

**IMTO – Italian Mission to Oman**

**University of Pisa**

**SUMHURAM**

**Preliminary Report**

**September – December 2014 (SUM14C)**



# PRELIMINARY REPORT (SUM14C)

## September-December 2014

The last IMTO's campaign of 2014 (SUM14C), under the direction of prof. A. Avanzini, started on 20<sup>th</sup> September and finished on 5<sup>th</sup> December 2014.

Excavations were performed in two areas with different goals.

In Area A, eastern part, excavation of street A113 continued towards south and then west to border buildings BA15, BB2 and BB4. Excavation of room A210, inside BA15, was carried on for understanding the first occupational phase of the building.

In Area B excavation of building BB4 was completed.

In Area F three different operations took place: excavation of the deposit inside the Monumental building 2 (BF5) was completed; the excavation outside the western wall of the building, in street A43, was continued as well as excavation outside the eastern wall of BF5 for clarifying the structures unearthed during the last campaign (SUM14B).

Excavations were conducted on the field by dr. Vittoria Buffa and dr. Alexia Pavan, with Mr. Said al Mashani and Mr. Said al Amri, archaeologist dr. Silvia Lischi and with senior students Giulia Buono, dr. Cleto Carbonara, Carlotta Rizzo, Oriana Crasi and Anna Chiara Muscogiuri. Documentation of the finds was carried out by dr. Vittoria Buffa, dr. Alexia Pavan, dr. Silvia Lischi, Giulia Buono, dr. Cleto Carbonara, Carlotta Rizzo, Anna Chiara Muscogiuri.

Sergio Martelli was responsible of the drawing of pottery, objects and structures.

Gianluca Buonomini was responsible of restoration of pottery vessels and bronze objects and dismantling and restoration of *tannur*.

The restoration activities have been carried out at the walls (partially dismantling and rebuilding) M16, M460, M117, M75, and M306 inside the city as indicated in the technical report section.

The restoration of the walls M16, M460, M117, M75 can be considered a huge intervention that involved the partial dismantling, the reconstruction and/or the rising up of the walls.

The restoration and consolidation of ancient masonry structures has been done under the coordination of Valter Filatondi and Emiliano Mura as indicated in the restoration chapters.

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 Ghanem al Shanfari, Said al Mashani, Ali al Kathiri, Said al Amri, Said al Salmi, Hassan al Jabri. We thank them all, together with all the Museum's team, for their kind helpfulness.

# Sumhuram Preliminary Report SUM14C

## September-December 2014

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# Archaeological Report

## **Excavation in Area A, square I-11/12, street A113 (trench supervisor: Giulia Buono)**

The street A113, in Area A, has been subject of previous archaeological campaigns. The area has been first excavated by the American mission (AFSM) and then by IMTO during SUM10C, SUM11A, SUM11C, SUM13C and SUM14A.

The excavation of this street during this campaign had the purpose to continue to investigate it westward, to understand the relationship between buildings BA15, BB4 and BB2.



*South view of A113 before excavation.*

The most upper layers US458 and US469 were removed from the trench during SUM14A. Following the layers visible in the trench left after SUM13C, two main layers have been recognized: US508 and US516.

The removal of the first one, US508, started at an elevation of 30.08. The layer consisted of brownish gray compact loam, while in the lower part the consistence became looser. This accumulation layer covered a furnace (US720 with its filling US721), identified at an elevation of 30.04. The furnace is circular in shape (diameter 0.60 m) made of small limestone stones with soot traces and mudbricks at its base. This structure was constructed on US508 floor, in the middle of the street A113, in front of M581. The US720 was completely removed. Its filling, US721, was made of loose loam, dark in colour with a large amount of big size charcoals, small stones with soot traces and few bones and shells. Some samples of filling were collected.

The related floor of US508, made of packed earth, was reached at an elevation of 29.87.

US508 has given back some pottery shards including 8 fragments of storage vessels and one base of glazed jar, some bones and shells, iron slags, a fragment of soft-stone vessel, oil lamps (Sh688), a lid (S2657) and two metal objects (MI235, MB882) and a bronze ring (MB884).

The layer was completely removed from the trench.



*West view of A113 with US508 floor and the furnace US720.*

Below US508, US516 was composed of reddish brown compact loam with mudbricks, found at an elevation of 29.59. The following findings were collected from this layer: some pottery shards (77 fragments: 57 storage, 10 table of which 7 glazed, 3 kitchen), some bones and shells, a fragment of pottery with purple traces, a fragment of soft-stone vessel, a fragment of bronze mirror (MB879), an iron object (MI234) and a fragment of rim of soft-stone vessel (S2662).

The floor was not reached and the layer was not completely removed from the trench. The excavation stopped at an elevation of 29.42.



*North-east view of A113 after excavation.*



*South view of the street A113 after excavation.*

## **Excavation in area A, square M12, street A113 (trench supervisor: Saeed Al Hamri)**

The street A113 in Area A has been the subject of previous archaeological investigations. The area was first excavated by the American mission (AFSM) and then in four campaigns of Italian Mission to Oman (IMTO) SUM 10C, SUM11C, SUM 12C and SUM 13C.

The excavations in the street A113 during the SUM14C campaign started with the aim to continue the removal of the last three layers US 469, US 508 and US 516. These layers were located between M613, M607 and M521.



The first layer US 469 was found at the elevation of 30.5 m and it consisted of compact loam, reddish brown in colour. The excavation of this layer was proceeded from the north towards the south. During the excavation some findings were collected like some pottery shards ,a lot of bones and shells, some iron slags and bronze fragments.

Below US 469 the US 508 was discovered. It was found at the elevation of 29,98m. This is an accumulation layer with very compact loam, brownish gray in colour. There was presence of charcoals and ashes in some part of this layer. During the excavation some finds were collected like several iron slags in some part, a large amount of bones and shells, some pieces of bronze objects and stone tools.

Below US 508, US516 was the last layer that we removed. It consisted of medium compact loam, greyish brown in colour but in some part it was reddish brown. At the elevation of 29.59 m we found an amount of crumbled mud bricks which has been removed in order to follow the floor of the street. There was some ashes diffused in some part in this layer. A lot of bones and shells were collected; we found also a fragment of soft stone. This layer was not completely removed from the trench (the floor was not reached).





## Excavation in Area A, square I-11/12, BA15, room A210 (Trench supervisor: Giulia Buono)

The works of the room A210 restarted from the level US636 floor (20.45) left in situ during SUM13C campaign, with the purpose to reconstruct the different phases of this building.



*West view of A210 before excavation with US636 floor left in situ during SUM13C.*

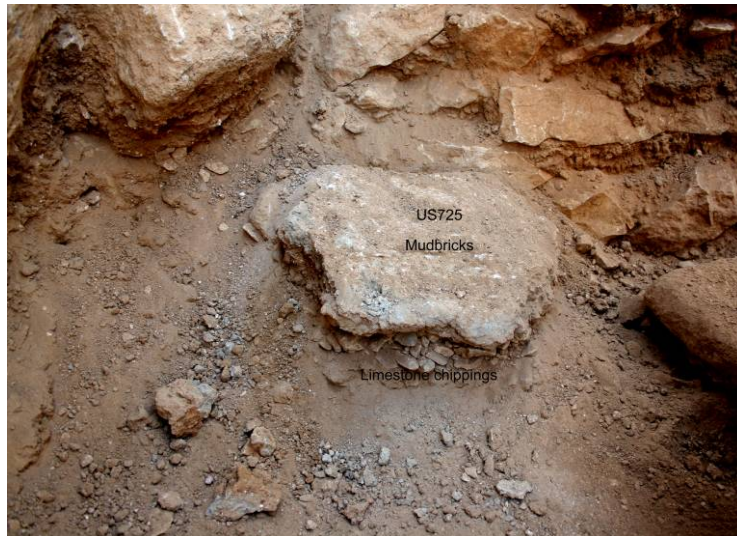


*Removal of US636 floor with the preparation for the plaster.*

Below the plastered floor and its preparation made of medium size limestone blocks, the US722 was identified. It consisted of loose loam, brownish in colour. Along the wall M610 a large amount of iron slags (5890 gr.) were collected. 51 fragments of pottery were found, of which only 3 diagnostic; in particular the pottery fragment named as US722,1 could belong to a straw temper jar reused as stopper. Further, in the layer the following objects were unearthed: a stone tool (S2658), oil lamps (Sh696, Sh701), fragments of soft-stone vessel (S2661, S2666), a Tutufa Bardeyi shell (Sh703) and some shell beads (Sh705, Sh706).

The floor was not recognized; only in the lower part of the layer, the loam slightly became more compact. The layer was completely removed from the room.

Under US722, US725 was identified at an elevation of 29.21. It was a layer with a thickness of about 20 cm made of mudbricks in the upper part and limestone chippings under them. No findings. It couldn't be interpreted as level of use. The layer was completely removed from the room.



*US725 with mudbricks and limestone chippings.*

The last layer identified in the room at an elevation of 29.03 is US726 that was made of brownish loam, with a consistence from medium compact to soft. The findings are very scarce: only 3 fragments of pottery not diagnostic (1 storage, 2 table), two coins (Co889, Co890), few iron slags, a fragment of flint, a Tutufa Bardeyi shell (Sh692), an iron object (MI238), a fish hook (MI239), fragments of nails (MI 240), two stone tools (S2669, S2670) and a oil lamp (Sh707).

The plastered floor, perfectly preserved in the eastern part of the room, was reached at an elevation of 28.92.

At an elevation of 28.96 and at 0.55 m from the threshold of the room a sandstone slab of 1.20x0.90 m was brought to light, above the plastered floor. Close to it, a large amount of broken thick plaster pieces (th. 5.0 cm) were found: we could hypothesize that they belonged to a structure or they could be fallen from the foreground. In front of the threshold of the room and along M610 the plastered floor is not preserved but the preparation of it, made of small limestone stones is still visible. The floor, its preparation and the sandstone slab were left in situ.



*US726 floor with sandstone slab.*



*West view of A210 after excavation.*

### *Preliminary remarks*

We decide to continue to investigate the room A210 of BA15 with the purpose to clarify the situation of this building. We removed the first plastered floor to search the ancient phases of this room. Unfortunately for the lack of the findings and for the complexity of the constructional phases of the walls of the room, at the end we are not able to make a conclusive hypothesis.

## **Excavation in Area B, square n-11, BB4, rooms A205 and A243 (Trench supervisor: Giulia Buono)**

The examined area was object of excavation during the campaign SUM13A. Previous works had partially investigated the room A205 with the not complete removal of US575. During this campaign the trench was enlarged towards west to verify the presence of wall that close the rooms. US575 was the most superficial layer (equal to US571) that covered both rooms. It consisted of loose brownish loam and stones from big to medium size fallen from the walls. It could be interpreted as a collapse layer. Inside the layer 74 pottery shards were found. The majority belongs to the storage category, with 14 amphorae and 2 fragments of black and gray jars. Other findings: iron slags, a vetrified pottery shard, a pottery fragments with bitumen, a fragment of soft stone vessel, a bronze scrap, oil lamp (Sh660), some shell beads (Sh662, Sh668), Tutufa Bardeyi shells (Sh666, Sh667), a bronze object (MB868). The layer was completely removed from the trench.



*West view of A205 and A243 before excavation.*



*South view of A205 with the collapse in US575.*

### *Room A205*

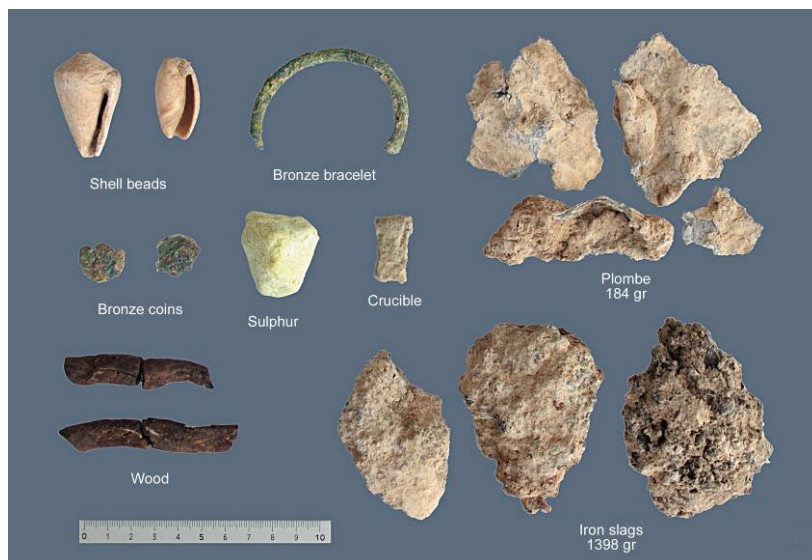
With the removal of US575 it was possible to understand the area occupied by the room. This room covers a surface of 13.12 m<sup>2</sup> and it is delimited by the walls M235 to the east, M578 to the south, M698 to the west and M582 to the north. M578 is badly preserved in its central part. Two doors, one along M582 and one along M698, put in connection this room with the rooms A204 and A243. Under US575, US714 was identified and it was made of compact brown loam with white inclusions and mudbricks. The related floor is very compact with white inclusions and it was reached at an elevation of 29.05. In the eastern part of the room, close to M235, the floor is made of limestone stones, medium in size and it covers a surface of 1.75 m<sup>2</sup>. The quantity of pottery found in it is similar to that collected in the upper layer: 54 pottery shards of which 36 storage with 4 amphorae, 15 table and 1 kitchen. Regarding the objects, the layer has returned some iron slags, a pottery fragments with purple traces, some shell beads (Sh659, Sh678), a bronze coin (Co878), a stone tool (S2651), an oil lamp (Sh677), an incense burner (S2649), two iron objects (MI228, MI232). The floor is still in situ.

### *Room A243*

A243 is a small room that covers a surface of 2.72 m<sup>2</sup>, located to the west of A205 and connected to it with a door along M698. It is delimited by M698 to the east, M578 to the south, M690 to the west and M582 to the north.

Below US575, US717 was recognized. This layer was made of loam, medium compact in consistence and brownish in colour with an abundance of stones collapsed from the walls. The plastered floor was reached at an elevation of 29.28.

The discoveries are very particular, maybe related to the use of this room: 1398 gr of iron slags, a piece of sulphur collected as sample, 184 gr. of lead in shape of plaque (D38), 27 pottery shards (21 storage), a bronze object (MB871), oil lamps (Sh669), Tutufa Bardeyi shells (Sh670), shell beads (Sh679), a stone tool (S2648), a bronze bracelet (MB872), a fragment of crucible (C164), two bronze coins (Co879, Co880), a fragment of wood handle (D39).



*Findings from US717.*



*West view of A205 and A243 after excavation.*

## **Area F, east of BF5/MB2, A235 and new rooms A237 and A238 (trench supervisor: Cleto Carbonara)**

In the SUM14C campaign, the IMTO (Italian Mission To Oman) resumes the excavation in the area placed east of BF5 (Monumental Building 2). This area was already object of archaeological investigation in the last campaign SUM14B when works are focused on the rooms A234, A235, and A236, immediately east of MB2.

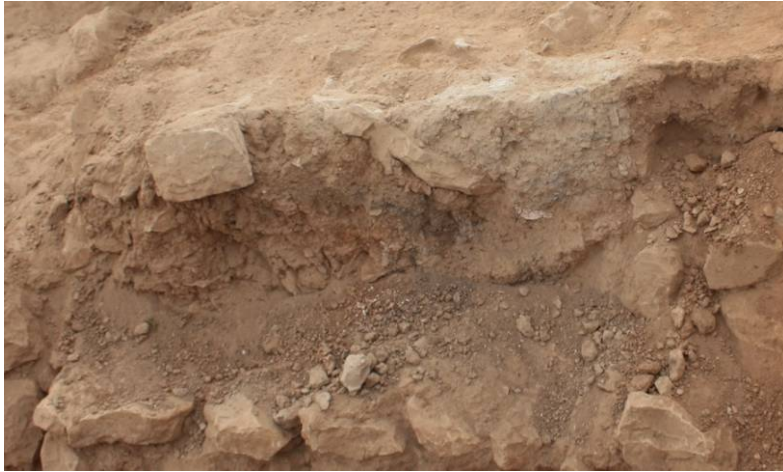
The area is totally covered by US700 a rather thick layer with loam composition and friable in consistence. Its colour is reddish brown.



*East of MB2 before excavation (from south)*

The removal of US700 starts from its southern part, east of room A234. Here, in US700 has been noted the presence of a large amount of stones very small in size. Bigger limestone blocks, with several sandstone slabs were concentrated in the southern part of the trench. Several traces of burnt, with a large amount of charcoals and ashes are visible along the western limit and in the southern part of the trench. The US700, in correspondence of the burnt marks returned several iron slags medium and big in size. The layer also returned some crumbled animal bones and shells together with several objects: a fragment of a soft-stone vessel (S2605), a bronze pendant (MB864), some fragments of a glass object (G216), and some shell beads (Sh635, Sh643). In the south-western portion of the area have been noted also several crumbled mudbricks.





*US700: mudbricks*

Removal of US700 in this area led to the discovery of two new small room A237 and A238.



*A238: US700 floor*



*A237: US700 floor*

### *A237*

It is a room placed east of A234, of which for now is visible only the north-western corner. It is delimited by the wall M670 to west, oriented NW-SE, and the wall M683 to north, oriented NE-SW. Below US700 that covered the inner face of M670 and M683, in A237 there is another layer, US701. It is characterized by a loam composition and a very soft consistence. Its dark brown colour is probably due to the several traces of burnt and ashes that have been found in it. This layer is also characterized by the presence of a large amount of charcoals. US701 returned two stone tools: a mortar (S2617) and a whetstone (S2618).



*A237: US701*

### *A238*

It is a narrow room placed east of A234 and north of A237, and delimited by the walls M671 to west, M683 to south and M684 to north. Of this room is visible only the western part. In it has been recognized a new layer below US700, US707. This is an accumulation loam layer reddish in colour and medium compact in consistence. Loam is mixed with limestone blocks big and medium in size probably coming from the wall surrounding the room. The south-western corner of the room is characterized by a strong presence of traces of burnt mixed with mudbricks. Mixed with loam was

also found charcoal and crumbled bones and shells. US707 also returned three shell beads probably used in the manufacturing of the same ornament (Sh646).



*A238: US707*

### *A235*

It is a long room placed east of MB2 and north of A234 and A238. It is delimited by the walls M109 to west, M684 to south and M672 to north. The higher part of M672 in mudbricks is preserved only in the eastern part of the wall. The western part of the room was already excavated during SUM14B campaign. In the eastern part the first layer to be removed is US700. Here the reddish brown and soft loam is mixed with some scattered limestone blocks and sandstone slabs big and medium in size. In the southern part of the room have been noted slight traces of burnt. US700 returned some crumbled animal bones and shells, together with an handmill (S2641), an handstone (S2627), a whetstone (S2628) and several shell beads (Sh647 and Sh648).



*Eastern part of A235, US700*

US700 rests on a compact floor made with a large amount of mudbricks.



*US700 floor*

Below US700 there is an accumulation layer made of clay loam, dark reddish brown in colour and medium compact in consistence (US710). Loam is mixed with limestone blocks small in size found in whole surface of the layer, and charcoal. Limestone blocks of bigger size were in the southern part of the room, probably linked with the collapse of M684. US710 returned a fragment of a basin (S2635), an handstone (S2636), an oil lamp (Sh653), a glass fragment (G217), and also some crumbled animal bones and shells.



*A235 : US710*



*East of MB2 after excavation*

## Excavation in Area F, street A43 (trench supervisor: Carlotta Rizzo)

Works restarted from the level where excavations of SUM14A stopped. We decided to enlarge the trench of this area with the propose to clarify the deposit in the street A43 to understand the viability in the western part of MB2 and the city wall. We follow the stratigraphy left *in situ* below M602 and the first US brought to light was US623. This is an accumulation layer with related floor. The first one is made of medium compact loam, reddish in colour with charcoals and traces of ashes. Inside the layer we also found some crumbled mud-bricks and fragments of broken plaster (maybe collapsed from the walls). Different kind of samples were collected: iron slags, plaster, fragments of soft-stone vessels, fragments of pottery with bitumen coating. The floor is made of very compact loam reddish grey in colour with several white inclusions. The floor, reached at an elevation of 27,28, has not an uniform thickness (20 cm circa) and has a visible height difference in the southern and in the western part of the site, in correspondence with M460. A huge assemblage of pottery, animal bones and marine shells were found. Near the floor the pottery is less abundant. The pottery shards found belong to all categories and shapes, mainly storage. Fine wares such as *terra sigillata* and cooking pots have been found as well. During the removal of US623 a limestone slab (measures: 100x50cm; th.0,5) was found, leaning to M642. Along its margins there was a layer with a lot of mud-bricks reddish in colour, named US727.



*US727 before excavation*

A good amount of different kind of objects were collected in US623: two incense burners S2639, S2644; five shell-beads Sh654, Sh664, Sh680, Sh681 Sh689, Sh704; the oil lamp Sh657; the bronze plaque MB866; the bronze nail MB867; the mirror (?) with textile traces MB870; two stone-tools S2645, S2650, S2664; two fragments of blades MI227, MI231; a fragment of glass vessel G218, G220; seven coins Co883, Co884, Co885, Co886, Co887, Co888, Co894; a loom weight S2652; a hook MI229; an iron object MI230; two stoppers Cl65, Cl66; two metal clamps MB875, MB877; a clay object Cl68; a plaque MI233; a bronze object MB883; a handle of soft-stone vessel S2663; a shell with fragment of iron D40; a rim of soft-stone vessel S2667.

During the removal of US623 a new layer, named US719, was found at an elevation of 27.34. It consists of an accumulation leaning to M460 and on M692 and M686. In the upper part of this US a thin layer of soil mixed with sand was recognized. US719 consists of a very soft reddish loam (more organic) with many white inclusions and traces of gypsum, some small stones and several traces of burnt belonging to fireplace. It could be interpreted as a pit, but the limits are not easy

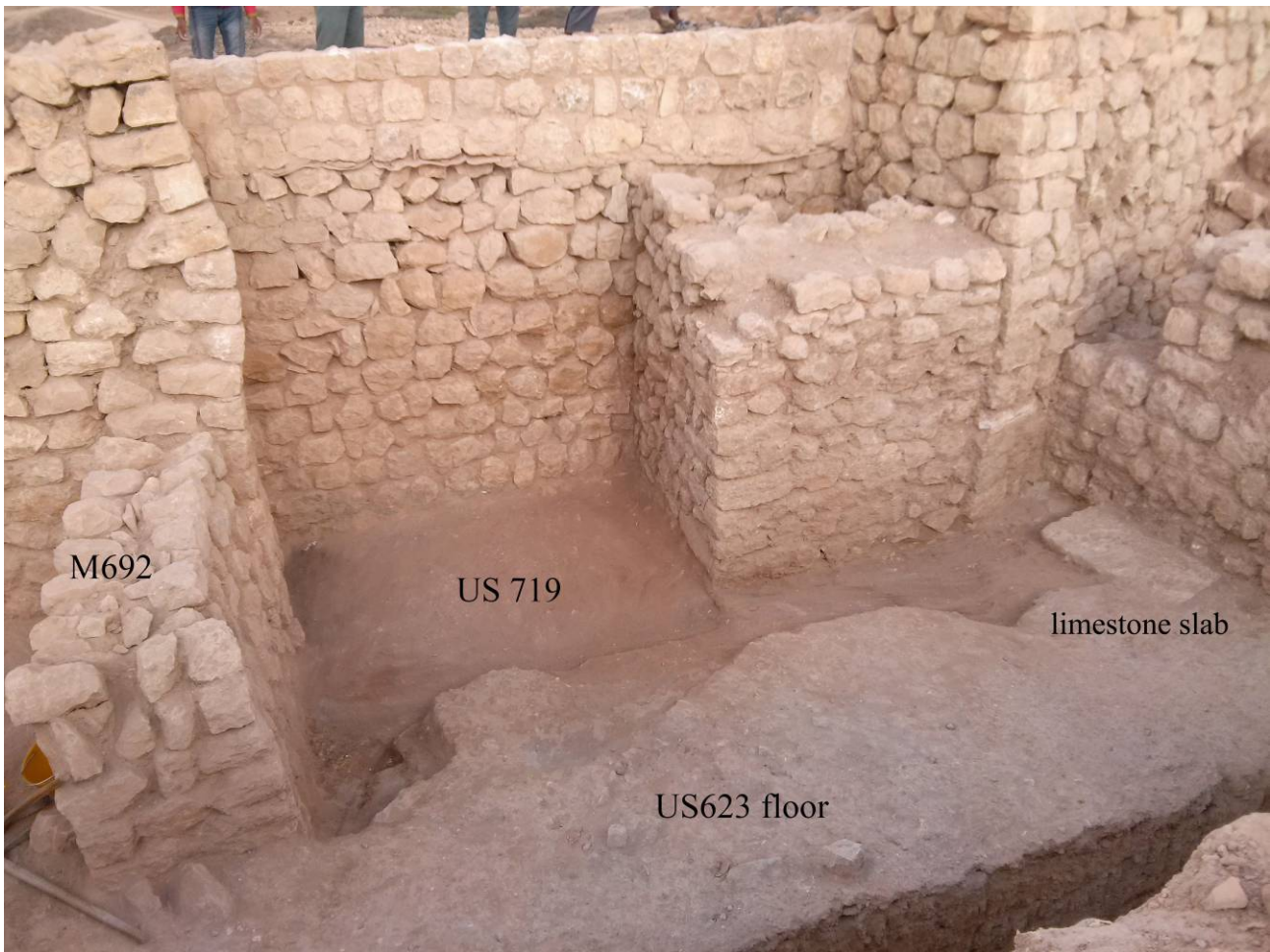
distinguishable. In the « pit » were found a lot of animal bones (mostly horns of goats and few of cows) and pottery. Few kind of samples were collected such as a fragment of vitrified pottery and a fragment of soft-stone vessel. During the excavation a limestone circular basin (measures : d. 58cm ; th. 7cm.) and a base of pillar (measures: 35x32cm) were found. The works stopped at an elevation of 26,69 and the layer has not completely removed. We collected the following objects : a spindle whorl Sh683; an iron object MI236, a stone tool S2665.



*Animal horn in US719*



*Limestone basin in US719*



*US719 and US623 after excavation*

Below US623, US647 was recognized. Also this layer is an accumulation with related floor. The first one is made of reddish loam with some charcoals and ashes. Some pottery shards and animal bones and marine shells were found. The floor, reached at an elevation of 26.72 (highest part: 26,92), has a slight slope, from north to south, and a not uniform thickness (especially in area of contact with US719) . It consists of a different deposits of accumulations and floors of thin thickness. The US647floor is light grey in colour, argillaceous matrix with white inclusions. A lot of pottery (especially archaeological complete vessels near the floor; mostly kitchens vessels), animal bones and marine shells were collected. Regarding to the samples collected: vitrified clay, fragments of soft-stone vessel, bronze and iron slags, fragments of coral and fragments of pottery with bitumen coating.

The following items have been discovered in the layer: a spindle whorl Sh658; a plaque (?) MB878; three coins Co891, Co892, Co893; five shell beads Sh690, Sh691, Sh 693, Sh694, Sh695, Sh700; a handle B93; a nail MI237; a stone vessel S2659; a glass vessel G221; a stone object S2660; a bronze fragment MB885; a stone tool S2671.

During the removal of US647 floor, we stopped at an elevation of 26.64, in the interface between US647 and US635.

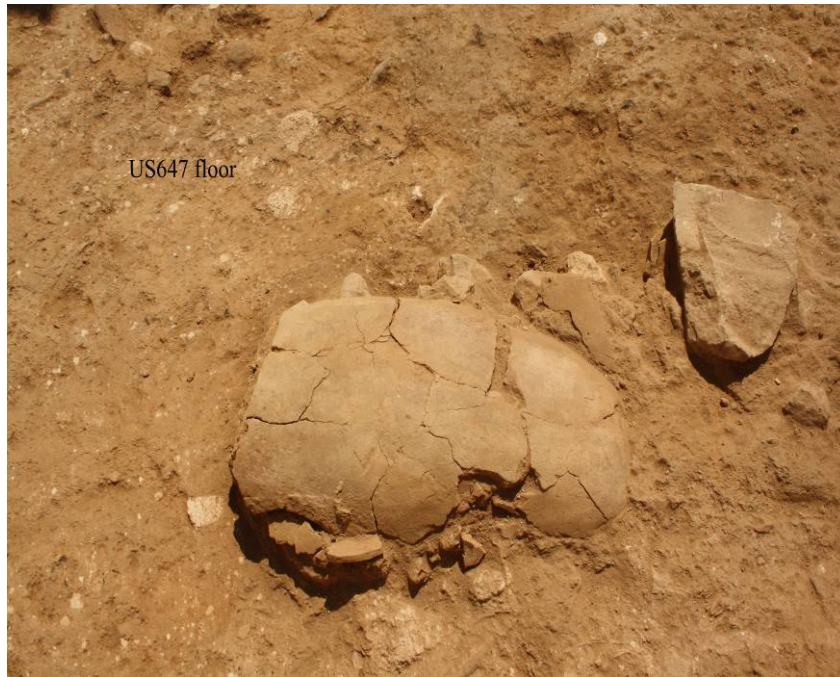




*US647 floor whit storage jar in situ*



*Kitchen vessel in US647 floor*



*Storage jar in US647 floor*

Contemporary to the digging of this western part, we enlarge also in the southern part of A43. During the removal of US623, that covered the entire excavation area, we found a new layer - US723-, at an elevation of 28.50. It is made of a collapse of stones of different sizes.

During the excavation a new wall was found, M692.

Below US723 a new layer was recognized: US724. It is an accumulation made of soft brownish red loam, with few pottery and animal bones. The layer was not completely removed. We stopped at an elevation of 26,89.



*US723 before excavation*



*A43 after excavation*

### **Walls**

The walls that delimited the excavation area belongs to the city wall (M460,M118), to BF5 (M93) and to BF3 (M86 and M462). During the cleaning of these walls we have observed that they presents different kind of holes, maybe belonging to wooden structures. See the pictures below.







**Preliminary observations**

The enlargement of this area can be explain the use of the so called street A43. After a preliminary observation it seems that A43 in correspondence with US623 was not interpretable like a street, but for the large amount of pottery, the presence of a huge quantity of bones, the consistence of the deposit, it could be interpreted as a place where the garbage was collected (according to report of A43 in SUM13C). US647 had a larger thickness and the accumulation of different floors suggests a continuous use of the street.

## **Excavation in Area F, room A239 (BF3) and tower A240 (trench supervisor:Alexia Pavan and Silvia Lischi)**

### *Room A239*

In area F excavations were carried on also in room A239, representing the southernmost room of building BF3. Operations started from an elevation of 28.49 reached during the previous campaign, corresponding to US667, covering all the area. However, considering the room was clearly delimited by walls M119, M86, M642 and M117 and that the composition of US667 was not clear, we decided to give a new name to the stratum. It is US708. The US is brown in colour, soft but not greasy, with a large quantity of animal bones (among the numerous horns). To be highlighted the presence of a fragment of stoneware and a fragment of paddle impressed ware (more similar to the African variant). A single small finds has been recovered: S2637, a fragment of soft-stone vessel. At the elevation of 28.19 the consistence of the accumulation changes: bones decrease and stones of small dimensions are now visible, it is US709. The accumulation is still brown and rather soft with few pottery shards and sparse animal bones. On the upper part of US709 a fragment of paddle has been found as well (it's the interface between the two layers), but, going down, undressed sandstone pieces occur in considerable number. A coin (Co877) has been found in the deposit. At an elevation of 27.29 stones disappear again: it's US711, brownish and soft, with very few bones and pottery (scanty fragments of vessels in straw temper ware – pinkish in colour- , a small fragment of wall in steatite temper ware). No small finds have been recovered. The thickness of this accumulation is 20 cm. Below US713 has been excavated. The composition is characterized by stones of big dimensions. The excavation of US713 was interrupted at the elevation of 25.31 m because of the space limitations and of the stability of the perimeter walls.



*A239 (north-west view): after excavation.*

### *Tower A240*

Tower A240 was delimited by walls M117, M685, M686 and M460 (the last one belongs to the city wall). We started the operations removing US712. Probably US712 is equal to US667 recognized in all the area during the previous campaign but not described. US712 is rather soft with animal bones, some pottery shards, stones of small and medium size and some crumbled mudbricks (red in colour). Among the pottery fragments a shard of terra sigillata with rouletting, pieces of double rod handle, fragments of so-called torpedo have been found together with a fragment of cooking pot with wiping marks.



*A240 (north view): after excavation.*



## Archaeological excavation of Monumental Building 2 (trench supervisor: Silvia Lischi)

During this campaign we continued and finished the excavation of MB2 started in SUM13C.



*A52 - MB2 (south view): before excavation of this campaign.*

The filling of **A52** is homogeneous throughout the room. After completed excavation it's possible assert that the stratigraphy is as follows:

**US650**: accumulation layer composed of the masonry blocks and few accumulation earth. This layer begins at a height of 27.80 m and ends at about 26.54 m. In this layer there were not found any materials. This layer has already been excavated in SUM04A, SUM13C and SUM14A.

**US705**: accumulation layer heavily stratified composed on the top of very compact earth and sporadic masonry blocks. And on the lower part was composed of mud bricks, sandstone slabs and few fragments of plaster. In this layer there were not found any materials. The height of this layer was 0,70 m, start from 26.54 m and finish at 25.84 m. This layer already excavated in SUM14A, SUM14B and has been finished excavate in this campaign.



*MB2 (north view): US705.*

**US678:** accumulation layer composed of planking level overlap. The layer was very compact and light brown in colour. In this layer there were found few masonry blocks, shells and bones often burnt, pottery fragments (few diagnostic – two with purple inside, samples 4 and 30 – three with bitumen inside, samples 13, 27 and 39), iron slags (samples 6 and 7 from SUM14B – samples 1, 6, 25 from this campaign) and some objects: oil lamps (Sh634, Sh638, Sh649, Sh651, Sh655), stone vessels (S2607, S2610), beads (Sh636, Sh639, Sh644, Sh650), stone tools (S2609, S2611, S2622), stone objects (S2608, S2613, S2615), whetstones (S2614, S2625), sandstone container (S2629), faceted ball (S2640). In the lower part of this layer has been found the top surface of seven column bases in limestone. The top of the layer was found at a level 25.84 m and the end of the layer was found at a level 25 m. This layer already excavated in SUM14A, SUM14B and has been finished excavate in this campaign.

**US706:** this accumulation layer is the lower part of US678, it has a different name because we want distinguish the materials found in the lower part of the layer, near the US706 floor. The layer was very compact and light brown in colour. This layer there was in throughout the room and covered the lower part of the column bases and the structures near the south wall (M93) of BF5. Inside there were found pottery fragments (few diagnostic – three with purple inside, samples 11, 12 and 15 – two with bitumen, samples 28 and 73), iron slags (samples 3, 7, 9, 16 and 43), shells and bones often burnt and some objects: oil lamps (Sh632, Sh637, Sh641, Sh642, Sh645, Sh656, Sh673, Sh698, Sh699), beads (Sh633, Sh640, S2624, Sh652, B92, Sh661, Sh675, Sh697), stone vessels (S2606, S2620, S2630, S2631, S2632, S2633, S2646), stone objects (S2608, S2613, S2626), stone tools (S2609, S2611, S2623), incense burner (S2621) and clay button (Cl63). The layer begins at a height of 25 m. This layer has been completely excavated in this campaign.

Below this accumulation layer there is a different and more complex situation. In fact, there are three new rooms. Two, called A241 and A242, near the southern wall of BF5 and one, called A244, in the remaining space.



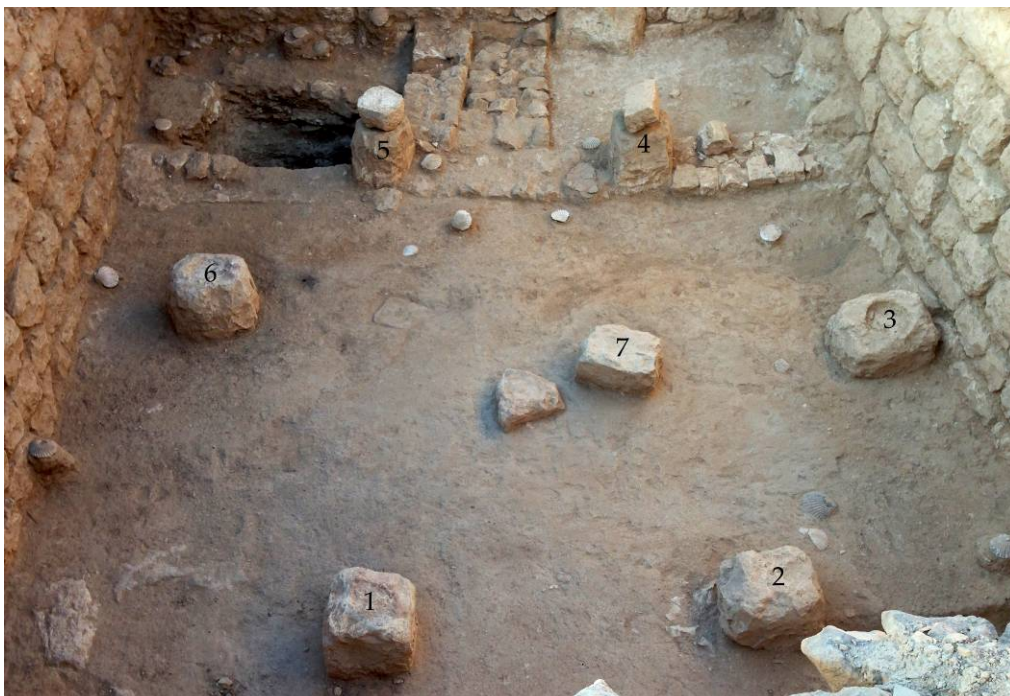
*MB2 (north view): after removed almost all US706 accumulation.*

### **Room A244**

The room was defined by the walls M93 to the north, M109 to the east, M92 to the west and M692, M693, M694 to the south.

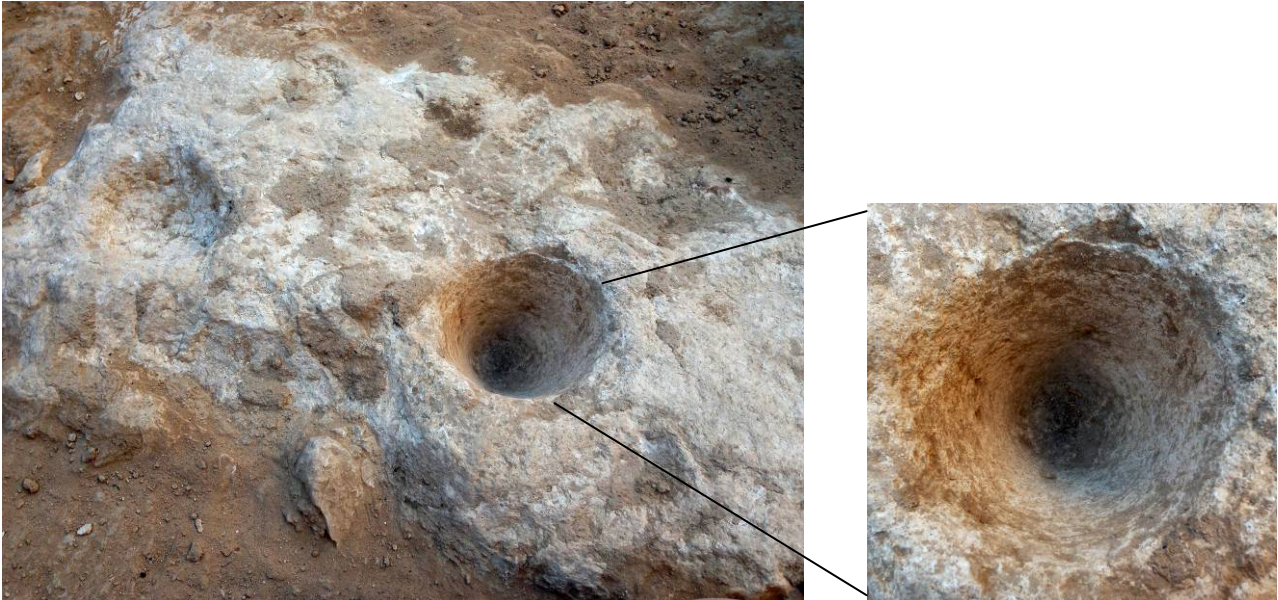
This room was directly under A52 and has inside five of the seven column bases found after excavation of US678 and US706. The other two column bases are incorporated from the walls M692, M693 and M694 to the south of room.

To be noted the presence of two column bases with a circular recess on the upper surface, n.3 and 6. Inside the room we continued to find the US706 for few inches and in some places the bedrock outcropping. Under US706 we found the US706 floor, six of the seven column bases rest on this floor. The central column seems rest on a higher level, always inside the planking level (q. 24,72 m).



*MB2 (north view): column bases inside A244.*

**US706floor:** for this floor was used the bedrock, levelled with very compact mud and in some places with plaster. The plaster was also used to fix the column bases and cover up the base of this. The presence of plaster is evident especially in the south, close to M692, M693 and M694. To be noted the presence of a hole on the floor made directly in the bedrock, between columns n.1 and 2, probably interpreted as a hole of the wooden pole. There are evident traces of manufacturing on the inner surface. Close to this hole there is another circular hole, just visible. The layer was found at a level 24,60 m. This layer has been completely excavated in this campaign.



*MB2: hole of the wooden pole.*

*Particular of the hole.*

### **Room A241**

The room was defined by the walls M92 to the west, M694 and M693 to the north, M696 to the east and M110 to the south.

In this room below the accumulation layer called US706, we founded the US715.



*A241 (west view): during excavation of the US715 accumulation.*

**US715:** this layer characterized by a large amount of masonry blocks in medium dimension and fragments of plaster. The layer was very compact and light brown in colour. Inside were found very few pottery shards, bones and shells. Only two objects were found in this layer: a shell bead (Sh676) and a sandstone dice (S2643). The layer was found at a level 25 m. This layer has been completely excavated in this campaign.

**US715floor:** this floor was made in plaster and not well preserved. The US715 directly covered the floor. The layer was found at a level 24,70 m and still *in situ*.



*A241 (north-east view): after excavation, US715 floor.*

### **Room A242**

This room was delimitate northward by M692, eastward by bedrock under the wall M692, southward by M697 and westward by M695. Here, once removed US706 accumulation discovered in whole area, we found US716.



*A242 (north view): before excavation of the US716.*

**US716:** this layer was looser and dark in colour, with fragments of reddish and greenish mudbricks and modern roots inside. We also found some stone small and medium in size, some bones, few shells and one iron slag (sample 51). Inside the layer there were found: six oil lamps (Sh665, Sh672), beads (Sh663, Sh674), tutufa bardey (Sh671), mortar (S2647), a stone object (S2642), two coins (Co881, Co882) and numerous pottery fragments (many diagnostic). The layer was finish at a level of 23,80 m. This layer has been completely excavated in this campaign.



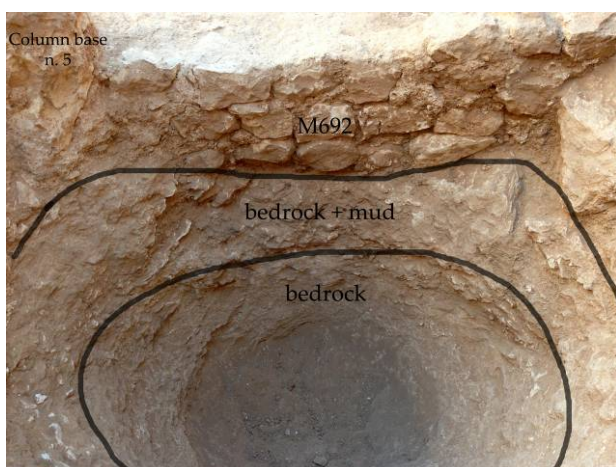
A242 (north view): position of the shells.



A242 (south view): before excavation the last part of US716.

**US718:** below US716 we found this new layer that was very looser and stratified, greyish in colour. Inside the layer there were found: a set of carnelian beads (S2653), few pottery fragments and few bones and shells. The layer was finish at a level of 23,20, when we found the bedrock. This layer has been completely excavated in this campaign.

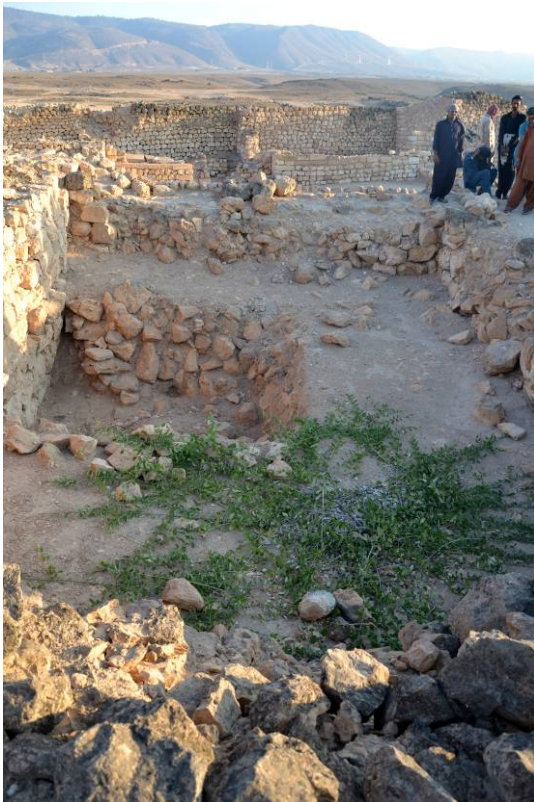
This environment, does not seem to have been used as such. It seems rather that the walls were built around to have been built with the intention to make the hollow in the bedrock more content and be able to relate with the rest of the building. The hollow enclosed by the room has walls in the shape of a funnel. The highest part of the walls is formed by walls or from bedrock outcrops, descending to the bottom there is a band of bedrock is not continuous but interspersed with clay. Below this layer takes the stone that goes to close the portion of 23.20 m. The hollow seems a natural one, but may have been made of the work surface is not appreciable.



A242 (south view and north view): stratigraphy inside the hollow.



*A242 (east view): after excavation.*



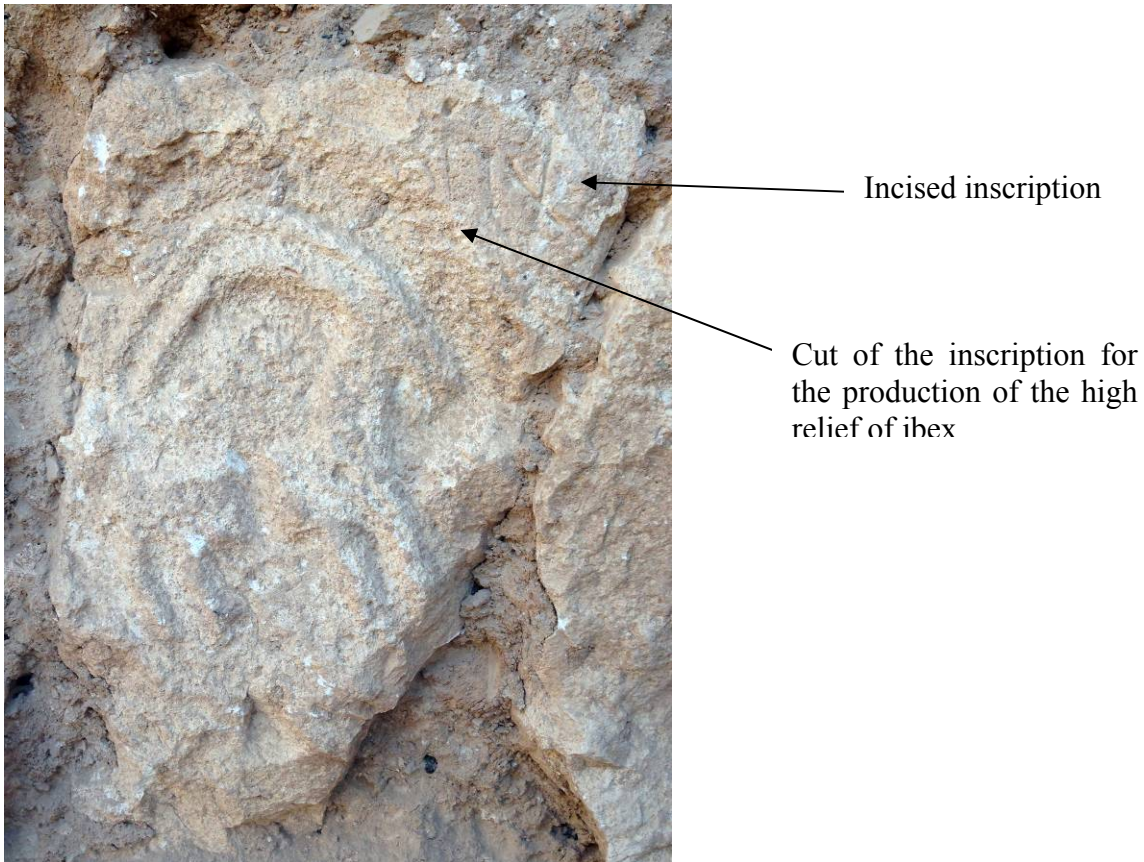
*BF5 (south view): before excavation (SUM13C) and after excavation (SUM14C).*

## **Preliminary conclusions**

### *Phase 1*

The first phase of the Monumental Building 2 is characterized by the presence of three rooms: A244, A242 and A241. The room A244 had a floor made of bedrock + plaster + mud (US706fl) at a level of 24,60 m. On this floor lean on six of seven column bases founded (n.1 – 6). Near the northern wall, between the column bases n.1 and 2, there is a hole in the bedrock floor. Probably a hole for a wooden pole (to support standard or other?). The carving stone on the northern wall

(M93) are probably contemporary at this period. To be noted that, at least on one carving stone (n.3), it appears that the ibex was produced reworking a masonry stone already inscribed.



*BF5: carving stone n. 3 with ibex.*

Near the southern wall there are two rooms: A241 and A242. The perimetral walls of A242 are: M692, M695 and M697. These walls doesn't seem to be highest of the existing because the few plaster preserved seems cover the top. There is the empty hollow inside A242. Inside the filling of the hollow we founded a lot of modern roof, an accumulation layer (US718) that seems the sedimentary layer and the bad conservation of the pottery shards. This leads us to suppose that its use was related to the presence of water. The room A241 has the walls M694 and M696 that, probably, were highest than now and a plaster floor (US715fl) at a level of 24,70 m. The wall M693, doesn't seem to be highest of the existing because on the top of the wall there was the layer US706 with two oil lamps and one pottery. It's possible that from this retaining wall could be enter in A241.



*BF5 (north view): M693 with shells and pottery shards on the top.*



The perimetral walls of the structure (M93 to the north, M109 to the east, M110 to the south and M92 to the west) that now arrive at a maximum level of 4,00 m, when the structure was in use probably reached a height of about 7,00 m. This consideration is based on the amount of collapsed stone were found inside the structure during its excavation. This calculation was made by Arch. Valter Filatondi on the basis of data provided by archaeologists Vittoria Buffa, Alexia Pavan and Silvia Lischi who dug the layers US650 and US705. It was assumed that the internal perimeter of stones, had the average size of 50 cm wide by 40 cm high and 50 cm in depth including the sealing mortar between them. These dimensions lead to an average volume of each stone of 0.10 mc. So considering the volume of the collapse, dug in the aforementioned US, amounting to 43 cubic meters, the size of the resulting relief (6 x 8.2 x 1.26) and adjusted by a percentage equal to 30% of ground, you get to determine the number 434 the collapsed stones. Having then determined in 57 stones the number sufficient for a course of stones along the perimeter, it may be assumed that there were 8 additional courses of stone above the current limit of the building. This number times the theoretical height of 40 cm above mentioned, leads to a height of 3.06 m above the current level of the building which is equal to 3.90 m. Therefore the overall height of 6.96 m is presumed. In this space is likely to think that there was the entrance to the house and there were space in the walls for the wooden beams supporting the upper floor. It is to point out in fact that all four internal sides of the perimeter walls have collapsed to a height not dissimilar to each other. This may suggest that at that level there was something that made them more fragile, perhaps lodgment of wooden support beams of the upper floor.

#### *Phase 2*

In this phase begins to form the sedimentary deposit (US718) inside the hollow in A242 and begins to get up the floor surface (US706) in A244. There is probably some problem in the support of the higher structures therefore is added a center column base that is on the floor at a level of 24,72 m.

#### *Phase 3*

During this phase the floor inside A241 is obliterated by a collapse of the perimetral walls (M694 and M696) or filling (US715). In A242 such a thing happens, infact above the sedimentary layer (US718), there is a layer composed by the stones of medium and small size, fragments of mudbricks and pottery shards. It's possible that this layer (US716) both voluntary. It's found at a level of 24,70 m. In this phase US706 cover the entire inner surface of the structure BF5, including the walls of the rooms A242 and A241. Thus was formed the room called A52. Inside this big room can still see the seven column bases and the carving stones on the northern wall.

#### *Phase 4*

It's impossible know the length of this period but there is a gradual but continuous accumulation on the first floor of A52, called US678. The height of this layer is about 0,84 m. The composition of the layer and the kind of material found inside allow to say that this layer was composed of numerous floor. The floor arrive at a level of 25,84 m and seems obliterate the column bases and almost all the carving stones on the northern wall. The floor made by earth, the lack of quality materials, the obliteration of column bases and carving stones suggest a change in the conception of the structure or perhaps even to a change in its use.

#### *Phase 5*

This is a abandonment phase. The types of the layers excavated (US705 and US650) suggest that the structure was abandoned and therefore has fallen primarily the middle floor and the roof and

then the upper part of perimetral walls. This does not seem a collapse witnessed by external findings which are negligible, but due to the slope of the walls inward that the collapse occurred preferentially inward.

*Technical notes on the construction type of MB2*

The outer walls of MB2 (M92, M93, M109 and M110) are splayed, this feature makes this a unique structure within the city of Sumhuran. To obtain this it has been necessary to resort to technical solutions in the construction technique: use of large stones within arranged orthogonally to the ground and use of small stones outside, necessary to give the splay without creating steps. The entire outer surface was completely covered with plaster, and this was only possible by building a continuous surface outside. The outer corners of MB2 are generally built with small stones, only in the case of the angle to the south-west the construction technique is more similar to that used in the rest of the city, with long cornerstones crossed.




*BF5 (north view): outer surface of M93 covered with plaster.*

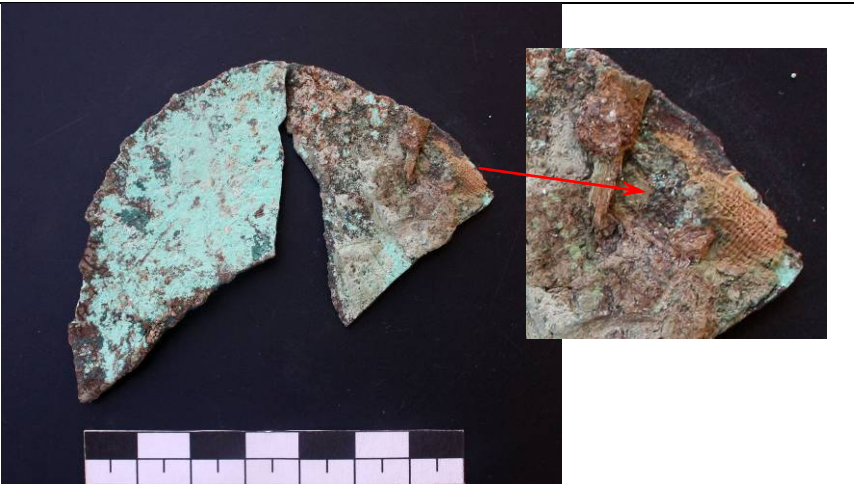
*BF5 (south-west view): outer corner of MB2 with long cornerstones crossed.*




## Object Index Card

<b>Registration Nr.</b> S2653 SUM14C, US718, 1			
<b>Provenance</b> Area F, BF5 (MB2), A242			
<b>Drawing code Nr.</b>			
<b>Definition</b> Beads (Type C.1 and I)	<b>State of preservation</b> Good	<b>Measures</b> l. w. h. th. diam.	<b>Shape</b>
<b>Material</b> Agate	<b>Preserved part</b> Complete		<b>Section</b>
<b>Description</b>  SUM14C, US718, 1 Eight carnelian beads found together. Five are hexagonal faceted beads (type C.1) and three spherical beads (type I).  Type I <ul style="list-style-type: none"> <li>a. d. 1 h. 0,9 d. hole 0,1</li> <li>b. d. 0,9 h. 0,9 d. hole 0,2</li> <li>c. d. 0,8 h. 0,8 d. hole 0,1</li> </ul> Type C.1 <ul style="list-style-type: none"> <li>d. d. 1 h. 0,8 d. hole 0,2</li> <li>e. d. 1 h. 0,8 d. hole 0,1</li> <li>f. d. 1 h. 0,8 d. hole 0,1</li> <li>g. d. 1 h. 0,9 d. hole 0,2</li> <li>h. d. 0,9 h. 0,9 d. hole 0,2</li> </ul>			
<b>Responsible</b> Silvia Lischi		<b>Date</b> 20/11/2014	

## Object Index Card

<b>Registration Nr.</b> MB870 SUM14C, US623, 40			
<b>Provenance</b> Area F, A43, US623			
<b>Drawing code Nr.</b>			
<b>Definition</b> Ornament (?)	<b>State of preservation</b> Fair	<b>Measures</b> l. 7 cm w. h. th. 0,2 cm diam.	<b>Shape</b> Circular (?)
<b>Material</b> Bronze	<b>Preserved part</b> Fragmentary		<b>Section</b> Flat
<b>Description</b>  SUM14C, US623, 40 Two fragments of bronze foil, probably used as an ornament for dress. Seems circular in shape. On the one surface there are a textile fragment, light brown in colour.			
<b>Responsible</b> Silvia Lischi		<b>Date</b> 19/10/2014	

## Object Index Card

<b>Registration Nr.</b> B92 SUM14C, US706, 25			
<b>Provenance</b> Area F, BF5, US706			
<b>Drawing code Nr.</b>			
<b>Definition</b> Bead (type B)	<b>State of preservation</b> Good	<b>Measures</b> l. w. h. th. 0,9 cm diam. 2,2 cm	<b>Shape</b> Circular
<b>Material</b> Fish vertebrae	<b>Preserved part</b> Complete		<b>Section</b> Flat
<b>Description</b>  SUM14C, US706, 25 Cylindrical disc-shaped bead with a central hole of natural origin and concave surfaces. There are four side holes, with ovoid shape and slightly to funnel ranging to join the central hole laterally. The surfaces are very smoothed. For comparisons see: B11 and B30. In southern Arabia seems there aren't attestations on the use of fish vertebrae for the production of beads, but there are several comparisons in Gujarat (India).			
<b>Responsible</b> Silvia Lischi		<b>Date</b> 11/10/2014	

# Technical Report

# Dismantling and restoration of *tannur* (Gianluca Buonomini)

- Dismantled *tannur* on the field





- Cleaning and consolidation in the laboratory







- Reconstruction





## ***Preliminary remarks on the pottery assemblage of BF5/MB2 (Vittoria Buffa)***

A very brief analysis of the pottery assemblage excavated in Monumental Building 2 allows only some preliminary considerations.

Overall it seems that the percentage of pottery of South Arabian origin is larger than usual in Sumhuram, with in particular a minimum percentage of vessels of “Indian” origin.

### Quantification of the materials

US650: no pottery as expected from the layer which represent the collapse/destruction of the upper part of the structure

US651: 28 fragments of storage vessels (with 2 amphora shards), 6 table vessels (with 1 glazed shard and 1 fragment of Terra Sigillata), 2 kitchen vessels.

US678: 18 fragments of storage vessels (with 2 amphora shards), 3 table vessels (1 glazed)

US715: 12 fragments of storage vessels and 1 fragment of kitchen vessel

US716: 121 fragments of storage vessels (with 26 amphorae), 181 fragments of table vessels (with 1 glazed shard), 40 fragments of kitchen vessels.

US718: 8 fragments of storage vessels, 1 fragment of table vessel.

To be highlighted the scarce quantity of pottery discovered in the deposit inside the building: 57 fragments (US651: 36 + US678: 21) on a surface of 6.05x8.20 for?? In height and, on the other hand, the huge amount of shards - 351- (US716: 342+ US718:9) discovered in A242, the “cistern/basin” (?), measuring 1,5x2 m for ?? in height.

For each US (from top to bottom) the following relevant fragments have been observed:

US651: -

1 terra sigillata (TSI?)

1 “Indian” cooking pot (Type I.1.1.10)

- 1 South Arabian straw tempered deep bowl (Type II.1.15)

- 1 jar Pavan type II.1.5.2 Tripolitanian 2, dated in Qana to the BA- II period (2<sup>nd</sup> – 5<sup>th</sup> cent. AD)

- 1 jar Pavan type II.1.6, dated in Qana to the BA-II period (2<sup>nd</sup> – 5<sup>th</sup> cent AD)

- 2 amphorae

- 2 glazed vessels

US678: - 7 glazed fragments

- 1 jar Pavan type II.1.6 , in Qana dated to the BA-II period, (2<sup>nd</sup>-5<sup>th</sup> cent AD)
- 1 handle of Dressel 2-4, 1 neck of amphora
- walls of South Arabian ovoid jars
- 1 “Indian” cooking pot (?)
- 1 ring base of a wavy rim bowl
- 1 high ring base of jar in straw temper ware

- US706: - 1 ring base of a wavy rim bowl
- few fragments of steatite tempered vessels, South Arabian types, 1 bowl with horizontal ledge handle
  - some amphora walls
  - several fragments of South Arabian ovoid jars
  - 1 toe of Egyptian amphora (Tomber: in KR mid 1<sup>st</sup> – early 2<sup>nd</sup> AD)
  - 5 fragments of goldish glazed vessels with shallow grooves, dated by Mouton to the Parthian Period.
  - 1 fragment of possibly Axumite pottery (US706, 6)
  - 1 Indian oil lamp

- US715 (A241): - 2 bases of wavy rim bowl and some fragments
- 1 rim of ovoid jar SA

- US716 (A242) : -1 fragment of “Indian” cooking pot
- 3 handles of Dressel 2-4 (1 or 2 Campanian), other fragments of amphorae
  - 1 glazed fragment
  - ring bases of SA ovoid jars
  - many SA shallow bowls and deep bowls
  - many ring bases of wavy rim bowls, only 1 rim
  - many SA steatite tempered cooking bowls, 1 with with horizontal ledge handle
  - 1 fragment of glazed vessel pale yellow
  - 1 rim of jar 2<sup>nd</sup> – 3<sup>rd</sup> cent AD (Pavan and Mouton, Pavan Type

#### II.1.2.2)

US718 (A242): very few sherds, a shoulder of a small jar with incised horizontal lines with the same encrustations visible also in shards from US716.

#### *Comments*

The lower level of floors in the entire building (US706) and in A241 (US715) incorporate pottery that can be dated from the 2<sup>nd</sup> (3<sup>rd</sup> ?) cent BC (goldish glazed vessels - Mouton) and pottery that in KR is dated to the earliest levels unearthed in the town (wavy rim bowls and steatite tempered cooking pots – Pavan). The end of

the US706 accumulation can tentatively dated to the 1<sup>st</sup> cent AD (Egyptian amphora dated by Tomber in KR mid 1<sup>st</sup> – early 2<sup>nd</sup> cent AD).

The layers above (US651 and US678) incorporate pottery that can be dated from 1<sup>st</sup> cent AD (amphorae Dressel 2-4) to the 2<sup>nd</sup> – 3<sup>rd</sup> cent AD (Pavan types II.5.2 and II.1.6).

The pottery assemblage found in A242, the “cistern/basin” (?), US716 incorporate fragments comparable with the pottery from the lowest accumulation in the building (US706) , wavy rim bowls, SA steatite tempered cooking vessels, but also Dressel 2-4 amphorae (at least 1 Campanian), and a jar dated by Pavan to the 2<sup>nd</sup> – 3<sup>rd</sup> cent AD. It seems therefore that in A242 we have pottery datable from the early occupation of MB2 to at least the first centuries AD. A possible explanation can be that A242 remained open for a long time , before going out of use around the 2<sup>nd</sup> – 3<sup>rd</sup> cent AD.

To be highlighted that many (but not all) the fragments from US716 show post-depositional encrustations (on both the surfaces and in fracture), possibly connected with the conditions of the deposit (presence of water?) (US716,19).

Some other show soot traces not clearly attributable to the depositional or post-depositional phase. Some of them are very worn (US716, 11).

***Preliminary remarks on the pottery assemblage of BF8 and rooms A227 and A228 (Alexia Pavan)***

At the end of the campaign a brief analysis of the pottery assemblage excavated in SUM14A and SUM14B in area F has been carried on.

The following US have been excavated:

US54 (covering the ruins of BF8): 228 fragments of storage vessels (with 41 shards of amphorae), 48 fragments of table vessels (with 4 glazed shards), 14 fragments of kitchen vessels.

US56 (square A20 and BF8: room A216): 63 fragments of storage jars (with 63 amphorae), 33 fragments of table vessels (with 3 glazed), 6 kitchen vessels.

US655 (=US659 in BF8: room A216) : 9 fragments of storage vessels, 3 fragments of table vessels but no diagnostic shards

US656 and related floor (BF8: room A216): 19 fragments of storage vessels

US659 and related floor (BF8: rooms A224, A217, A216, A223): 327 fragments of storage vessels (with 110 amphorae and 1 Black and Gray jar), 87 fragments of table vessels (with 1 glazed fragment), 64 fragments of kitchen vessels.

US660 and related floor (BF8: rooms A224 and A217): number not available

US675 (BF8: room A223), floor with no pottery

US676 (BF8: room A223), floor with no pottery

US687 (=US55, in A228): 16 fragments of storage vessels (with 4 shards of amphorae), 1 glazed fragment, 4 fragments of kitchen vessels.

Fragments from US54:

169: fragment of upper part of deep jar (Type III.1.8)

170: Egyptian amphora

171: cooking bowl in steatite temper ware with arch handle (Type I.2.4.6)

172: amphora

173: jar in straw temper ware (Type I.1.4.1)

174: possibly base of wavy rim bowl (Type II.6.1)

175: Terra Sigillata (TSI?)

176: Terra Sigillata

177: cooking pot (Type I.1.1.1)

178: cooking pot I.1.1.2

179: cooking pot in rice temper ware (Type I.1.1.4)

180: ring base in straw temper ware

181: cooking pot (I.1.1.5)

182: table jar, probably Indian (Type II.1.4)

183: handle of amphora

184: possibly base of wavy rim bowl (Type II.6.1)

185: cooking pot (Type I.1.1.9)

186: handle of amphora

- 187: handle of a glazed jar (very worn)
- 188: possibly wavy rim bowl (Type II.6.1) but in a variant of fabric still not attested
- 189: amphora
- 190: straw temper jar (Type III.1.4.1)
- 191: ring base in straw temper ware

Fragments from US56:

- 82: upper part of amphora with handle
- 83: storage jar/amphora (To check with Roberta)
- 89: =82 (amphora)
- 99: toe of amphora
- 94: storage jar in straw temper ware (Type I.1.4.1)
- 91: plate standing on low ring base (Hellenistic?) drawn by Martelli check with Roberta
- 93: storage jar (Type III.1.6)
- 84: storage jar in straw temper ware, possibly re-used or only very worn (Type I.1.4.1)
- 96: hole mouth jar/deep bowl (Type III.1.13)
- 92: lid with handle, drawn by Martelli
- 90: ring base of wavy rim bowl (Type II.1.6)
- 98: table bowl. Matches with SUM10A US412,6
- 95: storage jar in straw temper ware (Type I.1.4.1)
- 85: storage jar (new type)
- 97: storage jar (new type)

Fragment from US656:

- 1: fragment of ring base of storage vessel in straw temper ware

Fragments from US659:

- 1: handle of glazed jug (very worn)
- 2: table jar (Type III.1.1)
- 3: lid with button handle (new type); according to R. Roberta it could be Hellenistic or late Hellenistic
- 4: Terra Sigillata
- 5: table bowl (Type II.6.17)
- 6: table bowl (Wheeler type 1) in Black Slipped Ware
- 7: cooking bowl (Type I.2.2.1)
- 9: wavy rim bowl (III.6.1)
- 10: storage bowl (Type III.2.5)
- 11: fragment of spout (drawn by Martelli)
- 12: lid-cum-bowl (Type I.5.1)
- 13: table jar (new type)
- 14: table vessel, new type
- 15: small table jar (new type)



- 17: table open bowl (new type)
- 19: ring base of straw temper jar with whitish slip
- 20: ring base of storage jar in straw temper
- 21: ring base of storage jar in straw temper ware; whitish slip; post-depositional encrustations
- 22: storage jar in straw temper ware (Type III.1.4.1) (very worn)
- 25: rim of storage jar in straw temper ware (Type III.1.4.2)
- 23: ring base of storage jar in straw temper ware with whitish slip
- 24: storage jar (type III.1.8?)
- 26: storage jar in straw temper ware (Type III.1.4.1)
- 32: storage jar in straw temper ware (Type III.1.4.1)
- 27: ring base (very compact and hard fabric)
- 29: tulip shape bowl (Type III.2.3)
- 30: rim of storage jar in straw temper ware (Type III.1.4.1)
- 31: rim of storage jar in straw temper ware (Type III.1.4.2)
- 33: storage jar in straw temper ware (Type III.1.4.2)
- 34: hole mouth/ deep bowl (III.1.13)
- 36: table vessel, new type
- 37: ring base of storage vessel in straw temper
- 38: storage jar in straw temper ware (Type III.1.4.1)
- 39: rim of amphora
- 40: ring base of storage jar in straw temper ware
- 41: storage jar in straw temper ware (very worn)
- 42: high ting base of storage vessel in straw temper ware (very worn)
- 43: amphora handle
- 44: handle of amphora
- 45: handle of amphora
- 46: handle of amphora
- 47: handle of amphora 49: cooking bowl in steatite (Type I.2.4.4)
- 48: handle of amphora
- 50: cooking pot with possibly bamboo wiping marks (Type I.1.1.1)
- 51: cooking bowl in steatite (I.2.4.1)
- 52: wall of Paddle Impressed Ware. Fabric different from those previously attested.
- 53: cooking pot with rice temper (Type I.1.1.4)
- 54: (=58) cooking pot with rice temper (Type I.1.1.4)
- 55: cooking pot with rice temper (Type I.1.1.2)
- 56: cooking bowl in steatite (Type I.2.4.5)
- 57: cooking bowl in steatite (Type I.2.4.4)
- 59: cooking bowl in steatite (I.2.4.1)
- 60: cooking pot (new type) with crushed shell in fabric (shell?)
- 61: toe of amphora
- 62: storage jar, new type
- 63: cooking pot (Type I.1.1.1)
- 64: Indian cooking pot (Type I.1.1.5)

- 65: deep bowl/ hole mouth jar (Type III.1.13)
- 66: ring base of storage vessel in straw temper ware
- 67+71: handle of amphora (Egyptian?)
- 68: handle of Dressel 2-4 amphora
- 69: Black and Gray jar

Fragments from US660:

- 1: cooking pot (I.1.1.9) with two signs (letters?) incised after firing
- 2: table jar with flat rim (new type)
- 3: table jar (Type II.1.18)
- 4: cooking bowl (Type I.2.2.1)
- 5: table jar (new type)
- 6: table bowl (Type II.1.18)
- 7: wall of cooking pot with bamboo wiping marks (Kerala production)
- 8: wavy rim bowl
- 10: table bowl (Wheeler type 1) in Black Slipped Ware
- 11: table bowl (II.6.9)
- 12: wavy rim bowl (II.6.1)
- 15: cooking pot with rice temper (Type I.1.1.4)
- 16: cooking bowl (I.2.4.6)
- 17: cooking pot (I.1.1.9)
- 18: cooking pot with rice temper (Type I.1.1.6)
- 19: cooking pot with rice temper (Type I.1.1.2)
- 20: cooking pot (type I.1.1.1)
- 21: cooking pot (Type I.1.1.1)
- 22: cooking bowl (I.2.4.2)
- 23: cooking bowl (Type I.2.4.2)
- 24: cooking pot with rice temper (Type I.1.1.2) (worn)
- 25: cooking pot (I.1.1.2)
- 26: cooking pot with rice temper (Type I.1.1.1)
- 27: storage jar (Type II.1.4.1)
- 28: storage jar/amphora with many encrustations (post-depositional?)
- 30: ring base of storage vessel in straw temper
- 31: ring base of storage vessel in straw temper
- 32: storage jar (Type II.1.19)
- 33: storage jar with straw temper jar (Type III.1.4.1)
- 34: deep bowl/hole mouth jar (Type III.1.13)
- 36: deep jar (III.1.18)
- 38: rim of amphora
- 39: amphora handle
- 40: jar made from a re-used amphora
- 41: amphora handle
- 43: amphora handle

- 44: toe of amphora
- 46: deep jar made from a re-worked amphora. Wheel traces very evident, smoothed rim
- 47: handle of amphora (small dimensions)
- 48: cooking pot (Type I.1.1.9)
- 49: ring base of straw temper jar with possibly traces of re-working
- 50: table jug (new type). According to R. Tomber the shape could be Hellenistic or late Hellenistic

Fragments form US687:

- 1: cooking pot (Type I.1.1.1)
- 2: toe of Egyptian amphora
- 3: possibly rim of wavy rim bowl

*Comments*

A preliminary analysis of the ceramic assemblage from the investigated area reveals an evident homogeneity of the pottery from US54, US659 and US660. This works well with the interpretation of Sedov of a pit contemporary to US54 floor. The pottery is consistent with that found in the earliest layers of the city (see for example US174) with a number of cooking bowls in steatite and some wavy rim bowls (in Sumhuram these two types seem to be a marker of the contexts BC) although mixed with pottery dated to the end of the 1<sup>st</sup> cent BC/ 1<sup>st</sup> cent AD (see the Terra Sigillata cup US54, 175, and the noticeable amount of amphorae).

The Indian material reveals contacts with southern India (see the cooking pots with bamboo strokes in the interior typical of the Kerala production and the fragment of Paddle Impressed Ware –in a variant of fabric attested here for the first time) but also with the North as attested by the cooking pots with rice temper (Gujarat production) attributable to two different commercial routes (BC and AD). Also the archaeologically complete pot US660,45 could have a Gujarati provenance but the dating is uncertain (a similar shape is attested in Nevasa but the context is generically dated from the 3<sup>rd</sup> cent BC to the 5<sup>th</sup> cent AD).

To be highlight the occurrence of two fragments of bowls/plates (Wheeler type 1) in Black Slipped Ware (US660, 10; US659, 6), to be inserted into the same cultural horizon of Rouletted ware (3<sup>rd</sup>-2<sup>nd</sup> BC/ 1<sup>st</sup> cent BC).

Beside the cooking bowls in Steatite and the wavy rim bowls, the ASA material consists of ovoid jars on ring bases in Straw Temper Ware and deep bowls / hole mouth jars in the same fabric. A single fragment of tulip-shaped wall has been registered as well. Straw Temper Ware is attested in the pale yellow variant as well as in the pinkish one and in the one with red fabric and whitish slip.

An amount of re-worked vessel have been discovered as well (see the deep jar made from a re-used amphora US660, 46; the jar rim from amphora US660, 40; the re-used

high-ring base US660, 49) together with some pieces very worn (have they been exposed for a long time? See US659,1; US659, 42; US659, 22).

A mix of materials dated to the cent BC and AD occurs also in US686 in room A227 which has been equaled to US55 in square A20 (below US54) where a wavy rim bowl has been discovered together a toe of Egyptian amphora.

In chronological terms the contemporary occurrence of materials dated to the centuries BC and materials dated to the centuries AD could be an indicator of huge works of reconstruction (which implied also the demolition of previous structures) to be possibly dated to the 1<sup>st</sup> cent. AD.

## ***Preliminary remarks on the pottery assemblage of BA15 (Alexia Pavan)***

At the end of the campaign a brief analysis of the pottery material from building BA15 has been carried together with Giulia Buono and Carlotta Rizzo who have been trench supervisors of the excavations.

The following US have been excavated:

US472, in A222, superficial deposit  
US619, top layer, covering the whole building  
US664, in A218, covered by US619  
US627, in A212, covered by US619  
US636, in A210, covered by US619  
US642, in A211, covered by US619  
US643, in A209, covered by US627?  
US646, in A212, covered by US627  
US722, in A210, covered by US636  
US725, in A210, covered by US722  
US726, in A210, covered by US725  
US665, in A211, covered by US642  
US666, in A219, covered by US619

In US665 and US725 no pottery has been collected; in US726 no diagnostic pieces.

### **US646**

- 1: amphora or storage jar belonging to type III.1.18
- 2: base of glazed vessel
- 3: amphora
- 4: ovoid jars with conical neck and grooves below the rim (sometimes called “torpedo”)
- 5: base of jar in straw temper ware
- 6: cooking bowl (to verify the type, check the picture)
- 7: base of jar in straw temper ware

### **US643**

- 2: glazed bowl (II.6.6, Sasanian?)
- 3: glazed bowl (II.6.5, Sasanian?)
- 4: Indian cooking pot (I.1.1.2) with rice temper
- 5: fragment of flat storage base with large amount of grits and large red inclusions (to check the fabric)

### **US636**

- 1: glazed bowl (II.6.5, Sasanian?)
- 2: glazed jar/jug (II.1.24)
- 3: fragment of bowl made from a re-used shard

- 4: base of jar in straw temper ware
- 5: fragment of ovoid jar (so-called “torpedo” not surely attributable to a subtype because of the reworking)
- 6: dolium?
- 7: amphora handle
- 8: rim of jar in straw temper (III.1.4.1)

#### US664

- 1: fragment of wall
- 2: glazed bowl (II.6.5, Sasanian?)
- 3: lid cum bowl (I.5.1, wheel lines very evident)
- 4: base of glazed vessel

#### US666

- 1: not found

#### US472

- 2: hole mouth jar in straw temper ware (III.1.13)
- 3: base of Black and Gray jar

#### US627

- 11: glazed jug
- 12: cooking bowl (I.2.4.6)
- 13: amphora
- 14: fragment of decorated wall, see SUM06A US195, 1
- 15: Black and Gray jar (III.1.1.1)

#### *Comments*

The pottery assemblage unearthed in BA15 is generally to be dated to the late 2<sup>nd</sup>/3<sup>rd</sup> centuries AD. Beside the Black and Gray jars, the glazed bowls belonging to type II.6.5 have been found in archeological contexts to be dated to the 3<sup>rd</sup>/4<sup>th</sup> centuries AD in Kush (Kennet 2004: 132), ed-Dur (Mouton 1992: fig. 108, nos. 2, 6, 9, 10; 2008: 127-128, fig. 108, nos. 2-6), Ghallah (Mouton 2008: fig. 136, nos. 3-4). Similar bowls have been found also in Shabwa (Rutten 2009: 193, 196, fig. 1, nos. 4-10), at Khatt, Ras al-Khaimah, during the survey made by Derek Kennet (1998: 110-111, fig. 5, nos. 7-8) and in Qala‘at al-Bahreïn (Højlund, Andersen 1994: 240-241, figs. 1221-1123, nos. 260-261, figs. 1402-1404, no. 269, fig. 1473, nos. 276-277, fig. 1535).

The absence of amphorae is moreover an indirect proof of the late dating of the building.

According to the preliminary analysis of the pottery, building BA15 (or at least the occupational phase unearthed) is to be dated to the last constructional phase of area A and, in general, of the city, around the 3<sup>rd</sup> century AD.

# Restoration Report

**RESTORATION WORKS AT SUMHURAM  
(ARCHAEOLOGICAL PARK OF KHOR RORI)  
(Sultanate of Oman)  
CAMPAIGN from September to November 2014**

***IMTO***  
***Italian Mission To Oman***



**Technical Report**

**20<sup>th</sup> September – 13<sup>th</sup> November 2014**

**Valter Filatondi – Emiliano Mura**

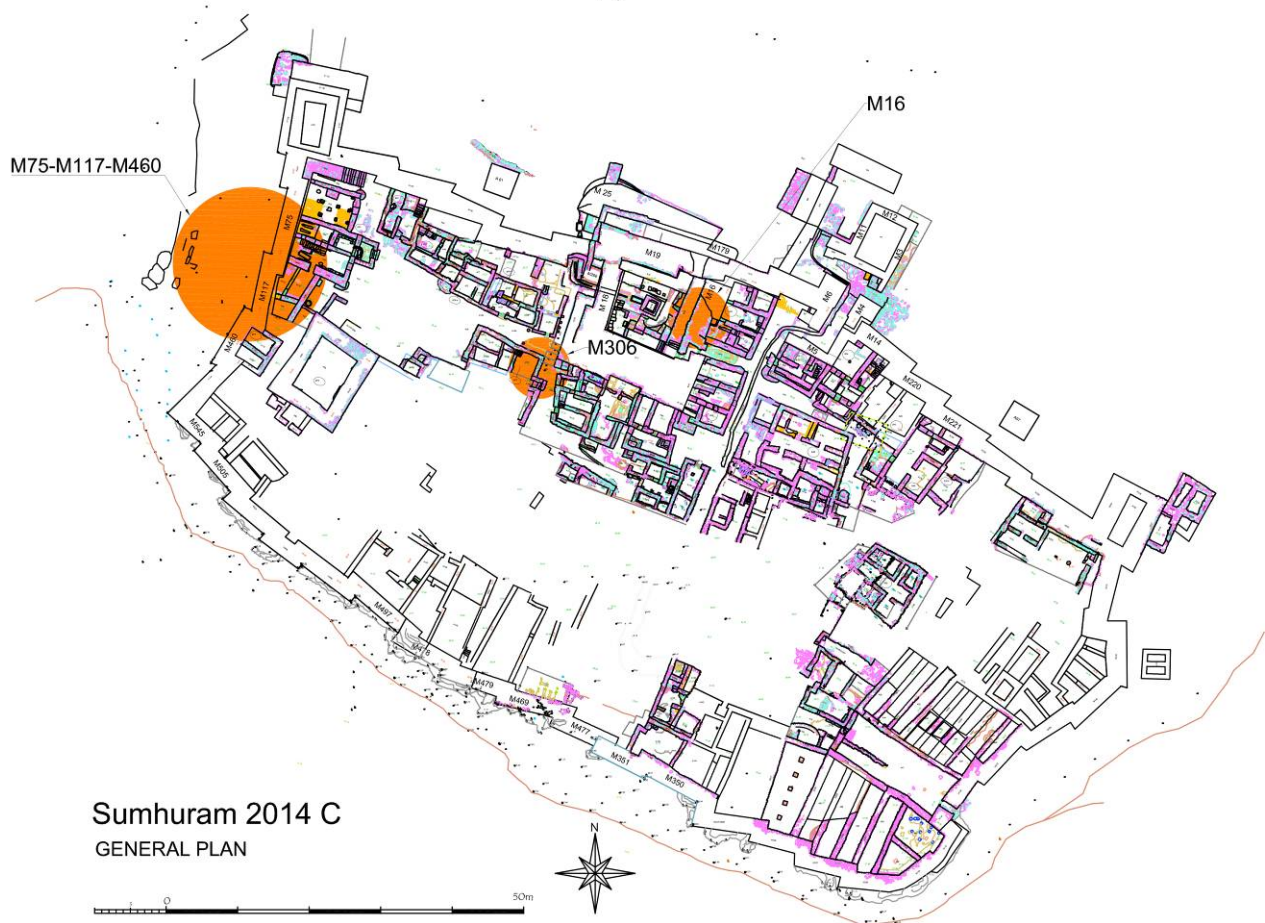


## Introduction

The restoration activities, during the campaign, regards the completion of the restoration of the walls of the Monumental Building 1. More in detail, the restoration regards the rising up of the wall M16. Beside this work, the restoration includes:

- the rising up of the walls M75-M117-M460 located at the west side of the city walls;
- the rising up of the wall M16 of the monumental building (East side);
- the reconstruction of the wall M306 located in front of the shrine.

The following map shows all the locations:



## Worker Teams

Two teams of workers have been engaged for all the needed operations to complete the reconstruction of the above mentioned areas. One team of eight people was engaged to prepare the mortar and the second one of twelve people was engaged for the restoration of the walls.

## Working progress status

In order to check the advancement of the works, we daily took a significant number of pictures of the areas. The number of the pictures and the point of viewing from which they are taken from, are those considered necessary for a good comprehension about the working progress status.

## Mortar preparation

The mortar, to be used for the connection between the stones, is the same used during the previous campaigns:

- **80** parts of brown colour with **200** parts of yellow colour.

The mix of the mortar is composed by the oxide colours mentioned above plus **4 buckets** of sand with eight scoops (**600grams**) of lime powder.

Therefore we have two different kinds of mortar:

- **stone mortar**, used for the external leaves of stones, obtained by the mix of sieved sand, hydrated lime, brown and yellow oxides for the chromatic tone.
- **filling mortar**, used for the back filling of the structure, made with the same components, except the use of raw sand instead of sieved sand without any brown and yellow oxides.

## Rising up of the wall M16 (Supervision Valter Filatondi)

On 20<sup>th</sup> September 2014 the situation on site was the following:



West side



East side

On 08<sup>th</sup> October 2014, after the restoration, the situation on site was the following



From West side



From East side

**Rising up of the wall M460**  
(Supervision Valter Filatondi)

On 20<sup>th</sup> September 2014 the situation on site is shown below.



On 13<sup>th</sup> November 2014, after the restoration, the situation on site is shown below.



**Rising up of the wall M117**  
(Supervision Valter Filatondi)

On 20<sup>th</sup> September 2014 the situation on site is shown below.



On 13<sup>th</sup> November 2014, after the restoration, the situation on site is shown below.



## **Rising up of the wall M75** (Supervision Valter Filatondi)

On 20<sup>th</sup> September 2014 the situation on site is shown below.



On 13<sup>th</sup> November 2014, after the restoration, the situation on site is shown below.



## Rising up of the wall M306 (Supervision Emiliano Mura)

On 02<sup>th</sup> November 2014, the situation on site was as shown below.



Wall facing East



Wall facing West

On 12<sup>th</sup> November 2014, after the restoration, the situation on site was the following





Wall facing East



Wall facing West