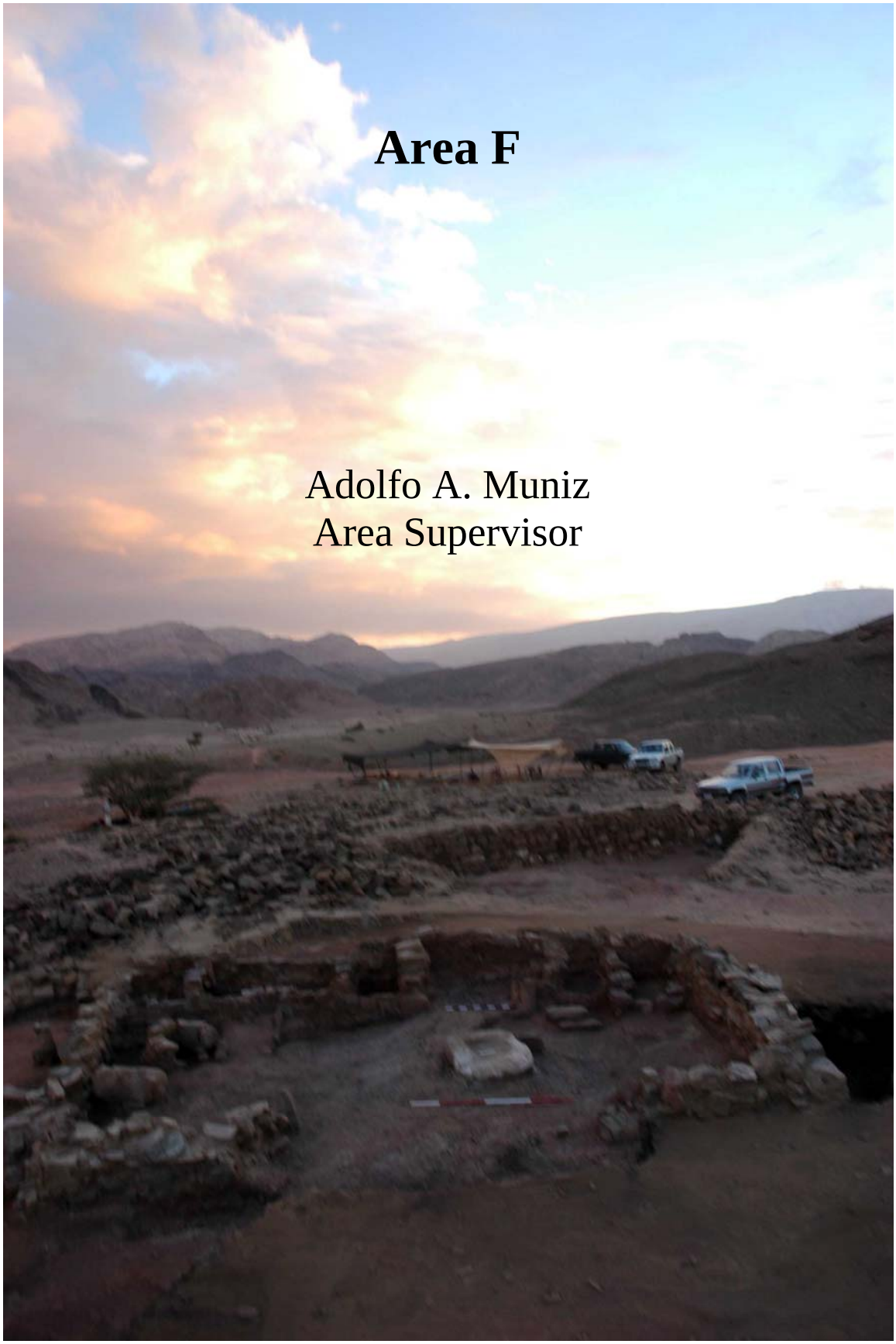
2006 Excavations at Khirbat en-Nahas



Area F

Adolfo A. Muniz
Area Supervisor

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Introduction

The following report details the excavations at Area F at the site of Khirbat en-Nahas during the 2006 Edom Lowlands Project (ELP). The area is located in the northern interior of the fortress northeast of Area A. The excavations centered on a structure and a portion of the adjacent fortress wall. The goals of the 2006 excavations in this area were aimed at elucidating the chronological sequence of the gate, the fortress and the interior structures in relations to the overall site. The excavations at Area F were conducted as part of the 2006 Edom Lowlands Project under the direction of Professor T.E. Levy (University of California, San Diego) and Dr. Mohammad Najjar (Department of Antiquities, Jordan). A team of archaeological students and volunteers in conjunction with local Bedouin laborers were responsible for carrying out the excavations at this site. The team members were Misty Bravence, Hahn Doan, Marcus Dywer, Gregory Greenberg, Haley Holt, Jennifer Roland, Brooke Shelman, and Robby Sinick and Sonia Zawadski. The excavations at Area F were supervised by Adolfo Muniz (UCSD) with the guidance of Professor T.E. Levy and Dr. Mohammad Najjar.

The members of the team at Area F removed layers of large stones from wall collapse and wind-blown sands and miscellaneous debris. Uncovered was a small building consisting of two main rooms and seven small installations or cells. In the adjacent area, the fortress wall was excavated in the north and south. A single occupation phase was unearthed. Evidence of copper melting was found within the structure. Collected from the excavation were numerous artifacts including basins, ceramics, animal bones, bellows pipes, numerous samples of carbonized wood and a scaraboid. Installations excavated in and in the exterior of the structure provide evidence to the activities being carried out at the structure. Yet, the functions of several of the

installations remains elusive and instead of providing answers, yielded only more questions. The following sections present evidence extracted in light of the new excavations at Site F.

The layout of the report is divided into four sections. Section I explains the archaeological methods utilized throughout the excavation. Archaeological excavation methods and the digital recording system are presented. Section II gives a description of the Area F structure. Presented is a description of the area, the rooms and their associated dimensions. Section III presents the occupation phases identified during the excavation and covers the main rooms and presents the various stratigraphic layers identified and the related features and artifacts. Section IV presents the conclusions.

Section I: Archaeological Methods

The methodology applied at Site F followed archaeological methods employed for wide scale excavations and recording previously used by the Jabal Hamrat Archaeological Project.. Excavations were carried out by students and volunteers with the assistance of local Bedouin. Rocks from fill from wall collapse were move by individuals and by wheelbarrow. Fill were excavated by terrias, handpicks, and by troweling. Sieving was conducted at random (1 of every 3 buckets) at the fill and wall collapse level. Sediments beneath the fill and wall collapse or ash layers associated with installations were all sieved. Excavations were carried by the removal of stratigraphic layers throughout the different units. All rooms and cells were excavated to bedrock level. Probes were conducted in the exterior of the west and south wall into the slag layer located against the structure.

The control units for excavating Area F were the locus, basket, and EDM. All loci, special artifacts, and features were ascribed control numbers. All numbers were sequentially

recorded by a Total Station (theodolite leveled on tripod, target (prism), and a Recon data collector operating Solofield software) as either point or polygon data. Each stratigraphic layer in every unit excavated on a given day was assigned a locus, basket, and EDM at the beginning of each day. The locus number defined the stratigraphy, the basket number was designated for the recovery of pottery shards, bone, lithics, copper ore and metal, slag samples, tuyere pipe and furnace fragments. Artifacts and ecofacts (including soil samples) were collected and transported to the lab for processing. “Special Finds” such as reconstructable pottery and special ceramics (other than the standard body or rim shard), hammerstones, mining hammers, grinding stones, installations, semi-complete tuyere and bellow pipes and furnace fragments were assigned individual EDM numbers to record their provenience. The collected data points were digitally converted into two dimensional scaled top plans on a daily basis.

Section II: The Area F Structure and Fortress Wall

Figure 1. Aerial view of Khirbat en-Nahas and the location of Area F in relations to the other excavations.

Area F is centrally located in the north part of the site of Khirbat en-Nahas in the northwest interior of the fortress (Figure 1). A small section of the fortress wall falls within the boundaries of the site. The site is located northeast of the fortress gate, also known as Area A. The area was composed of medium to large wall collapse from a building and the fortress. Sections of the wall from the structure were visible on the surface. The removal of stones from the wall collapse revealed instantly outline of walls. Following several weeks of excavation, a well-designed building with two main rooms and seven installations (cells) (Figure 2) were revealed. No entrance was defined.

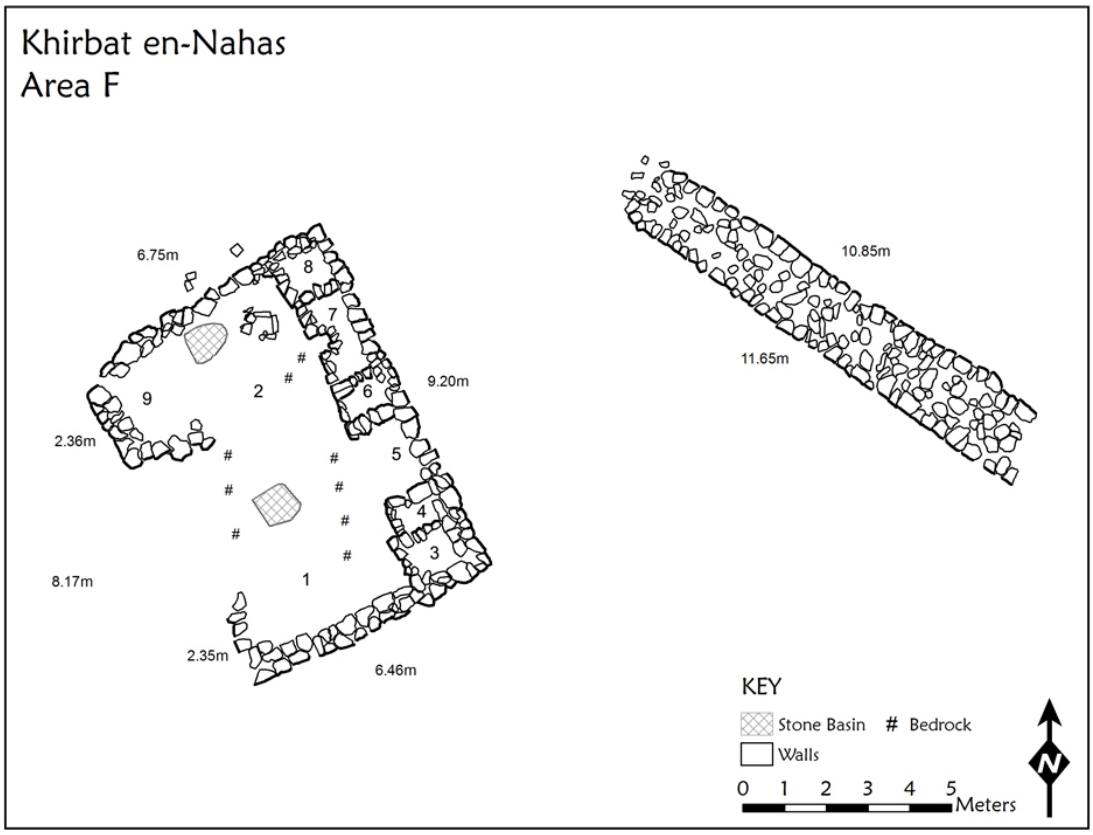

Figure 2. Overview of Structure F Rooms, Cells, and Fortress Wall.

The dimensions of the walls and rooms of the main structure are listed in Figure 2 and Table 1. The walls of the structure are poorly preserved in some areas. The construction material consists mostly of a shale sandstone. However, dolomite rocks have been used in several areas of the southwest wall. The walls have been constructed in two courses wide are filled with medium to small stone debris. The height of the exterior walls varies across the site and are absent in the eastern section.

The structure itself has been constructed with two main room and a series of cells along the eastern wall. No walls were found dividing the two main rooms and share similar construction attributes in style and building materials. Adversely, the walls of the cells constructed along the interior of the eastern wall vary distinctly.

Table 1. Area F wall and room measurements.

Room Number	Room Dimensions	North Wall	West Wall	South Wall	East Wall	Function
1	.83 x 129.5	-	1.83	5.15	4.45	Metallurgical – melting/smelting
2	4.4 x 4.62	6.75	2.36	-	4.39	Metallurgical – final product/ melting
3	.88 x 1.01	1.04	.78	1.06	.95	Furnace
4	73.5 x 72	.87	.69	.90	.57	Metallurgical
5	1.57 x 1.18	1.16	-	1.07	1.70	Metallurgical
6	.74 x .90	1.0	.60	1.02	.74	Unknown
7	1.99 x (s) .84, (n) .82 (c) .28	.91	2.61	.84	1.96	Unknown
8	.97 x .86	.97	.75	.92	.84	Unknown/ Storage (?)
9	2.13 x 1.16	1.56	1.74	1.32	-	Metallurgical - melting

Wall Number	Exterior	Interior	Width	Course Height	Course Width
813	9m 15cm	8m 32cm	67cm	6	2
807	6m 28cm	5m 15cm	64cm	6	2
821	2m 40cm	1m 83cm	47cm	5	1
843	3m 73cm	3m 62cm	63cm	7	2
845	6m 83cm	5m 88cm	55cm	6	2
887	1m 4cm	97cm	29cm	4	1
866	2m 80cm (w)	2m 61cm	37cm	5	1
891	80cm	74cm	19cm	4	1
830	85cm (n)	81cm (s)	38cm	3	1
829	84cm (n)	93cm (s)	32cm	4	1
828	1m 12cm (n)	1m 7cm (s)	44cm	6	1
827	86cm (n)	99cm(s)	39cm	2	1
818	1m 6cm (n)	99cm (s)	29cm	2	1

Basin and Installation Measurements

Locus	Width	Length	Interior Depth	Exterior Depth
856	1m	1m 4cm	10cm	25cm
869	87cm	1m 8cm	35cm	46cm
876	80cm	71cm	50cm	48cm
898	39cm	86cm	10cm (w)	17cm (e)
884	22cm	27cm	52cm	
884+pedestal	40cm	43cm	52cm	

Cells 3, and 4 share similar construction attributes-poorly constructed walls and single course thresholds. Cell 5 is similar although its threshold is lacking. On the other hand, Cells 6, 7, and 8 share a west wall and their interior dividing walls are similar in both construction and type of materials utilized. Last, Cell 9 is defined by the northwest corner of the main structure and is completed by a poorly constructed single course wall. A discussion of the rooms, the cells, and the associated features is presented in Section IV following a brief discussion on the occupational phases at the structure.

Section III: Strata and Occupation Phase

Figure 3. Strata assigned to the main structure and the fortress.

The strata for Structure F were conducted in consultation with Director T.E. Levy. Excavations at Area F identified one surface, a fill with compact mud (L. 900) that was

encountered prior to reaching bedrock. The surface is the only one located and has been identified as the original occupation phase (Stratum F2b). Above the surface, various fills associated with ash layers and installations were encountered. These activity layers and features have been assigned to Stratum F2a.

122 loci (Appendix 1) have been assigned to six strata at Area -- F1a, F1b, F2a, F2b, F2, and F3. The Harris Matrix for Area F depicting the six strata and their assigned loci is listed in Figure 4. Loci in Stratum F1a represent the mound of wall collapse. The loci assigned to Stratum F1b consist of the fill and wall collapse around the fortress area. Loci associated production and activity areas has been assigned to Stratum 2a. This includes the ash layers and basins associated with copper melting. Stratum T2b is associated with the main occupation phase. These include the two main rooms and the walls of the main structure. Stratum 2 has been assigned to the mound of crushed slag that is found against the structure. Finally, Stratum 3 is the fortress wall. The strata assigned to the layers of excavation are discussed in the following section.

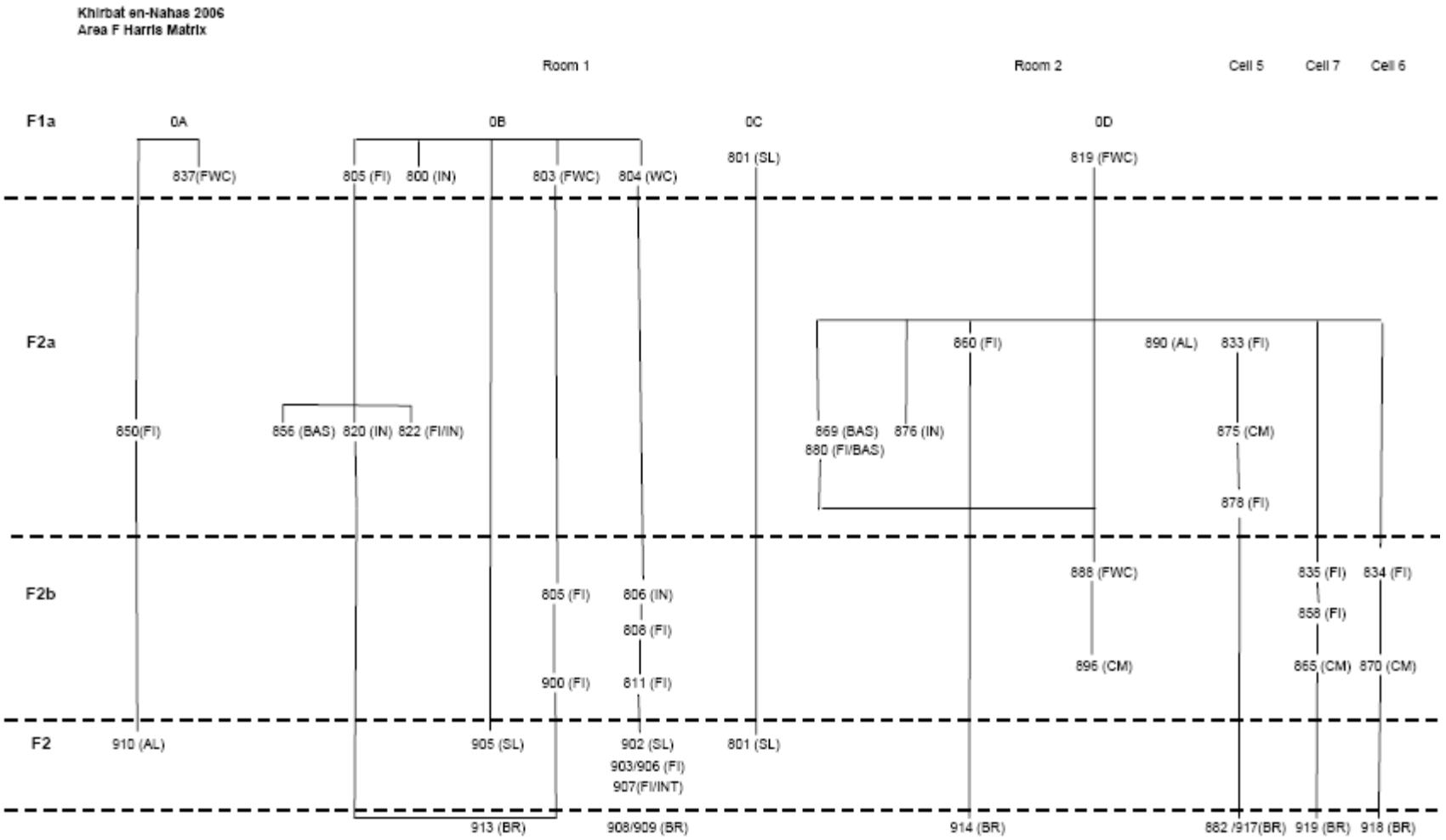

Figure 4. Area F Harris Matrix

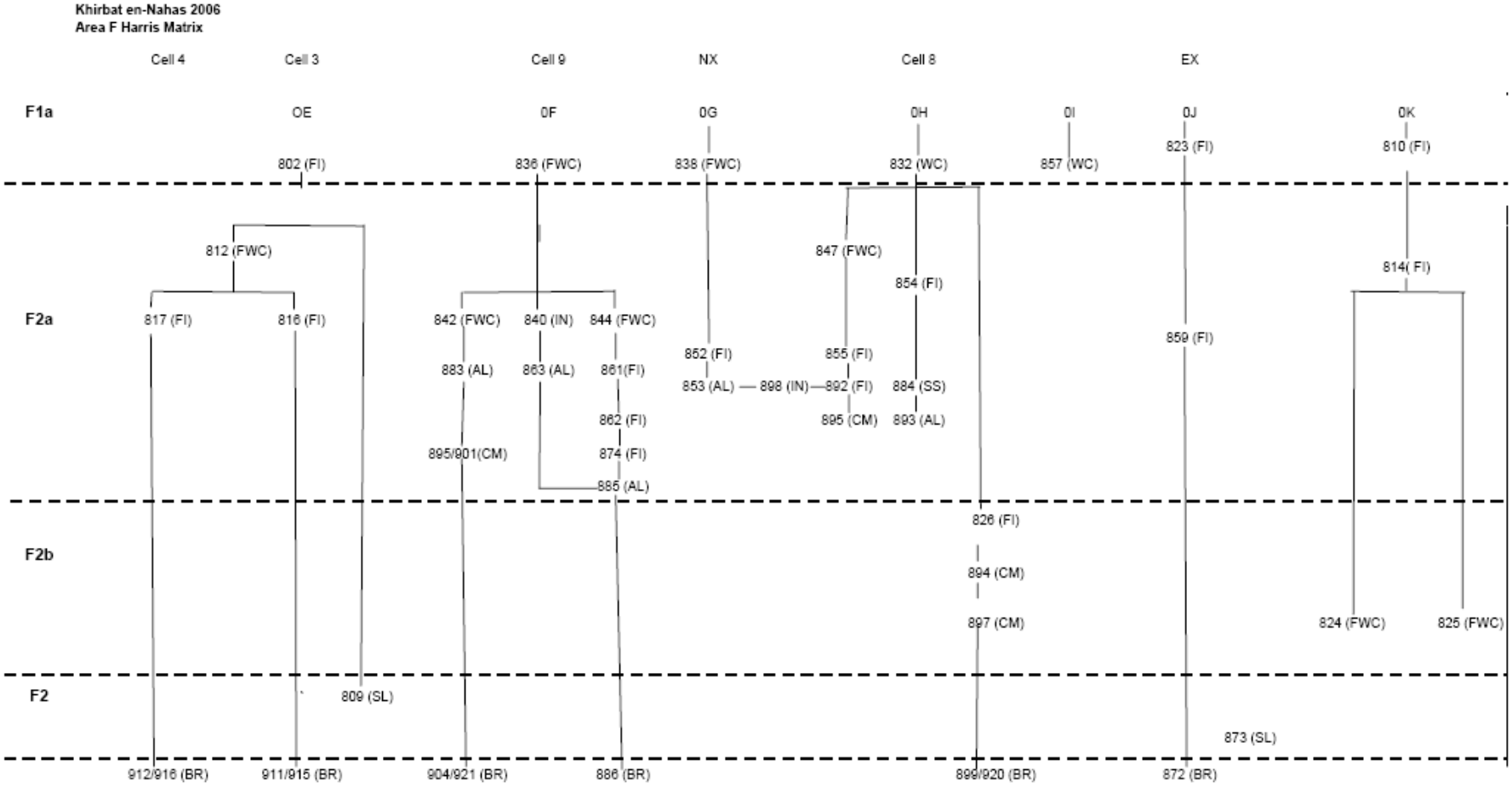

Figure 4. Area T Harris Matrix (continued).

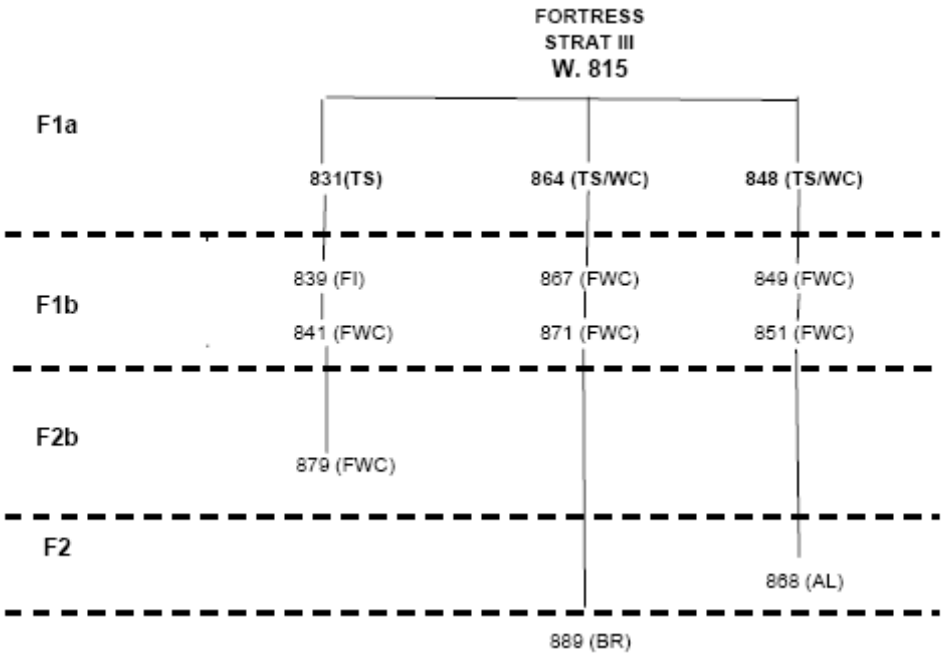

Figure 4. Area T Harris Matrix for Fortress (continued).

Stratum F1a

Loci assigned to Stratum F1a consist of the collapse of rocks from the structure. The collapse is a large mound of stones surrounding an area of fills and wall collapse that extends from the main structure to the fortress (Figure 5). The mantle consists of shale, dolomite, and limestone rocks with wind-blown. The layers of loose rocks (L. 0) were first cleaned before the removal of the wall collapse commenced.

Figure 5. Wall collapse assigned to Stratum F1a.

Loci assigned to Stratum F1a included L. 837, L. 805, L. 803, L. 804, L. 819, L. 836, L. 838, L. 832, and L. 857. Assigned to this stratum were four loci that were not part of the wall collapse but were representative of the topsoil. These were L. 823, 810, L. 802, and L. 801. L.801 is the top of the crushed slag mound that can be seen in Figure 5 in the upper right hand section.

An circular installation assigned to this stratum was L. 800 (Figure 6). This locus was circular in nature and was originally believed to have been a cairn or grave stones. Removal of the installation and excavations beneath revealed that a large rectangular area had been once dug and then backfilled with sediments from the upper layers. Three pieces of human bone were recovered from the intrusive fill excavated within the crushed slag.

Figure 6. Circular feature from Stratum F1a..

Stratum F1b

The loci associated with Stratum F1b are L. 839, L. 841, L. 849, L. 851, L. 867, and L. 871, are from the probe initiated on, north and south of the fortress wall. The fill and wall collapse removal associated with the fortress wall assigned to

Stratum F1b are depicted in Figure 7. Once the upper layer stones from the wall

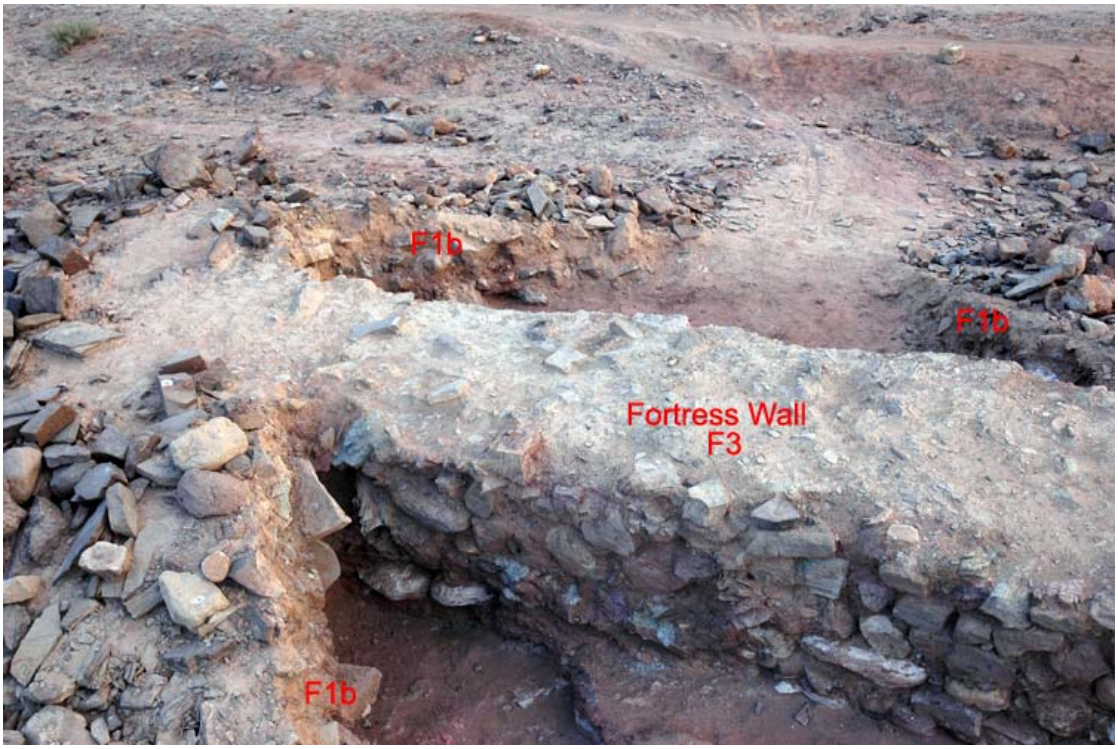

Figure 7. Fortress wall (F3) and Stratum F1b fill.

collapse were removed, loose accumulated wind-blown sands mixed with stone debitage and structural collapse from the main fortress wall was found underneath.

In the main structure, no strata have been assigned to Stratum F1b. The shallow deposits of wall collapse and sand found at the topsoil level immediately revealed the walls of the structure. Thus, the fill within the walls was assigned to F2a.

Stratum F2a

Figure 8 illustrates the rooms, cells, and installations that will be referred in the discussion of the remaining strata. Stratum F2a represents the activity areas in the main structure of Area F. There are several areas and features associated with this

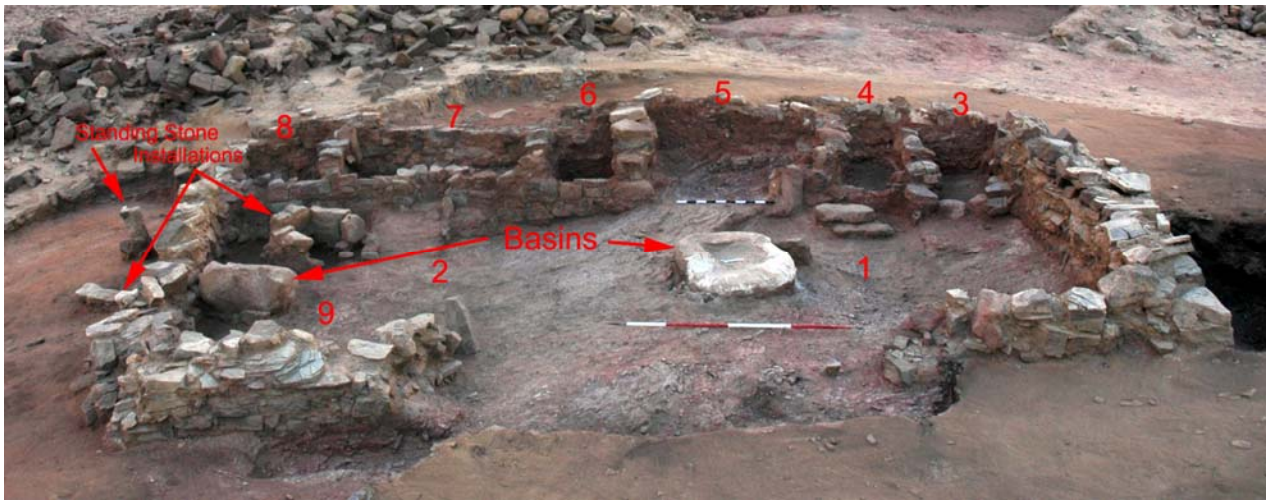

Figure 8. Overview of rooms, cells, and installations referred to in the discussion.

Stratum. The first layer of the Stratum F2a deposits are the fill and wall collapse associated with main structure. The sediments removed consist of wind-blown sand mixed with stone debitage from the wall collapse. The associated loci are: L. 860, L. 890, L. 833. L. 812, L. 817, L. 816, L. 842, L. 840, L. 844, L. 847, L. 854, L. 859, and L. 814. Clearing of the fills within the structure revealed several room areas and installations or cells.

First, Cell 3, 4, 5, and 9 have all been assigned to Stratum F2a. Cell 3, 4, and 5 are located in the southeastern section of the structure. The fill inside all three cells consisted of a reddish fill mixed with heavy traces of chipped shale followed by a compact layer of mud. All three cells appear to have been filled with the chipped stone sediment in antiquity. The affiliated loci with Cell 3 are L. 812, and L. 816. Few finds, mostly fragments of bellows and tuyere pipes were located in association with small pieces of copper metal. However, in Cell 3, a furnace base was found along side partially complete pieces of bellows pipes and slag (Figure 9)

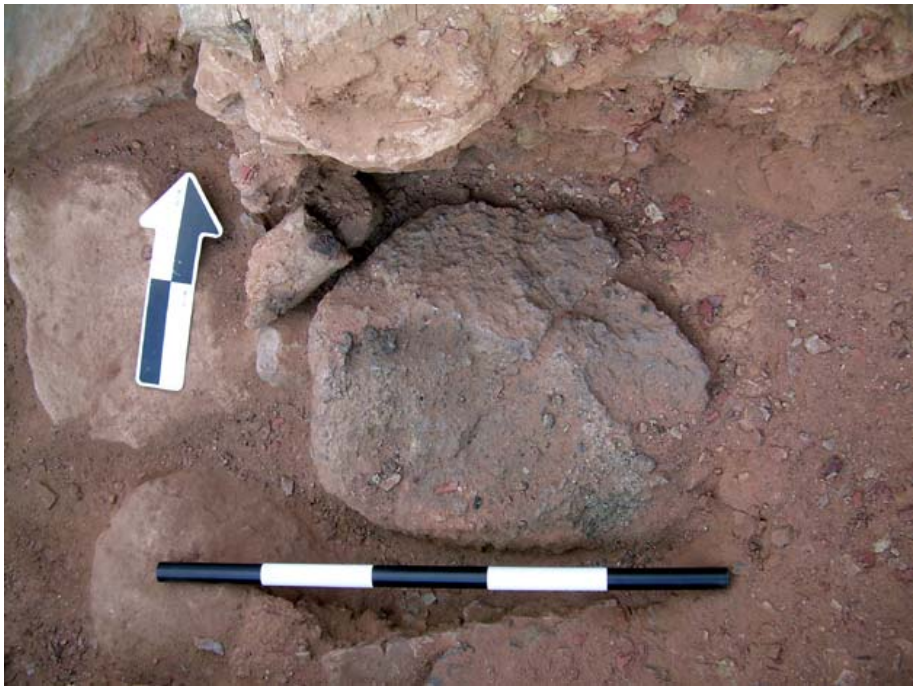

Figure 9. Furnace base found in situ with a partially complete bellows pipe.

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The affiliated loci with Cell 4 are L. 812, and L. 817. Finds in this cell include four small pieces of copper metal, bellows tube fragment and one prill.

Similarly, Cell 5 is part of Stratum F2a. The loci affiliated with this cell are L. 833, L. 875, and L. 878. Cell 5 did not have a wall separating it from Room 1 and 2. Finds recovered from the loci in Cell 5 include one furnace fragment and one piece of charcoal.

Cell 9, also assigned to Stratum F2a is an activity area adjacent to several installations. The area had concentrated amounts of ash and has the best evidence for melting activity. The loci associated with this cell are L. 842, L. 883, L. 895, and L. 901. Many types of artifacts including copper metal, anvils, glassy slag, ceramics, special pottery (EDM 20413, 20593), tuyere pipe fragments and worked stone were recovered from this area. Immediately adjacent to the cell is a large basin (L. 869) and

a stone installation (L. 876) (Figure 10). The basin contained traces of copper and slag on the inside. Complete bellows pipe were recovered next to the basin. Similarly, a stone installation was located next to the basin. Excavation of the stone installation did not contain evidence of production or processing activity.

A separate activity area was a separate basin located in Room 1. The basin

Figure 10. Basin and rock installation in Room 2. Partial bellows pipe can be seen above the basin.

was situated next to a fire installation containing traces of ash. Significant pieces of copper metal and bellows pipes were recovered in between the basin and the rock installation.

Another set of installations was uncovered outside the main structure along the north wall. This consisted of two installations, a fire installation (L. 898) comprised of

a poorly constructed semi-circular hearth and a standing stone (L 884) (Figure 11). Whether the two installations are related is unknown. The standing stone is an anomaly in itself. Due to its shape, it appears to be an alter. However, given the deep markings found on the top, a utilitarian function seems more plausible.

Figure 11. Standing stone located in the exterior of the structure along the northern wall.

In Room 1 of the main structure, a similar fire installation (L. 820) with an ash layer was unearthed. The installation (Figure 12) was found in association with

Figure 12. Fire installation with ash and white sandstone fill unearthed in Room 1.

fragments of bellow pipes and ceramics. A small depression covered with a white sandstone fill was found mixed with the ash layer. After further cleaning a large basin

Figure 13. Basin found adjacent to fire installation.

(L. 856) was unearthed. The basin is composed of a white sandstone and contained evidence of burning on the western section where it was breaking down.

A special ceramic (EDM 20340) found in a fill close to the western wall is shown in Figure 14. The ceramic is a fragment of Edomite pottery that dates to _____. The shard was retrieved from a sediment light tan in color mixed with small stone debitage.

Figure 14. Two samples of ceramics from Stratum F2a. A: EDM 20340, B: EDM 20593.

Stratum F2b

Figure 15. Paving stones found beneath a layer of compact fill with patches of mud.

The evidence for Stratum F2b, the main occupation phase of the structure comes from two the two main room that make up the interior of the structure. It is in these two areas the best evidence for a surface was found (L. 900) (Figure 15). In Room 1, layers of paving stones with patches of compact mud were found throughout the

Figure 16. Traces of compact mud found above bedrock by walls of Cells 6, 7, and 8.

room's surface. Beneath the paving and fill, bedrock was reached. Excavations yielded similar results in Room 2- particularly around the basin and the Cell 7 installation. Traces of a compact mud mixed with fill was uncovered (Figure 16). Due to the slope of the mound that makes up the foundation of the structure, it was evident fill was required to level the surface.

The second distinct evidence that separates Stratum F2b from F2a are Cells 6, 7, and 8 (Figure 16). Although the fills making up the content of the cells were very similar to Cells 3, 4, and 5, the construction of the cells corresponds the construction phase of the main walls. The outer wall was three courses high by one course wide. This attribute extended to the inner walls that separated the cells.

At the fortress, Stratum F2b corresponds to the ash layers found beneath the

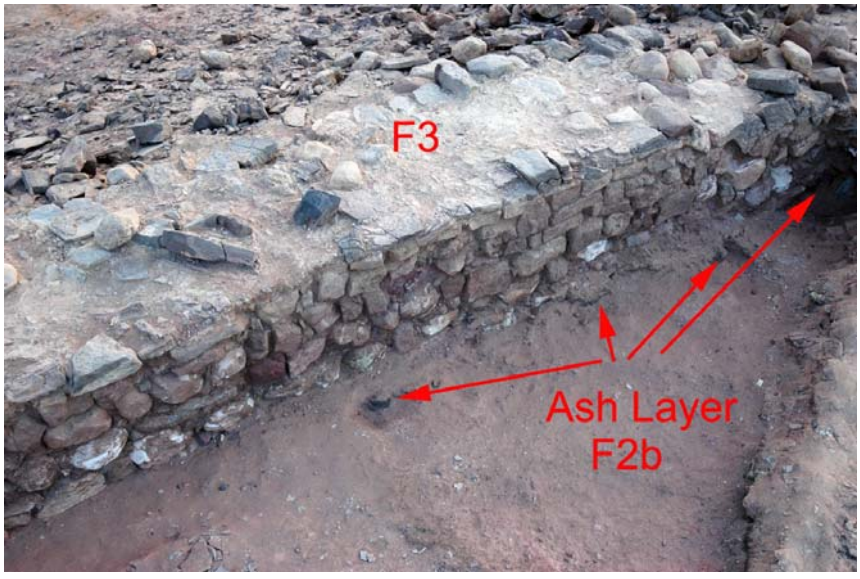

Figure 17. Ash layers at the fortress wall assigned as Stratum F2b.

fill and wall collapse of the main structure. The ash layer was dark-grey and found throughout the level before reaching the shale bedrock.

Stratum F2

Stratum F2 has been assigned to the slag mound (Figure 18) that is situated to the south of the main structure. The layer is actually a mound of slag that represents production activity within the fortress. The crushed slag was deposited in antiquity against the south wall. Traces of slag were also located underneath the south wall indicating that construction in this area of the structure post-dates the smelting activity. A probe was initiated in this section of the structure. Bedrock was reached below the slag layer.

Figure 18. A mound of slag butts against and beneath the south wall of the structure.

Stratum F3

Stratum F3 was assigned to the fortress wall (Figure 17). Following the removal of the wall collapse, the fill and wall collapse, and the ash layers associated with the fortress wall, the shale bedrock was reached both in the north and south sections of the wall.

Conclusions

The excavations at Area F centered on a structure and on a section of the fortress wall. The fills were shallow and consisted mostly of wind-blown sediments. The lower layers consisted of fill mixed with patches of compact mud, particularly around the installations.

In the structure, a single occupation phase was identified. The structure was built with two main rooms surrounded in the east by 6 installations or cells. It is clear that a slag layer existed prior to the construction of the south wall, as large pieces of slag were recovered or seen protruding from below the base of the wall. Similarly, the slag mound continued to be built against the southern wall after the construction of the structure.

The cells appeared to have filled with debris-a fill mixed with crushed red shale. The share resembles the bedrock beneath the main structure, the slag mound, and the fortress wall. Three of the cells, 3, 4, 5 indicate a distinct construction style than the neighboring cells, 6, 7, and 8. The walls of the latter are well defined and

well designed. The walls of the former cells are smaller and less defined. The function of the cells is not clear. However, given the furnace base found in Cell 3, it is possible that this part of the structure once did serve as the original industrial area and the cells were used as storage areas. The well-constructed cells near Room 2 failed to provide evidence of their use. The semi-circular wall built between Room 2 and the cells is also an anomaly. It is possible this part of the room was originally used as a cultic or ritual area. The evidence comes from the basins, the square installation, and the standing stone that could have served as an alter. At a later, the basins appear to have been moved to the current location as they were not leveled on the floor, but were resting at an angle on the floor. It was during this time the basin were used for industrial purposes. The evidence comes from the many associated copper objects and bellows pipes. Complete and partial bellows pipes were the most common artifact recovered at this structure. Very few furnace fragments were identified at Area F. Given these types of artifacts, the use of the basins in association with Cell 9 and in Room 1, the most plausible hypothesis is that the room was used not for smelting, but or melting or recycling copper. This is most evident by a medium size artifact that was located (Figure 18). The metal object (EDM 20285) contains pieces of copper and pins. This piece of metal came from the fill L. 819 in Room 2. As well, many well preserved partial bellows pipes were recovered. This area also yielded copper metal, copper objects, hammerstones, prill, reconstructable pottery, worked stones, and a scaraboid.

Figure 19. Recycled metal object from Room 2.

As previously stated in the introduction of this report, the structure at Area F revealed new evidence from the excavations about the use of the structure. However, many more questions arise, particularly with the cells found in the structure. Answers to the fortress wall are still lacking. The carbon samples collected should provide dates in relation to the structures, the site, and the wall itself.

Appendix 1

Khirbat en-Nahas
Year: 2006

Area: F

Locus List Sheet

Locus	1st Basket	Square	Description (including EDM descriptors)	Stratum	Opened	Closed
800	1017	PP71,PP72	Installation: Fire	F1a	10/4/2006	10/6/2006
801	1018	PP71	Fill Below Installation	F2	10/4/2006	10/16/2006
802	1019	QQ72	Fill Beneath Topsoil	F1a	10/4/2006	10/6/2006
803	1020	QQ72	Fill and Wall Collapse	F1a	10/4/2006	10/6/2006
804	1024	PP72	Wall Collapse	F1a	10/5/2006	10/29/2006
805	1026	PP72	Fill Beneath Topsoil	F2b	10/5/2006	10/21/2006
806	1030	PP72	Installatiion: Hearth	F2b	10/5/2006	10/6/2006
807	1038	PP72	Southern Wall of Structure F1	F2b	10/6/2006	10/29/2006
808	1040	PP72	Fill	F2b	10/6/2006	10/16/2006
809	1041	QQ72	Fill	F2	10/6/2006	10/29/2006
810	1042	RR73	Fill Beneath Topsoil	F1a	10/6/2006	10/7/2006
811	1044	PP72	Fill Beneath Topsoil	F2b	10/6/2006	10/7/2006
812	1045	QQ72	Fill and Wall Collapse	F2a	10/6/2006	10/7/2006
813	1047	QQ72/QQ73/PP72/PP73	Eastern Wall of Structure F1	F2b	10/6/2006	10/29/2006
814	1054	RR73	Fill Beneath Topsoil	F2a	10/7/2006	10/9/2006
815	1055	RR73	Wall: Fortress	F3	10/7/2006	10/29/2006
816	1059	QQ72	Fill	F2a	10/7/2006	10/21/2006
817	1060	QQ72	Fill	F2a	10/7/2006	10/21/2006
818	1061	QQ72	Wall -Cell 3 and 4	F2a	10/7/2006	10/29/2006
819	1064	PP73	Fill Beneath Topsoil	F1a	10/7/2006	10/29/2006
820	1072	PP72	Installation: Metallurgy	F2a	10/8/2006	10/29/2006
821	1073	PP72	Western Wall of Structure F1	F2b	10/8/2006	10/12/2006
822	1074	PP72	Fill: Metallurgical Installation	F2a	10/8/2006	10/21/2006
823	1077	QQ73	Fill Beneath Topsoil	F1a	10/8/2006	10/23/2006
824	1082	RR73	Fill and Wall Collapse	F2b	10/9/2006	10/9/2006
825	1083	RR73	Fill and Wall Collapse	F2b	10/9/2006	10/9/2006
826	1084	PP73	Fill	F2b	10/9/2006	10/21/2006
827	1087	PP73	Wall-Cell 5	F2a	10/9/2006	10/29/2006
828	1088	PP73	Wall-Cell 6 and 5	F2b	10/9/2006	10/29/2006
829	1089	PP73	Wall	F2b	10/9/2006	10/29/2006
830	1090	PP73	Wall-Cell 8 and 7	F2b	10/9/2006	10/29/2006

831	1094	RR73	Topsoil	F1a	10/9/2006	10/12/2006
832	1098	PP74	Wall Collapse	F1a	10/10/2006	10/23/2006
833	1099	PP73/QQ73	Fill	F2a	10/10/2006	10/19/2006
834	1100	PP73/QQ73	Fill	F2b	10/10/2006	10/15/2006
835	1101	PP73/QQ73	Fill	F2b	10/10/2006	10/15/2006
836	1105	OO73	Fill and Wall Collapse	F1a	10/12/2006	10/13/2006
837	1106	OO72	Fill and Wall Collapse	F1a	10/12/2006	10/16/2006
838	1108	OO74	Fill and Wall Collapse	F1a	10/12/2006	10/13/2006
839	1113	RR73	Fill	F1b	10/12/2006	10/13/2006
840	1116	OO73	Installation: Furnace	F2a	10/12/2006	10/16/2006
841	1121	RR74	Fill: Trench along Fortress Wall	F1b	10/13/2006	10/13/2006
842	1123	OO73	Fill and Wall Collapse	F2a	10/13/2006	10/22/2006
843	1124	OO72/OO73/PP73/PP74	Wall: Northern Wall of Structure F1	F2b	10/13/2006	10/29/2006
844	1125	OO73	Fill and Wall Collapse	F2a	10/13/2006	10/16/2004
845	1130	OO72/OO73	Wall: Western Wall of Structure F1	F2b	10/13/2006	10/29/2006
846	1131	PP74	Wall	F2b	10/13/2006	10/20/2006
847	1133	PP74	Fill and Wall Collapse	F2a	10/13/2006	10/14/2006
848	1136	SS73	Topsoil	F1a	10/13/2006	10/13/2006
849	1137	SS73	Fill Below Topsoil	F1b	10/13/2006	10/13/2006
850	1140	OO72	Fill	F2a	10/13/2006	10/28/2006
851	1142	SS73	Wall Collapse	F1b	10/13/2006	10/16/2006
852	1145	OO74	Fill	F2a	10/13/2006	10/29/2006
853	1146	PP74	Ash Layer	F2a	10/13/2006	10/29/2006
854	1158	PP74	Fill	F2a	10/14/2006	10/23/2006
855	1159	PP74	Fill	F2a	10/14/2006	10/20/2006
856	1164	PP72/PP73	Basin	F2a	10/14/2006	10/29/2006
857	1171	QQ74	Topsoil and Wall Collapse: Fortress Wall	F1a	10/15/2006	10/29/2006
858	1172	PP73	Fill	F2b	10/15/2006	10/16/2006
859	1176	QQ73	Fill: Trench along Wall 813	F2a	10/15/2006	10/16/2006
860	1180	PP73	Fill: Trench in Interior of Structure F1	F2a	10/15/2006	10/29/2006
861	1181	OO73	Fill: Trench along Wall 843	F2a	10/15/2006	10/29/2006
862	1182	OO73	Fill	F2a	10/15/2006	10/16/2006
863	1185	OO73	Ash Layer	F2a	10/15/2006	10/16/2006
864	1191	RR74	Topsoil and Wall Collapse: Fortress Wall	F1a	10/16/2006	10/16/2006
865	1192	PP73	Fill	F2b	10/16/2006	10/29/2006
866	1193	PP73	Wall	F2b	10/16/2006	10/29/2006

867	1194	RR74	Fill Below Topsoil	F1b	10/16/2006	10/16/2006
868	1208	SS73	Ash Layer	F2a	10/16/2006	10/17/2006
869	1209	PP73	Basin	F2a	10/16/2006	10/29/2006
870	1211	PP73	Mudbrick	F2b	10/16/2006	10/29/2006
871	1212	RR74	Fill and Wall Collapse	F1b	10/16/2006	10/21/2006
872	1213	QQ73	Bedrock	BR	10/16/2006	10/29/2006
873	1214	QQ73	Crush Slag Layer	F2	10/16/2006	10/29/2006
874	1224	OO73	Fill: Trench-West of Wall 843	F2a	10/17/2006	10/20/2006
875	1227	PP73/QQ77	Mudbrick	F2a	10/17/2006	10/24/2006
876	1231	PP73	Rock Installation	F2a	10/17/2006	10/29/2006
877	1233	OO73	Fill and Wall Collapse	F2a	10/17/2006	10/17/2006
878	1253	PP73/QQ73	Fill	F2	10/19/2006	10/19/2006
879	1254	RR73/RR74	Fill: Trench along fortress wall and collapse	F2b	10/19/2006	10/19/2006
880	1256	PP73	Fill: Soil Sample	F2a	10/19/2006	10/19/2006
881	1260	RR73/RR74	Fill: Trench along fortress wall and collapse	F2b	10/19/2006	10/21/2006
882	1261	PP73/QQ73	Bedrock	BR	10/19/2006	10/21/2006
883	1262	OO73	Ash Layer	F2a	10/19/2006	10/21/2006
884		OO74	Standing Stone	F2a	10/20/2006	10/29/2006
885	1276	OO73	Ash Layer: Trench Western Wall	F2a	10/20/2006	10/20/2006
886	1291	OO73	Bedrock	BR	10/20/2006	10/29/2006
887	1299	PP73/PP74	Wall-Cell 8	F2b	10/20/2006	10/29/2006
888	1300	PP73	Fill and Wall Collapse	F2b	10/20/2006	10/21/2006
889	1314	RR74	Bedrock: Trench along Fortress Foundation	BR	10/21/2006	10/22/2006
890	1320	PP73	Ash Layer	F2a	10/21/2006	10/29/2006
891	1322	PP73	Wall-Cell 7 and 6	F2b	10/21/2006	10/29/2006
892	1324	PP74	Fill: Compact Mud	F2a	10/21/2006	10/23/2006
893	1328	PP74	Ash Layer	F2a	10/21/2006	10/29/2006
894	1331	PP73	Fill: Compact Mud	F2b	10/21/2006	10/22/2006
895	1347	PP74	Fill: Compact Mud	F2a	10/22/2006	10/23/2006
896	1348	PP73	Mudbrick	F2b	10/22/2006	10/29/2006
897	1351	PP74	Fill: Compact Mud	F2b	10/22/2006	10/22/2006
898	1363	PP74	Installation	F2a	10/22/2006	10/29/2006
899	1365	PP74	Bedrock	F2	10/22/2006	10/29/2006
900	1376	PP72	Fill	F2b	10/23/2006	10/29/2006
901	1386	OO73	Fill: Compact Mud	F2a	10/23/2006	10/23/2006
902	1388	OO73	Slag Layer	F2	10/23/2006	10/28/2006
903	1389	OO73	Fill (possible grave)	F2	10/23/2006	10/27/2006
904	1421	OO73	Bedrock	BR	10/24/2006	10/29/2006

905	1431	PP72	Slag Layer	F2	10/26/2006	10/29/2006
906	1463	PP73	Fill	F2	10/27/2006	10/28/2006
907	1497	PP72	Fill	F2	10/27/2006	10/28/2006
908	1507	PP72	Bedrock	BR	10/28/2006	10/29/2006
909	1514	PP72	Bedrock	BR	10/28/2006	10/29/2006
910	1515	OO72	Ash Fill	F2	10/28/2006	10/29/2006
911	1522	QQ72	Fill	F2	10/28/2006	10/29/2006
912	1532	OO72	Fill	BR	10/28/2006	10/29/2006
913	1547	PP72	Bedrock- Room 1	BR	10/29/2006	10/29/2006
914	1548	PP73	Bedrock- Room 2	BR	10/29/2006	10/29/2006
915	1549	QQ72	Bedrock- Cell 3	BR	10/29/2006	10/29/2006
916	1550	QQ72	Bedrock- Cell 4	BR	10/29/2006	10/29/2006
917	1551	PP73	Bedrock- Cell 5	BR	10/29/2006	10/29/2006
918	1552	PP73	Bedrock- Cell 6	BR	10/29/2006	10/29/2006
919	1553	PP73	Bedrock- Cell 7	BR	10/29/2006	10/29/2006
920	1554	PP74	Bedrock- Cell 8	BR	10/29/2006	10/29/2006
921	1555	OO74	Bedrock- Cell 9	BR	10/29/2006	10/29/2006
922	1556	OO73	Wall-Cell 3	F2a	10/29/2006	10/29/2006