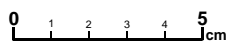
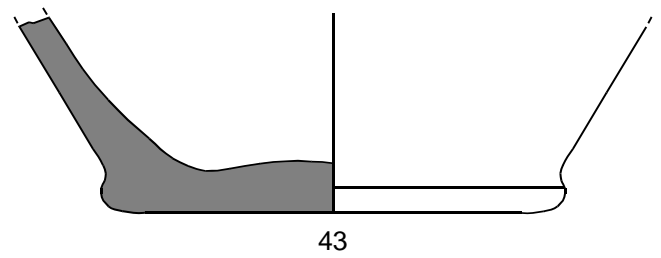
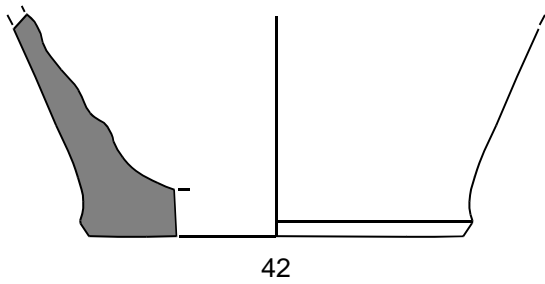
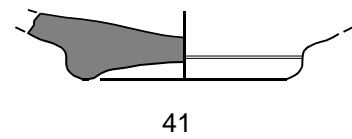
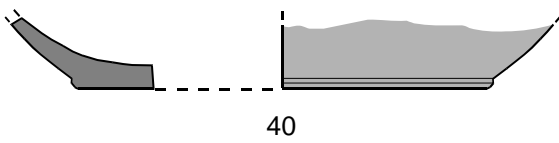
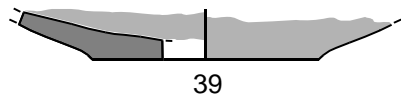
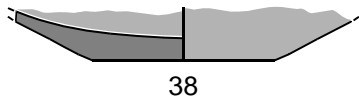
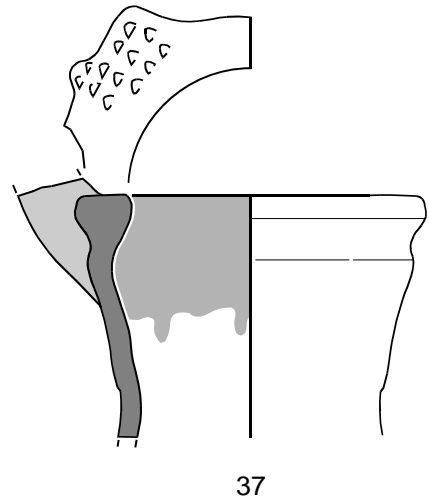
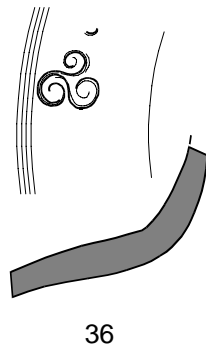
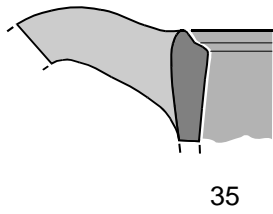
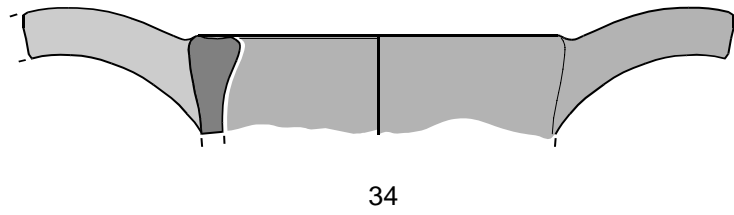
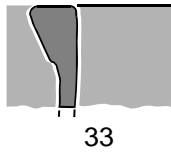
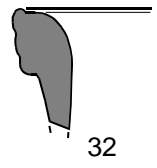
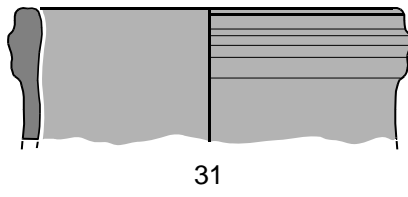
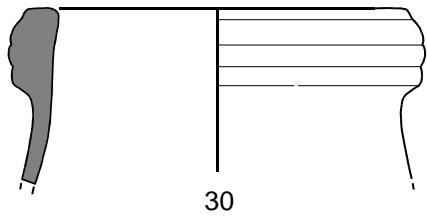
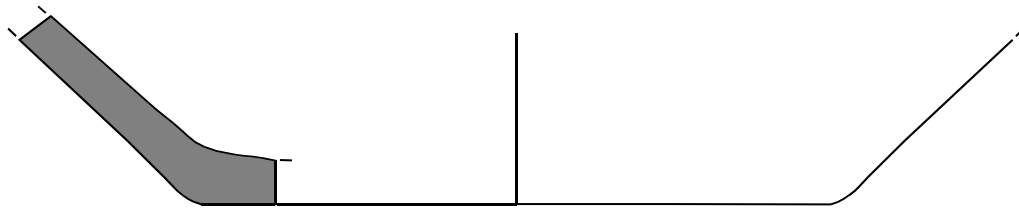


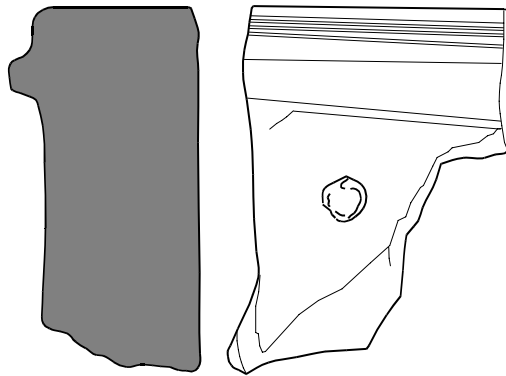
RC- SU 21



RC- SU 21

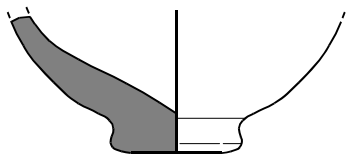


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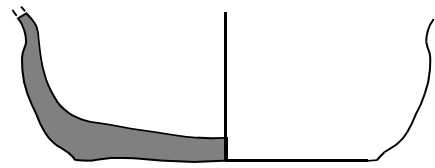


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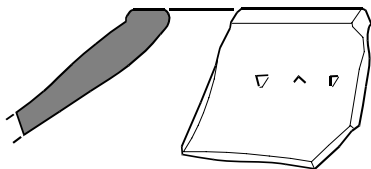
Cooking ware



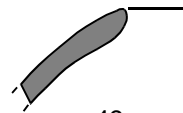
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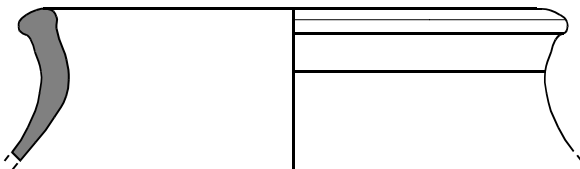
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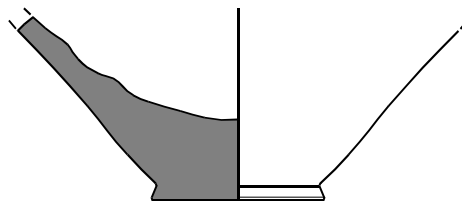
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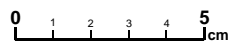
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53



RC - SU 22

Definition: Level of sand

Interpretation: Level of sand formed by wind action.

Observations: Level of grey, fine-grained sand. Containing pottery, but very little in quantity. In some areas, it appears compacted.

Material: Slip ware: 25 frags.
Common ware: 27 frags.
Bone: (0,98 kg)

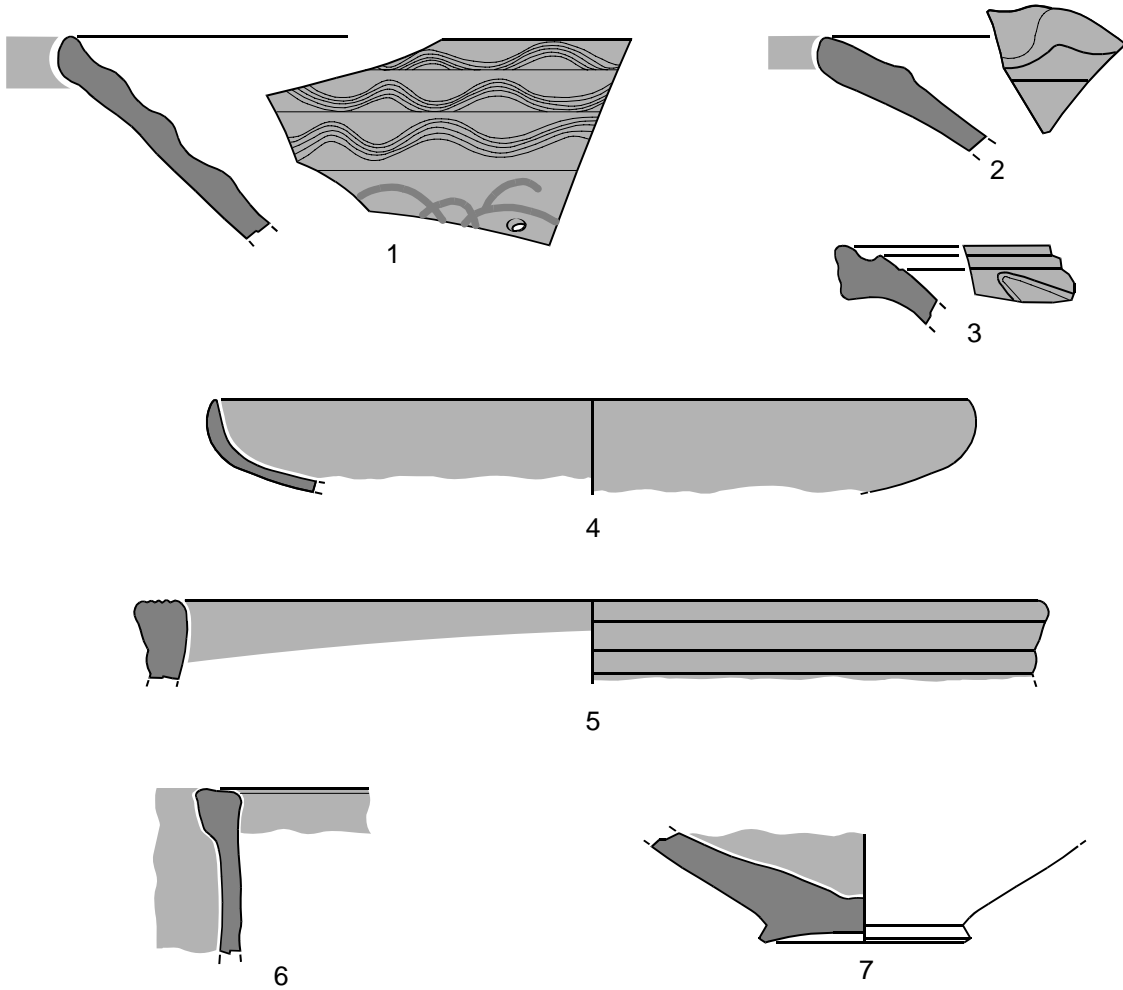
Archaeologist: E. Ariño

| | |
|-----------------------------|-------|
| <i>Covered by (Stratum)</i> | 19-21 |
| <i>Covering (Negative)</i> | 7 |
| <i>Covering (Structure)</i> | 8 |
| <i>Covering (Stratum)</i> | 23 |

RC - SU 22



RC- SU 22



RC - SU 23

Definition: Level of compact red clay

Interpretation: This stratum could belong to the first stage of sequence, maybe related to the first fortification wall.

Observations: Stratum composed of successive horizontal layers of clay, although sandy areas are incorporated within the stratum. The cross-section makes the alternating layers readily observable. Located beneath SU-21, it presents few differences when compared to the higher level. Yielded several fragments of limestone used in architectural decoration and four brick fragments. Containing pottery. Beneath, where the level meets bedrock, a crust of pebbles and numerous pottery fragments can be observed. It is probably SU-10, which was uncovered in the 2007 season, but that cannot be stated with certainty because SU-8 was not excavated.

Material: Slip ware: 238 frags.
Common ware: 553 frags.
Cooking ware: 1 frags.
Ceramic architectural covering: 3 frags.
Construction elements: 13 frags.
Stone construction elements: 7 frags. (5 shapeless, 2 carved)
Bone: (2 kg)

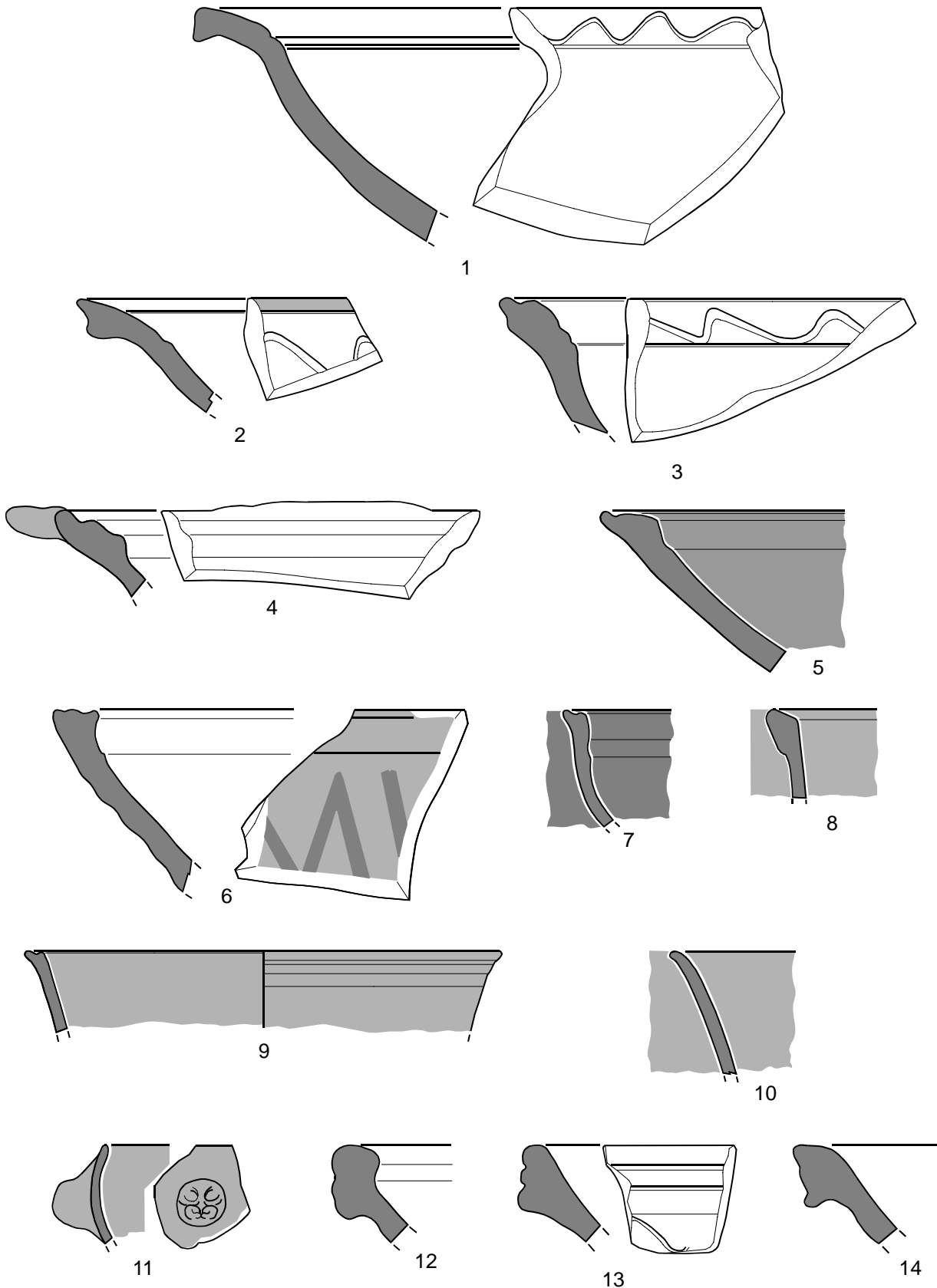
Archaeologist: E. Ariño

| | |
|-------------------------------|-------|
| <i>Supporting (Structure)</i> | 8 |
| <i>Covered by (Stratum)</i> | 22-21 |
| <i>Covering (Stratum)</i> | 12 |

RC - SU 23

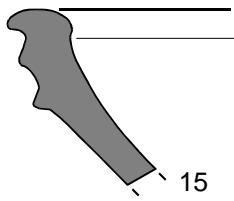


RC- SU 23

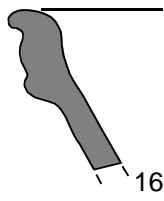


0 1 2 3 4 5 cm

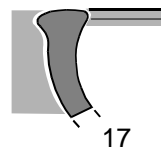
RC- SU 23



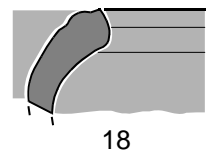
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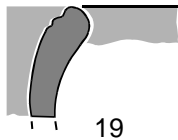
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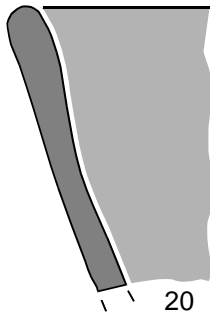
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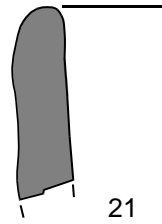
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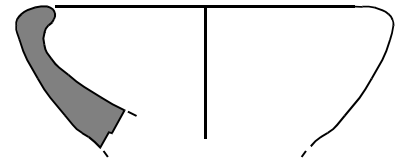
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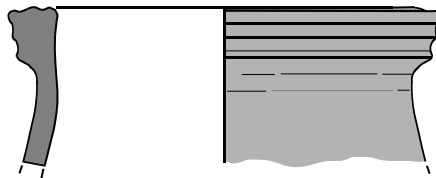
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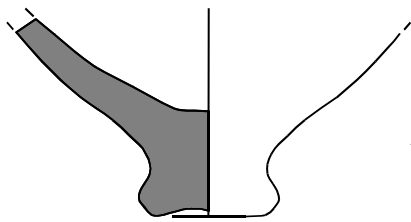
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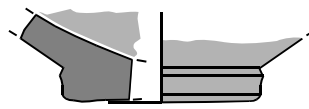
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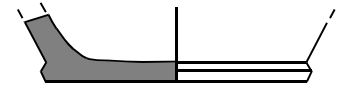
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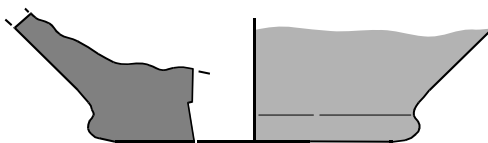
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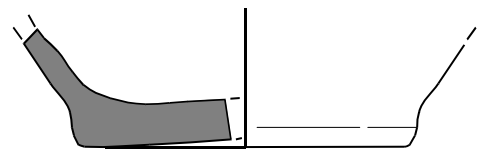
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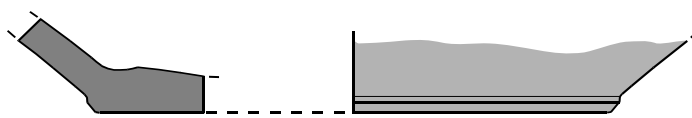
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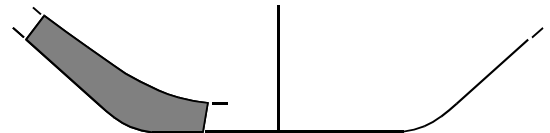
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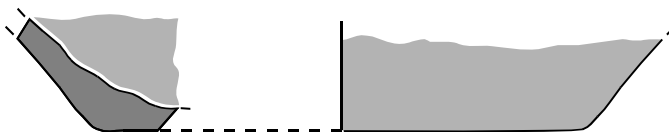
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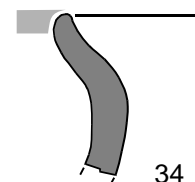
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33



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Cooking ware



Archaeological record: Sector RF (Tchinguiz Tepe)

Verònica Martínez

Excavation strategy

One of the objectives of the ERAUB (Equip de Recerca Arqueològica i Arqueomètrica Universitat de Barcelona) in the archaeological efforts carried out in the ancient city of Termez is the detailed study of the pottery recovered in the various archaeological contexts. From the outset, the methodology used to study ceramic materials has been both archaeological and archaeometric. In order to establish a typological and chronological sequence—non-existent until now—of the ceramic types characteristic of each period, a typological and archaeometric study is in progress on the pottery uncovered in various dig sites, including centres of pottery production and a number of dwelling areas, all of varying chronologies. Combining the study of ceramics from habitations and the identification of ceramics made in production centres, once located, offers the ideal formula to establish what production characterised each historical period of the city and, in turn, establish with certainty where they were produced and in which areas they came to circulate and find use. In this respect, we will be able firstly to establish the local diffusion routes and, secondly, to propose regional diffusion routes.

Based on the results obtained from the archaeological record and the study of pottery recovered in the year 2006 in the ovens situated in the area of Kara Tepe as well as from the stratigraphic sequence initiated in 2007 in Tchinguiz Tepe, the decision was taken to broaden our ceramic study and undertake new fieldwork in 2008 on a new combustion structure corresponding to a kiln used for pottery production in sector RF at Tchinguiz Tepe.

The space where the kiln was encountered had been the subject neither of magnetic surveying in the 2006 season, nor of georadar surveying in the 2007 season. On each occasion, the reason lay in the existence of a large earthen mound formed during prior archaeological digs, which hampered an acceptable application of either geophysical method (Sala *et al.*, 2007). Cleaning of the space at the conclusion of the 2007 season, however, revealed some surface evidence which appeared to point to the existence of a combustion structure. A large overfired area could be made out. Reddish in colour, it contained numerous pottery shards and slag dispersed across the surface. In addition to an earthen mound where the kiln was located, the space has also been highly affected by use as a military training ground in recent years. All these circumstances, together with the erosion of the structures over time, have the consequence that the archaeological remains have been severely disturbed and appear in a highly degraded state.

Excavation of sector RF

Based on the evidence that indicated the existence of a ceramic kiln in sector RF, a sample trench was marked out measuring 9 x 10 m, running north-south parallel to the eastern wall of the fortification wall between Towers 5 and 6.

The first stage of excavation was to clear the superficial level of sand, which contained a large amount of small round pebbles and pottery shards severely eroded by wind action (SU-1). The superficial level covered part of the kiln structures and the levels of infill in their interior, as well as a homogeneous floor extending practically over the entire surface under excavation (SU-10). The floor (SU-10) presents various manmade elements. On the one hand, it shows evidence of having been a circulation area. Evidence includes a series of small pits and a dwelling. It was also cut away to set the adobe walls of the kiln. Lastly, it has recently been used to dig trenches for military purposes.

The evidence of past and recent use as a floor for circulation includes a small ditch (SU-3), which is filled with overfired sand (SU-2) resulting from direct combustion, and a second ditch (SU-9) filled in by a level of ash (SU-8). On the floor (SU-10), a series of circular patches (SU-4 and 5) were uncovered near the entrance to the kiln. All the elements have been considered vestiges of various dwellings, undoubtedly built to carry out some temporary activity.

In the western sector of the excavated space, the remains of two adobe bricks (SU-12) were identified in horizontal positions on the floor SU-10 and covered by SU-1. To the southwest, a level of sand, which was identified between SU-1 and SU-10, was recorded at SU-6, although its characteristics are very similar to SU-1. It is a level of yellowish sand mixed with a large amount of round pebbles, gravel and pottery shards severely eroded by wind action. Along with these finds, the vitrified remains of the kiln structure appear, indicating that the level was formed subsequent to the use of the kiln, from the materials coming from its destruction and from the accumulation of round pebbles and pottery shards. The potential of the level increases towards the west and could indicate that it is the same unit as SU-1, which presents a greater thickness to the west because of the slope of the terrain.

In the centre of the sample trench, the floor SU-10 was bisected by a large military trench (SU-18), which runs north-south and measures 5.80 m in length, 0.60 m in width and 80 cm in height. The bottom of the sample trench had been a floor of circulation (SU-24) that connected two oval pits (2 x 0.90 m) running east-west. The oval pits lie at either end of the trench and were similarly excavated in stratum SU-10. The same level filled in the trench and the pits (SU-17). It was composed of yellowish sand, pottery shards, charcoal and modern elements for military use. The materials confirm that the level was formed in a secondary modern context.

In the eastern half of the sample trench, the excavation of the superficial level revealed the structure of a rectangular kiln, oriented north-south. A passage to the north would seem to lead to a larger quadrangular space, situated to the south, which we believe might have been the cooking chamber. Although the rack appeared to have disappeared entirely, the springing points of the arches which supported it have been preserved. The two spaces were enclosed to the east by the wall SU-31 and to the west by the wall SU-30, both of which were built of adobe. The southern part of the walls still bears evidence of the arches which supported the rack. The stratigraphic evidence of the elements was grouped as SU-16 for the springing points of the arches resting on wall SU-31 and as SU-33 for the springing points of the arches resting on wall SU-30. At their southern end, the two walls are supported by a structure oriented east-west (SU-13), which was also built of adobe and encloses the kiln on its southern end.

As the evidence on the superficial level has suggested, the kiln structures would appear to fit in a cutting made in level SU-10, which has also affected other strata below, such as SU-27 and 28. SU-27, which corresponds to a level of sand mixed with pottery with a potential of 1.5 m, is located immediately beneath SU-10. SU-10 was affected not only by the cutting made to build the walls but also by cutting related to the modern military trench. Stratum SU-27 stands on the level of sandstone that constitutes the geological base of the site (SU-28), which was identified at the bottom of the trench and at the bottom of the oval pits that define its edges, as well as the interior of the kiln and the kiln's western side. In this location, it could be observed that the rock had been carved along the same orientation as that of the kiln, creating a step in which the kiln wall fit. It can be deduced that the cutting made for the kiln involved carving the rock base, with the carving reflects the kiln's outline.

The distinct archaeological strata of infill in the preserved space inside the kiln were diverse in character. Some were levels of accumulation of materials which corresponded to the collapse of the kiln structures, and they lay below the depth of the cooking chamber and must be the result of the collapse of the rack and dome. Others, which were found in the area corresponding to the space for feeding fuel and entering the kiln, corresponded to strata formed by household trash once the kiln was no longer performing its primary function, but was used as a trash heap instead. By contrast, the level beneath it corresponded to the charred remains of the various—and last—fuel fed into the kiln.

The first archaeological level deposited on the part which the kiln's rack would have occupied, beneath SU-1, corresponds to a stratum of 8 cm of potential formed by sand mixed with grey ash (SU-7),

pottery shards, overfired and vitrified remains of the kiln structure. Within this level was what would have been the firing chamber. The level also covered what was preserved of the springing points of the arches supporting the entirely destroyed rack. Precisely where the firing chamber meets the feed passage and where the kiln walls are set back at a right angle, level SU-7 stopped as it ran into SU-11, located above the fuel feed passage. Lying beneath SU-7 and occupying approximately the same surface area, we found another level of reddish sand (SU-15), with 40 cm of potential, located below the springing points of the arches and containing a significant amount of adobe bricks that were overfired and vitrified as a result of the collapse of the kiln structure. SU-15 covered another stratum of collapse (SU-23), which had 70 cm of potential comprising brown sand and a large number of adobe brick fragments, most of which were less overfired than those that appeared in higher levels, although there were overfired, vitrified adobe brick fragments as well. Lastly, beneath this high-potential level, SU-25 was found resting directly over the geological base of the site (SU-28). SU-25 corresponded to a level of brown sand, with 12 cm of potential and characteristics closely resembling the bricks in SU-23. However, no construction materials appeared. SU-25 is the first level of destruction after the kiln ceased to function as such and, based on its characteristics and composition, its formation could have been delayed for some time, before the large-scale collapse of the kiln took place as supported by the evidence in SU-15 and 23.

As we have indicated, the first level of destruction in the feed passage was SU-11, with 14 cm of potential, corresponding to a stratum formed by greyish pink sand and some pottery shards. In addition, we have indicated the level seems to be supported by SU-7 towards the south, while lying over SU-19 and 20. SU-20 presented a level of light brown sand, with roughly 20 cm of potential, located within the interior of the passage and resting against SU-23. Notable in this level is the large number of household remains, ceramics, a practically complete piece of Cooking ware, and a plentiful group of bones from various animals. Radiocarbon analysis of charcoal samples from the level enables us to date the time when the kiln ceased to function and was partly reused as a household dump. To the north, the level rests against another stratum, SU-19, formed by sand mixed with grey ash, with 14 cm of potential, located in the northerly part of the kiln. Beneath SU-19 was located another level (SU-29), whose surface was highly compact and overfired. A number of regularly arranged adobe bricks appeared, but in the light of the general characteristics and composition of the level, we believe that the stratum relates to the collapse of the structure corresponding to the kiln's entrance. Both SU-20 and SU-29 rested over a level of ash and charcoal (SU-26), in a clearly primary position. With 72 cm of potential, the charcoal appeared at the bottom and edges of SU-26 and included mostly small carbonised branches and twigs arranged horizontally and following the internal structure of the kiln. The central portion of the stratum was formed of a high-potential layer of ash which, along with the charcoal, extended from the start of the passage to the north, just at the kiln's entrance, to the start of the firing chamber at its southern end, where SU-23 leaned against it. SU-26 rested directly over the geological base of Tchinguiz Tepe and clearly corresponds to the carbonised remains of fuel used in the last pottery firings performed in the kiln. As a result, the fuel must always have been deposited in the passage before the firing chamber located beneath the rack, which served as the base of the cooking chamber. In this way, there would have been no direct action of the fire on the pottery through the rack's air vents. Heat would only have reached the cooking chamber, enabling more controlled cooking.

At its northern end, SU-29 rests over SU-34, corresponding to a vertical stratum formed by a heterogeneous mix of sand and adobe bricks, affixed to walls SU-30 and 31, just where the kiln's mouth starts. In turn, level SU-34 appears to rest on the carbonised branches and twigs from SU-26, since it would not have been possible to feed fuel into the kiln if its entrance had been sealed. Given its characteristics, the notion that SU-34 might correspond to a level of destruction can also be rejected. For these reasons, we interpret SU-34 as a mechanism to shut the air intake temporarily to the firing and cooking chambers. Although SU-34 rested on a level of ash on its southern side, it was covered by another stratum on its northern face. This other stratum is SU-22, which filled in a depression that permitted entry into the kiln (SU-32). Measuring 1.2 m in length and 1.9 in width, the depression was excavated directly over stratum SU-27. The ditch's bottom was the actual geological base and its infill corresponded to SU-22. SU-22, with 0.56 m of potential, was formed by light-brownish sand mixed with pottery shards, macrofauna and charcoal. Given its nature, it was certainly a mixed level in which elements originating from the kiln's collapse appeared mixed with a large proportion of household rubbish. This would sup-

port the use of the depression as a household trash heap parallel to the kiln's collapse. SU-22 is covered by SU-21, which in turn is covered by SU-10. SU-21 corresponds to a level of sand, undoubtedly windborne, with 20 cm of potential. It covers the kiln's entrance and the part corresponding to the northern corner of the walls SU-30 and 31. Its formation occurred subsequent to the abandonment of the kiln.

Kiln structure

The kiln is rectangular and measures 6.60 m in length and 2.10 m in width, with a southeast-northwest orientation. The interior of the conserved space corresponds to the sunken part of the cooking chamber, which measures 2.90 m in length by 1-1.4 m in width. The height from the bottom of the space to the springing points of the arches that supported the rack in the cooking chamber is approximately 0.80 m. The internal faces of the walls SU-13, 30 and 31, which bound the space, are highly vitrified. The concentration of vitrified material attached to the adobe bricks hampers a complete description of the brick courses.

The construction of the three walls required the excavation of a ditch (SU-14) which cut through levels of sand mixed with small and medium-sized round pebbles and pottery shards (SU-10 and 27) to reach the geological base (SU-28), which was also lowered to fit the kiln's structure. The presence of ceramics in SU-10 and SU-27 would appear to indicate that the area was already occupied prior to the construction of the kiln.

The wall enclosing the kiln on the south side (SU-13) is oriented southeast/northwest and built directly on the geological base, previously carved to set the wall. Eight courses of adobe bricks with earthen mortar remain, reaching a maximum height of 1.10 m. The adobe bricks appear to have solely undergone a process of sun-baking to harden. With the operation of the kiln, however, they subsequently changed drastically in the high temperatures achieved during cooking within the kiln. Evidence of these alterations can be observed clearly on the face of the adobe bricks corresponding to the interior of the severely vitrified firing chamber. They present a variety of colours ranging from grey to reddish.

The wall enclosing the kiln on the western side (SU-30) is buttressed by the transverse wall described previously (SU-13). It is built according to the same system as wall SU-13 and six courses of adobe bricks with earthen mortar remain, reaching a height of 0.74 m. The adobe bricks present severe alterations caused by fire. Where the cooking chamber joins the fuel feed passage, the wall (SU-30) has a set-back of 20 cm, which makes a right angle towards the interior to mark the lesser width of the passage. On the exterior, we know part of the elevation of the wall corresponding to the firing chamber as a result of subsequent action which created a new negative in the wall.

The wall that encloses the kiln on the eastern side (SU-31) has very similar characteristics to the parallel wall to the west (SU-30). Of the eastern wall, we also preserved six courses of adobe bricks stacked with earthen mortar to a maximum height of 1 m and reaching to the transverse wall SU-13. Once past the cooking chamber, the eastern wall steps forward with respect to the western wall at a central point of the feed passage.

The walls SU-30 and 31 bear the loads of the preserved springing points of the distinct arches that supported the kiln rack. Although we cannot describe the rack, which has not been preserved, we can deduce that the entire ensemble, arches and rack, would have been constructed of adobe bricks. The springing points of the arches can clearly be observed in the upper part of the elevation on both eastern and western walls, marked by a line that separates the vitrified crust over a large part of the kiln's walls from the actual structure of overfired adobe bricks ranging in colour from red to green. The arches, which have a width of 0.30-0.40 m, rise from the lateral walls of the kiln and are arranged in parallel at 0.30 m intervals. Similarly, a series of oval perforations can be observed on both sides of walls SU-30 and 31, marked in the structure of the walls themselves and connecting to the interior of

the firing chamber through the free spaces between the springing points of the arches. The holes in the western wall (SU-30) are of a smaller size and in a poorer state of conservation than the holes on the eastern wall (SU-31). They have a diameter of roughly 0.20 m and appear at intervals of approximately 0.30 and 0.40 m.

The circulation floor of the fuel feed passage could be determined by its greater depth with respect to the floor of the firing chamber. Movement from the first to the second space is marked by a step in the rock base. The passage is roughly 3.30 m long and 0.6 m wide.

To gain entrance to the kiln's entrance, a roughly ramp-shaped depression (SU-32) was found excavated in the terrain (SU-27). Although no evidence of the entrance door appeared, there was clear evidence of a cutting in the rock base (SU-28). SU-34, which corresponds to a vertical stack of adobe bricks and sand at the kiln's entrance, could relate to the closure of the kiln's mouth during the last firing. The level of charcoal and ash (SU-26) preserved on the bottom of the fuel feed passage would appear to correspond to the fuel used in the last kiln firing.

Radiocarbon dating

Previously, the chronology proposed for the RF kiln had been relative in nature. Based on the knowledge now obtained of the pottery sequence at the Termez site, we can situate the kiln and its production within the Kushan-Sassanian period. To verify and more precisely fix the proposed chronology using a method that gives results in absolute terms, four charcoal samples have been taken to analyse their carbon-14 content. The charcoal was recovered from the level of ash and charcoal corresponding to the last kiln batch (SU-26) taken from the kiln's entrance and its feed passage as well as one of the levels of the firing chamber's rubble (SU-23). With the analysis, our aim is to achieve the greatest precision possible in dating the end of the kiln's operation, the time of its collapse and the period in which the structure was reused as a household trash heap.

Other kilns producing pottery in ancient Termez

All the kilns excavated in the terrain corresponding to the ancient city of Termez present differing morphologies and the ceramic types recovered are diverse formally and archaeometrically (Tsantini *et al.*, 2007). We exclude structures built in the Islamic era from this conclusion.

The first of the kilns excavated at Kara Tepe (called kiln 1) is rectangular in form, 6.5 m in length and 2.5 m in width. All that has been preserved is a portion of the walls and a central square column in the firing chamber, all constructed of adobe. The available archaeological data correspond to a partial excavation of the structure done by an Uzbek-Japanese team¹ (Ariño *et al.*, 2006). Subsequent to those efforts, the Uzbek-Catalan mission excavated a second kiln near the first (called kiln 2), which was smaller in size and had a distinct orientation. The new structure, which measured 3.5 m in length and between 1 and 0.5/0.6 m in width, conserved 1.50 m of its elevation. The outer walls of the kiln were built of adobe bricks and a series of arches, also built of adobe, which supported the rack conserved in situ. At the edge of the firing chamber, the enclosing wall conserved two vents that permitted air circulation during the process of cooking, although we are unable to determine whether they formed part of the rack or, therefore, whether the air was drawn through the cooking chamber or through vents connected directly to the exterior in order to control the amount of heat produced in the firing chamber (Ariño *et al.*, 2006). The carbon-14 analysis of various charcoal samples originating from different strata of the infill from the preserved chambers of the kiln, fuel and fire, have enabled the abandonment of kiln 2 to be dated to around the fifth century A.D. (Mestres, Rauret, 2007).

1.- The kiln was excavated in 2002 by the Japan-Uzbekistan Archeological Expedition, led by K. Kawasaki and Sh. Pidaev.

Ceramic artifacts

For the purposes of archaeometric characterisation, a selection of 17 individual pieces of pottery was made from among the ceramics recovered at differing stratigraphic levels of the kiln.

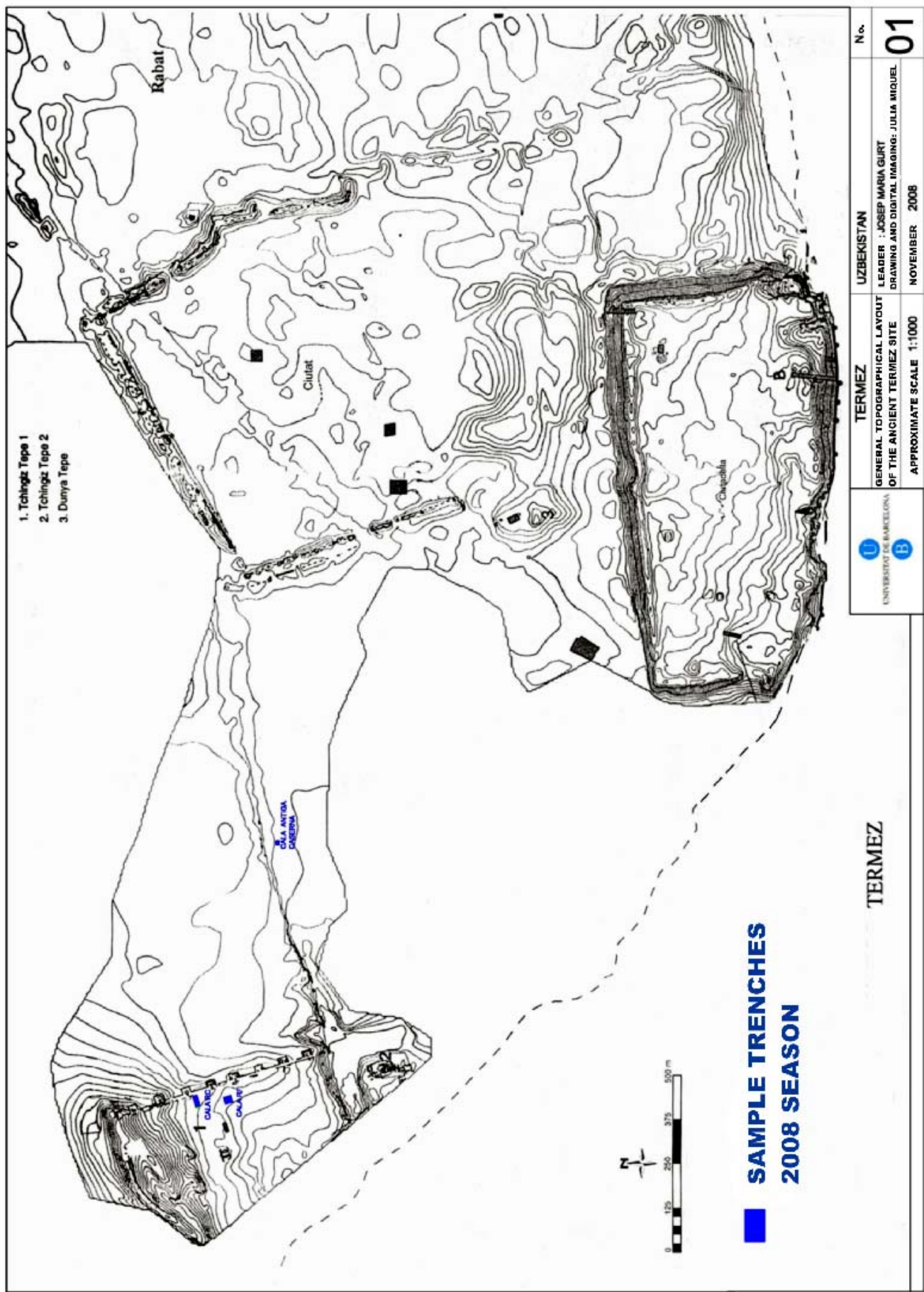
Works cited

ARIÑO, E., SALA, R., LAFUENTE M., GURT, J.M., PIDAEV, SH., STRIDE, S., 2007, The ceramic kilns of Kara Tepe, a J.M. Gurt, Sh. Pidaev, A.M. Rauret, S. Stride, IPAEB 2006, *Preliminary Report of the First Season work of the International Pluridisciplinary Archaeological Expedition to Bactria*, vol. 1, 13-44.

MESTRES, J.S., RAURET, A.M., 2007, Datation by C14 of samples coming from the archaeological context of the Kiln N°2 of Kara Tepe, a J.M. Gurt, Sh. Pidaev, A.M. Rauret, S. Stride, IPAEB 2006, *Preliminary Report of the First Season work of the International Pluridisciplinary Archaeological Expedition to Bactria*, vol. 1, 91-98.

SALA, R., LAFUENTE, M., GURT, J.M., 2008, Geophysical Surveys of Tchinguiz Tepe in the 2006 Season and Archaeological Follow-up Planned for the 2007 Season, in J.M. Gurt, Sh. Pidaev, A.M. Rauret and S. Stride (eds.), IPAEB 2007, *Preliminary Report of the First Season work of the International Pluridisciplinary Archaeological Expedition to Bactria*, vol. 2, 7-36.

TSANTINI, E., MARTÍNEZ, V., GURT, J.M., PIDAEV, SH., 2008, Archaeometrical study of the ceramics coming from the archaeological site of Termez in Uzbekistán, a J.M. Gurt, Sh. Pidaev, A.M. Rauret, S. Stride, IPAEB 2007, *Preliminary Report of the First Season work of the International Pluridisciplinary Archaeological Expedition to Bactria*, vol. 2, 141- 194.

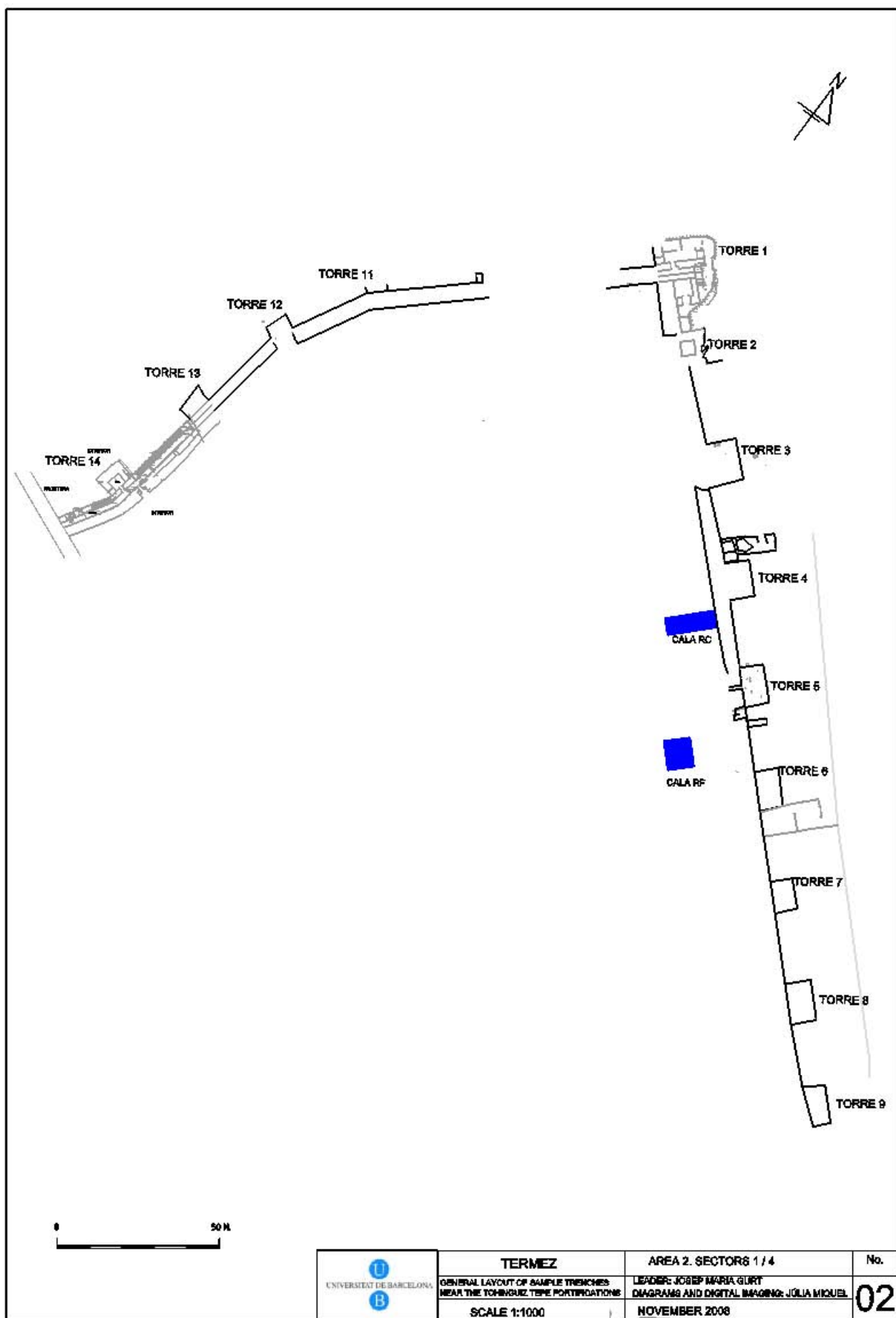


- 1. Tchingsz Tepe 1
- 2. Tchingsz Tepe 2
- 3. Dunys Tepe

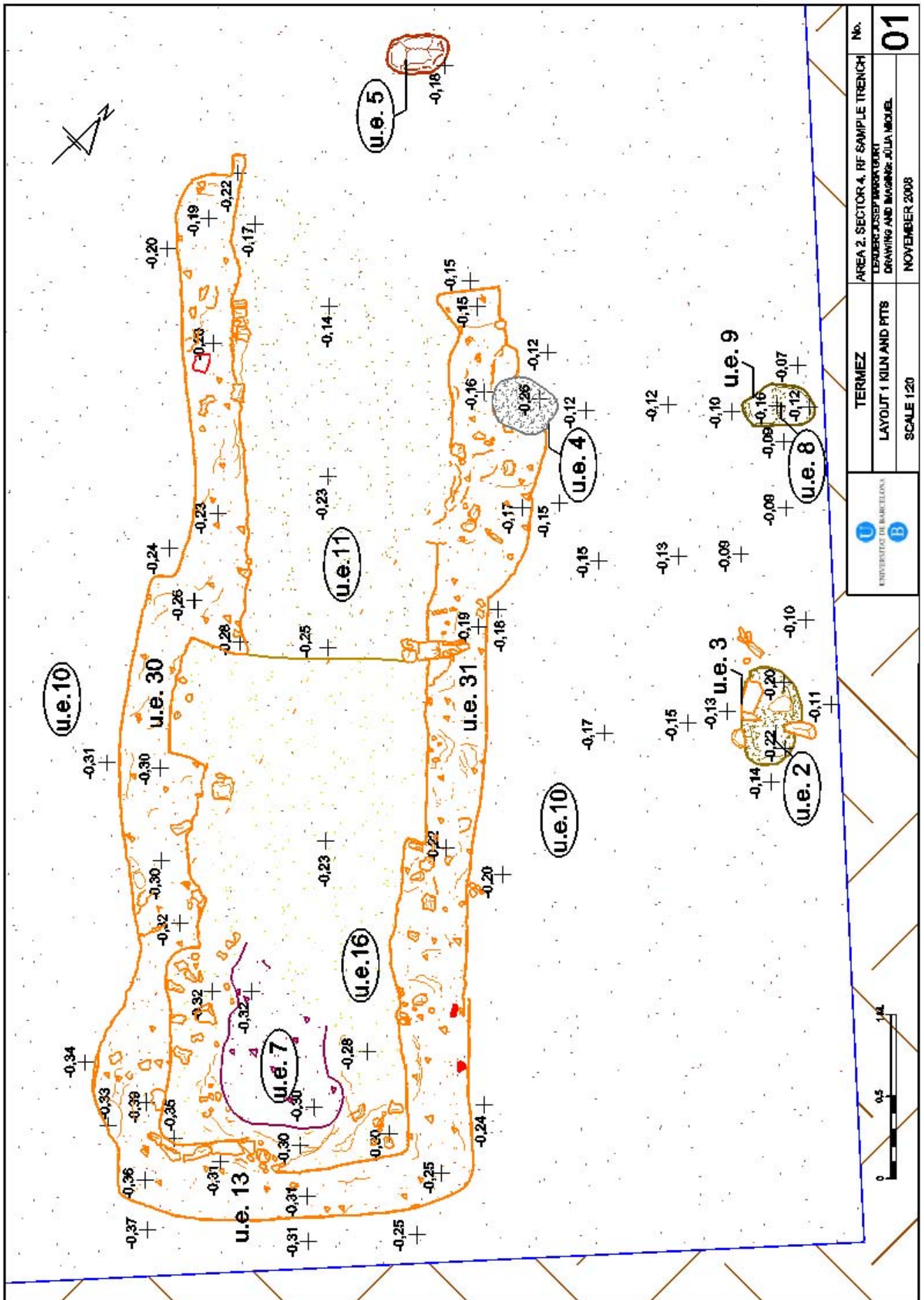
**■ SAMPLE TRENCHES
2008 SEASON**

| | | | |
|------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------|
| UNIVERSITAT DE BARCELONA | TERMEZ GENERAL TOPOGRAPHICAL LAYOUT OF THE ANCIENT TERMEZ SITE APPROXIMATE SCALE 1:1000 | UZBEKISTAN LEADER : JOSEP MARIA GURT DRAWING AND DIGITAL IMAGING: JULIA MIQUEL NOVEMBER 2008 | No. 01 |
| | TERMEZ | | |

General Topographical Layout of the Ancient Termez Site

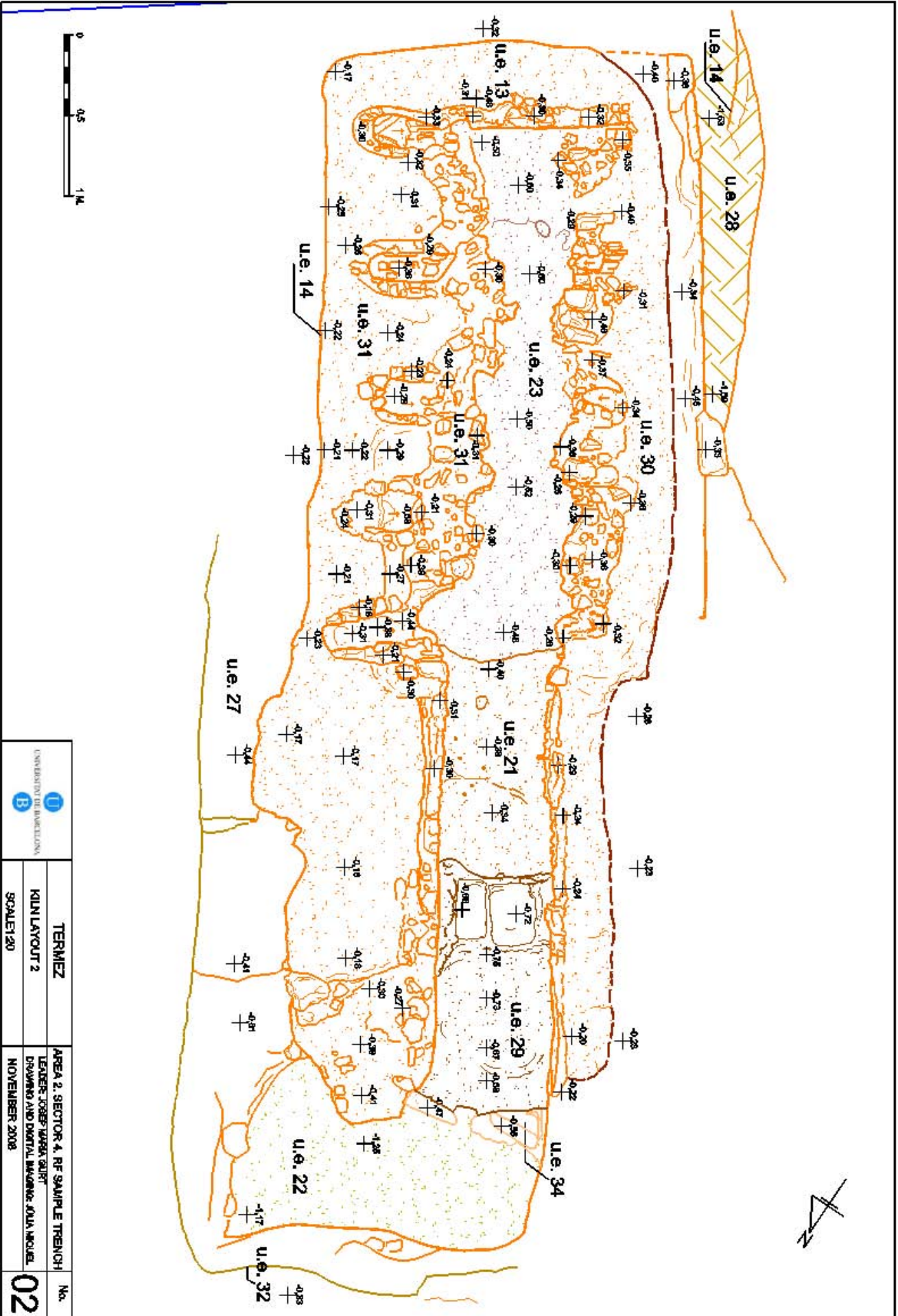


General Layout of Sample Trenches and Fortifications at Tchinguz Tepe



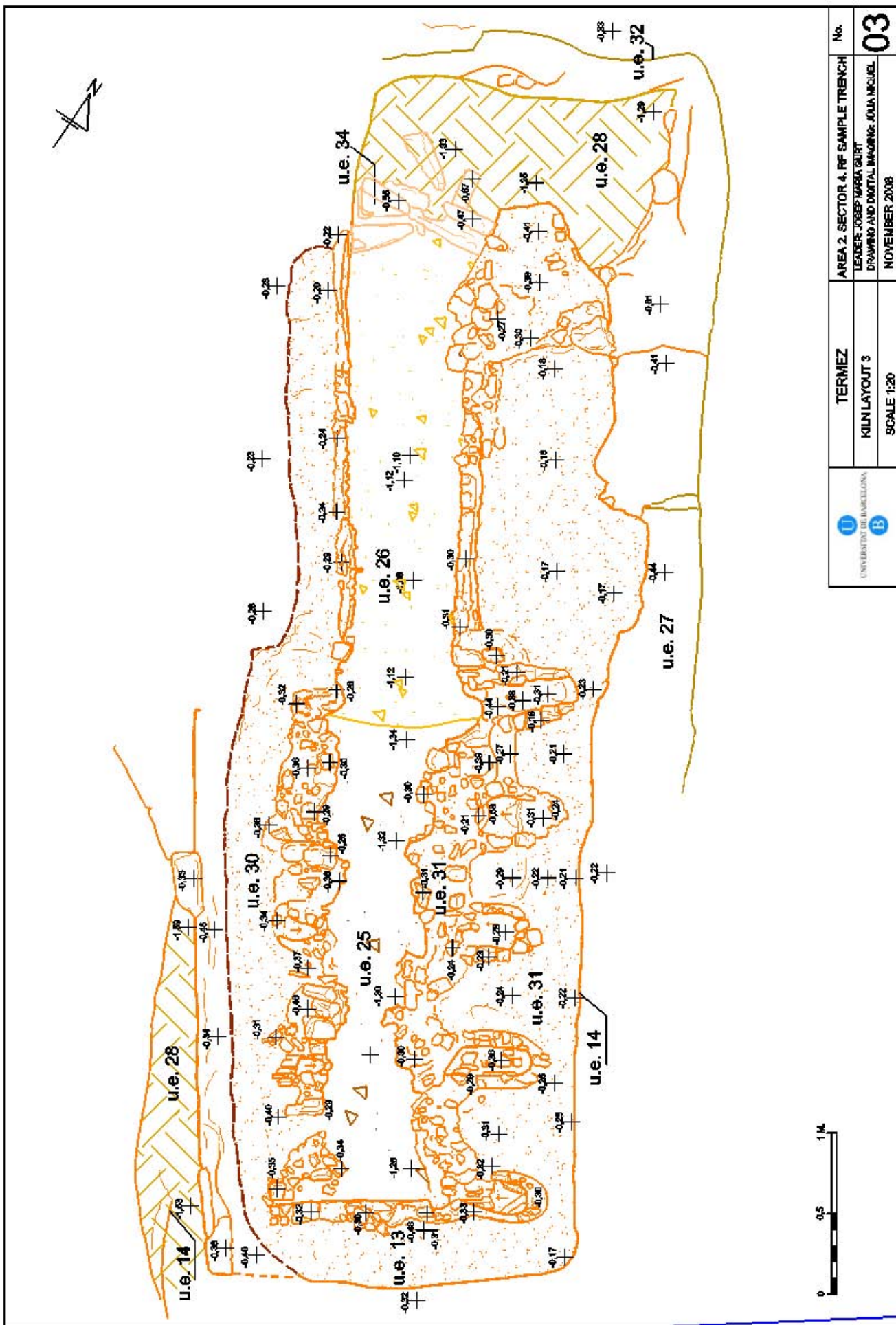
| | | | |
|--|------------------------|-------------------------------------------------------------|-----------|
| | TERMEZ | AREA 2. SECTOR 4. RF SAMPLE TRENCH | No. |
| | LAYOUT 1 KILN AND PITS | LEADER JOSEF BARROQUET DRAWING AND IMAGING: JÜLIA MICHEL | 01 |
| | SCALE 1:120 | NOVEMBER 2008 | |


Sample Trench RF: Layout 1: Kiln and Pits



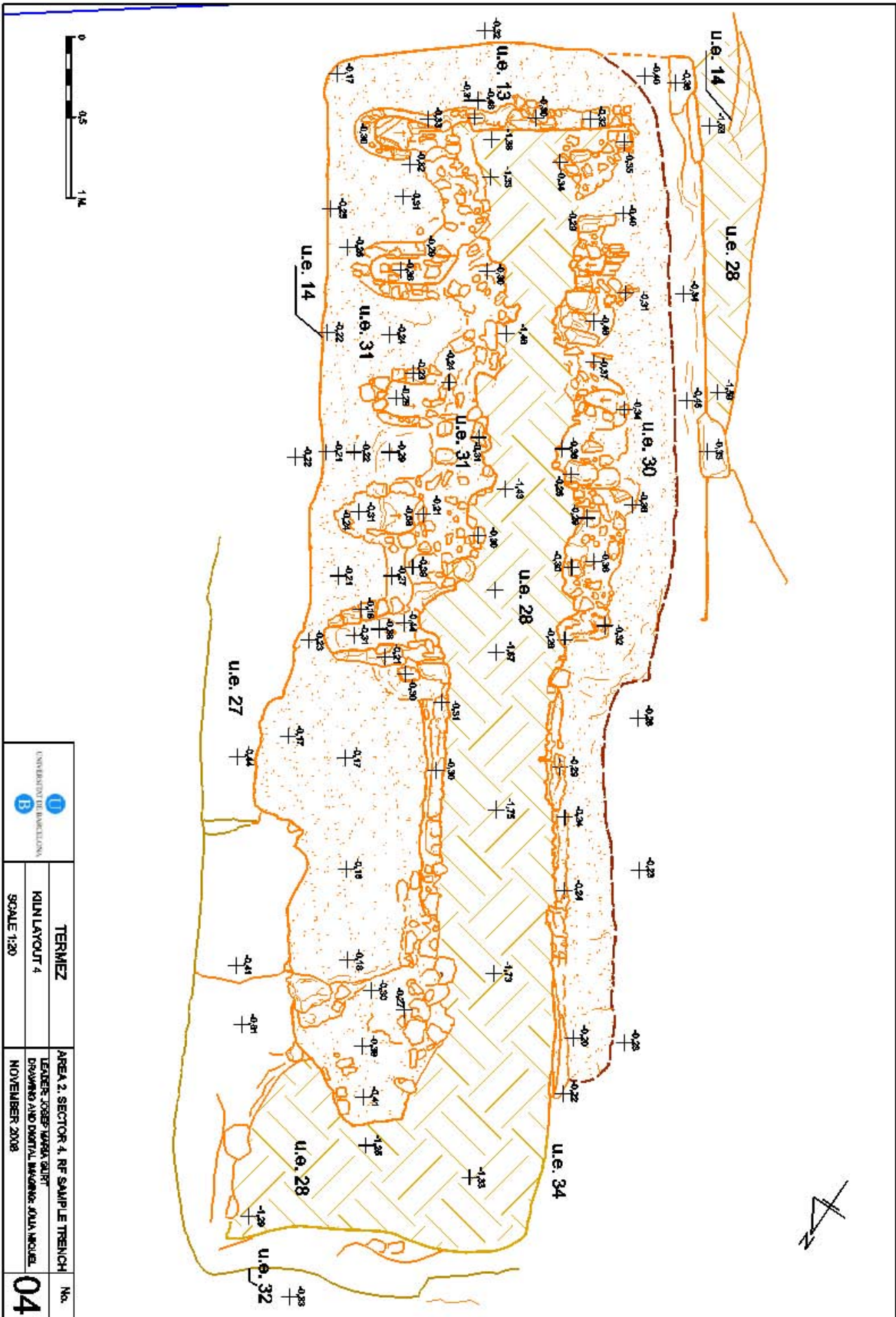
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|----------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------|-----|
| UNIVERSITÉ DE BORDEAUX | TERMIEZ | AREA 2, SECTOR 4, RF SAMPLE TRENCH LEADER: JOSEPH VARRAULT DRAWING AND DIGITAL IMAGING: JOUJAN NOVEMBER 2008 | No. |
| | KILN LAYOUT 2 | | |
| | SCALE 1:20 | | |

Sample Trench RF: Kiln. Layout 2

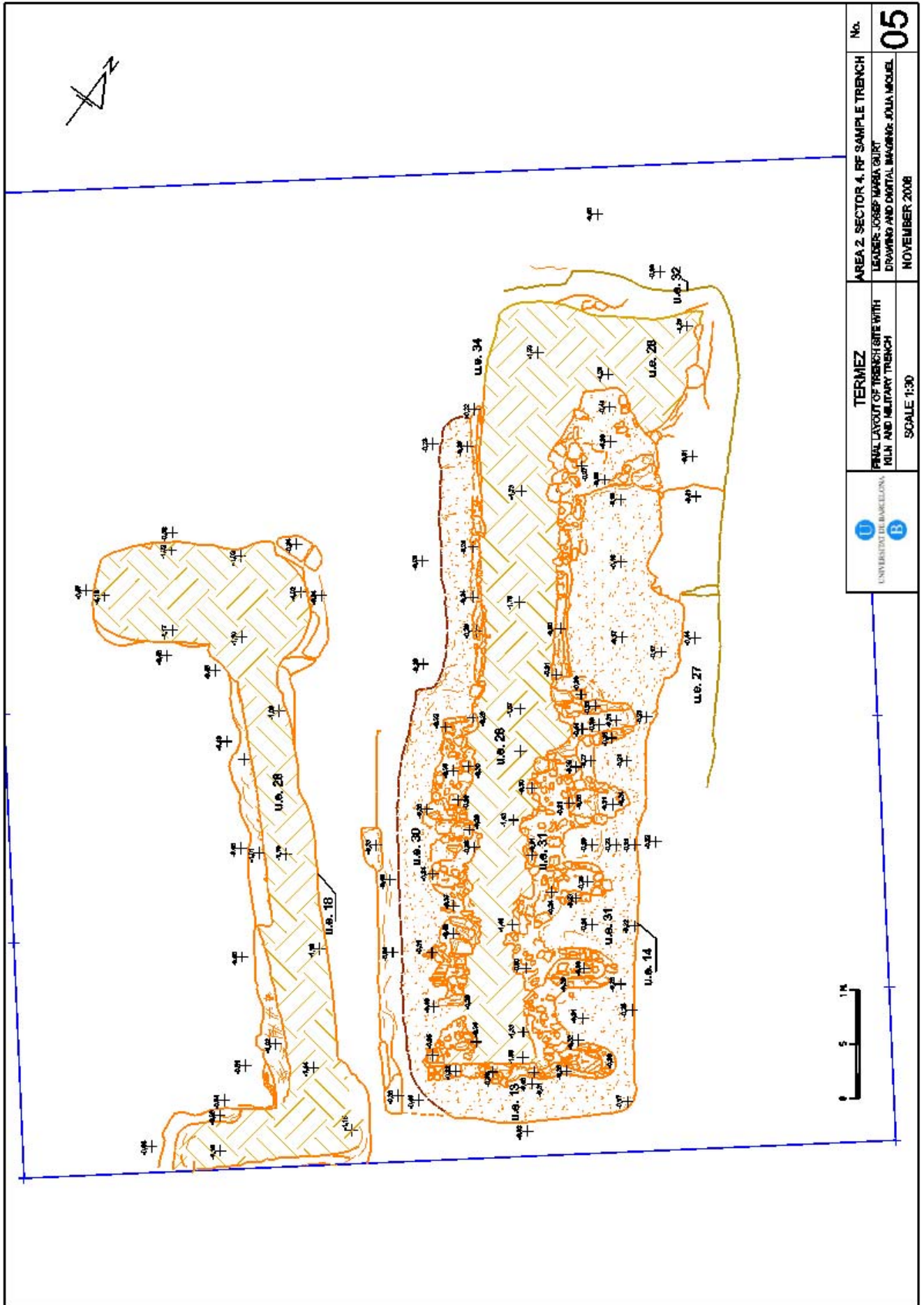


| | | |
|-------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------|
|  | | No. 03 |
| TERMES KILN LAYOUT 3 SCALE 1:20 | | AREA 2. SECTOR 4. RF SAMPLE TRENCH LEANER JOSEF MARIA SUIT DRAWING AND DIGITAL IMAGING: JOLIA MICHEL NOVEMBER 2008 |

Sample Trench RF: Kiln. Layout 3

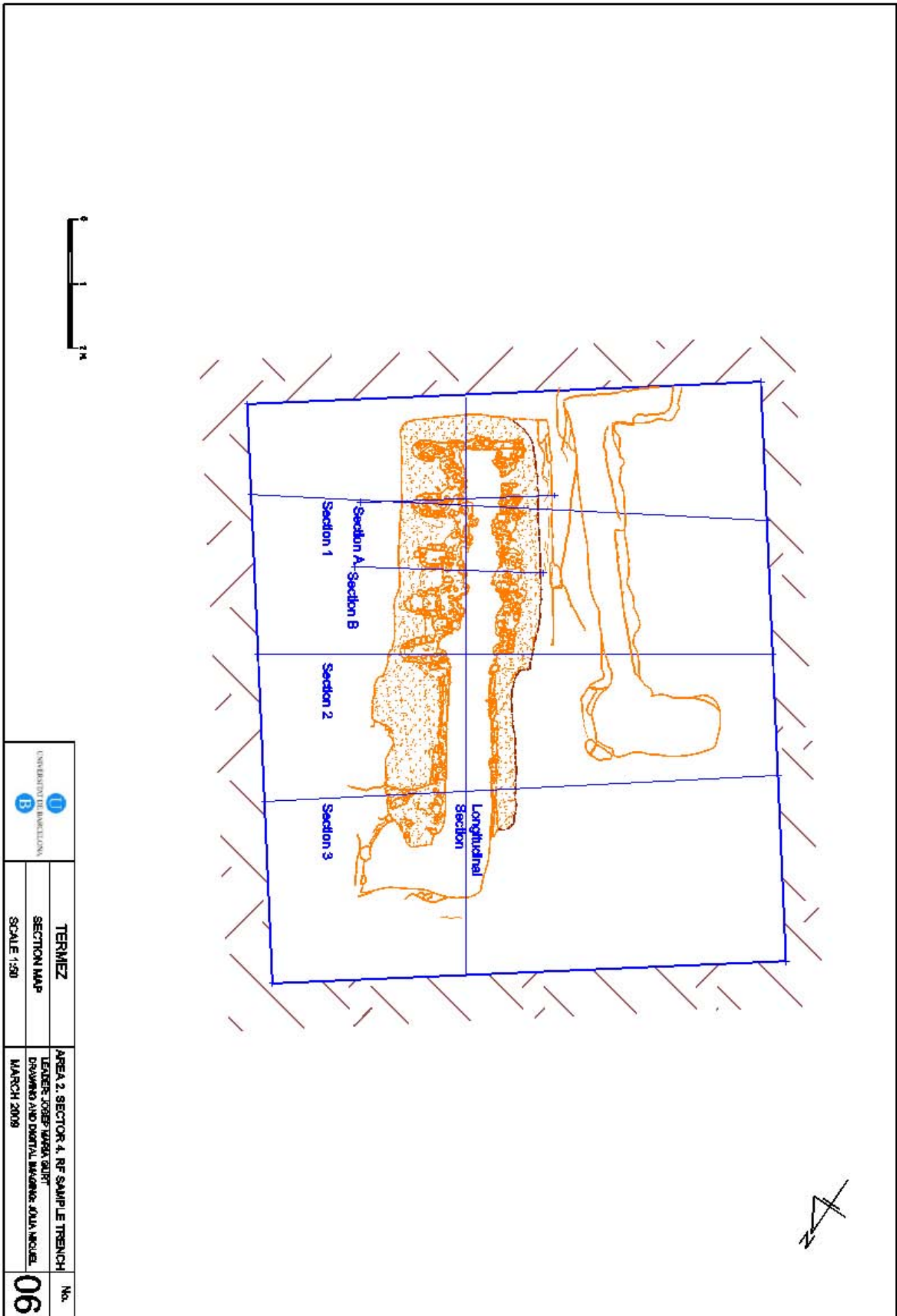


Sample Trench RF: Kiln. Layout 4

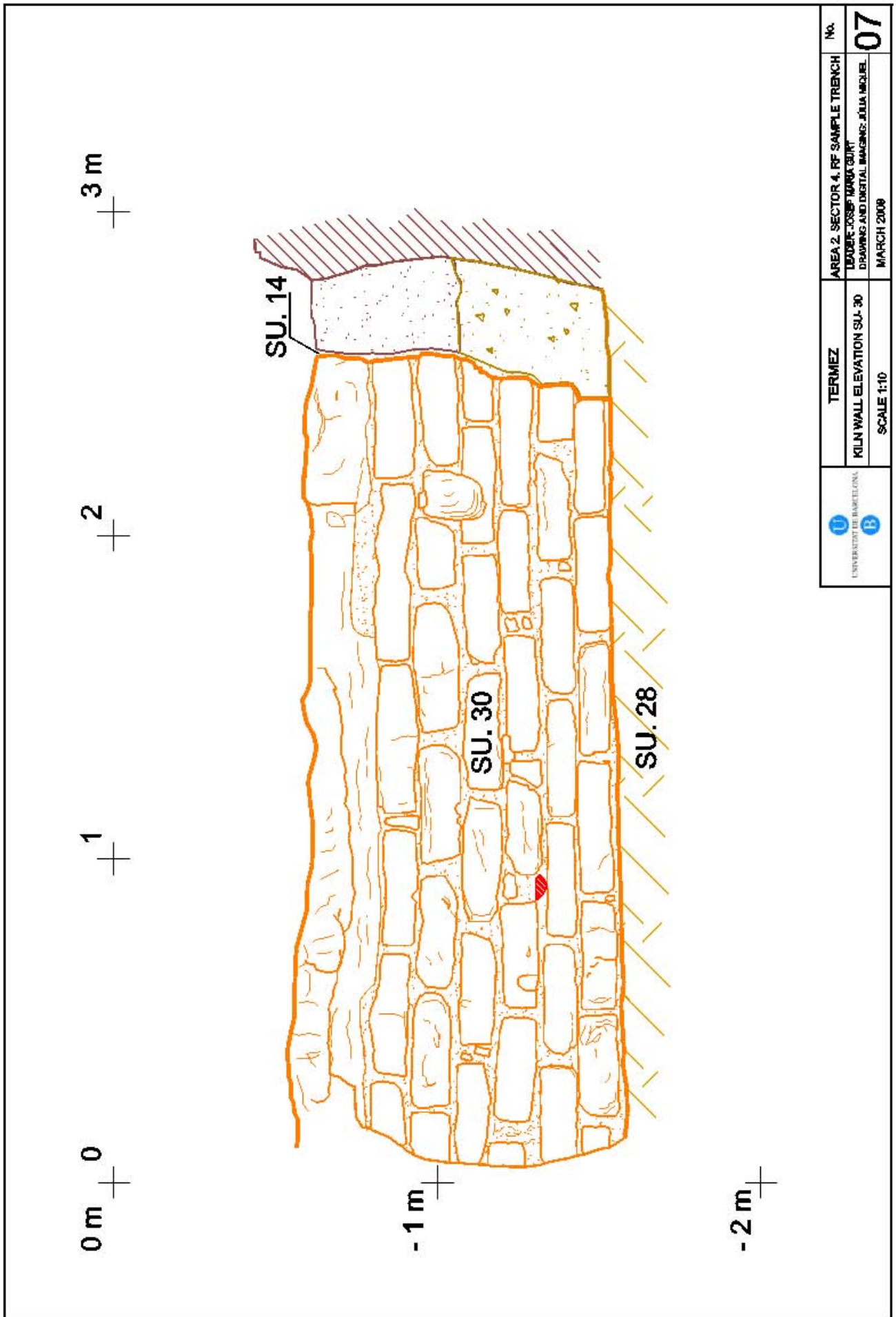



| | | | |
|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------|
|  UNIVERSITAT DE BARCELONA | TERMEZ FINAL LAYOUT OF TRENCH SITE WITH KILN AND MILITARY TRENCH | AREA 2. SECTOR 4. RF SAMPLE TRENCH LEADER: JOSEP MARIA GURT DRAWING AND DIGITAL IMAGING: JULIA MOQUEL NOVEMBER 2008 | No. 05 |
| | SCALE 1:30 | | |

Sample Trench RF: Final Layout. Kiln and Military Trench

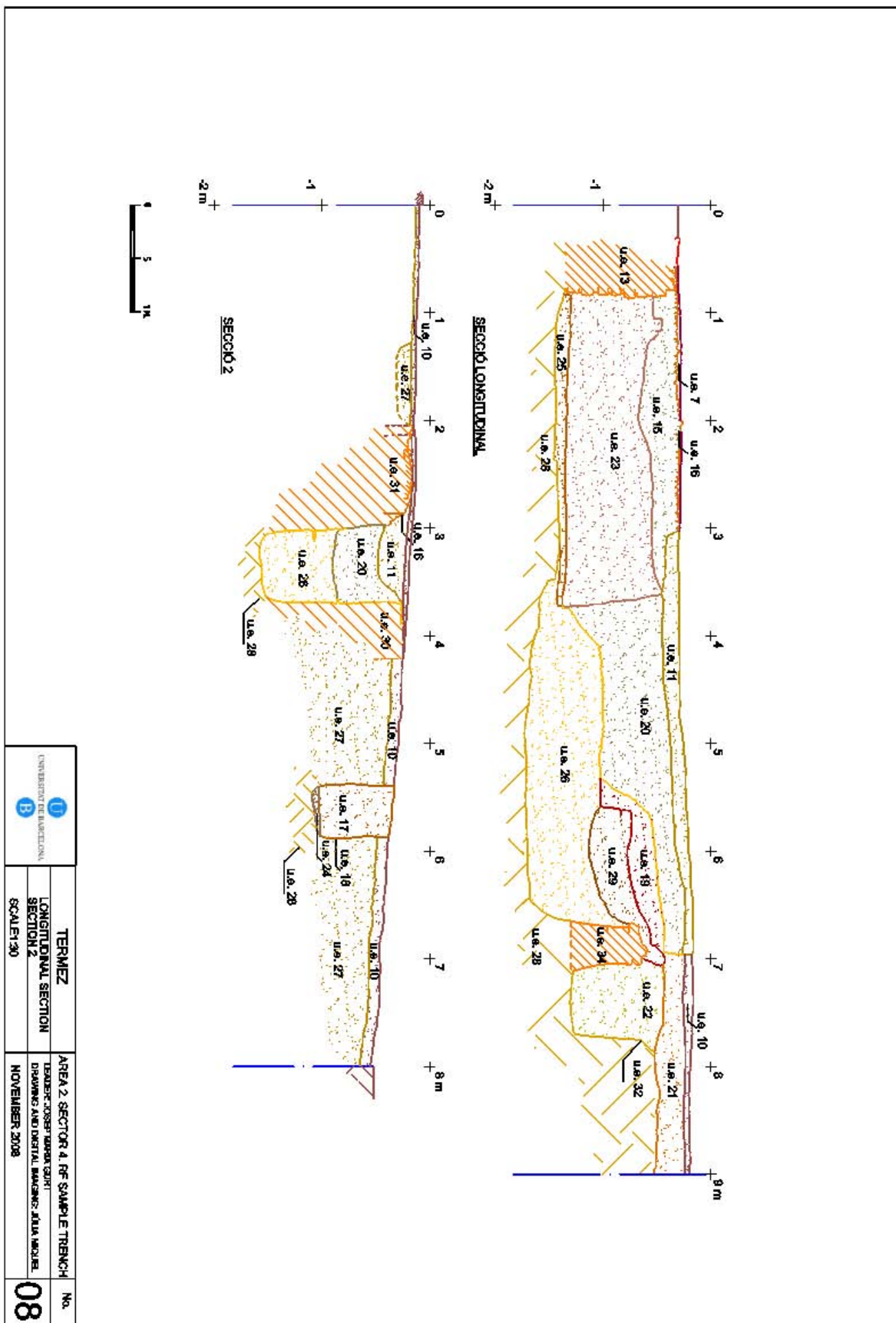


Sample Trench RF: Section Map

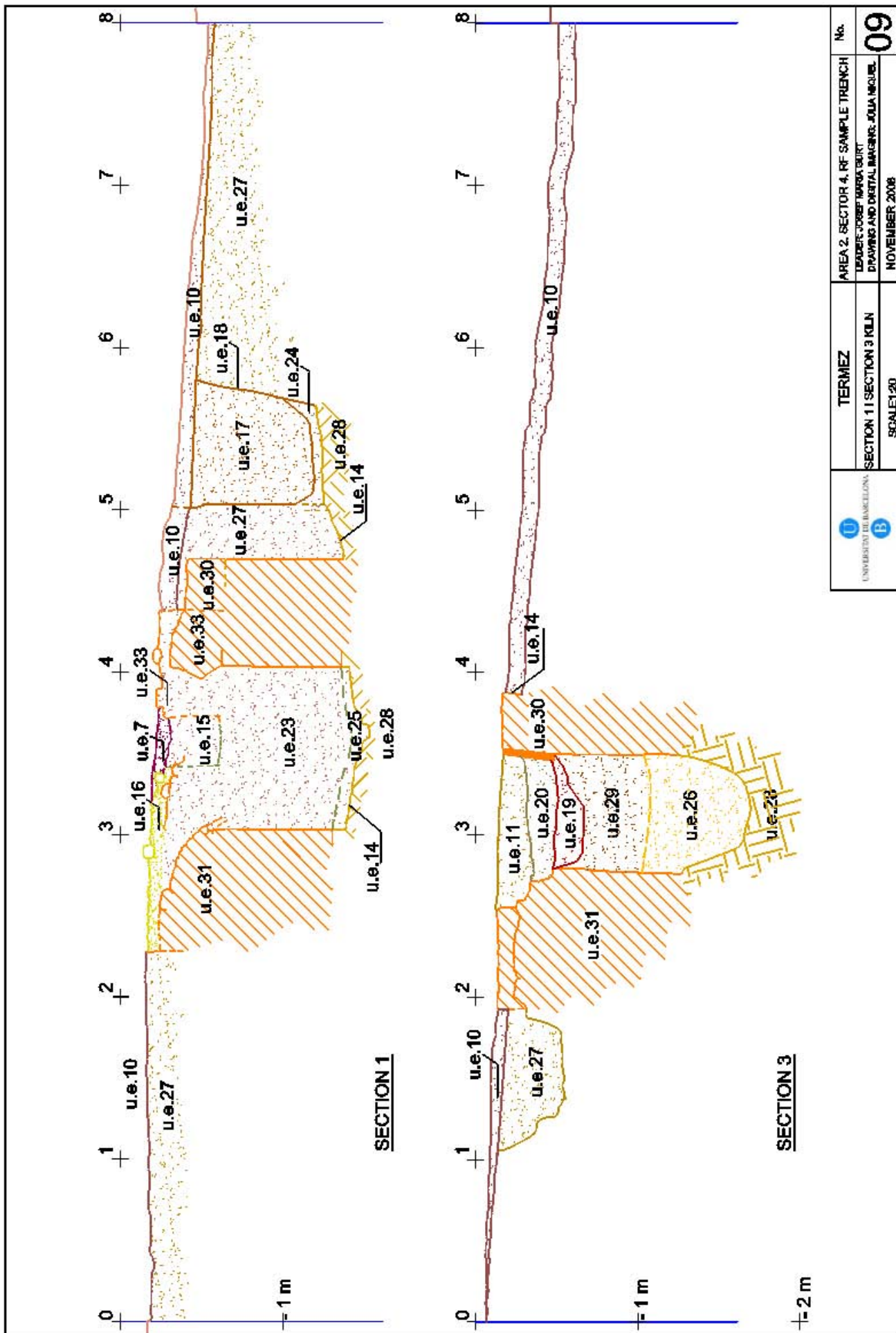


| | | | |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------|
|  UNIVERSITAT DE BARCELONA | TERMEZ KILN WALL ELEVATION SU-30 | AREA 2. SECTOR 4. RF SAMPLE TRENCH LEADER JOSEF MARIA GURT DRAWINGS AND DIGITAL IMAGINGS: JULIA MOLUE | No. 07 |
| | SCALE 1:10 | MARCH 2008 | |

Sample Trench RF: Kiln Wall Elevation SU-30

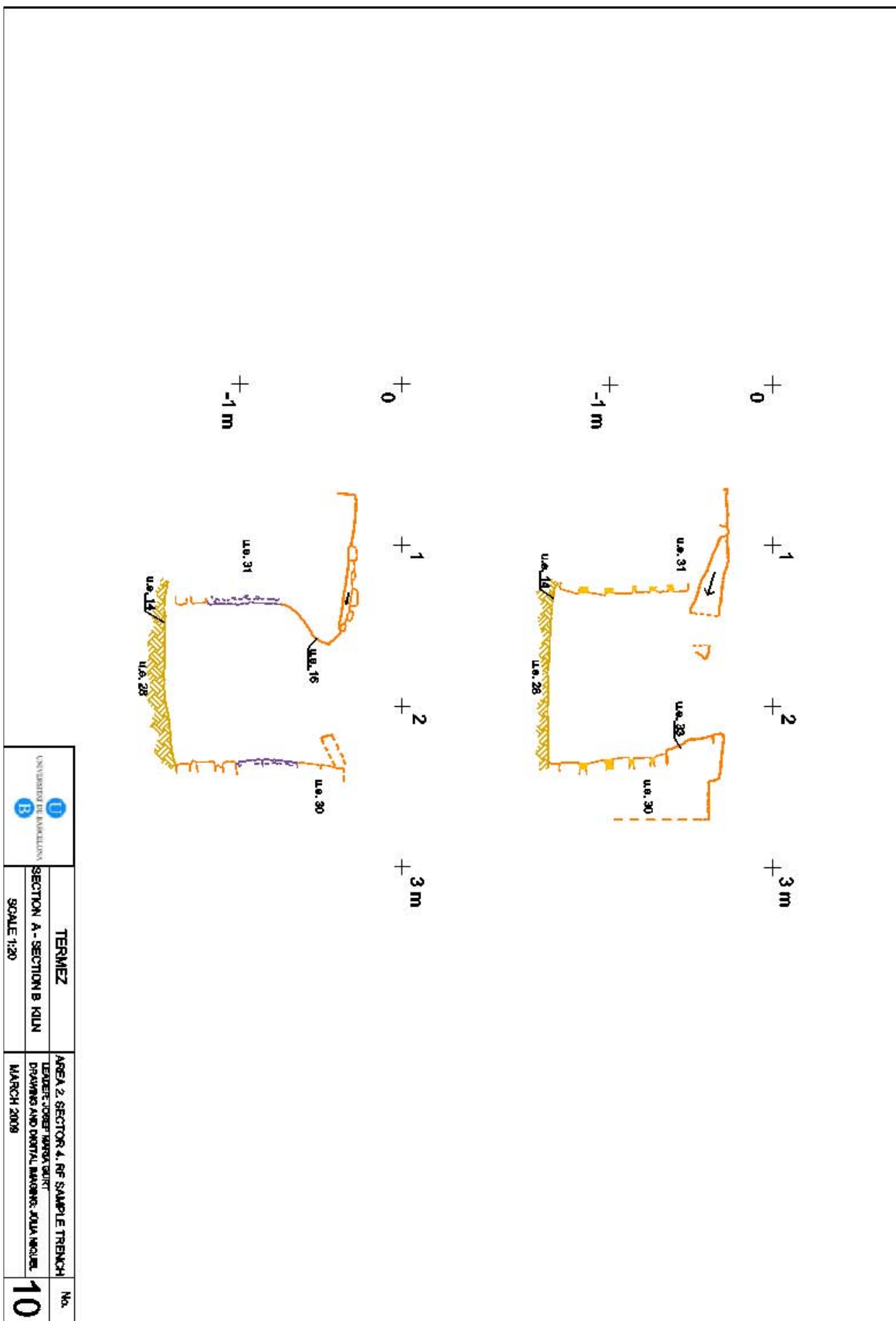


Sample Trench RF: Longitudinal Section. Section 2



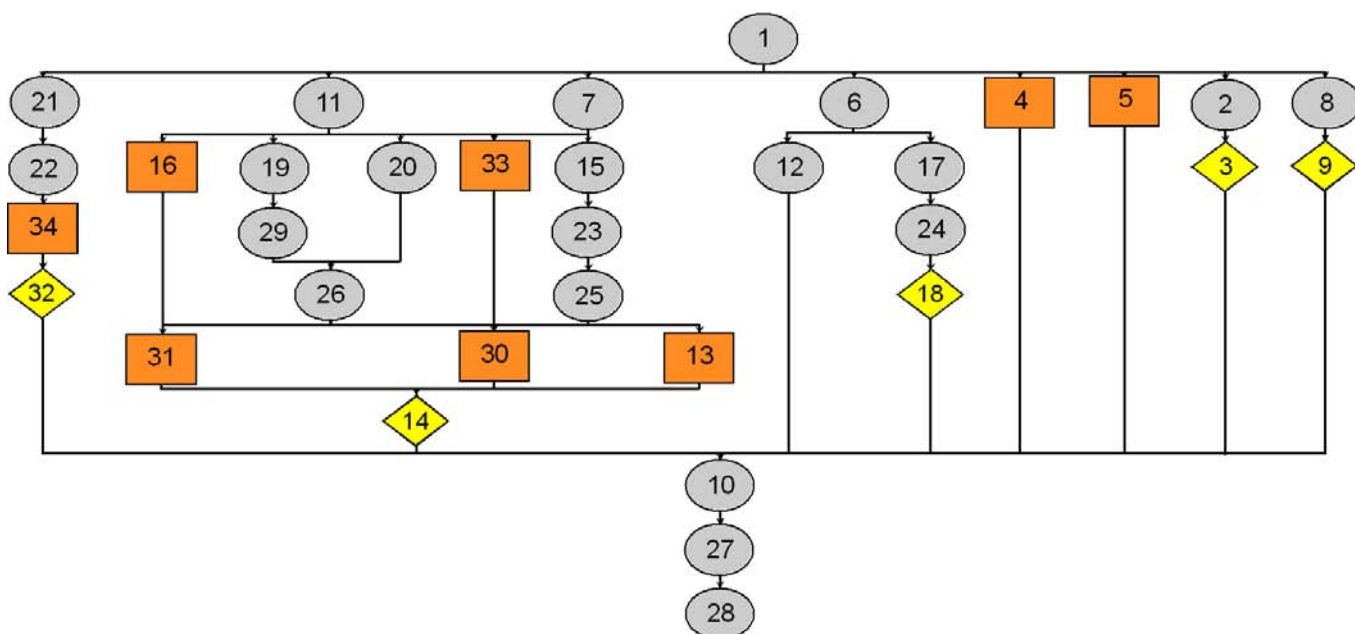
Sample Trench RF: Section 1. Section 3 Kiln

| | | | |
|------------------------------|------------------------------------------|------------------------------------------------------------------------|---------------|
| UNIVERSITAT DE BARCELONA | TERMES | AREA 2. SECTOR 4. RF SAMPLE TRENCH | No. |
| | SECTION 1 SECTION 3 KILN SCALE 1:20 | LEADERS: JOSEF MARXA GALT DRAWING AND DIGITAL MARGINS: JOLIA MEQUEL | 09 |
| | | | NOVEMBER 2008 |



| | | | |
|-------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------------------------------------------------------------|-----|
|  UNIVERSIDAD DE ARICA | TERMEZ | AREA 2, SECTOR 4, RF SAMPLE TRENCH | No. |
| | SECTION A - SECTION B KILN | LEONARDO JOSEF HERRERA BARRI DRAWINGS AND DIGITAL IMAGING: AQUILA INQUEL MARCH 2009 | |
| SCALE 1:20 | | 10 | |

Sample Trench RF: Section A. Section B Kiln



RF - SU 1

Definition: Superficial level of sample trench

Interpretation: Current surface of the sample trench at the start of excavation after using a mechanical earth mover to remove an artificial mound from previous excavations in nearby sectors of the site.

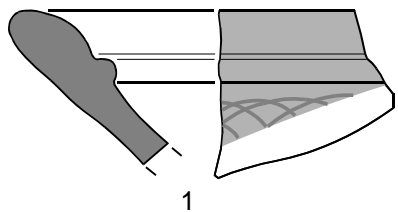
Observations: Level of yellowish sand with gravel and pottery corresponding to the superficial level. Covers the structures and strata of infill of the kiln and other elements near the kiln. Level located beneath an artificial mound created during excavation of an area near Tchinguiz Tepe. High risk of intrusion of artifacts. Gravel and pottery appear severely eroded by wind action.

Material: Slip ware: 53 frags.
 Common ware: 78 frags.
 Cooking ware: 5 frags.
 Overfired pottery: 4 frags.

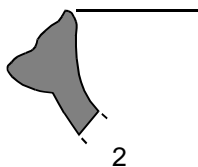
Archaeologist: Verónica Martínez

| | |
|----------------------|-------------------------------------------------------|
| Composition | Loess with gravel |
| Dimension | 72m ² |
| Formation: | Superficial level of manmade and/or natural formation |
| Potential | 10 cm |
| Covering (Stratum) | 8-7-6-11-10-2 |
| Covering (Structure) | 13-5-30-31-4-16-33 |

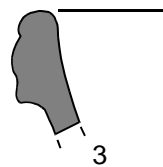
RF-SU 1



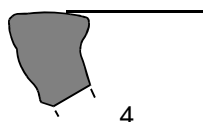
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2



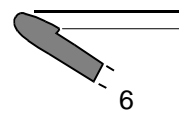
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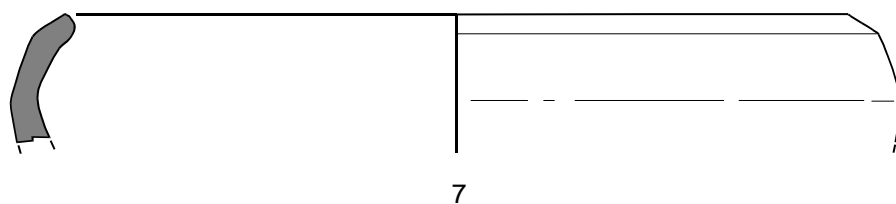
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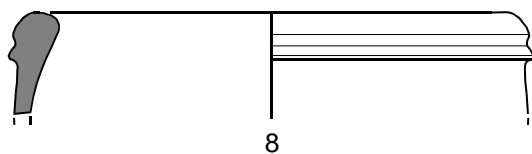
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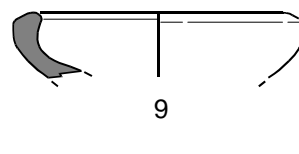
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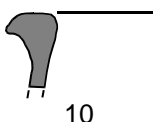
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8



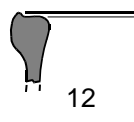
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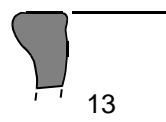
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11



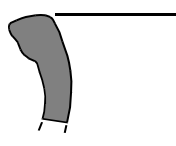
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13



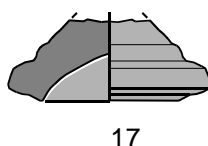
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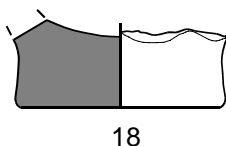
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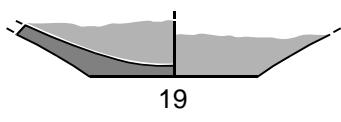
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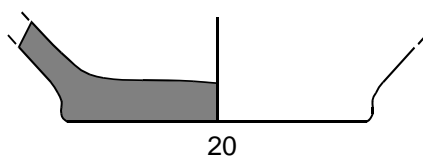
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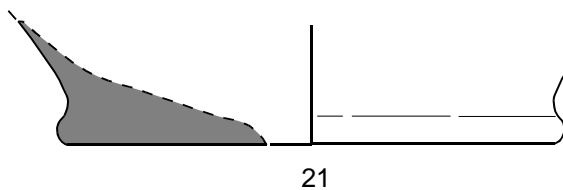
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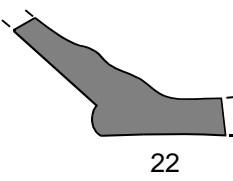
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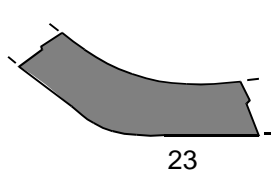
20



21



22



23



RF - SU 2

Definition: Infill of a small pit

Interpretation: Pit infill of overfired sand, resulting from direct combustion.

Observations: Level of infill of a small oval pit (58 cm on north-south axis by 36 cm on east-west axis), located in the east-central corner of sample trench 1. Level formed by dark-brown sand. Containing pottery.

Material: Slip ware: 4 frags.
Common ware: 9 frags.

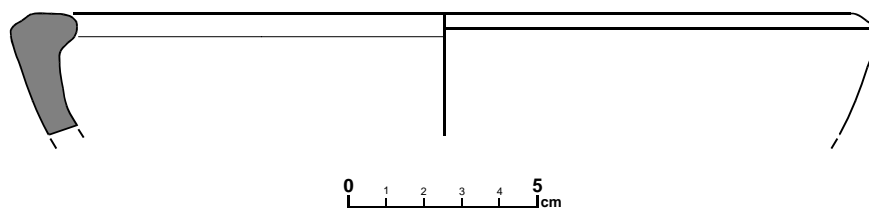
Archaeologist: Verònica Martínez

| | |
|-----------------------------|---------------------------|
| <i>Composition</i> | Overfired sand |
| <i>Dimension</i> | 58x36 cm |
| <i>Formation:</i> | Resulting from combustion |
| <i>Potential</i> | 8 cm |
| <i>Covered by (Stratum)</i> | 1 |
| <i>Covering (Negative)</i> | 3 |



SU's 2, 3

RF- SU 2



RF - SU 3

Definition: Small oval pit

Interpretation: Pit excavated for construction of a possible dwelling, temporary in nature.

Observations: Small oval pit (58 cm on north-south axis by 36 cm on east-west axis, with 8 cm of depth), located in the east-central corner of sample trench 1. Orientation is northwest/southeast.

Material:

Archaeologist: Verònica Martínez

| | |
|-------------------------------|----------|
| <i>Dimension</i> | 58x36 cm |
| <i>Potential</i> | 8 cm |
| <i>Covered by (Stratum)</i> | 2 |
| <i>Intersecting (Stratum)</i> | 10 |

RF - SU 3



SU 3

RF - SU 4

Definition: Level of small circular dwelling

Interpretation: Small temporary dwelling, similar to SU-5, built on floor SU-10.

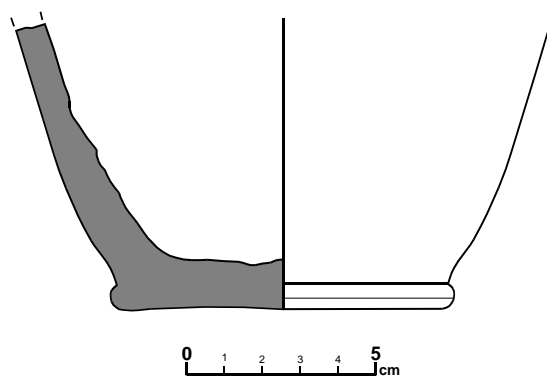
Observations: Circular structure with a diameter of 40 cm, composed by dark-brown sand in the external part of the eastern wall of the kiln near the entrance. Containing no artifacts.

Material: Common ware: 3 frags.

Archaeologist: Verònica Martínez

| | |
|----------------------|----|
| Covered by (Stratum) | 1 |
| Resting on (Stratum) | 10 |

RF - SU 4



RF - SU 5

Definition: Small circular dwelling

Interpretation: Small temporary dwelling, similar to SU-4, built on floor SU-10.

Observations: Circular stratum (38 cm by 24 cm), oriented northeast/southeast, composed of dark-brown sand and located opposite the kiln's entrance. Containing no artifacts.

Material:

Archaeologist: Verònica Martínez

| | |
|----------------------|----|
| Covered by (Stratum) | 1 |
| Resting on (Stratum) | 10 |



SU 5

RF - SU 6

Definition: Superficial level of sample trench

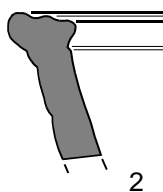
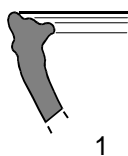
Interpretation: The presence of plentiful slag corresponding to the interior of the kiln's firing chamber leads us to think that it may be a level formed by remains pertaining to the collapse of the kiln structure and by the accumulation of pottery shards subsequent to the kiln's operation.

Observations: Level of yellowish sand with gravel that is very round and eroded by wind action. Contains ceramic artifacts, some overfired, and remains of slag belonging to the internal structure of the kiln. In all likelihood, it corresponds to the continuation of the superficial level (SU-1) towards the west, presenting a greater thickness on that side because of the terrain slopes towards the west.

Material: Slip ware: 30 frags.
Common ware: 77 frags.
Cooking ware: 3 frags.
Overfired pottery: 1 frag.
Bone: (0,15 kg)

Archaeologist: Verònica Martínez

| | |
|-----------------------------|----------------------------------|
| <i>Composition</i> | Sand, gravel, pottery |
| <i>Dimension</i> | Western part of the trial pit 1 |
| <i>Formation</i> | Manmade and natural accumulation |
| <i>Potential</i> | 20 cm |
| <i>Covered by (Stratum)</i> | 1 |
| <i>Covering (Stratum)</i> | 12-17-10 |



RC - SU 7

Definition: Level of firing chamber infill

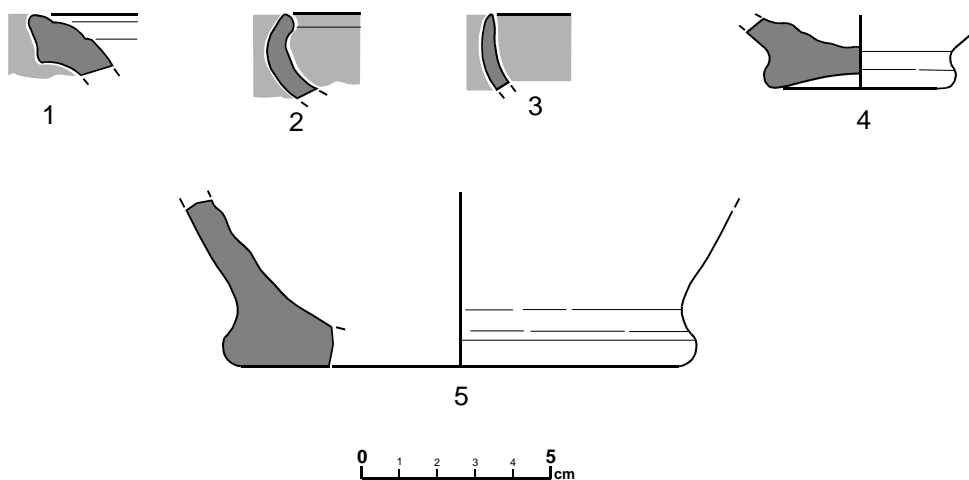
Interpretation: Level of infill inside the kiln's firing chamber corresponding to the collapse of the rack and the walls of the cooking chamber.

Observations: Level of sand mixed with greyish sand that covers the central part of the kiln's firing chamber. Containing pottery and abundant overfired and vitrified remains originating from the internal wall of the chamber. Z=-0.30 m.

Material:
 Slip ware: 16 frags.
 Common ware: 44 frags.
 Cooking ware: 11 frags.
 Bone: (0,5 kg)

Archaeologist: Verònica Martínez

| | |
|-------------------------------|-------------------------------------------|
| <i>Composition</i> | sand and fired and vitrified adobe bricks |
| <i>Dimension</i> | 3 x 0.40 m |
| <i>Formation</i> | level of manmade and/or natural infill |
| <i>Potential</i> | 8 cm |
| <i>Covered by (Stratum)</i> | 1 |
| <i>Covering (Stratum)</i> | 15 |
| <i>Leaning on (Structure)</i> | 30-13-31 |



RF - SU 7



SU- 7, 10, 11 , 13, 14

RF - SU 8

Definition: Level of ash infill from small pit

Interpretation: Ash infill of pit, potentially corresponding to the remains of a dwelling's direct combustion.

Observations: Infill from pit (SU-9), ash with no artifacts. Dimensions: 40 cm (east-west) by 22 cm (north-south). Z=0.12-0.16 m.

Material:

Archaeologist: Verónica Martínez

| | |
|-----------------------------------|-----------------------------|
| <i>Composition</i> | sand and ash |
| <i>Dimension</i> | 40x22 cm |
| <i>Formation:</i> | manmade accumulation of ash |
| <i>Potential</i> | 14 cm |
| | |
| <i>Covered by (Stratum)</i> | 1 |
| | |
| <i>It is refilling (Negative)</i> | 9 |
| | |

RF - SU 9

Definition: Small depression

Interpretation: Household pit, readily attributable to a temporary action.

Observations: Small oval depression over floor SU-10, oriented northeast-southwest, measuring 40 cm in length, 22 cm in width and approximately 6 cm in depth.

Material:

Archaeologist: Verònica Martínez

| | |
|-------------------------------|----|
| <i>Filling (Stratum)</i> | 8 |
| <i>Intersecting (Stratum)</i> | 10 |



SU 8 and 9

RF - SU 9



SU 9

RF - SU 10

Definition: Level of recent circulation

Interpretation: Level of sand cut vertically to join the kiln walls constructed of adobe. It seems to have functioned as a circulation floor for a long period of time, because the pottery and gravel appear severely eroded and fragmented by the action of natural agents. Once the kiln had been destroyed, the sediment of this level eventually covered the northeast entrance to the kiln.

Observations: Stratum of greyish sand and a large amount of gravel corresponding to a level of recent of circulation present across the entire area of sample trench 1. On this level, it is possible to observe a series of small temporary manmade actions related to possible dwellings (SU-2, 4, 5, 8). It is one of the strata cut vertically to join the walls SU-13, 30 and 31 which define the structure of the kiln. Depth: -0.20/-0.25 m.

Material: Slip ware: 60 frags.
Common ware: 99 frags.
Cooking ware: 16 frags.
Glazed ware: 1 frag.

Archaeologist: Verònica Martínez

| | |
|----------------------------------|---------------------------|
| <i>Composition</i> | Loess, gravel and pottery |
| <i>Dimension</i> | 72m ² |
| <i>Formation:</i> | Human and natural origin |
| <i>Potential</i> | 6 cm |
| <i>Covered by (Stratum)</i> | 1-12-6 |
| <i>Supporting (Structure)</i> | 5-4 |
| <i>Intersected by (Negative)</i> | 3-9-14-18 |
| <i>Covering (Stratum)</i> | 27-21 |

RF - SU 11

Definition: Level of kiln entrance infill

Interpretation: Level of infill inside the passage at the kiln's entrance, caused by the collapse of the structure.

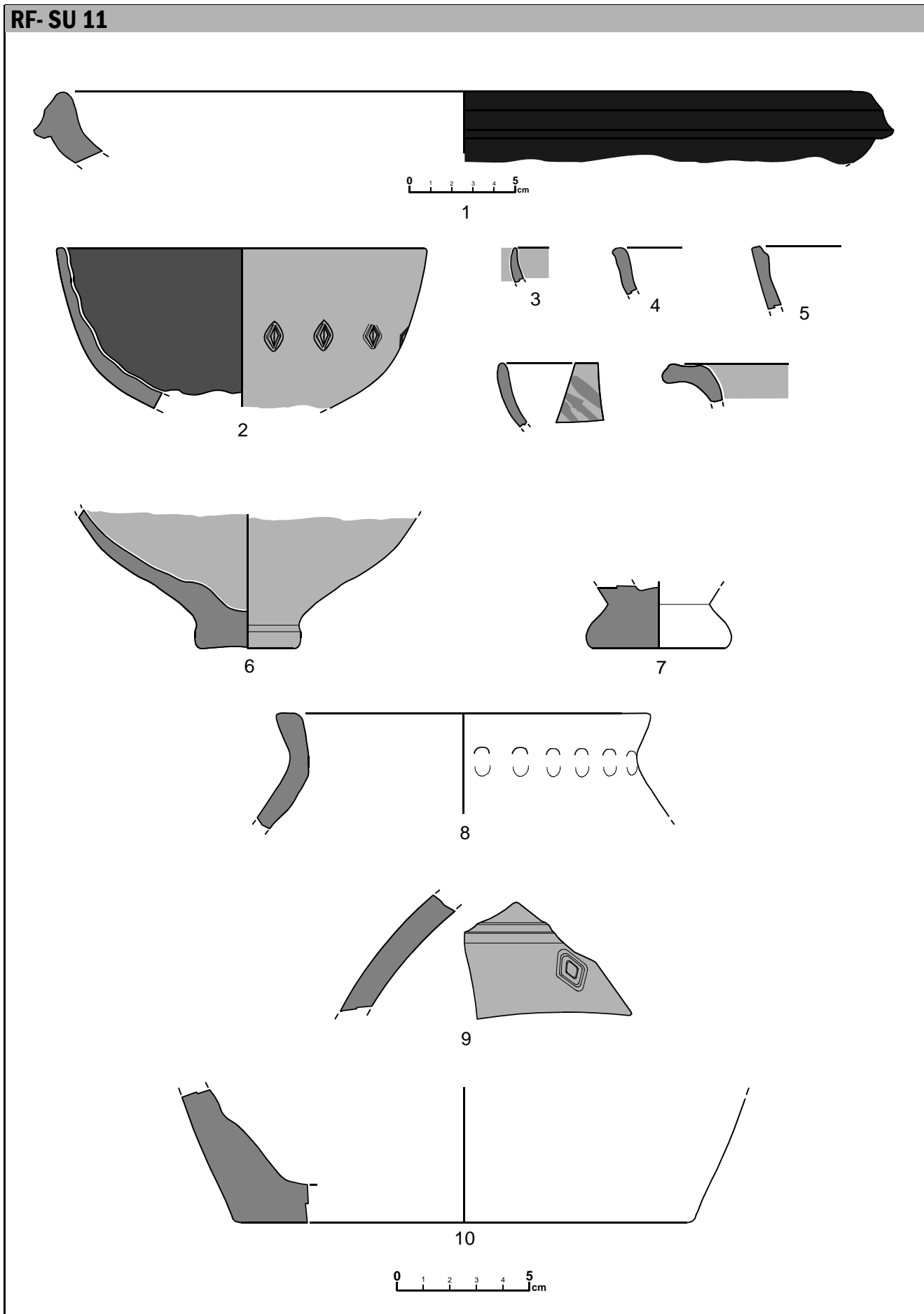
Observations: Level of sand mixed with reddish grey ash covering the central part of the kiln's passage. Containing pottery. Z= -0.23 m.

Material:
 Slip ware: 24 frags.
 Common ware: 58 frags.
 Cooking ware: 5 frags.
 Construction elements: 2 frags.
 Bone: (0,78 kg)

Archaeologist: Verònica Martínez

| | |
|-------------------------------|------------------------------------------------------|
| <i>Composition</i> | sand, pottery |
| <i>Dimension</i> | 2.6x0.6 m |
| <i>Formation:</i> | nivel de colmatación de origen natural y/o antrópico |
| <i>Potential</i> | 14 cm |
| <i>Covered by (Stratum)</i> | 1 |
| <i>Covering (Stratum)</i> | 20-19 |
| <i>Leaning on (Structure)</i> | 31-30 |

RF- SU 11



RF - SU 12

Definition: Accumulation of shapeless adobe

Interpretation: Small accumulation of adobe on the floor SU-10.

Observations: Accumulation of shapeless adobe in the northwest part of sample trench 1. Depth: -0.40 m.

Material:

Archaeologist: Verònica Martínez

| | |
|-------------------------------|----|
| Covered by (<i>Stratum</i>) | 6 |
| | |
| Covering (<i>Stratum</i>) | 10 |
| | |

RF - SU 13

Definition: Southern kiln structure built of adobe bricks

Interpretation: Adobe structure built on rock, enclosing the southern part of the firing and cooking chambers, corresponding to the northeast-southwest wall and arranged transversally to the longitudinal walls of the combustion structure. Together with structures SU-30 and 31, it forms the rectangular outer structure of the kiln, which includes a rectangular passage as entrance (2.60 m long by 1.30 m wide), a firing chamber below and a cooking chamber above (3.90 m long by 1.60 m wide).

Observations: Adobe-brick structure corresponding to the outer wall enclosing the southern side of the firing and cooking chambers. It measures 2.36 m in length (oriented northeast/southwest) and 0.54 m in width. Given repeated pottery firings, the adobe bricks which form the internal kiln wall appear severely vitrified, while the remainder appear reddish. The entire longitude of the structure has been defined, while the total width of the adobe-brick wall can be determined in the corner of the western elevation. The wall's height, visible on the internal vitrified walls of the kiln, reaches 1.10 m.

Material:

Archaeologist: Verònica Martínez

| | |
|--------------------------------|------------|
| Covered by (<i>Stratum</i>) | 1 |
| Supporting (<i>Stratum</i>) | 7-25-23-15 |
| | |
| Resting on (<i>Negative</i>) | 14 |
| Resting on (<i>Stratum</i>) | 28 |
| | |

RF - SU 13



SU 13, 28, 30, 31

RF - SU 14

Definition: Interface of kiln construction

Interpretation: Interpretation: Interface from removal of sand and gravel (SU-10 and 27) to build the kiln's walls (SU-13, 30 and 31).

Observations: Interface from removal of sand and gravel (SU-10) to build the kiln's walls (SU-13, 30 and 31). The interface entails the area occupied by the kiln and measures 6.5 m in length and 2.36 m in width. The most superficial level affected by this negative action is stratum SU-10, and stratum SU-27 beneath it has been affected as far as the sandstone rock (SU-28), which has been carved as well.

Material:

Archaeologist: Verònica Martínez

| | |
|-------------------------------|----------|
| <i>Supporting (Structure)</i> | 30-13-31 |
| <i>Intersecting (Stratum)</i> | 27-28-10 |



SU- 10, 13, 14, 15, 30, 31

RF - SU 15

Definition: Level of infill inside kiln.

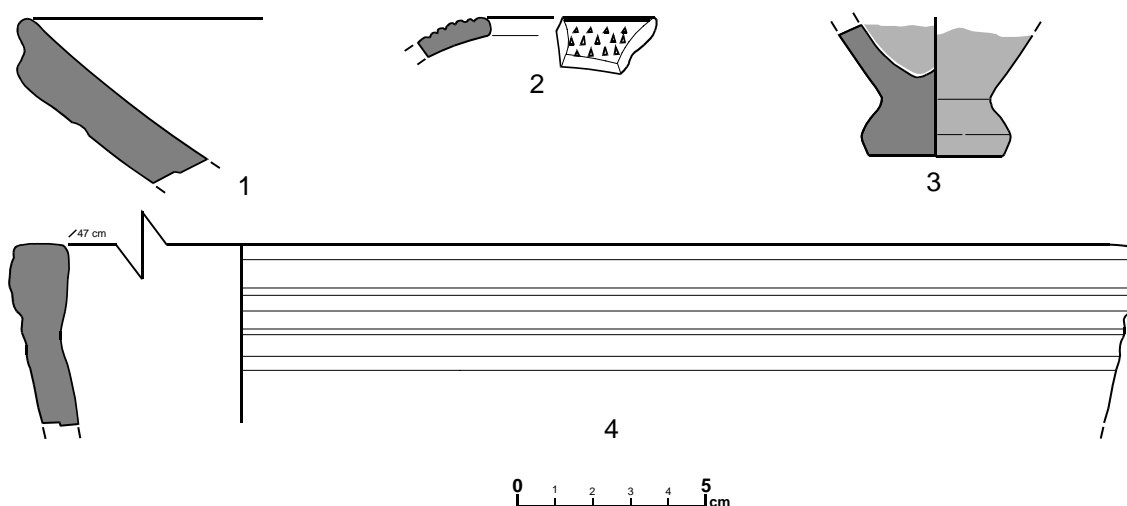
Interpretation: Level of infill in the kiln's interior from overfired adobe bricks altered by fire as a result of constant firing of pottery. It undoubtedly corresponds to the destruction of the upper structure and/or the dome of the firing chamber, based on the evidence of fired adobe bricks with vitrified faces and the remains of vitrified slag.

Observations: Level of reddish sand covering the interior of the firing chamber, beneath the springing points of the disappeared arches that held up the rack of the kiln's cooking chamber. Large number of randomly arranged bricks fired as a result of the operation of the firing chamber. To a lesser extent, there are also pottery sherds, bone and small pieces of charcoal.

Material: Slip ware: 16 frags.
Common ware: 16 frags.
Bone: (0,23 kg)

Archaeologist: Verònica Martínez

| | |
|-------------------------------|--------------------------------------------------------------------|
| <i>Composition</i> | sand, overfired and vitrified adobe bricks, pottery |
| <i>Dimension</i> | 2.78 m x 0.80 m |
| <i>Formation</i> | Level of collapse of the kiln structure with natural contributions |
| <i>Potential</i> | 40 cm |
| <i>Covered by (Stratum)</i> | 7 |
| <i>Covering (Stratum)</i> | 23 |
| <i>Leaning on (Structure)</i> | 30-31-13 |



RF - SU 16

Definition: Structure of springing points of the kiln's arcades

Interpretation: Remaining structure of the springing points of the kiln's arcades conserved in wall SU-31 and constructed of adobe bricks.

Observations: Rectangular adobe bricks arranged obliquely and marking the springing point of the arcades from the kiln's eastern wall (SU-31), upon which they rest. It appears severely overfired from contact with the heat emitted from the firing chamber. It would appear to show a juncture with structure SU-33, which rests on wall SU-30, forming the arch holding up the rack, but the complete structure does not remain. The diverse arcades of the structure join at wall SU-31, giving way between the arches to roughly five circular vents of greater size than the ones found on the opposite side of the kiln (SU-33).

Material:

Archaeologist: Verònica Martínez

| | |
|------------------------|----|
| Covered by (Stratum) | 1 |
| <hr/> | |
| Resting on (Structure) | 31 |
| <hr/> | |

RF - SU 16



RF - SU 17

Definition: Loess and gravel infill of long ditch

Interpretation: Infill of long ditches and military trench, containing recent sand and gravel and resting on the trench's level of circulation (SU-24).

Observations: Stratum composed of yellowish sand with gravel, pottery and charcoal. The characteristics (colour and texture) resemble those of stratum SU-6. There is a risk of intrusion in dealing with the infill of the two ditches and a military trench of recent use. Modern elements from military use are mixed with highly fragmented, ancient pottery. The level of the trench's interior circulation and the two ditches is SU-24. Upper depth: -0.40/-0.54. Lower depth: -1.02/-1.19

Material: Slip ware: 53 frags.
Common ware: 99 frags.
Cooking ware: 24 frags.
Bone: (0,200 kg)

Archaeologist: Verònica Martínez

| | |
|-----------------------------------|---------------------------------------------|
| <i>Composition</i> | Pottery, charcoal, elements of military use |
| <i>Dimension</i> | 5.80 m x 0.90 m |
| <i>Formation:</i> | Level of manmade and/or natural infill |
| <i>Potential</i> | 80 cm |
| <i>Covered by (Stratum)</i> | 6 |
| <i>It is refilling (Negative)</i> | 18 |
| <i>Covering (Stratum)</i> | 24 |

RF - SU 18

Definition: Level of circulation within the military trench

Interpretation: Interface resulting from the excavation of a military trench with a pit at either end.

Observations: Interface over stratum SU-10, comprising a military trench with oval pits at either end. The trench runs northeast-southwest and was created atop SU-10. It functions with the floor SU-24, which is found at the bottom of the trench and the two pits. The negative is filled in by stratum SU17 across its entire extent. The total length of the trench and pits is 5.80 m and the trench's width is 0.60 m. Broadly, the pits are roughly 2 m in length and 0.90 m in width and lie east-west.

Material:

Archaeologist: Verònica Martínez

| | |
|-------------------------------|-------|
| <i>Filling (Stratum)</i> | 17 |
| <i>Covered by (Stratum)</i> | 24 |
| <i>Intersecting (Stratum)</i> | 27-10 |

RF - SU 19

Definition: Level of ash filling in kiln

Interpretation: Level of sand and ash filling in kiln at the mouth of its entrance passage.

Observations: Level of sand mixed with ash and charcoal located in the interior of the kiln passage. Depth: -0.35 m.

Material:

Archaeologist: Verònica Martínez

| | |
|-------------------------------|-----------------------------|
| <i>Composition</i> | charcoal and ash |
| <i>Dimension</i> | 72m ² |
| <i>Formation:</i> | Combustion in kiln interior |
| <i>Potential</i> | 14 cm |
| <i>Covered by (Stratum)</i> | 11 |
| <i>Covering (Stratum)</i> | 29 |
| <i>Leaning on (Structure)</i> | 31-30 |

RF - SU 20

Definition: Level of infill in kiln

Interpretation: Level of infill in the kiln's entrance passage, which must correspond to a level of household rubbish, given the large quantity of macrofauna, charcoal and pottery shards, among which are located a nearly complete cooking pot. Radiocarbon analysis of the charcoal samples collected in the level date it to the time when kiln had ceased operations and was reused as a household trash heap.

Observations: Level of light-brown/beige sand located in the interior of the central passage leading into the kiln. The southern limit of the stratum can clear be seen where the kiln's entrance connects to the firing chamber. Containing pottery and scorched remains of adobe bricks, slag and a large amount of animal bones.

Material: Slip ware: 35 frags.
Common ware: 63 frags.
Cooking ware: 2 frags.
Bone: (1,800 kg)

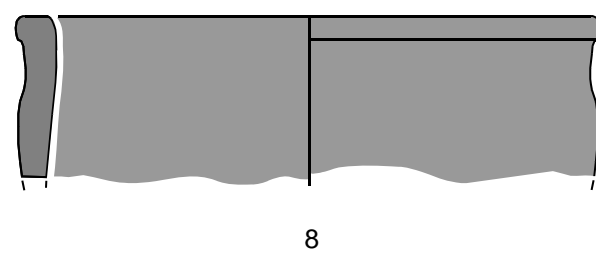
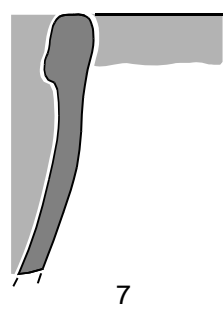
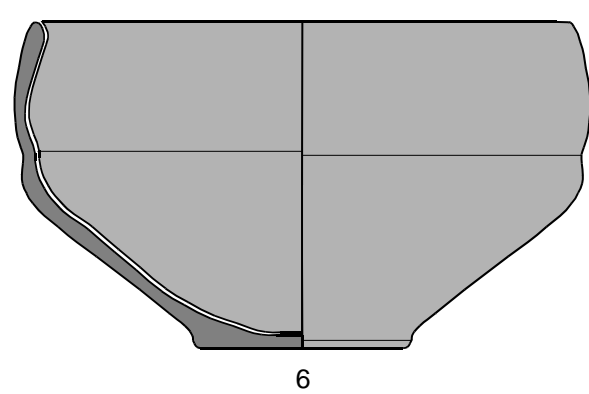
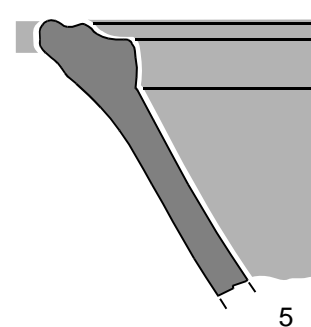
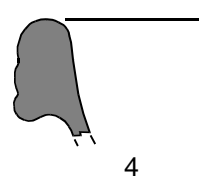
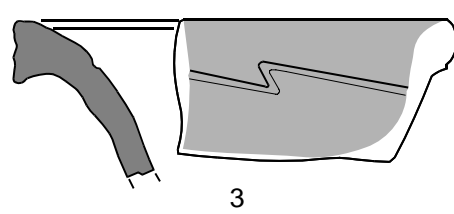
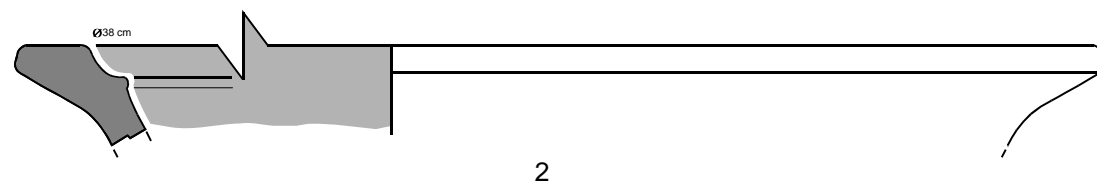
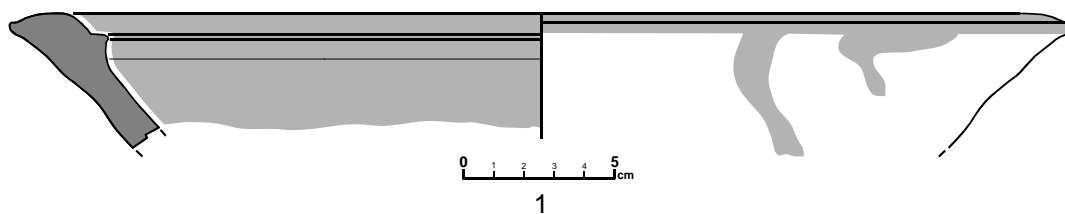
Archaeologist: Verònica Martínez

| | |
|-------------------------------|-------------------------------------------------------------|
| <i>Composition</i> | Loess, pottery and small lumps of charcoal |
| <i>Dimension</i> | 1.90 m x 0.74 m |
| <i>Formation:</i> | Level of collapse of upper structure of the kiln's entrance |
| <i>Potential</i> | 20 cm |
| <i>Covered by (Stratum)</i> | 11 |
| <i>Covering (Stratum)</i> | 26 |
| <i>Leaning on (Structure)</i> | 31-30 |

RF - UE 20

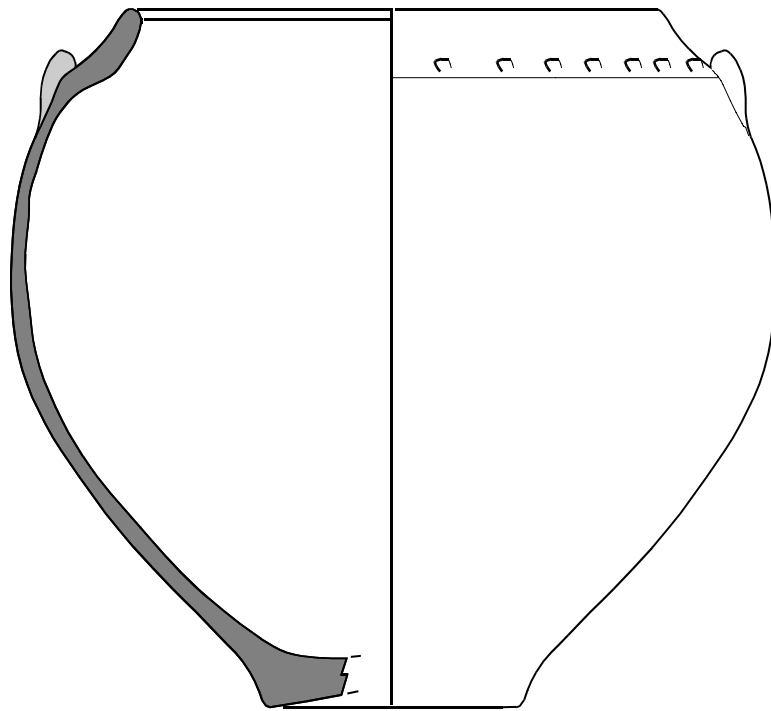


RF- SU 20

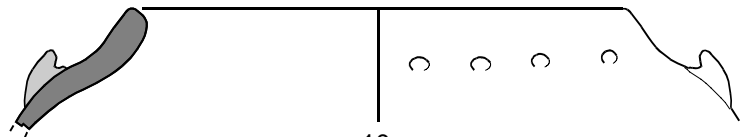


RF- SU 20

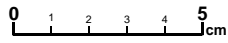
Cooking ware



9



10



RF - UE 21

Definition: Level of compact sand.

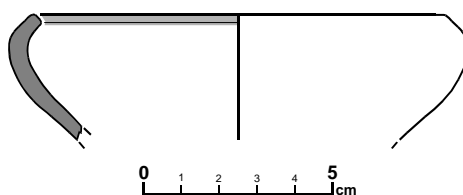
Interpretation: Level of sand, undoubtedly windborne, covering the kiln's entrance (the most northerly part of the structure) and level SU-22, which corresponds to the level of infill in the depression at the kiln's entrance.

Observations: Level of compact, light-beige sand, 20 cm in thickness, covered by SU-10 and covering SU-22. Contains a small amount of pottery. Depth: -0.19. Partially excavated.

Material: Slip ware: 67 frags.
Common ware: 181 frags.
Cooking ware: 5 frags.

Archaeologist: Verònica Martínez

| | |
|-----------------------------|----------------------------------|
| <i>Composition</i> | Loess and pottery |
| <i>Dimension</i> | Northeastern part of trial pit 1 |
| <i>Formation</i> | Sand of natural origin |
| <i>Potential</i> | 12 cm |
| <i>Covered by (Stratum)</i> | 10 |
| <i>Covering (Stratum)</i> | 22 |



RF - SU 22

Definition: Level of infill of depression at kiln entrance

Interpretation: Accumulation of sand containing pottery, macrofauna and charcoal, filling in the depression SU-32 corresponding to the depression permitting access to the kiln. The type of archaeological content leads us to think that it must certainly be a mixed level, reflecting kiln rubble and simultaneous household rubbish after the kiln's collapse.

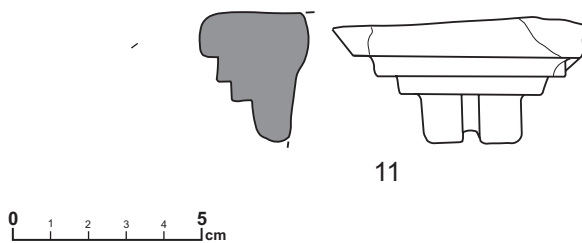
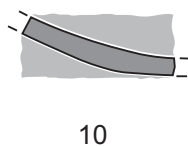
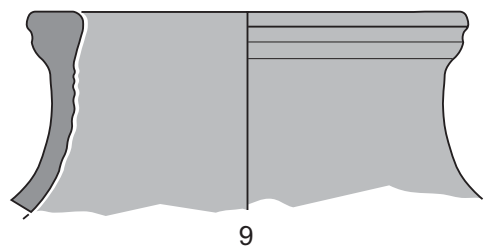
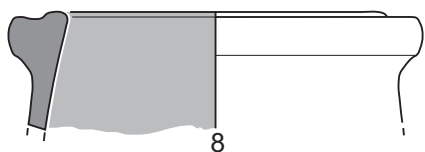
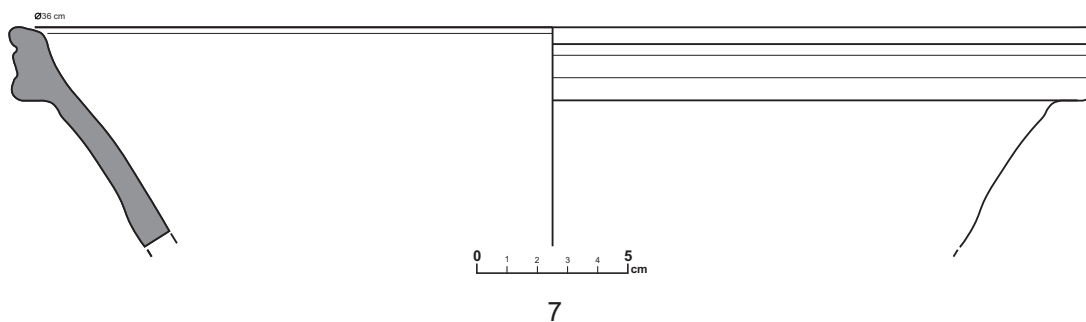
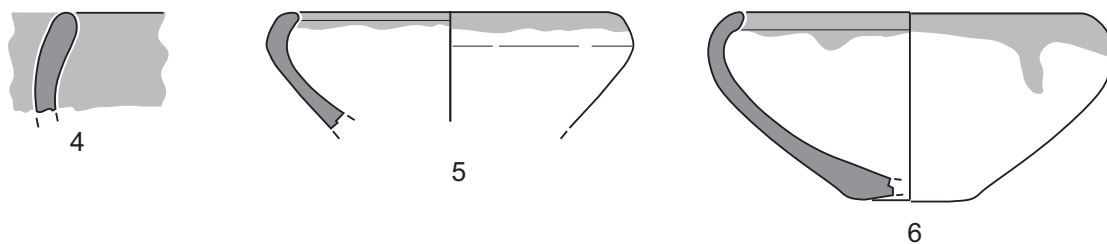
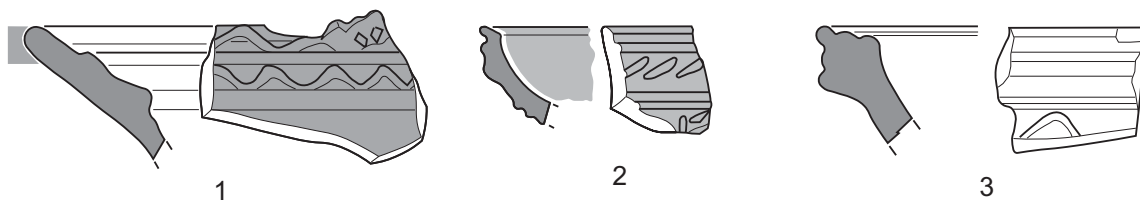
Observations: Level of grey and light-brown sand outside the entrance passage to the kiln (north end of the combustion structure). Containing pottery and animal bones.

Material:
 Slip ware: 60 frags.
 Common ware: 59 frags.
 Cooking ware: 1 frag.
 Indeterminate pottery: 1 frag.
 Pottery with kiln vitrification: 1 frag.
 Construction elements: 1 frag.
 Stone construction elements: 1 frag.
 Bone: (0,150 kg)

Archaeologist: Verònica Martínez

| | |
|-----------------------------------|-----------------------------------------|
| <i>Composition</i> | Loess, pottery, small lumps of charcoal |
| <i>Dimension</i> | 1 m x 0.86 m |
| <i>Formation:</i> | Human origin with natural contributions |
| <i>Potential</i> | 56 cm |
| <i>Covered by (Stratum)</i> | 21 |
| <i>It is refilling (Negative)</i> | 32 |
| <i>Leaning on (Structure)</i> | 34 |

RF- SU 22



RF - SU 23

Definition: Level of infill in the kiln's interior

Interpretation: Level of collapse of kiln's upper structures (rack arches, rack and walls of cooking chamber).

Observations: Level of brown sand in the interior of the firing chamber in the space that would have been covered by the kiln's rack (under SU-15). The level contained a large amount of reddish fired adobe fragments, undoubtedly belonging to the walls and roof of the cooking chamber, along with overfired blocks of adobe with vitrified faces corresponding to the rack that separated the firing chamber from the cooking chamber.

Material: Slip ware: 38 frags.
Common ware: 91 frags.
Cooking ware: 1 frag.
Ceramic architectural covering: 2 frags.
Bone: (0,300 kg)

Archaeologist: Verònica Martínez

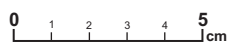
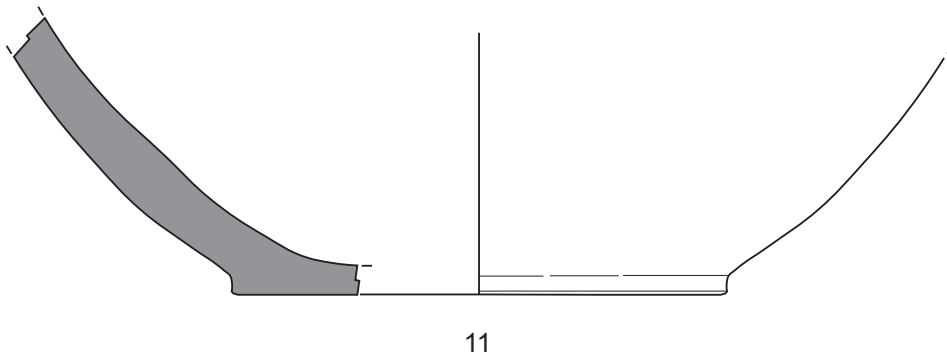
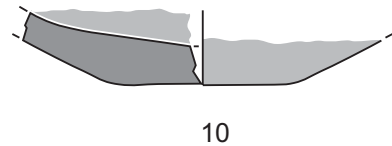
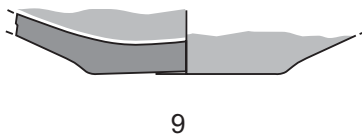
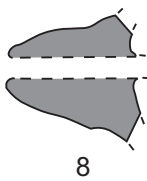
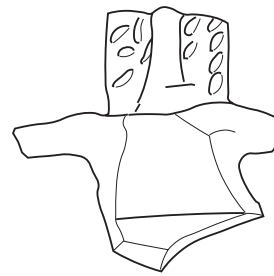
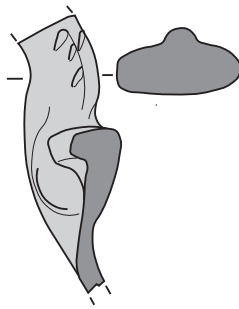
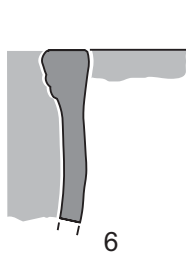
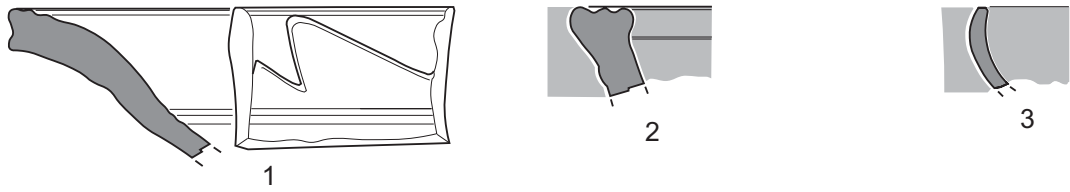
| | |
|-------------------------------|--------------------------------------------------|
| <i>Composition</i> | Loess, pottery, fired and vitrified adobe bricks |
| <i>Dimension</i> | 2.84 x 1.6 m |
| <i>Formation:</i> | Collapse of kiln structure |
| <i>Potential</i> | 70 cm |
| <i>Covered by (Stratum)</i> | 15 |
| <i>Covering (Stratum)</i> | 25 |
| <i>Leaning on (Structure)</i> | 30-31-13 |

RF - SU 23

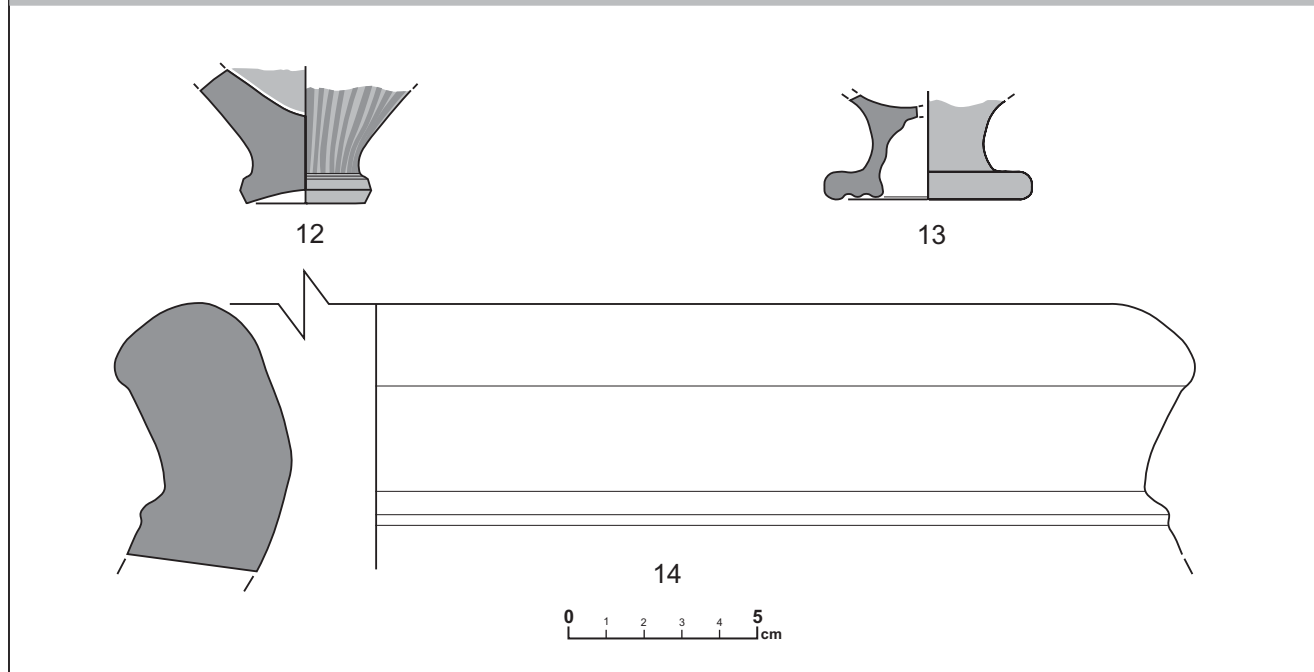


SU- 13, 14, 16, 23, 20, 21, 30, 31, 33

RF- SU 23



RF- SU 23



RF - SU 24

Definition: Level of circulation within the military trench

Interpretation: Level of circulation in current military trench.

Observations: Level of circulation in military trench comprising a thin layer of highly compact, light-beige sand. It has the same dimensions as interface SU-18. Depth: -1.10/-1.19 m.

Material:

Archaeologist: Verònica Martínez

| | |
|-----------------------------|----------------------------------------------|
| <i>Composition</i> | compact sand |
| <i>Dimension</i> | 2 m x 0.90 m |
| <i>Formation:</i> | natural origin giving way to a manmade floor |
| <i>Potential</i> | 2-4 cm |
| <i>Covered by (Stratum)</i> | 17 |
| <i>Covering (Negative)</i> | 18 |

RF - SU 25

Definition: Level of kiln infill

Interpretation: Level of infill at southern end of the kiln's interior, beneath the vanished cooking chamber. From its characteristics and composition, it must be a level made up of the finest particles resulting from the collapse of the rack and the walls and roof of the cooking chamber, which must have formed deposits directly on the natural rock forming the kiln floor, beneath the larger materials in SU-23.

Observations: Level of brown sand highly similar in characteristics to the sediment in SU-23, but without any fired adobe bricks. The level covers the rock that constitutes the kiln floor.

Material:

Archaeologist: Verònica Martínez

| | |
|-------------------------------|----------------------------------------------------------|
| <i>Composition</i> | limos |
| <i>Dimension</i> | 2.84 x 1.6 m |
| <i>Formation:</i> | destrucción de la cámara de cocción y parrilla del horno |
| <i>Potential</i> | 12 cm |
| <i>Covered by (Stratum)</i> | 23 |
| <i>Covering (Stratum)</i> | 28 |
| <i>Leaning on (Structure)</i> | 30-31-13 |

RF - SU 26

Definition: Level of ash and charcoal in the kiln passage

Interpretation: Level of ash and charcoal resulting from the cooking of pottery, found inside the kiln passage. Towards the side corresponding to the rack location, the level is not continuous but cuts off abruptly, which would seem to indicate that fuel was deposited only in the kiln passage during pottery firings and not in the space located under the rack. In this way, the direct action of the flames would not directly reach the rack or the ceramic pieces. Based on its characteristics, we may consider the level to be formed during the kiln's operation. Radiocarbon analysis will enable us to establish an absolute chronology of the last ceramic firing carried out in the kiln before its destruction.

Observations: Level of ash and charcoal located in the entrance passage of the kiln, below both SU-20 and a layer of tongue-shaped, vitrified adobe pockets extending to both sides of the passage, where small-diameter, well-conserved carbonised branches and twigs have been found. The pockets of vitrified sand must correspond to the collapse of part of the kiln's lateral structure destroyed during a firing. The level of charcoal appears on the floor of the kiln's entrance corresponding to the excavated rock. Towards the south, the level cuts off abruptly in the space beneath the rack.

Material: Slip ware: 7 frags.
Common ware: 22 frags.
Overfired pottery: 1 frag.

Archaeologist: Verònica Martínez

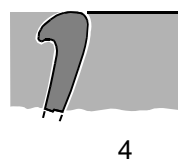
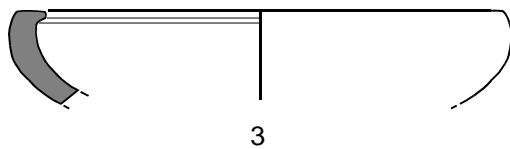
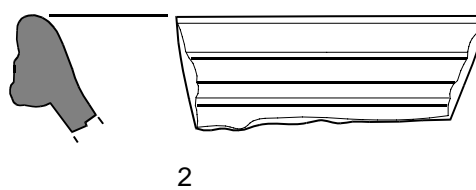
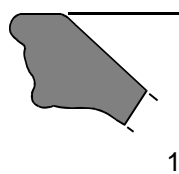
| | |
|-------------------------------|--------------------------------------------------------------------------|
| <i>Composition</i> | Ash and charcoal with large number of fine carbonised branches and twigs |
| <i>Dimension</i> | 3 m x 0.66 m |
| <i>Formation:</i> | concentration of charcoal and ash of human origin |
| <i>Potential</i> | 0.72 m |
| <i>Covered by (Stratum)</i> | 29-20 |
| <i>Covering (Stratum)</i> | 28 |
| <i>Leaning on (Structure)</i> | 34 |
| | |

RF - SU 26



SU 29

RF - SU 26



RF - SU 27

Definition: Level on which the kiln walls stand

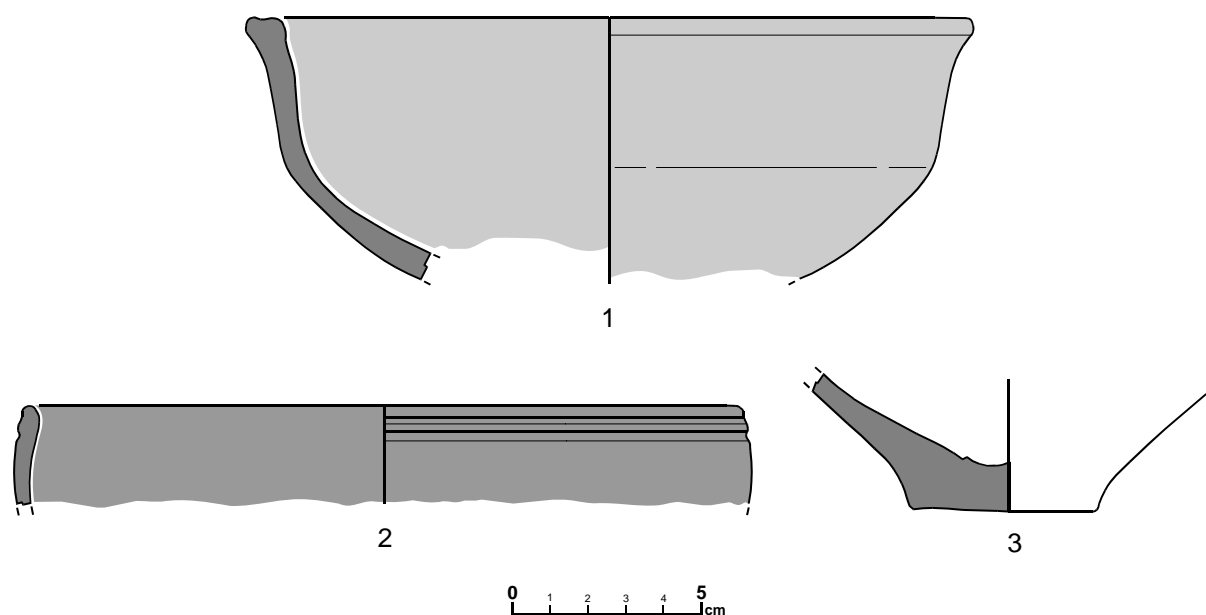
Interpretation: Level of sand subsequent to the construction of the kiln, given that it has been cut to build the kiln wall (SU-31).

Observations: Level of sand with gravel, cut by the negative SU-14 to build kiln structure SU-13.

Material:
 Slip ware: 20 frags. (0,352 kg)
 Common ware: 31 frags. (1,430 kg)
 Cooking ware: 2 frag. (0,40 kg)
 Bone: (0,10 kg)

Archaeologist: Verònica Martínez

| | |
|----------------------------------|------------------------------------|
| <i>Composition</i> | Sand and gravel |
| <i>Dimension</i> | Almost the entirety of trial pit 1 |
| <i>Formation</i> | Manmade and/or natural |
| <i>Potential</i> | 1.5 m |
| <i>Covered by (Stratum)</i> | 10 |
| <i>Intersected by (Negative)</i> | 32-14-18 |
| <i>Covering (Stratum)</i> | 28 |



RF - SU 28

Definition: Level of rock corresponding to kiln floor

Interpretation: Level of rock that has been cut to set the kiln floor. The three walls of the kiln's structure (SU-13, 30 and 31) have been built on rock faces after carving.

Observations: Level of fine-grained sandstone corresponding to the level of circulation of the kiln's firing chamber and the passage where carbonised fuel is stacked. It has been carved to set the structure of the kiln.

Material:

Archaeologist: Verònica Martínez

| | |
|----------------------------------|-------------------------|
| <i>Composition</i> | Sandstone |
| <i>Dimension</i> | 8.9 m x 0.76 m visibles |
| <i>Formation:</i> | Natural |
| <i>Potential</i> | Desconocida |
| | |
| <i>Supporting (Structure)</i> | 13-30-31-34 |
| <i>Intersected by (Negative)</i> | 14 |
| <i>Covered by (Stratum)</i> | 27-26-25 |
| | |

RF - SU 28



SU 28, 13, 30, 31

RF - SU 28



SU 28, 13, 30, 31

RF - SU 29

Definition: Level of sand infill at the kiln's entrance

Interpretation: Level of infill at the kiln's entrance, formed by the process of destruction affecting the upper structure of the kiln and by household materials such as pottery, macrofauna, charcoal etc. The level has been formed over a stratum of ash and charcoal (SU-26) corresponding to the fuel of the kiln's last firing. As a result, its formation must have occurred at a time when the kiln had ceased operation as such and the structure was being used as a household trash heap.

Observations: : Level of light-brown sand that is compact on the surface as a result of oxidisation, including fired adobe bricks lying flat at the mouth of the kiln's entrance. The level contains adobe bricks fired to different degrees, pottery and a large quantity of macrofauna.

Material: Slip ware: frags.
Common ware: frags.
Cooking ware: frag.
Bone: (1,800 kg)

Archaeologist: Verònica Martínez

| | |
|-------------------------------|-------|
| <i>Covered by (Stratum)</i> | 19 |
| <i>Covering (Stratum)</i> | 26 |
| <i>Leaning on (Structure)</i> | 31-30 |

RF - SU 29

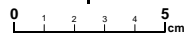
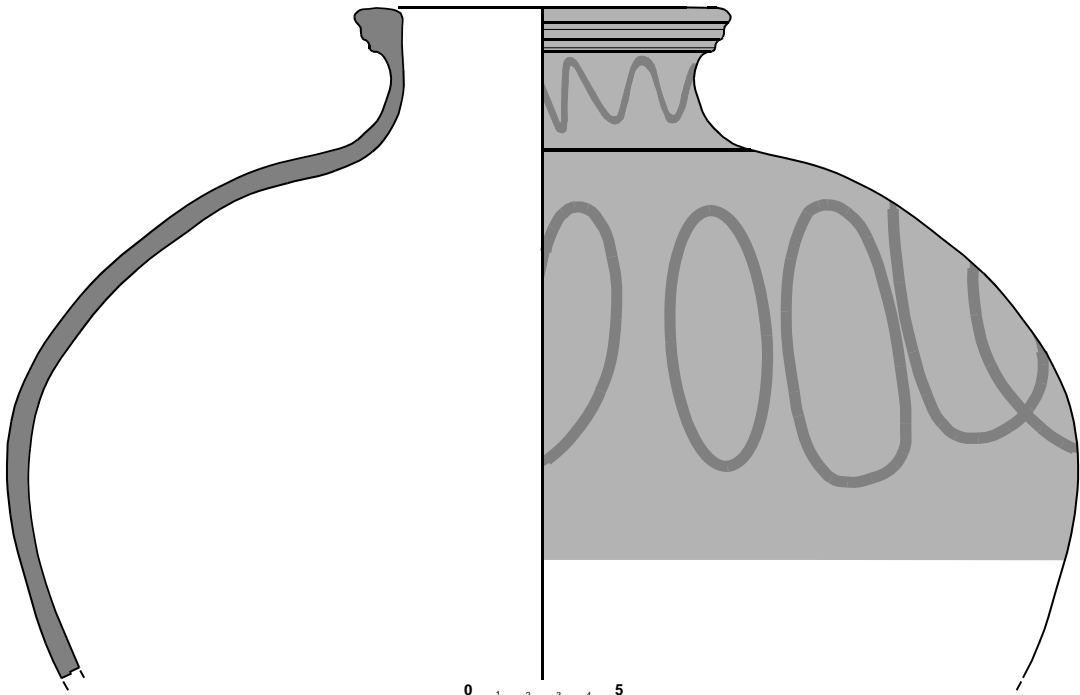
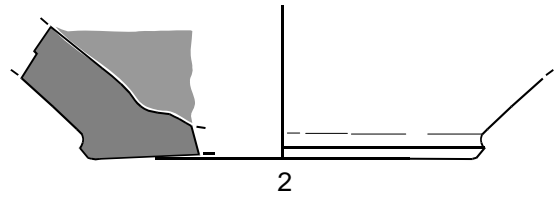
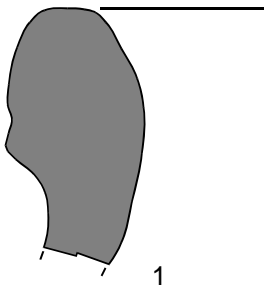


SU 29, 13, 30, 31



SU 29

RF- SU 29



RF - SU 30

Definition: Western adobe-brick structure of kiln

Interpretation: Longitudinal wall of the kiln on its western face built of adobe in earthen mortar. Construction involved excavation of strata SU-10 and 27 as far as the sandstone (SU-28). Once the rock was carved away, wall SU-30 was built directly on the rock, affixing the adobe bricks directly to the earthen wall uncovered in strata SU-10 and 27.

Observations: Structure with five courses of adobe bricks in earthen mortar, constructed on the rock, enclosing the kiln's firing and cooking chambers to the west, corresponding to the wall oriented northeast-southwest and arranged longitudinally and parallel to wall SU-31. It is 6.40 m in length (north-south) and 0.52 m in width. Where the cooking chamber connects to the entrance passage, the structure has an inflection of 20 cm. As a result of ongoing pottery firings, the face of the adobe bricks forming the inner wall of the kiln appear severely vitrified, while the remaining bricks present shades of red. The structure's length and width have been defined on the surface. The wall's height, visible on the internal vitrified face of the kiln, measures 0.74 m and its internal elevation is 0.82 m.

Material:

Archaeologist: Verónica Martínez

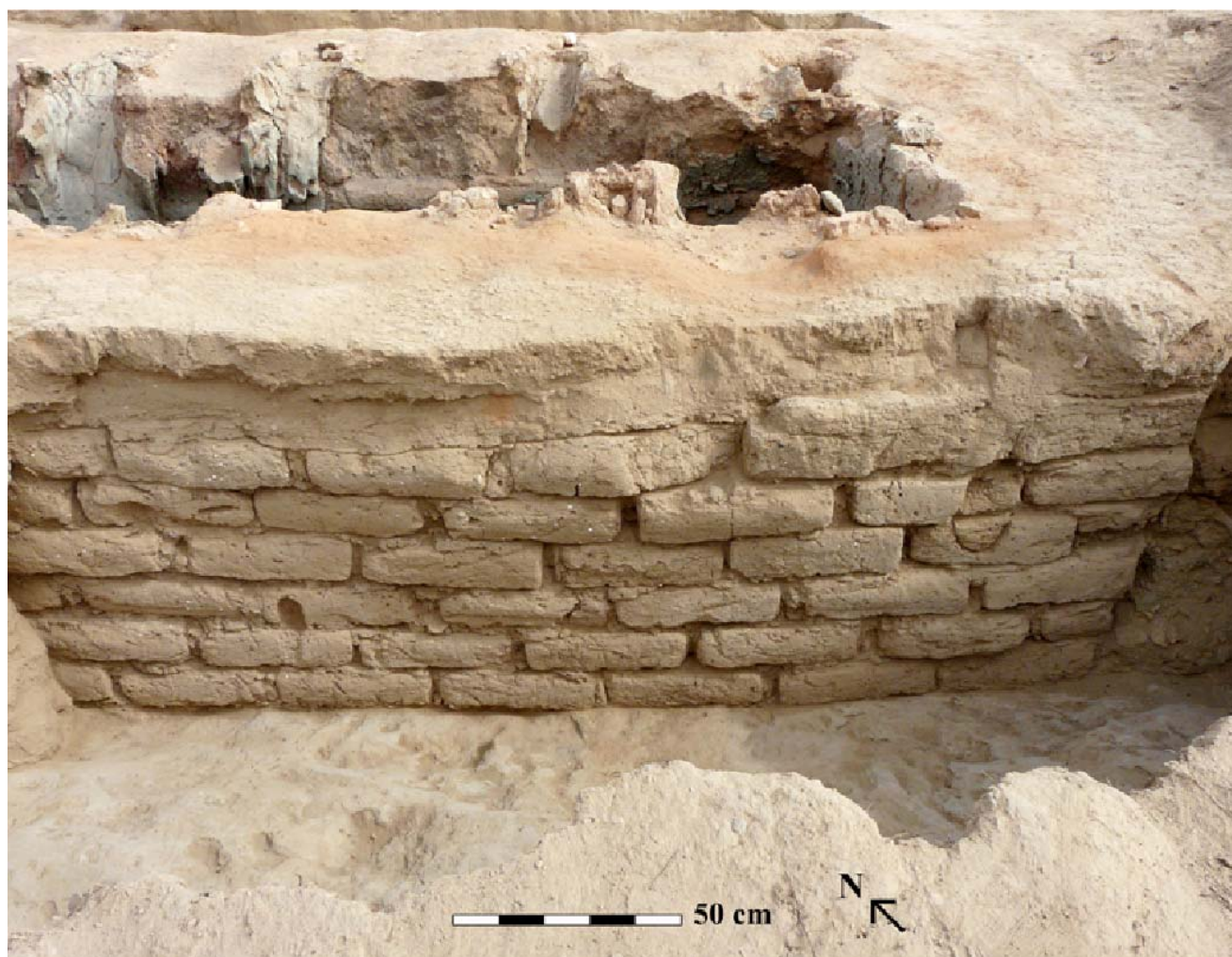
| | |
|-------------------------------|------------------------|
| <i>Covered by (Stratum)</i> | 1 |
| <i>Supporting (Stratum)</i> | 15-7-25-29-23-11-20-19 |
| <i>Supporting (Structure)</i> | 33 |
| <hr/> | |
| <i>Resting on (Negative)</i> | 14 |
| <i>Resting on (Stratum)</i> | 28 |
| <hr/> | |

RF - SU 30



SU- 13, 22, 28, 30

RF - SU 30



SU- 28, 30



RF - SU 31

Definition: Eastern adobe-brick structure of kiln

Interpretation: Longitudinal wall of the kiln on its eastern face.

Observations: Structure with six courses of square adobe bricks in earthen mortar, constructed on the rock (SU-28), enclosing the kiln's firing and cooking chambers to the east, corresponding to the wall oriented northeast-southwest and arranged longitudinally and parallel to wall SU-30. It is 6.60 m in length (north-south) and almost 1 m in width. As a result of ongoing pottery firings, the face of the adobe bricks forming the inner wall of the kiln appear severely vitrified, while the remaining bricks present shades of red. The structure's length and width have been defined on the surface. The wall's height, visible on the internal vitrified face of the kiln, measures 1 m. The external elevation of the wall remains unknown because it has not been fully excavated yet.

Material:

Archaeologist: Verònica Martínez

| | |
|-------------------------------|------------------------|
| <i>Covered by (Stratum)</i> | 1 |
| <i>Supporting (Structure)</i> | 16 |
| <i>Supporting (Stratum)</i> | 23-11-20-25-7-19-15-29 |
| <hr/> | |
| <i>Resting on (Negative)</i> | 14 |
| <i>Resting on (Stratum)</i> | 28 |
| <hr/> | |

RF - SU 31



SU- 13, 28, 30, 31a

RF - SU 31



SU- 13, 28, 30, 31b

RF - SU 32

Definition: Depression for access to kiln entrance

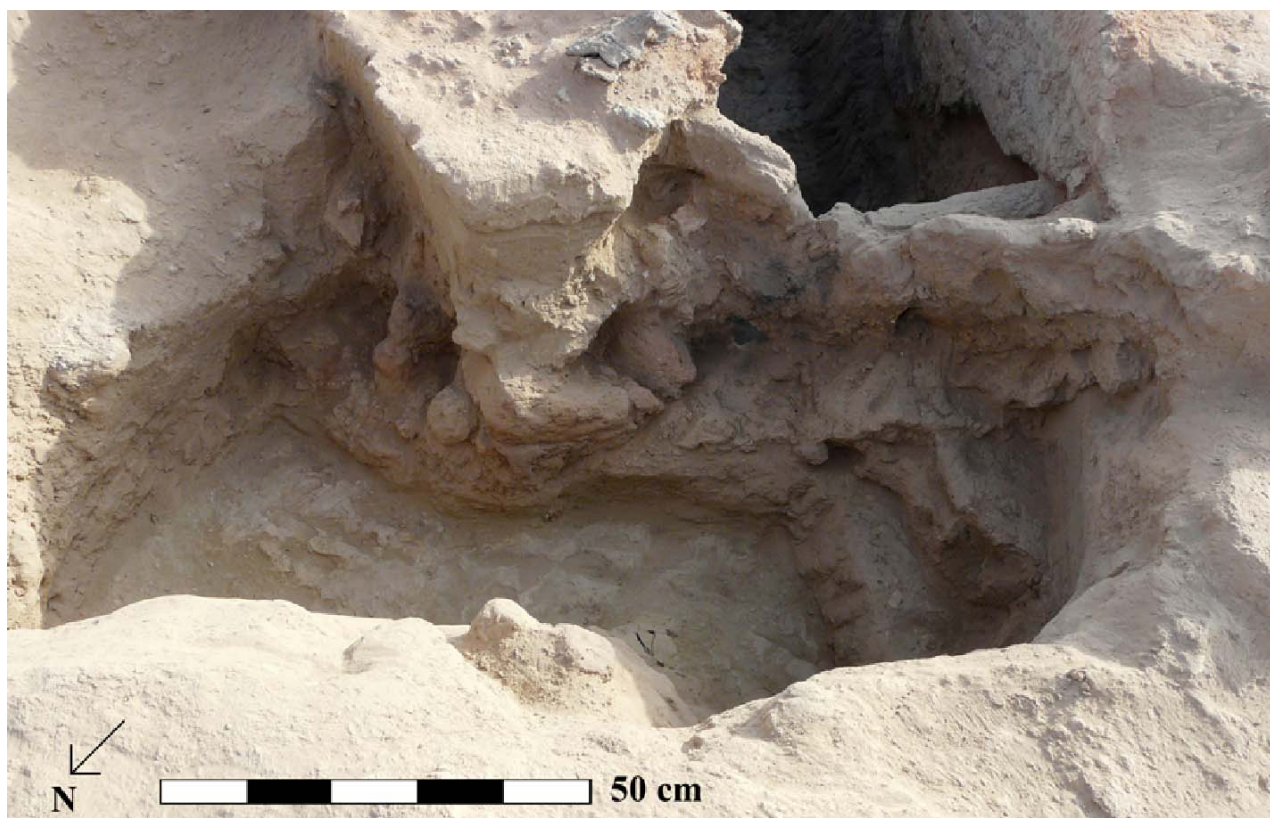
Interpretation: Depression for access to kiln entrance..

Observations: Semicircular interface corresponding to a negative level produced in stratum SU-27 to permit entry into the kiln. The depression is 1.2 m long, 1.9 m wide and 0.86 m deep, and sandstone lies at the bottom.

Material:

Archaeologist: Verònica Martínez

| | |
|-------------------------------|----|
| <i>Filling (Stratum)</i> | 22 |
| <i>Intersecting (Stratum)</i> | 27 |



SU- 32, 28, 30, 31

RF - SU 33

Definition: Structure of springing points of kiln's arcades

Interpretation: Structure corresponding to a series of arcades resting on the western wall (SU-30) and relating to the arches supporting the rack, of which only the springing points remain.

Observations: Rectangular adobe bricks arranged obliquely and marking the springing points of the arcades from the kiln's western wall (SU-30), on which they rest. The level appears highly overfired as a result of the heat given off by the firing chamber. It would appear to join structure SU-16, which rests on wall SU-31, forming an arch to support the rack. However, the complete structure does not remain. The various arcades of the structure join at wall SU-30, giving way between the various arches to some five circular vents, which are smaller in size to the ones located on the opposite side of the kiln (SU-16).

Material:

Archaeologist: Verònica Martínez

| | |
|-------------------------------|----|
| <i>Covered by (Stratum)</i> | 1 |
| <i>Resting on (Structure)</i> | 30 |

RF - SU 33



SU- 13, 28, 30, 31

RF - SU 33



SU- 13, 28, 30, 31

RF - SU 34

Definition: Structure enclosing the kiln entrance

Interpretation: Heterogeneous accumulation of sand and adobe bricks at the kiln's entrance, which would have served to enclose it after feeding the kiln with fuel (SU-26).

Observations: Accumulation of earth and adobe bricks at the kiln's entrance, appearing over the sandstone (SU-28), to seal off access.

Material:

Archaeologist: Verònica Martínez

| | |
|-----------------------------|-------|
| <i>Supporting (Stratum)</i> | 22-26 |
| | |
| <i>Resting on (Stratum)</i> | 28 |
| | |

Archaeological record: Sector AC, military camp (former barracks)

Josep Maria Gurt

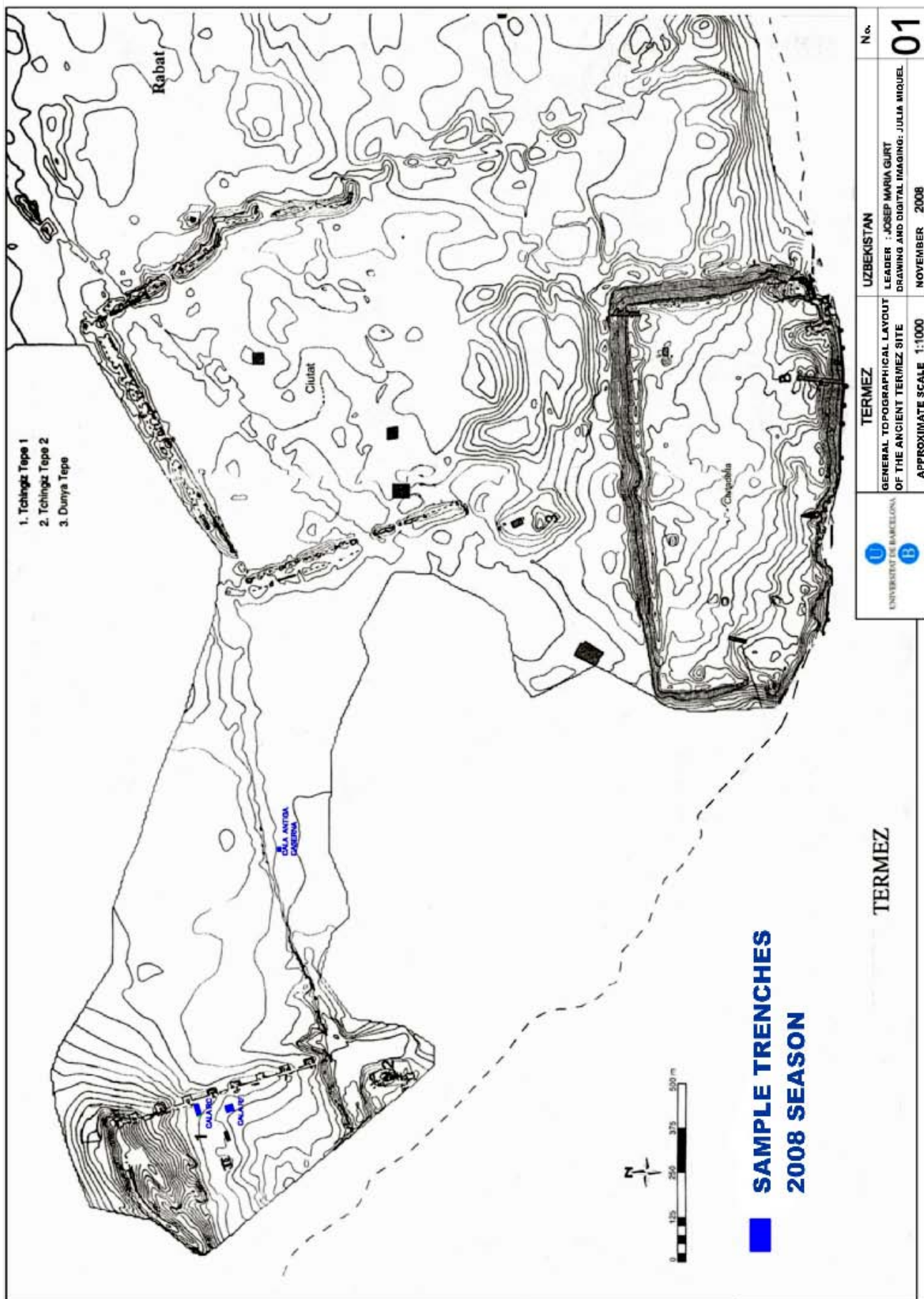
Excavation strategy

This area is a part of the city that has never prospected or surveyed. Located halfway between the citadel and the hill of Tchinguiz Tepe, it forms part of a wide terrace near where the city expanded in the Islamic era. The objective of our intervention was to try to verify the stratigraphic sequence of the sector, particularly bearing in mind the discovery of Greco-Bactrian coins in the area at the start of the twentieth century. We have not drawn on earlier geophysical surveys because of the characteristics of the terrain, which has been highly disturbed by structures and remains (principally metallic) corresponding to the former military installations located on the site.

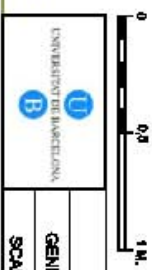
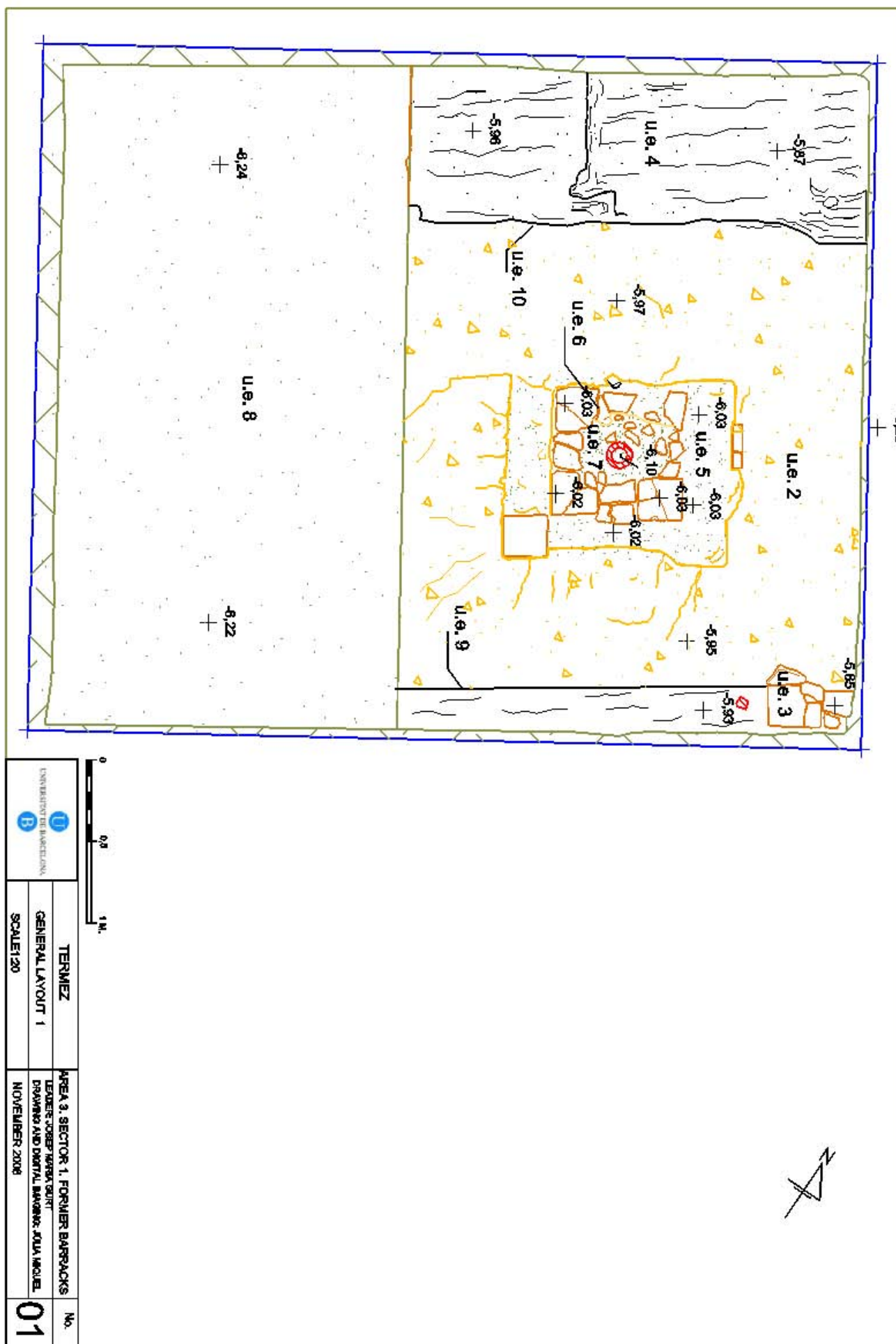


Excavation of the military camp sector: former barracks

The stratigraphic sequence of the survey conducted is very straightforward. The area appears to have been inhabited in the medieval period, with settlements built directly over levels from the Kushan period. The finds from the excavated area correspond to what was probably an open space, or patio, of a medieval Islamic structure, which is well preserved and probably abandoned without having suffered a clear process of destruction. As a result, over time, it will have been filled in by geomorphological processes currently under study. We cannot precisely determine whether the structures rested directly on archaeological levels related to the Kushan period or whether earlier structures were cleared away. At present, we can only state that the levels preceding the Islamic buildings contain only pottery material from the Kushan period. Some levels cover a clear water channel which was expressly carved into the city's geological substrate for that purpose. Apparently, based on the most preliminary analysis, the Kushan material horizon yielded by the site is distinct to those observed in the sector Tchinguiz Tepe.

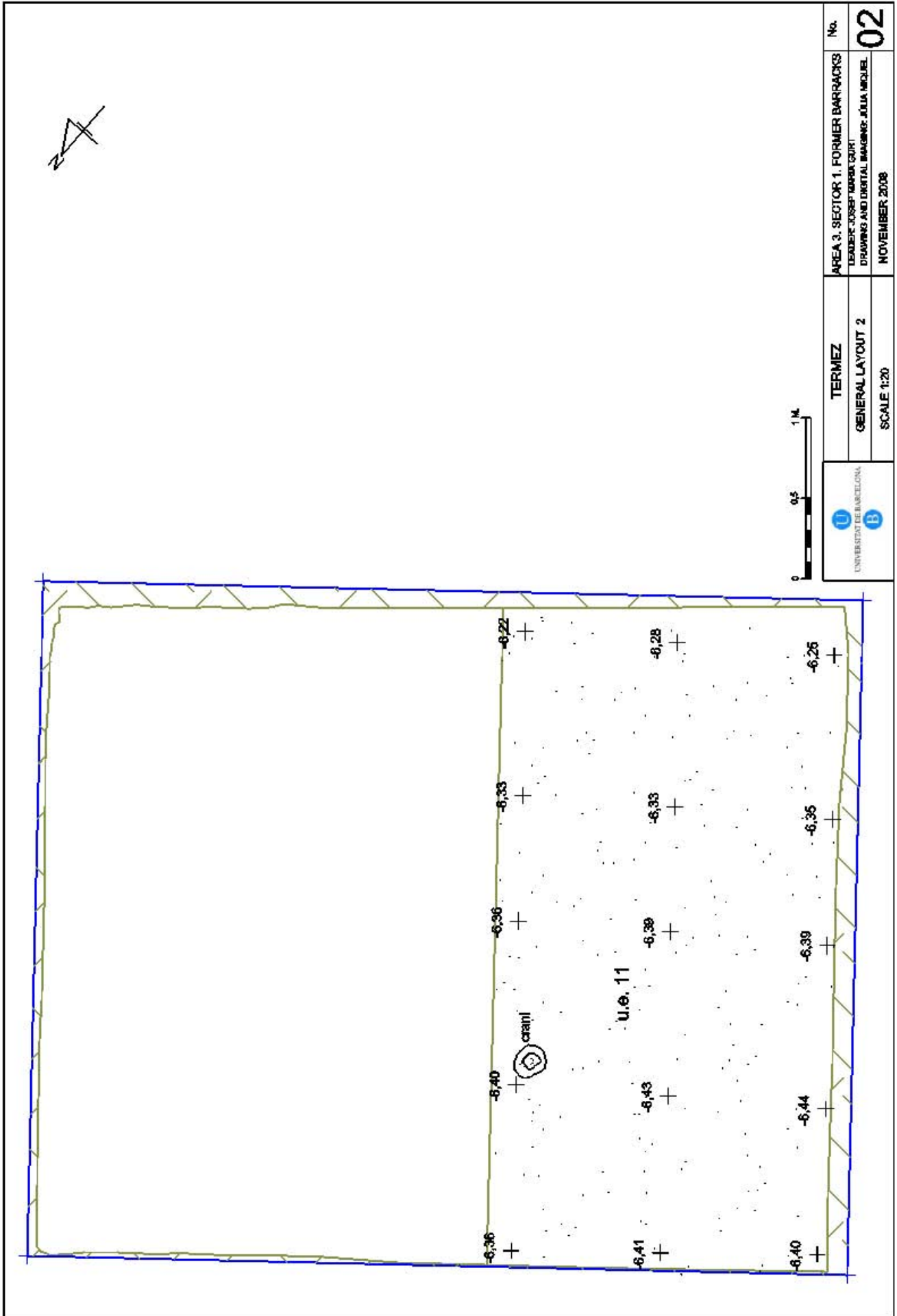


General Topographical Layout of the Ancient Termez Site

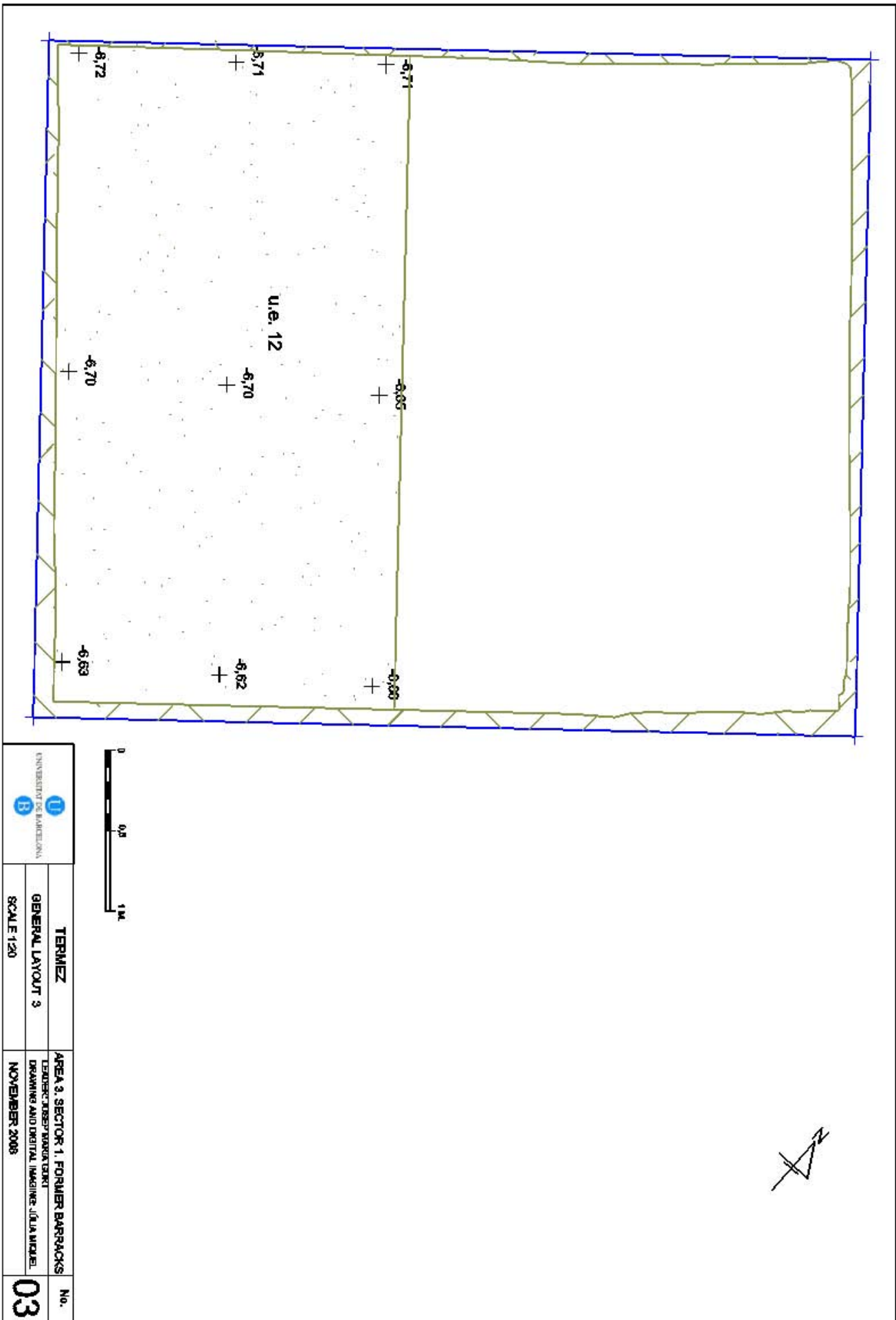


| | | |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----|
| | | No. |
| TERMIEZ GENERAL LAYOUT 1 SCALE 1:20 | AREA 3, SECTOR 1, FORMER BARRACKS LEADERS: JOSEP MARTEL SQUIT DRAWING AND DIGITAL DRAWING: JOLIA MOLLET NOVEMBER 2008 | 01 |

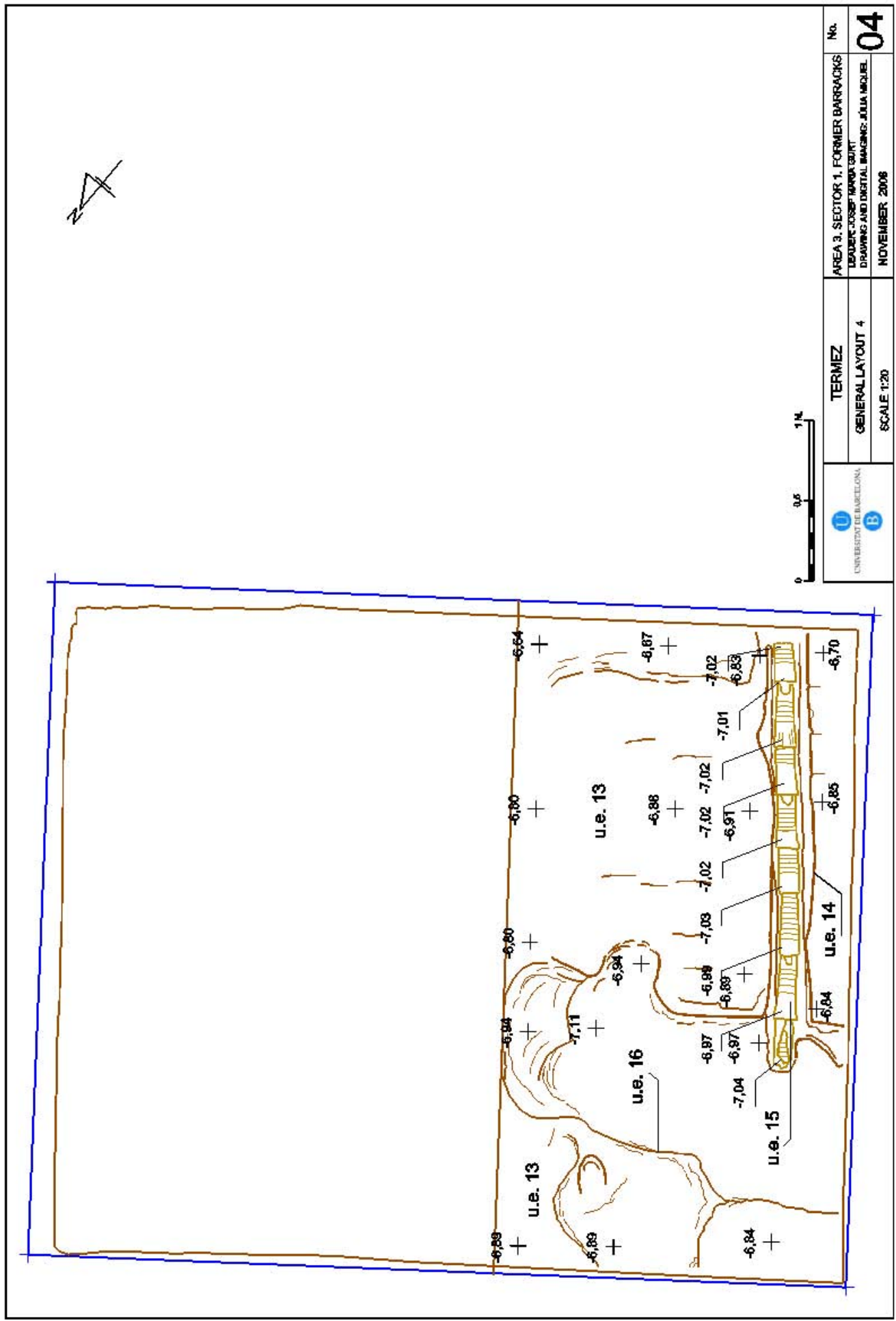
Sample Trench Barracks 1 A3-H



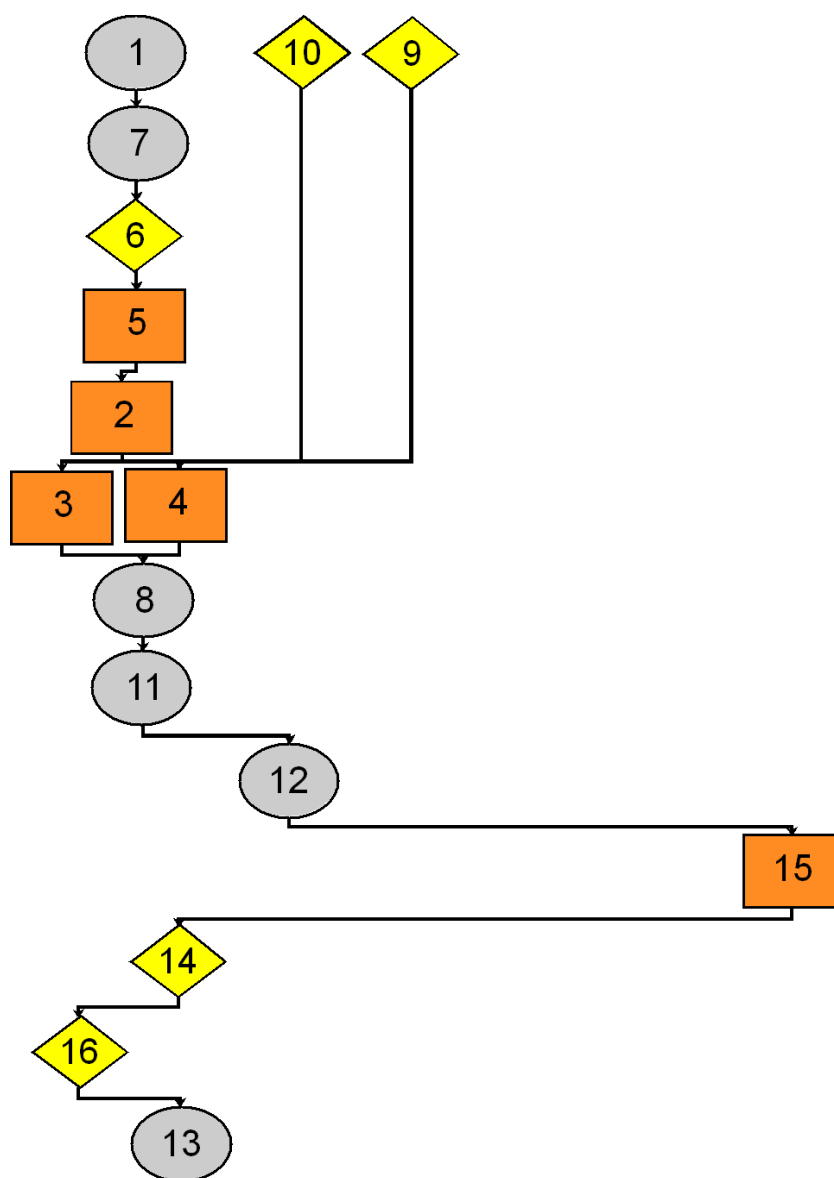
Sample Trench Barracks 2 A3-H



Sample Trench Barracks 3 A3-H



Sample Trench Barracks 4 A3-H



AC - SU 1

Definition: Level of abandonment above pavement.

Interpretation:

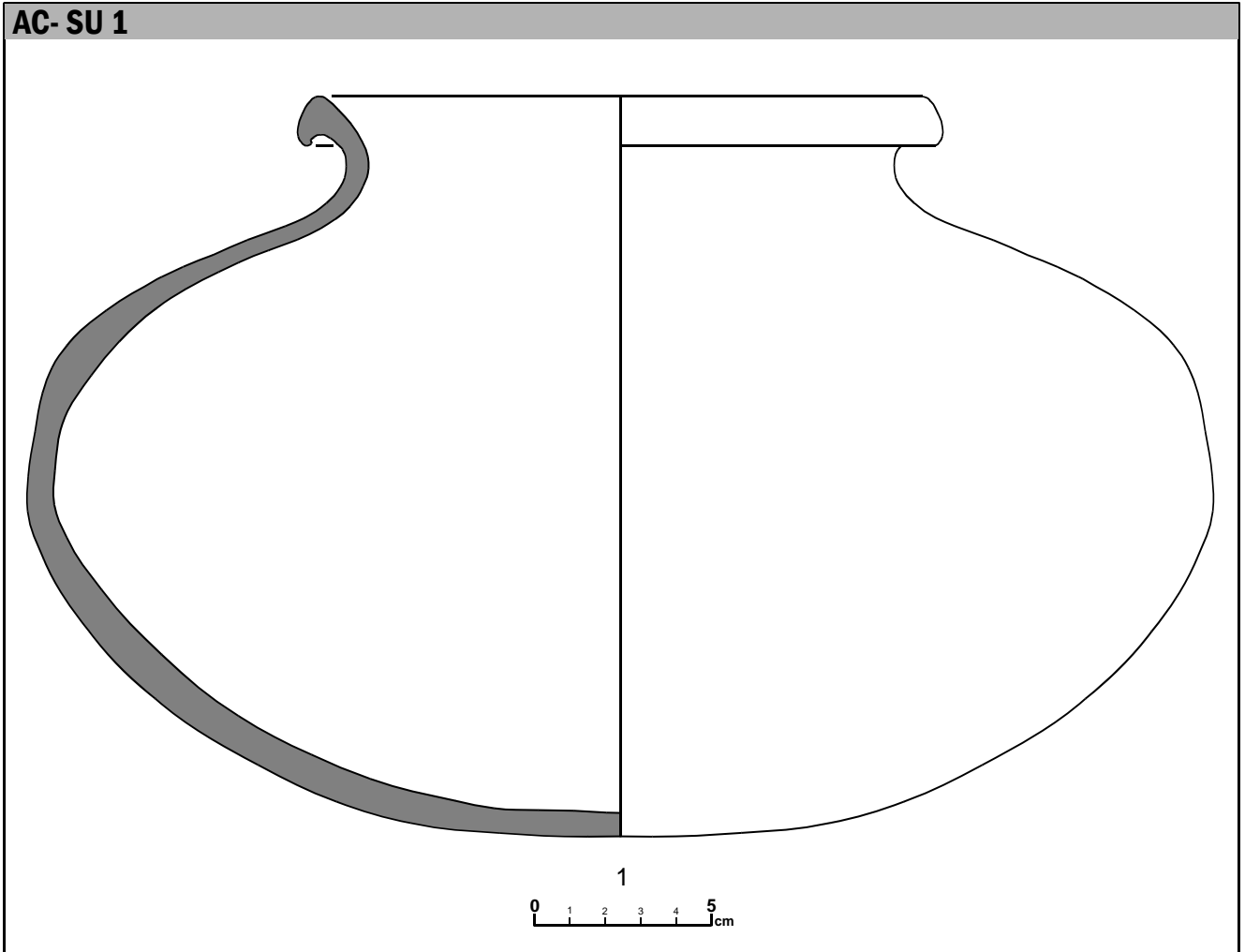
Observations: We began the excavation with this SU. The SUs above it are unknown. They were excavated prior to our intervention.

Material:

Archaeologist: J.M. Gurt

| | |
|----------------------|---|
| Covering (Stratum) | 7 |
| Covering (Structure) | 2 |
| | |

AC - SU 1



AC - SU 2

Definition: Trodden earth pavement

Interpretación:

Observations: The centre contains a depression in which is set and raised a rectangular frame of square bricks laid horizontally, or, possibly in some cases, vertically

Material:

Arqueólogo: J.M. Gurt

| | |
|-------------------------|-----|
| Covered by (Estratum) | 1 |
| Supporting (Estructure) | 5 |
| Joined to (Estructure) | 4-3 |
| Resting on (Estratum) | 8 |
| | |

AC - SU 3**Definition:** Wall of square bricks**Interpretation:****Observations:** Poorly preserved, only a compressed clay base remains. We do not know what would have covered it.**Material:****Archaeologist:** J.M. Gurt

| | |
|----------------------------------|---|
| <i>Intersected by (Negative)</i> | 9 |
| <i>Abutted by (Structure)</i> | 2 |
| | |
| <i>Resting on (Stratum)</i> | 8 |
| | |

AC - SU 4**Definition:** Wall of compressed clay**Interpretation:****Observations:** Poorly preserved, only a compressed clay base remains. We do not know what would have covered it.**Material:****Archaeologist:** J.M. Gurt

| | |
|----------------------------------|----|
| <i>Intersected by (Negative)</i> | 10 |
| <i>Abutted by (Structure)</i> | 2 |
| | |
| <i>Resting on (Stratum)</i> | 8 |
| | |

AC - SU 5

Definition: Brick pavement

Interpretation:

Observations: Rectangular frame of square bricks laid horizontally and, possibly in some cases, vertically, forming a pavement. An oval cutting appears in its centre.

Material:

Archaeologist: J.M. Gurt

| | |
|----------------------------------|---|
| <i>Intersected by (Negative)</i> | 6 |
| _____ | |
| <i>Resting on (Structure)</i> | 2 |
| _____ | |

AC - SU 6

Definition: Small oval pit.

Interpretation:

Observations: The pit is dug in the brick pavement.

Material:

Archaeologist: J.M. Gurt

| | |
|---------------------------------|---|
| <i>Filling (Stratum)</i> | 7 |
| _____ | |
| <i>Intersecting (Structure)</i> | 5 |
| _____ | |

AC - SU 7

Definition: Infill of small pit

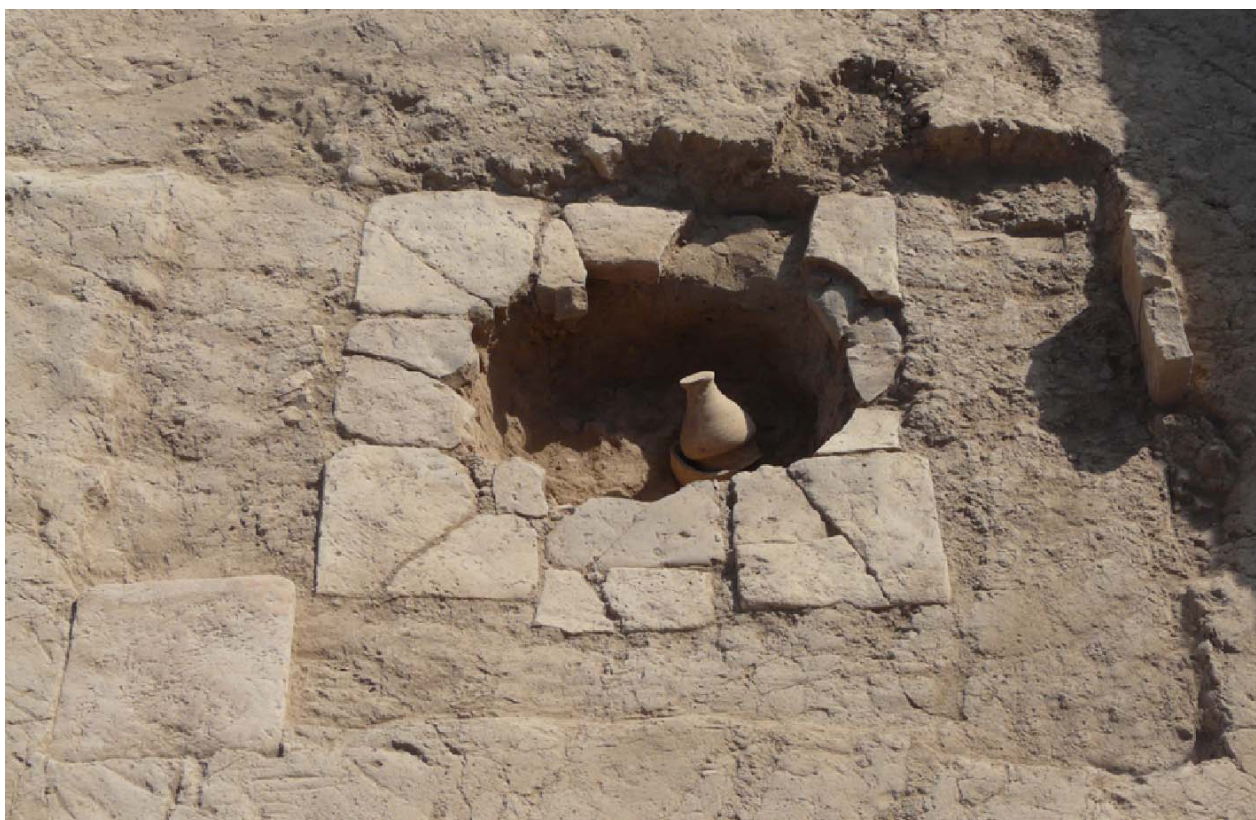
Interpretation: Premeditated action to deposit pottery artifacts.

Observations: Infill in an oval pit excavated in the centre of a brick pavement. Containing several individual superimposed pieces of pottery. One of the pieces is a cup tipped upside down in the remains of a pottery bowl.

Material:

Archaeologist: J.M. Gurt

| | |
|-----------------------------------|---|
| <i>Covered by (Stratum)</i> | 1 |
| <i>It is refilling (Negative)</i> | 6 |

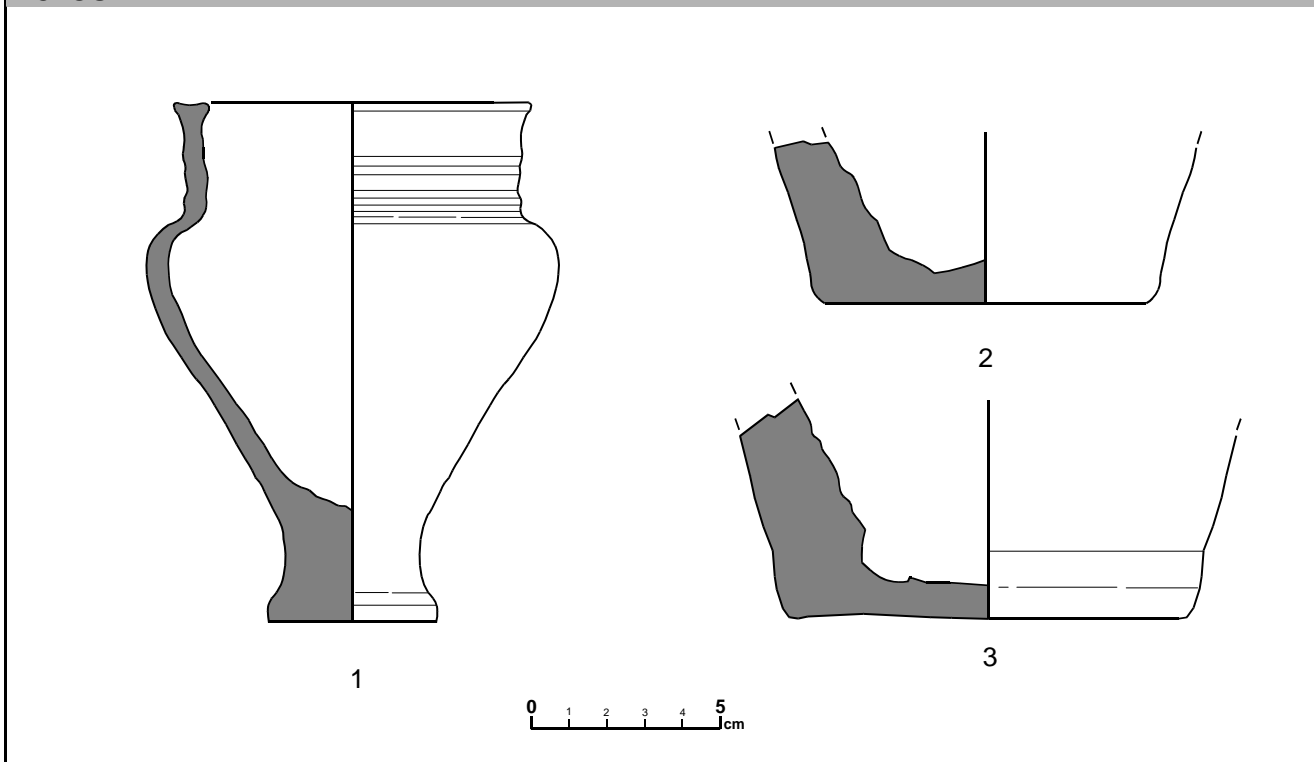


UEs 2, 5, 6, 7

AC - SU 7



AC- SU 7



AC - SU 8

Definition: Accumulation of shapeless adobe

Interpretation: From the positive of the human skull, we believe that the stratum is of intentional human formation.

Observations: Level of brown, highly compact sand. At the outset of the excavation, it had already been partially excavated. As a result, the layer above is not known. Containing pottery. A human skull was also found.

Material:

Archaeologist: J.M. Gurt

| | |
|------------------------|-------|
| Supporting (Structure) | 2-4-3 |
| Covering (Stratum) | 11 |