

# THE HUMEIMA EXCAVATION PROJECT: PRELIMINARY REPORT OF THE 1991-1992 SEASONS

by

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## The Humeima Excavation Project

The first two seasons of the Humeima Excavation Project took place from 29 June-8 August, 1991 and 20 June-30 July, 1992 (Fig. 1).<sup>1</sup> Previous work at Humeima by the present Project Director, carried out

in 1986, 1987 and 1989 under the aegis of the Humeima Hydraulic Survey, was designed to locate and record all ancient structures in the vicinity of Humeima related to water-supply.<sup>2</sup>

Survey and excavation in and around

1. The project, like the survey work around Humeima in previous years, is funded by the Social Sciences and Humanities Research Council of Canada, with the addition of generous funding from the Taggart Foundation of New York. In 1992, Dumbarton Oaks provided funds for the excavation of the C101 church. Several members of the staff provided their own travel funding, and there were contributions by the Graduate School of UCLA, and by ASOR Jennifer C. Groot Travel Scholarships awarded to Kelly Low, Dennine Dudley, and Judith Mitchell. The project director is Prof. John P. Oleson of the Department of Classics, University of Victoria; Co-Directors are Dr. Khairieh 'Amr of the Jordanian Department of Antiquities and Dr. Robert Schick, American Center of Oriental Research. Dr. 'Amr also served as the Representative of the Department of Antiquities to the project. The project was accredited by the American Schools of Oriental Research and licensed by the Department of Antiquities of the Hashemite Kingdom of Jordan. We are grateful to Dr. Safwan Tell, Director General of the Department of Antiquities, for his assistance with the project, to Dr. Pierre Bikai, Director of ACOR, and to Dr. Patricia Bikai, ACOR Administrator, for their help with the practical arrangements necessary for carrying out the work. Dr. Bert de Vries, the former Director of ACOR, was also of assistance in planning the 1991 season. Accommodations for the team were once again generously provided at the al-Mureighah Secondary School by the Director, Mr. Thiab Rikhat, for whose courtesy and hospitality we remain extremely grateful. Field Supervisors in 1991-92 were Oleson (Field B), Schick (Field C), and 'Amr (Field F). Square supervisors were Susan Coliton, Erik de Bruijn, Dennine Dudley, Darlene Emery, Rebecca Foote, Faida abu-Ghazaleh, John Howard, Kelly

Low, Carla Luna, Judith Mitchell, Robert Moldenhauer, Sabrina Rampersad, Leslie Shumka, John Somogyi-Csizmazia, Sarah Taylor, and Ruba Saleh al-Wazani. Martha Oleson assisted with excavation and processing finds for several weeks in 1991 and 1992, Olaf and Patience Oleson for two weeks in 1992. Photographers were J. Oleson, S. Coliton, and B. Douglas; Brian Cannon, Peter Denholm, and Stephen Copp served as architects.

2. During the first season, in 1986, the survey recorded 51 cisterns, four springs and associated conduits, 27km of aqueduct channel, a dam, and sets of wadi barriers, terraces, and cleared run-off fields. During the second season, in 1987, the team catalogued all such facilities visible within the habitation centre proper. Where necessary, soundings were made to determine the nature of the internal distribution system and its chronology. This system included a Nabataean (Fig. 2, no. 63) and Roman reservoir (Fig. 2, no. 62), both fed by the aqueduct system, two large rectangular cisterns in the settlement centre (Fig. 2, nos. 67-68), and nine smaller, circular cisterns built below the houses of Auara (Fig. 2, open circles). Probes proved the Nabataean origin of the aqueduct and its reservoir. In 1989, probes were made around one of the large Nabataean cisterns (Fig. 2, no. 68) in the settlement centre and at two domestic cisterns (Fig. 2, nos. 64, 69), in an attempt to determine their chronology. The large cistern seems to have been constructed in the first century BC; the smaller cisterns in the first or second century AD. During the 1989 season, excavation was also carried out at a small bath building fed by the aqueduct, revealing a typically Roman-type bath, constructed in the third century AD, and modified in the fifth or sixth century. For full reports, see Oleson 1986; 1987a-b; 1988a-b; 1990 a-b; 1991; 1992.

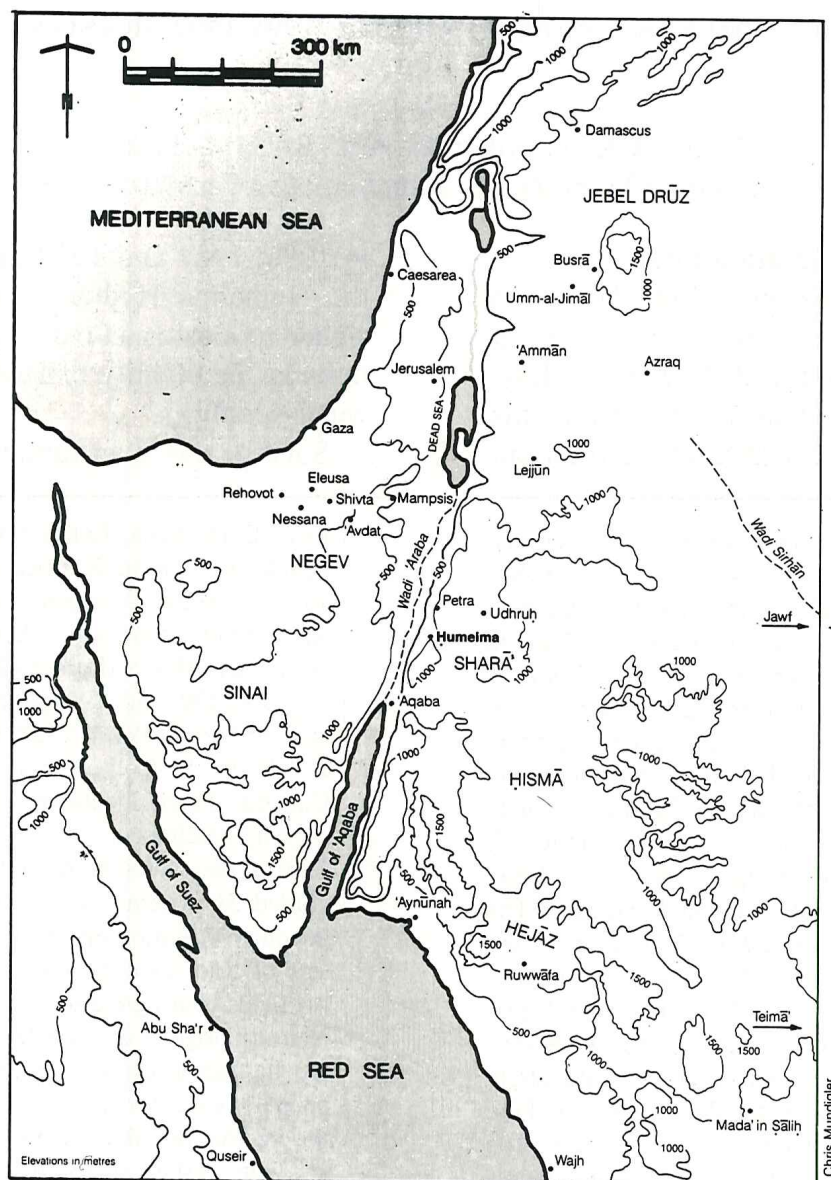


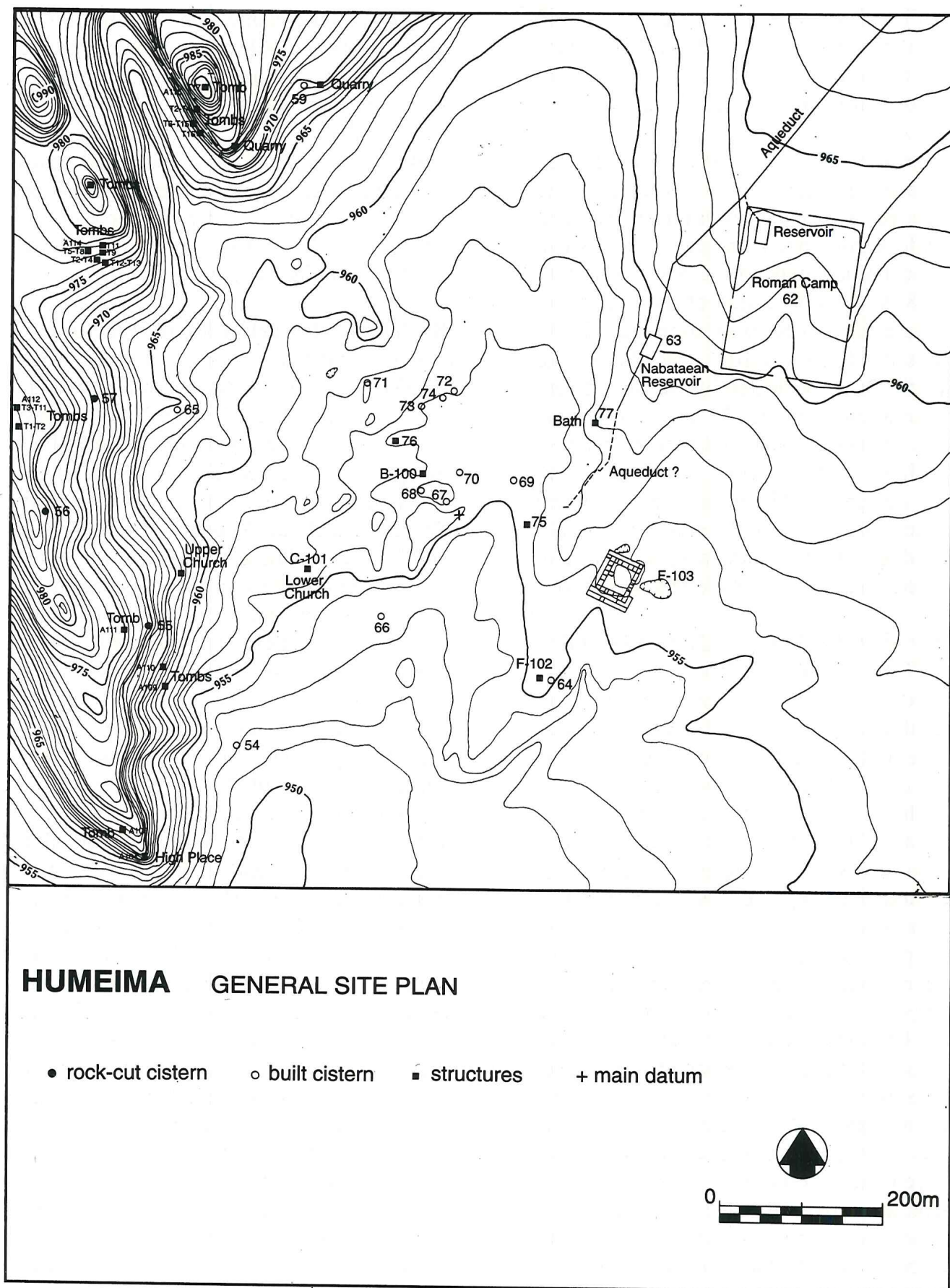
Fig. 1. Location of Humeima in the Middle East (C. Mundigler).

Humeima through 1989 provided information about the technological basis for the foundation and development of the Nabataean, Roman and Byzantine settlements of Auara (Oleson 1991; 1992). The field work, however, had not been designed to elicit information about the structures in the settlement centre that were not involved with the water supply. In view of the great extent of the field of ruins, and the importance of the settlement into the Abbasid period, a priority for this second stage of the project is the excavation of other types of public and private structures to complement the information already recovered concerning the water-supply system.

### Selection of 1991-92 Excavation Areas

The site was divided up into six excavation fields (see Fig. 2) for the purposes of mapping and recording. Field A includes all structures within a 1.0 kilometre radius of the base datum point in the settlement centre that are not part of some other excavation field, along with random surface finds. Field B includes the structures in the vicinity of cisterns nos. 67-68, Field C the field of ruins that surrounds the Lower Church and extends up the hill to the west, Field D the two areas of rubble north of Area B, and isolated structures in the vicinity, Field E the Roman Camp, Reservoir no. 63, the Bath, and the structures in their vicinity,





Brian Cannon Stephen Copp

Fig. 2. Humeima: Plan of settlement area (B. Cannon, S. Copp).

and Field F the so-called Caravanserai and the structures south of it. Field Z is surface finds or isolated structures found in the region of Humeima, but outside the radius of Field A.

The 1991 excavation areas were selected to sample different types of structures and to recover associated ceramics belonging to a wide chronological range. A prominent mound immediately to the north of cistern no. 68, in the very centre of the settlement, was selected as one excavation area, B100. The second area, C101, was the Lower Church, partially cleared by the Department of Antiquities in 1962. The third area, F102, seemed to be a well-preserved house associated with a circular cistern of Nabataean design. In 1992 excavation continued in each of these three areas, and probes were dug in F103, a caravanserai or palatial complex, and a survey of tombs was begun.

#### B100: EXCAVATION AND INTERPRETATION (John Peter Oleson)

Sixteen 5 m x m squares were laid out over the highest part of the B100 complex in the hope that they would provide the most information about its nature, function and chronology. In order to reveal the overall plan of the latest stage of the complex, the surface soil was cleared from most of the mound during the 1991 season, while several deep probes were excavated in an attempt to define the character of two particularly interesting features and the chronology of structural development in the area. Ultimately, deep excavation was carried out in Square 2 (Room E, the Apse) and Square 3 (Room B), and superficial clearing and shallow excavation were done in the other 14 squares. Excavation in 1992 focused on the solution of various questions remaining at the end of the 1991 season: the chronology of the apse and its relation to the rectangular feature apparently framing Rooms A and B; the character of the early structures below the centre of the B100

mound, and the plan of the western portion of the B100 complex. By the end of the 1992 season, we had exposed a complex 41m long from east to west, and 15m wide (Fig. 3; Pls. I; II, 1). In 1992, accessible portions of Room E were excavated down to sterile soil, a deep probe was sunk in Room G, and the western portion of the complex, which extends 28m west of the Apse, was defined and probed.

#### B100 Phase 1: Early Islamic Structures

The latest phase of occupation of Area B100 included all the walls revealed by surface clearance (Fig. 3). The Room E apse and Wall 13 belong to an earlier phase, although they remained in use throughout the occupation of the complex. At present, Phase 1A includes Rooms A to D, F to J, and N. During Phase 1B, also of the Early Islamic period, this complex was expanded 13m to the west with the addition of Rooms L, M, and the adjacent courtyard. In the slightly later Phase 1C, Room K was added on the west.

The complex includes a cluster of approximately square or rectangular rooms varying from about 2.4m square to 5.7 x 8.4m. Atypical are Room I, a walled courtyard surrounding Room H and providing access to Room J, and Room J itself, which has a semicircular north wall. Rooms D, E, and K through M face on a courtyard closed on the south by a wall. The walls of all these rooms have the same approximate orientation 30 degrees west of north, although the corners and intersections are seldom at precise right angles. Most rooms share at least one wall with a neighbouring room; those at the core of the complex share several. The walls vary in width from 0.66 to 0.82m, without any obvious standard module. With a few exceptions, the walls all share the same poor construction technique of dry stone masonry, including unworked sandstone or limestone boulders, rubble, and occasional re-used blocks. Most of the



Fig. 3. Humeima: Plan of Area B100 (S. Copp).

rooms show the remains of transverse arches that sprang from piers along the walls and carried the stone or brush roofing. The walls around the western extension of the structure (Phases 1B-1C) were built slightly more carefully, occasionally making use of large, roughly-trimmed blocks of red sandstone.

No obvious overall plan can be discerned in the eastern portion of the complex. A door at the southeast corner of Room C led to a large walled area (still unexcavated) that may be a courtyard. A door in the southeast corner of Room A led into Room B, but it was walled up some time before the structure was abandoned. Another door in the northeast corner of Room A led into Room G, but it too was walled up. The present north wall of Room G is a very thin, poorly preserved line of single blocks and rubble that may in fact be a later partition. A door in the east wall of Room G gave access through Room H into Room (or Courtyard) I. A door at the north end of Room I—also carefully walled up—provided access to Room J, a small chamber with a very poorly preserved north wall that forms an arc of approximately 100 degrees, intersecting the north wall of the complex.

The western portion of the complex is better defined. Room E consists of a pre-existing apse walled off to form an enclosed space, framed on either side by smaller, irregular rooms (D and O). These rooms face on a long courtyard (L 19.6, W 9.3-7.1m) on which open Rooms K, L, M, N and F. The long wall (Wall 2) defining the south edge of the court disappears under a pile of modern spoil 5m west of Room D. It is likely that a doorway or gate here gave entry to the complex.

Only portions of Rooms A, B, D, E, F, G, K and M could be excavated down to the Phase 1 floor level. The picture these probes present, however, is a uniform one. In all but Rooms A and K was a paving of

reused, irregular but often roughly rectangular slabs and blocks of sandstone and limestone set in clay. In many cases there were one or two probable packed clay floors above the stone paving. Room K clearly had only a packed clay floor, just above the foundation level of its walls. In most of the rooms in the eastern portion of the complex, the paving level corresponded clearly with a foundation level or a break in the structure of the surrounding walls. In some instances new walls were built with reused blocks, but in most cases, several of the walls in each room were constructed of reused or re-laid blocks on top of existing wall lines. Rooms A, B, E and M also contained raised stone platforms, plastered benches, and slab-built bins along the walls or in corners, similar to features on recent bedouin houses at Humeima. Doors incorporating an upright slab outside the door-sill, necessitating a step down into the interior but protecting the interior from dirt, vermin, and run-off water, are another feature common to the B100 complex (Rooms A, B, D, E, F, K, M) and recent bedouin dwellings. *Ṭabun* ovens and their characteristic deposits of soft grey ash were found inside Rooms D, E and I, and outside Room F.

The chronology of the Phase 1A-1C complex cannot yet be precisely defined, but the latest ceramics are Abbasid. In view of their location and apparently unspecialized plan, most of the rooms probably served as dwellings; the complex may have served an extended family, or several families, engaged in herding and agriculture. The fill within the rooms, and in particular above the pavements in Rooms B, D, E, F and G, is a mix of generally small fragments of a wide variety of wares dating from the Middle Nabataean through the Abbasid periods, with a sprinkling of later wares. The constant traffic of goats, sheep, and camels around the site ever since the construction of Cisterns 67 and 68 resulted



in both the reduction of discarded vessels to small sherds and the constant mixing of those sherds in the soft surface sand and soil. Within the rooms composing this complex the upper level of fill for the most part is not a gradual occupation deposit, but fill transported to the area by intentional human activity or by wind and surface wash after abandonment.

## B100 Phase 2: Byzantine Structures

Clearance of surface rubble fallen from the west wall of Room G revealed the upper edge of an eastward-curving wall carefully constructed of large blocks of the local white sandstone facing a core of rubble and earth. Further excavation revealed an apse with a radius of approximately 2.10m (Pl. II, 2), which terminated on the south at a neat wall face aligned with the lower courses of the west wall of Room A—a wall carefully constructed of re-used Nabataean blocks. The upper courses of the straight outside wall behind the apse form the west wall of Room G. In consequence, the apse shares the same rough orientation as the Phase 1 complex. The southern two-thirds of the apse was excavated to its foundation in 1991 and 1992.

The interior wall of the apse consists of seven regular ashlar courses. To judge from the amount of stone tumble in the apse interior the original structure was considerably higher. The remains of a fallen transverse arch that supported the roof of the structure were found lying across the room at a bearing of 236 degrees. A wall had been built across the open side of the apse to isolate it as a room. A doorway was found near its south end, but several other walled-up doors are visible.

A paving of flagstones and re-used blocks set in mortar was found which originally extended throughout the apse interior, as far as the later blocking wall on the west. Two box-like features resembling mangers (L 1.20m, W 0.45m, H 0.50m) were built

on this pavement at the south end of the apse; a slab-built bench was found at the northwest corner of the room, associated with several *tabun* ovens. Since this paving is at the same level as a similar flagstone floor encountered in Room B of Square 3, these two rooms may have formed a coordinated part of the same structure.

A probe below the paving revealed the foundation courses of the apse wall, consisting of unworked blocks, rubble and re-used blocks. A substantial stone packing sloped from the foundation blocks into the interior of the apse. Middle and Late Nabataean, Late Byzantine, Umayyad and Abbasid ceramics were incorporated in the packing; its removal revealed two large, carefully-dressed sandstone blocks laid against the apse footing blocks, forming an apsidal feature within the apse and of markedly smaller radius. A small probe in front of these blocks revealed a packed earth floor, and below a floor paved with heavy, reused stone blocks, including a Nabataean pilaster base. The fill above this paving contained a small amount of Late Nabataean and Late Byzantine pottery. The yellow silt below the pilaster was sterile.

Further excavation is required to reveal the plan, function, and precise chronology of the structure to which the apse belonged. The dimensions of the apse, however, along with the massive character of its construction, suggest that it was part of a public structure, perhaps a church. The presence of Late Byzantine wares in the fill provides a *terminus post quem*. The discovery of a Dushara block and a horned altar reused in the apsidal feature, along with numerous fragments of fine stone revetments and architectural mouldings, suggests the existence of a governmental or religious structure somewhere in the area, although not necessarily associated with the apse itself.

Walls similar in construction technique and chronology to that of the apse were exposed by deep probes in Rooms B and G.



Because these rooms lay near the centre and highest point of the mound of architectural debris constituting Field B100, it was hoped that probes dug here would reveal the complete sequence of occupation in the area and possibly uncover traces of any Early Nabataean structures below what seemed to be later walls.

Excavation of the sandy soil forming the upper strata within these rooms yielded large amounts of wall tumble, ceramics dating from the Middle Nabataean, Late Byzantine, Umayyad and Abbasid periods, and small fragments of glass vessels, steatite cooking pots, occasional iron nails and large quantities of fish and chicken bones.

The probe in Room B revealed Wall 13, which crosses the room from north to south well below the level of the later occupation. The first floor found inside the room or space defined by Wall 13 was a series of sandstone pavers that extended 1.5m west of the wall. A lens of decayed mud brick on the floor contained only Late Byzantine pottery. The paving sealed off a stratum of very loose, sandy loess mixed with cobbles and occasional lenses of clay which contained fragments of ceramics dating from the Middle Nabataean through Late Byzantine periods, along with a great deal of rubbish, including scraps of iron, bronze and lead, the bronze base for a statuette, bronze coins, bones, and ash. The coins unfortunately could not be identified even after cleaning, but their dimensions suggest dates in the Late Roman and Early Byzantine periods.

The sandy loess mixed with cobbles rested on another pavement of sandstone slabs and re-used blocks and a piece of alabaster revetment. This paving is similar in appearance and level to the paving in the apse. The levels of fill and packing below this pavement all contained Middle Nabataean through Byzantine or Late Byzantine ceramics. The ashlar blocks composing the west (inside) face of the wall terminate with

a foundation offset in association with a loose fill of cobbles and soil. The layers beneath extend up to the face of the deep foundation, which consists of sandstone and limestone cobbles set in mortar and smeared on the exterior with a layer of clay. They contained some of the earliest ceramics so far identified at Humeima—Early Nabataean cup fragments of the first century BC—but found in combination with Middle Nabataean, Late Nabataean, and Byzantine sherds. The bottom layer consisted of a series of sterile water-deposited layers of clay, sand, and pebbles into which the foundation trench for the wall had been dug. Because of the cramped space, excavation had to be halted before the bottom of the wall was found. The depth of the foundation so far exposed is 2.66m. On the east (exterior) side of the wall, the layers extending up to the wall face contained Middle Nabataean through Late Byzantine ceramics. The lowest 0.60m of fill (where excavation had to be halted because of lack of working room), was sterile.

The pavement along the east side of Room G was removed and the fill beneath it excavated, revealing loose, reddish sand and cobbles surrounding Wall 07. This wall was built of large, carefully-dressed blocks of ashlar masonry laid with alternating course of small cobbles. The wall runs north/south from beneath the north baulk almost to the south end of the trench, where it turns a corner and runs into the west baulk. A three-stepped foundation was built across the corner of the wall, bonding with both sections. The bottom of the steps lay at the same elevation as the wall foundation. At a level even with the top of the bottom step the consistency of the fill became firmer, with fewer stones. Although there was no apparent difference in the sand itself, the upper levels of the fill contained only Late Byzantine ceramics, and the lower levels strictly Middle and Late Nabataean ceramics.



### **B100 Phase 3: Nabataean Features**

A possible mud brick wall or clay-filled foundation or robber trench was exposed below the level of the pavement in Room E. The longest exposed section, 0.72-0.75m wide, extends east-west, bending 90 degrees to the south at its west end, and possibly 90 degrees to the north at its east end (Pl. II, 2). Alternative explanations are that the feature is composed of mudbrick, although it was very difficult to isolate possible individual bricks, or pisé rather than mud brick, that it is a silt deposit isolated by foundation trenches excavated on either side in antiquity, or that it is a robber trench filled by later silt deposits. The bottom of this clay feature varies in elevation. Only a very few, small sherds of Middle and Late Nabataean wares were found in the sand on either side of the feature. The soil around and below the base of the feature, consists of sterile red granular sand.

A curious cross-shaped feature was exposed on the south side of the clay feature. It consisted of two upright blocks with Nabataean dressing on their upper surfaces, framing and supporting two thinner slabs placed between them at right angles. These blocks were set on a large, thick slab which was supported by another slab and blocks, and placed on a possible slab pavement. The lower slabs penetrate into the south baulk. The function and chronology of this feature are uncertain. A significant number of animal bones were found close to it, and the ceramic finds provide dates ranging from Early to Late Nabataean. Two sherds were dated to the first century BC, and the latest material was dated tentatively to the late fourth century AD. There was much more ceramic and non-ceramic material on this side of the clay feature than on the north.

A socle of fist-sized and larger stones underlies the clay feature along the north side of the bottom slab supporting the cross-shaped feature construction. No cor-

responding socle was found on the north face of the clay feature. Only considerable further excavation—very difficult at this depth—can determine the sort of structure or situation of which this enigmatic clay feature formed a part. Since a similar clay layer was encountered at the bottom of a probe in Room G east of the apse, the feature, wall, or natural layer of alluvial clay may extend well beyond the portion exposed in Room E.

The probe along the west face of Wall 07 in Room G was extended below its foundation. The soil changed at this elevation to gravelly sand alternating with lenses of firm sand. The gravelly layers contained large quantities of fragmentary ceramics dating to the Early and Middle Nabataean periods (first and second centuries AD, possible extension into third). Below the gravel, the probe was excavated through very compact, finely textured clay. In elevation and consistency this layer corresponds to the clay feature (possible mudbrick wall?) in Room E. The material may be either mudbrick or a clay deposit.

In view of the early character of the ceramics, it may be that the structures found below Room G are the oldest architectural remains yet found in B100. It is likely that the structure of which Walls 07 and 10 constituted the core around which natural fill and intentional dumping accumulated over subsequent centuries. Further excavation along Walls 07 and 10 in 1993 will define the chronology.

### **Summary Analysis of Field B100**

Although excavation in Field B100 in 1992 revealed more details of the plan of the complex, and provided information concerning chronology, further excavation is required to identify the function of the visible structures and of the earlier structures buried deep within the debris mound. Nevertheless, it now seems likely that the apse in Room E formed part of a Byzantine



church. Excavation in other areas of the B100 complex has revealed the existence of a flagstone pavement floor extending south from the north wall of the complex some 0.60m lower than the pavement in the apse. A possible explanation is that the pavement in the apse is the chancel pavement, and the pavement exposed in Room F and other rooms, the pavement of the nave and aisles. This hypothesis is supported by the location of a pier in Room F below the level of the later interior walls, the orientation of which accords with the longitudinal axis of the apse and B100. This structure was cleared out in the Umayyad period and subdivided into a large structure with a south-facing courtyard. At some later date, this complex was extended 10m to the west, and two more rooms were added along the north wall. Slightly later, another room was added outside the west wall. All the construction subsequent to the Byzantine period seems to belong to the Early Islamic period, although there is a small amount of ceramic evidence that parts of the complex may have been occupied as late as the Ottoman period. The function of this complex remains uncertain, although the presence of numerous small rooms, *tabun* ovens, the high proportion of coarse-ware, kitchen, and storage ceramics found, the large number of quern fragments recovered, and the presence of large deposits of fish and bird bones suggest habitation.

The identity of the structures that formed the core of the mound at the east end of the B100 complex is still undetermined. The apse itself may be superimposed on some earlier Nabataean structure made of pisé or mud brick. It abuts and does not bond with Wall 02, the substantial ashlar wall to its south, which may predate it. Probes in Room B in 1991 and in Room G in 1992 revealed the presence of very substantial walls deep below the surface, probably Byzantine in date but extending into Nabataean levels. Unfortunately, these walls do

not form any obvious pattern in relation to the apse. Further excavation is required to solve some of these problems.

#### C101: THE LOWER CHURCH (Robert Schick)

The Lower Church is one of two churches at Humeima. No work has been done on the Upper Church, farther to the west. In 1962 the Department of Antiquities of Jordan cleared the apse, chancel, and the north and south aisles down to the flagstone pavement. No records survive of their work. They did not, however, clear the nave below the upper rock tumble, and they thus left undisturbed sub-tumble deposits in about one third of the church interior. The survival of this deposit meant that the stratigraphic profile of the church could still be recovered.

The excavated area included the church, two rooms flanking the church on the north, and two more rooms on the south (Fig. 4; Pl. III). During the 1991 and 1992 seasons the church interior (Room 1) was cleaned up, the intact deposits in the nave excavated down to the pavement (Pl. IV, 1), a probe dug in the central apse, and five probes for burials dug below the pavement in the nave. The west two-thirds of the northeast sacristy room (Room 2) was also excavated down to the pavement, and a probe dug in the northwest corner. The north half of the southeast room (Room 3) was excavated down to the pavement. The northeast portion of the northwest room (Room 4), a narthex or atrium, was excavated. The entire southwest room (Room 5) was excavated, while a far southeast square (Square 6) was partially excavated. It also proved necessary to remove large piles of excavation dump from 1962.

#### The Church Interior: (Room 1)

##### *Architecture*

The church is a typical basilica (east/west exterior L 21.5m, north/south W



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15m). Two rows of five arch piers divided the interior into a nave just over 5m wide flanked by narrower north and south aisles, each about 3.5m wide. The east end of the nave terminated in a raised chancel and apse, while the two side aisles ended in smaller semicircular apses. Benches were built of cobbles with mud bricks along the south, west and north walls of the church. In the southwest corner of the church was a badly damaged staircase. Immediately to its west was a niche or cupboard. A doorway in the middle of the north wall led into the northwest room, while a second door led into the northeast room. There were no doors in the west wall or south walls. The pavements in the church and the northeast and southeast rooms were made of large, irregularly-shaped flagstones of blueish flakey slate and white harder sandstone. There were no mosaics or marble pavements.

Traces of an ambo survived between the easternmost pier of the north row and the northwest corner of the chancel. The chancel, raised two steps above the level of the nave and side aisles, projected into the nave as far west as the first arch piers but did not extend into the north or south aisles. The steps reused marl conduit blocks from the aqueduct or a similar structure. The chancel screen base was also made of reused marl conduit blocks placed right side up so that the grooves could hold the panels. No trace of an altar was found.

The three apses were all semicircular. The central apse had a diameter of 3.5m. No evidence for a *synthronon* remained. The north apse had a diameter of about 2m. Its west end was delineated by a low line of plaster-lined mud brick. The south apse had a diameter slightly greater than 2m; its west end was delineated by a line of cobbles faced by mud brick. The two side apses belong to the initial construction period of the church.

#### *Stratigraphy and Finds*

Five layers could be distinguished in the

undisturbed deposits in the nave. On top was sterile soil above hard-packed soil with large tumbled blocks and cobbles but very few artifacts. These two deposits constituted the remains of the partial collapse of the building after it had been abandoned, covered by an accumulation of wind-blown silt and sand.

Below was a layer of ash that was thickest in the centre of the nave and thinned out and disappeared as it sloped up towards the north and south aisles. The ash split and merged into a number of sub-layers and lenses with non-ashy soil in between; the ash contained little charcoal and varied from black to light bluish grey and the non-ashy soil was often discoloured by heat. A few bones were found in the ash, but ceramics were scarce and consisted of the mix of Nabataean through Early Islamic types typical of the site. Some of the sherds were burnt. The ash probably came from the burning of the roof.

The ash rested on compacted, silty soil above the pavement. The soil contained comparatively few cobbles or pebbles but was much richer in organic materials and pottery. Chunks of charcoal, but no ash, were found throughout the layer. The layer also produced many animal bones, hundreds of ostrich egg shell fragments, and glass fragments, especially in the bottom few centimetres. Large numbers of corroded iron nails were found as well, that would have come from the wooden beam superstructure of the church roof. Only a few other metal objects and scraps were recovered, however. It appears that the metal furnishings in the church were removed prior to the final destruction of the church, leaving the iron roof nails as the only remaining metal. The large quantities of Nabataean through Early Islamic pottery in this layer included handmade storage jars. The deposit represented debris from the last occupation of the church and the robbing out of the church while the building remained



structurally intact.

Also found within this bottom layer were many marble fragments, including portions of at least five chancel screen panels, several fragments of a hexagonal panel that may have formed the base for the ambo, fragments of a large marble basin, and colonnettes and bases, as well as two chancel screen fragments that preserved nine letters of a Greek inscription: ]ACWCEOYCT[ .. The designs of the panels were typical; motifs included a cross, and open-work circles surrounded by stylized acanthus leaves within a rectangular frame of parallel grooves and ridges. Only a small number of the chancel screen fragments joined; less than half of the most complete panel was recovered. Several fragments were fire-blackened. Although additional marble pieces would have been found in 1962, and subsequently lost, it seems that the chancel screen and ambo were deliberately dismantled, their panels broken up, and most of the pieces removed, perhaps for burning to produce lime.

Some pavers in the northeast edge of the central apse were lifted and the sandy fill layers below excavated to a depth of some 1.50m until the cobble foundation of the apse wall was reached. The fill contained large amounts of pottery and bones, but next to no other artifacts. The pottery seemed to not include any types datable to the Islamic periods.

### *The Burial Probes*

A number of crosses were carved into the pavers in the nave, including six in the area covered by the undisturbed soil deposits (Pl. IV, 2). There was no symmetry to the distribution of the crosses. In an attempt to understand the reason for their presence five probes were dug beneath them. As it turned out, the crosses marked the locations of burials.

The fill layers in these five burial probes contained a great deal of pottery and animal

bones, but almost no other artifacts. All of the graves were constructed in a similar manner, with flat-lying, but irregularly-shaped sandstone capstones about a metre down on top of rows of dressed blocks forming the sides. The skeletons were oriented roughly east-west with the head at the west end (Pl. V, 1). All the skeletons were fully extended and articulated. Two of the burials were placed in wooden coffins.

In the first probe, differences in the compaction of the silty fill below the pavement clearly marked the edge of the soil dug out for the burial. Thus, the pavement and fill below was installed, and only at a later date was the paver lifted, the fill below removed, and the grave constructed. Looser fill was then deposited above the grave capstones and the paving stones replaced. As a result the pottery in the fill dates the burial, not the construction of the church; it seems not to include any sherds datable to the Islamic period. A small bronze cross worn as a necklace and remnants of sandals were the only associated artifacts.

In the fill of the second burial probe exceptionally large amounts of pottery and animal bones were found. The skeleton belonged to a young girl, who was buried with numerous objects, including an ivory doll, beads, a gold earring, and a glass mirror set into a painted plaster disk (Pl. V, 1). A portion of the compacted orange sand layer below the burial was excavated down to a level 1.74m below the top of the pavement. The pottery here was datable to the first to third centuries AD. This layer matched the bottom subpavement layer in the northwest and southwest rooms and so clearly represented an extensive deposit of soil predating the construction of the church.

The skeleton of the third burial probe was well preserved inside a wooden coffin made of long boards. Of particular interest was the highly unusual discovery of the desiccated, but intact, brain still inside the



skull. A bronze cross necklace was found as well. Excavation of the fourth burial probe to a depth of over a metre did not reveal any capstones, so time constraints required its abandonment. A burial may be immediately to the north, however. A fifth burial probe revealed a poorly preserved wood coffin. The skeleton had no associated artifacts other than a single iron nail, and very slight traces of sandals near the feet.

### **The Northeast Room (Room 2)**

The western two-thirds of the northeast room were excavated. The room was spanned by three E-W arches, and a bench ran along the west wall. The upper layers consisted of rock tumble in loose, sandy and silty soil. The uppermost layer below the tumble in the north end of the room, where an intact Byzantine bronze lamp was found, was composed of ashy, sandy soil, perhaps the remains of the cooking fires of transient occupants. Elsewhere were further layers of generally silty, non-ashy soil extending down to thin layers and lenses of ash in the last 0.10m above the pavement. These layers were highly variable in colour, ranging from dark black to light bluish grey, with deposits of ash-free silt mixed in. In the centre of the room was a hard clay surface surrounding two pavers that had been lifted out of the pavement and dumped on top of dark ash containing many large storage jar fragments. The pavers had been intentionally removed in order to install an oven lined with fired brick, of which only a small portion survived. The use of the oven can account for the large number of storage jar fragments, some burnt, the large amounts of bone, and the concentrated ash deposits. All this indicates substantial domestic occupation of the room after the church had fallen out of use.

Two paving stones in the northeast corner were removed and the fill layers below excavated deeply until the north and west walls were pedestalled at a depth of 2.50m

below the pavement. The fill consisted of silty and slightly ashy layers, with orange sand at the bottom. The layers were all filled with substantial quantities of pottery and animal bones, but they contained little to no glass or other objects. None of the layers can easily be seen as a beaten earth floor or other occupational surface. The depth at which the walls bottomed out was surprisingly deep for foundation courses.

Given its location off the east end of the north aisle, with no access to the outside, and the presence of much liturgical glass in the layers immediately above the pavement, the room can be identified as a sacristy.

### **The Southeast Room (Room 3)**

Excavation of the north half of the room revealed that rock tumble overlaid compacted silty soil, with relatively small amounts of mixed pottery, which covered four installations: an E/W row of stones along the south wall of the church, a second N/S row of stones at a slightly lower level along the west wall of the room, a third E/W row between the two arch springers, and a fourth N/S row along the east wall. These features rested on top of a flagstone pavement identical to the type of pavement in the church interior, but some 1.5m lower. The installations were built as a unit and may be storage bins or feeding troughs for animals. Among the finds were a loom weight, a cluster of reconstructable cooking pot sherds, and two pieces of steatite with mending holes pierced around their edges. The room was roofed by two N-S arches. One doorway of the room was located in the middle of the east wall. A second doorway in the middle of the west wall led into the southwest room. Excavation did not proceed below the pavement.

### **The Northwest Room (Room 4)**

A portion of the northeast corner, where the doorway was located, was excavated. Below the thick deposits of rock tumble



outside the room, excavation reached the top of a compacted sandy layer that probably represents the original street level when the church was in use. Below the thick rock tumble inside the room excavation exposed a sequence of three layers containing very little pottery: on top, silty, sandy, stone-free soil, then a layer of black powdery ash below, and a further layer of silt below. Oddly enough, below those layers was a beaten earth floor, rather than a flagstone pavement as in the church and south rooms. Excavation in a probe below the beaten earth floor did not proceed deeply, but appeared to reach the start of fill layers similar to the fill layers below the pavement in the northeast room.

A springer for a N-S arch was uncovered along the interior face of the north wall just west of the door. A staircase along the east wall had seven steps remaining, made of reused marl aqueduct blocks placed upside down. The threshold of the door in the north wall consisted of two levels of large flat-lying stones.

### **The Southwest Room (Room 5)**

The entire southwest room was excavated (Pl. V, 2). Excavation proceeded through topsoil, tumble, and subtumble down to the flagstone pavement, a sequence similar to that in the southeast room. The subtumble deposit proofed to contain a couple dozen *in situ* smashed vessels of roughly seventh century types, including an amphora and a variety of storage jars and cooking pots, either resting directly on the pavement or within a couple of centimetres of it. Traces of a small rectangular wooden box were also found just above the pavement. Within the subtumble deposit was a level of carbonized roots from trees that had once grown in the corners of the room. The flagstone pavement in the north half of the room proved to break off on a fairly straight line about halfway across the room. In its place in the south was a beaten earth sur-

face. A concentration of nails was found in the doorway in the east wall, clearly part of the door construction.

One large paving stone was lifted in the northwest corner and the soil below excavated until the walls of the rooms were pedestalled. Below the pavement was ashy soil filled with pottery and bones and below it a layer of orange sand.

The presence of the pottery vessels in this room indicates its use for storage. The results of the excavation showed that the room, as well as the adjoining southeast room probably were contemporary with the church, but functionally unrelated to it.

### **The Far Southeast Square (Square 6)**

Some slight amount of work was done in an additional square east of the southeast room. Clearance revealed the top of a wall extending straight east from the southeast corner of the church, so a square was set out to determine whether it formed the north or south wall of a room interior. Excavation proceeded through tumble layers, but time constraints prevented any deeper excavation. As a consequence that question remains unresolved.

### **Conclusions**

Because the pottery from the probes below the pavements have not been analyzed yet, no firm evidence is currently available about the date of construction of the church. The coins also remain unread. From general historical considerations, however, construction should fall in the late fifth or sixth centuries. All of the architectural features of the church and adjoining rooms appear to belong to a single phase of construction. The church was partially robbed out and put to domestic use at some indefinite time in the Early Islamic period. The rooms to the south may have been unrelated to the church. Work will continue in 1993.



## EXCAVATION OF STRUCTURE F102 (Khairieh 'Amr)

F102 is the designation given to a structure associated with a Nabataean cistern, at the eastern periphery of the settlement (see Fig. 2; Pl. VI). The area was chosen for excavation because it was expected to have remains from the early phases of occupation, being associated with the cistern, as well as the late phases, being at the periphery of the settlement.

Prior to excavation, Structure F102 was covered with extensive overburden of fallen blocks and rubble, but some wall lines could already be discerned (Pl. VII, 1). It appeared to be a large rectangular structure with internal crosswalls defining rooms. A grid oriented to the compass was established, dividing the field into 6 x 6m squares. After clearing most of the surface rock overburden, excavation started in 1991 in Trenches 1, 3 and 4. In the last week, definition of walls was also carried out in Trench 2, and in Trench 11—to the east of Trench 1, towards the cistern. During the 1992 season, excavation was continued in a sounding in the northwest corner of Trench 1—measuring 3m E-W x 1.50-2.50m N-S, further clearing was carried on in Trench 2, Trench 5 was excavated to connect Trenches 3 and 4, and Trench 6 was opened to connect Structure F102 to the cistern (Fig. 5). Both the sounding in Trench 1, and a sounding in the northern half of the western room in Trench 5 (Room F), went below the 'floor' levels of the main building phase of Structure F102. As the structure forms one unit, it will be treated as such in the following report, rather than dividing it up according to the sections found in the excava-

tion trenches.

### Architecture and Phasing of F102

A large portion of structure F102 was exposed during the two seasons, along with a small portion of another structure to the north (Walls 01.9, 10, and 11 in Trench 1) (Fig. 5; Pl. VI). The construction style of this northern structure is somewhat similar to that of the main phase (1B-C) of the complex found in Field B100. All trenches excavated in depth in F102 gave roughly similar results: at least eight phases of use of the area could be distinguished<sup>3</sup>.

#### Phase 1

This is the latest building phase at the field, best shown by Wall 01.02 (i.e. Wall 2 in Trench 1), where the northwestern face of the wall is a late addition built on top of Wall 01.21 (Figs. 5, 6; Pl. VII, 2). Wall 01.21 is in turn only one course high, abutting the original (Phase 5) northwestern face of Wall 01.02. The blocking in Trench 4 of the doorway in Wall 04.02 may also belong to this phase (see Pl. VIII, 1), as well as the stone pavings 04.20 and 26 in the bins in the northern section of Trench 4. The blockage in the doorway of Wall 04.02 looks more like a retaining wall than a true blockage and may have served the purpose of excluding outside rubble when the room was cleared for reuse (Pl. VIII, 1). Partial clearance of ancient buildings for use as storage areas is a common practice at Humeima even today.

Pottery found in Locus 01.29—which extends under the northwestern face of 01.02, see also Fig. 7—dates as late as the 12th century (Fatimid-Ayyubid period)<sup>4</sup>.

3. Please note that the elusive Phase 2 reported in Oleson, 'Amr and Schick 1992: 159-160 as perhaps to "be combined with Phase 4", is now definitely to replace Phase 4 as directly preceding Phase 5. The previous Phase 4 is now given as Phase 3, while Phase 3 is designated as Phase 2.

4. According to preliminary readings and personal communication with Robin Brown in reference to painted sherds from the same stratum in Trenches 5 and 6. Close parallels were found at al-Wu'eira and Shobak, Brown 1987: 277-287; 1988: 236-240.



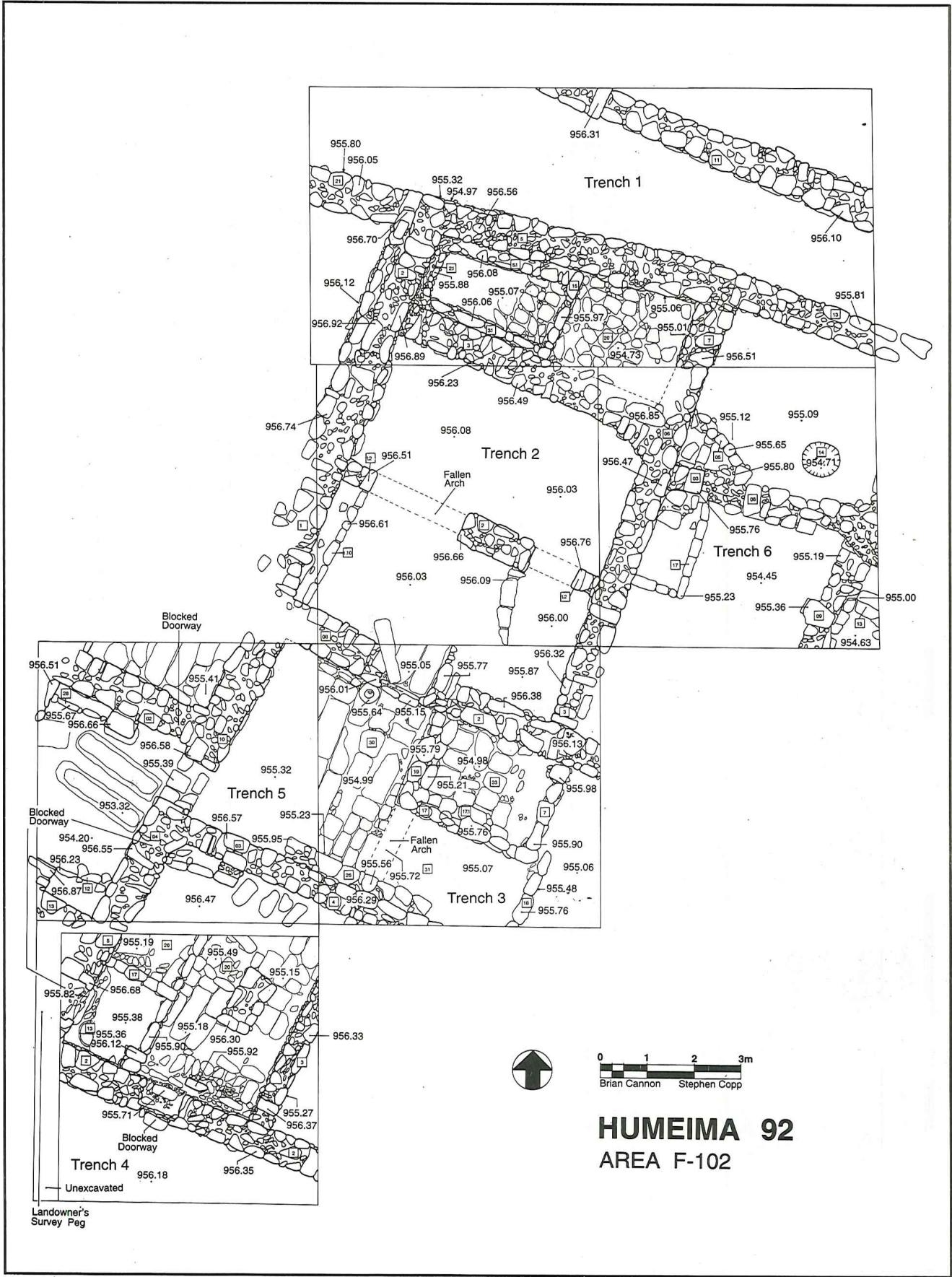


Fig. 5. Humeima: Plan of Area F102 (B. Cannon, S. Copp).



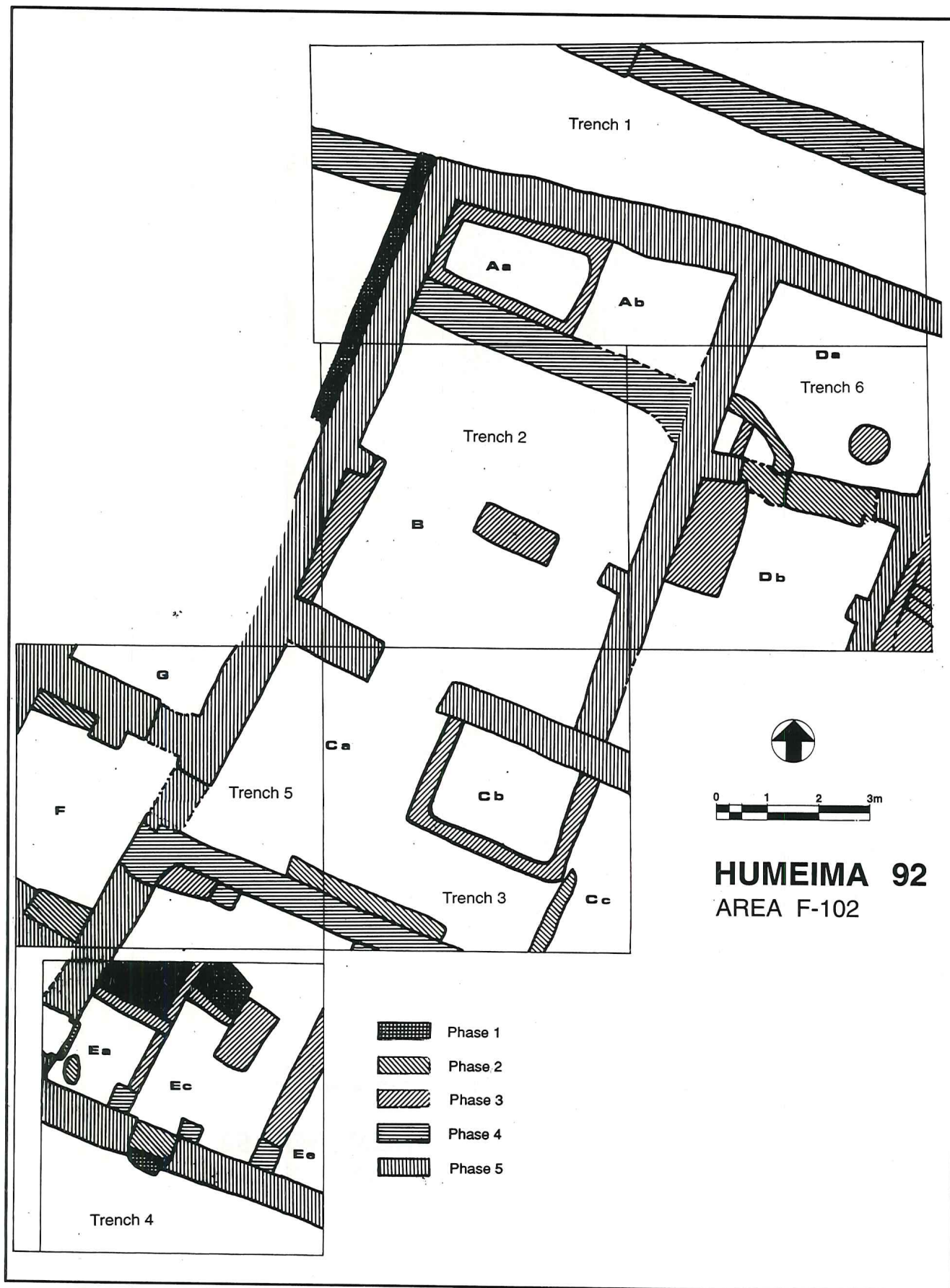


Fig. 6. Humeima: Area F102, provisional phasing during the Islamic periods (K. 'Amr).



Associated with the use of Phase 1 are loci that produced Late Islamic hand-made "village ware" pottery, found in the top levels of all excavated trenches, containing high concentrations of stone rubble most probably due to an earthquake. This pottery is still very little known, especially in southern Jordan, and although hand-made pottery from the 19th and early 20th centuries in northern Jordan is abundant and obviously is based on a long tradition, its southern counterpart is almost nonexistent. The author failed to find any reference to pottery in the accounts from the period and only one potter who worked during the first half of the twentieth century in Wadi Musa could be identified ('Amr 1987: 43). During personal discussions with elderly people from the areas of at-Tafileh, Wadi Musa and Humeima, I was told that they used wood, animal skin and metal rather than pottery vessels (see also Brown 1992: 352-353). Due to the greater durability and simpler forms (and perishability in the case of animal skin) of these materials, the archaeologist's task in finding a dating tool for the Late Islamic periods is made very difficult. During these periods, people in southern Jordan also widely used the barter system, hence the scarcity of coins, another rare dating tool in Late Islamic southern Jordan. In conclusion, pottery did exist in southern Jordan in the Late Islamic periods, but it was rare and is very little known.

Our best dating tool for Phase 1 at F102 is a pair of iron scissors found in Locus 04.16—within the fill of bin 04.26—below the (earthquake) rubble of 04.10. Taking into consideration the poverty of the Hisma and its rare contacts with modern civilisation up till the first decades of this century, the iron scissors suggest that the earthquake mentioned above is most probably that of 1927. The number of door lintel and tethering stones found out of position in Trench 3, and a fallen arch in Trench 5 (Room F) below the same rubble are most

probably there due to natural decay rather than earthquake, as is also indicated by the rubble of Loci 01.08 and 12 (in Room A) below the assumed earthquake rubble of 01.01. Similar situations resulting from natural decay could be seen in some of the rooms at the site that were occupied as recently as the early 1970s. Thus there would have been a period of abandonment of the structure prior to its final destruction, possibly in 1927, although occasional visitors must have deposited the pottery and scissors there.

### *Phase 2*

This phase is represented by beaten earth floors in all rooms in Trenches 1, 3, 4, 5 and 6.

In Trench 3, beaten earth floor 03.16 of Room Ca is associated with late Walls 03.18 and bench 03.26 built against Wall 03.04, as well as a large limestone mortar partially sunk in the floor next to the entrance in Wall 03.02 (=02.08) (Pl. VIII,2). The probable fallen arch Locus 03.25 (no springers or imposts found) may have been left as a divider at that time. In Trench 5, excavation in the east part stopped at the continuation of Floor 03.16, where it was associated with the two Tabuns 05.19 in the southwest corner of Room C and 05.16 in the northwest corner (not shown in Figs. 5 and 6). In the west room (Room F) in Trench 5, this phase is represented by Floor 05.29, associated with installations 05.12 and 05.28 which are interpreted as storage bins.

In Trench 4, this phase is represented by beaten earth Floor 04.12 and Hearth 04.13 of Room Ea, as well as the steps leading to the doorways in Walls 04.05 and 04.02 (see Pl. X, 1). In Trench 1 the same level is represented by Locus 01.22, a level of "courtyard layers", i.e. washed silt indicating that Room A of Trench 1 was open to rain and was not roofed during that phase. A fragment of a steatite cooking pot lid found on



Floor 04.12 perfectly joined two fragments found on 01.22, approximately 17.20 m away but at the same elevation of c. 955.30m asl (Pl. IX, 1).

In Trench 6, the Phase 2 Floor 06.06 is associated with feature 06.05, probably a storage bin. Connected with the use of 06.05 is a one-course-high building up of Wall 06.08, thus joining the previous Phase 5 arch springers, and dividing Room D into two units. A patch of ash, burnt bone and charcoal (06.04) was found directly above Floor 06.06 in the north (Room Da).

The features belonging to this phase indicate that Structure F102 was used for domestic purposes at the time. The room in Trench 4 (Room E) served as living quarters, Room F of Trench 5 was a store room connected to the food preparation and cooking area to the east (in Room C) through the opening in Wall 05.04/10. Room A in Trench 1 was not roofed and maybe only used for the occasional dumping of objects, while the role of Room D in Trench 6 is not clear.

The pottery associated with this phase indicates a date within the Middle Islamic period, c. 11th/12th century AD (for a logical attempt at the archaeological periodization of the Islamic periods see Whitcomb 1992a: 387; 1992b: 113).

### *Phase 3*

There was much "supporting and mending" building activities during this phase. Beaten earth floors were laid on earlier stone pavements in Rooms A, C, G and E (Pl. IX, 2). Piers for supporting arches, and dividing curtain and secondary walls were built in almost every excavated room. In Trench 2, the remnants of the plaster on the southeast face of Wall 02.01 extend behind the secondary Wall 02.01.1. Additionally, in Trench 4 Room E, the space under one of the arches was built up, creating Wall 04.03. A layer of burning was found below the floor level of this phase in Trench 4 (Pl.

X, 1).

In Trench 6, beaten earth Floor 06.11/12, at 955.08m asl, is associated with Pit 06.14 found full of ash and a possible storage bin below the Phase 2 Feature 06.05 in the north, and raised Platform 06.17 in the south, suggesting activities related to food preparation. Also showing at this phase was a curved Wall 06.09 in the southeast corner of Trench 6, possibly defining the cistern. Three steps were cleared that may have led down into the cistern.

In Trench 1, an elaborately decorated Islamic bronze open-work finial for a staff was found in the matrix of Floor 01.19 of Room Ab. Pottery sherds dating into the Early Islamic period (Early Abbasid, c. ninth century AD) were also found embedded in the floors of this phase. The nature of the additions to Structure F102 during this phase suggests reinforcements, perhaps after an earthquake. In his study of the historical references to earthquakes in Bilad ash-Sham, Ghawanmeh (1992: 56) listed nine major earthquakes during the first six decades of the ninth century AD.

### *Phase 4*

The complexity of this phase is best represented in Trench 5, where the doorway in the preceding Phase 5 Wall 05.04/10 was blocked and replaced by a doorway further to the north. Associated with the blockage is the building of the NW-SE running Wall 05.03 (=03.04), and the arches spanning Rooms C and E. In Room E, the plaster on the northeastern face of Wall 04.02 extends behind the arch piers. Thus Rooms C and E would have been one large open courtyard previous to Phase 4.

Although the NW-SE running Wall 01.03 (=02.03) (perhaps created by building up the space under the northern arch of the large Phase 5 northwest room of the structure, spanning Trenches 1, 2, 3 and 6 and dividing it into Rooms A and B) has not been fully defined yet, logically it should

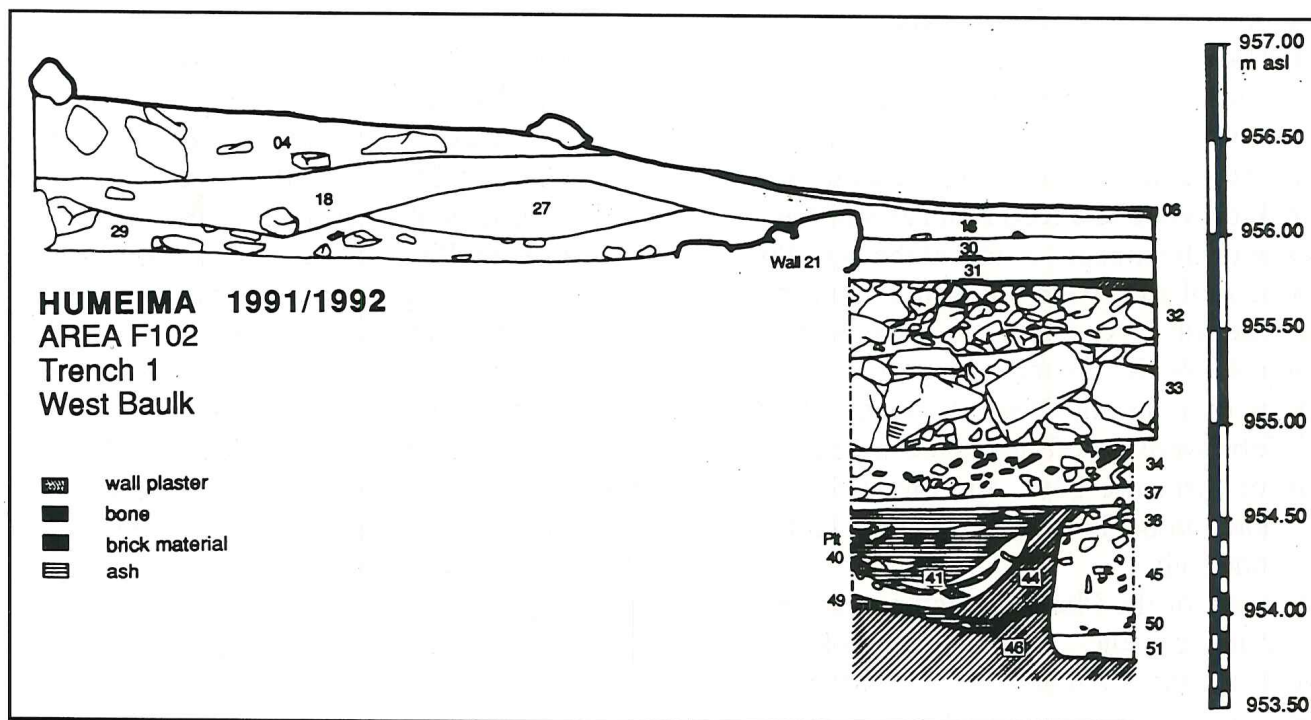


Fig. 7. Humeima: Area F102, Trench 1, West Baulk (K. 'Amr).

belong to Phase 4, being contiguous to and abutted by secondary Wall 01.03.1 of Phase 3, and itself abutting Wall 01.02 of Phase 5.

Another candidate for Phase 4 is the "enigma" Wall 01.21 (see Oleson, 'Amr and Schick 1992: 159-160). Additionally, although only the tops of the walls belonging to the northern structure in Trench 1 were cleared, their building technique suggests a Phase 4 date. Thus the "street" running across Trench 1 would have been created during Phase 4.

The best dating evidence for this phase comes from the sounding in the northwest corner of Trench 1 (see Pl. VII, 2 and Fig. 7), where Wall 01.21 is clearly associated with the mixed sand and clay (street level?) Locus 01.31. Directly below, rubble level Locus 01.32 seems to be brought in to level the ground above earthquake collapse Locus 01.33, thus providing foundations for Wall 01.21 and its associated surface 01.31. The (little) pottery found in Loci 01.31-32 is similar and may be dated to the eighth century, while that from Locus 01.33 is mainly "Umayyad" with a few sherds of

probable "Early Abbasid" date. It is tempting to assume that this is the famous earthquake of AH 130 or 131 (AD 747-8 or 748-9; see Ghawanmeh 1992: 56; Russell 1985: 47-49; McNicoll, Smith and Hennessy 1982: 123ff). No evidence for this earthquake was found in any of the excavated rooms, indicating that the collapse was cleared out when the structure was reused, and perhaps partially utilised in the levelling of 01.32.

Phase 4, therefore, represents the modifications and partial rebuilding of Structure F102 after the earthquake of January 748 (according to Russell 1985: 47-49).

#### Phase 5

This is the main building phase of Structure F102. The walls were built of blocks of sandstone, sometimes reusing dressed Nabataean ashlar, with mixed rubble and mud mortar. The rooms were rectangular with central doorways surrounding an open courtyard (joint Rooms C and E, see Phase 4 above), and most of them were paved with sandstone slabs (Fig. 5 and Pl. IX, 2).



Room F in Trench 05 had remnants of a plaster floor (05.36) defining this phase.

No clear evidence for the original roofs was found. The arches may have either supported stone slabs that were consequently cleared, or wood and reed roofs as still seen in some of the modern rooms at the site. No ceramic roof tiles were recovered from the area. The ash layer above the pavement in Trench 4 (Pl. X, 1) may suggest a burnt wooden roof during Phase 4. As no clear roof slabs were found anywhere in the vicinity of Structure F102, the Phase 5 roof was more probably wood and reed rather than stone slab.

As none of the Phase 5 stone pavements were removed, the main dating evidence came from the sounding in the northwest corner of Trench 1, where the top of the foundation of Wall 01.05—at its corner with Wall 01.02—was reached at a level of 954.97. The associated surface there is compacted earth Locus 01.34 (Fig. 7). Directly on this surface lies the stone tumble Locus 01.33 with its large dressed building blocks. If the assumption that 01.33 represents the earthquake of AD 748 is correct, then the main construction of Structure F102 should pre-date AD 748 but still lie within the Early Islamic period.

Among the fill of the c. 70cm deep foundation trench (01.35) of the corner of Walls 01.02 and 01.05, only three sherds were recovered, dating to the sixth/early seventh century AD. In Room F of Trench 5, no pottery datable to the Islamic periods was found below Floors 05.29/45 and 05.36 associated with Phase 5.

#### *Phase 6*

The level associated with Phase 5 in the sounding at the northwest corner of Trench 1, Locus 01.34 (Fig. 7) contained many fragments of wall plaster, indicating the presence of earlier plastered walls. The only well-defined architectural remains preceding Phase 5 were found in the sounding

in the western room of Trench 5 (Room F), where Walls 05.02, 04 and 11 continued below the Phase 5 floor of Room F, showing that—at least in this area—the Phase 5 structure used Phase 6 walls as foundations.

The base of Wall 05.04 was the best exposed of the Phase 6 architecture. It represented a building technique obviously different from that of Phase 5, using hard, haematite-rich stone rather than the softer sandstone of the upper wall, making it more like the southeastern wall of Structure F102 (Wall 01.07/02.06/03.03). This phenomenon, however, needs more investigation as the base of that wall has not been reached yet.

In Trench 1, Phase 6 is represented by two layers, Loci 01.37 and 38. Locus 01.38, which started as a substantial layer of 30cm thickness in the east, was eroded off in the west. Its steep slope to the east (bottom elevation in the southeast of 954.23 as opposed to 954.57 in the southwest, over a horizontal distance of 2.50m) may indicate a different topography of the area at the time of deposition. The mixed nature of the locus and the presence within it of “piles” of ashes (Locus 01.39) indicate imported fill/dump. The compact nature and almost level clear top defined by fine blown ashes indicate a “surface”. Locus 01.37 above 38 was fine loose dry sand, similar to what could be seen at the site at present. Thus the area of Trench 1 was an outdoor area during this phase. The pottery from Loci 01.37 and 38 dates up to the Late Byzantine period (sixth century AD).

#### *Phases 7-8*

These two phases, represented in the sounding in Trench 1 by soil layers containing pottery dating to the second up to at least the fourth centuries AD, are combined due to a complexity in the stratigraphy that could not be fully determined yet. What appeared to be the scanty remnants of mud brick walls (Loci 01.43, 44 and 47) domi-



nate the remains below Locus 01.38, along with compacted mud feature 01.46 that is neither excavated nor explained yet (Pl. X, 2). All associated loci contained substantial amounts of mud brick fragments.

At least one pit, Locus 01.40, had been cut into Loci 01.44 and 46. Its fill Locus 01.41 contained excellent examples of classical Nabataean pottery of the second century AD along with much ash, bone and mud brick fragments. This was partially sealed by the Late Byzantine Locus 01.38. To the east of Locus 01.44, the gritty clayey Locus 01.45 was completely sealed by 01.38 and contained pottery that may go up to the fourth century AD (see Fig. 7). The top of 01.45 was not well defined but would have measured at least 40 x 20cm with a depth of 50cm. One possible explanation is that 01.45 was the fill of a pit dug into a brickly feature defined by 01.43 and 01.44. The pit was only partially filled with the matrix of 01.45, making its top elevation of 954.48 almost 10cm below the top of the much earlier 01.41 (or otherwise washed off, although the ash of 01.41 would have gone easier than the compact gritty material of 01.45).

Otherwise, all the deposits excavated in Trench 1 below Locus 01.38 were varying colours of loose sand with much pottery dating mainly to the second century AD (with possible extension into the third century AD, a decision on this will have to await further refinements of Nabataean pottery chronology).

Bricky feature 01.46 deserves special attention. It had obviously been ill treated by cuts and erosion (Pl. X, 2). Its overhanging eastern face bears what may be interpreted as pick marks that were easily found upon removing the loose surrounding sands (a similar phenomenon was discovered in B100, Room E). The matrix of 01.46 resembles that of Loci 05.40/58, into which graves were cut (top elevation of 05.40 is 954.23 as compared to 953.90-954.46 for

01.46). The removal of a small portion of 05.58 did not produce any cultural material. The accidental breakage of a small fragment of 01.46, however, produced a small, coarse red ware sherd.

In Trench 5, all walls in Room F end at a level of about 954.25, and a layer of hard brickly material (05.40) appears; graves were cut into this level. Two graves were entirely exposed, as well as part of a third (going into the western balk). The two completely exposed graves were excavated. They were dug in a NW/SE direction with the heads at the northwest. Both graves were cut in two sections, the upper being wider and longer than the lower. The lower sections contained the skeletons and were covered by flat stone slabs. Loci 05.41, 42, 43 and 44 are all associated with the first burial. The skeleton in this grave was found undisturbed; it was an adult of undetermined sex aged 20-35 years, lying on the back with the arms folded across the chest. The corpse seems to have been wrapped in a woven cloth shroud (fragments of which were recovered). Fragments of wood were also found, suggesting the use of a coffin. The skeleton had eight rings (five silver, two iron and one bronze), five of which were on the left hand.

The second burial, Loci 05.53-57 to the southwest of the first, included the skeleton of a male, laid out in a similar position to the first but the arms beside the body. No jewellery was found in this grave, but there were fragments of what may have been a shroud. The toe of a leather sandal survived.

The pottery found directly above the graves extends into the fourth century AD, suggesting a date in Phase 7 or 8 for the graves. The excavators suggested that the cemetery was probably covered during an earthquake (AD 363?, see Russell 1985: 42), thus explaining the construction of houses on top.

A small section taken in the matrix of



the soil in which the graves were excavated did not produce any cultural material. Further investigation of that aspect, however, is still needed.

FIELD F103: "THE CARAVANSERAI"  
(Rebecca M. Foote)

At the beginning of the eighth century AD, descendants of al-'Abbas, a paternal uncle of the Prophet Muhammad, settled in Humeima. From here they orchestrated their revolutionary overthrow of the Umayyad caliphate in AD 747-750. The structure labeled F103, on the eastern outskirts of the settlement, may be the palatial complex of the Abbasid family.

Before excavation in 1992, the structure was thought to be a caravanserai, due to the general plan (reasonably visible from wall lines at the surface) of a roughly rectangular building divided into "cells" centred on a court and its location at the outskirts of the settlement, providing easy access for travellers. Oleson has restored the *Via Nova Traiana* as passing close to this spot (Oleson 1992: Fig. 2). Clearance of surface debris revealed the structure to be an irregular rectangle, covering approximately 2,847 square metres (Fig. 8, Pl. XI). It consists of a large trapezoidal courtyard (810 square metres), surrounded by cells, seven on each side; the cells vary in dimensions, ranging from 11 to 60 square metres. It seems likely that some cells are subdivided or that sets of two or three (adjacent larger and smaller ones) interconnect to form *buyut* (apartments); however, further excavation will be necessary to identify doorways or cross-walls. The inner ring of cells is surrounded by a second ring of cells/rooms on the north, west, and south, with even a third stretch along the south, making the total measurement of the building 61 x 46-50m. While the plan is still roughly rectangular and could be compared with other early caravanserais, it more readily compares with regional eighth century *qaṣr* complexes.

Three probes were dug in the western portion of the structure to obtain information concerning its plan, date of foundation, and function. An obvious projection (room?) into the courtyard, almost mid-way along its western wall, was selected as the site of Probe 01. A 3 x 3m square was laid out along the south face of the projection's south wall, where it intersects the courtyard wall. The probe produced ceramic evidence that the projection is the result of later rebuilding, while the courtyard wall—the deepest of three walls clarified in the probe—is of Early Islamic date and part of the original structure. Probes 02 and 03 were situated to reveal whether the apparently concentric walls parallel to the courtyard wall also belonged to the original phase of the building. Probe 02 was laid out around the western wall of the inner ring of cells and Probe 03 around the western perimeter wall of the structure. The north/south walls of Probes 01, 02 and 03 had approximately the same foundation levels and the ceramics associated with their foundations, indeed, date all to the Umayyad/Abbasid period.

Probe 02 produced evidence that suggested the structure may not have been a caravanserai. Fresco-painted wall plaster was discovered *in situ* near the base of the east face of the north/south Wall 01, near its intersection with the east/west wall at the south end of the probe. A red painted surface continues over a metre both northward along the east face of Wall 01 and eastward along the north face of Wall 02. Patterns of deep rust, burgundy, orange, and grey-blue with black outlining are distinguishable on fragments which surfaced in the fill of locus 05. The plaster lies beneath a predominantly ashy layer, likely indicating a fire in the room during a later Islamic occupation period that could have caused destruction of the fresco at higher levels. Because no conservator was on site, only a few centimetres were exposed.

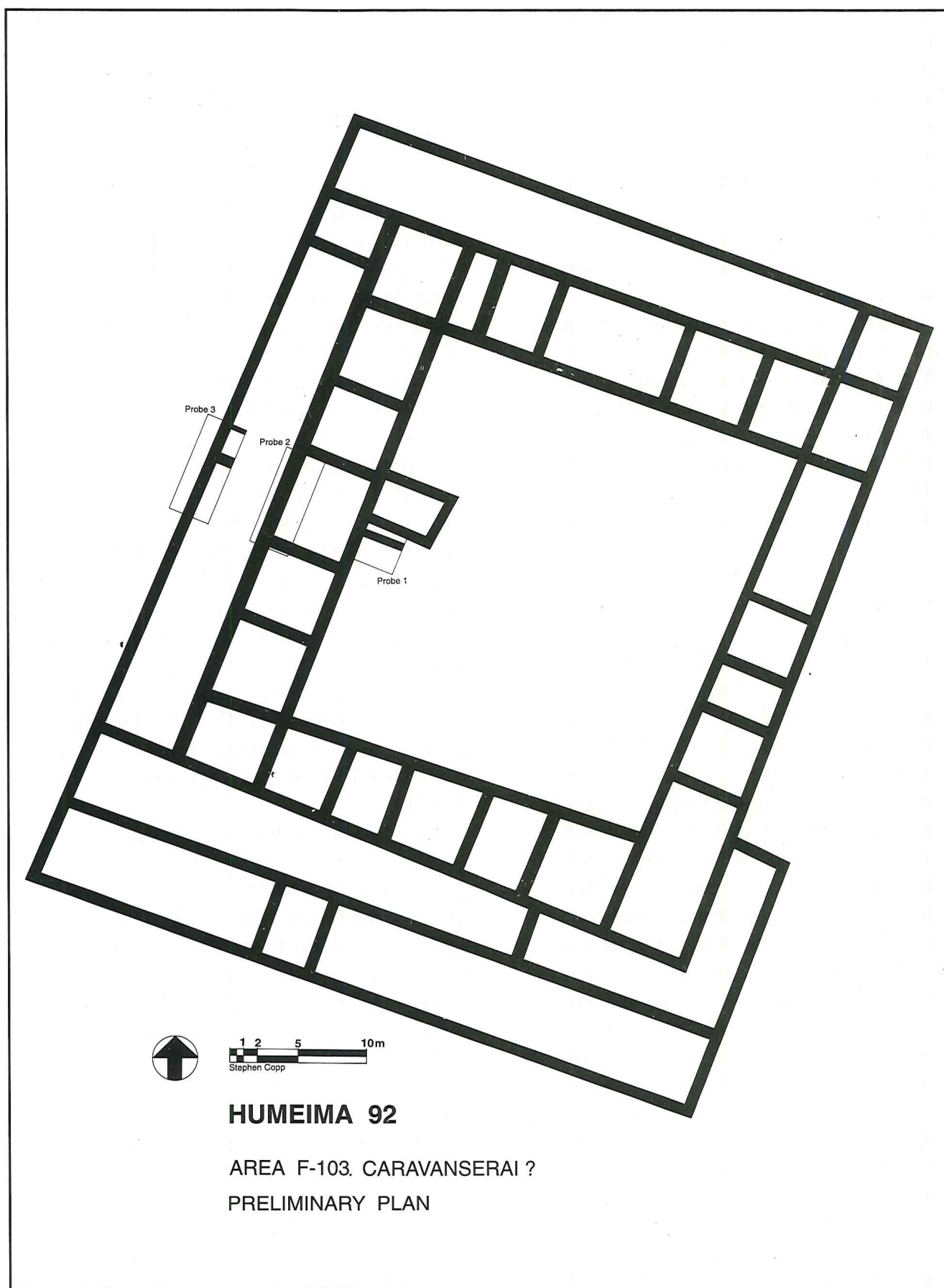


Fig. 8. Humeima: Plan of Area F103 (S. Copp).



Nonetheless, the level of the foundation along the west face of Wall 01 indicates that the fresco may still be intact for over half a metre above the floor. Since the fresco seems to be part of the original structure, it may be Umayyad/Abbasid in date. A block with traces of cement and painted wall plaster was found within tumble in Probe 03, suggesting that there may even have been widespread use of painted wall plaster in the building.

Several crosswalls undetectable from the surface were also isolated in Probe 03. Clearly the building is more complex than the present plan suggests. Although there was very little coherent occupation deposit in the building, it is interesting that many fired bricks were found, and that this structure alone at Humeima yielded ceramic roof tiles.

### F103: Conclusions

In sum, the complexity of its plan, the roof tiles, and the painted plaster make F103 more elaborate than other regional caravanserai of the Early Islamic period. Furthermore, the rectangular plan with cells surrounding a courtyard can readily be compared with early eighth century palatial architecture elsewhere in Bilad ash-Sham, such as at the Amman citadel, 'Anjar, Burqu', Hallabat, al-Hayr al-Gharbi, al-Hayr ash-Sharqi, Jabal Seis, Kharana, Khirbet al-Mafjar, Minya, Mshatta, Risha, Qastal and Tuba. Many of these excavated *qaṣr* complexes include mosques. The size and layout of F103 (especially the 50 x 10m extension beyond the cells along the south and east) suggest the presence of a mosque. Moreover, the building is oriented north-easterly and would therefore have offered the southern projection a natural southeasterly orientation toward Mecca. The mosque at Humeima, attested in historical sources such as the *Akhbar al-Dawla al-'Abbasiya* (al-Duri 1971), might well have been situated in the Abbasid family's palatial complex

and even have been an organizing factor behind its non-cardinal orientation.

### FIELD A: TOMB SURVEY (John Somogyi-Csizmazia)

Rock-cut tomb shafts dot the countryside around Humeima (see Fig. 2). A survey was conducted in 1992 to determine the chronology of the original construction and of subsequent reuse, the development of tomb design, the location and organization of the necropoleis, and the average number of individuals within each shaft or tomb. As expected, because of their highly visible location all the tombs surveyed had been plundered by looters.

Virtually all the tombs took the form of a vertical shaft cut down into the soft bed-rock, usually into the surface of a relatively flat outcropping of the red sandstone that forms the ridges around the site. There are several different tomb designs. The most common is the single shaft with one or two compartments arranged in vertical sequence. Several tombs are quite large and square in shape (A115, T2). The tomb groups can be arranged either in rows (A115, T1-T15) or in a cross pattern (A113, A112).

Some tomb shafts were designed for a single interment, while others extended downwards to accommodate as many as five compartments (Fig. 9). Each compartment was marked by either a narrow, projecting, horizontal stone offset extending around the periphery of the shaft to hold capstones, or by a horizontal groove into which the capstones were slipped. It is likely that soil was placed as a filler and seal on top of the interments. In general, the quality of the stone-working is high, and the layout has been executed with care, resulting in a very regular appearance.

In the course of the season, 11 groups of tombs were mapped, drawn, and catalogued, 64 separate tombs in all. Five tomb shafts were excavated down to bed-rock: A

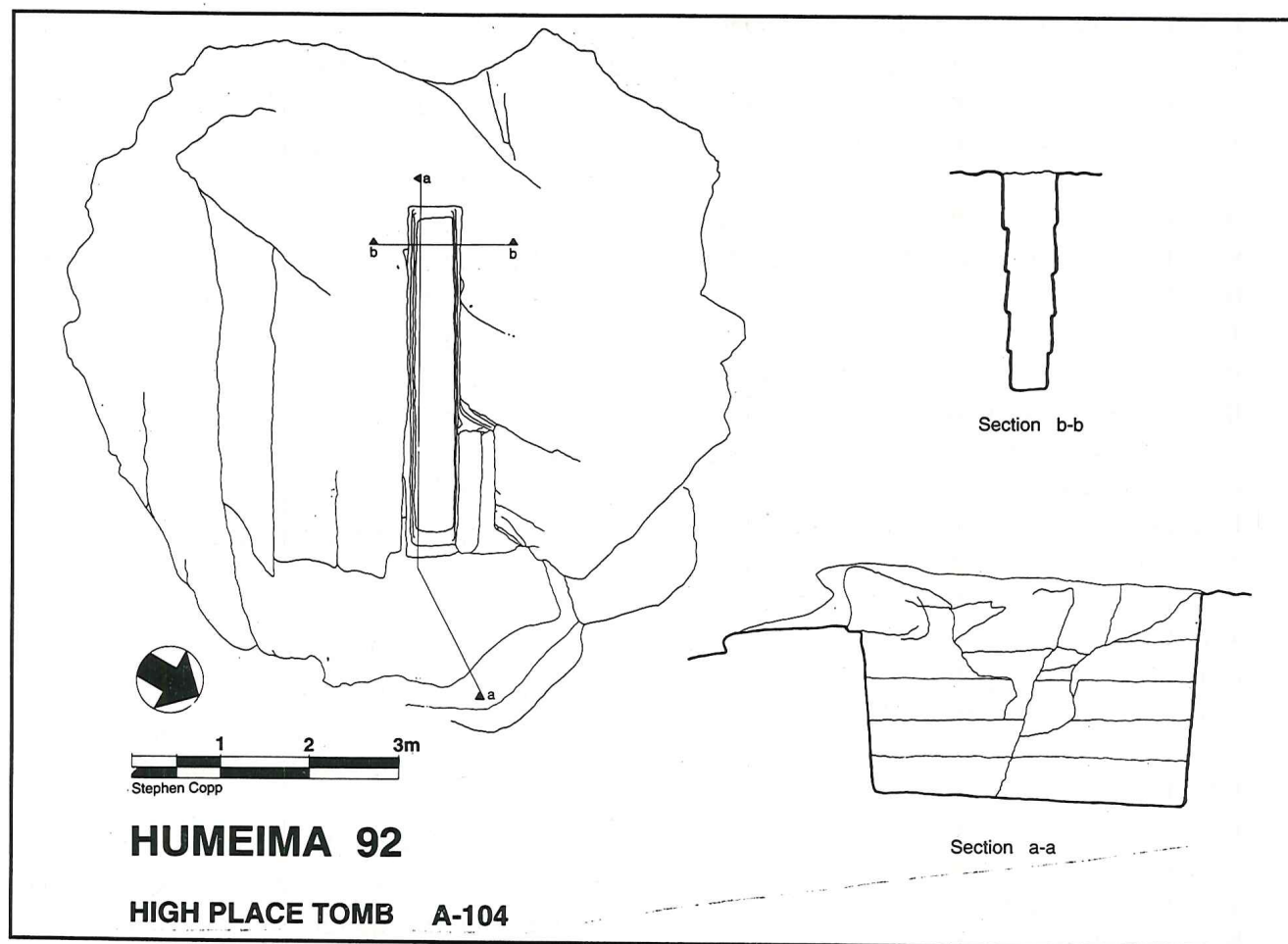


Fig. 9. Humeima: Plan of High Place Tomb, A104 (S. Copp).

conservative estimate of the minimum total number of individuals buried in the tombs is 81.

An examination of the pottery samples obtained from several tombs from different areas allowed construction of a preliminary chronological sequence for the tombs. The necropoleis and tombs located closest to the site of Humeima—A104-A107—are earlier in date. These early tombs were in use from the first century to the third century AD (although most of the finds date to the second and third century), and possibly were begun in the first century BC. Necropoleis and tombs further away from the site—including A108-A115—are later in date, from the second to the sixth century AD, but predominantly fourth and fifth century. It seems likely that the highly visible and convenient tomb locations close to the set-

tlement were the first chosen for tomb excavation. After these choice locations were occupied, families had to travel farther away to pick their tomb sites. The clustering of most tombs suggests that families continued to bury their dead in a selected location. The quality of the stone-working varies significantly among the tombs. Tombs that are located near holy areas, such as A104, have a much better quality of stone work when compared to tombs such as A107 which are isolated.

We plan to sample a larger number of tombs from every burial area around the city in 1993, in order to refine the conclusions concerning design, chronology and location. There will also be a concerted search made for further tombs and necropoleis in the area.



# A BYZANTINE COIN HOARD FROM THE OUTSKIRTS OF HUMEIMA

A hoard of coins and jewellery was found during a walk taken by the excavation staff in the hills 4 km northwest of Humeima during the 1991 season. While crossing a featureless, sandy plateau, two of the members noticed a silver coin on the ground. Examination of the spot revealed two earrings consisting of gold beads alternating with pearls on oval gold hoops (Pl. XII, 1), five gold coins (Pl. XII, 2) and eighteen silver coins (Pl. XII, 3) (de Bruijn and Dudley 1993). The coins were stacked, silver above the gold, in what originally must have been a neat pile, possibly contained in a purse of leather or cloth that has perished. All surface pottery within a 3m radius was collected. The ceramics, which date from the Middle Nabataean through the Ottoman period, resemble the background scatter of ceramics seen all across this plateau and most probably have no connection with the hoard.

The gold coins are *solidi* of the Emperor Arcadius (AD 383-408; Pl. XII, 2; Sear 1964: no. 4119). The obverse bears a portrait of the emperor, facing right, wearing diadem, cloak and cuirass. The obverse legend reads: *D N ARCADIUS P F AUG*. The reverse of the coins shows Constantinopolis seated, facing right, holding a sceptre and a shield inscribed *VOT V MVL X*. The reverse legend is *CONCORDIA AUGGG* followed by either a delta or gamma, with *CONOB* in the exergue. All five coins are identical in type and seem to have been struck by the same die. None bears any signs of wear.

The silver coins are drachmas of the Sassanian king Yazdegard I (399-420; Pl. XII, 3). The obverse displays a bust of the ruler, facing right, wearing a crown mounted with a globe and a crescent. He is diademed and draped and wears a single-pearl earring and

at least one necklace. The reverse bears a depiction of the fire-altar flanked by attendants holding swords. Crescents appear on either side of the fire. All but a few of the eighteen coins appear to have been struck from the same dies.

These coins will be of importance to our knowledge of trade between the southern part of the province of Arabia and Persia in the Byzantine period. The fact that the coins are in mint condition and struck from a very small number of dies may indicate a close relationship between the individual who left them at Humeima and the issuing authorities.

## BALLOON PHOTOGRAPHY

One problem with planning the long-term excavation of Humeima and reconstructing the plan of the settlement has been the lack of clear aerial photographs of the site. The British military forces took some photographs from high altitudes in the 1930s, but the quality is poor.<sup>5</sup> In consequence, arrangements were made for Prof. J. Wilson Myers and Mrs. Myers to visit Humeima during the summer of 1992 and take aerial photographs from their tethered hydrogen balloon. They took a number of photographs at 700m to provide images of the whole site. Lower-level photographs were taken of central portions of the site, of some of the structures (Pls. I; III; VI; XI) and necropoleis, and of the Roman camp. In addition, low-level photographs were taken of all 1989, 1991, and 1992 excavation areas.

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5. David Kennedy of the University of Western Australia has the negatives for these photos.



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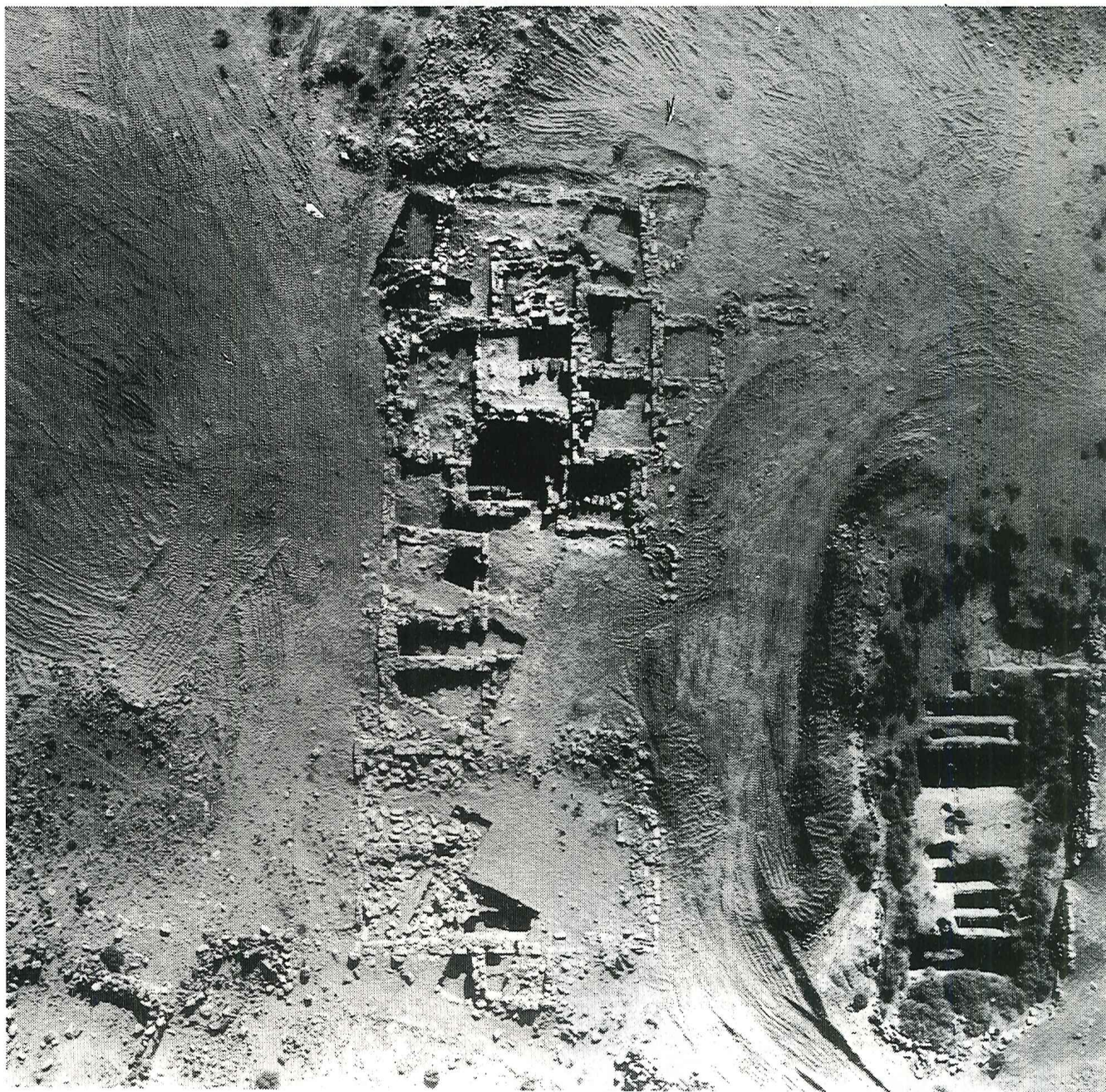
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Humeima: Area B100, aerial (Photo: W. and E. Myers).



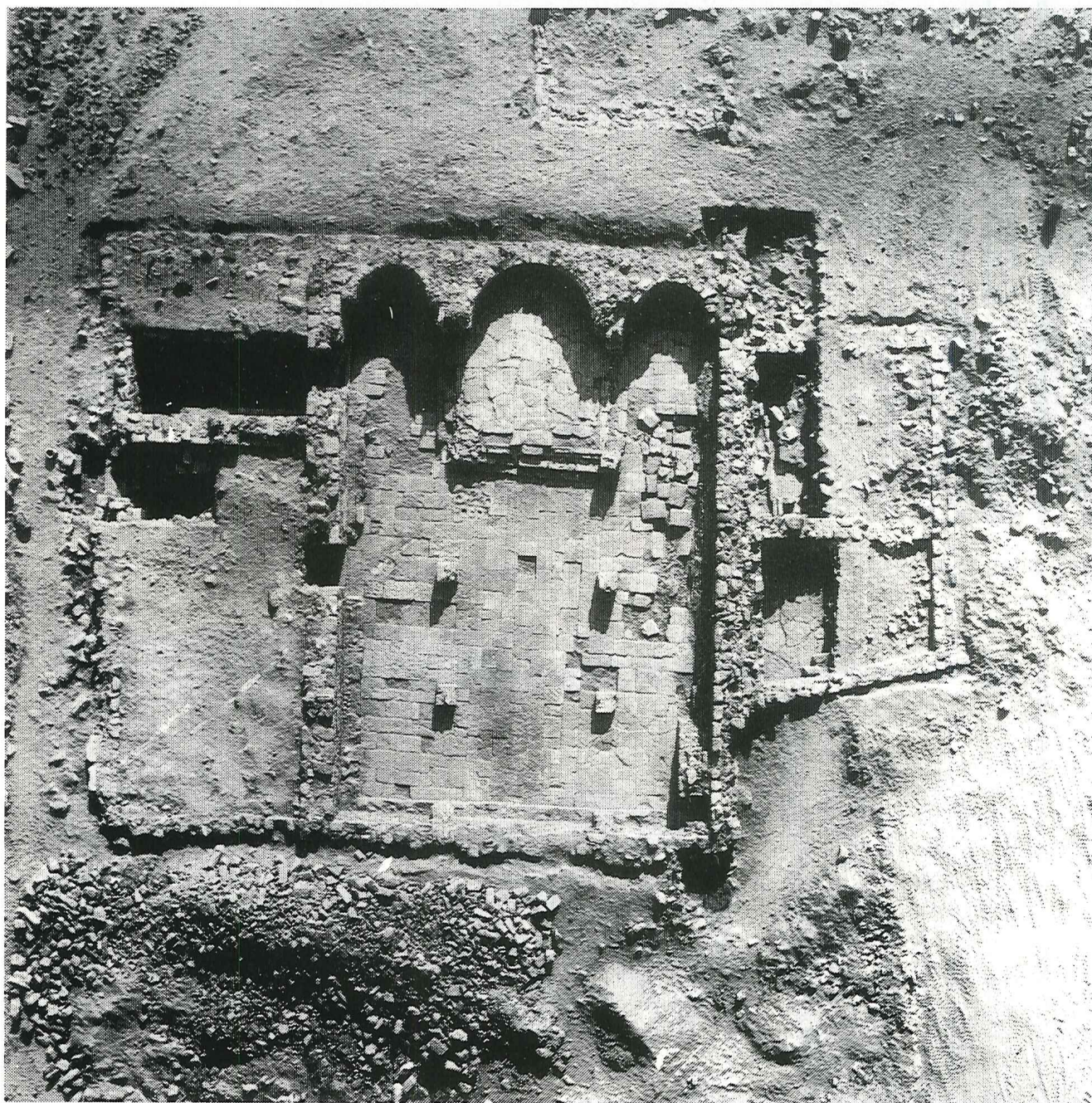


1. Humeima: Area B100, Phase 1 structures from SW (Photo: J. P. Oleson).



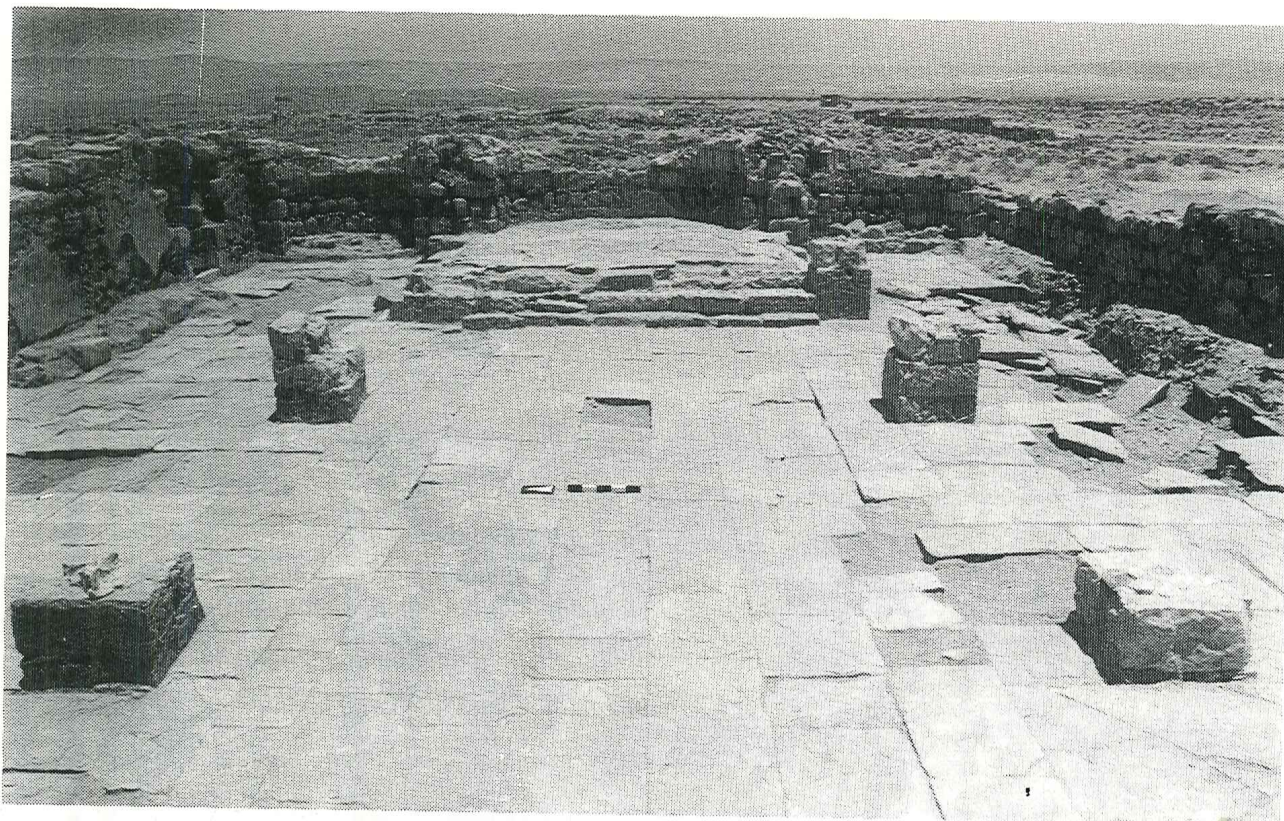
2. Humeima: Area B100, Phase 2 apse with Phase 1 features, from E (Photo J. P. Oleson).





Humeima: Area C101, Lower Church, aerial (Photo: W. and E. Myers).



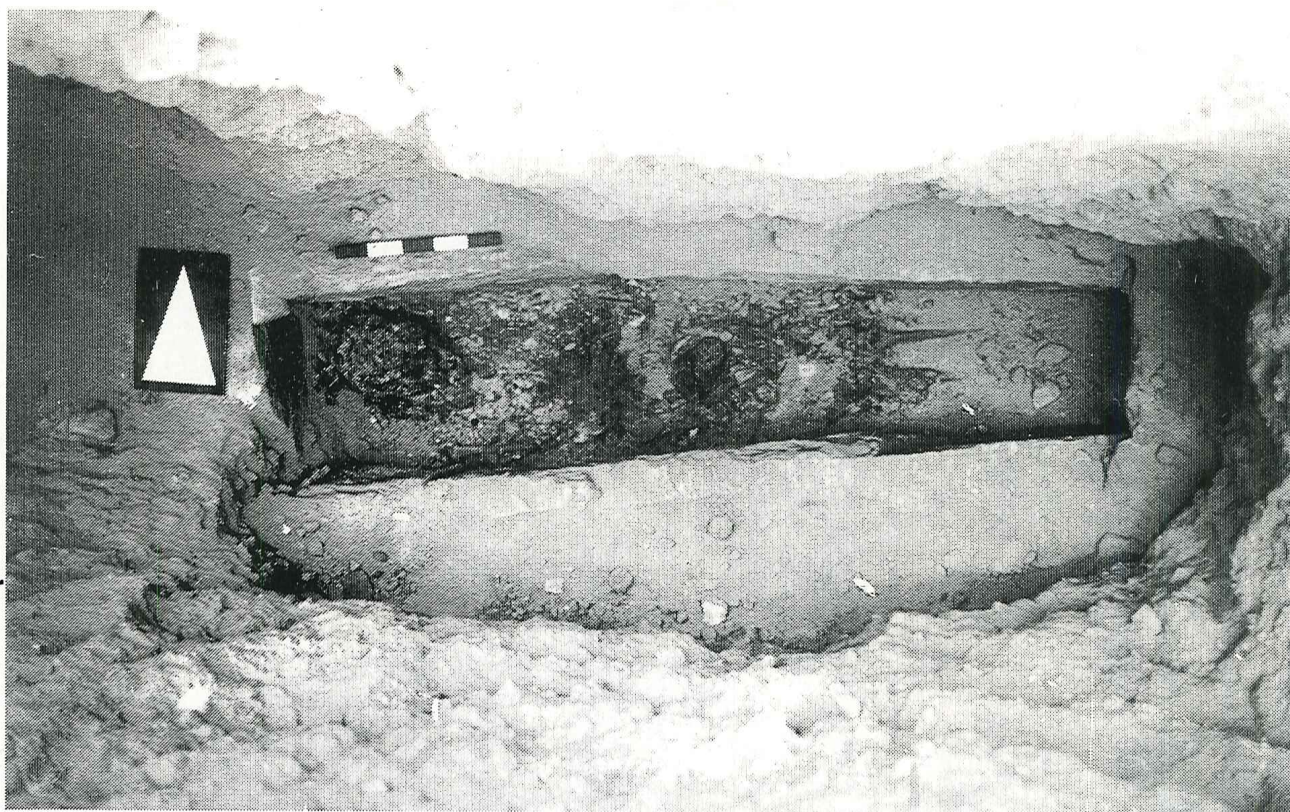


1. Humeima: Area C101, Lower Church, nave from west. (Photo: B. Douglas).



2. Humeima: Area C101, Lower Church, pavement cross (Photo: B. Douglas).





1. Humeima: Area C101, Lower Church, Burial 2 (Photo: B. Douglas).



2. Humeima: Area C101, Lower Church, Room 5, from west (Photo: B. Douglas).



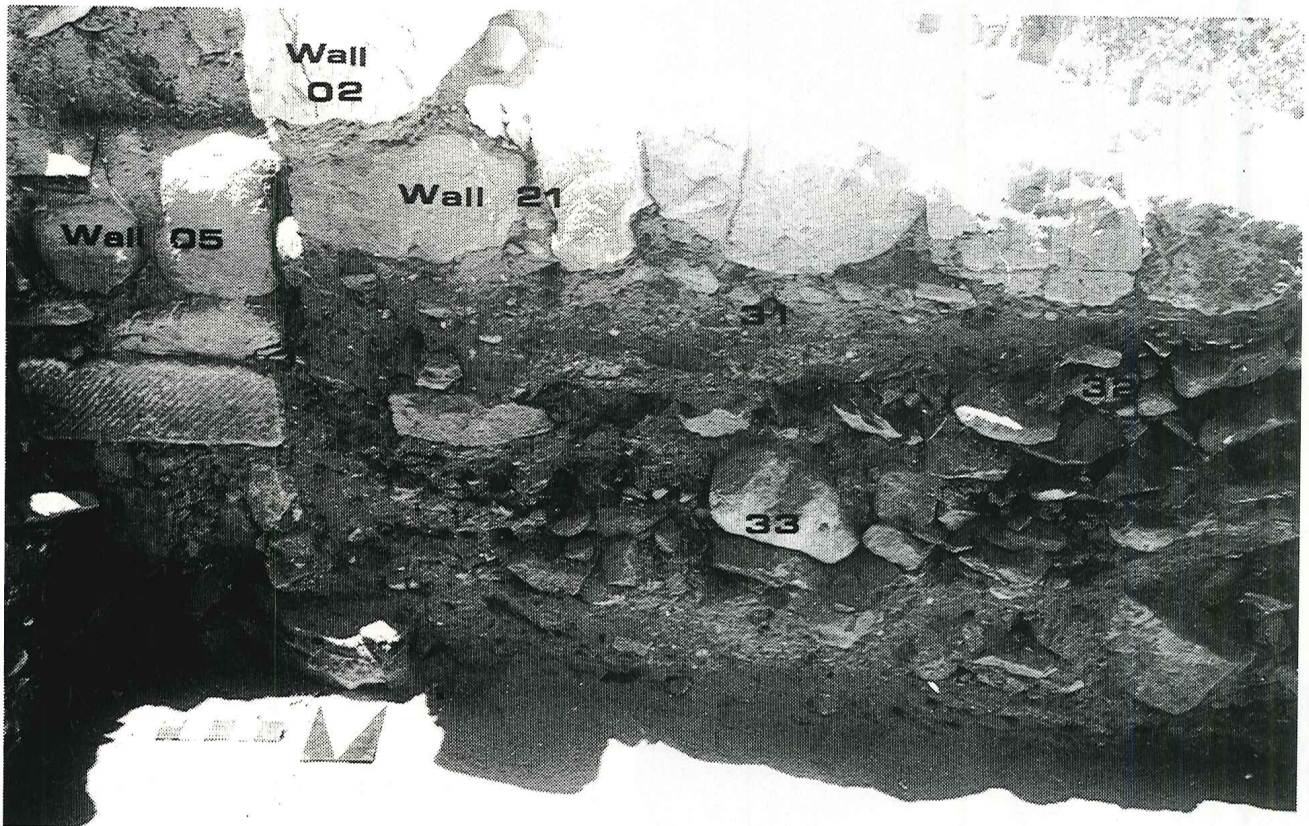


Humeima: Area F102, aerial photograph. North is at the top of the photograph. The "Nabataean" cistern is to the east of the structure (Photo: W. and E. Myers).





1. Ḥumeima: Area F102 prior to excavation (Photo: J. P. Oleson).



2. Ḥumeima: Area F102, Trench 1. South section of the sounding in the northwest corner (Photo: S. Coliton).



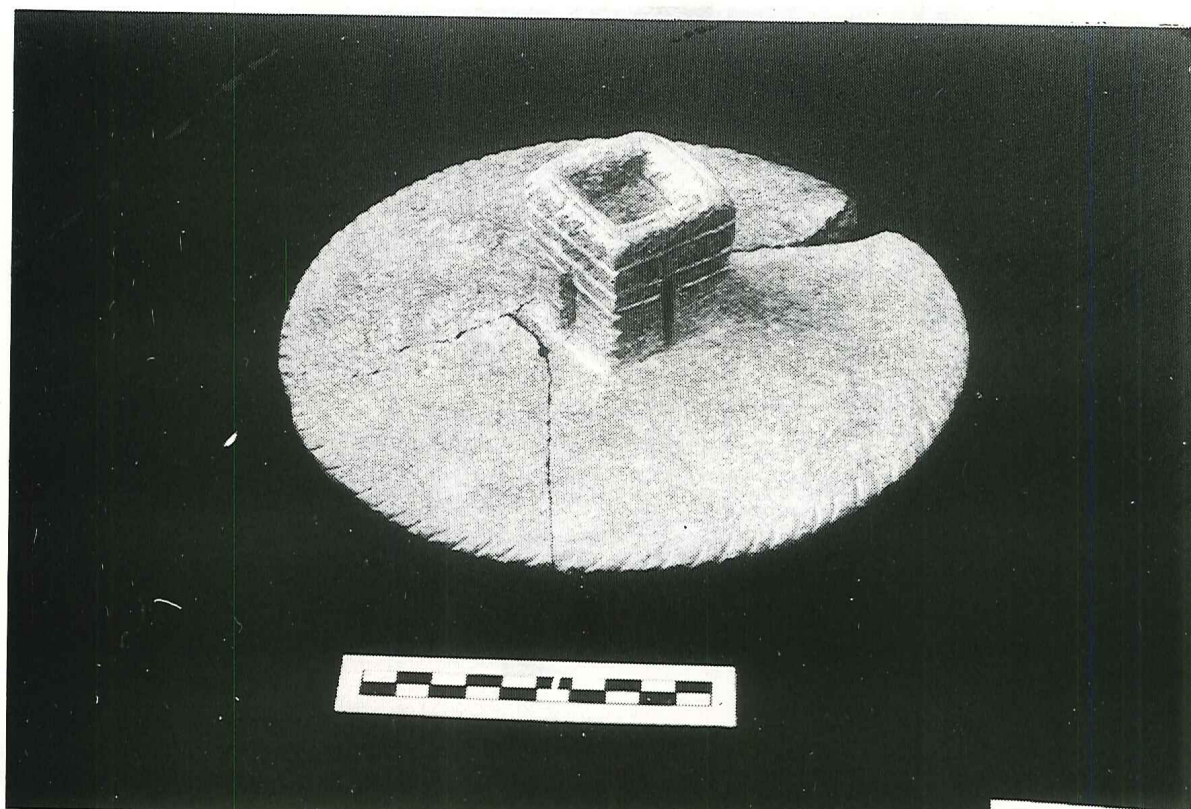


1. Humeima: Area F102, Trench 4. The Phase 1 blockage of the entrance in Wall 04.02, the Phase 2 steps, the Phase 3 curtain wall 04.15 and the Phase 4 arch imposts (Photo: S. Coliton).



2. Humeima: Area F102, Trench 3. Large limestone mortar partially sunk in beaten earth Floor 03.16 next to the entrance in Wall 03.02 (Photo: S. Coliton).





1. Ḥumeima: Area F102. Steatite lid from Phase 2 (RN 91.0221.01). The two fragments closer to the scale were found in Trench 1 directly on top of Locus 01.22, while the back fragment was found in Trench 4 on top of Floor 04.12 (Photo: S. Coliton).

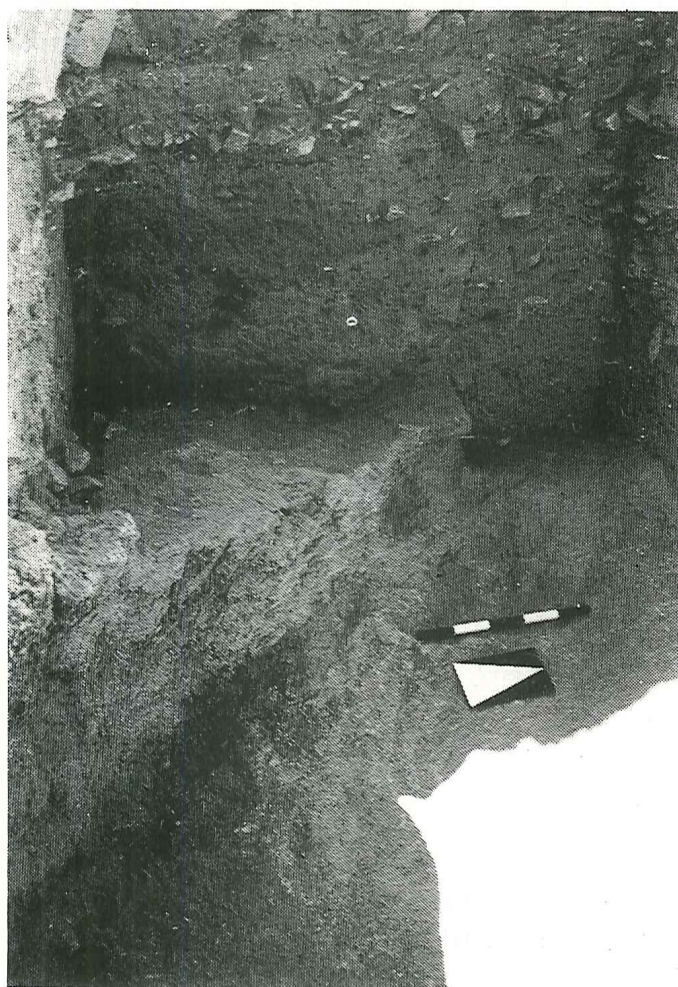


2. Ḥumeima: Area F102, Trench 1. Phase 3 beaten earth Floor 01.19 (to the west) associated with secondary walls 01.05.1 and 01.15, covering Phase 5 flagstone Pavement 01.20 (exposed to the east) (Photo: S. Coliton).



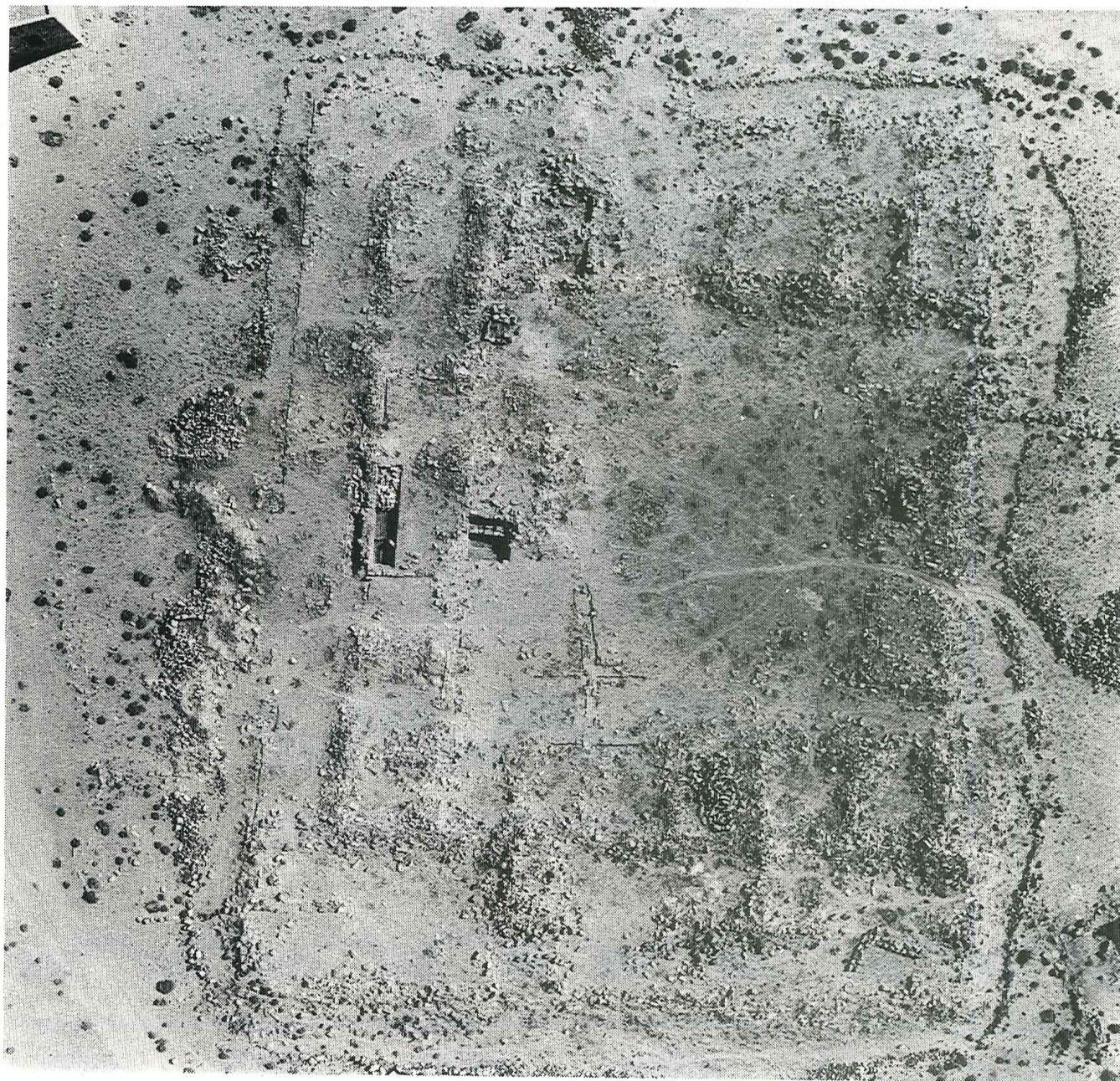


1. Ḥumeima: Area F102, Trench 4. Phase 3 curtain Wall 04.15. Note the ash layer between the associated beaten earth Floor 04.21 and Phase 5 flagstone Pavement 04.26. In the background, doorway in Wall 04.05 with Phase 2 steps (Photo: S. Coliton).



2. Ḥumeima: Area F102, Trench 1. Compacted mud feature 01.46 (Photo: J. P. Oleson).





Humeima: Area F103, Abbasid Palace?, aerial (Photo: W. and E. Myers).





1. Humeima: Gold and pearl earrings from hoard (Photo: S. Coliton).



2. Humeima: Solidi of Arcadius (Photo: J. P. Oleson).



a. Obverse.



b. Reverse.

3. Humeima: Drachmas of Yazdigard I (Photo: J. P. Oleson).