

**IMTO – Italian Mission to Oman**

**University of Pisa**

**SUMHURAM**

**Preliminary Report**

**October – December 2010 (SUM10C)**



## **PRELIMINARY REPORT (SUM10C)**

### **October-December 2010**

The third IMTO's campaign of 2010 (SUM10C), under the direction of prof. A. Avanzini, started on 30<sup>th</sup> October 2010 and finished on 9<sup>th</sup> December 2010.

The campaign will have a continuation of one month (till the 8<sup>th</sup> of January 2011) thanks to the active collaboration of Said al Mashani.

The main goals of excavations were focused in area A (BA6 and the street A156), at the junction between area F and area A (street A80), and in area F (A69 and A68).

The western curtain of the city wall has been excavated and cleaned from the dumps accumulated on the exterior.

The restoration activities have been carried on along the northern side of the city wall (wall M223) and in the southern side (walls M218 and M206). Moreover, walls M17 and M18 of the Monumental Building have been raised up.

The excavations were conducted on the field by dr. Vittoria Buffa, dr. Michele Degli Esposti and dott. Alexia Pavan, with the collaboration of Alessandro Fumagalli, Giulia Russo and Silvia Lischi. Arch. Alessandro Massa and Simona Rossi were responsible of the architectural survey, the AUTO-CAD digitalization and the updating of the plans.

The consolidation and restoration of ancient masonry structures have been done by arch. Sara Micali and arch. Sergio Martelli.

The work of IMTO has been possible thanks to the collaboration of the Office of the Adviser of His Majesty the Sultan for Cultural Affairs in Salalah and in Muscat. In particular, we would like to thank Ghanem al Shanfari, Said al Mashani, Ali al Kathiri, Said al Salmi, Hassan al Jabri and all the Museum's team for their kind helpfulness.

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# Archaeological Report



## **Excavations in Area A (Trench supervisor: V. Buffa)**

During the SUM10C campaign work was concentrated in building BA6 and in the street A113.

### ***Building BA6***

The area occupied by building BA6 had been partially excavated by the AFSM expedition in 1952-1953 (Albright 1982: 35, fig. 5, V, B22, C22, D24, E24, F24).

The building had been excavated by IMTO during the SUM04A, SUM04B, SUM05A and SUM06A campaigns. It occupies an area to the left, coming from the main gate, opposite buildings BA3 and BA4. It stands isolated, surrounded by streets A75, A45, A57 and A113. It consists of an external porch (A51) to the left of the entrance and an open area delimited by walls to its right, of a central corridor (A60) giving access to two rooms (A59 and A63) to the left and to one room to the right (A56). As already mentioned in the previous preliminary reports, the south-eastern corner of the building was occupied by a "late complex" built over the more ancient premises. During the SUM06A campaign the walls related to this complex were removed (see Preliminary Report SUM06A). During the summer of 2007 torrential rains caused great damages to the walls of this part of the building, already previously in a bad state of preservation. During the fall of 2007 restoration of the damaged walls was carried out (see Preliminary Report SUM07B). The operation has allowed us to carry on the continuation of excavation during this season.

*Room A63.* The room had been completely excavated during the SUM05B campaign. During the current campaign a deep sounding was carried out in the NW part of the room for a width of 1.70 m from wall M137, on the opposite side of the deep sounding dug in SUM05B along wall M57. From floor US169, set at the elevation of 29.94 m, the deep sounding reached down to the elevation of 28.39 m. Floor US169 showed the hard packed reddish brown loam, previously detected and underneath a preparation of a perfectly horizontal layer of mud bricks. From this preparation (US449) iron slags, some shells and animal bones, stone tools and few pottery sherds were recovered. The deposit underneath was named US452. It consisted of loose light reddish brown loam of fine texture; it yielded in the upper part few animal bones. At the elevation of 28.93 a charcoal sample has been taken.

The sounding stopped at the layer of limestone chips at the altitude of 28.39 m. This filling of lime chips covers everywhere in the town the bed rock.

The walls delimiting the room were set at different levels. In the deep sounding carried out in SUM05B in street A45 it was found out that the external face of wall M57 was set at the elevation of 28.44 m. In the short stretch of wall unearthed in the sounding the internal face of the wall showed to be set at the elevation of 29.07 m.

Wall M137 dividing room A63 and room A59 was set at the elevation of 29.24 m, and wall M102 at 29.49 m. The sounding seems to show that building BA6 was built in the first constructional phase, as already known, filling the space delimiting the outer perimeter of the building with loam so to reach an altitude that would have given the building a higher, prominent position in the area, in respect to the other houses of the area.

### ***South-East corner of the building***

Unfortunately in particular this part of the building has been badly disturbed by undocumented AFSM excavations.

1. *Room A65a. (D24 of AFSM)* The room was cleared of the debris accumulated during the previous years and the US186 floor was again exposed. The accumulation removed during this campaign has been denoted US461. The floor US186 was reached at the elevation of 29.80-29.89 m. The room is separated from the central corridor A60 by wall M144. A door,

opposite the door to room A63, connected the room with the corridor. Inside the room the first step is made of two blocks of limestone; the second step goes over the wall and is made of a sandstone slab. This entrance was later blocked, possibly when on the area the “late premises” were built. The other walls delimiting the room are M101, M147 and M128.

## 2. *Area South of room A65a.*

South of room A65a, separated from it by wall M147, an almost square space is delimited by other walls M230, M101, M148. As mentioned above the area has been particularly disturbed by collapses of walls during the life of Sumhuram, excavations by AFSM and modern wall collapses during year 2007.

During the SUM06A campaign the walls belonging to the “late premises” were removed and some test excavation has been carried out in front of the large limestone slab found in the North of the space.

During this campaign different features have been unearthed.

a. *Room A79a.* South of wall M183 the continuation of walls M101 and M230 was unearthed. *Room A79a* occupied the corner formed by M101 and M230, with M172 to the West and M183 to the North as other surrounding walls. The filling inside the room, US453, was brownish grey loam, crumbled, rather fine, mixed with some small stones, some animal bones, few shells and few pottery sherds. The floor US453 was marked by a sandstone slab and was reached at the elevation of 29.75 m. All the walls were reaching below the floor.

b. *Room 64a.* The rest of the square space, excluding room A79a, is denoted as room A64a. It is defined by walls M230, M231, M148, M147 and M183. In the room no uniform stratigraphy was present.

Two limestone slabs (denoted slab 1 and slab 2) stand in the central part of the room. Slab 1 measures 1.30 X 1.20 m, thickness 0.22 m; slab 2 measures 0.72 X 0.68 m, thickness 0.08 m. The northern side of the slab 1 rests on wall M147 at the elevation of 30.73 m; the southern corner on the end of wall M183 at the elevation of 30.79 m. Apparently the western corners of slab 1 did not have a structured support, but rested on the collapse of blocks of wall M148/M476 (see below) with an inclination of about 0.15 m from E to W. The smaller and thinner limestone slab 2 stands south of slab 1, at the same elevation and with the same inclination, leaning on short wall M472. Wall M472 is superficial and was probably built to sustain it.

(Wall M183 is 2.30 m long and ends just below slab 1). The slab, called a “stone floor”, was mentioned by Albright who wrote that fragments of more than twelve amphorae and other storage vessels were recovered on the deposit above the slab (Albright 1982, p. 35). A floor (US454floor) was traced above walls M172 and M472 (under slab 2) and in the area delimited by these two walls and walls M230, M231 and partially M148. US454floor was traced also to the North under a small part of the slab 1. The floor, tramped sometimes with stones, was hard packed grey loam with lime mortar. It was up to 10 cm thick. It stood at the elevation of 30.10 to 30.30 m, sloping down from East to West, as the slabs. Along M230 the floor was not present, probably because of the restoration work on this wall. Wall M148 and M230 were well plastered and the connection between floor and the plaster is well visible under door M231. The N-S wall M148 was set at the height of floor US454. At this time the wall did not reach wall M230 to the S, but here an opening 0.80 m wide existed. In this opening, at the height of floor US454 two flat limestone slabs can be observed. Over the slabs a very fine, silt like deposit of brown loam has a thickness of about 0.15 m. The opening was closed with undressed stones over the deposit. The same slabs and deposit can be observed at the same elevation on wall M230. No trace of US454floor was instead detected in the area in front of slab 1.

US454 above the floor consisted of grayish brown loose loam with some ashes. US454 included very few fragments of storage vessels and few animal bones.

Under US454 floor the deposit (US455) consisted of reddish brown, fine very loose loam. US455 was present also under all of slab 1, but not in the area West of slab 1. US455 yielded few fragments of storage vessels, a fragment of a crucible (G153), two strainer (S1598, 1599), a grinding stone (S1608), some animal bones.

West of slab 1 up to wall M148 the deposit (US459) consisted of grayish brown loam incorporating a massive collapse of limestone blocks fallen from M148. US459 has been excavated down to the elevation of 29.43 m. Some blocks were still present. with animal bones and pottery fragments. Finds from US459 included only few fragments of pottery, the majority storage jars, two oil lamps (Sh389) and some animal bones. Excavating US459 it became clear that wall M148 was set at the height of US454 floor on top of another, earlier wall (M476) running from wall M230 to wall M147.

In the area between M230, M476 and up to below M472, US455 had a thickness of about 15 cm. The deposit below (US470) has been excavated only in the corner formed by M230 and M472 and in front of M472. In US470 stone blocks fallen from wall M148 were not present. The deposit consisted of very loose grayish loam incorporating a thin layer of ashes and small limestone stone whitened (by fire??). It yielded a great quantity of animal bones, fish vertebrae, a quantity of pottery in large fragments (90% storage vessels), stone lids, one with plaster to close a vessel (S1605), six oil lamps (Sh386, 388), fragments of soft stone vessels (S1609, 1611, 1612, 1613, 161), one mortar (S1610), four complete *strombus* shells (Sh387, 390), two whetstone (S1615, 1618), three grinding stones (S1616, 1617, 1625), a perforated stone (S1630). Two charcoal samples was taken from US470 (n. 48 and n. 50). Excavation stopped at the elevation of 29.18 m. Some stones, bones and shards were still present.

In the area between walls M147, M101, M183 and slab 1 excavation unearthed a different deposit. The filling removed, US451, was hard packed brown loam on the surface and turned very loose, dark grey with white lime specks and charcoal. It incorporated broken mud bricks, fragments of burned wall plaster, white (burned) limestone pebbles. Finds included a shell bead (Sh370), two oil lamps made with *clamys twonsendi* (Sh377, 378), soft stone vessels (S1582, 1591, 1592), a bronze coin (Co680), clay polishers (Cl27, 28), a quantity of pottery fragments of storage vessels, many animal bones.

Excavation stopped on a level of medium-small pebbles, some white limestone pebbles, charcoal specks, some bones and shells, at the elevation of 29.89 m. US451 was not present below the slab, where the filling (US455) was a fine, uniform reddish loose loam. Excavation showed that all the walls were reaching down below the surface unearthed. Wall M183 stopped just below the slab. In wall M101 from the elevation of 30.67 m down to the surface excavated the wall is interrupted and the opening filled with the same US451. The same interruption is present on the eastern face of wall M101 on street A113 (see below).

### ***Street A113***

A trench 2.00 X 4.00 m in size has been opened in street A113, to the East of wall M101. Here the surface was at the elevation of 31.47 m. The street had been, probably only in the northern part, partially excavated by AFMS (Albright 1982, p. 35, fig. 5, V, VI). The deposit (US458) consisted of hard packed reddish brown on the surface, becoming crumbled, light grey incorporating fragments of mud bricks and fragments of plaster underneath. It yielded several pottery fragments, one iron awl (MI176) and the fragment of a soft stone vessel (S1597), some iron slags. A wall,

M473, was leaning on wall M101 going in an eastern direction. Its upper surface was found at the elevation of 31.10 m. The deposit under US458 (US465) consisted of loose, dark grey, crumbled loam, incorporating whitish stones (burned?). Its upper surface was found at the elevation of 30.87 m. A structured fireplace made of sandstone blocks (M474) was leaning on wall M101. The stone blocks of M101 surrounding the fireplace are whitened by heavy fire. Inside the fireplace the deposit (US464) includes a quantity of burned animal bones, fish vertebrae, few charcoal specks and a grinding stone (S1624), one iron slag (n. 62). A charcoal sample (n. 42) was taken from US464. US465, to the East and North of M474, can be interpreted as the dumping of the fireplace. It incorporated a quantity of burned animal bones and small limestone pebbles whitened by fire. It yielded iron slags (n. 53, 65), reddened "rusty?" fragments of pottery, a *strombus* (Sh385) and a coin (Co701).

On the bottom of the structure a sandstone table with a gutter (S1600) was lying in US469 close to wall M101. The elevation of its upper surface was 30.67 m. It measures m 0.57 X 0.42, height of the wall 0.16 m. The table is broken in two parts; the rear part remained *in situ*, almost inserted in wall M101 where the wall is interrupted in correspondence with the interruption seen in room A64a (see above). At the same elevation in room A64a a flat limestone slab is inserted in the opening. US469 has been denoted the filling of the opening in wall M101, corresponding with US451 in room A64a. It consists of light grey hard packed loam.

US469 has been removed down to the level left by the AFSM excavation, at the elevation of 30.08 m. US469 yielded several fragments of storage vessels, two pestles (S1619, 1621), a steatite object (S1620), a whetstone (S1622) and iron slags (n. 54). A fragment of a flat limestone slab (0.79 X 0.46 m, thickness 0.08 m) was incorporated in the layer (S1635).

Comparing the stratigraphy of street A113 with the stratigraphy in street A45, excavated by IMTO in previous years, the elevation of 30.08 m reached in street A113 is 0.20 m lower than the elevation of US21 floor in street A45.

## **Area A and area F: (Trench supervisor: Alexia Pavan)**

The focus of the excavations carried on during this campaign aimed to clarify the connection between street A80 in area F, running north-east and street A156 in area A, perpendicular to it and running south-east

Crucial is the importance of the two streets because two of the main areas of the city.

New elements brought to light thanks to the enlargement of the trench westward and southward, allowed to revise the previous sequence of layers and to define a more complete stratigraphy.

Moreover new data about building BF7 have been acquired as well as about the lay-out of the spaces southern from building BA11.

### **Street A80 (fig. A)**

The works started in street A80, enlarging the excavated surface with a trench of almost 3 meters (l. max) westward, with the removal of the upper surface and of US302 already excavated in SUM09A and SUM10A (see reports). US302 is made of masonry blocks collapsed from the wall structures, mixed with medium and small stones, sandstone blocks, plaster and earth. One coin (Co646), a fragment of incense burner (S1579) and two fragments of soft-stone vessels (S1580 and S1590) have been discovered.

In A80 US302 floor has been reached at an elevation of 29.40 in the northernmost part of the street, at an elevation of 29.57 at the crossroad with street A156 and at an elevation of 29.55 in correspondence with the entrance to the shrine A110. US302 floor in street A80 was in relation with US393 in A110, corresponding to the last phase of the shrine occupation (period 3, phase X).

The removal of US302 allowed to expose a new wall M464, delimiting eastward room A162 (see below), probably belonging to building BF7.

Below US302, US80 has been individuated. The layer is made of stones, earth and broken mudbricks. A fragment of basin, placed in the *lapidarium* in the site, has been discovered.

US80 floor has been reached at an elevation of almost 29.00 in the northernmost part of the street, at an elevation of 28.91 in front of A110, while at the crossroad with A156 it was placed at 28.90.

Pottery shards, animal bones and shells have been discovered in the accumulation of US80 and above US80 floor; no small finds have been, however, registered.

A layer with the same characteristics of US80 (masonry blocks, stones, plaster) has been individuated inside room A162, but it has been called US436 since it was delimited by walls M468, M467 and M465 (see below).

The stratigraphical sequence in street A80 was characterized, below US80 floor, by the presence of US443 with its related floor, not noticed in the previous campaigns, but clearly visible thanks to the enlargement of the trench. US443, placed between US316 floor and US425 in street A156 and between US80 floor and US309 in street A80, seems to cover an ashy lens to be related to a big fire.

The same floor has been recognized in the eastern part of street A156 but it was difficult to follow along streets A156 and A80. The elevation in street A156 was at 28.76. The entrance to shrine A110 in phase with US80 floor was placed at an elevation of 28.82 (period 2, phase V).

US309 accumulation, with its related US309 floor, placed at an elevation of 28.40 in the northernmost part of the street and at 28.37 in front of the shrine A110 has been recognized at the same elevation of the one brought to light in SUM09A and followed in SUM10A.

Near the wall M464 some stones, placed roughly circularly, has been discovered in relation with US309 floor as well as a single masonry block in correspondence with wall M465 and some sandstone blocks in correspondence with wall M467.

However it was not possible to recognize any coherent structure.

US309 floor covered a step placed outside the entrance to the shrine A110.

The most ancient floor of street in street A80 was US313 which seems follow a natural slope of the city towards north; the elevations reached by the floor, after the removal of the trench left in



SUM10A, are the following: 27.84 in the northernmost part of the street, 27.95 in correspondence with the later room A161, 27.96 in front of the entrance and 28.00 at the crossroad with street A156. It's important to be noticed that the accumulation above US313floor was characterized by the presence of a series of floors made one above the other and indicating a continuous use of the street. Moreover the almost complete lack of objects, animal bones and pottery point out that the inhabitants of the city kept clean all the area.

During this campaign we removed also the accumulation closing the entrance to A110. The most ancient threshold has been discovered at the elevation of 27.95, in relation with US313floor reached at 27.94. A flat slab was placed on the right of the entrance.

In SUM10A US313floor was considered equal to US425 because of a supposed slope followed by the floor in A80. The enlargement of the trench cleared out that below US425 in A156 there was US440 with its related floor which is equal to US313floor in A80.

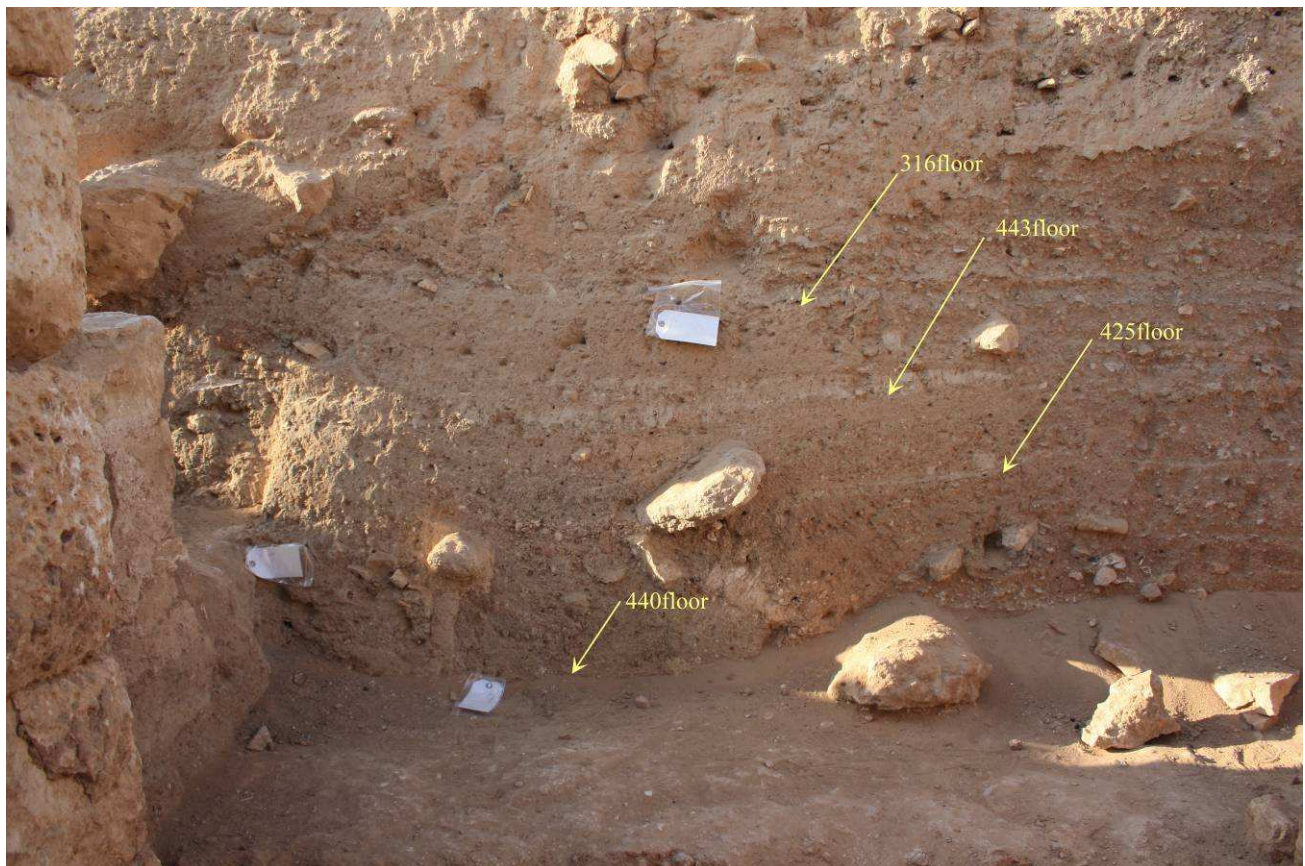
### **Street A156**

Also for street A156, as well as for street A80, the enlarging of the trench, made possible to achieve more information about the stratigraphy and the correspondence with the layers brought to light in street A80.

The following series of floors with related accumulation has been carried out: US203floor (elevation of 29.33); US316floor (elevation of 28.90), the new floor – with related accumulation- US443 (elevation 28.76), US425floor (elevation 28.37-28.40) and US440 floor (28.10). Below US440floor, in room A133, during SUM10A, 418 accumulation and related floor has been discovered. However it has to be considered more a foundation filling than an anthropic accumulation: for this reason we decided to stop at US440floor.

Almost all the floor quoted above were already identified in SUM10A; however during this campaign a new floor, placed between US316 and US425 has been discovered (see sketch below).

US440floor already reached in front of room A133, was previously thought a kind of step US425floor.



Very few pottery and a limited quantity of animal bones and sea-shells come from the street A156. The following small finds have been discovered: two fragments of stone vessels from US316 (S1578 and S1596); a slab used as architectural element (S1589), a fragment of stone vessel (S1594) and a shell pendant (Sh383) from US425; a coin (Co699) and a fragment of vessel – probably in alabaster- (S1606) from US440.

Thus is now possible to suppose the following relations among the layers in street A156 (area A), street A80 (area A/F) and street A129 (at least its easternmost part):

A156	A80	A129
203floor (29.33)	302floor (29.49-29.57)	302floor
316floor (29.10)	80floor (29.16 - 28.91)	306floor (28.70)
443floor (28.85)		
425floor (28.50)	309floor (28.65 - 28.37)	187floor (28.40)
440floor (28.14)	313floor (28.00-27.85)	196floor (27.90)

### **Productive (?) structures in street A156**

The removal of US425floor and of the accumulation US440 in street A156, allowed the discovery of three interesting structures to be linked with some kind of production activities. Since they have been discovered at the end of the campaign and it was not possible to excavate them accurately, they have been registered, described and drawn, but they have to be object of in-depth analysis during next campaign.

Two of the structures, namely US466 and US467, could be interpreted as ovens/furnaces.

The large quantity of ashes, charcoals and burnt animal bones discovered inside the structures and scattered around them, makes possible to link it with the food preparation. However a fragment of crucible (G154), a stone strainer (S1627) and a stone object (S1628) have been found in US467 and four coins have to be related to US466 (Co697, Co698, Co703 and Co704).

US466 is roughly circular in structure, with a noticeable quantity of plaster and chalk and quite large amount of stones whitened by high fire. These materials are visible also in section.

Moreover a kind of channel, dug in US440floor, has been brought to light. The length is actually 4,26 m. but it may will be possible to follow also westward in street A156.

US467, interpreted as a furnace too, is more or less oval in shape with an irregular surface sloping down from NE to SW. The limits are not always well defined. The external edges are made of medium compact grey earth with crumbled plaster and burnt stones (limestone, sandstone). A thin black line runs along its external side. The structure contains a loose filling, brown/dark brown in colour, with ashes and charcoals.

### **A possible extension of BF7: rooms A161 and A162**

The removal of the accumulation on street A80 allowed to expose a series of walls delimiting two rooms: A161 and A162.

In A162, below US302floor, US434 has been discovered. The layer has been dug just for a narrow “corridor” because it has not been possible to extend the excavation westward. The excavated accumulation seems very similar to US302, with a large amount of masonry blocks and stones of small/medium size. A bronze nail (MB637) has been found in the layer.

Room A162 is actually delimited by walls: M465, M464, M466. Because the upper part of M464 (ext. length 5.60) was very bad preserved and completely moved towards street A80, we decided to remove partially the upper three rows of stones.

Inside the room we stopped at an elevation of 28.47 which does not correspond to any floor. However it was not possible to go more down before the enlargement of the excavated area westward.

The internal face of wall M464 is covered by a thick layer of plaster.

Quite surprising has been the excavation of room A161. The small premise (overall dimensions: 2.20x1.50 circa) is, in fact, closed by walls (M468 and M467) well done in the interior, but very bad built on the exterior. During the excavations, a series of steps have been found. They could be interpreted as the steps going down, from street A80, to building BF7; the elevation of the lowest step was placed at 27.57. The elevation of the step varies from 25.57 till 28.41 with two intermediate steps at 27.85 and 28.14. Meanwhile the level of the street was going up, the entrance to the building has been closed, we guess contemporary with US309floor, walling up the space occupied by the staircase. Wall M467 is founded, in fact, at 28.41 which is roughly the elevation of US309floor. The accumulation discovered in the room, namely US436, was made of un-shaped sandstone blocks, animal bones and crushed mud-bricks.

### **Eastern part of street A156: rooms A163, A159 and A160**

Contemporary with the excavation of the two streets A80 and A156, we carried out some works also in the eastern part of street A156 where three rooms have been individuated and dug: room A163, A159 and A160.

A159 and A160 in their latest phase of occupation were just one bigger room, namely room A164, delimited by walls M432, M431, M461 and M471 with a floor placed at an elevation of 29.62 (US22floor). Wall M471 was made just from a row of irregular stones and it has been dismantled with the aim of going on with excavations.

Below US22floor we recovered US442, an accumulation layer covered by US22floor (elevation of 29.62) and related to US442floor, reached at an elevation of 29.22. Considering the difficulty to go on with the excavations in the narrow space between M458-M462-M468 and the trench, we stopped at this floor.

The late room A164 covered two small premises: A160 and A159.

Room A160 is rectangular in shape and it's delimited by walls M462, M463, M461 and M468. The overall internal dimensions are: 0.9x2,10.

Below US22floor the first layer discovered was US432, made of a large amount of sea-shells, loose earth, metal slag. No pottery has been discovered. A button shell bead (Sh363) and a glass bead (G143) have been discovered as well. The floor was placed at the same elevation of US433floor (28.97/29.00). Below US432floor a new layer, namely US457, have been discovered. A fragment of small fine-toothed bone comb (B72), two beads (S1585 and Sh380), a spindle whorl (Sh379), a stone tool (S1586) and an iron nail (MI175) have been found. Very scanty remains of pottery and bones have been found together with some iron slags.

The accumulation was related with a very carefully plastered floor (sample n. 40) still visible in the opening in M468. Below, a series of floor preparations has been brought to light, proof that the pavement has been done and fixed different times.

US437floor sealed the layer below, namely US460, where some seeds (see below) have been found (sample n. 36; earth sampled n. 35) together with some pottery shards. The pavement has been reached at 28.70.

Room A159 is rectangular in shape and it's delimited by walls M432, M431, M462 and M458. The overall dimensions are: 2,75x 2,37.

Below US22floor, the first layer discovered was US433, made of loose earth, charcoals and animal bones. Differently from US432, placed at the same elevation, it was lacking of sea-shells.

US433 was reached at an elevation of 29.00. Very few pottery shards, animal bones and sea-shells have been found together with an oil lamp (Sh368).

Floor US433 was cut by pit US438 (fig. ), containing stones of medium/small size, animal bones, sea-shells, charcoals, together with the following small finds: nails in bronze and iron (MB657, MI167), two shell beads (Sh367), two glass beads (G149), three whetstones (S1550, S1554, S1555) and three handstones (S1551, S1552, S1553). The pit had very clear margins and occupied almost

all the room with the exception of the north-western and the south-western corners where US439 has been discovered. US439, cut by pit US438 too, was made by earth, stones, animal bones, seashells. The following objects have been found: two handstones (S1559, S1564), the stone tool S1561, two fragments of rotatory mills (S1562, S1563) as well as two bronze clamps (MB660, MB661). An accumulation of ashes and charcoals, namely US441, has been found below the pit US438 and the accumulation US439. On the related floor – US441floor – made of compact earth, two complete lower parts of mills or rotary querns (S1569 and S1570) have been found together with two shell inlays (Sh371). The two mills were placed along wall M432.

The most important discovery from US441, has been, however, a quite large amount of seeds, found here, for the first time, in Sumhuram. The seeds, sampled as well as the earth containing them and the earth collected around the querns and in the internal cavity, will be analyzed in Italy by M. Mariotti. According to G. al Shanfari, they could be identified as belonging to the plant of *sharkamut*.

Below US441floor, US444 have been found. The layer is made from a compact layer of brown/graysh earth mixed with stones, seashells, bones and some pottery. No small finds have been discovered inside.

US445, brought to light below US444, is rather compact, with pottery shards, bones and stones of medium size. Scanty amount of charcoals.

We stopped with excavations in room A159 at US447floor, reached at an elevation of 28.05, where we found other seeds identical to those of US441 and three coins (Co695, Co700, Co702).

## **Excavations in Area A (Trench supervisor: V. Buffa)**

During the SUM10C campaign work was concentrated in building BA6 and in the street A113.

### ***Building BA6***

The area occupied by building BA6 had been partially excavated by the AFSM expedition in 1952-1953 (Albright 1982: 35, fig. 5, V, B22, C22, D24, E24, F24).

The building had been excavated by IMTO during the SUM04A, SUM04B, SUM05A and SUM06A campaigns. It occupies an area to the left, coming from the main gate, opposite buildings BA3 and BA4. It stands isolated, surrounded by streets A75, A45, A57 and A113. It consists of an external porch (A51) to the left of the entrance and an open area delimited by walls to its right, of a central corridor (A60) giving access to two rooms (A59 and A63) to the left and to one room to the right (A56). As already mentioned in the previous preliminary reports, the south-eastern corner of the building was occupied by a "late complex" built over the more ancient premises. During the SUM06A campaign the walls related to this complex were removed (see Preliminary Report SUM06A). During the summer of 2007 torrential rains caused great damages to the walls of this part of the building, already previously in a bad state of preservation. During the fall of 2007 restoration of the damaged walls was carried out (see Preliminary Report SUM07B). The operation has allowed us to carry on the continuation of excavation during this season.

*Room A63.* The room had been completely excavated during the SUM05B campaign. During the current campaign a deep sounding (fig. 1) was carried out in the NW part of the room for a width of 1.70 m from wall M137, on the opposite side of the deep sounding dug in SUM05B along wall M57. From floor US169, set at the elevation of 29.94 m, the deep sounding reached down to the elevation of 28.39 m. Floor US169 showed the hard packed reddish brown loam, previously detected and underneath a preparation of a perfectly horizontal layer of mud bricks. From this preparation (US449) iron slags, some shells and animal bones, stone tools and few pottery sherds were recovered. The deposit underneath was named US452. It consisted of loose light reddish brown loam of fine texture; it yielded in the upper part few animal bones. At the elevation of 28.93 a charcoal sample has been taken.

The sounding stopped at the layer of limestone chips at the altitude of 28.39 m. This filling of lime chips covers everywhere in the town the bed rock.

The walls delimiting the room were set at different levels. In the deep sounding carried out in SUM05B in street A45 it was found out that the external face of wall M57 was set at the elevation of 28.44 m. In the short stretch of wall unearthed in the sounding the internal face of the wall showed to be set at the elevation of 29.07 m.

Wall M137 dividing room A63 and room A59 was set at the elevation of 29.24 m, and wall M102 at 29.49 m. The sounding seems to show that building BA6 was built in the first constructional phase, as already known, filling the space delimiting the outer perimeter of the building with loam so to reach an altitude that would have given the building a higher, prominent position in the area, in respect to the other houses of the area.

### ***South-East corner of the building***

Unfortunately in particular this part of the building has been badly disturbed by undocumented AFSM excavations.

3. *Room A65a. (D24 of AFSM)* The room was cleared of the debris accumulated during the previous years and the US186 floor was again exposed. The accumulation removed during this campaign has been denoted US461. The floor US186 was reached at the elevation of 29.80-29.89 m. The room is separated from the central corridor A60 by wall M144. A door,



opposite the door to room A63, connected the room with the corridor. Inside the room the first step is made of two blocks of limestone; the second step goes over the wall and is made of a sandstone slab. This entrance was later blocked, possibly when on the area the “late premises” were built. The other walls delimiting the room are M101, M147 and M128.

4. *Area South of room A65a.*

South of room A65a, separated from it by wall M147, an almost square space is delimited by other walls M230, M101, M148. As mentioned above the area has been particularly disturbed by collapses of walls during the life of Sumhuram, excavations by AFSM and modern wall collapses during year 2007.

During the SUM06A campaign the walls belonging to the “late premises” were removed and some test excavation has been carried out in front of the large limestone slab found in the North of the space.

During this campaign different features have been unearthed.

c. *Room A79a.* South of wall M183 the continuation of walls M101 and M230 was unearthed. *Room A79a* occupied the corner formed by M101 and M230, with M172 to the West and M183 to the North as other surrounding walls. The filling inside the room, US453, was brownish grey loam, crumbled, rather fine, mixed with some small stones, some animal bones, few shells and few pottery sherds. The floor US453 was marked by a sandstone slab and was reached at the elevation of 29.75 m. All the walls were reaching below the floor (fig. 2).

d. *Room A64a.* The rest of the square space, excluding room A79a, is denoted as room A64a. It is defined by walls M230, M231, M148, M147 and M183. In the room no uniform stratigraphy was present (fig. 3).

Two limestone slabs (denoted slab 1 and slab 2) stand in the central part of the room. Slab 1 measures 1.30 X 1.20 m, thickness 0.22 m; slab 2 measures 0.72 X 0.68 m, thickness 0.08 m. The northern side of the slab 1 rests on wall M147 at the elevation of 30.73 m; the southern corner on the end of wall M183 at the elevation of 30.79 m. Apparently the western corners of slab 1 did not have a structured support, but rested on the collapse of blocks of wall M148/M476 (see below) with an inclination of about 0.15 m from E to W. The smaller and thinner limestone slab 2 stands south of slab 1, at the same elevation and with the same inclination, leaning on short wall M472. Wall M472 is superficial and was probably built to sustain it.

(Wall M183 is 2.30 m long and ends just below slab 1). The slab, called a “stone floor”, was mentioned by Albright who wrote that fragments of more than twelve amphorae and other storage vessels were recovered on the deposit above the slab (Albright 1982, p. 35). A floor (US454floor) was traced above walls M172 and M472 (under slab 2) and in the area delimited by these two walls and walls M230, M231 and partially M148. US454floor was traced also to the North under a small part of the slab 1. The floor, tramped sometimes with stones, was hard packed grey loam with lime mortar. It was up to 10 cm thick. It stood at the elevation of 30.10 to 30.30 m, sloping down from East to West, as the slabs. Along M230 the floor was not present, probably because of the restoration work on this wall. Wall M148 and M230 were well plastered and the connection between floor and the plaster is well visible under door M231. The N-S wall M148 was set at the height of floor US454. At this time the wall did not reach wall M230 to the S, but here an opening 0.80 m wide existed. In this opening, at the height of floor US454 two flat limestone slabs can be observed. Over the slabs a very fine, silt like deposit of brown loam has a thickness of about 0.15 m. The opening was closed with undressed stones over the deposit. The same slabs and deposit can be observed at the same elevation on wall M230. No trace of US454floor was instead detected in the area in front of slab 1.

US454 above the floor consisted of grayish brown loose loam with some ashes. US454 included very few fragments of storage vessels and few animal bones.

Under US454 floor the deposit (US455) consisted of reddish brown, fine very loose loam. US455 was present also under all of slab 1, but not in the area West of slab 1. US455 yielded few fragments of storage vessels, a fragment of a crucible (G153), two strainer (S1598, 1599), a grinding stone (S1608), some animal bones.

West of slab 1 up to wall M148 the deposit (US459) consisted of grayish brown loam incorporating a massive collapse of limestone blocks fallen from M148. US459 has been excavated down to the elevation of 29.43 m. Some blocks were still present. with animal bones and pottery fragments. Finds from US459 included only few fragments of pottery, the majority storage jars, two oil lamps (Sh389) and some animal bones. Excavating US459 it became clear that wall M148 was set at the height of US454 floor on top of another, earlier wall (M476) running from wall M230 to wall M147.

In the area between M230, M476 and up to below M472, US455 had a thickness of about 15 cm. The deposit below (US470) has been excavated only in the corner formed by M230 and M472 and in front of M472. In US470 stone blocks fallen from wall M148 were not present. The deposit consisted of very loose grayish loam incorporating a thin layer of ashes and small limestone stone whitened (by fire??). It yielded a great quantity of animal bones, fish vertebrae, a quantity of pottery in large fragments (90% storage vessels), stone lids, one with plaster to close a vessel (S1605), six oil lamps (Sh386, 388), fragments of soft stone vessels (S1609, 1611, 1612, 1613, 161), one mortar (S1610), four complete *strombus* shells (Sh387, 390), two whetstone (S1615, 1618), three grinding stones (S1616, 1617, 1625), a perforated stone (S1630). Two charcoal samples was taken from US470 (n. 48 and n. 50). Excavation stopped at the elevation of 29.18 m. Some stones, bones and shards were still present.

In the area between walls M147, M101, M183 and slab 1 excavation unearthed a different deposit. The filling removed, US451, was hard packed brown loam on the surface and turned very loose, dark grey with white lime specks and charcoal. It incorporated broken mud bricks, fragments of burned wall plaster, white (burned) limestone pebbles. Finds included a shell bead (Sh370), two oil lamps made with *clamys twonsendi* (Sh377, 378), soft stone vessels (S1582, 1591, 1592), a bronze coin (Co680), clay polishers (Cl27, 28), a quantity of pottery fragments of storage vessels, many animal bones.

Excavation stopped on a level of medium-small pebbles, some white limestone pebbles, charcoal specks, some bones and shells, at the elevation of 29.89 m. US451 was not present below the slab, where the filling (US455) was a fine, uniform reddish loose loam. Excavation showed that all the walls were reaching down below the surface unearthed. Wall M183 stopped just below the slab. In wall M101 from the elevation of 30.67 m down to the surface excavated the wall is interrupted and the opening filled with the same US451. The same interruption is present on the eastern face of wall M101 on street A113 (see below).

### ***Street A113***

A trench 2.00 X 4.00 m in size has been opened in street A113, to the East of wall M101 (fig. 4). Here the surface was at the elevation of 31.47 m. The street had been, probably only in the northern part, partially excavated by AFSM (Albright 1982, p. 35, fig. 5, V, VI). The deposit (US458) consisted of hard packed reddish brown on the surface, becoming crumbled, light grey incorporating fragments of mud bricks and fragments of plaster underneath. It yielded several pottery fragments, one iron awl (MI176) and the fragment of a soft stone vessel (S1597), some iron

slags. A wall, M473, was leaning on wall M101 going in an eastern direction. Its upper surface was found at the elevation of 31.10 m. The deposit under US458 (US465) consisted of loose, dark grey, crumbled loam, incorporating whitish stones (burned?). Its upper surface was found at the elevation of 30.87 m. A structured fireplace made of sandstone blocks (M474) was leaning on wall M101. The stone blocks of M101 surrounding the fireplace are whitened by heavy fire. Inside the fireplace the deposit (US464) includes a quantity of burned animal bones, fish vertebrae, few charcoal specks and a grinding stone (S1624), one iron slag (n. 62). A charcoal sample (n. 42) was taken from US464. US465, to the East and North of M474, can be interpreted as the dumping of the fireplace. It incorporated a quantity of burned animal bones and small limestone pebbles whitened by fire. It yielded iron slags (n. 53, 65), reddened "rusty?" fragments of pottery, a *strombus* (Sh385) and a coin (Co701).

On the bottom of the structure a sandstone table with a gutter (S1600) was lying in US469 close to wall M101. The elevation of its upper surface was 30.67 m. It measures m 0.57 X 0.42, height of the wall 0.16 m. The table is broken in two parts; the rear part remained *in situ*, almost inserted in wall M101 where the wall is interrupted in correspondence with the interruption seen in room A64a (see above). At the same elevation in room A64a a flat limestone slab is inserted in the opening. US469 has been denoted the filling of the opening in wall M101, corresponding with US451 in room A64a. It consists of light grey hard packed loam.

US469 has been removed down to the level left by the AFSM excavation, at the elevation of 30.08 m. US469 yielded several fragments of storage vessels, two pestles (S1619, 1621), a steatite object (S1620), a whetstone (S1622) and iron slags (n. 54). A fragment of a flat limestone slab (0.79 X 0.46 m, thickness 0.08 m) was incorporated in the layer (S1635).

Comparing the stratigraphy of street A113 with the stratigraphy in street A45, excavated by IMTO in previous years, the elevation of 30.08 m reached in street A113 is 0.20 m lower than the elevation of US21 floor in street A45.

## **Area A and area F: (Trench supervisor: Alexia Pavan)**

The focus of the excavations carried on during this campaign aimed to clarify the connection between street A80 in area F, running north-east and street A156 in area A, perpendicular to it and running south-east

Crucial is the importance of the two streets because two of the main areas of the city.

New elements brought to light thanks to the enlargement of the trench westward and southward, allowed to revise the previous sequence of layers and to define a more complete stratigraphy.

Moreover new data about building BF7 have been acquired as well as about the lay-out of the spaces southern from building BA11.

### **Street A80 (figs. 5a-b)**

The works started in street A80, enlarging the excavated surface with a trench of almost 3 meters (l. max) westward, with the removal of the upper surface and of US302 already excavated in SUM09A and SUM10A (see reports). US302 is made of masonry blocks collapsed from the wall structures, mixed with medium and small stones, sandstone blocks, plaster and earth. One coin (Co646), a fragment of incense burner (S1579) and two fragments of soft-stone vessels (S1580 and S1590) have been discovered.

In A80 US302 floor has been reached at an elevation of 29.40 in the northernmost part of the street, at an elevation of 29.57 at the crossroad with street A156 and at an elevation of 29.55 in correspondence with the entrance to the shrine A110. US302 floor in street A80 was in relation with US393 in A110, corresponding to the last phase of the shrine occupation (period 3, phase X).

The removal of US302 allowed to expose a new wall M464, delimiting eastward room A162 (see below), probably belonging to building BF7.

Below US302, US80 has been individuated. The layer is made of stones, earth and broken mudbricks. A fragment of basin, placed in the *lapidarium* in the site, has been discovered.

US80 floor has been reached at an elevation of almost 29.00 in the northernmost part of the street, at an elevation of 28.91 in front of A110, while at the crossroad with A156 it was placed at 28.90.

Pottery shards, animal bones and shells have been discovered in the accumulation of US80 and above US80 floor; no small finds have been, however, registered.

A layer with the same characteristics of US80 (masonry blocks, stones, plaster) has been individuated inside room A162, but it has been called US436 since it was delimited by walls M468, M467 and M465 (see below).

The stratigraphical sequence in street A80 was characterized, below US80 floor, by the presence of US443 with its related floor, not noticed in the previous campaigns, but clearly visible thanks to the enlargement of the trench. US443, placed between US316 floor and US425 in street A156 and between US80 floor and US309 in street A80, seems to cover an ashy lens to be related to a big fire.

The same floor has been recognized in the eastern part of street A156 but it was difficult to follow along streets A156 and A80. The elevation in street A156 was at 28.76. The entrance to shrine A110 in phase with US80 floor was placed at an elevation of 28.82 (period 2, phase V).

US309 accumulation, with its related US309 floor, placed at an elevation of 28.40 in the northernmost part of the street and at 28.37 in front of the shrine A110 has been recognized at the same elevation of the one brought to light in SUM09A and followed in SUM10A.

Near the wall M464 some stones, placed roughly circularly, has been discovered in relation with US309 floor as well as a single masonry block in correspondence with wall M465 and some sandstone blocks in correspondence with wall M467.

However it was not possible to recognize any coherent structure.

US309 floor covered a step placed outside the entrance to the shrine A110.

The most ancient floor of street in street A80 was US313 which seems follow a natural slope of the city towards north; the elevations reached by the floor, after the removal of the trench left in

SUM10A, are the following: 27.84 in the northernmost part of the street, 27.95 in correspondence with the later room A161, 27.96 in front of the entrance and 28.00 at the crossroad with street A156. It's important to be noticed that the accumulation above US313floor was characterized by the presence of a series of floors made one above the other and indicating a continuous use of the street. Moreover the almost complete lack of objects, animal bones and pottery point out that the inhabitants of the city kept clean all the area.

During this campaign we removed also the accumulation closing the entrance to A110. The most ancient threshold has been discovered at the elevation of 27.95, in relation with US313floor reached at 27.94.

In SUM10A US313floor was considered equal to US425 because of a supposed slope followed by the floor in A80. The enlargement of the trench cleared out that below US425 in A156 there was US440 with its related floor which is equal to US313floor in A80.

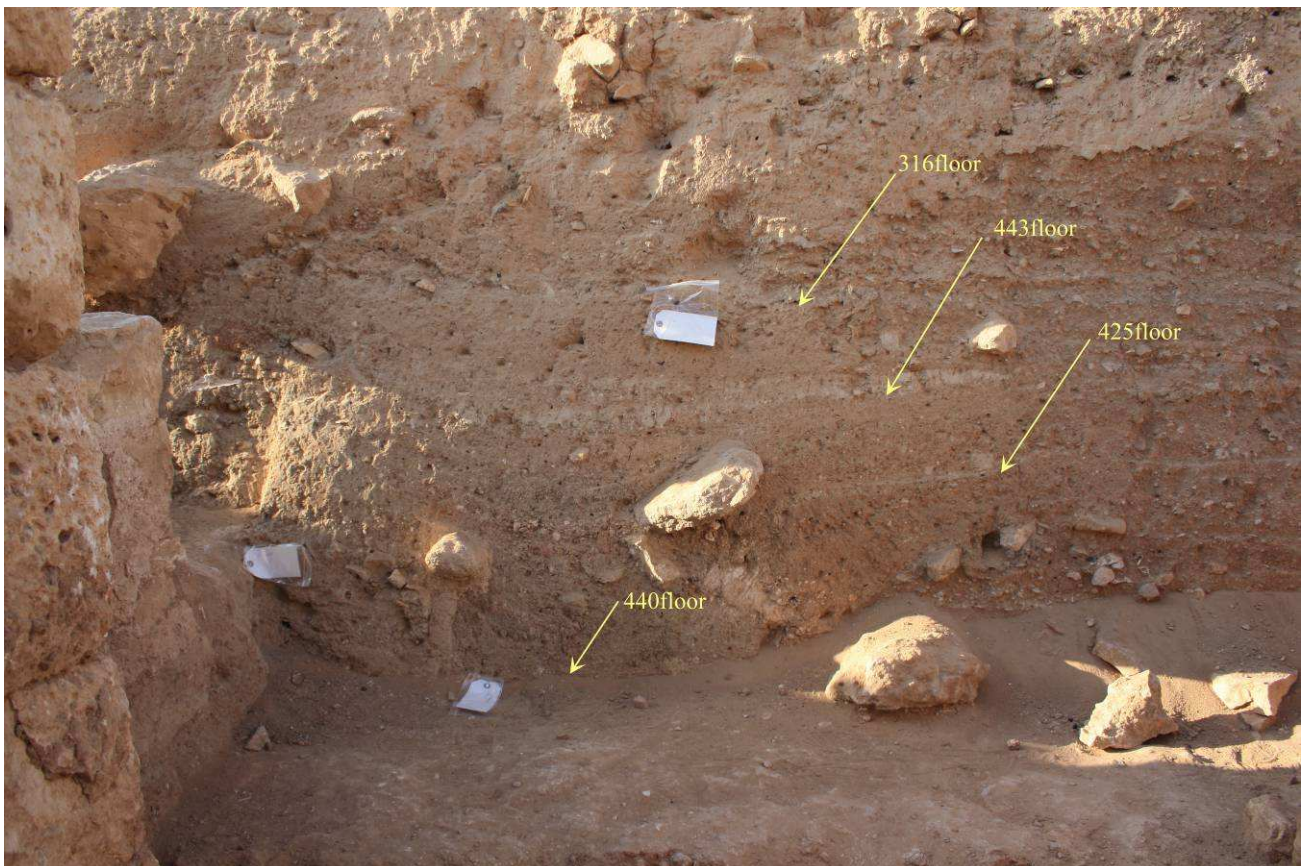
### **Street A156 (figs. 7-8)**

Also for street A156, as well as for street A80, the enlarging of the trench, made possible to achieve more information about the stratigraphy and the correspondence with the layers brought to light in street A80.

The following series of floors with related accumulation has been carried out: US203floor (elevation of 29.33); US316floor (elevation of 28.90), the new floor – with related accumulation- US443 (elevation 28.76), US425floor (elevation 28.37-28.40) and US440 floor (28.10). Below US440floor, in room A133, during SUM10A, 418 accumulation and related floor has been discovered. However it has to be considered more a foundation filling than an anthropic accumulation: for this reason we decided to stop at US440floor.

Almost all the floor quoted above were already identified in SUM10A; however during this campaign a new floor, placed between US316 and US425 has been discovered (see sketch below).

US440floor already reached in front of room A133, was previously thought a kind of step US425floor.





Very few pottery and a limited quantity of animal bones and sea-shells come from the street A156. The following small finds have been discovered: two fragments of stone vessels from US316 (S1578 and S1596); a slab used as architectural element (S1589), a fragment of stone vessel (S1594) and a shell pendant (Sh383) from US425; a coin (Co699) and a fragment of vessel – probably in alabaster- (S1606) from US440.

Thus is now possible to suppose the following relations among the layers in street A156 (area A), street A80 (area A/F) and street A129 (at least its easternmost part):

A156	A80	A129
203floor (29.33)	302floor (29.49-29.57)	302floor
316floor (29.10)	80floor (29.16 - 28.91)	306floor (28.70)
443floor (28.85)		
425floor (28.50)	309floor (28.65 - 28.37)	187floor (28.40)
440floor (28.14)	313floor (28.00-27.85)	196floor (27.90)

### **Productive (?) structures in street A156**

The removal of US425floor and of the accumulation US440 in street A156, allowed the discovery of three interesting structures to be linked with some kind of production activities. Since they have been discovered at the end of the campaign and it was not possible to excavate them accurately, they have been registered, described and drawn, but they have to be object of in-depth analysis during next campaign.

Two of the structures, namely US466 and US467, could be interpreted as ovens/furnaces.

The large quantity of ashes, charcoals and burnt animal bones discovered inside the structures and scattered around them, makes possible to link it with the food preparation. However a fragment of crucible (G154), a stone strainer (S1627) and a stone object (S1628) have been found in US467 and four coins have to be related to US466 (Co697, Co698, Co703 and Co704).

US466 is roughly circular in structure, with a noticeable quantity of plaster and chalk and quite large amount of stones whitened by high fire. These materials are visible also in section.

Moreover a kind of channel, dug in US440floor, has been brought to light. The length is actually 4,26 m. but it may will be possible to follow also westward in street A156.

US467, interpreted as a furnace too, is more or less oval in shape with an irregular surface sloping down from NE to SW. The limits are not always well defined. The external edges are made of medium compact grey earth with crumbled plaster and burnt stones (limestone, sandstone). A thin black line runs along its external side. The structure contains a loose filling, brown/dark brown in colour, with ashes and charcoals.

### **A possible extension of BF7: rooms A161 and A162 (fig. 6)**

The removal of the accumulation on street A80 allowed to expose a series of walls delimiting two rooms: A161 and A162.

In A162, below US302floor, US434 has been discovered. The layer has been dug just for a narrow “corridor” because it has not been possible to extend the excavation westward. The excavated accumulation seems very similar to US302, with a large amount of masonry blocks and stones of small/medium size. A bronze nail (MB637) has been found in the layer.

Room A162 is actually delimited by walls: M465, M464, M466. Because the upper part of M464 (ext. length 5.60) was very bad preserved and completely moved towards street A80, we decided to remove partially the upper three rows of stones.

Inside the room we stopped at an elevation of 28.47 which does not correspond to any floor. However it was not possible to go more down before the enlargement of the excavated area westward.

The internal face of wall M464 is covered by a thick layer of plaster.

Quite surprising has been the excavation of room A161. The small premise (overall dimensions: 2.20x1.50 circa) is, in fact, closed by walls (M468 and M467) well done in the interior, but very bad built on the exterior. During the excavations, a series of steps have been found. They could be interpreted as the steps going down, from street A80, to building BF7; the elevation of the lowest step was placed at 27.57. The elevation of the step varies from 25.57 till 28.41 with two intermediate steps at 27.85 and 28.14. Meanwhile the level of the street was going up, the entrance to the building has been closed, we guess contemporary with US309floor, walling up the space occupied by the staircase. Wall M467 is founded, in fact, at 28.41 which is roughly the elevation of US309floor. The accumulation discovered in the room, namely US436, was made of un-shaped sandstone blocks, animal bones and crushed mud-bricks.

### **Eastern part of street A156: rooms A163, A159 and A160**

Contemporary with the excavation of the two streets A80 and A156, we carried out some works also in the eastern part of street A156 where three rooms have been individuated and dug: room A163, A159 and A160.

A159 and A160 in their latest phase of occupation were just one bigger room, namely room A164, delimited by walls M432, M431, M461 and M471 with a floor placed at an elevation of 29.62 (US22floor). Wall M471 was made just from a row of irregular stones and it has been dismantled with the aim of going on with excavations.

Below US22floor we recovered US442, an accumulation layer covered by US22floor (elevation of 29.62) and related to US442floor, reached at an elevation of 29.22. Considering the difficulty to go on with the excavations in the narrow space between M458-M462-M468 and the trench, we stopped at this floor.

The late room A164 covered two small premises: A160 and A159.

Room A160 is rectangular in shape and it's delimited by walls M462, M463, M461 and M468. The overall internal dimensions are: 0.9x2,10.

Below US22floor the first layer discovered was US432, made of a large amount of sea-shells, loose earth, metal slag. No pottery has been discovered. A button shell bead (Sh363) and a glass bead (G143) have been discovered as well. The floor was placed at the same elevation of US433floor (28.97/29.00). Below US432floor a new layer, namely US457, have been discovered. A fragment of small fine-toothed bone comb (B72), two beads (S1585 and Sh380), a spindle whorl (Sh379), a stone tool (S1586) and an iron nail (MI175) have been found. Very scanty remains of pottery and bones have been found together with some iron slags.

The accumulation was related with a very carefully plastered floor (sample n. 40) still visible in the opening in M468. Below, a series of floor preparations has been brought to light, proof that the pavement has been done and fixed different times.

US437floor sealed the layer below, namely US460, where some seeds (see below) have been found (sample n. 36; earth sampled n. 35) together with some pottery shards. The pavement has been reached at 28.70.

Room A159 is rectangular in shape and it's delimited by walls M432, M431, M462 and M458. The overall dimensions are: 2,75x 2,37.

Below US22floor, the first layer discovered was US433, made of loose earth, charcoals and animal bones. Differently from US432, placed at the same elevation, it was lacking of sea-shells.

US433 was reached at an elevation of 29.00. Very few pottery shards, animal bones and sea-shells have been found together with an oil lamp (Sh368).

Floor US433 was cut by pit US438 (fig. ), containing stones of medium/small size, animal bones, sea-shells, charcoals, together with the following small finds: nails in bronze and iron (MB657, MI167), two shell beads (Sh367), two glass beads (G149), three whetstones (S1550, S1554, S1555) and three handstones (S1551, S1552, S1553). The pit had very clear margins and occupied almost

all the room with the exception of the north-western and the south-western corners where US439 has been discovered. US439, cut by pit US438 too, was made by earth, stones, animal bones, seashells. The following objects have been found: two handstones (S1559, S1564), the stone tool S1561, two fragments of rotatory mills (S1562, S1563) as well as two bronze clamps (MB660, MB661). An accumulation of ashes and charcoals, namely US441, has been found below the pit US438 and the accumulation US439. On the related floor – US441floor – made of compact earth, two complete lower parts of mills or rotary querns (S1569 and S1570) have been found together with two shell inlays (Sh371). The two mills were placed along wall M432 (fig. 9)

The most important discovery from US441, has been, however, a quite large amount of seeds, found here, for the first time, in Sumhura (fig. 10). The seeds, sampled as well as the earth containing them and the earth collected around the querns and in the internal cavity, will be analyzed in Italy by M. Mariotti. According to G. al Shanfari, they could be identified as belonging to the plant of *sharkamut*.

Below US441floor, US444 have been found. The layer is made from a compact layer of brown/grayish earth mixed with stones, seashells, bones and some pottery. No small finds have been discovered inside.

US445, brought to light below US444, is rather compact, with pottery shards, bones and stones of medium size. Scanty amount of charcoals.

We stopped with excavations in room A159 at US447floor, reached at an elevation of 28.05, where we found other seeds identical to those of US441 and three coins (Co695, Co700, Co702).

## **Excavations in area F: A68 and A69 (Trench supervisor: Silvia Lischi)**

This part of the city was excavated during campaign by A. Sedov in SUM05B, SUM08B and SUM10B with the aim to verify the layout of the structures previously excavated by R. Cleveland in 1960 and to check the stratigraphy in this part of the site.

Two buildings (BF1, BF2) and part of a third (BF6) were excavated, with streets running parallel and perpendicular to city walls M133/M134.

According to the interpretation of A. Sedov A68 was a part of this street running along city wall M134, between the city wall and external wall of building BF6 (M157).

A69 was probably a continuation of this street and was running along city wall M133. External wall M74 of building BF1 bordered the street to the south. Later, street A69 was blocked near the inner offset of city wall M133 by constructing building BF2. The construction of wall M143, apparently at the same time, which connected the north-eastern corner of building BF1 and the inner offset of city wall M134, probably transformed this part of the street into a room belonging to building BF1.

### **A69 (squares f6-7)**

The SUM10C works in rooms A69 has been the continuation of the excavations performed by A. Sedov in SUM10B. The first layer to be found has been US428, a mixed layer with a lot of stones connected with the restoration of M134.

Under this layer was found US429 made of crumbled loess, stones and a few pottery.

According to Sedov's interpretation (2010B) the deepest part of this layer was supposed to be intact, while the superficial one especially in the centre of the room, was disturbed by the remains of Cleveland's 1960 excavations.

In SUM10B US428 has been almost completely removed from the in the entire room.

Below only the western part has been excavated, reaching US429floor.

In SUM10C the first operation has been the removal of the remaining of US428 (stones and masonry blocks) in the eastern part of A69 where a compact surface has been reached. This could not be considered a floor and it presents the typical lamination produced by the rain, demonstrating that the surface has been exposed for a period, before to be covered by the materials from the modern restoration.

Below US428, layer US429 has been found. In the upper part of the layer the following objects have been found: the bronze nail MB638, the bone object B67, the shell bead Sh364 and two coins (Co644 and Co645). In SUM10B the following objects were discovered MB629 (bronze object), the pendant Sh361, the handles B61-62-63-64, the partially worked handles B66 (five pieces), an iron stick (MI162), a mortar (S1546), a grinding stone (S1547), a spindle whorl (B66bis) and two coins (Co637 and Co638).

The lower part of US429 was composed of very compact earth and limestone chips.

Near wall M143 a residue of plaster floor US429floor has been found, covering for some centimetres also the wall.

Below US429floor a preparation filling covering the bedrock was brought to light. It slopes towards the city wall M134 (fig. 11).

### **A68 (square f7)**

In SUM10C the operations in A68 started with the cleaning of the exposed surface (fig. 12). In campaign SUM08B the section made in SUM05B was removed, since it collapsed during the monsoon season in SUM07, falling inside room A68 which was already excavated until the bedrock, in the area delimited by M71, M175 and M143

In SUM05B four layers and the related floor levels in the section across the street were determined (see section):

**- Phase of recent occupation in this part of the town:**

top layer US187 and related US187floor connected with M159;

**- Phase KR-II period:**

layer US172 and related US172floor (27.34-27.03);

**- Phase KR-I period:**

layer US162 and related US162floor (26.15-26.10);

layer US174 and related US174floor (25.20-25.04);

Below US174, US193, namely the foundation filling, covered the bedrock reached at points 25.08-24.80.

In SUM08B US162floor, made from heavily packed clay and slightly raised up in the eastern part of A68, was reached and, this year, the operations started with the cleaning of all the area (point of 26.53).

During the first operations, a disturbed situation has been noticed in line with the corner of M143, where earth of different colour and consistence (and a piece of plastic) has been brought to light.

The disturbance could be place in relation with the restoration of the corner of city wall M135.

Considering the uncertainty to attribute the excavated layer into a sequence already fixed we decided to name the stratum US437. Going on with the excavations we have been able to understand the equality between US437 and US162.

US162floor in the western part of the room has been reached at an elevation of 26.32.

The following objects have been listed as belonging to US437: coins Co647, Co648, Co649, Co650, Co651, Co653, Co654, Co655, Co656, Co663, Co664, Co665, Co672, Co671, some metal objects (MI163, MI164, MB640, MB644, MB645, MB646, MB647, MB649), a lot of vitrified (G144; G145) and not vitrified crucibles fragments (CI22) and other objects of different material (handles B69, B70 and B71, strainers CI21 and CI25, stone vessel S1573, pivot (?) S1571, a probable fragment of unguentarium G146, fragment of vessel G147, bead Sh372).

In the corner between M181 and M135 clear traces of burning have been noticed with many burnt animal bones and burnt stones of medium size. At least some of these stones seems to have been placed with some coherent order, to be interpreted as remains of fireplace connected with floor US162floor (pieces of mudbrick and plaster, spread around without any order, have been registered as well).

Removing the upper part of the accumulation in the area we noticed an interesting situation: in the western side of A68 we recognized the already named US174, while in the eastern part of A68 a different layer, US450, has been brought to light.

Both the strata were covered by US162floor which raised up in the eastern part where it has been removed during previous operations.

US450, already visible in the section near wall M182 in SUM08B, is made from small and medium size stones and limestone chips: a clearly intentional sterile filling for the room/street. This layer results covered by US162floor but it has been found below US174 in the corner between M180 and M161/M157.

A huge quantity of objects and pottery have been found in US174: (G144, G148, G150, Sh365, Sh366, Sh369, Sh373, Sh374, Sh375, Sh376, CI23, CI24, CI26, MI165, MI166, MI168, MI170, MI172, MI173, MB639, MB653, MB654, MB656, MB659, MB662, MB664, MB641, S1549, S1566, S1567, S1568, S1572, S1574, S1575, S1577, S1583, S1595, B73). Various bronze coins (Co652, Co657, Co658, Co659, Co660, Co661, Co662, Co666, Co667, Co668, Co669, Co670, Co673, Co674, Co675, Co676, Co677, Co681, Co682, Co683, Co684, Co685, Co688, Co689, Co690, Co691, Co692, Co693, Co694, Co696).

MB659, a bronze disk difficult to interpret because of the presence of a thick patina (plate, part of a shield?) was found in the corner between M180 and M161/157.



At an elevation of height of 25.31 an iron sword almost 1m long (MI172) was found laying horizontally very close to city wall M135, while a turtle plastron (B73) was placed directly on the blade, near the tip.

The objects have been found on a quite hard surface characterized by the presence of charcoals; it is not to be excluded the presence of a wooden box. Below the objects US193, the foundation filling levelling the bedrock, has been recognized.

The eastern part of the room, delimited by walls M143, M71 and M175 has not been re-excavated during this campaign. The bedrock, here, has been reached in SUM05B (elevations of 24.90; 24.86; 24.75) but it has been covered after the collapse of the section and levelled during the modern restoration works performed in the area.

Considering the available time, the intentional filling US450 has not been removed in the eastern part of A68 (fig. 13).

## **Survey on the territory of Sumhura (area north of the gallery)**

A brief and general survey focussed on the area northern from the “Sumhura gallery” was made by IMTO on 8th December 2010.

The survey aimed at collecting some data about the ancient occupational traces on the territory, before the construction of a new platform in the area.

Many different structures, linked with the occupation and the exploitation of the area surrounding the city have been noticed; however no remains of items or pottery suitable for a possible dating of the structures have been found.

### *Structures linked with the presence of water*

A structure roughly delimited by blackened masonry blocks is clearly visible north of the gallery (figs. 1,2). The presence of a big tree inside the structure seems to be related with the abundant presence of water below the soil.

The finding of a fragmentary sandstone basin (fig. 3) confirms the function of the place and suggests a frequentation's period contemporary to the city's occupation.

### *Alignments*

In the surveyed area a stone alignment with north-eastern/south-western direction is clearly visible. It consists of unworked stones, in vertical position, blackened by the presence of lichens. The alignment is placed at the edge between the bedrock outcrop and the alluvial plain. The position of the alignment visible in the surveyed area seems to suggest a double purpose linked with:

- the retaining and distribution of the water from the water courses converging to the Sumhura plain;
- the keeping of the fertile soil in order to protect it from the erosion

### *Hut bases*

Irregularly circular structures have been seen during the survey. They are made of stone blocks of large size, connected in cluster, mostly eroded. Similar structures discovered in Taqah have been attributed by Cremaschi to the Late Bronze/ Iron Age periods (Cremaschi in Report SUM06B).

Many fireplaces, used in modern times, have been noticed as well.



Fig. 1 Remains of the structure linked with water (well?)



Fig. 2 Detail of the masonry blocks

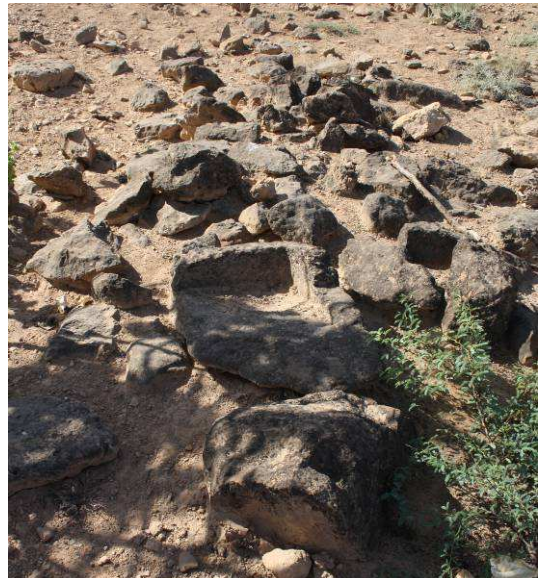


Fig. 3 Fragmentary basin

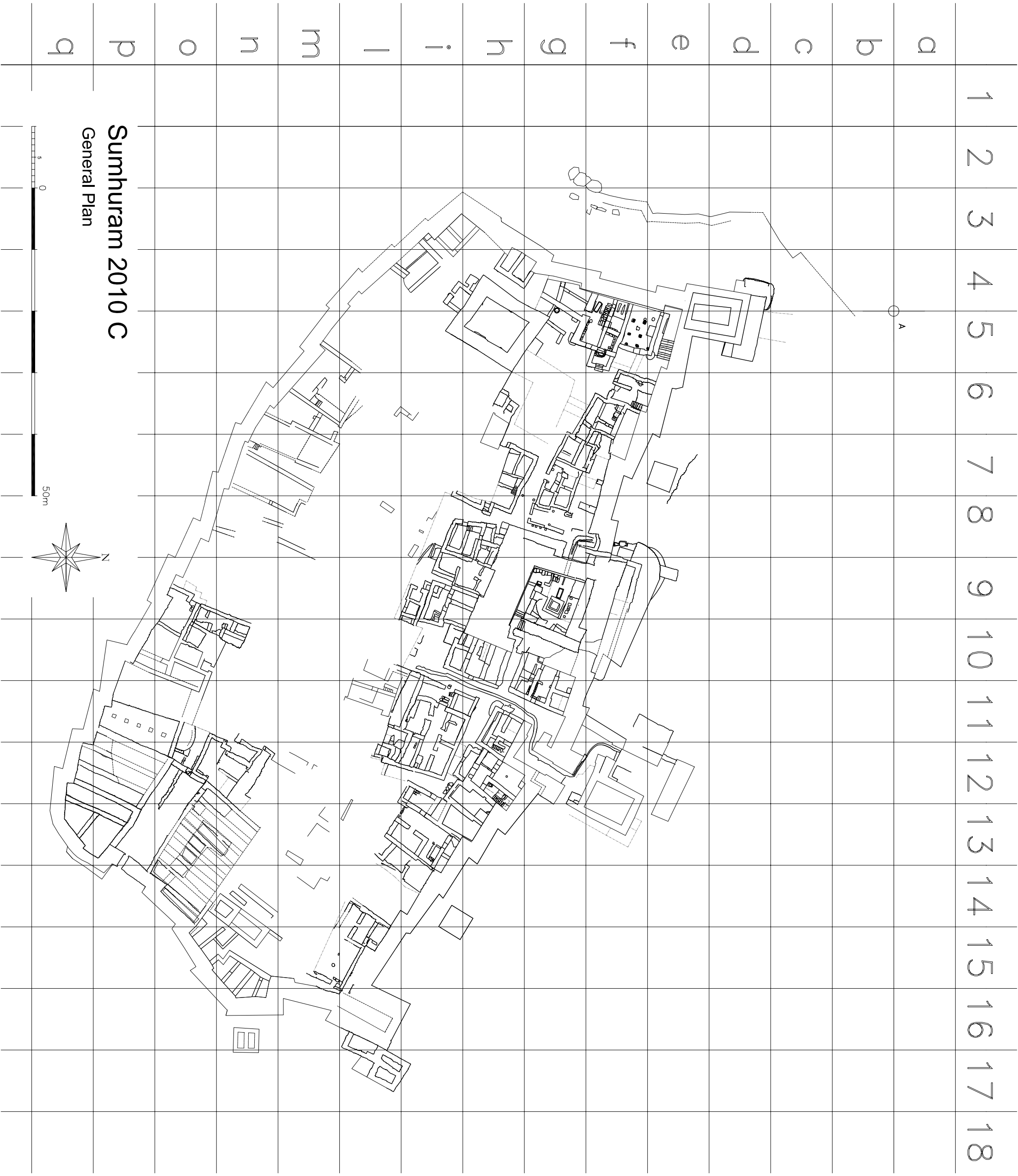




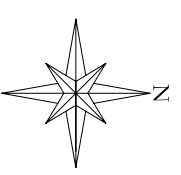
Fig. 4 Stone alignment northern from the gallery



Fig. 5 Hut base of the Taqah type



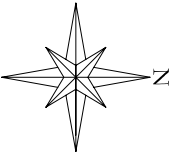
Sumhuram 2010 C  
General Plan



50m

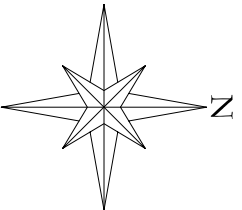


Sumhuram 2010 C  
General Plan



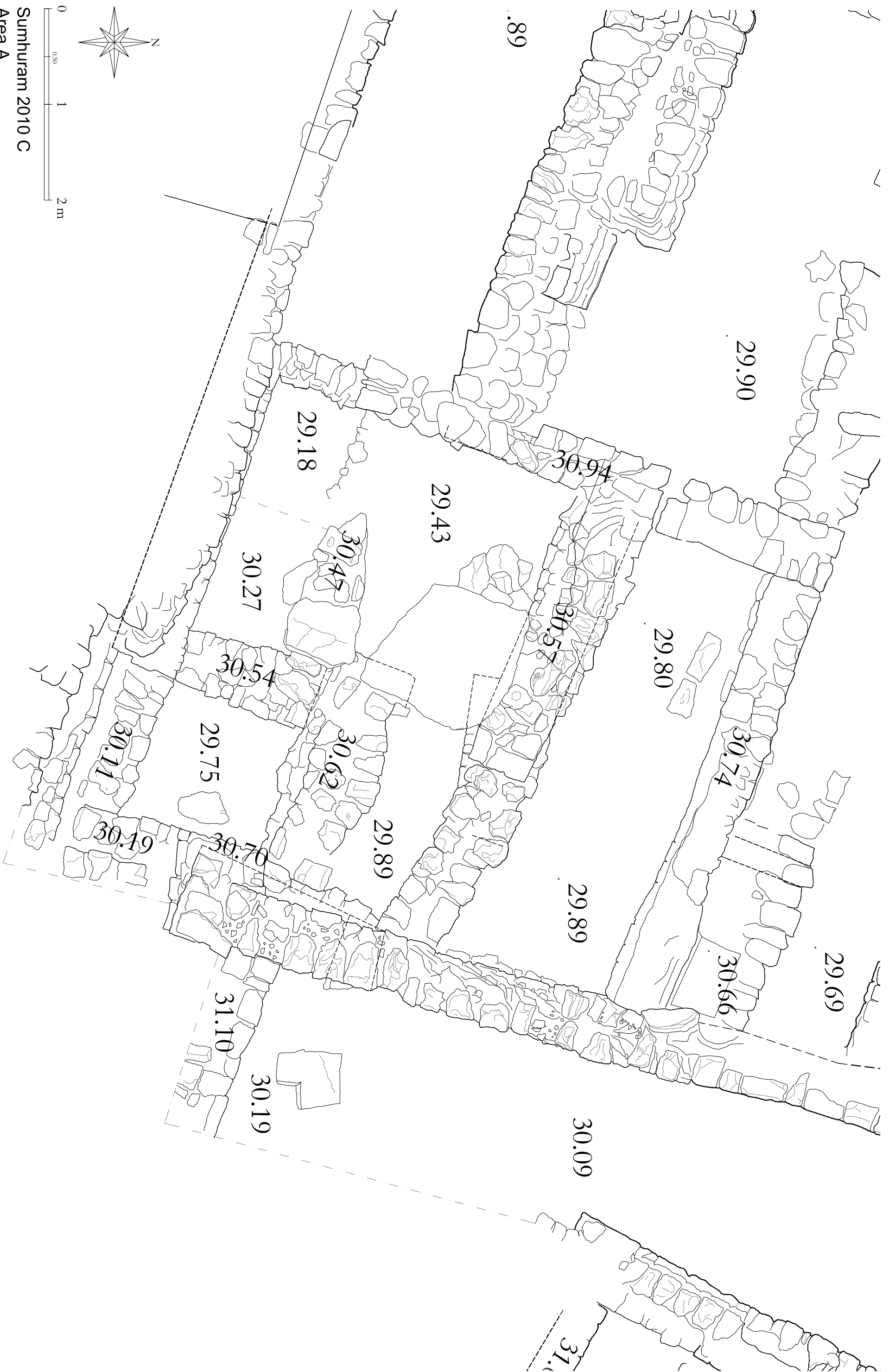


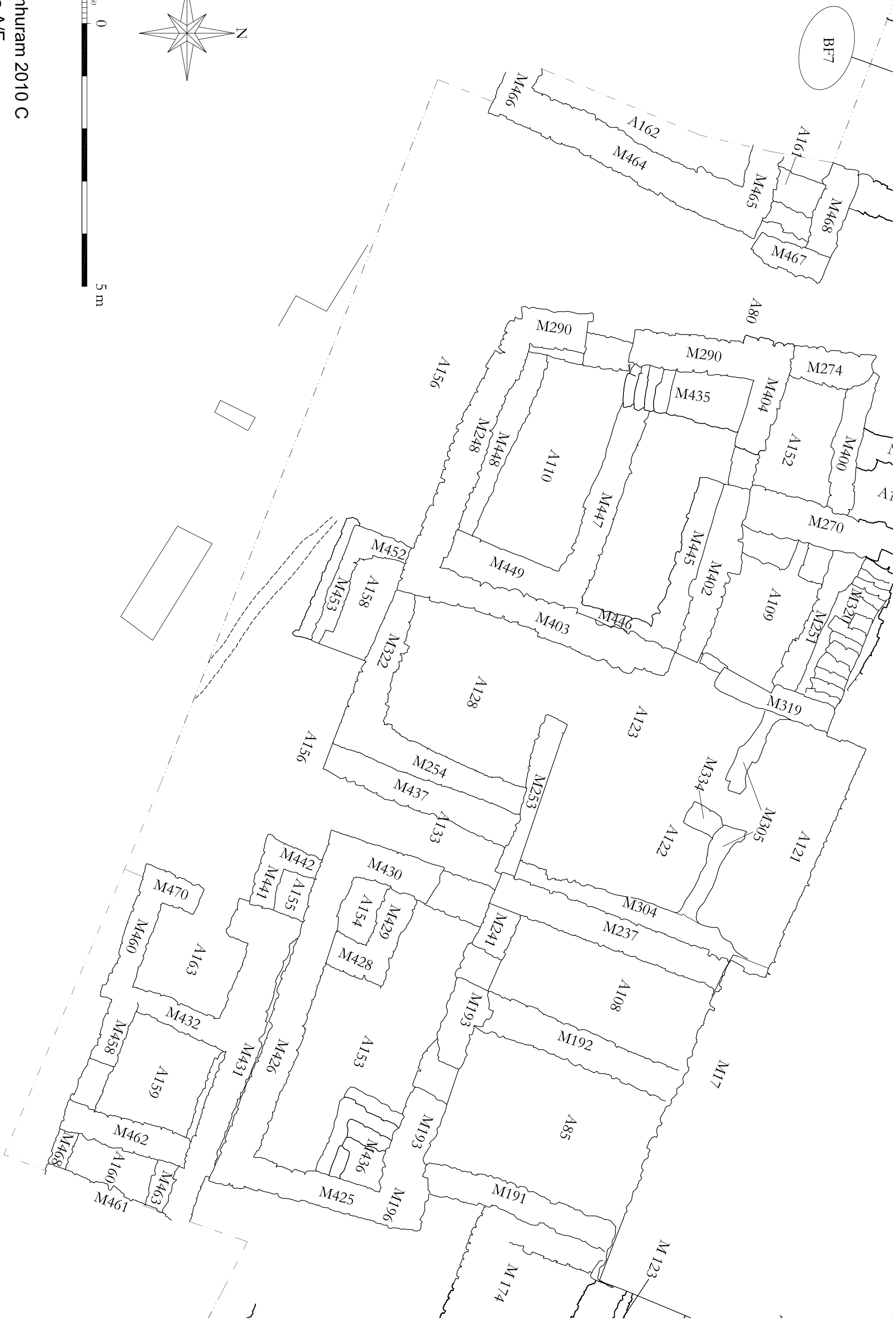




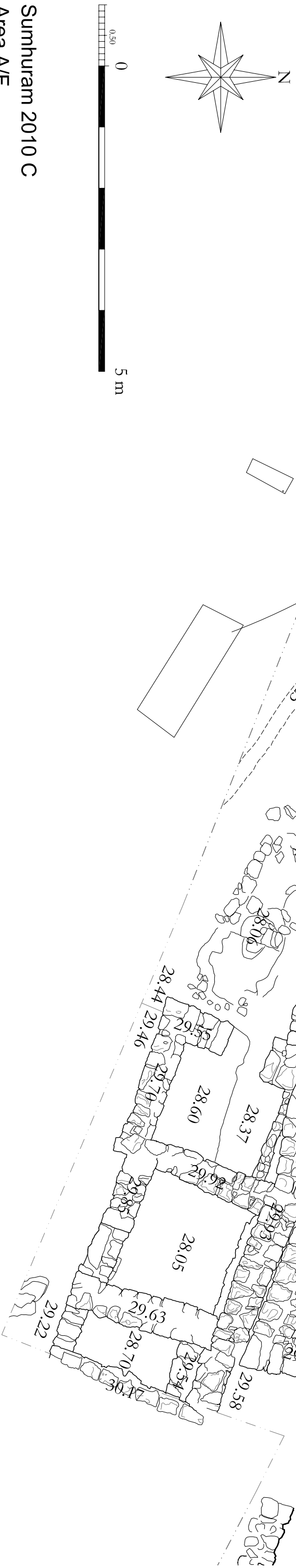
Sumhuram 2010 C  
Area A



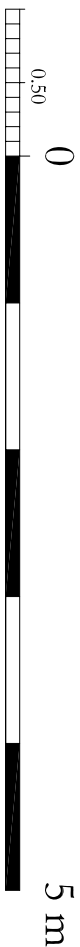
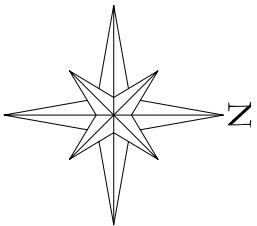
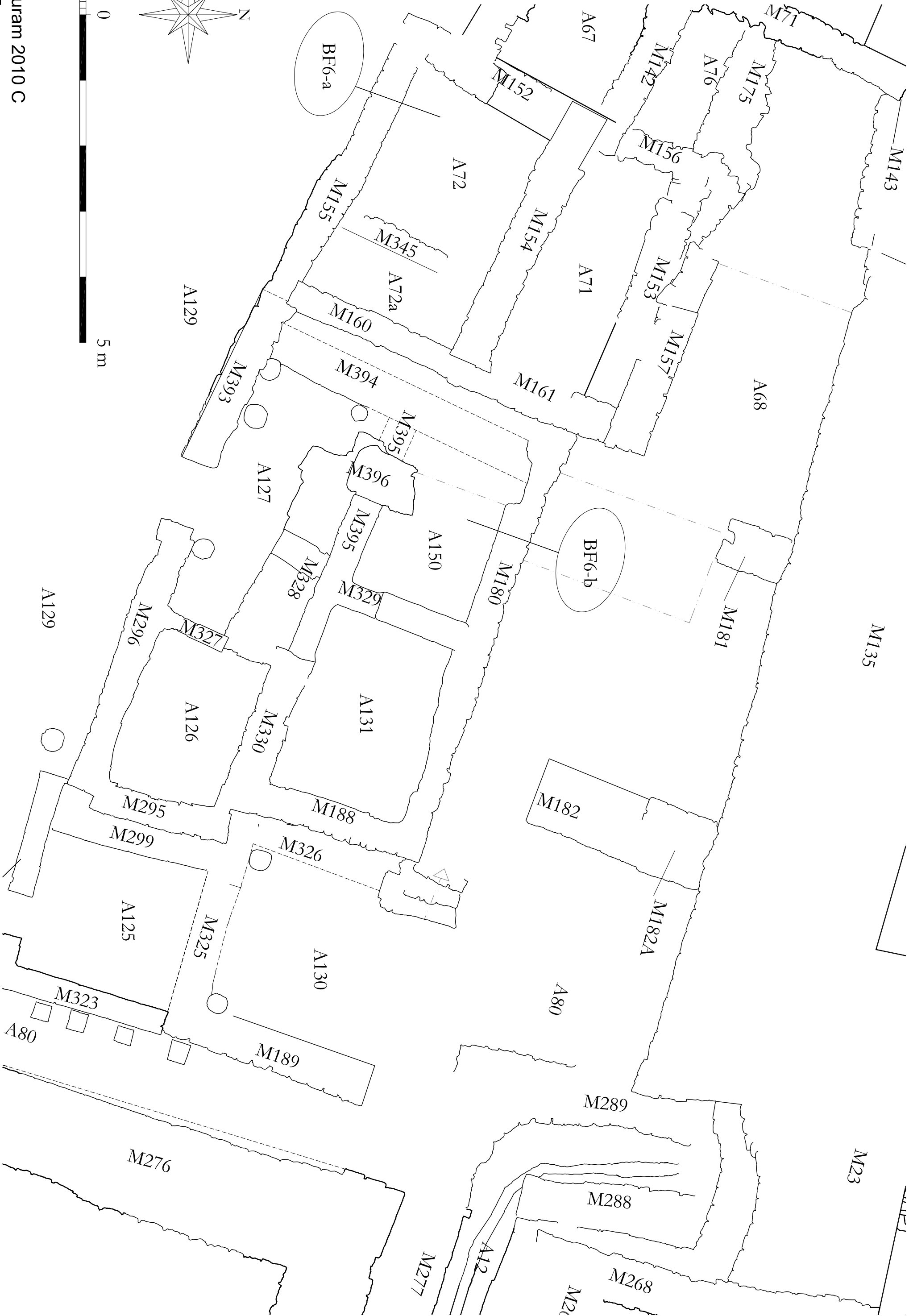


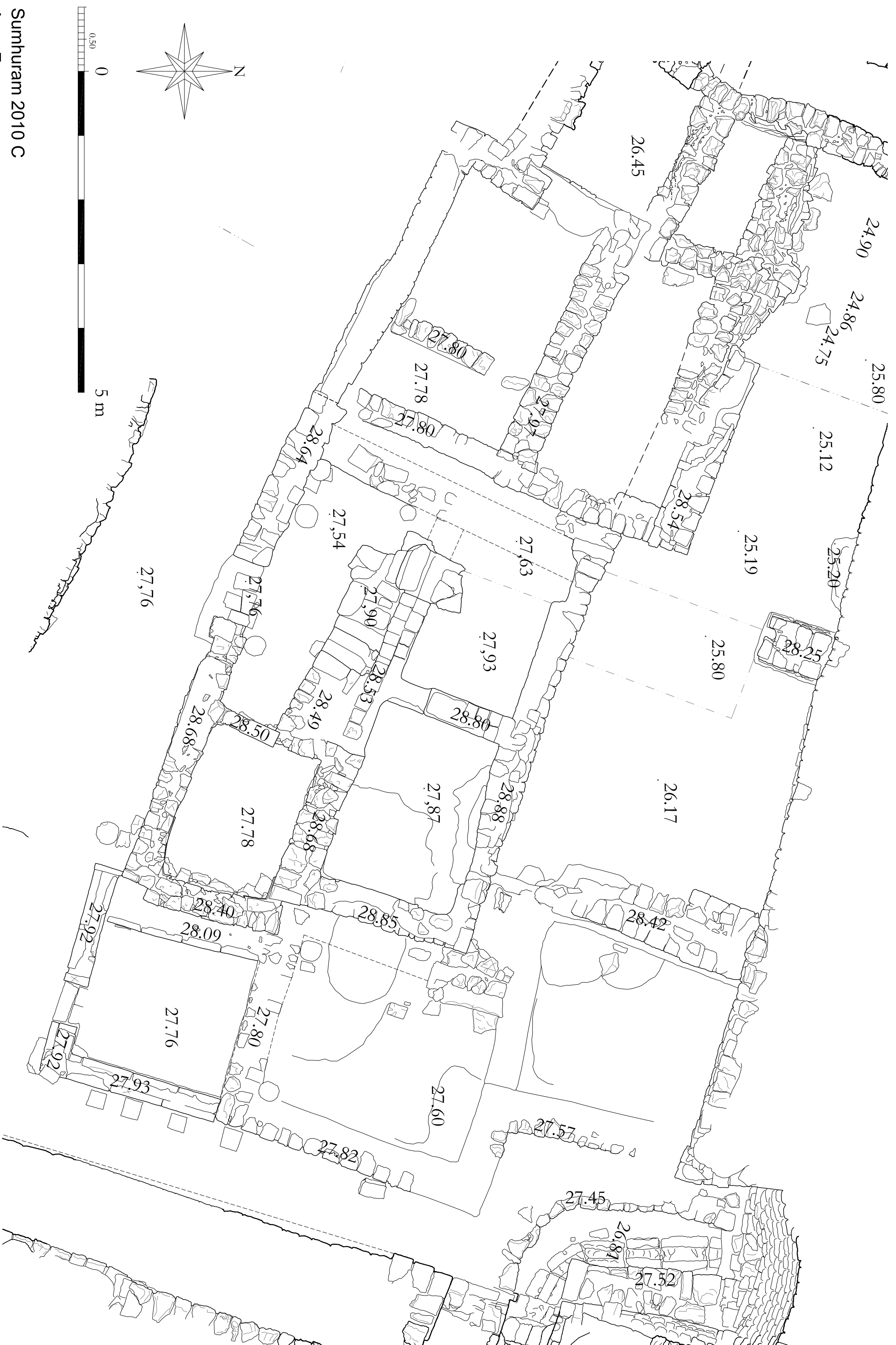


Sumthuram 2010 C  
Area A/F



Sumthuram 2010 C  
Area A/F







## Object Index Card

<b>Registration Nr.</b> SUM10C; US174, 75; MI172			
<b>Provenance</b> Area F, A68, US174			
<b>Drawing code Nr.</b>			
<b>Definition</b> Sword	<b>State of preservation</b> fair	<b>Measures</b> l. w. h. th. Diam.	<b>Shape</b>
<b>Material</b> Iron	<b>Preserved part</b> Complete (?)		<b>Section</b>
<b>Description</b>  Complete sword, broken in many parts, with point preserved. The blade, long 80 cm, is double-edged and rhomboidal (?) in section. About the hilt, just part of the grip is preserved. A rivet, circular in section (diam. 0.7) in visible on the grip, to fix the blade. The iron fragment MI172 could be part of the sword (to check). The point of the sword and its lower part was intentionally covered by a turtle shield (?) (B73).			
<b>Responsible</b> A.P.		<b>Date</b> 27-11-2010	

### Object Index Card

<b>Registration Nr.</b> SUM10C; US174,84; Sh376			
<b>Provenance</b> Area F, room A68			
<b>Drawing code Nr.</b>			
<b>Definition</b> Lid	<b>State of preservation</b> fair	<b>Measures</b> l. w.	<b>Shape</b>
<b>Material</b> Shell	<b>Preserved part</b> fragmentary	h.        2.4 th.        0.7 diam.    9 dp.	<b>Section</b>
<b>Description</b>  <p>Fragment of shell lid, probably from a <i>lambis truncata sebae</i> shell (see Lombardi in Report 2). The surface is decorated with rather deep incisions made according to a rather rough style (local imitation of finer one?). From the exterior to the interior the motifs are the following: concentric triangles, zig-zag pattern, concentric triangles attached, from the top, to concentric squares.</p> <p>On the internal natural recess of the shell a bronze coin (Co696) has been discovered.</p>			
<b>Responsible</b> A.P.		<b>Date</b> 26-11-2010	

## Object Index Card

<b>Registration Nr.</b> SUM10C; US174,40; MB659			
<b>Provenance</b> Area F, A68, in the corner between M161 and M180			
<b>Drawing code Nr.</b>			
<b>Definition</b> Disc	<b>State of preservation</b> good	<b>Measures</b> l. w. h. th.            1 diam.        14.2	<b>Shape</b>
<b>Material</b> Bronze	<b>Preserved part</b> Complete (?)		<b>Section</b>
<b>Description</b> Complete slightly concave disc with a flange/rim extending 1.7 cm circa. Although covered by a thick patina, the external side of the disk seems to be decorated with concentric circles. A projecting element circular in section (rivet?) is visible in the centre of the internal side.			
<b>Responsible</b> A.P.		<b>Date</b> 10-12-2010	

**Objects from SUM10C – pictures -**



Iron sword *MII72* covered by turtle shield (?) *B73*, from area F, A68, US174



Bronze disc *MB659*, from area F, A68, US174



Shell decorated lid *Sh376* with coin *Co696* inside, from area F, A68, US714



## **KHOR RORI, ARCHITECTURAL REPORT 2010B**

### **ancient town of Sumhura**

**Sara Micali, architect, Florence, Italy**  
**5 – 28 November 2010**

The aim of the structural restoration of the ancient town of Sumhura, during the archaeological campaign 2010B, Managed by Prof. A. Avanzini and Alexia Pavan (Dep. Ancient History, University of Pisa), is the conservation and the reconstructing of the architectonic image and visual impact of Khor Rori site.

The works were divided in 4 parts:

- 1) restoration and rebuilding of wall M223
- 2) restoration and rebuilding of walls M218 - 206
- 3) raising of the inside walls M17 – M18 of Monumental Building
- 4) analysis of the structural status of wall M221

*Sky view before the works*



*View from the Gallery during the works*



## **Restoration and Rebuilding technic for walls M223 and M218-206**

Both Wall M223 and M218-206 were two partially collapsed sections of the old walls of the town. After a preliminary dismantling, by clearing and removing all the earth, roots and the few not stabled stones of the upper part, the restoration started laying a film of Geotex on the remain cleaned existing original walls in order to define the transition between old and new stones.

After the dismantling, and before the reconstructing operations, the sand ground at the bottom of the walls was removed to find the bedrock, foundation of the both walls.

After this operations and the check of the good state of the structural conservation, the rebuilding of the walls with stones and mortar started.

In the upper part a top light slope was made and finished with the technic of “beautification”, a top made with mortar and small stones, in order to let the rainwater run off.

### **Stones**

The stones removed where very few, so in order to rebuild a larger part of the walls, was not possible to numbering them for the reconstruction.

As usually happen, stones for the new part of walls were collected by the stockpiles accumulated during the archaeological excavations.

Two type of stones where used for the rebuilding: front stones and filling stones.

Front stones were chosen or worked similar in color, shape and dimensions of the others used in the original walls just beside the two in object.

Filling stones, not visible, are usually in different size, smaller then front stones, are used to fill the back size of the wall.





## Mortar

Two type of mortar mixture were used.

Visible stones mortar, used for front stones:

4 buckets of sand, 600 gr of lime, 100 gr of Brown pigment, 300 gr of yellow pigment and water.

filling mortar, not visible, used for filling stones:

4 bucket of sand, 300 gr of lime, 50 gr of Brown, 150 gr of yellow and water.

Pigments and lime used:



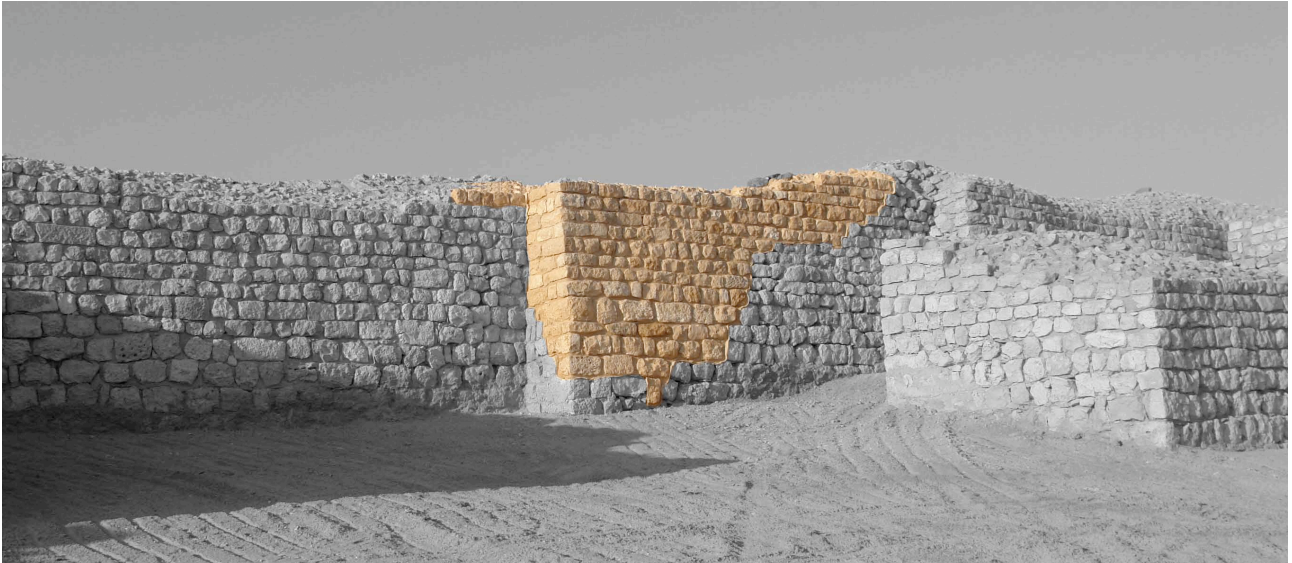


M223 - Pictures of the work in progress, from the beginning to the final restoration





M223 – Comparison between original and rebuilt wall (in colour the rebuilt part)



M223 – Top beautification: once the wall is finished, a sloping layer of mortar is bedded with different sized stones on top and filled again with the same type of mortar used for the wall front.





M218 and M206 – Pictures of the work in progress, from the beginning to the final restoration



## **Raising of walls M17 and M18 – inside part of Monumental Building**

Walls M17 and M18 were already restored and rebuilt in the past campaigns.

But in 2010B campaign was decided to raise the walls of three rows, to reach a similar level of the opposite side of the same wall.

New stones and mortar were chosen, provided and posed with the same standards and techniques above described.

In this case, the width in relation to the height of the walls, now 5.45 m in the higher part, led to the conclusion not to weight down the structure with a full filling of stones and mortar, choosing to fill just enough to support the new rows.

In the remain part, between the new rows of stones and the opposite side, was made a very light slope of mortar and stones, just to reach a slight slope to let the rainwater runoff.



Raising of walls M17 and M18 – inside part of Monumental Building:  
before and after the works and comparison (in colour new rebuilt part)





M221 - analysis of the structural status of wall M221







The bad conditions of the wall, already restred in the past campaign, as shown by the below pictures, and in particular the specific section in the lower corner where the stone is now missing, are in the need to be supervised and better observed analyzing the further movements of the recent stone sliding.

For the moment two suggestion may be to provided:

1. to insert two props, fixed from the ground up to the stone, just above the indicated missing stone, to help balancing and not collapsing the upper part of the wall, and wait 2-3 months to decide how to restore this wall
2. analyze the situation of the opposite part of the wall, the inside town one, clearing and restoring it ,trying also to reduce the eventual pulling of the filling ground.