

## **Table of Contents**

### **1. Introduction**

- 1.1 Excavation Goals**
- 1.2 General Description of the Area**
- 1.3 General Description of the Strata**

### **2. Discussion of the Strata**

- 2.1 Stratum I**
- 2.2 Stratum IIA**
- 2.3 Stratum IIB**
- 2.4 Stratum III**
- 2.5 Stratum IV**
- 2.6 Stratum V**

### **3. Discussion of Architecture According to Strata**

- 3.1 Stratum I**
- 3.2 Stratum IIA**
- 3.3 Stratum IIB**
- 3.4 Stratum III**
- 3.5 Stratum IV**
- 3.6 Stratum V**

### **4. Appendix**

**Jabal Hamrat Fidan 2002**  
**Khirbat Al - Nahas**  
**Final Report**  
**Area: S**

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## **1. Introduction**

This report summarizes the excavation conducted in Area S excavation season 2002 at Khirbat Al – Nahas, Jordan. The report contains three chapters; the first chapter includes research goals set before the season, a description of the area and general discussion of the strata. The second chapter goes into more detail of the strata, mentioning included loci, and possible function of the area. The third chapter describes the architecture in more detail including tables with measurements and architectural style description. There will be references to figures in the text, the images are found in the appendix along with a list of the ones included in the report. Also included in the appendix are spatial maps of ground stones, special finds, copper metals and copper ceramics. Furthermore, the Harris Matrix from area S will be included in the appendix along with one section drawing of the stratum II A waste pit. The strata plans will also be found in the appendix, and the third chapter will refer to those instead of images.

### **1. 1. Excavation Goals**

One of the overall goals of this project was to investigate the copper production activity in the low lands as opposed to the plateau in southern Jordan. It has been suggested that organized copper production did not take place in the low lands until the 8: th or 7: th centuries B. C. E. One of the goals was to test that theory and investigate if copper production may have taken place in this area earlier than previously suggested. The administration of an earlier production phase was also taken in consideration as well as the relation between the low lands and the high lands.

The goals of the excavation in Area S were to investigate the structure visible on the top surface, as well as possible architecture below. Immediately southeast of Area S, a structure was excavated by a German team, led by Volgmar Fritz, during the early 1990:s. The structure they excavated was dated to the 11:th century B.C.E. This project does not connect to V. Fritz's excavation, but some of the questions that rose concerning his results may be further clarified by this project's excavation at Khirbat Al – Nahas. Spatial analysis of finds in the structure and its surroundings is another important aspect of this project.

### **1. 2. General Description of the Area**

Area S originally included six 5 x 5 meters squares on a north – south axis. The squares were distributed as two columns (N – S) and three rows (E – W). The western column was assigned the letters BBB, and the eastern CCC. The rows were assigned numbers starting with 43 to the north, 42 in the center and 41 to the south. Later in the excavation season, three more squares were added as a column AAA west of column BBB.

<b>AAA 43</b>	<b>BBB 43</b>	<b>CCC 43</b>
<b>AAA 42</b>	<b>BBB 42</b>	<b>CCC 42</b>
<b>AAA 41</b>	<b>BBB 41</b>	<b>CCC 41</b>

Just to the south of the area, a mound of slag was visible on the surface extending slightly over the gridline in the southern portion of Area S. Area M was located to the SE of Area S with a distance of approximately 73 meters. Area M included a slag mound very similar to the one south of Area S, and as excavation proceeded it was evident that primary smelting of copper took place at Area M. Area A was situated northwest of Area A with a distance of approximately 165 meters, being the main gate system of Khirbat Al – Nahas.

Several buildings, much like the one on the surface of Area S, are distributed through out the site of Khirbat Al – Nahas. A large building with possible guard towers is located to the west of Area S. An excavated building is situated to the east of the area. Most of the surface at Khirbat Al – Nahas is covered in slag, leaving an impressive black mass covering this large site.

### **1. 3. General Description of the Strata**

Area S included six strata: I, II A, II B, III, IV and V. The ground surface (STR. I.) was covered in architectural debris (see appendix, plan for Surface Debris.) and a large structure (see appendix, plan for stratum I) was located on the surface as well. The surface debris and the structure (STR. I.) consisted of large wadi boulders of lime- and sandstone, naturally rounded by erosion. Rectangular large shale slabs were included as well, possibly naturally cut in a rectangular manner slightly eroded over time. The function of the structure was not possible to determine. Further excavation around the site would offer a comparison to work with. The structure could possibly have served a short-term occupation. It is an enclosure better built on the northern, eastern and western sides, but it is unlikely that it was a high building, the collapse is wide spread but not substantial enough for a high building built in stone. The surface was leveled by filling the semi-subterranean building from stratum II B with large boulders very similar to the building material of the stratum I structure. This layer, referred to as collapse, was more than 1 meter thick.

Stratum II A (see appendix, plan for stratum II A) was represented by wall lines and blockages of entrances of an already existing structure (STR. II B.). The wall lines probably served as dividers for a courtyard east of the structure (STR. II B.). Copper production activity, such as secondary melting and limited final product production could have taken place here. There were no clear indications of an abandonment phase between stratum II A and B, but main activity could have shifted slightly from the building to the courtyards to the east of the building. The main copper production activity took place south of the structure, where a slightly later large production waste pit also was located. The blockages of the entrances of the structure (STR. II B.) most likely mark the end of stratum II A. No evidence of a sudden abandonment was noted within the area.

Stratum II B (see appendix, plan for stratum II B) included a four-room semi-subterranean building, common in the Levant during Iron Age II. This is the main occupational phase in the area. The main entrance was built in the western wall, leading into the main room (room 2). A small entrance is located in the center of the eastern wall as well, leading into room 3. Room 1 is located in the northern portion of the

building with an entrance leading to room 2, whereas room 4 represented the southern room with an entrance leading to room 2. Limited copper production activity took place inside the structure, possibly being final product activity. Major production activity took place to the south of the building, most likely including secondary melting. Slag crushing activities were conducted north of the building mainly, but also to the south and southeast, represented by surfaces.

Stratum III did not include occupation. It was represented by a layer of crumbled slag used as gravel to level the surface prior to building the structure (STR. II B.) The full extent of the layer was not exposed, but it was present below all rooms, and below the walls surrounding them. Extremely low amounts of finds were extracted from this layer, further indicating that no occupation was involved.

Stratum IV did not include much architecture, (see appendix, plan for stratum IV) which could be due to the fact that only samples of the surfaces were exposed. One small wall line below room 3 was noted. The surfaces were of hard packed possible mudbrick, and Early Bronze Age ceramics were mixed in with the pottery material. Early Bronze Age ceramics occur on the surface of the site as well and are therefore not reliable for dating. An installation below room 4 was also exposed, possibly serving as a cooking facility. Below the surfaces virgin soil appeared as yellowish sandy sediment mixed with gravel.

Stratum V represented the virgin soil in area S. It was first exposed in the deep probe, where a layer measuring approximately 1 meter of virgin soil was excavated. The soil is sandy yellow sediment mixed with gravel. The deeper layer of the probe included coarse sand.

## **2. Discussion of the Strata**

### **2. 1. Stratum I**

#### ***\* Indicates surface***

*(Sediment loci included in stratum I are: 293, 282, 251, 252, 253, 254, 255, 256, 294, 335, 283, 257, 266, 258, 343, 259, 260, 261, 273, 262, 263, 280, 267, 271, 268, 274, 278\*, 275, 299, 292, 296, 302, 300, 309, 305, 312, 317, 316.)*

A structure measuring 15.4 m. x 8.4 m. (walls: N – wall 265, E – wall 264, S – wall 270, W – wall 269) was situated on the ground surface of Area S. The building material consisted of large wadi boulders of mainly sand- and limestone. Occasional large slabs of shale were also included in the architecture. The structure was very poorly preserved and showed as an eroded rectangular feature, with wide wall lines as a cause of the extensive collapse. Very similar structures can be seen through out the site of Khirbat al – Nahas, and may be contemporary to the structure on the surface of Area S. A very large structure is situated just west of Area S with possible guard towers. The relation between the two structures remains unknown until further excavation is conducted. The function of the structure was not entirely clear. More comparative material from the site would be useful. Although, it was clear that it was an enclosure of some sort, perhaps serving a temporary or short-term occupation. Lack of surfaces associated with the structure (STR. I) may further indicate this. There were no signs of animal presence around the area.

Stratum I was the stratum containing the most loci within the area. The reason for this was the depth of the stratum, especially within the structure. The stratum I structure was built on top of the stratum II B structure, which was a semi-subterranean four-room building. Before the structure (STR. I) was built, the depression left from the semi-subterranean building (STR. II B) was purposely filled in with large boulders and reused worked stones, very similar to the building material of the structure (STR. I). The layer of rock fill extended to a depth of more than 1 meter. Outside the structure (STR. I), to the east and west, the loci mostly represented clearing the ground surface, topsoil, and fill. A pit was located to the south of the structure (STR. I) including metallurgical waste; and very large amounts of furnace slag as well as tapped slag was extracted from there. Additional large amounts of slag were recovered from just north of the structure (STR. I).

Initially the ground surface was cleared, (L. 293, L. 282, L. 251, L. 252, L. 253, L. 254, L. 255, L. 256) and finds such as pottery and slag were collected. The perimeters of the loci followed the 5 x 5 meters squares. Large amounts of slag were collected north of the structure (L. 293, L. 251) as well as south of the structure (L. 255, L. 256). Less slag was recovered from east and west of the structure (L. 252, L. 254, L. 282, L. 253).

No occupational surface was noted inside the structure (STR. I). Although, a hard packed mudbrick surface (L. 278) was recorded outside the southwest corner (Figure 1) most likely associated with the structure (STR. I). The surface was located just a few centimeters below the ground surface which may explain why the surfaces were so poorly preserved and the density of finds so low. L. 273 represented the fill above the surface, and L. 309 represented the locus below the surface.

Interesting to note was the different quality of soil inside and outside the structure in the topsoil. Light brown silty soil with collapse was the predominant soil type inside the structure (L. 283, L. 257, L. 259, L. 261), whereas the loci situated to the east, outside the structure, all consisted of a darker brown soil with clay contents (L. 258, L. 343, L. 260, L. 267, L. 268). Possibly the darker soil also contained more organic material. The soil difference was not as clear for the topsoil locus to the west of the structure (STR. I), which consisted of a sandy, silty sediment mix containing low amounts of finds (L. 335).

The topsoil south of the structure was ashier and contained metallurgical production waste (L. 263, 262). As the excavation proceeded, it was clear that L. 263 represented the top layer of a dug down waste pit, perhaps contemporary to the slag mound south of Area S. The amount of finds in L. 263 was so high and fragmentary that a shift of recording occurred. Instead of recording every fragment of tuyere pipe or furnace, a collective basket was opened for each category of finds. L. 263 extended below wall 270, bounding the structure (STR. I) to the south, and polluted L. 261 and 274. L. 263 extended all the way down to the stratum II A slag waste below (L. 310) (Figure 2). Large amount of slag and moderate amounts of metallurgical production waste was collected in the southern portion of L. 262. A layer of fill above a stratum II A surface was excavated below (L. 275) and wall 329 appeared, separating the waste pit from the loci to the east of it. Similar ashy sediment with metallurgical production waste was noted north of the structure (L. 266, L. 294), although in less amounts than south of the structure. The loci north of the structure are situated above a major slag crushing area (STR. II B), and are possibly fills above that surface and the sediment may have mixed with it, extending to the stratum I layer.

The lower extensions of the topsoil loci inside the structure (STR. I) was divided by the baulks that cut the inside of the structure (STR. I) in three parts (L. 280, L. 271, L. 274). Later, when the AAA squares were opened the northwest interior corner was excavated (L. 283) in conjunction with the rest of the interior loci. The light colored silty soil mixed with dense collapse was a common feature for them all as well as the very low density of finds. The baulks were all removed at this layer, exposing the top of the four-room building (STR. II B). After these loci were closed the perimeters of the loci below followed the outline of the architecture of the building below (STR. II B). The upper layers of stratum I inside the structure were represented by L. 299, L. 292, L. 296, L. 302, and L. 300. The lower layer including collapse inside the structure was represented by L. 305, L. 312, L. 317, and L. 316 (Figure 3).

#### **Room 1. Upper levels of stratum I                      L. 299, L. 292**

L. 299 included the eastern portion of room 1 whereas L. 292 represented the western half of the room. It was decided to separate the room in two loci due to architectural debris that was believed to be a thresh hold. The loci were very similar; the soil was light brown and silty and included very large amounts of collapse. Originally it was suggested that the room could have been used as a storage facility since several large grinding slabs and other worked stones were recovered. As excavation proceeded it was agreed that the groundstones were reused as fill material. As mentioned above, the worked stones and the regular rocks were used to fill in the depression left from the semi-subterranean building from the previous strata. This was further indicated by the very low amounts of finds collected from the two loci. The collapse continued further below, represented by L. 305. An important aspect of the excavation at this stage was to clear the architecture bounding the room and separating it from the collapse.

## **Room 2. Upper levels of stratum I                      L. 302**

L. 302 was a large locus, including the largest room in the building. Extensive collapse was removed from here. It was very similar to the upper levels in Room 1, the soil was light brown and silty with comparatively low amounts of finds. Pieces of corroded copper metal were among the finds as well as a few worked stones. Like all the upper levels of stratum I inside the structure, the large stones found in the sediment were not collapse but fill of the depression left from the semi-subterranean building from the previous strata. The collapse continued lower and locus 317 was opened below, representing the lower layer of stratum I in room 2. Defining the architecture surrounding the room was of great importance at this phase of the excavation.

## **Room 3. Upper levels of stratum I                      L. 296**

The locus represented the upper layer of stratum I inside room 3. The sediment was very similar to room 1 and 2, with light colored silty soil including collapse. Several worked stones were collected from here, again indicating that they were reused for filling the depression of the semi-subterranean building from previous strata. The amounts of finds were low in general, although more metallurgically related finds were found in the southern portion of the room. This room contained slightly less collapse compared to room 1, and 2. The lower layer of stratum I was represented by L. 312, opened below L. 296.

## **Room 4. Upper levels of stratum I                      L. 300**

The locus contained more metallurgically related finds than the other interior loci at this level. It was most likely due to contamination from L. 263, south of the structure, as it extended below wall 270. An effort was made to define the architecture surrounding the room, especially the interior western corners. The room included extensive collapse and the finds were limited. Several worked stones were found mixed with the sediment, most likely used in the filling process of the structure from previous strata. The lower level of stratum I in room 4 was represented by L. 316, opened below L. 300.

## **Room 1. Lower levels of stratum I                      L. 305**

The locus was used both for the lower level of stratum I containing collapse, and the upper levels of stratum II A. Finds increased considerably in the lower portion of the locus, indicating the beginning of stratum II A. Several worked stones were collected from the collapse layer reused in the same manner as in the other rooms. Defining the surrounding architecture was still an important part of the excavation of the room at this level as well as removing the remaining collapse. On the spatial analysis maps, the finds extracted from L. 305 were included in stratum II A as the majority of the finds were collected from the lower layers of the locus (Figure 4).

## **Room 2. Lower levels of stratum I                      L. 317**

The lower level of stratum I in this room was interesting since the finds increased considerably. All the soil was sieved from here, and in that process a fragment of a possible glass bracelet was collected indicating Egyptian influence (B # 6594 EDM # 10283). A final product mold fragment was also collected, being a casting mold of a figurine head. It has been suggested that it could possibly be a figurine mold of the Egyptian Goddess Hathor, the protector of metallurgy (B # 6323 EDM # 70879). Mixed in the soil there were a large number of worked stones, such as grinding slabs, shallow mortars, hammerstones and polishing stones. There were quite a few metallurgically related finds, all indicating possible secondary melting, such as partially processed copper, copper metal and prills. Although, the production most likely did not take place during stratum I, but relates to stratum II A or B. Since the structure was purposely filled by large stone slabs and reused large worked stones, the sediment may very well have been disturbed and mixed, contaminating stratum I. The finds were mixed with loose silty sediment and no surfaces were noted. Most likely, the locus represents the fill layer above the stratum II A layer (L. 331) and the stratum II B surface (L. 338). (Figure 5)



ore was found in the room, the soil did not contain any ash, and the low amount of slag indicated refining further. The tuyere pipe fragments and furnace fragments found in room 1, were few and could have been moved from the area of copper production activity that took place south of the structure (L. 310, L. 327, L. 328). Below L. 305, a stratum II B surface (L. 337) was recorded, and the finds listed here should be in taken inconsideration when analyzing that surface, as the soil may have been mixed as the structure (STR. II B) was filled in with the rock fill. (Figure 8)

## **Room 2.**

### **L. 331**

The locus represented fill above a surface (STR. II B, L. 338) and was very similar to room 1 as for the find material. Several worked stones were situated in the soil. Some grinding slabs and shallow mortars were found in situ, and some had been moved. Other worked stones included dimpled hammerstones, hammerstones, polishing stones, ballistic stones and a round worked stone possibly being a roof support. Large amounts of copper metal pieces were collected from room 2, and some of these contained iron metal as well. Furthermore, partially processed copper, slag with copper, some copper ore, a few furnace fragments and tuyere pipe fragments were recovered. Beads of different sizes, materials and shapes were collected along with small pieces of ostrich eggshell. The find material was pointing towards secondary melting activity and also possible final production. There were no ash mixed with the soil, and the slag collected from here, mostly came from the southwest corner of the room, corresponding to room 4. The slag concentration most likely related to stratum III below the surface of II B. Important to take in consideration when analyzing the material from here, is the large number of worked stones as well as the close vicinity to the stratum II B surface below. As mentioned before the soil may have been mixed around when the building was filled at a later phase. (Figure 9)

## **Room 3.**

### **L. 333**

As in rooms 1 and 2 the locus represented fill over a surface (STR. II B, L. 339) and the find material is very similar to the other interior loci. Worked stones were represented here as well, such as grinding slabs, polishing stones, dimpled hammerstones and regular hammerstones. Miscellaneous stones were recovered, possibly being used as raw material for beads. Several beads were included in this locus, and as before there were of various shapes, sizes and materials. Copper metal, partially processed copper, miscellaneous metal and slag with copper were recovered implying possible secondary copper processing. Very low amounts of copper ore was found along with a few tuyere pipe fragments and furnace fragments. A possible melting installation (small furnace) was located in the northeast corner of the room. Larger slag concentrations were recorded in that portion of room as well. Interestingly, no ashy soil surrounded the possible installation. If in fact secondary melting took place within the building (STR. II B) it is likely that it took place in room 3. Melting of copper in a confined environment does not seem very plausible, although heating of metal for final products may be possible. Again, it is important to consider the close location between this locus and the surface below as it might have been polluted when the filling of the structure took place. (Figure 10)

## **Room 4.**

### **L. 330, L. 334**

The soil and finds were very uniform with the other interior loci. The room was excavated in two phases; L. 330 represented the western part, whereas the eastern part was represented by L. 334. The soil was slightly sandier in room 4 compared to the silty soil found in room 1, 2 and 3. The most interesting find from here was a second scarab. It was found in L. 330 (B # 6974 EDM # 71241) and primary analysis indicate that this scarab could possibly be an Egyptian import as opposed to the first one, which is most likely locally made. The motif appears to be clearly Egyptian, and preliminary dating points towards the 11:th century B.C.E. It is interesting that both scarabs were found in the same room, but at different levels. Again, the soil could have been mixed around at a later phase. Scarabs could have been viewed upon as prestigious objects, and can therefore not be used for dating. They could have been kept for a long time, or reached the area long after they were manufactured. The Egyptian influence is still interesting to take in consideration, when analyzing the area further. Other finds in both loci included copper metal pieces, partially processed copper, slag with copper and possible iron metal. A few tuyere pipe fragments and furnace fragments were also recovered from room 4, but it is very possible that they originated from the copper production area



south of the structure. The wall (314, 315) separating the room from the production area was damaged, possibly when the waste pit was dug (STR. II A.) and pollution of room 4 could easily have occurred. Secondary copper processing is suggested to have taken place here as well as in the other interior loci. There were several hammerstones and dimpled hammerstones along with polishing stones further suggesting production. (Figure 11)

*Loci associated with copper production in stratum II A are: 279, 301, 310, 327\*, 328\**

Copper production activity was concentrated to two main areas in Area S, north and south of the structure (II B). L. 310 represent a continuation of the waste pit. The locus consisted of a thick layer of tapped slag as well as furnace slag. Metallurgical debris was also included in the waste. The curve in the section clearly showed that this was a dug down waste pit (Figure 2). Below the thick layer of slag a STR. II A surface was exposed (L. 327). Patches of crushed slag was recorded, and limited crushing activity could have taken place here. Very large amounts of tuyere pipe fragments and tuyere pipe fragments along with several metric tons of slag was collected from this area. A furnace (L. 324) was situated below L. 327 relating to stratum II B. When the waste pit was dug, the stratum II B layer was disturbed, stratum II A was at places intrusive to stratum II B. Furthermore, the furnace (STR. II B, L. 324) just mentioned, was of a higher elevation than its surroundings, making it appear as intrusive in L. 327 from below. When L. 327 was excavated a wall (W: 329) appeared, limiting the locus to the east. North of the wall (W: 329) a stratum II A copper production surface was exposed, contemporary to wall 329 and L. 327. The surface (L. 328) consisted of a large patch of mudbrick in the center of the locus with several concentrations of ash. (Figure 12) Primary smelting could possibly have taken place south of the structure, but it seems more likely that refining of copper was the main operation in Area S, whereas primary smelting took place in Area M.

An ashy fill (L. 301, L. 279) was excavated north of the structure, situated above a large slag crushing area (L. 284, L. 318) from stratum II B. The area was less dense in metallurgical finds than south of the structure. It may be that copper production activity in general was more limited during stratum II A than during the main occupational phase of stratum II B.

A probe was excavated to the northeast of the structure, in Sq. BBB 43. The probe was later extended to the east and west, in order to relate the walls (W: 288 and W: 276) with the layers between. L. 304, L. 319, and L. 277 represented the upper layer within stratum II A. Comparatively low amounts of finds were collected from there and all three loci consisted of a darker brown fill with possible clay contents. The lower layer in the probe area was represented by L. 307, L. 320, and L. 281, which all consisted of an ashy silty sediment, located above a possible stratum II B copper production layer including crushed slag.

The stratum II A wall additions most likely served as dividers of courtyards situated to the east of the structure. L. 322 represented the central portion, and the soil continued to be the slightly darker silty fill mentioned from stratum I. The finds extracted from here were mostly concentrated close to wall 288, bounding the structure in the east. A possible stone mold was collected (B # 6727 EDM # 71039) showing four long grooves on one side, and two grooves on the other. Several hammerstones and dimpled hammerstones were recovered as well as metallurgically related finds much like within the structure. Among them were copper ore, furnace fragments, partially processed copper, prills and slag with copper. L. 322 may have been fill above a production surface relating to stratum II B, but due to time constraints full excavation was not possible. L. 336 was opened below (STR. II B), and the density of finds increased although no proper surface was reached. The courtyards were included in the copper production activity. The darker soil may indicate production as well as higher contents of organic material. Some of the production could have moved from within the structure to the courtyards during stratum II A.

The main entrance of the stratum II B building was blocked, and excavation was conducted west of the structure to investigate the blockage further (L. 340). The locus contained very few finds although some worked stones were included in the collapse mixed with the soil. The blockage may mark the end of the occupation of stratum II A. Another blocked entrance was noted in the central portion of wall 288, bounding the structure to the east. This entrance could have blocked at an earlier stage during stratum II A as it seemed that it was blocked when wall 357 was added to the structure.

## 2. 3. Stratum II B

### **\* Indicates surface**

(Sediment loci included in stratum II B are: 318\*, 337\*, 284\*, 311, 339\*, 338\*, 336, 332\*, 354\*, 355\*, 324, 323, 321, 285, 325, 295)

Stratum II B indicated the main occupational phase in the area. The four-room structure was built within this stratum. The building is quite typical for Iron Age II in this part of the Near East. Surfaces associated with the building are listed below. The activity inside the structure did not seem to change considerably from stratum II A to II B. Secondary melting may have been the main activity in the area as well as crushing slag in order to extract the copper attached to the slag after the first smelting took place. Limited bead production could possibly have been conducted here as raw materials along with so many different designs of beads were represented. (Figure 7)

### **Room 1.**

### **L. 337**

Lower amounts of finds were found as the surface was excavated and removed. The surface was hard packed at places, light brown and quite even. Very few furnace fragments and tuyere pipe fragments were collected from here along with moderate amounts of partially processed copper, slag with copper and copper metal. There were considerably fewer worked stones at this level below the collapse. There were no indicators of a big change of function of the room compared to stratum II A. In fact, the finds in the locus above (STR. II A, L. 305) might be closely related to this locus as the layers may have been mixed as the building was filled. It seems likely that the transition period between stratum II A and B may have been continuous, with no abandonment phase. Therefore, the function of the building may not have changed considerably, except that some of the activity was possibly moved to the courtyards east of the building during stratum II A. (Figure 8)

### **Room 2.**

### **L. 338**

Approximately a quarter of the room was excavated with an E – W orientation, reaching between wall 297 and 291. The surface was uneven; being hard packed mudbrick mixed with loose sediment. More slag was collected from the eastern portion of the locus, possibly originating from the slag layer below. The density of finds was slightly higher in room 2 than in room 1. The majority of the finds were metallurgically related such as, furnace fragments, tuyere pipes, slag with copper, partially processed copper, copper metal and copper ore. A very large piece of corroded metal was collected from the northern portion of the locus (B # 7506, EDM # 71497). The furnace fragments and tuyere pipes were collected in very low numbers, and did probably not originate from the room but from production area to the north and south of the structure. Several worked stones were recovered from room 2 as opposed from room 1. Hammerstones, dimpled hammerstones and grinding slabs were found on the surface although not necessarily in situ. As mentioned above, there were no indications of an abandonment phase between stratum II A and B, and the activity inside the structure may not have changed considerably. The most obvious change of strata shows in the wall additions that are quite distinct from the structure (STR. II B) in architectural style (see chapter 3). (Figure 9)

### **Room 3.**

### **L. 339**

Approximately a third of the room was excavated to this level. A small possible furnace was located in the northeast corner of the locus and several furnace fragments were collected from there. Copper metal, partially processed copper, copper ore and tuyere pipe fragments were also collected from here. Possibly, the furnace in the corner worked as a small scale melting installation used in secondary or final copper melting. Puzzling is that there was no ash mixed in the soil surrounding the furnace. Carnelian pieces along with quartz, ostrich egg shell and several beads were found in room 3, possibly indicating bead production. Intense activity may have taken place here, indicated by thin surfaces on top of each other, with patches of slag. A blocked small entrance was noted, leading into this room from the east connecting it with the

courtyards. The blockage of the entrance most likely took place at the end of stratum II A, leaving room 3 connected with the courtyards at least during stratum II B as well as early stratum II A. (Figure 10)

#### **Room 4.**

#### **L. 332**

The surface was situated on a thick layer of crumbled slag, which was partly mixed in with the surface. The density of finds was slightly lower in room 4 compared to room 2 and 3. Metallurgically related finds such as copper metal, copper ore, slag with copper, prills, slag with copper, tuyere pipe fragments and furnace fragments were recovered from the surface. The vicinity of the main production area just south of the room should be taken in consideration, although room 4 is separated from it by wall 315. Secondary melting activity inside the building fit the material in room 4 as well. As stated above, there were no clear division between the strata II A and B; it seems more likely that the transition was gradual and that the main activities stayed the same. Hammerstones and grinding slabs were collected from room 4, further pointing towards the same find material between the two strata. Beads and worked shell were also present in the room, but no raw material for beads was found, and the number of beads was a lot lower here than in room 3. (Figure 11)

*Loci associated with copper production in stratum II B are: 285, 321, 323, 318\*, 284\*, 324, 354\*, 355\**

There were two main copper production areas within Area S. A furnace (L. 324) was situated south of the structure (STR. II B), on a surface (L. 355) with indications of slag crushing activities. A second surface (L. 354) with signs of crushing activities was located to the southeast of the structure (STR. II B). (Figure 13) The surfaces of L. 355 and L. 354 were never excavated, only fully exposed. Both surfaces included patches of hard packed crushed slag that extended below wall 329 (STR. II A). It was evident that the crushing activity was related to the furnace, suggesting secondary melting. Compared to Area M, large amounts of slag with copper were found in Area S whereas in Area M almost none was found.

The second main production area was located north of the structure. A distinct surface was noted being the size of 1,5 squares (L. 284, L. 318).(Figure 14). Only a small portion of the large size locus was excavated. A very hard packed surface consisting of very finely crushed slag appeared at the top, and as it was excavated it became evident that the layer of slag was at least 15 cm thick, with very thin layers of sediment in between. (Figure 15) A possible theory could be that the copper was primarily smelted in Area M, and before the secondary melting took place in Area S, the slag was crushed to extract the copper attached to it from the smelting process. After it was extracted, it was melted again to further purify it. The secondary melting could have taken place in the furnace (L. 324) south of the structure, or a second furnace may be located north of area still unexcavated.

Possible copper production activity could also be traced in the probe (L. 285) and in its extensions to the east (L. 321) and west (L. 323). An approximately 15 cm thick ash layer with large amounts of crushed slag appeared in the probe (L. 285). It was situated slightly lower than L. 318 north of the structure. Quite large amounts of bones were collected from here, possibly indicating a rubbish dump. Small pieces of slag, and very fragmentary pottery, tuyere pipe- and furnace fragments indicated this further. The layer was very distinct from the crushing slag surface. The surface was very dense and hard, whereas the soil in the probe was loose and ashy. The northern portion of L. 323 contained several worked stones of various types, possibly being tools that were discarded. Below the ash layer a layer of ashy silty sediment was exposed (L. 295 in the probe, L. 325 east of probe). A second layer with ash and slag appeared below that (STR. III, L. 303, L. 326), so L. 295 and L. 325 may have been fill between the two. (Figure 16)

The central part of the courtyards east of the structure was also excavated (L. 336). The soil continued to be slightly darker than on the inside of the structure. A high variety of finds were collected from this locus, pointing towards secondary melting or final product activity. Very large amounts of worked stones of various kinds were collected from L. 336. Several hammerstones, dimpled hammerstones, pestles, polishing stones, grinding stones were among the finds. A carnelian flake was found along with possible worked quartz. Tuyere pipe fragments, partially processed copper, copper ore, slag with copper and copper metal were represented among the metallurgical finds. Due to time constraints it was not possible to excavate this locus any further. But the density of finds indicated that an occupational level might have

been below. Indications of both bead production as well as secondary and final copper production were present here. (Figure 17)

#### **2. 4. Stratum III**

*(Sediment loci included in stratum III are: 342, 326, 303, 344, 345, 341)*

Stratum III represented a layer of evenly crumbled slag situated below the stratum II B structure. The slag crumble created the equivalent of gravel, and was used for leveling the surface prior to building the semi-subterranean stratum II B structure. The lower line of the walls from the structure (STR. II B) was surprisingly straight, and the leveled surface probably facilitated the construction of the four-room building. The common feature for all the loci below the structure was that almost no finds were collected from this layer.

The slag layer became evident as the surfaces from stratum II B were excavated and removed. The surfaces were excavated as small probes, so the slag layer was not exposed to its full extent. In all four rooms the slag layer appeared below the surfaces associated with the structure. The layer was the thickest below room 2 (L. 345) (Figure 19) extending below wall 298 into room 1 (L. 342) (Figure 18). Below room 3 the slag layer (L. 344) appeared unevenly with a concentration to the northeast (Figure 20). A copper arrowhead was collected from here and recorded with the EDM (B # 7559 EDM # 71533) but most likely it belonged to stratum II B (L. 339). The uneven surface above the slag as well as the uneven distribution of slag below room 3 could explain why the arrowhead was recorded as part of stratum III. The slag layer was quite thick below the western portion of room 4 (L. 341) as well, and it may be that the surface from stratum IV was sloping slightly. (Figure 21)

A different slag layer appeared in the probe as well (L. 326, L. 303). The slag was crushed and not crumbled. The probe area could possibly have served as a dumping area for the slag that was too small to use for the filling of the depression below the structure. (Figure 16)

#### **2. 5. Stratum IV**

*(Sediment loci included in stratum IV are: 346, 347, 350\*, 351\*, 352\*, 353\*, 356)*

Even though the room numbers do not apply anymore, the same perimeters of the loci continued to be used as excavation proceeded. The stratum II B structure was not removed, so its walls and the slag layers below them bound these loci. As only small portions of the former rooms were excavated in combination with very low amounts of finds, the function of these surfaces remain unknown.

##### **Below Room 1.**

##### **L. 353**

Slightly less than half of the former room 1 was excavated. The stratum IV surface sloped to the south, and the slag layer above it is quite thick, especially towards the south (below wall 298), which may have compensated for the topography of stratum IV prior to when the structure (STR. II B) was built. Very few finds were found on the surface, although two large pharyngeal fish teeth were collected. Perhaps the surface was disturbed when the slag filling was distributed over it. As the surface was removed, virgin soil appeared below as yellowish sandy sediment mixed with gravel. No locus was opened for that layer. (Figure 22)

**Below Room 2.****L. 352**

Approximately a quarter of the former room 2 was excavated, extending from below wall 297 (STR. II B) to the west and wall 291 (STR. II B) to the east. The surface appeared as a hard packed mudbrick surface, light in color. Very few finds were extracted from here, but a few pottery sherds and partially processed copper were among them. A cup mark was situated in the southwest corner of the locus, recorded with the EDM (EDM # 71637). As the surface was removed, virgin soil appeared as yellowish sandy sediment mixed with ravel. No locus was opened for that layer. (Figure 23)

**Below Section Room 3. Upper level STR. IV****L. 347**

The locus represented a layer of fill above the stratum IV surface below. The slag layer (STR. III) was only partly covering it. General finds were collected from here along with a hammerstone and very low amounts of copper ore. L. 351 was opened below it representing the surface. Early Bronze Age sherds were among the pottery collected from this locus. They were few, and Early Bronze Age pottery occurs on the surface through out the site, so they are not reliable for dating.

**Below Section Room 4. Upper level STR. IV****L. 346**

The locus represented a layer of fill above the stratum IV surface, including large amounts of bones and some pottery. Approximately a third of the former room was excavated. A possible rock mold was recovered from here, broken in two pieces, showing one groove on one of the sides. An installation (L. 356) appeared in the northwest corner of the locus, relating to the stratum IV surface below (L. 350). Early Bronze Age sherds were among the pottery collected from this locus. They were few, and Early Bronze Age pottery occurs on the surface through out the site, so they are not reliable for dating.

**Below Section Room 3. Lower level STR. IV****L. 351**

The surface appeared below L. 347 as a hard packed very even mudbrick surface with a post hole in the northwest corner of the locus. Approximately a quarter of the former room was excavated. A single stone wall line, one course deep, was bounding the locus to the northeast (W. 359). Low amounts of general finds were collected from here, along with very little copper ore and partially processed copper. As the surface was removed, virgin soil appeared below as yellowish sandy sediment mixed with gravel. (Figure 24)

**Below Section Room 4. Lower level STR. IV****L. 350**

The surface appeared below the layer of fill (L. 346) above. Approximately a quarter of the former room 4 was excavated. A rectangular installation, contemporary to the locus was situated in the northwest corner of the locus, excavated separately as L. 356. A sample of mudbrick most likely relating to the installation was recovered along with low amounts of general finds. As the surface was removed, virgin soil appeared below as yellowish sandy sediment mixed with gravel. No locus number was opened representing the virgin soil. (Figure 25)

The installation (L. 356) found in association with L. 350 consisted of a rectangular small feature built from small uncut stones, partly covered in mudbrick. There were small divisions inside the installation perpendicular to the outer rectangle. The inside stones were partly covered in partially burnt mudbrick. The installation could possibly have been used as a cooking facility. A hammerstone, a dimpled hammerstone along with a red miscellaneous stone were collected from inside the installation along with very limited amounts of pottery. (Figure 25)

**2. 6. Stratum V**

*(Sediment locus included in stratum V is: 308)*

Stratum V represented virgin soil. It was first reached in the probe (L. 308) where it appeared as a yellowish sandy sediment mixed with gravel. The locus included a depth of excavation of approximately 1 meter. The lower part of the locus is pure coarse sand. No finds were collected from L. 308.

Loci were never opened below the structure (STR. II B) representing the virgin soil. All the surfaces from stratum IV are all situated on top of the virgin soil, marking the first phase of occupation in Area S.

### 3. Discussion of architecture according to strata

#### 3.1. Stratum I

*(Walls included in stratum I are: 264, 265, 269, 270)*

The walls included in stratum I all bounded the main structure on the ground surface. North – W: 265, East – W: 264, South – W: 270, West – W: 269. The large structure was oriented in a NW – SE direction.

The building material used for these walls was exclusive for stratum I. It consisted of large wadi boulders, mostly of sandstone and limestone. They were naturally rounded and some were extensively eroded. Large rectangular shale slabs were also included in the material. Shale is local stone, and breaks naturally in angles. The same material of stones was also used for filling the semi-subterranean structure (STR. II B). Large amounts of reused worked stones were included in the rock fill and in the architecture.

<b>Wall 264</b>	Length: appr. 12 – 13 m.	Width: 1.5–2 m. incl. collapse	Height:
<b>Wall 265</b>	Length: appr. 8 m.	Width: 2 m. incl. collapse	Height:
<b>Wall 269</b>	Length: appr. 9. 5 m.	Width: 1.5–2 m. incl. collapse	Height:
<b>Wall 270</b>	Length: appr. 5 m.	Width: 1. 5 m. incl. collapse	Height:

#### 3.2. Stratum II A

*(Walls included in stratum II A are: 276, 306, 329, 348, 349, 357, 358)*

Walls 306, 348, 357 and 349 were all parallel, situated to the east of the structure (STR. II B), oriented NE - SW. Wall 276 and wall 329 were oriented NW – SE. Wall 329 was added to the exterior southeast corner of the stratum II B structure, whereas wall 276 was located in the northeastern-most corner of area A, not fully excavated. It is likely that W: 276 was perpendicular to the four walls mentioned above (W: 306, W: 348, W: 357 and W: 349). These same four walls were all added to the structure (STR. II B.) most likely serving as dividers of courtyards east of the structure. The blockage of the small entrance in wall 288 seemed to be connected to the building of W: 357 (see appendix X plan for stratum II A) W:358 is not fully exposed, but it is oriented in a NW – SE direction, west of the structure. It may be perpendicular to wall lines connected to the structure.

The building material from stratum II A showed distinct architectural features as well. The stones are all naturally rounded and medium sized. The walls were usually single wall lines, with multiple courses. In wall 329, large pieces of tapped slag were included as building material as well.

<b>Wall 276</b>	Length: 2. 6 m.	Width: 0. 45 m.	Height: 0. 80 m.	Courses: Max. 6 Min. 6
<b>Wall 306</b>	Length: 4. 0 m.	Width: 0. 36 m.	Height: 0. 68 m.	Courses: Max. 5 Min. 5
<b>Wall 329</b>	Length: 4. 6 m.	Width: 0. 40 m.	Height: 0. 47 m.	Courses: Max. 3 Min. 3
<b>Wall 348</b>	Length: 2. 2 m.	Width: 0. 44 m.	Height: 0. 42 m.	Courses: Max. 4 Min. 4
<b>Wall 349</b>	Length: 2. 4 m.	Width: 0. 40 m.	Height: 0. 72 m.	Courses: Max. 4 Min. 4
<b>Wall 357</b>	Length: 2. 2 m.	Width: 0. 45 m.	Height: 0. 62 m.	Courses: Max. 3 Min. 3
<b>Wall 358</b>	Length: 1. 5 m.	Width: 0. 38 m.	Height: 0. 58 m.	Courses: Max. 3 Min. 3

### 3. 3. Stratum II B

(Walls included in stratum II B are: 287, 288, 289, 290, 291, 297, 298, 313, 314, 315)

The four-room building was built in a NW – SE direction. Room 1 was the northernmost room, oriented in a NE – SW direction. Room 2 represented the largest room in the structure, in the central and western portion of the building. It is oriented in a NW – SE direction, parallel to room 3, which is located in the central eastern portion of the building. Room 4 represented the southernmost room, oriented in a NE – SW direction, parallel to room 1. (see appendix X plan for stratum II B)

The building material used in this structure consisted of rectangular cut medium sizes stones. The architectural style was exclusive to stratum II B. The main entrance accessing the structure was located in the northwest part of room 2 (W: 297). It measures approximately 1. 6 m. Larger cut square stones marked the entrance. The entrance was blocked during stratum II A. A large lintel was recorded below the blockage, possibly fallen from the entrance (see appendix X plan for stratum II B collapse). A second, much smaller entrance was noted in the central portion of wall 288 connecting room 3 with the area east of the building. The entrance measured approximately 0. 6 m.

There were several entrances connecting the interior rooms within the building. The one connecting room 1 with 2, measured 0. 66 m. (W: 298). A large opening between room 2 and 3 measured 2. 5 m. (W: 290, W: 291). The opening between room 2 and 4 measured 0. 86 m. (W: 289, W: 313). A possible second entrance between room 1 and 2 was noted in the portion of wall 298 where it meets the exterior wall of 297. It was suggested that it could also have served as a possible interior window. It was completely blocked, and the blockage was never removed. There were more examples of blocked windows within the structure. In the eastern end of room 4 (W: 288) a blockage was noted in the section of the wall. A third opening between the eastern portion of wall 298 and wall 291, similar in size with the previous so called windows was noted. Large cut stones mark the lower limit of the opening.

The measurements in the following table are measured excluding the walls surrounding the rooms, and interior lines of the walls.

<b>Room 1</b>	Dimensions 6.1 x 2.2 m.	North: wall <b>287</b> Length: 6.08 m. Width: 0.4 m. Height: 1.2 m.  Courses: 8	East: wall <b>288</b> Length: 1.9 m. Width: 0.44 m. Height: 1.18 m.  Courses: 9	South: wall <b>298</b> Length: 5.7 m. (incl. entrance) Width: 0.4 m. Height: 1.26 m. Courses: 10/5	West: wall <b>297</b> Length: 2.15 m. Width: 0.4 m. Height: 1.5 m.  Courses: 14
<b>Room 2</b>	Dimensions 5.7 x 3.0 m.	North: wall <b>298</b> Length: 2.31 m. Width: 0.6 m. Height: 1.26 m. Courses: 10/5	East: walls <b>290/291</b> Length: 1.12/2.5 m Width: 0.4 m./0.46 Height: 1.1 m/1. 12 Courses: 8/9	South: wall <b>313</b> Length: 2.34 m. Width: 0. 4 m. Height: 1.42 m. Courses: 13	West: wall <b>297</b> Length: 5.74 m. Width: 0.44 m. Height: 1.5 m. Courses: 14
<b>Room 3</b>	Dimensions 6.4 x 1.7 m.	North: wall <b>298</b> Length: 1.44 m. Width: 0.4 m. Height: 1.26 m. Courses: 10/5	East: wall <b>288</b> Length: 6.37 m Width: 0.44 m. Height: 1.18 m. Courses: 9	South: wall <b>289</b> Length: 1.7 m. Width: 0.42 m. Height: 1.12 m. Courses: 9	West: wall <b>290/291</b> Length: 1.12/2.5 m Width: 0.4/0.46 m Height: 1.1/1. 12 m Courses: 8/9
<b>Room 4</b>	Dimensions 4.9 x 2.3 m.	North: wall <b>313/289</b> Length: 2.34/1.7 m. Width: 0.45/ 0.44 m Height: 1.42/1.12 m Courses: 13/9	East: wall <b>288</b> Length: 1.5 m. Width: 0.44 m Height: 1.18 m. Courses: 6	South: wall <b>315</b> Length: 4.9 m. Width: 0.24 Height: 1.65 m. Courses: 13	West: wall <b>297</b> Length: 1.48 m. Width: 0.4 m. Height: 1.5 m. Courses: 14

The measurements in the following table are measured including the walls surrounding the rooms, and exterior lines of the walls.

<b>Room 1</b>	Dimensions: 7.1 x 2.5 m.	North: wall <b>287</b> Length: 7.1 m. Width: 0.4 m. Height: 1.2 m. Courses: 8	East: wall <b>288</b> Length: 2.5 m. Width: 0.44 m. Height: 1.18 m. Courses: 9	South: wall <b>298</b> Length: 5.9 m. Width: 0.4 m. Height: 1.26 m. Courses: 10/5	West: wall <b>297</b> Length: 2.50 m. Width: 0.4 m. Height: 1.5 m. Courses: 14
<b>Room 2</b>	Dimensions: 7.0 x 3.8 m.	North: wall <b>298</b> Length: 3.21 m. Width: 0.6 m. Height: 1.26 m. Courses: 10/5	East: walls <b>290/291</b> Length: 1.84/2.86 m Width: 0.4/0.46 m. Height: 1.1/1.12 m. Courses: 9/8	South: wall <b>313</b> Length: 2.72 m. Width: 0.4 m. Height: 1.42 m. Courses: 13	West: wall <b>297</b> Length: 6.97 m. Width: 0.44 m. Height: 1.5 m. Courses: 14
<b>Room 3</b>	Dimensions: 6.1 x 2.5 m.	North: wall <b>298</b> Length: 2.48 m. Width: 0.4 m. Height: 1.26 m. Courses: 10/5	East: wall <b>288</b> Length: 6.12 m. Width: 0.44 m. Height: 1.18 m. Courses: 9	South: wall <b>289</b> Length: 2.53 m. Width: 0.42 m. Height: 1.12 m. Courses: 9	West: wall <b>290/291</b> Length: 1.84/2.86 m Width: 0.4/0.46 m. Height: 1.1/1.12 m. Courses: 9/8
<b>Room 4</b>	Dimensions: 5.7 x 2.7 m.	North: wall <b>313/289</b> Length: 2.72/2.53 m Width: 0.45/0.44 m Height: 1.42/1.12 m Courses: 13/9	East: wall <b>288</b> Length: 2.23 m. Width: 0.44 m Height: 1.18 m. Courses: 6	South: wall <b>315</b> Length: 5.66 m. Width: 0.24 m. Height: 1.65 m. Courses: 13	West: wall <b>297</b> Length: 2.66 m. Width: 0.4 m. Height: 1.5 m. Courses: 14

### 3. 4. Stratum III

*(Walls included in stratum III are: none)*

No architecture is included from stratum III.

### 3. 5. Stratum IV

*(Wall included in stratum IV are: 359)*

Wall 359 was the only architectural feature represented in stratum IV. The building material used in this wall included small uncut stones, built in a single line, one course deep. The exposure of stratum IV was very limited so the function of this wall is unknown.

An installation was also situated within the stratum IV, but it was discussed in chapter 2, STR. IV. (see 2.5.)

<b>Wall 359</b>	Length: 1.46 m.	Width: 0.35 m.	Height: 0.20 m.	Courses: Max. 1 Min. 1
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### 3. 6. Stratum V

*(Wall included in stratum V are: none)*

The stratum represents virgin soil. No architecture or finds were found here.



## **4. Appendix**

### **Included in the appendix are:**

#### Stratum Plans:

Surface Debris

Stratum I

Stratum II A

Stratum II B

Stratum II B Collapse

Stratum IV

#### Spatial maps:

Special Finds: Stratum I, II A, II B.

Ground Stones: Stratum I, II A, II B.

Copper Products: Stratum I, II A, II B.

Metallurgical Ceramics: Stratum I, II A.

#### Harris Matrix

#### Section Drawings

#### List of Images

Images

**Image list:**

Figure: 1	EDM # 70210	Description: Stratum I surface, SW of structure
Figure: 2	EDM # Section	Description: Section photo, L. 310, L. 263
Figure: 3	EDM # 70504	Description: Overview, Stratum II B building from stratum I view
Figure: 4	EDM # 71231	Description: Room 1
Figure: 5	EDM # 71231	Description: Room 2 and 3
Figure: 6	EDM # 71231	Description: Room 4
Figure: 7	EDM # 71414	Description: Stratum II A/ B overview of Area S
Figure: 8	EDM # 71415	Description: Room 1, L. 305
Figure: 9	EDM # 71416	Description: Room 2, L. 331
Figure: 10	EDM # 71417	Description: Room 3, L. 333
Figure: 11	EDM # 71418	Description: Room 4, L. 332
Figure: 12	EDM # 71420	Description: L. 327, L. 328, W: 329 Copper Production Area STR. II A
Figure: 13	EDM # 71681	Description: L. 329, L. 354, L. 355. Copper Production Area STR. II B
Figure: 14	EDM # 71683	Description: L. 318 overview. Slag crushing area
Figure: 15	EDM # 71609	Description: L. 318 section. Slag crushing area
Figure: 16	EDM # 71694	Description: Southern section of probe
Figure: 17	EDM # 71682	Description: L. 336, courtyards east of STR. II B structure
Figure: 18	EDM # 71644	Description: Below room 1, L. 353, with STR. III slag
Figure: 19	EDM # 71642	Description: Below room 2, L. 352, with STR. III slag
Figure: 20	EDM # 71646	Description: Below room 3, L. 351, with STR. III slag
Figure: 21	EDM # 71643	Description: Below room 4, L. 350, with STR. III slag
Figure: 22	EDM # 71606	Description: Stratum IV surface, below room 1
Figure: 23	EDM # 71605	Description: Stratum IV surface, below room 2
Figure: 24	EDM # 71603	Description: Stratum IV surface, below room 3
Figure: 25	EDM # 71604	Description: Stratum IV surface, below room 4

## Appendix

Figure 1. EDM # 70210 Description: Stratum I surface, SW of structure.



Figure 2 Section Description: Section of L. 263 and L. 310



Figure 3. EDM # 70504 Description: Overview STR. II B building, STR I view.



Figure 4. EDM # 71231 Description: Room 1





Figure 5 EDM # 71231 Description: Room 2 and 3



Figure 6. EDM # 71231 Description: Room 4



Figure 7. EDM # 71414 Description: Area Overview, stratum II A/B



Figure 8. EDM # 71415 Description: Room 1, L. 305



Figure 9. EDM # 71416 Description: Room 2, L. 331



Figure 10. EDM # 71417 Description: Room 3, L. 333





Figure 11. EDM # 71418 Description: Room 4, L. 332



Figure 12. EDM # 71420 Description: L. 328, L. 327, L. 324, W: 329





Figure 13. EDM # 71681 Description: L. 354 (W), L. 355 (E) and W: 329.



Figure 14. EDM # 71683 Description: L. 318, overview.



Figure 15. EDM # 71609 Description: L. 318, section.



Figure: 16. EDM # 71694 Description: Southern section of probe



Figure 17. EDM # 71682 Description: L. 336, courtyard



Figure 18. EDM # 71644 Description: Section W: 297, STR. III slag, L. 353





Figure 19. EDM # 71642 Description: Section W: 297, STR. III slag, L. 352



Figure 20. EDM # 71646 Description: Section W: 299, W: 288, STR. III slag, L. 351



Figure 21. EDM # 71643 Description: Section W: 297, STR. III slag, L. 350 and L. 356



Figure 22. EDM # 71606 Description: Stratum IV surface with stratum III slag below room 1.



Figure 23. EDM # 71605 Description: Stratum IV surface with stratum III slag, below room 2.



Figure 24. EDM # 71603 Description: Stratum IV surface with stratum III slag, below room 3.



Figure 25. EDM # 71604 Description: Stratum IV surface with stratum III slag, below room 4.

