

## THE OBSIDIAN OF TAK'ALIK AB'AJ IN CEREMONIAL CONTEXTS

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Further to the use of obsidian in ancient Mesoamerica as a raw material for the elaboration of cutting tools, it was also considered to be a significant object to use as an offering, and therefore, probably, in the same way daily life artifacts were manufactured, also special pieces were elaborated with the purpose of being integrated to rituals or ceremonies.

In Tak'Alik Ab'aj, throughout many years of investigation, a considerable amount of offerings associated with structures, plazas and monuments have been recorded. One characteristic shared by most of these offerings is the paucity or inexistence of obsidian pieces. Examples like this have been identified in the different architectural complexes of the site, particularly in Structures 3, 6, 7 and 12 of the Main Group (Balcárcel 1995; Crasborn 2004; Dillon 1987; Prater 1984; Schieber 2000; Vela 2003), and Structure 32 of the West Group (Zetina 1994).

On the other hand, there are other offerings where obsidian pieces were indeed included; these cases correspond to the massive offering dedicated to Stela 13, and to Burial 1. However, in both findings, pottery represented the highest percentage among the offered artifacts, and therefore the question rises: what were the reasons that defined the inclusion or not of lithic artifacts in these offerings?

In the Maya area, a number of caches were identified in sites like Piedras Negras (Hruby 1998; 1999), Dos Pilas (Palka and Escobedo 1992; Siver 1992), Tikal (Coe 1965), Isla de Flores (Suyuc, n.d.) and other sites from northern Petén and the area of the Río Pasión (Krejci and Culbert 1995), where lithic artifacts were those with the stronger presence with respect to the other artifacts considered to be the protagonists in these rituals.

In Tak'Alik Ab'aj, there were two findings in which obsidian pieces outnumbered the rest of the artifacts: the first case corresponded to a macro-core offering placed on Burial 1, and the second corresponded to a cache located in Structure 17, where 13 prismatic blades were identified. Prior to defining the quality of these findings, it is important to present an up-to-date panorama regarding the behaviour of obsidian within the site and throughout its occupation, to establish whether such behaviour was, or was not, reflected in the lithic artifacts contained in these offerings.

The study of obsidian artifacts was initiated in 1998 by Edgar Carpio and is being now continued by this author. Today, the sample comprises 4066 artifacts from contexts that have been properly identified through ceramic analysis.

This survey shows that most of the obsidian was originated in the sources of El Chayal and San Martín Jilotepeque, and in a lesser degree, in other sources such as Tajumulco, Ixtepeque and Pachuca (Mexican source). However, and throughout the Tak'Alík Ab'aj occupation, the presence of these sources and the amount of specimens varied depending on the different timeframes. These changes would seem to be the reflection of the dynamics at the site, and of the commercial relationships their leaders maintained throughout its history.

The site's earliest occupation corresponds to the final part of the Early Preclassic period (1000-800 BC), and has been identified in the area known as El Escondite, located west of the Main Group, near the brook of El Chorro. There is a total of 151 pieces for this period, most of which come from the source of San Martín Jilotepeque and represent 52.3% of the sample, while El Chayal accounts for 33.6%. One interesting piece of information is the presence of prismatic blades at such an early date, which seem to have been imported after being manufactured, as the remaining artifacts associated with this context do not reflect the production of blades at that time.

In the Middle Preclassic (800-300 BC) there was an increase in the presence of obsidian with 880 artifacts, reflecting a change in comparison to the percentage of both sources, as this time it was El Chayal the one with the stronger presence, 48.6% with respect to San Martín Jilotepeque, which went down to 39%.

This trend remained the same during the Late Preclassic period (300 BC – 250 AD), as El Chayal showed a further increase in its presence, which climbed to 54.3%, while San Martín Jilotepeque went down to 32.5%. Simultaneously, there was an increase in the obsidian consume at the site, as for this timeframe the sample included 1848 artifacts.

In the Early Classic period (250-600 AD), there was a drastic decrease in the amount of obsidian, with only 163 artifacts. The presence of El Chayal as a source dropped to 50.9%, while San Martín Jilotepeque climbed to 35.5%.

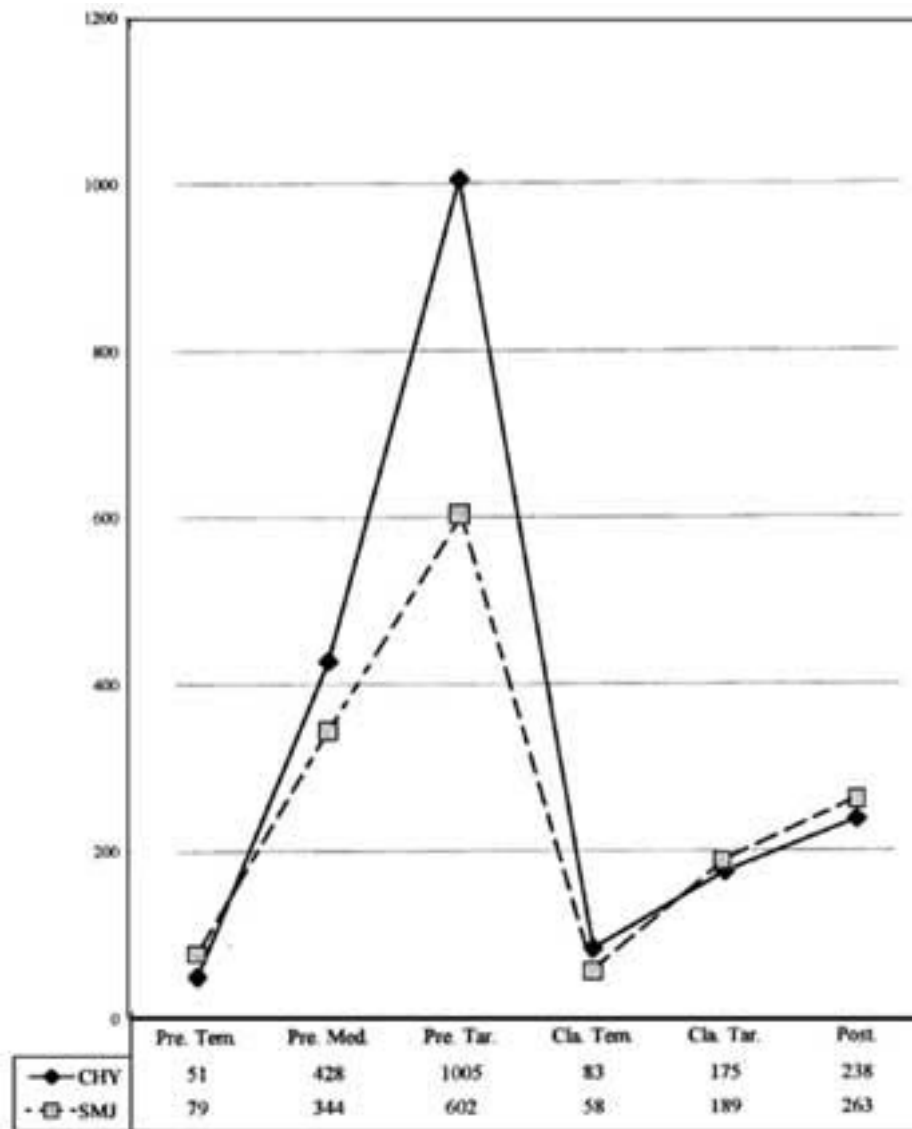


Figure 1. Frequency of obsidian sources throughout time at Tak’Alik Ab’aj.

This change persisted up to the Late Classic period (600-900 AD), as this time span shows an increase in the consumption of obsidian that climbed to 419 pieces, whereas one more time, San Martín Jilotepeque presented a larger percentage than that of the source of El Chayal (45.1% and 41.7, respectively). During this period, it is also observed that in Tak’Alik Ab’aj, a foreign source was introduced, namely, Cerro de las Navajas or Pachuca –a green obsidian-, which represented 1.19% of the total sample.

Towards the Postclassic period (900-1524 AD), there was a new increase in obsidian consume with a total of 605 artifacts, and likewise, there was continuity in the pattern of the preceding period, as the percentage for San Martín Jilotepeque increased to 43.4%, while El Chayal suffered another drop to 39.3%. Also, there are some specimens from the source of Tajumulco, representing only 0.6% of the sample. It should be noted that obsidian from the source of Ixtepeque is also present

since the Preclassic and up to the Postclassic period; however, in none of the cases identified this source exceeded 0.5% (Figure 1).

With this scenario in mind, there are cases of offerings with the presence of obsidian, which have been identified according to the number of the structure to which they correspond and not to the date of the finding.

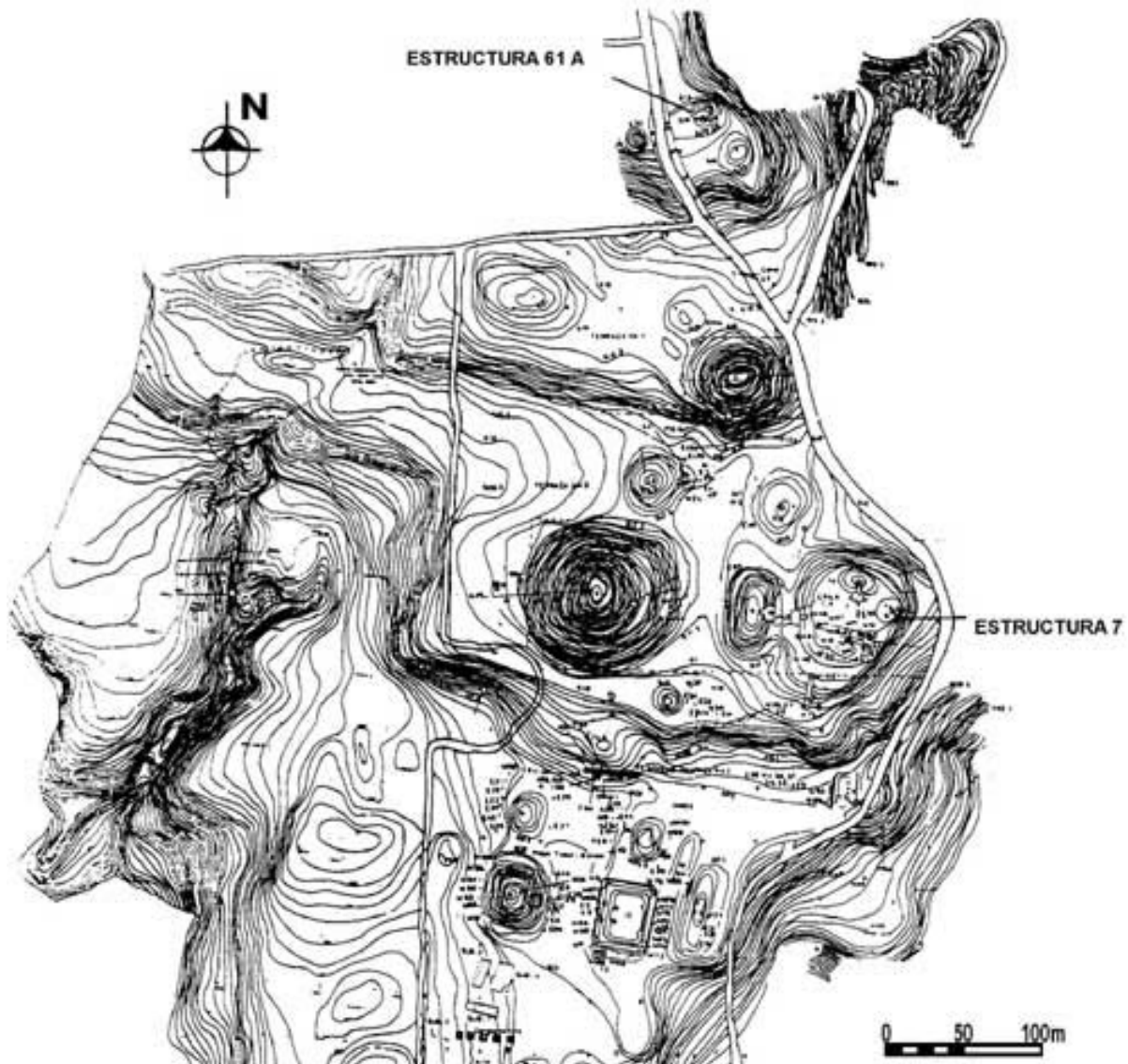


Figure 2. Map of the archaeological site of Tak'Alik Ab'aj (drawing by M.D. De León 2003).

## STRUCTURE 7

Located on the southeast side of Terrace 3 in the Main Group (Figure 2), this structure corresponds to a low and long platform which supports two small structures on its north end: Structure 7A was placed on the central axis, and Structure 7B on the east side (Schieber 2002:459). The amount of monuments present on the platform and their astronomical implications, together with the amount of offerings

placed there, make of this structure the most sacred one of the site (Schieber 2003:797). Two significant findings in this structure will be described, namely, the massive offering in Stela 13, and Burial 1.

### MASSIVE OFFERING IN STELA 13

Research conducted in the south façade of Structure 7A in 2000, led to the identification of an offering placed during the Late Postclassic period in front of Stela 13 (Figure 3; Schieber 2002: 459-461). As a part of this offering more than 500 artifacts were put in place, of which only 5% correspond to obsidian. Among them, 33 prismatic obsidians from the source of El Chayal were recovered. Only 21 of these artifacts are complete. None of the specimens presented evidence of retouch, while only seven showed traces of a light use. It is not possible, for the time being, to establish to how many cores these blades corresponded, however, they seem to correspond to the intermediate series within the core reduction series, and represent a length average of 17.2 cm x 2.1 cm across, with an average weight of 20.2 grams (Figure 4).

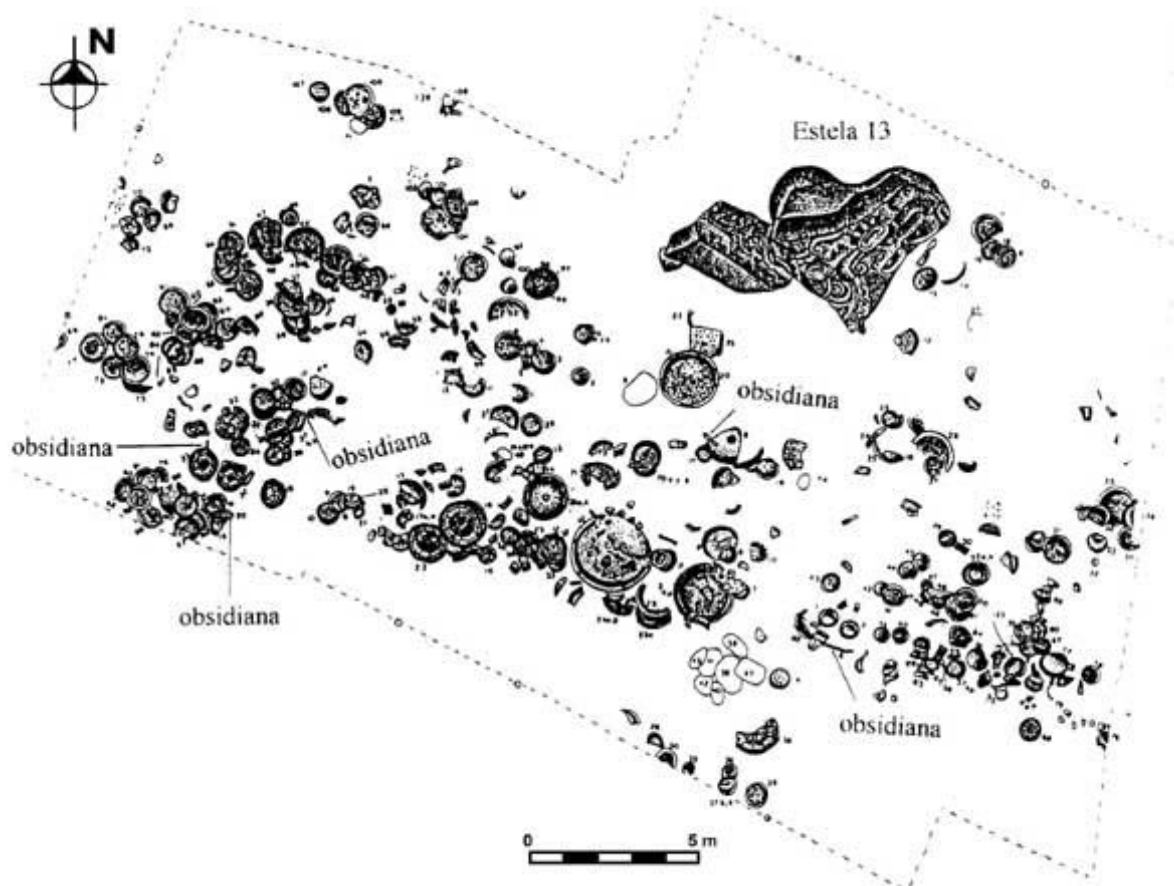


Figure 3. Plan view of massive offering dedicated to Stela 13 (drawing by J. Claudio and M.T. De León 2000).

When examining the distribution of the artifacts in the offering, it is observed that the main ceramic pieces were directly related to the stela and followed a north-south and east-west axis, while blades did not show a defined pattern of distribution, and were found inside, under and around the vessels.

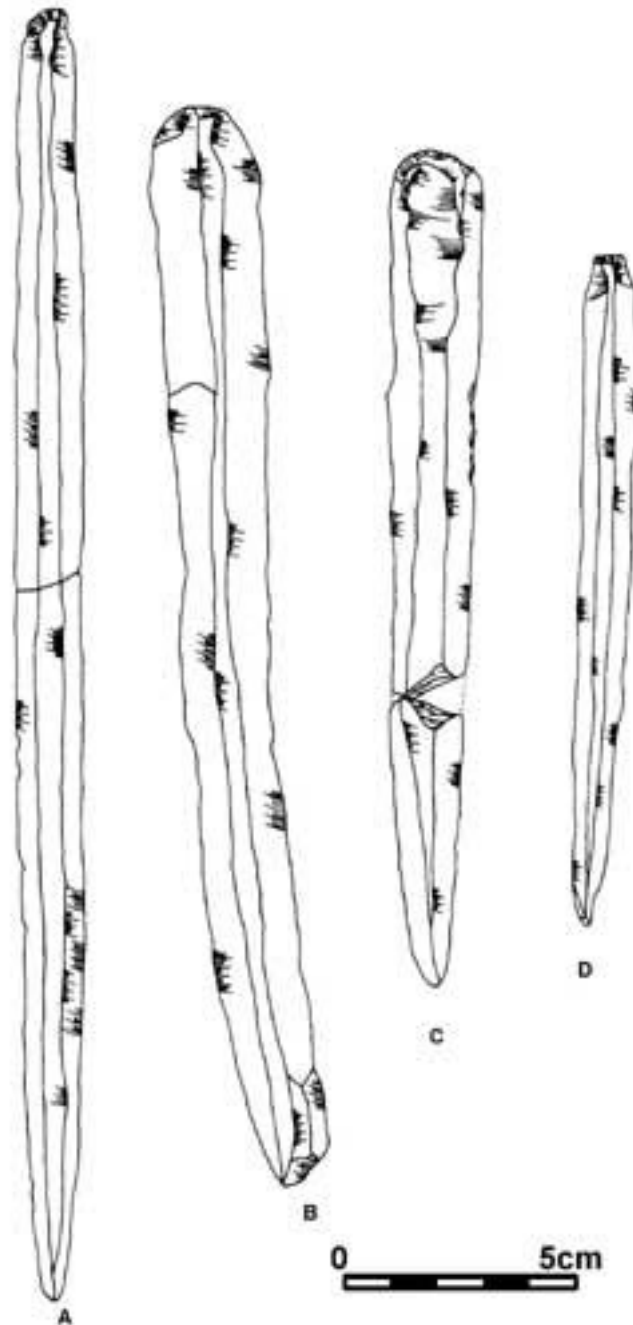


Figure 4. Blades from special contexts. A) Structure 17; B, and C) Structure 7; D) Structure 61A (drawing by J. Crasborn 2004).

## BURIAL 1

This burial was excavated in 2002, and is located at the center of Structure 7A, at the back of Stela 13 (Schieber 2003:798). This research has established that

subsequently to depositing the burial, a leveling was carried out inside of which an offering was placed, so that both findings are described in the order in which they have been identified. An offering was deposited inside the refill that covered Burial 1, consisting of six bowls of the Santiago ware together with five complete macro-cores, two of which were placed on their platform and the three others on their sides (Figure 5). All of them seem to have been locally produced with materials from El Chayal. Three of them still have a bark on their distal segment, and traces of having been impregnated with hematites. These macro-cores have an average length of 15.4 cm, a platform diameter of 11.6 m, and a weight of 2446.6 grams, that is to say, approximately 5.4 pounds (Figure 6).

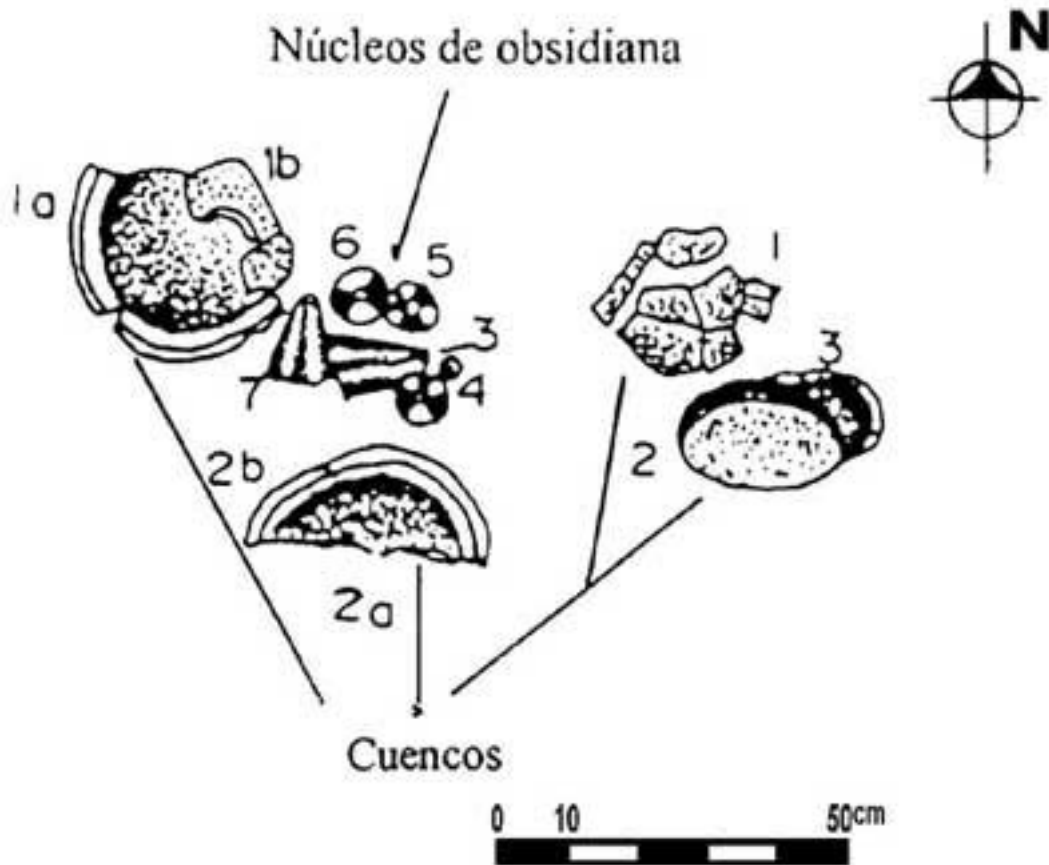


Figure 5. Plan view of cores placed on top of Burial 1 (drawing by M.I. De León 2002).

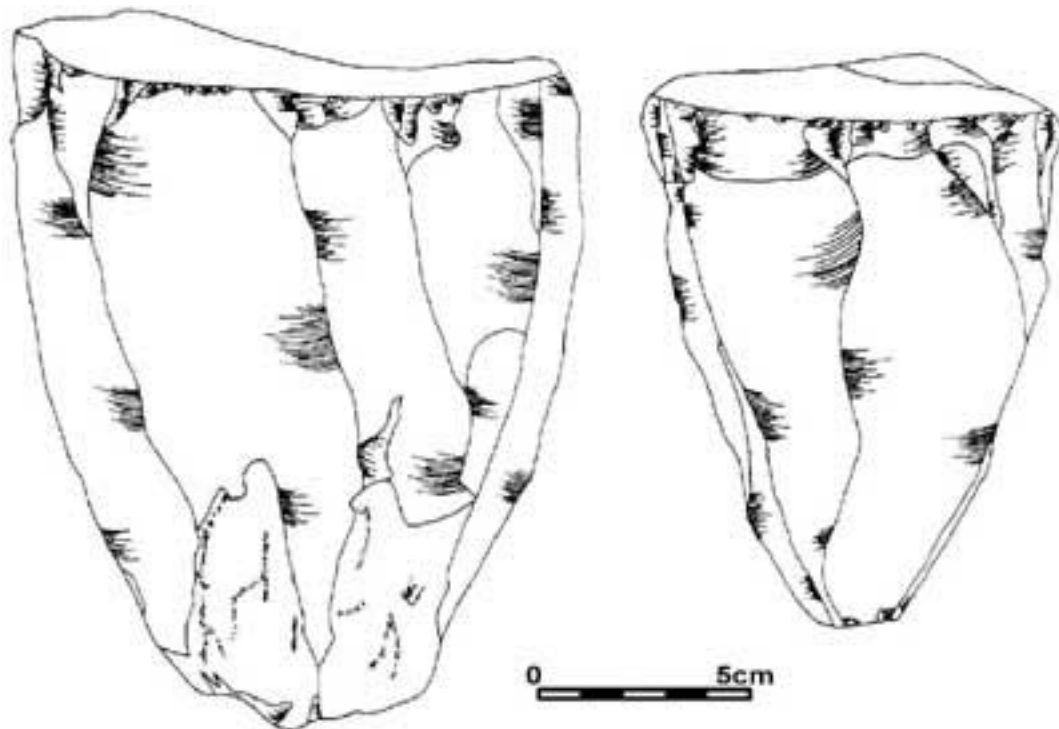


Figure 6. Offering cores placed on top of Burial 1 (drawing by J. Crasborn 2004).

Besides, Burial 1, dated to the transition between the Late Preclassic and the beginning of the Early Classic period, presented a substantial amount of jadeite artifacts, iron pyrite mosaics and vessels, among others (Figure 7). However, and contrary to the findings mentioned above, this offering only included five prismatic blades, two of which were found complete; the first one corresponded to a blade from El Chayal, 18 cm long, placed probably where the feet of the individual were resting; the second piece, 16 cm long and from San Martín Jilotepeque, was placed close to the left hand of this ruler; a third fragment was found near his left ankle, and the two remaining ones were not directly a part of the furnishings of this character, as one was placed north, close to his abdomen under three cobble stones, and the other one was placed southwest of his feet, under three jadeite discs. None of these pieces had evidence of retouch, and only two of them appear to have had a light use.



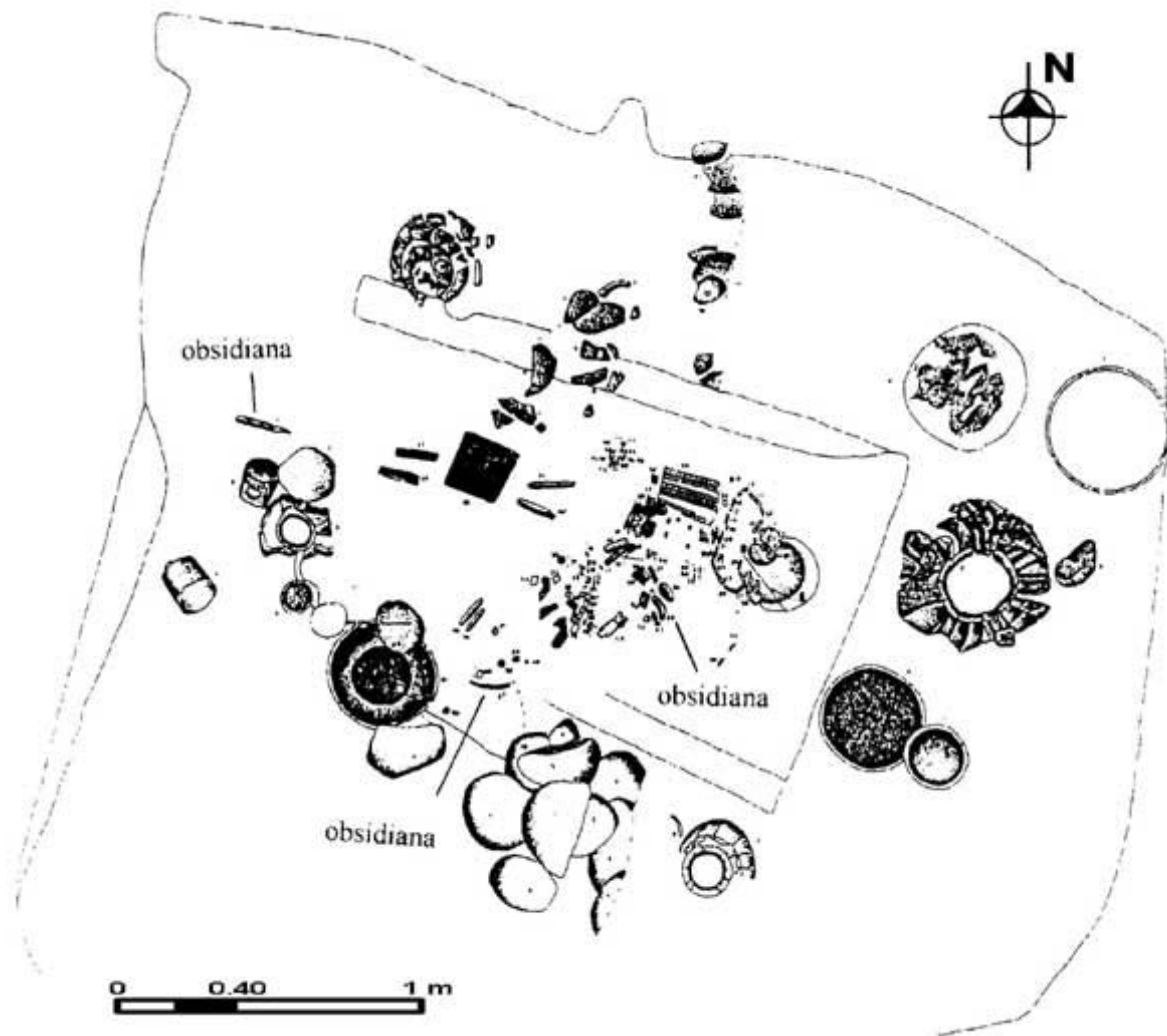


Figure 7. Plan view of Burial 1 (drawing by M.T. De León 2002).

Likewise, on the south side, or the left side of the character, a red bowl was found with 15 flakes from El Chayal in the inside (Figure 8). Adjacent to this bowl, a pyrite mosaic was deposited as well as a greenstone fish. This finding is interesting because the pieces corresponded to finely worked artifacts; in contrast, four of the flakes presented carving errors, which led us to ask ourselves why such kind of artifacts may have been included in an elite burial. Despite the fact that it is not possible to answer this question, it probably could be suggested that somehow, they may have fulfilled some kind of function during the lifetime of this character, or either, that they were a part of some ritual connected with the ceremony, as all specimens range from 2.8 and 8.7 cm in length, and 1.6 and 4 cm in width.

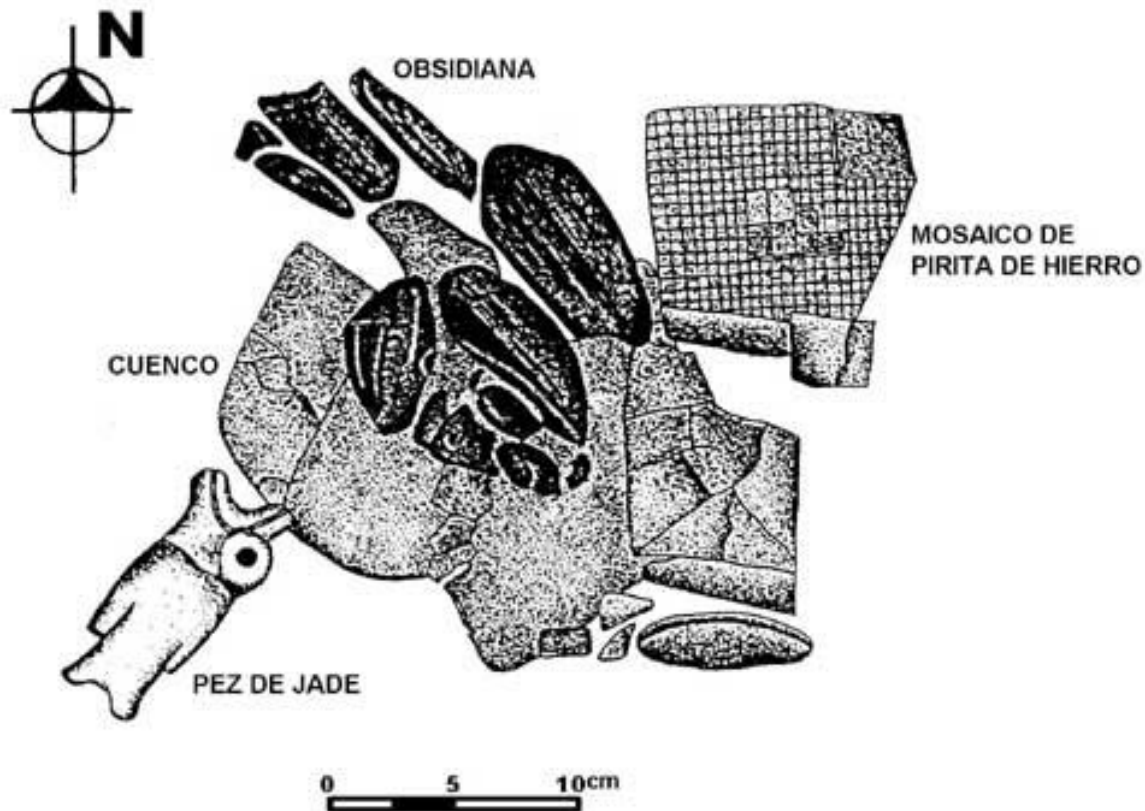


Figure 8. Plan view of obsidian flakes associated with Burial 1 (drawing by M.T. De León 2002).

## STRUCTURE 17

It is located in the South Group, approximately 0.5 km away from the Main Group – on Terrace 1- in the finca Santa Margarita (Figure 2). The University of California at Berkeley, during the 1976 and 1980 excavations at Tak’Alik Ab’aj, identified a considerable amount of offerings in this place.

The majority of these offerings included nothing but ceramics, except for three caches, but unfortunately, there is detailed information for just one of them. This corresponds to the one identified in Operation T-114 excavated by Adriane Prater in 1979, and located at the east side of Mound 17 (Dillon 1987: 50-53). This finding – Cache 1- dated to the Late Preclassic period and consisted of three vessels placed one on top of the other; inside, the fragments of 13 complete blades were found (Prater 1984:157). These blades possibly corresponded to different reduction sequences of two cores from El Chayal. Among these artifacts, two blades show traces of use and five present evidence of retouch. So far, these are the largest artifacts found at the site (Schieber and Orrego 2002:30), with an average length of 28.5 cm, a width of 1.68 cm, and a weight of 28.3 grams (Figure 4).

## STRUCTURE 61A

It is located north of the Main Group on Terrace 5, in finca San Isidro (Figure 2). It was investigated by Claudia Wolley in 2000. The excavations conducted on its south side revealed the presence of a circular altar-censer (No. 33). In association with it, there was an offering consisting of four vessels. Vessels denominated A and B contained four complete prismatic blades which formed a rhombus that pointed to the four cardinal directions (Figure 9). This finding was dated to the beginning of the Early Classic period (Wolley 2000: 27-28). The four blades apparently corresponded to the final reduction series, and possibly they belonged to one or two cores from San Martín Jilotepeque. All specimens were complete, with no apparent traces of use or retouch. As opposed to the blades identified in Structures 7A and 17, these ones were smaller, with an average length of 15 cm, a width of 1.25 cm, and an average weight of 5.52 grams (Figure 4).

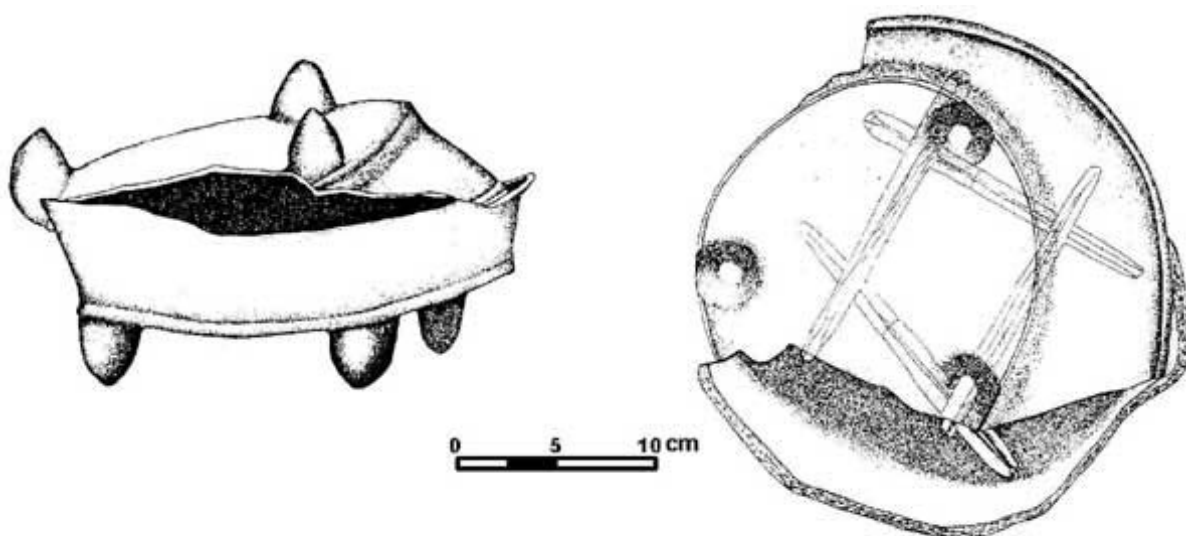


Figure 9. Plan view of offering in Structure 61A (drawing by J. Pineda 2000).

## FINAL COMMENT

In 1988, the dump of an obsidian workshop was discovered in the southeast sector of the Main Group and dated to the Preclassic period; according to Carpio (1999:16), it was associated to the production of macro-cores, so that it is probable that the prismatic blades recovered in Structures 7A and 61A were elaborated there, with the special purpose of being deposited with these offerings. The length of the pieces varied from 13 to 23 cm, while the artifacts of common usage did not exceed 10 cm in length, except for two cases where the blades exceeded 15 cm. However, in the case of the blades found in Structure 17 with a length that ranged between 28 and 29 cm, evidence was not sufficient to ascertain that they were produced in Tak'Alik Ab'aj, so the possibility exists that despite the fact that it could have existed a production of tools within the site, some already manufactured pieces may have also been imported.

In this line of thinking, it could be hypothesized that the macro-cores placed on Burial 1 were also produced at the site; however, they showed an average length of 15 cm, while the exhausted cores originated in other excavations did not exceed 6 cm; such dimensions, nevertheless, may have been associated to the reduction process of the core rather than to the size with which they were produced. On the other hand, evidence gathered to this day suggests that the deposit of obsidian artifacts in offerings like the Cache found in Structure 17 and the massive offering in Stela 13, which date to the Preclassic period, included artifacts that were 100% from the source of El Chayal, the one with the strongest presence in this timeframe.

However, during the transition between the Late Preclassic and the Early Classic periods, there was a greater variability regarding the selection of sources, as the offering of cores exclusively included artifacts from El Chayal, though that was not the case with Burial 1, where specimens of the two major sources of supply of the site were deposited, while in the offering of Structure 61A, all pieces were from San Martín Jilotepeque.

As to the arrangement of the artifacts deposited in these offerings, it has been observed that most of them do not follow any specific depositing order, as is the case with the massive offering of Stela 13. One exception in this sense corresponds to the offering of Structure 61A, which displayed an intentional arrangement of the four pieces and suggested an orientation towards the four cardinal directions. This detail, as well as the number of artifacts involved, has led us to consider that the intentionality of the ritual in regard to the deposit of the obsidian pieces was different than that of other offerings at Tak'Alík Ab'aj. As to the amount of artifacts in the already described offerings, it was interesting to realize that the amount of specimens in all of them gave an odd number, so chances are that this fact may have had some significance that still remains obscure.

Finally, in our view, it would be greatly important to conduct a study of micro-traces of use in the artifacts present in these contexts with signs of wear, so as to ascertain whether they in fact had, or had not, a use connected with the rituals conducted at Tak'Alík Ab'aj.

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Figure 1 Frequency of obsidian sources throughout time at Tak'alik Ab'aj

Figure 2 Map of the archaeological site of Tak'alik Ab'aj (drawing by M.T. de León 2003)

Figure 3 Plan view of massive offering dedicated to Stela 13 (drawing by J. Claudio and M.T. De León, 2000)

- Figure 4 Blades from special contexts: A) Structure 17; B and C) Structure 7; D) Structure 61A (drawing by J. Crasborn 2004)
- Figure 5 Plan view of core offering placed on top of Burial 1 (drawing by M.T. De León 2002)
- Figure 6 Cores offered on top of Burial 1 (drawing by J. Crasborn 2004)
- Figure 7 Plan view of Burial 1 (drawing by M.T. De León 2002)
- Figure 8 Plan view of obsidian flakes associated with Burial 1 (drawing by M.T. De León 2002)
- Figure 9 Plan view of offering at Structure 61A (drawing by J. Pineda 2000)