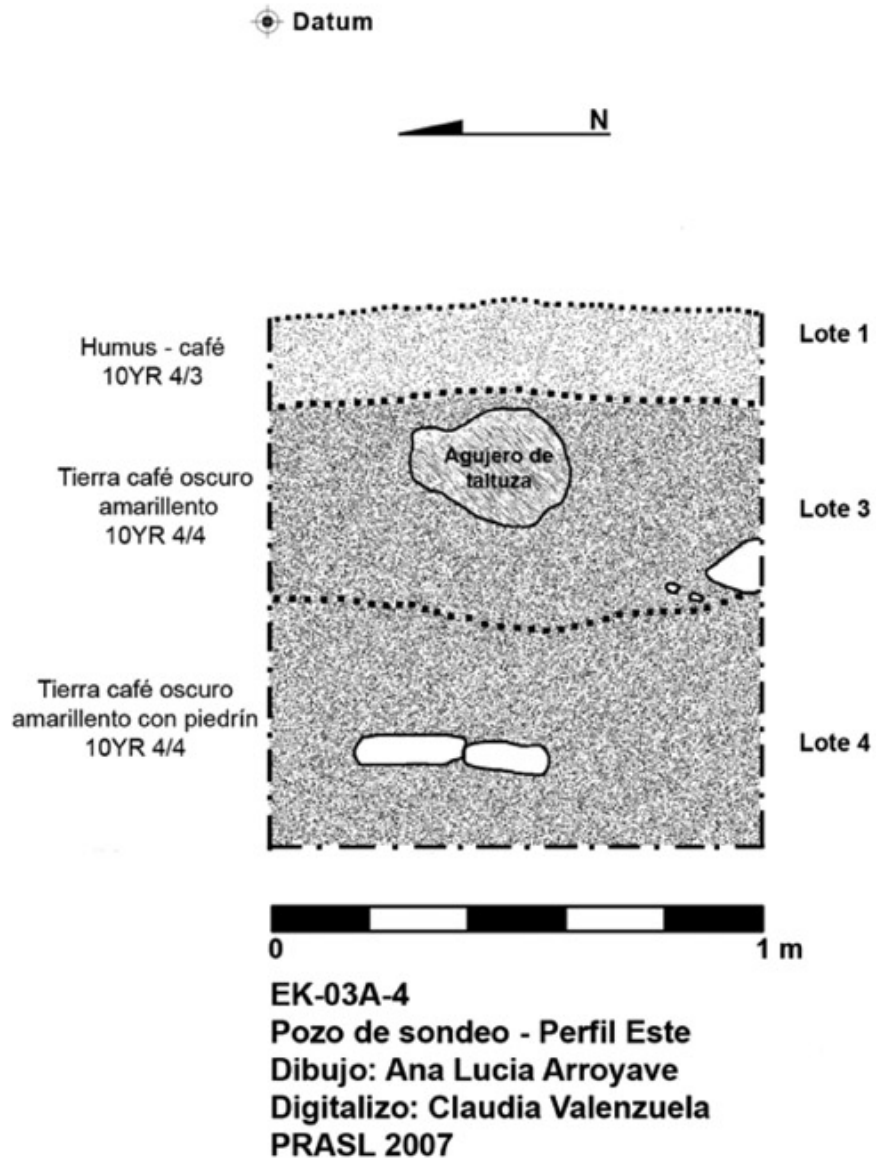


Figure 31. East profile of EK-03A-4.

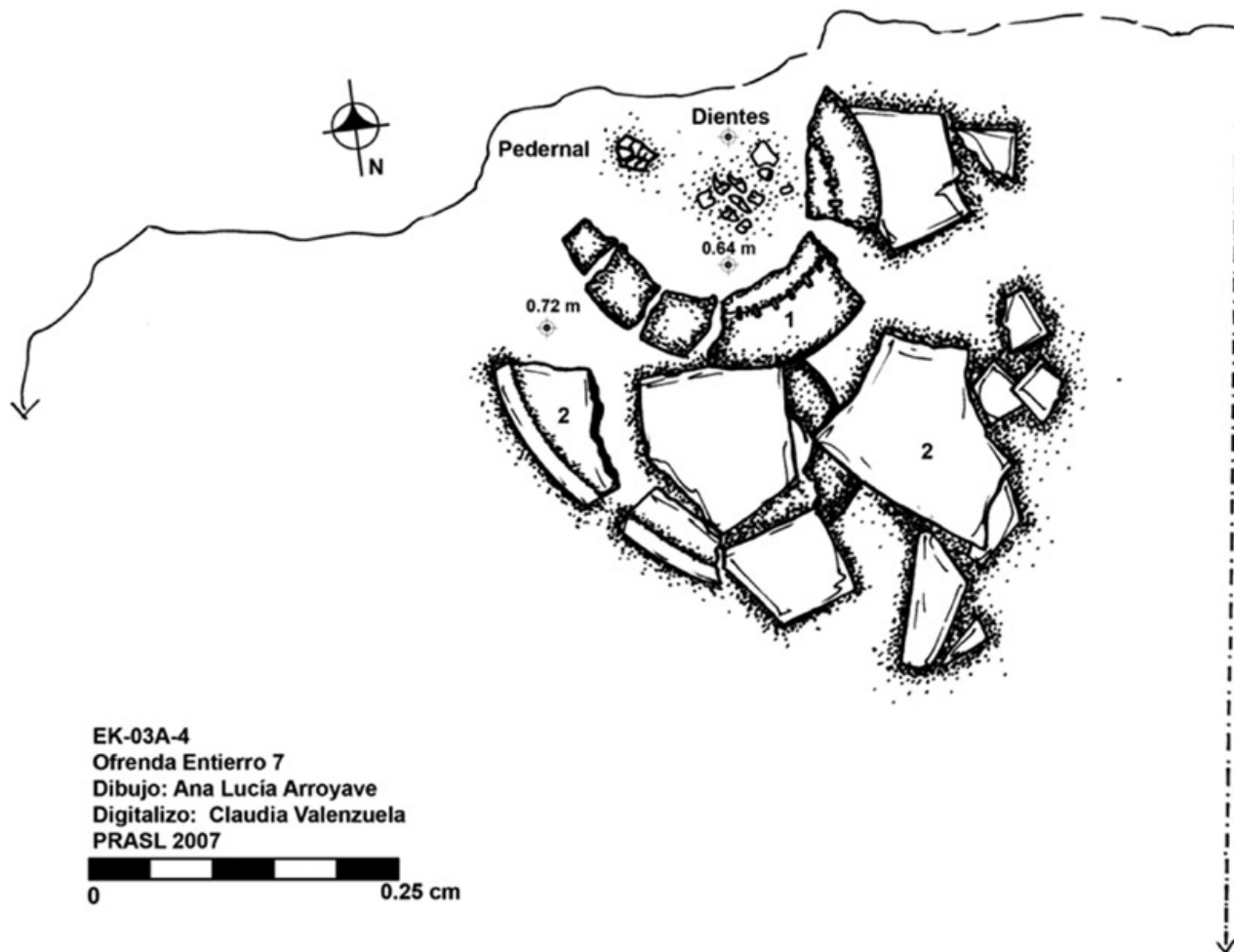


Figure 32. Burial 7 (EK-3A-4-2), view of vessels 1 and 2.

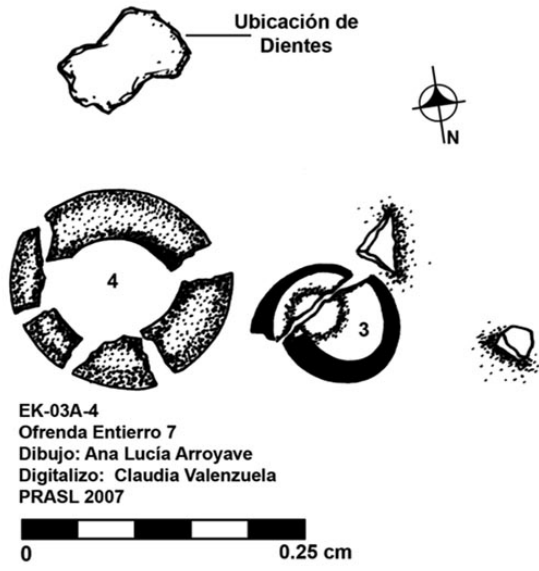


Figure 33. Burial 7 (EK-3A-4-2), view of vessels 3 and 4.

Datum 0.50 m

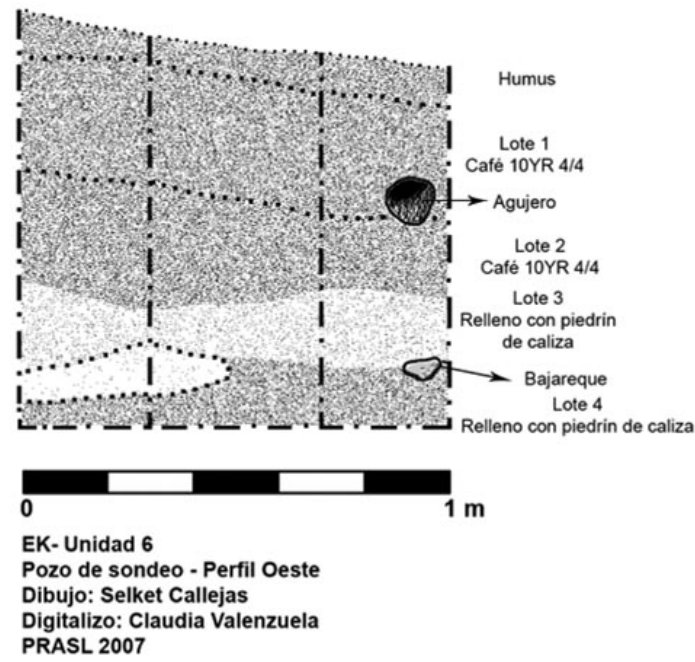


Figure 34. East profile of EK-03A-6.

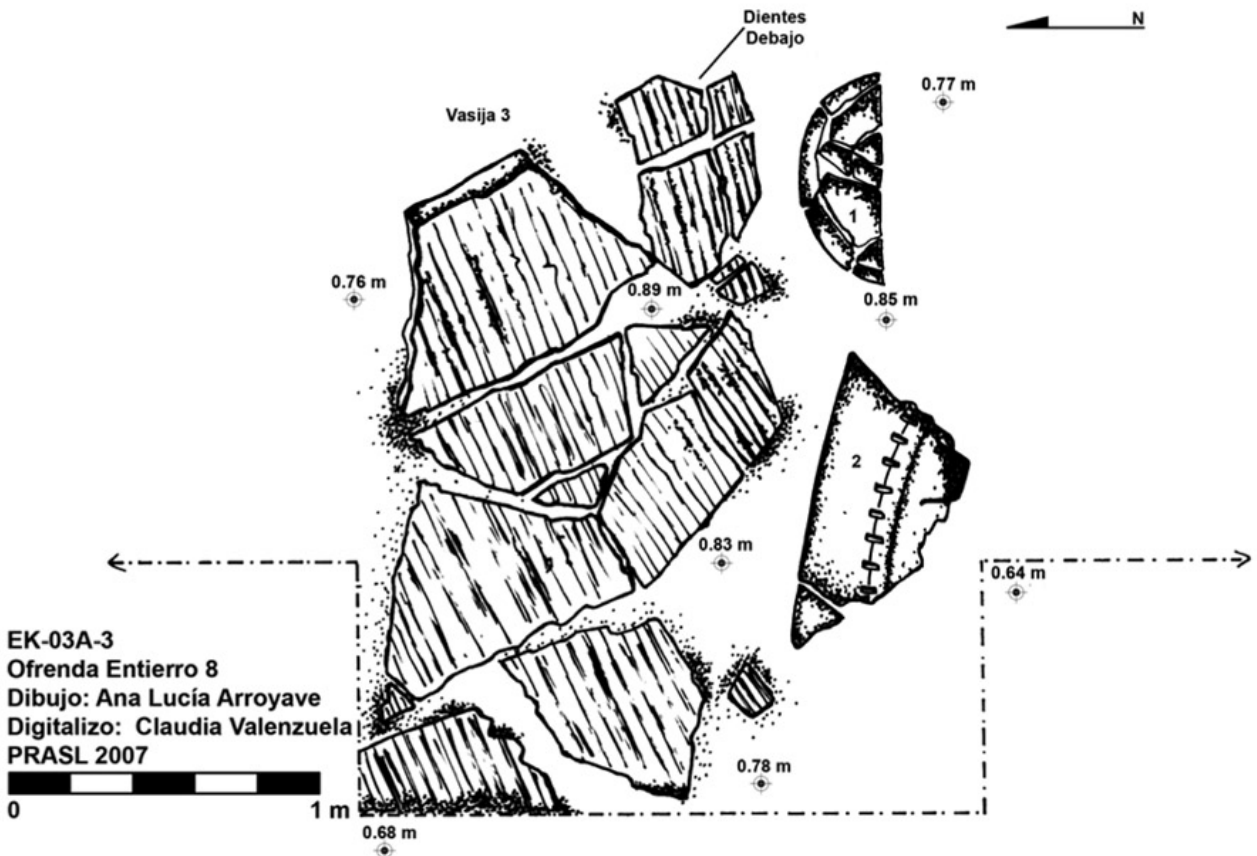
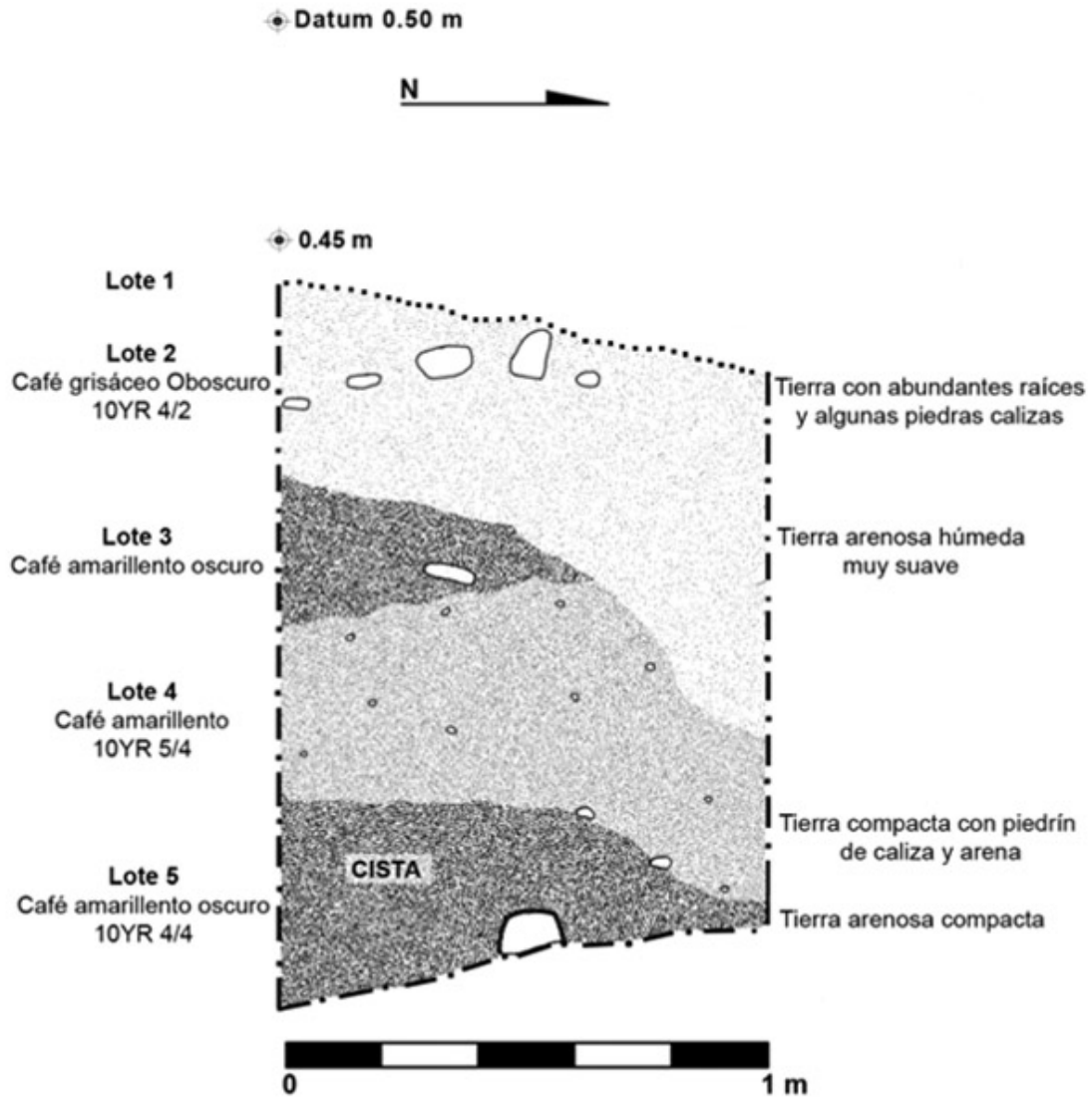


Figure 35. Burial 8 (EK-3A-6-3).



**EK-03A-7**  
**Pozo de sondeo - Perfil Oeste**  
**Dibujo: Ana Lucia Arroyave**  
**Digitalizo: Claudia Valenzuela**  
**PRASL 2007**

Figure 36. West profile of EK-03A-7.

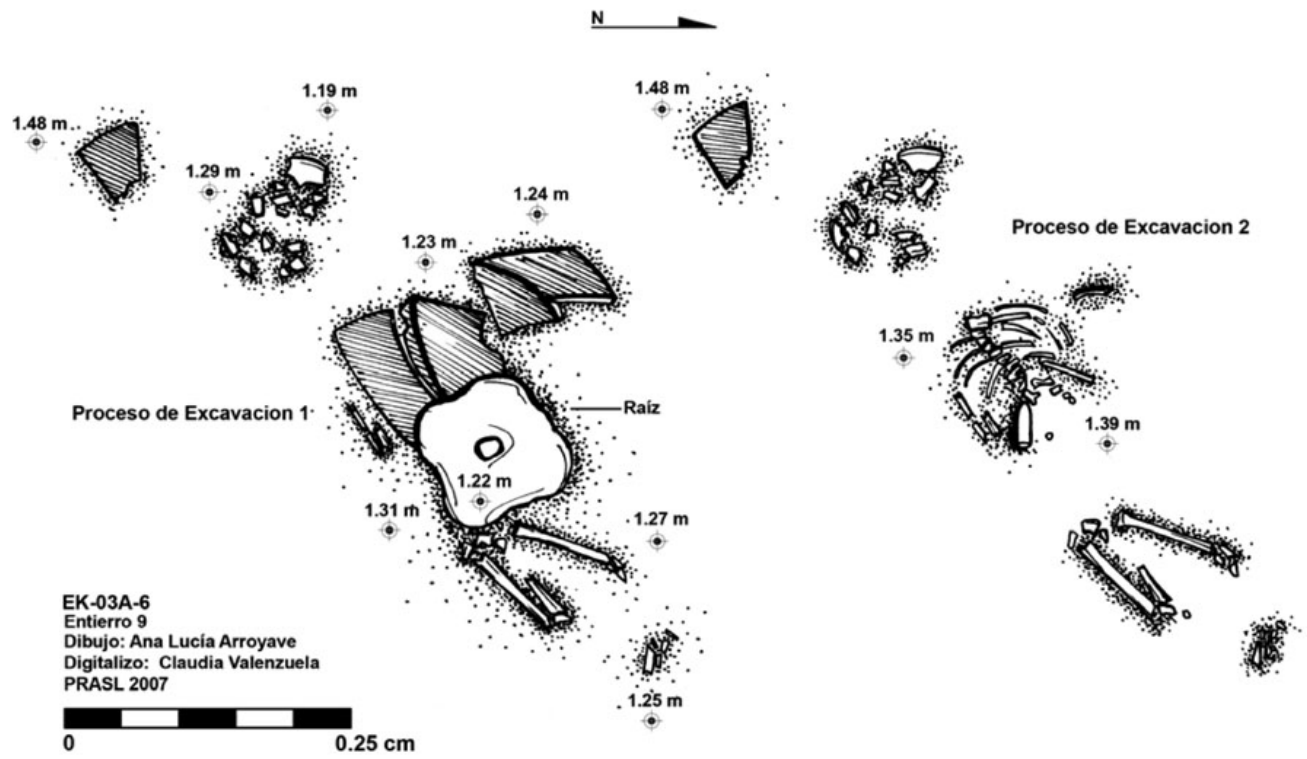


Figure 37. Burial 9 (EK-3A-8/9-4).

## **Excavations on the South Embankment of El Kinel's Canal: EK-04A and EK-7A**

*By Fabiola Quiroa Flores*

### **EK-04A-04 and 05**

The goal of these units was to carry on with the search for post molds on the south embankment on the edge of the canal dividing the North and South sectors of El Kinel. Unit 4 was a 1 x 1 m pit, with an orientation of 334° NW, located to the southwest of Unit 1, while Unit 5 was a trench following Unit 4, measuring 1.1 m (NW-SE) and 1 m (NE-SW) toward the southeast.

Like Units 1, 2 and 3 from 2006, the new units showed the same stratigraphy, that is to say Lot 1 consisted of a very dark gray (10YR 3/1) humus layer of organic consistency and a coarse and loose texture. Lot 2 was a dark grayish-brown soil (10YR 4/2) of very hard and compact consistency, of coarse texture with a mixture of mud and sand, forming big and compact clods. Lot 3 pertained to an olive-brown soil (2.5 Y 4/3) of hard, compact and clayey consistency of coarse texture made up of clay. This is very likely a sedimentary matrix.

In Unit 4, Lot 3, at 0.46 m and close to the east corner of the pit, we found a fourth post mold of 0.15 m in diameter and 0.15 m in depth ([Figure 38](#)). The matrix within the post mold was the same as the one from Lot 2, although it had a very malleable consistency. However, we did not find any other post mold, neither in this unit nor in Unit 5, so we concluded the excavation. Furthermore, except for a very small fragment of animal bone in Lot 3 of Unit 5, we did not find any archaeological artifact.

### **EK-07A-01: Excavations in the G9-2 Structure**

#### *EK-07A-01*

Unit 1 was a 1 x 1 m pit, with an orientation of 282° NW on Structure G9-2, which reached a depth of approximately 1.24 m and had six lots and some extensions. This unit was constituted by a test pit with the goal of better knowing the chronological sequence of El Kinel's North Sector.

Lot 1 pertained to a humus layer of very dark brown color (10YR 2/2) of organic consistency and coarse texture. Five potsherds from the Terminal Classic were recovered, as well as two flint flakes and 22 small wattle-and-daub fragments.

Lot 2 was a brown-color soil (10YR 4/3) of lumpy consistency and coarse texture, with a mixture of mud and sand. We found 74 potsherds from the Terminal Classic, 24 flint fragments, 82 wattle-and-daub fragments, and two obsidian fragments. The lot ended when we found yellowish, sandy patches in the matrix.



Lot 3 was a yellowish-brown soil (10YR 5/6), of compact, sandy consistency and fine texture, a mixture of mud with great amounts of sand, and possibly mica as well. The density of archaeological materials decreased dramatically at the beginning of the lot, but from a depth of between approximately 0.55 to 0.68 m at the northeast, southeast and west of the unit, we found fragments of decomposed, almost pulverized bone, which may have belonged to an individual, although they were so deteriorated that it was impossible to excavate them or to identify them with certainty (Scherer, personal communication, 2007). We also took a carbon sample adjacent to the bone located in the southeast, as well as collecting three flint fragments, one fragment of wattle-and-daub, and 49 potsherds from the Late and Terminal Classic.

Lot 4 consisted of a dark yellowish-brown soil (10YR 4/4) of lumpy, somewhat malleable but compact consistency, of medium texture. It is a mixture of mud, sand and mica. We recovered 19 potsherds from the Late Classic, three flint fragments, and three fragments of wattle-and-daub, including one with reed imprints.

Lot 5 was a yellowish-brown soil (10YR 5/4) of sandy and slightly compact consistency, of medium texture; it is a mixture of mud, plenty of sand and mica. When we started going down on the lot we started finding small groups of amorphous limestones, with no apparent order. We also found one fragment of animal bone, 131 potsherds from the Late Classic, 15 flint fragments, one fragment of figurine, three of wattle-and-daub and two carbon samples. Due to the amount of materials, as well as their nature and the kind of matrix, it is possible that the concentration could pertain to the first layer of a domestic midden ([Figure 39](#)). Against the southwest profile of the pit we found the large fragments of a jar with striated surface and a small stone slab, so we decided to level off in order to extend the excavation and further uncover the feature.

Lot 6 was a matrix very similar to the previous lot, although it is far sandier, soft and loose, of yellowish-brown color (10YR 5/6), which had very little mud, but high amounts of sand and mica. Because of the worked slab and the possibility of finding a burial, this lot was only excavated as a sample and it was finished arbitrarily. We recovered 75 Late Classic potsherds, one figurine fragment and a great amount of turtle shell fragments and other (unidentified) animal bones.

We made a recording of 0.25 x 0.25 m against the southwest profile in order to verify whether the slab found in Lot 5 belonged to a burial, always respecting the stratigraphy of the original pit. Therefore, in Lot 1 we recovered four potsherds; in Lot 2 one worked animal bone, three flint fragments and 22 sherds; and in Lot 3, 27 potsherds and 27 flint fragments.

A little after we started excavating Lot 4 we discovered a whole but broken vessel, inverted and "killed", associated with human bones, so this feature was designated as Burial 12. This is why we decided to open another unit so as to be able to expose the burial.

## EK-07A-02

Extension of Unit 1 on its southwest side, we excavated a pit of 0.75 m (NE-SW) by 2 m (NW-SE) which because of lack of time (the field season was about to end) and due to the fact that we already knew the structure's stratigraphy, was excavated in a single lot until we reached 0.62 m below *datum*, above the level in which the burial's vessel was located. During the excavation we noted the remains of an extremely destroyed wattle-and-daub wall running at 200° SW, over the building's longitudinal axis, and very close to the surface of the terrain, resting directly on the burial. From this lot we recovered 57 potsherds from the Terminal Classic, one obsidian fragment, 34 fragments of wattle-and-daub, and five flint fragments. We also took a carbon sample from the wattle-and-daub remains.

### **Burial 12 (EK-07A-02-02)**

This burial did not show any formal construction to house it, although near the individual's lower extremities we found some roughly-cut limestones and two grindstone fragments, one made of limestone and one of basalt, which could pertain to a collapsed wall from the dwelling, or to the remains of an informal or partial cist. In any case, these were not arranged in a formal way, but rather they were found dispersed among the lot's matrix. Another possibility is that the cist was dismantled in ancient times, since the wattle-and-daub wall which went across the burial seemed to be later than the burial event.

The individual in Burial 12 ([Figure 40](#)), was placed at 280° NW, following the normative axis of Structure G9-2, in an extended dorsal decubitus position with the arms extended beside the thorax, the head in the southeast with the face looking upward. The legs were fragmented and it would seem as if some kind of disturbance may have altered their original position, although the left leg was found extended and very likely the right one as well, but this was hard to ascertain. The individual was accompanied by a "killed" tripod dish, placed upside-down over the skull, as well as a tooth from a mammal, possibly a cat or a dog (Scherer, personal communication 2007) associated with the right hand. The vessel was dated toward the Late Classic (Arroyave, personal communication 2007).

The soil in the burial was of a dark yellowish-brown color (10 YR 4/4), of lumpy but malleable consistency, and of medium texture. From Lot 2 we collected a broken (but complete) tripod dish, one carbon sample from near the individual's pelvis, three soil samples (two beside the left femur and one under the vessel on the individual's skull), two grindstone fragments, two flint fragments, and 20 potsherds from the Late Classic.

### **Conclusions**

Structure G9-2 obviously performed a domestic function, judging from the materials recovered from a midden and from its configuration, which was most likely built with wattle-and-daub walls and a roof made of perishable materials.

It is likely that it also was a service area for the inhabitants of H10-1, because unlike that structure, in which the ware consisted mainly of vessels for serving food (Golden et al, this volume), in G9-2 we found mainly fragments of cooking and storage vessels. Besides, the closeness between one structure and the other is an obvious indicator of the rank of the inhabitants of both structures. While we found in H10-1 a burial with several vessels inside a crypt, in G9-2 we found an individual buried without a formal construction and accompanied only by a monochrome vessel. Furthermore, in H10-1 we found plenty evidence of imported fine-paste wares (*ibid.*), while in G9-2 on the other hand, most of the wares were of a domestic character. All the same, it seems that the inhabitants of G9-2 had access to imported goods, possibly from the Guatemala Highlands, since we found a fragment of grindstone made of basalt, which is not found locally. However, we still need more excavations in the area in order to define the relationship between G9-2 and the H10-1 structure, as well as the possible social rank of their occupiers.

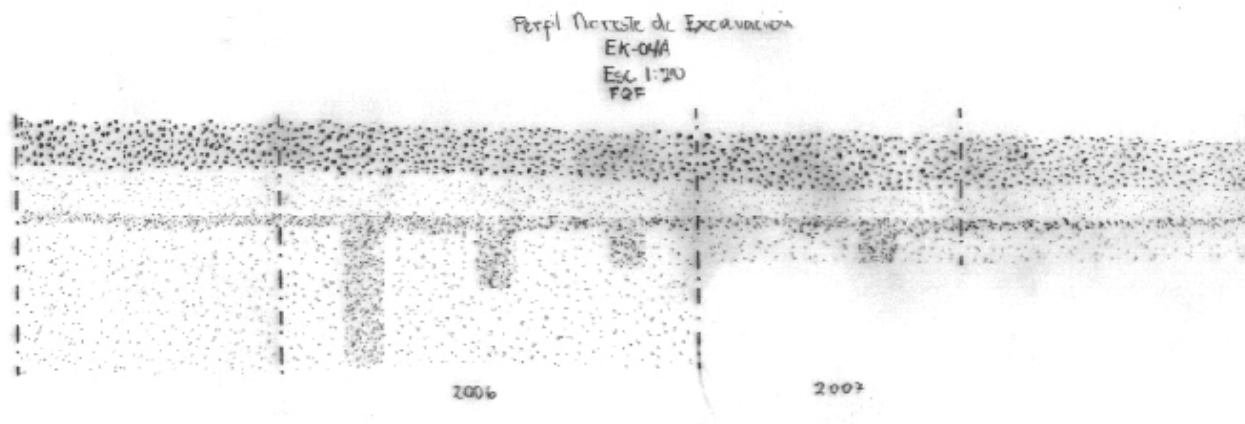


Figure 38. EK-04A. Northeast profile of the excavation, showing the post molds (scale 1:20).

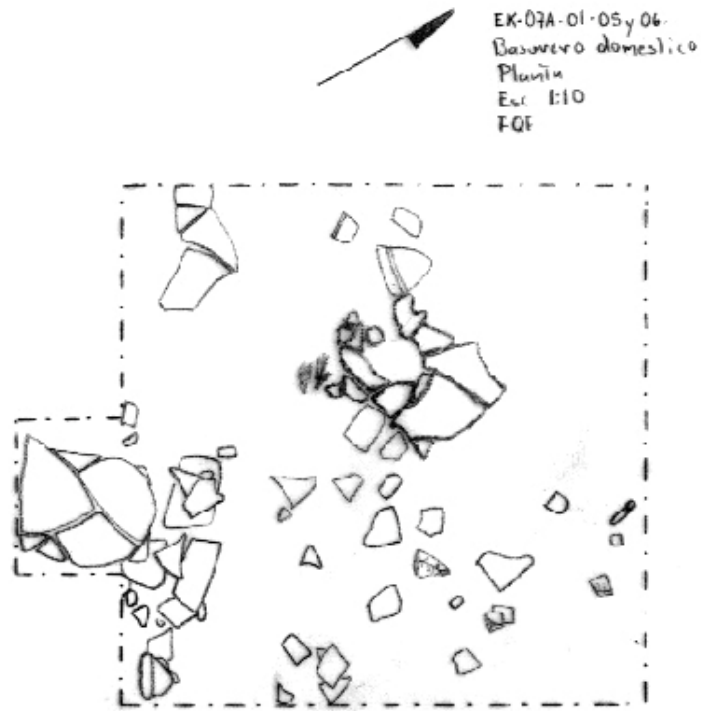


Figure 39. EK-07A-01-05 and 06. Plan of the trash deposit.

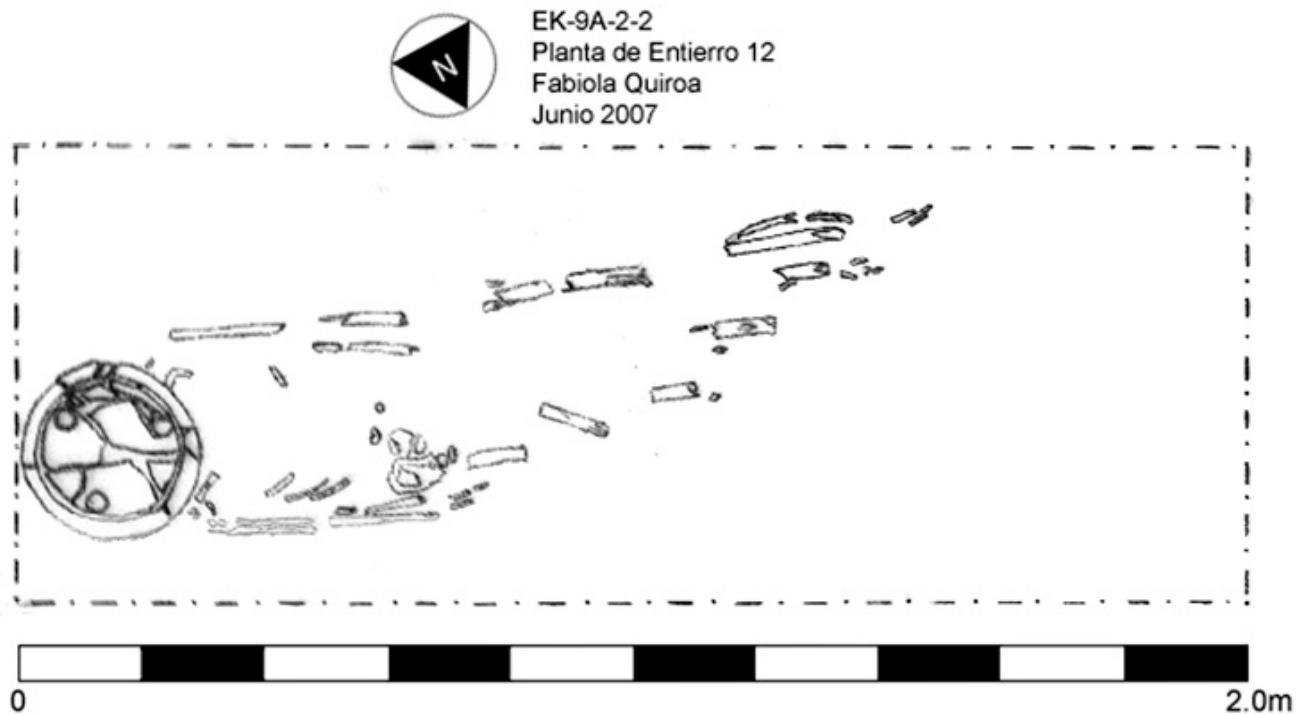


Figure 40. Burial 12 (EK-07A-02-02).

## Excavations in El Kinel: the 04B, 05A, 6A, and 9A Operations

By Claudia Valenzuela

### EK-04B

The aim of this operation was to define any cultural evidence, specifically excavating one test pit in the west part of the canal that runs across El Kinel, since in the 2006 season we had found evidence of post holes.

The excavation was carried out in a 1 m<sup>2</sup> area oriented 4° to the north, reaching a depth of 1.06 m from the surface ([Figure 41](#)). The first lot consisted of humus, this layer consists of dark grayish-brown earth (10YR 4/2), with abundant roots since we excavated over an area of cultivation. This lot reached its maximum thickness at 0.24 m from the surface, where we only found bone remains (probably belonging to a rodent) with no cultural evidence.

Lot 2 consisted of a layer of brown earth (10YR 5/3) of soft texture, whose stratigraphy reached 0.35 m in thickness. No cultural material was observed.

Lot 3 is formed by clayey-sandy earth of yellowish-brown color (10YR 5/4); this stratum reached to a thickness of 0.20 m. One last layer was composed of yellowish sand (10YR 4/6). No cultural evidence was established in this unit. However, thanks to the stratigraphy the natural changes undergone by the terrain were defined, such as the ones caused by rising water to the upper level of the canal running across El Kinel.

### EK-05A

This excavation was limited to an area of 1 m<sup>2</sup> with a depth of 0.75 m, oriented 100° due north ([Figure 42](#)). This test pit was excavated in a flat terrain, in the highest part to the west of El Kinel, in an area used for maize agriculture.

Lot 1 consists of dark grayish-brown earth (7.5YR 3/4) with many roots; it reached a depth of 0.19 m, and we noted that the earth has been burned on account of it being an area for cultivation. Lot 2 had yellowish-brown earth (10YR 5/4) of clayey texture with pumice fragments with a thickness of 0.40 m.

One last stratum was identified as Lot 3, consisting of a sandy yellowish earth (10YR 4/6) with a thickness of 0.16 m. In this excavation we were not able to find any cultural evidence.

### EK-06A

This excavation was carried out in a plain to the southwest of El Kinel, the pit was located at the southwest edge of a low mound of rectangular shape, previously identified as EK-06, and to the southeast of the *aguada* (water reservoir) located at the

western lateral edge of this structure ([Figure 43](#)), which has been filled up during field-improvement operations for agriculture.

#### *EK-06A-1*

This 1 m<sup>2</sup> excavation was oriented 359° to the north. Lot 1 pertained to a soil of grayish-brown earth (10YR 4/2) with abundant roots, with a maximum depth of 0.18 m and a minimum depth of 0.8 m, in which no cultural evidence was found.

Lot 2 is formed by a clayey and quite compact yellowish-brown earth (10YR 4/3), with a depth of 0.38 m. At a depth of 0.31 m we began to excavate ceramic fragments, with a total amount of 32, which according to the analysis pertain to utilitarian wares, dated toward the Late Classic (Tepeu 2 phase), which was determined by the presence of the Tinaja, Maquina and Encanto groups.

Lot 3 is characterized by yellowish-brown clayey earth (10YR 5/4); we noted in this lot the concentration of limestone in the southwestern part of the pit, with a depth of 0.53 m. The presence of ceramics was more abundant, and we managed to recover 158 potsherds, as well as a greenstone adze and fragments of animal bone remains, which were found deposited among the limestones. The analysis showed that most of the pottery is purely utilitarian vessels, which chronologically belong to the Late Classic (Tepeu 2 phase) with the presence of the following groups: Encanto, Cambio/Encanto, Tinaja, Azote, Infierno, Máquina and some eroded polychromes ([Figure 44](#)).

Lot 4 consists of a somewhat sandy yellowish-brown earth, with a thickness of 0.28 m, in which no cultural evidence was found. Lot 5 is the last cultural stratum, consisting of yellowish sandy earth (10YR 4/6 mud), as well as Lot 4 it did not include pottery.

#### *EK-06A-2 and 3*

Two more units were added to this unit, identified as 06A-2 and 06A-3, since the agglomeration of limestones continued toward the west of Unit 06A-1.

Unit 06A-2 was excavated to the south of 06A-1m, with a length of 1.50 m and a width of 0.50 m, whose stratigraphic description coincides with lots 1 and 2 of sub-operation 06A-1 described above. Lot 3 consisted of clayey yellowish-brown earth (10YR 5/4), in which the grouping of limestone rocks continued at 0.52 m from the surface; 53 potsherds were recovered (dating toward the Late Classic, or Tepeu 2 phase) and a fragment of a quite rough flint artifact.

The continuity of this excavation was defined through Unit 06A-3, which is 1 m long and 0.50 m wide. Lots 1 and 2 did not produce any cultural material, and the sedimentary matrix pertains to that of Unit 06A-1 and 2. In Lot 3 the continuity of the limestone was greater than in units 1 and 2, however we found less ceramic material, with 38 potsherds whose analysis places them chronologically toward the Late Classic (Tepeu 2 phase), represented by the following groups: Tinaja Rojo, Santa Rosa, Azote, Cambio

and Máquina. Among the shapes the following stand out: jars, dishes, bowls and a figurine fragment.

In order to better understand this unit we only extended the excavation of units 06A-1 and 06A-3. Lot 4 of these units consists of yellowish sandy earth (10YR 4/4) with small limestone fragments. This stratum reached a maximum thickness of 0.30 m and a minimum of 0.14 m, but only in Unit 06A-3 were found 53 potsherds, belonging to the Late Classic (Tepeu 2 phase) identified by the following groups: Encanto, Cambio, Azote, Águila, and Tinaja. Lot 5 is of sandy yellowish earth, identified as river bed (10YR 4/6). This lot was only performed in Unit 06A-1, and no trace of cultural material was found.

The excavation of 06A-1 went as deep as 1.50 m, while sub-operation 2 was 0.60 m deep, and sub-operation 3 was 1 m deep. Because of the amount of material found in Lot 3 of the three sub-operations, we can suggest that this was a midden dated toward the Late Classic (Tepeu 2 phase).

## **EK-09A**

### *EK-09A-1*

This test pit was performed in 0.50 m<sup>2</sup>, with a north-south orientation at the north of El Kinel, at the foot and in the south end of the structure. From an architectural perspective this is a rectangular structure of roughly four meters in height, being one of the tallest structures at the site ([Figura 45](#)).

Lot 1 presented loose earth of a dark grayish-brown color (10YR 4/2), identified as humus, with a depth of 0.50 m from the *datum*, with 0.42 m at the northwest corner, 0.40 m at the northeast corner, 0.43 in the southeast and 0.42 m in the southwest. We could recover only nine ceramic fragments, dating toward the Terminal Classic.

Lot 2 is integrated by compact, hard, and clayey brown earth (10YR 4/3), in which the cultural level reached a depth of 0.52 m in the northwest corner, 0.46 m at the northeast, 0.56 m at the southeast, and 0.54 m at the southwest. We recovered 25 sherds, dating toward the Terminal Classic defined by the presence of the following groups: unslipped Cambio, Tinaja, Altar Naranja, Tres Naciones, and Encanto with red wash, which are represented by vessels with utilitarian forms such as jars, water jars and bowls.

Lot 3 is made of a grayish-brown earth (10YR 4/3) which is clayey, hard, and quite humid. It starts at a depth of 0.72 m in the northwest corner, 0.74 m at the northwest, 0.75 m at the southeast, and 0.73 m in the southwest end. At a depth of 0.96 m from the surface we found a grouping of limestones and pumice stones where we collected 179 pottery fragments dating to the Terminal Classic; the following groups were identified: Encanto, Cambio, Máquina, Infierno, Tres Naciones, Altar and Tinaja, consisting of jars,

water jars, bowls and dishes. Therefore it was necessary to perform a second unit, identified as 09A-2 ([Figure 46](#)).

### *EK 09A-2*

This excavation was extended to the north of Unit 09A-1, covering an area of 0.50 m<sup>2</sup>. Lot 1 from this unit has a loose, dark grayish-brown earth (10YR 4/2) with a depth from the *datum* of 0.50 m; 0.29 m in the northwest corner, 0.33 m in the northeast, 0.40 m in the southeast, and 0.42 m in the southwest. We only found three potsherds here, which date toward the Terminal Classic (Tepeu 3 phase).

Lot 2, whose stratigraphic description is identical to Lot 2 of 09A-2 described above, had a depth of 0.50 m from the datum; in the northwest corner 0.47 m, to the northeast 0.48 m, in the southeast end 0.46 m and 0.52 m at the southwest. We only recovered three ceramic fragments.

In Lot 3 we saw the continuation of the feature found in Unit 09A-1 at a depth of 0.93 from the surface, with a maximum width of 0.76 m. The ceramics found were 279 sherds dating toward the Terminal Classic (Tepeu 3 phase). Among this unit's pottery were defined more groups than in the operation 09A of Lot 3, including the following: Bolonchac, Altar Naranja of Cedro Acanalado type, and Trapiche Inciso, Azote, Tres Naciones, Encanto with red and cream wash, differentiated color, Infierno and Tinaja. The shapes represented in these groups are mainly jars and water jars, although the presence of dishes and bowls was remarkable, as well as some pedestal fragments.

### **Conclusions**

The excavation defined by means of a test pit led us to the conclusion that this area was part of a midden, since the agglomeration of limestones and pumice stones is also found in the midden found to the west of El Kinel, in Operation 06A, which we also think was a midden because of the amount of ceramic material found here, as well as some animal bone remains.

The ceramic analysis was carried out not just on the material recovered from the excavation, but also on surface material recovered during survey and mapping of this area, whose analysis was based on 498 potsherds from the 620 sherds we found, which are dated toward the Terminal Classic (Tepeu 3 phase).



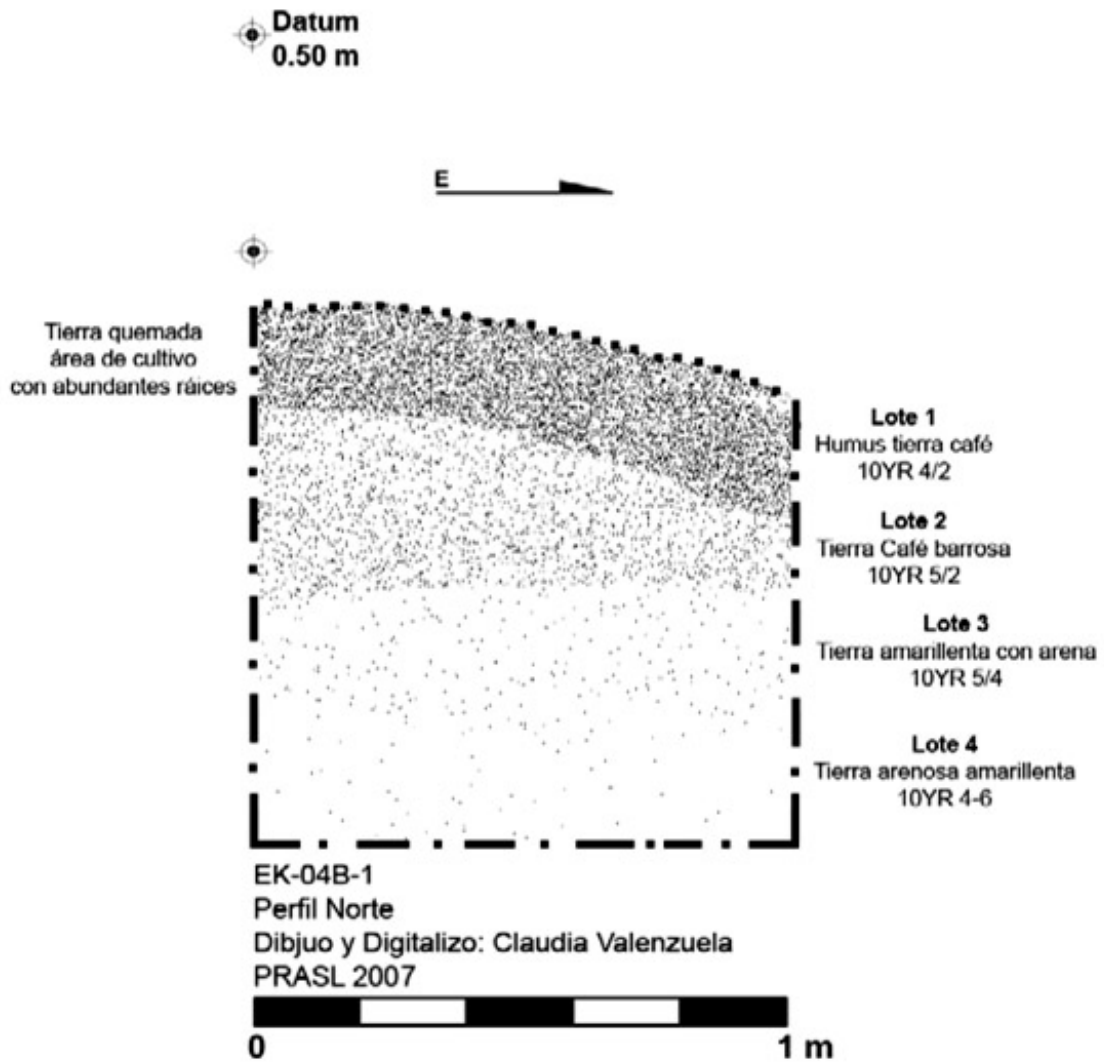
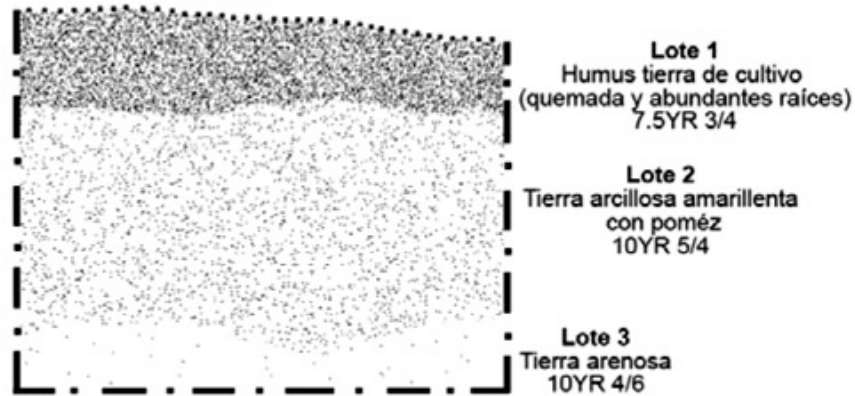


Figure 41. Operation EK-04B, north profile.

Datum 0.50 m



EK-05A-1  
Perfil Norte  
Dibjuo y Digitalizo: Claudia Valenzuela  
PRASL 2007



Figure 42. Operation EK-05A, north profile.

Datum 0.50 m

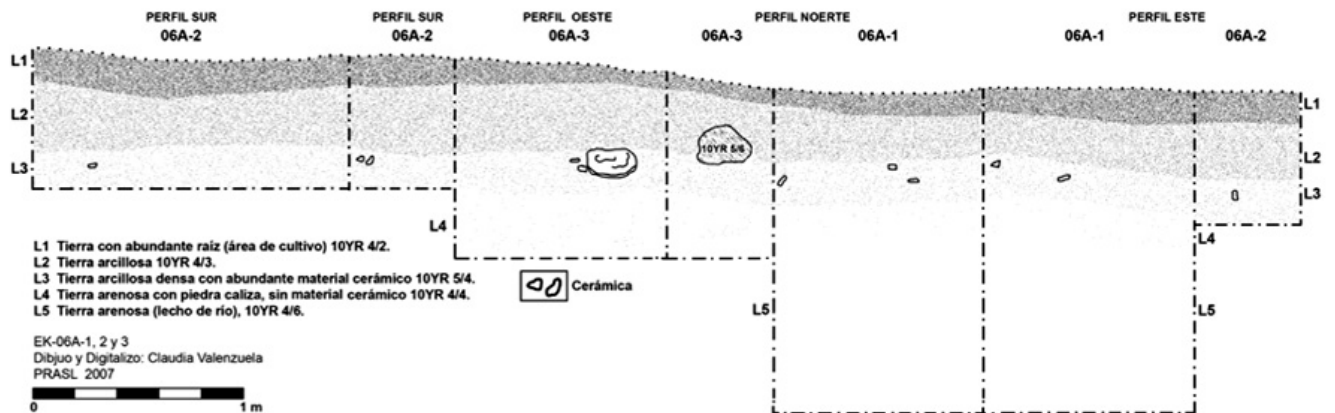


Figure 43. Operation EK-06A -1,2,3 profiles.



Figure 44. Potsherd of the type Máquina Azúcar Impreso, exterior (A), side view (B).

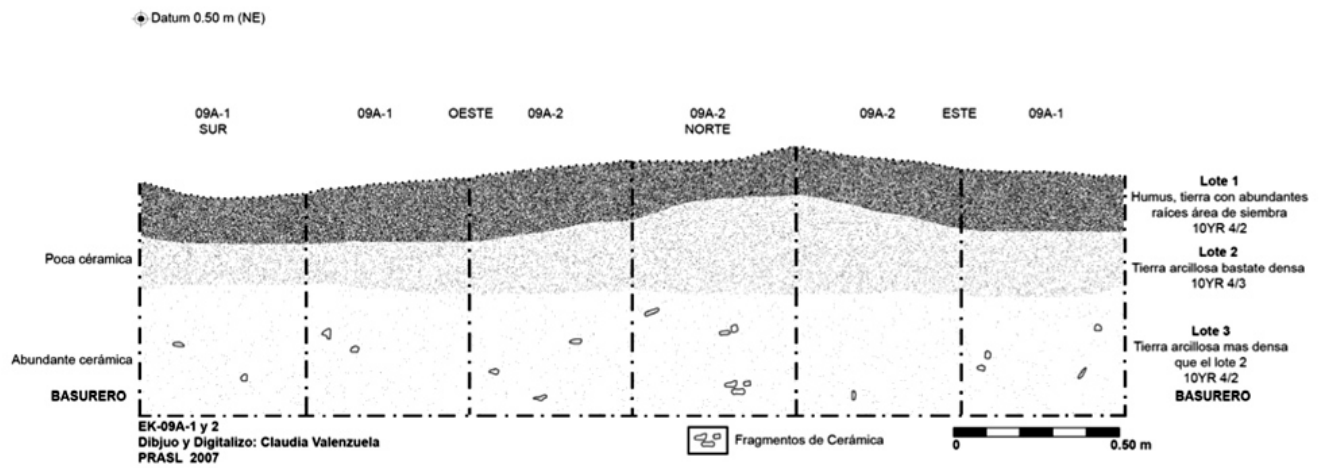
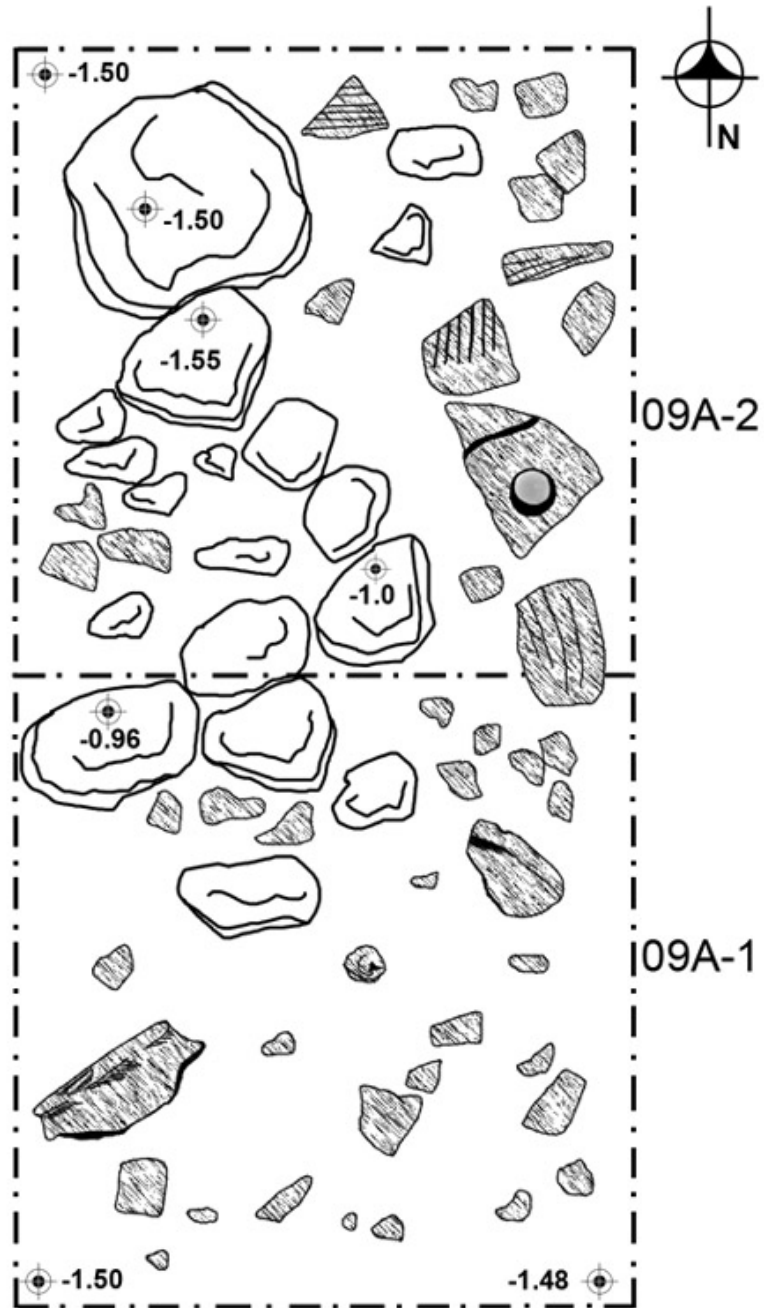


Figure 45. Profile of operation EK-09A-1 and 2.



EK-09A-1 y 2  
 Planta de Basurero - Lote 3  
 Dibjuo y Digitalizo: Claudia Valenzuela  
 PRASL 2007



Figure 46. Plan of EK-09A-1, 2-3.

## **Excavations on the south edge of El Kinel's canal: EK-08A**

*By: Selket Callejas*

Test pits were excavated on the canal's south edge, at a distance of 2 m one from the other, with the goal of finding post molds that may indicate the possible existence of a wall on El Kinel's south side.

### **EK-08A-1**

This 1 m<sup>2</sup> excavation unit is located to the south of the EK-D27 station, and is oriented from the northeast to the southwest. The excavation started with a depth of 0.40 m in the north corner, 0.43 m in the east corner, 0.41 m in the south corner, and 0.43 m in the southwest corner, from a *datum* of 0.30 m.

We defined two lots through stratigraphy, the first one is the vegetal layer (humus) of very dark brown earth (10YR 3/3), starting at a depth of 0.40 in the north corner, 0.43 m in the east corner, 0.41 m in the south corner, and 0.43 m in the west corner.

Lot 2 is made of a thick layer of mud or sediment (according to the inhabitants of the locality it was accumulated by the rising level of the Usumacinta river) of yellowish-brown color (10YR 5/4) and a clayey, compact consistency. The sounding reached a depth of 1.06 m and no cultural material of any kind was found.

### **EK-08A-2**

This 1 m<sup>2</sup> test pit with a northeast-southwest orientation started with a depth of 0.26 m in the north corner, 0.30 m in the east, 0.26 m in the south, and 0.24 m in the west from the *datum* (0.30 m).

Two lots were excavated as well, with the same characteristics of Unit 1. The humus reached to 0.36 m, 0.32 m, 0.40 m, and 0.37 m. The sounding ended in the mud (sediment) layer at a depth of 1.06 m, without finding any kind of cultural evidence.

### **EK-08A-3**

This 1 m x 1 m sounding was oriented to the northeast-southwest. The excavation started with a depth of 0.32 m at the north, 0.28 m east, 0.26 m south, and 0.28 m west. Two lots were excavated, the humus reached a depth of 0.43 m, 0.41 m, 0.40 m, and 0.41 m. The second lot consisted of yellowish-brown mud, without finding any kind of cultural material.

### **EK-08A-4**

This 1 m<sup>2</sup> excavation unit was oriented from northeast to southwest, starting with 0.33 m at the north corner, 0.31 m in the east corner, 0.33 m in the south corner, and 0.32 m in

the west corner. In this unit we excavated two lots, the humus of dark brown earth (10YR 3/3) reached a depth of 0.46 m, 0.39 m, 0.43 m, and 0.46 m.

Lot 2 consisted of a matrix of compact mud of yellowish-brown color (10YR 5/4) which showed no material evidence. The excavation ended at a depth of 0.85 m.

### **Conclusions**

No post molds or other cultural materials were found in this excavation.

## **Excavations in Zancudero (ZD-01B), 2007 season**

*By: Fabiola Quiroa Flores*

### **ZD-01B-04**

This 1 m (NW-SE) by 2 m (NE-SW) unit is oriented to 323° NW, along the inner face of Zancudero's defensive wall, reaching a depth of 1 m ([Figure 47](#)). This unit was an extension toward the four cardinal directions of the test pit ZD-01B-03 from 2006, with the aim of exposing and excavating the burial detected the previous field season in the said test pit.

Lot 1 was a humus layer of very dark brown color (10YR 2/2), of organic consistency and coarse texture, mixed with a regular amount of limestone gravel and many roots. We found 21 potsherds from the Late Preclassic and Early Classic, as well as two fragments of human bone (the rotula of the right knee; Scherer, personal communication 2007). This block presented some blocks of cut limestone, pertaining to the rubble from the construction of the wall.

Lot 2 consisted in a very dark grayish-brown soil (10YR 3/2) of lumpy consistency and loose at the same time and of coarse texture, a mixture of organic soil and mud, with a great amount of limestone gravel. Furthermore, toward the end of the lot was formed a uniform layer of gravel. We recovered 183 potsherds from the Late Preclassic and the Early Classic, one wattle-and-daub-fragment, and four flint fragments.

Lot 3 pertained to Burial 1 from Zancudero, whose matrix was of very dark grayish-brown color (10YR 3/2), very similar to the previous lot, but quite looser and with a lesser amount of gravel.

Lot 4 was an arbitrary lot which consisted of the leveling of the terrain surrounding the individual, therefore the matrix was similar to the one found in lots 2 and 3. For lack of time the excavation was stopped upon finding the heavy construction fill of the plaza, and we recovered some bone fragments from the individual from Burial 1, as well as 78 potsherds from the Late Preclassic and the Early Classic.

### **Burial 1 (ZD-01B-04-03)**

It is possible that the individual from Burial 1 ([Figure 48](#)), was housed by a cist formed by big limestones, although the great amount of roots of considerable size found throughout the excavation had deformed what should have been a rather precarious and informal cist. This possible cist was found on average at a depth of 0.78 m, and it must have had a more or less rectangular shape with walls made of irregular stones, a roof of very rough slabs, and a floor made of a slight clay layer covering the heavy fill of the plaza construction.

It is likely that the individual was placed in a dorsal decubitus extended position (we don't know for sure because of the roots) with extended legs, arms parallel to both sides of the torso, and the hands at the sides of the pelvis. The skeleton was oriented to 62° NE, and what little was left of the skull toward the northeast.

Apparently the individual was not accompanied by any offering, although this feature was found almost totally destroyed, displaced and very disturbed by the action of the roots. In this lot we recovered 51 potsherds from the Late Preclassic and the Early Classic.

## Conclusions

It is likely that Zancudero's defensive wall, among other structures, guarded humble dwellings built of perishable materials, of which no trace whatsoever was left, and the individual from Burial 1 was buried inside his house. Another possibility is that the burial functioned as a sort of offering and was thus deposited along the interior side of the wall, under the floor of the plaza, if we regard the high amount of gravel as a plaza stone pavement, or as the fill of a stucco floor that was not preserved.

In any event, given the extreme disturbance suffered by this context due to the action of the great and abundant roots located in the excavation area, it is almost impossible to define the true nature of this burial.

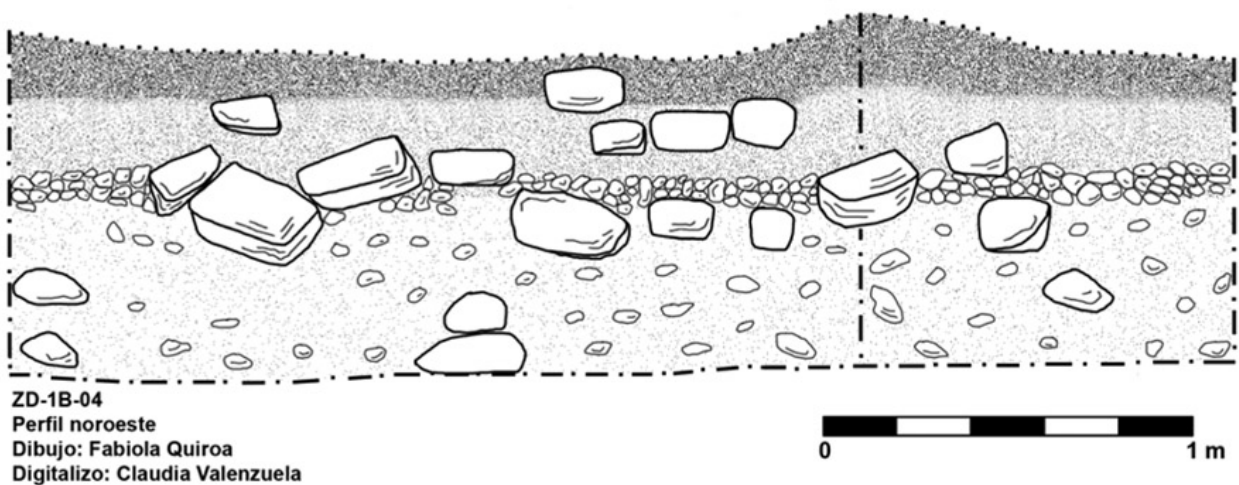


Figure 47. ZD-01B-04. Northwest and northeast profiles of excavation (scale 1:20).



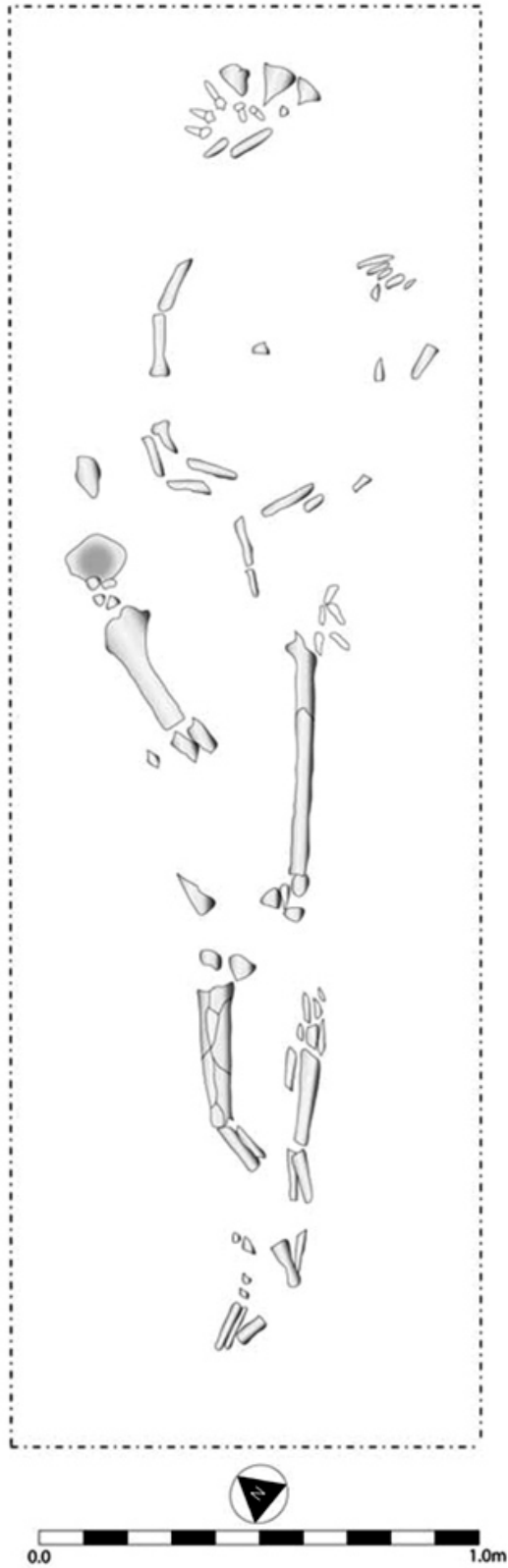


Figure 48. Burial 1 (ZD-01B-04-03).

## Excavations at Zancudero: Operations 01C and 02A

By: *Claudia Valenzuela*

### ZD-01C

#### ZD-01C-1

This test pit was excavated in the plaza at the foot of the wall, toward the north end of the same ([Figure 49](#)). An area of 50 m<sup>2</sup> with a north-south orientation was excavated, starting with Lot 1 which is made of dark brown earth (7.5YR 3/2) with plenty of roots, with a depth from the *datum* of 0.50 m, 0.46 m at the northeast, 0.30 m at the northwest, 0.57 m at the southeast, and 0.52 m in the southwest corner, but there was no cultural material.

Lot 2 had no change in the earth, but it had a fill of limestone with a depth from the *datum* of 0.73 m at the SW, 0.76 m in the SE end, 0.60 m at the NE, and 0.62 m at the NW. Here we recovered 56 ceramic fragments dated toward the Terminal Preclassic and the Early Classic.

Lot 3 showed a fill of big limestones with brown earth (7.5YR 3/2) reaching a maximum depth of 1.06 m, with only two potsherds dated toward the Early Classic.

Lot 4 was a fill of gravel with dark brown earth (7.5YR 3/3), which reached a maximum depth of 1.40 m from the *datum*. Here we obtained 26 ceramic fragments pertaining to the Early Classic (Tzakol 1 phase), as well as some fragments of wattle-and-daub and carbon.

Lot 5 was a stratigraphic layer made of earth of the same color as Lot 4, but with a difference: we found a fill of big limestones with a depth of 1.45 m at the northwest, 1.46 m at the northeast, 1.59 m at the southeast, and 1.61 m at the southwest. We only recovered 18 ceramic fragments dating toward the Late Preclassic (Chicanel phase).

#### ZD-01C-2

ZD-01C-1 was extended to the south, performing a second unit identified as ZD-01C-2, whose dimensions encompassed an area of 0.50 m<sup>2</sup>. The stratigraphic levels in this pit are the same as the ones from Operation ZD-01C-1, therefore we will only describe the material that was found here. We found no cultural evidence in Lot 1. In lots 2 and 3 we found 23 potsherds, which we were unable to date because they were very eroded. Lot 4 included 29 ceramic fragments whose chronology is from the Terminal Preclassic, of Chicanel and Tzakol phases, with the presence of the following groups: Zapote, Flor, Sierra, Boxcay Café, Polvero, Juventud, Balancam, Achiote, and Color Diferenciado, which are represented by water jars, jars, and bowls. Lot 5 only produced 12 potsherds dated toward the Terminal Preclassic.

### ZD-01C-3

This 0.50 m<sup>2</sup> pit was excavated in the wall's upper part, with a maximum depth of 0.50 m, in which we could only see big limestones as part of the fill forming the wall. We found no cultural material ([Figure 50](#)).

### ZD-01C-4

This 0.50 m<sup>2</sup> pit was excavated outside the north section of the wall, reaching a maximum depth of 0.86 m, containing only one lot composed of dark brown earth (7.5 YR 3/2); we recovered 21 ceramic fragments, which unfortunately were too eroded so their chronology could not be defined. Directly after this lot we reached the bed rock (2.5Y 8/3; [Figure 51](#)).

### ZD-02A-1

This was carried out to the south of Zancudero, in a group settled on top of a modified natural hill. This architectural compound consists of five structures with a probable administrative function, on the basis of its spatial distribution and its location within the site. It is located on the south flank of a hill of approximately 70 m in height.

This excavation was defined on the west end of the patio, in an area of 0.50 m<sup>2</sup> oriented north-south, whose depth reached 0.23 m to the northwest, from the *datum* of 1 m, 0.22 to the northeast, 0.24 to the southeast, and 0.23 to the southwest. Lot 1 consisted of humus of dark brown earth (7.5YR 3/2), we recovered a little ceramic material which was too eroded and we could not define its chronology.

El Lote 2 no tuvo cambio de tierra, pero se halló un relleno de pieza caliza grande ([Figure 52](#)), in which we found 102 somewhat eroded ceramic fragments, which could be dated toward the Early Classic (Tzakol 2 phase).

### Looting in the wall

Besides, we made two drawings of the looting of the wall of Zancudero ([Figure 53](#) and [Figure 54](#)), showing that this is a man-made work, not a natural feature.

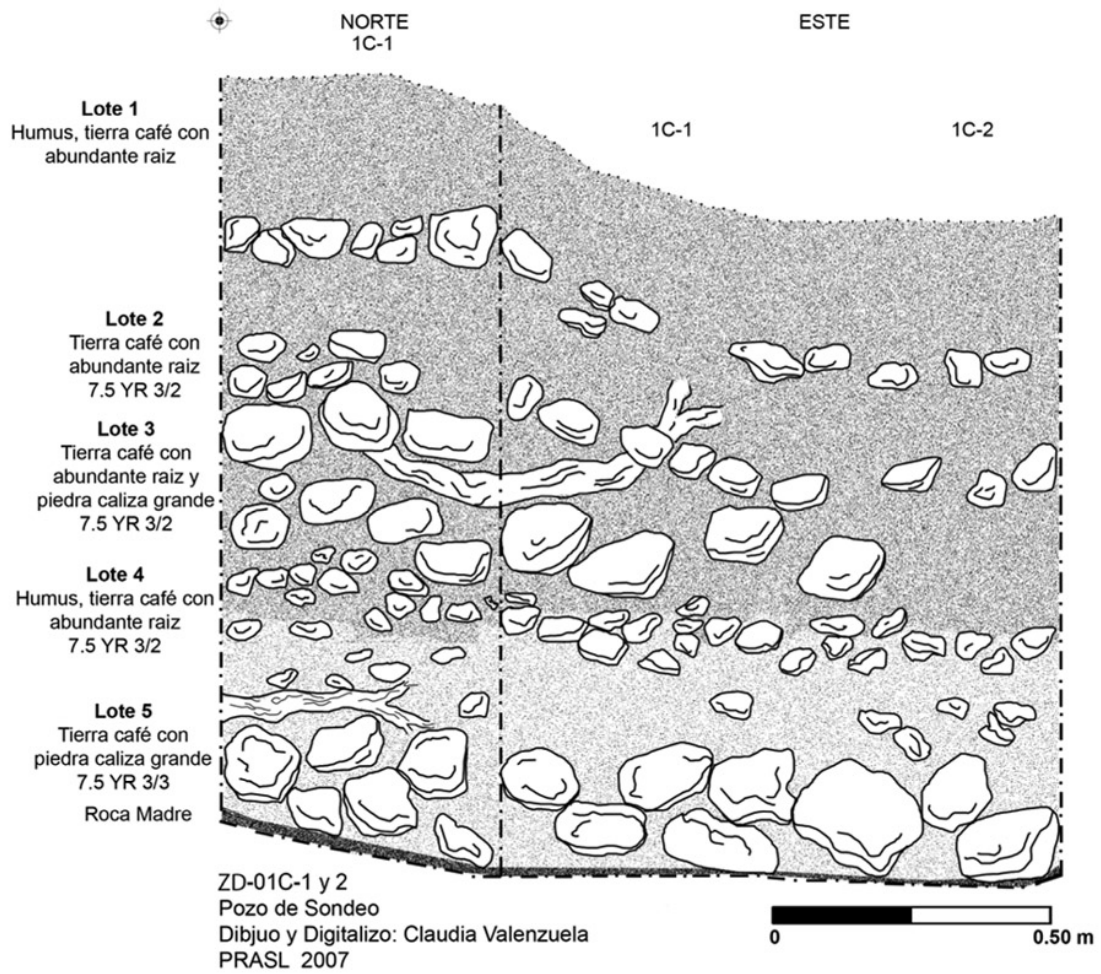


Figure 49. Profile of ZD-01C-1 and 2.

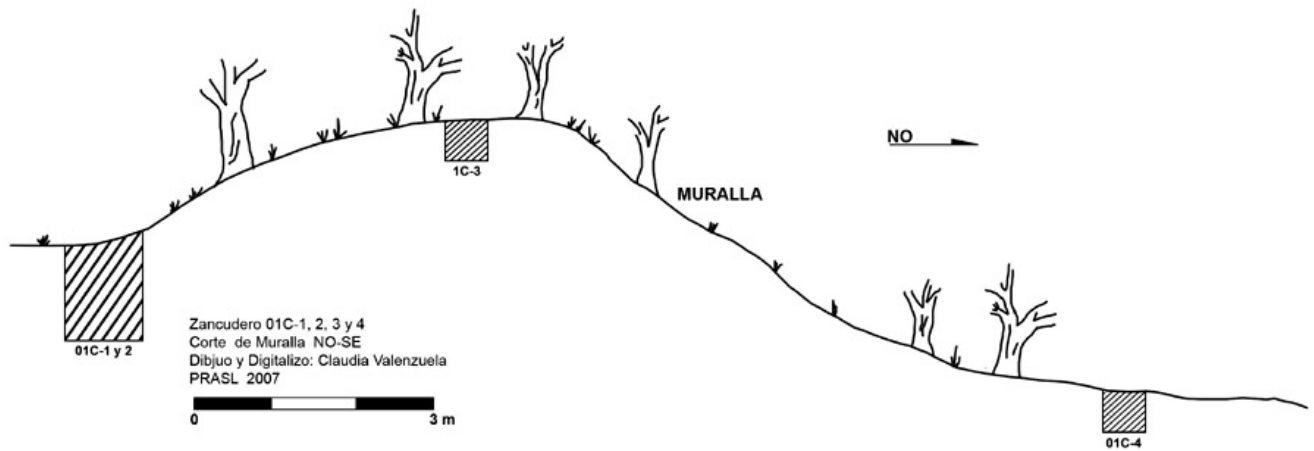


Figure 50. Cross-section of walls and Operation ZD 1C-1, 2, 3, and 4.

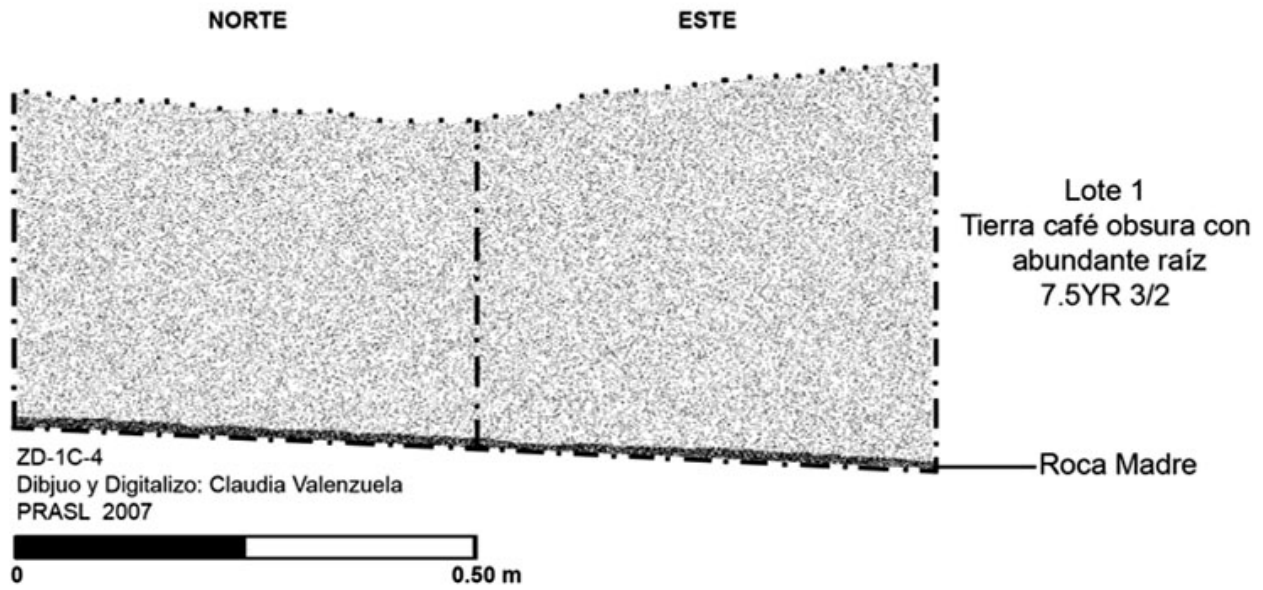


Figure 51. Profile of ZD-01C-4.

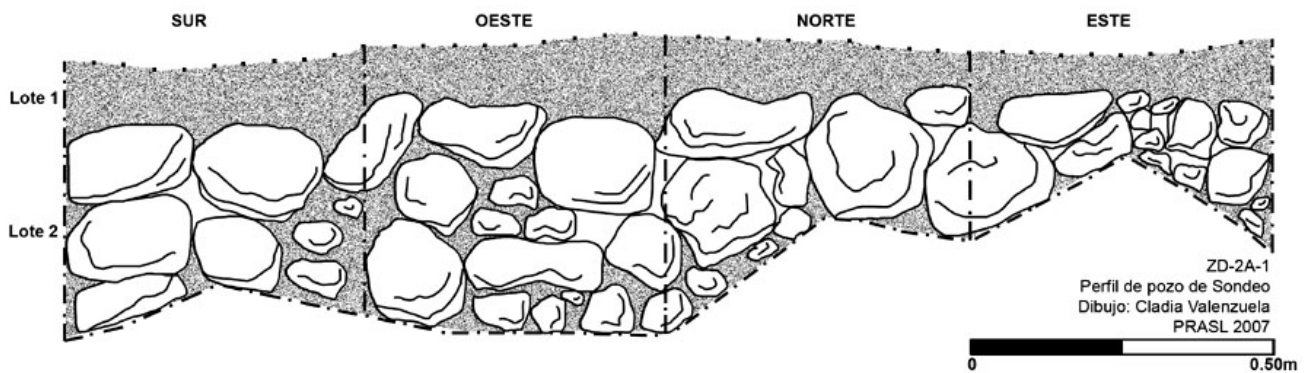


Figure 52. Profile of ZD-02A-1.

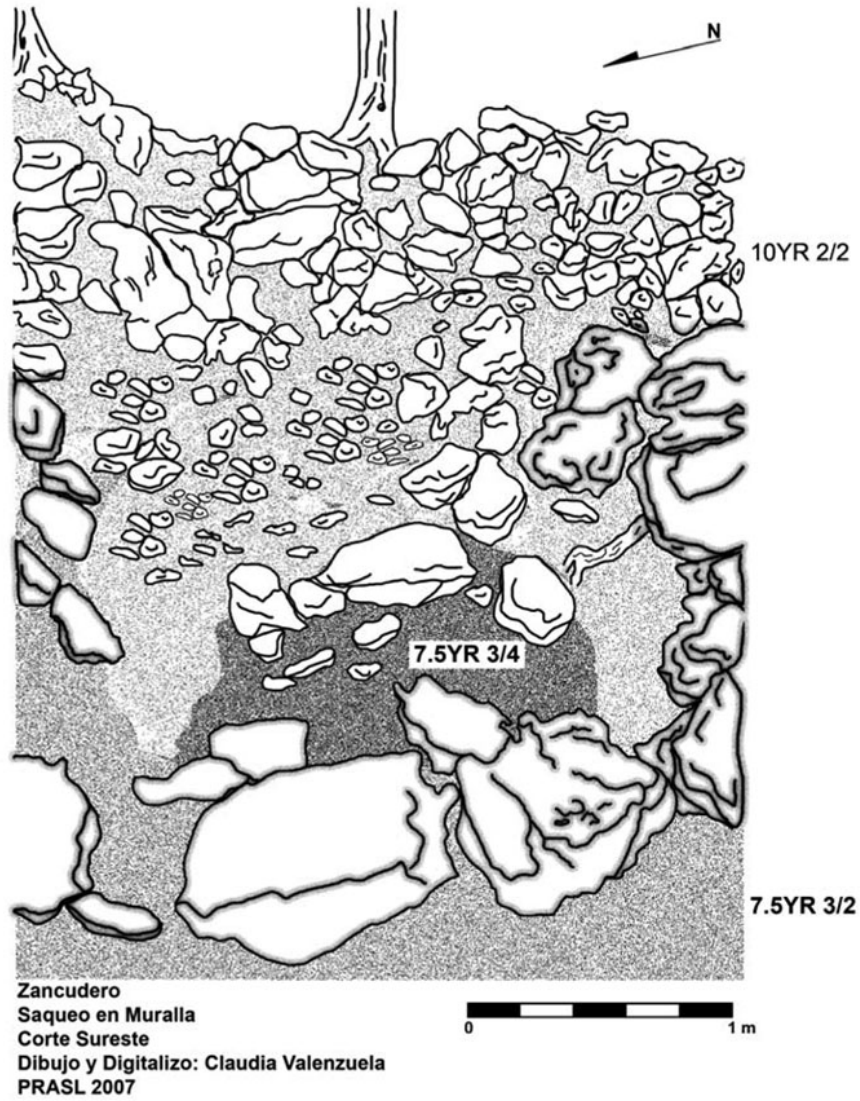


Figure 53. Looting on Zancudero's wall.

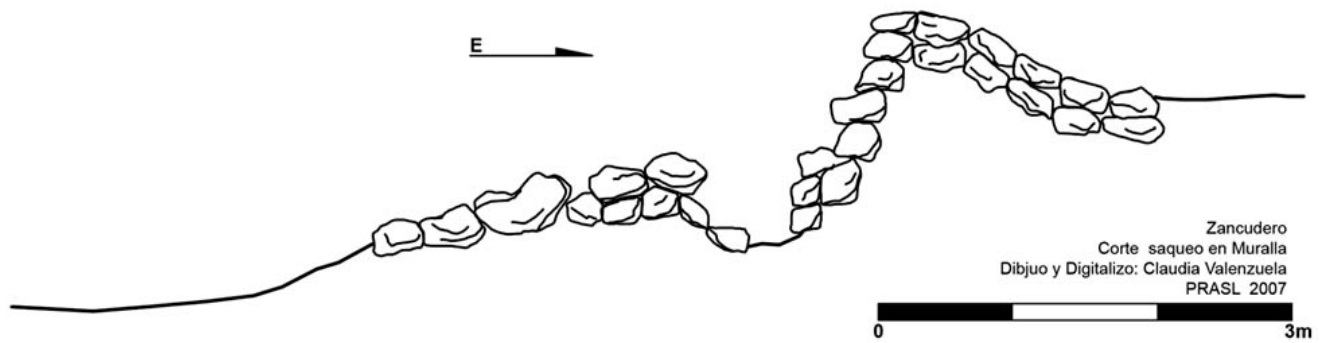


Figure 54. Looting on Zancudero's wall.

## **Excavations at the site of Zancudero: Operation 01D**

*By: Selket Callejas*

### **ZD-01D-1**

This is 0.50 m<sup>2</sup> excavation unit is oriented north-south, and is located to the south of the wall, in the interior side of the base. The excavation started with a depth of 0.59 m in the northeast corner, 0.52 m in the northwest corner, 0.55 m southeast and 0.59 m southwest, from a *datum* of 0.50 m.

In this unit we excavated two lots, the first one pertains to the humus layer, of a very dark brown color (7.5YR 2.5/2) of coarse texture, soft and loose. In this lot few small fragments of pottery were recovered, reaching a depth of 0.73 m, 0.65 m, 0.67 m, and 0.74 m.

Lot 2 is formed by a fill of earth of coarse texture, soft and loose, of very dark brown color (7.5YR 2.5/2) mixed with unworked limestones of several sizes. Here we also found a little ceramic material and just one lithic fragment. The lot reached a depth of 1.07 m in the northeast corner, 1.03 m in the northwest corner, and 1.06 m in the southeast and southwest corners.

This excavation unit was excavated down to the bedrock, immediately after lot 2.

### **ZD-01D-2**

Unit 2 consisted of a 0.52 m<sup>2</sup> test pit oriented from north to south, located at 3.20 m from the ZD-01D-1 excavation unit. The depths in which this unit started were the following (from a *datum* of 0.50 m): 0.69 m for the northeast corner, 0.64 m for the northwest corner, 0.72 m for the southeast corner, and 0.69 for the southwest corner.

Just like in Unit 1 we excavated two lots; the first one was the stratum of humus or vegetal cover, of very dark brown earth (7.5YR 2.5/2) which had a depth of 1.03 m, 1.00 m, 1.02 m, and 1.05 m southwest. In this lot we recovered some fragments of ceramics, mostly body sherds.

The next lot is formed by a fill of very dark brown earth (7.5YR 2.5/2) and unworked limestone. This lot reached a depth of 1.24 m to the northeast, 1.16 m to the northwest, 1.30 m to the southeast and southwest. Very little cultural material was found in this lot, consisting of very small ceramic fragments. The excavation reached a maximum depth of 1.61 m in the center of the pit upon excavating the bedrock.

### **ZD-01D-3**

This 0.50 m<sup>2</sup> unit is located at the top of the defensive wall, and is oriented from north to south. The main goal of this excavation was to know the constructive system of the wall, and to get a date for the wall. For this the sounding started with a depth of 0.10 m in the

northeast corner, 0.34 m to the northwest, 0.19 m to the southeast, and 0.21 m to the southwest.

We only excavated two lots. Lot 1 is formed by the humus of soft, loose earth of a very dark brown color (7.5YR 2.5/2) with a depth of 0.19 m, 0.41 m, 0.30 m and 0.36 m. We did not find cultural materials.

Lot 2 formed the construction fill of the defensive wall, including unworked limestone rocks of several sizes, piled up and mixed with very dark brown earth (7.5YR 2.5/2) of a coarse, soft and loose texture. In this lot we only found seven potsherds which may pertain to the Preclassic.

The size of some stones included in the fill, the depth it reached and the instability of the rocks forming the profiles of the excavation, did not allow us to continue with this excavation unit, in which the lot reached a depth of 1.45 m to the northeast, 1.65 m to the northwest, 1.61 to the southeast, and 1.65 to the southwest, from the *datum* of 1 m from the surface of the wall's base.

#### **ZD-01D-4**

This 0.50 x 0.50 m test pit is located to the north and in the outside base of the wall. The excavation was started at 0.41 m to the northeast, 0.43 m to the northwest, 0.33 m in the southeast and southwest corners.

We excavated two lots, the first one was the humus of very dark brown earth (7.5YR 2.5/2) soft, loose and with organic material (dry leaves, roots, and others). It had a depth of 0.63 m in the southeast corner, 0.58 m in the northeast, 0.51 m southeast, 0.50 m southwest. We only found one potsherd in this lot.

The second excavated lot consists of bedrock, which is compact, hard, and of pale yellow color (2.5Y 8/2), reaching a depth of 0.79 m, 0.73 m, 0.63 m, and 0.58 m without the presence of cultural material.

#### **ZD-01D-5**

This 0.50 m<sup>2</sup> sounding with northeast-southwest orientation was located to the west of the wall, in its inside base. The depths in which the excavation was started (from a *datum* of 0.85 m) were 0.84 in the northeast corner, 0.91 to the northwest, 0.78 southeast and 0.86 to the southwest.

We only excavated two lots down to bedrock. The first one, consisting of humus, reached a depth of 0.97 m in the northeast corner, 1 m to the northwest, 0.95 m southeast, and 0.98 m in the southwest corner. The matrix was of loose earth mixed with organic material of very dark brown color (7.5YR 2.5/2). We recovered very few ceramic fragments.



The second lot was made of the same fill found in the units described above, reaching the following depths: 1.24 m in the northeast corner, 1.28 m northwest corner, 1.30 m southeast corner and 1.28 m southwest corner. It consisted of unworked limestones of several sizes, mixed with loose dark brown earth (10YR 3/3). Like the previous units, cultural materials were scarce and we only found a few very eroded potsherds.

#### **ZD-01D-6**

This is a 0.50 m<sup>2</sup> excavation unit on the northeast wall, oriented north-south. The excavation started at a depth of 0.30 m in the northeast corner, 0.51 m in the northwest corner, 0.43 m in the southeast corner, and 0.50 m in the southwest corner.

In this unit we only removed the stones forming the wall, which were merely piled up without any specific order. The materials we obtained in this process were part of Lot 1, but they were quite scarce. The matrix of Lot 1 was made of big unworked limestones, mixed with a little dark brown earth (10YR 3/3).

#### **ZD-01D-7**

This 0.50 m<sup>2</sup> sounding is located on a platform between two mounds, to the south of the one in the plaza that forms the wall. The unit was oriented north-south and started with the following depths: 0.54 m northeast corner, 0.52 m northwest corner, 0.50 m southeast corner, and 0.59 southwest corner (from a *datum* of 0.50 m) from the surface of the platform.

Three lots were excavated: the humus of very dark brown earth (7.5YR 2.5/3) and organic material, reaching a depth of 0.63 m in the northeast corner, 0.64 m in the northwest corner, 0.62 m in the southwest corner. In it we found very few potsherds.

Lot 2 was made of the platform's leveling fill, consisting of unworked limestone of several sizes mixed with very dark brown earth. This lot reached a depth of 1.29 m in the northeast corner, 1.25 m northwest corner, 1.34 m in the southeast corner, and 1.30 m in the southwest corner. The recovered cultural material consisted of only 21 potsherds.

The third lot was made of limestone sand of yellowish-brown color (10YR 5/4) which pertains to the soil which was not culturally altered. This sounding reached the maximum depth of 1.43 m in the northeast corner, 1.46 m in the northwest corner, 1.40 m in the southeast corner, and 1.37 m in the southwest corner. No cultural material of any kind was recovered.

## **Topographic survey of the sites of El Kinel and Zancudero, 2007**

*By: Betsy Marzahn-Ramos*

### **Methodology**

The data for the maps of El Kinel and Zancudero were collected on the basis of measurements made with a Leica TCR 407 total station and a TDS Recon 200 data collector, provided by the Anthropology Department of Brandeis University. This high-precision instrument for mapmaking combines an electronic theodolite for measuring vertical and horizontal angles with an electronic distance measuring device. These components reach an accuracy level of +/- 2mm and 3 arch seconds under favorable conditions.

The total station works through the emission of an infrared signal directed toward a retro-reflective prism, located in the point that is to be measured. The signal comes back to the instrument and the difference in the signal's phase is detected by microprocessors calculating the exact distance between the instrument and the prism. When this is combined with the readings of the vertical and horizontal angles of other microprocessors, it is possible to obtain a point's exact location. Before making the map with the total station a hypothetical Cartesian plan was made over the site, with a central point which had received the following location: 5000 m North (X), 5000 m East (Y), and an elevation of 100 m (Z).

The total station used this system of coordinates in order to record the location of over 5,000 single points throughout the site of El Kinel, between the 2006 and 2007 field seasons, and roughly 1,500 points in the site of Zancudero, which were taken in 2007. Each point was recorded as a series of three numbers that represent the locations of X, Y, and Z of each point in the plan. Everyday the spatial data were unloaded on an Excel calculus sheet, in order to examine and correct any error. Finally we drew graphically, using the mapping software Surfer 8.0 and the software for architectural design Autocad. The mapmaking was focused primarily on two aspects: 1) record surface remains (standing walls, mounds, platforms, stairways, etc.), and 2) record topographic data, taking into account the cultural and natural environment.

The following methodology was used in order to record all features:

- 1) the limits of architectural features (corners, walls, stairways, etc.) were identified by archaeologists and pointed out with temporal markers.
- 2) the total station was used to record these limits as lines using people who carried the prism between the points that had been marked.

3) topographic data were recorded over and between the architectural features using the total station, focusing particularly on areas with a high degree of topographic variation. The prisms were located in the high and low points, over and around architectural features, with additional points concentrated in areas with high relief.

4) every day we unloaded spatial data in .txt files and they were imported to Autocad, a software platform that facilitates computer design. The necessary corrections were made and other data were used to create architecturally correct maps, using the standard conventions of Maya archaeology.

5) topographic data were outlined using the Surfer 8.0 mapmaking software, in order to create a tri-dimensional map of the topographic surface of the areas around the sites.

6) architectural data and tri-dimensional topographic data were combined using Surfer 8.0, in order to create the final third dimension rendering of the center of the sites of El Kinel and Zancudero.

### **Making El Kinel's map**

The map of the central area of El Kinel's North and South sectors (Morales 2001) was started by Golden, Marzahn-Ramos and Meléndez in the 2006 field season, and was completed by Marzahn-Ramos in 2007. In both seasons archaeologists were assisted by local workers from Santa Rita, and in 2007 members of La Técnica community also participated in the project's topographic survey team.

In 2006 Datum 1 (EK-01) was located in the North sector, Structure H-10, from the group of mounds where El Kinel's Monument 1 (the sculpture of Shield Jaguar III) was found (Houston et al. 2006; Morales 2001; Morales and Ramos 2002). By the end of the 2007 field season we had established a total of 31 data in the North and South sectors of El Kinel. The 2007 topographic survey project allowed us to fill in the blanks of the topographic data from 2006, which had remained because of lack of time, because the community members did not have permission to survey certain areas, or because of the inability to enter certain areas due to the restricted nature of the features.

The mapmaking work at El Kinel during the 2007 field season was performed on 15-17 and 24-27 of June. These new data helped us to better define the depth of the canal and the slope of its banks, since the project was able to make the map of the canal when it was completely dry. The data from 2006 were limited due to the presence of water in the canal when the map was being made. During the current field season we were able to make a more thorough record of the topography of the canal and the embankment, making the map on both the north side (EK-D2) and south side (EK-D2, EK-D26, and E-KD27).

Thanks to the cooperation of the local people and their interest in the project, we were able to make the map of the privately-owned plots of land, to which we had not had access in 2006. Because of this, during 2007 we could include in the map the site's

biggest mound, which is located in the South sector, as well as a small mound. Recent data made it possible to see that when the canal is full it not only prevents crossing it easily from north to south, but it also surrounds a mound, from which almost the whole South sector can be seen, and even most of the length of the canal and its embankment to the west. The points in the South sector were taken up to the limit of the road running from east to west, to the south of the big mound.

Lastly, points were taken in most of the excavation units from 2007, but not in the units that couldn't be seen from the data of the total station. However, these units were manually added to the map on the basis of their distance from the *datum* and from other excavation units.

Toward the end of the 2007 season we were able to locate on the map all known mounds, to which we had access in the North and South sectors of El Kinel ([Figure 7](#)). Using data from the 2006 and 2007 seasons, in which the climatic conditions and the state of the site's vegetation were quite different, we could produce a map reflecting with accuracy the nature and constructive features of El Kinel.

### **Making Zancudero's map**

With the aid of local guides, the project members identified Zancudero during the 2006 season. We made several short visits to the site during this season, in which Marzahn-Ramos and Meléndez made a preliminary map with metric tape and compass. In 2007 we went back to the site and made the survey with the total station between June 18 and 23. Due to limited time for making the map, the main focus of the work was to survey as much as possible of the wall and the central plaza, as well as taking points in all excavation units.

Zancudero is located inside the Sierra del Lancandón National Park, as well as in privately-owned fields. The topographic survey team had some restrictions for working inside the national park, and we were allowed to survey the wall in a privately-owned field for a day. Starting from this, the whole wall located inside the Sierra del Lancandón National Park was surveyed from points on its base, and just a little part of the wall located in the field was included in the map.

The initial *datum* (ZD-D1) was established near the base of the wall, on the south, on the side of the site within the park. A total of 22 datum points were established on that side. The wall's south side within the park was surveyed from the base of the wall upwards and downwards. Most of the north side of the wall was surveyed only from the top, because of the steep slope on the outside part of the wall. All excavation units located on the wall and in the area of the central plaza were processed using the total station, as well as the six structures in this plaza.

The wall was approximately 800 m long. The part of the wall inside the park was surveyed completely, and some meters of wall located in the private lands ([Figure 9](#)). The wall continued to the south, winding around most of Zancudero, which we could not

record on the map this year. There are many structures in the site which were not included in the map either, nor were they explored with test pits, because of lack of time and limited access. Many of the structures in the private lands have been looted and are almost collapsing. We informed the owner and apparently he is going to monitor the situation. If we had access to the rest of the wall and to the other structures on the southeast of the part we studied in 2006 and 2007, we would have a more complete image of the occupation and activity of this site, and this could offer an additional insight on the reason behind this great Preclassic wall.

In Zancudero's center there is a big hill, approximately 90 m tall. On top of the hill there are many low platforms, with an impressive view of the plains to the south and the mountains to the north. One can see at least two small caves on the hill-slopes, and on the foot of the hill there are several small scattered structures.

What makes this site interesting is not the settlement per se, but rather the great wall enclosing the greatest part of the hill. The wall is at least 800 m long, and in some places over 4 or 5 m tall, surrounding at least three quarters of the hill and the structures around it. The rest of the circumference is completed by swampy terrain and the Yaxchilán stream, which creates an advance post which is easy to defend, with easy access to water and food in the surrounding area.

It is still not clear what this formidable wall was protecting during the Preclassic or Classic. On the other hand, this is a small and insignificant site, surrounded by a wall which is quite big, with a strategic occupation since the hill in the center of Zancudero offers an incomparable view of the surrounding terrain. During the Classic period this hill must have provided Yaxchilán's defenders a good view upriver and of the valley that runs toward the kingdom of Hix Witz, which probably was not a part of Yaxchilán itself. Furthermore, it may have been possible for Yaxchilán's lords to see the subordinate communities within their kingdom. It is difficult to predict the role the wall played as lookout in the context of a settlement more dispersed and politically fractured during the Preclassic.

## Summary and Conclusions

By: Charles Golden, Andrew Scherer and Rosaura Vásquez

### Introduction

This chapter offers a short summary of the finds presented in the foregoing sections, as well as a look toward the opportunities and questions for future field and research seasons in the area. As usual, the interpretations based on these findings will probably be modified on the basis of future research. However, the research from 2007 is based and built upon the findings from previous studies in the area, and the authors believe that a good framework for understanding the development of the Piedras Negras and Yaxchilán polities has started to develop. We predict that future research will refine, rather than discard, the findings and interpretations described in this report.

### General perspective on El Kinel

The architecture in El Kinel's south group is characterized by a series of earthen mounds which during the Classic period may have been covered by stone blocks, on which were supported perishable superstructures, on top of the foundation stones. Adjacent to these mounds are a series of *aguadas* (water reservoirs) which may have functioned as borrow pits for extracting building material for making platforms. During 2007 the excavations in the South Group continued in the Structure L9-3, where previous work in 2006 had produced five burials. Four more burials were recovered in this group during 2007; the most remarkable one was Burial 10, a man of between 16 and 20 years of age, buried in the depths of the mound. A ceramic vessel was placed on the face of the individual, which was dated to the later part of the fifth century or the earlier part of the sixth century A.D., and could help to define the earliest period of occupation in El Kinel. Excavations carried on for 2 m below this burial, producing some pottery which couldn't be dated with certainty for any period previous to the fifth century. This confirms the interpretations of the data from the 2006 field season, which indicate an occupation in the South sector spanning the Late Classic (roughly from A.D. 600 to A.D. 800), but is not extended long before or after this period.

Excavations on the North sector were focused on Structure H10-1, where El Kinel's Monument 1 was found. Horizontal excavations revealed a rich domestic collection from the Terminal Classic, including a great amount of potsherds --with a particular abundance of Altar Naranja Fino, and Tres Naciones Gris Fino-- as well as great amounts of lithic refuse, and animal remains. It is interesting that fine wares from the Terminal Classic are almost totally absent from the south group, and we suspect that the North Sector was abandoned during the middle or end of the ninth century A.D., several decades after the South Sector was abandoned. The settlement of the North Sector probably started toward the end of the Late Classic, as evidenced by Burial 11. Burial 11 had the very poorly preserved remains of an adult individual, accompanied by three ceramic vessels, a ray spine, and at least 81 rat skeletons, representing the remains of the rodents that consumed a great part of the skeleton.

The program of test pits was continued throughout El Kinel, in an attempt to obtain a wider sample of materials from the whole site, and to carry on with the excavations from 2006, which revealed a series of post molds in an elevated area adjacent to the canal. The pottery from sounding pits adjacent to other structures in El Kinel supports the general patterns established in the structures that were more intensively excavated, such as L9-3 and H10-1, in particular the idea that El Kinel is mainly a Late-Terminal Classic center, and that the South Sector is the oldest of the two sections of the site.

Excavations along the edge of the canal, where the 2006 investigations produced a series of post molds, resulted in adding one more post mold to the series. However, no artifacts have been recovered which are associated with these features. Therefore, the preliminary interpretation about the embankment along the edge of the canal is that it is a man-made defensive feature, possibly the base of a palisade, although this cannot be confirmed, nor its date can be ascertained.

### **General perspective on Zancudero**

While part of the field team carried on working in El Kinel throughout the field season, most of the project archaeologists spent one week conducting more reconnaissance and preliminary excavations in Zancudero. Excavations in the current season confirmed that the construction and occupation of Zancudero date almost exclusively from the Late Preclassic (ca. 250-300 B.C.), and that the defensive wall is contemporaneous with this early occupation. It is difficult to define Zancudero's extension, since the map is not yet completed. What's more, the areas surrounding the settlement from the Late Classic (part of which has been provisionally defined as the site Arroyo Yaxchilán) cannot be easily distinguished from the Preclassic site without further excavations.

### **Future research**

We are still lacking information about the archaeological sites in the La Técnica zone. Although important advances have been carried out for increasing our knowledge of the El Kinel and Zancudero sites, both sites require more attention in terms of mapping and excavation. First, at present we don't know the limits of the La Técnica site, although it seems that this site's center is shown in the map made by Marzahn-Ramos and his colleagues. We still need to survey the area between the center and the site called Arroyo Yaxchilán. It is possible that this is a continuous settlement, and that El Kinel and Arroyo Yaxchilán are a single site.

Furthermore, evidently there is a series of sites to the north of the present-day community of La Técnica, including Arroyo El Mico, La Fortuna, and Tzimin. However, we are also lacking the necessary survey between these sites and El Kinel in order to define the limits of them all. There is a need to perform excavations in all sites identified in 2007 to determine their occupation dates, their material relationships (for example between the pottery producers), and their political relationships.

El Kinel's chronology appears to be more or less well established, although it is always possible to make it finer with additional excavations in the future. But more important that stratigraphic excavations are horizontal excavations. We have not been able to understand fully the settlement pattern in El Kinel's center. We need to define the distribution of residential, ceremonial, and administrative structures. Although this site has seen much modern agricultural activity, which has had a deep impact on the preservation of ancient remains, horizontal excavations performed in 2007 indicate that there is much *in situ* evidence of everyday life from the last occupation phases in El Kinel.

In the Zancudero site we still need to map the whole wall, which we think measures 800 m. During the 2007 season we mapped approximately 200 m. This site requires more excavations on the wall, as well as in the structures inside and outside the wall, in order to illuminate the settlement patterns and the site's construction and occupation dates. Apparently the wall was built during the Late or Terminal Preclassic, and part of the site's occupation pertains to the same time, although without further excavations it is not possible to determine whether there are structures mainly from the Classic inside the wall, or Preclassic structures outside the wall. Thus, it is impossible to define the chronological and spatial limits of the Zancudero site.

In the following seasons we hope that the PRASL team will be able to continue the research in the whole area of Yaxchilán's kingdom. At the moment it is not possible to extend the investigations further inside the Sierra del Lacandón National Park because of security issues. Up until 2007 PRASL archaeologists have carried out research from Piedras Negras to La Técnica, leaving a huge historic blank in the area now known as Centro Campesino. Without the opportunity of working in this all-important area --which includes the Guatemalan side of the site of Yaxchilán-- it is impossible to fully understand the history of the Yaxchilán kingdom in Guatemalan territory. We hope for a peaceful resolution to the situation of instability in the park, and for the opportunity to carry on working with the Defensores de la Naturaleza [Defenders of Nature] and with communities like La Técnica, in order to improve our knowledge of Maya history and to protect the Guatemalan heritage.

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