

PRELIMINARY REPORT OF THE ḤUMAYMA EXCAVATION PROJECT, 1993

by

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Introduction

Large-scale excavation continued at Ḥumayma, ancient Auara, in 1993 (Fig. 1).¹ Several probes completed the exposure of the Nabataean tomb, Byzantine church, and early Islamic structure in B100. Excavation of the Byzantine church and its out-buildings in C101 was completed, and another small Byzantine church was partly cleared higher up the slope west of the settlement at C119. The large Abbasid residence in F103, which had been probed with striking results in 1992, was excavated in a systematic fashion. Six trenches were also opened in the Roman fort north of the settlement (E116), a probe was made in a large, early Islamic structure at the north edge of the site (D120), and the survey and testing of tombs cut in the hills

west of the site continued (Fields A105-A115, A117-A118).²

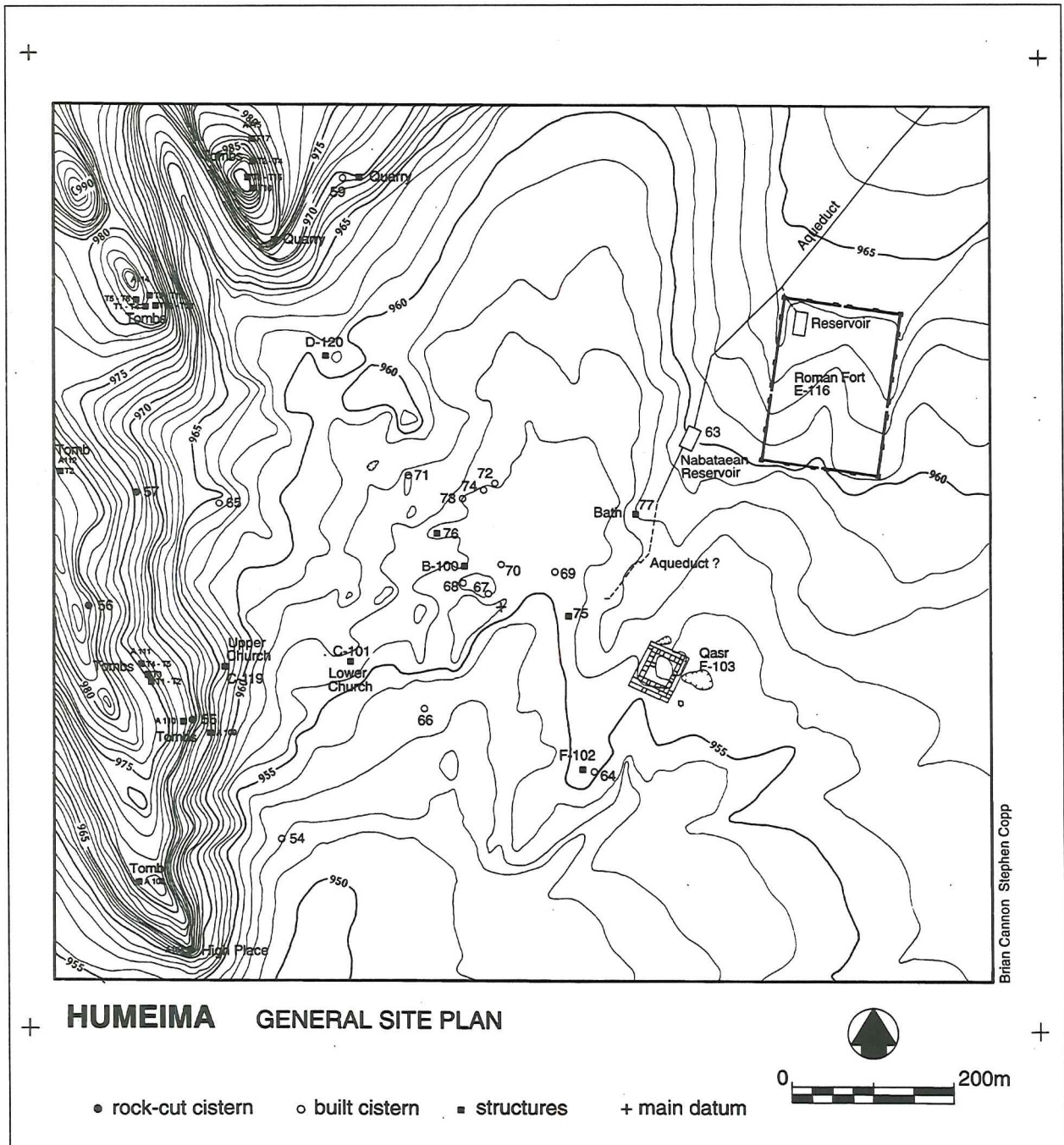
Field B100

Since the major results of the probes in B100 were presented in a previous article (Oleson *et al.* 1993a, b), only a summary will be given here. B100, near the very centre of the settlement, is a rectangular complex (15 x 40 m; Fig. 2) of small, square rooms organized around three courtyards. This final, Early Islamic phase was built around and above several earlier structures. In particular, the central portion was constructed during the Umayyad period inside the remains of a single-apsed Byzantine church, while the eastern portion of the complex was constructed in the Abbasid period on top of some unidenti-

1. Excavation took place from 22 May through 1 July. The project was once again funded by the Social Sciences and Humanities Research Council of Canada, and a special grant was awarded by the Taggart Foundation to help pay for the costs of conservation. An Endowment for Biblical Research Scholarship was awarded to Paul Shrimpton of the University of Victoria. The project director was Prof. J. P. Oleson of the Department of Classics, University of Victoria; Co-Directors were Dr. K. 'Amr of the Department of Antiquities of Jordan and Dr. R. Schick, American Center of Oriental Research. Dr. 'Amr also served as the Representative of the Department of Antiquities to the project. The Humeima Excavation Project is affiliated with the Committee on Archaeological Policy of the American Schools of Oriental Research and licensed by the Department of Antiquities of the Hashemite Kingdom of Jordan. The Project Director and Co-Directors are grateful to Dr. Safwan Tell, former 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 season's work. Accommodations for the team were again generously provided at the al-Muraygha Secondary School by its former Director, Mr. Thiab Rikhat, for whose courtesy and hospitality we remain extremely grateful. Field Supervisors in 1993 were Oleson, Schick, 'Amr, and Foote. Square supervisors were Erik de Bruijn, Cindy Davison, Dennine Dudley, Chris Nelson, and John Somogyi-Csizmazia. Student excavators were Linda Clougherty, Iain Glover, Paul Shrimpton, and Rachel Wenstob. Photographers were J. Oleson and Chris Mundigler; Stephen Copp served as the architect. The conservator was Judy Logan of the Canadian Conservation Institute. For reports on earlier seasons, see Oleson *et al.* 1993a-b.

2. Oleson supervised the excavation of Fields B100 and E116; Schick C101, C119, and D120; 'Amr F102 and analysis of ceramics; Foote F103; and Somogyi-Csizmazia the tomb survey and analysis of human remains. The relevant sections of the following report were written by the supervisors on the basis of reports prepared by the excavators.

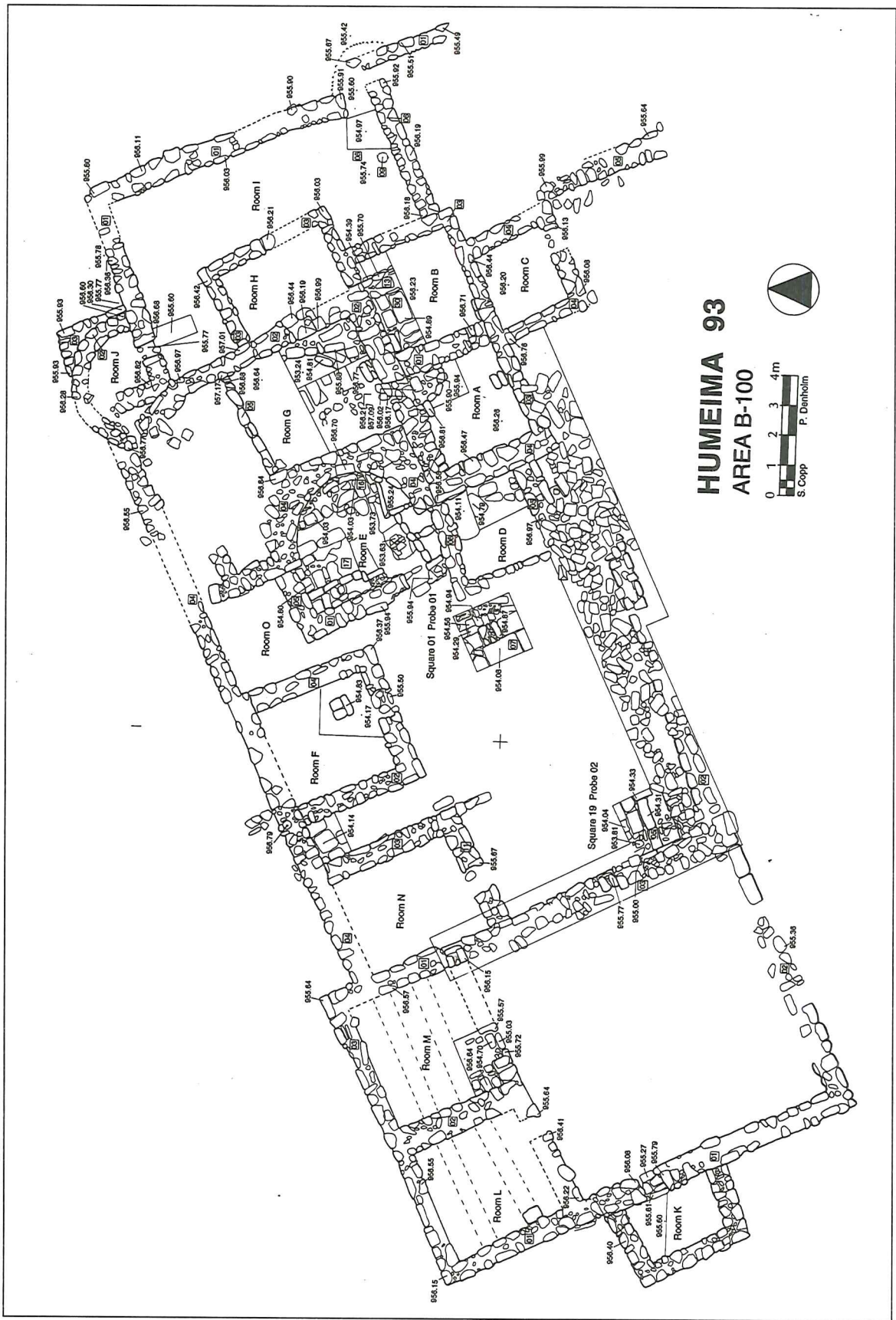


1. Humeima: Map of site and structures.

fied Byzantine structures with massive foundations, possibly outbuildings of the church. The church, in turn, had been built above a Nabataean cemetery, possibly related to a sanctuary.

In 1993, two probes were laid out in an attempt to identify several more piers and the west wall of the Byzantine church. One

such pier was located in Probe 1, precisely on line with the pier below Room F to the north and with the south face of the apse to the east. In addition, steps forming the south edge of a chancel platform were identified, along with the setting for a marble chancel screen. Fragments of the screen itself have been found throughout the late

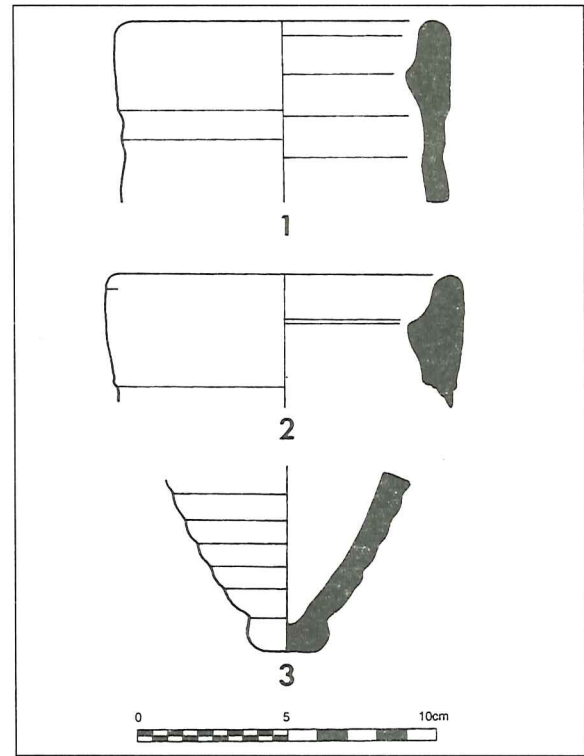


2. B100: Plan of structure.

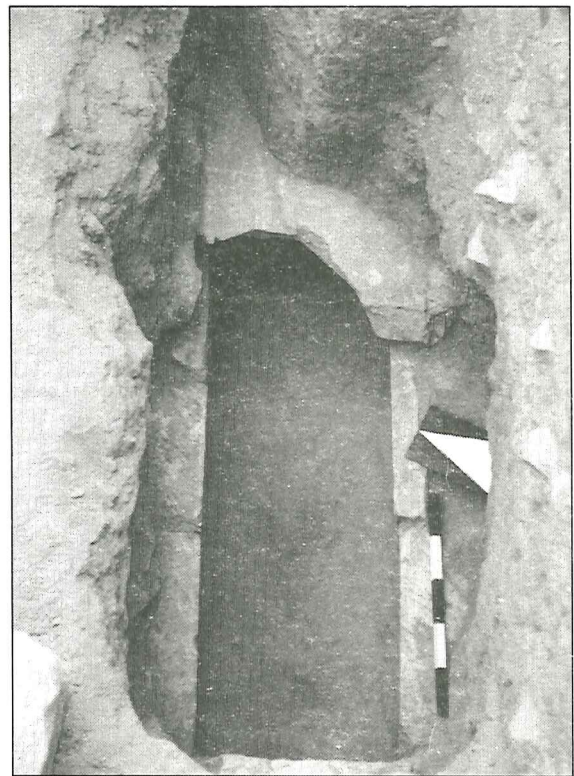
strata. A second probe was executed at the intersection of Walls 02 and 03, the south and west walls of the central portion of the early Islamic complex, to determine whether these walls rested on the south and west walls of the church. The south wall clearly belonged to the initial construction period of the church, but the west wall appeared to be a partition inserted later. In addition, two more piers of the church were found built into the west wall, on line with each other and with the piers in Room F and Probe 1. Consequently, it seems that the original west wall of the church lies somewhere between wall 03 and the west wall of the Islamic complex (which is post-Byzantine in origin).

In any case, it is now clear that a three-aisle, single apse church 12.25 m wide and at least 17.5 m long, with a finely-laid floor of stone slabs and a raised chancel with carved marble screen was built here sometime in the fifth or sixth century. The church in C101 is only slightly larger (W 14 m, L 19.25 m). The floor was re-laid sometime at the beginning of the Islamic period (Fig. 3), and the church remained in use for an unknown period of time until its abandonment, possibly associated with destruction by fire. Rubbish was dumped or accumulated in the ruins of the church later on during the Umayyad period, but this was levelled off, a few stretches of paving installed, and partition walls built to allow domestic occupation of the structure in the late Umayyad or early Abbasid period. Still within the Abbasid period, the complex was extended to the east and west.

The church, however, was not the earliest structure on this spot. An enigmatic feature built of upright, reused sandstone blocks (Locus 33), uncovered in the lowest level of the apse in 1992, was removed by illicit diggers during the winter. They exposed a Nabataean cist grave (Locus 37; interior dimensions L 2.50, W 0.47, H 0.40; Fig. 4) constructed of neatly finished slabs of white



3. B100: Ceramics from the fill between the two pavements of the church (Drawing: M. S. Malkawi; descriptions in appendix).



4. B100: Nabataean burial below Apse (Photo: C. Mundigler).

sandstone lining the sides of a trench cut into the hard soil. The orientation was more or less the same as that of the later church (60/240 degrees). The floor was earth. Further slabs were laid across the cist to cover it, and the cross-shaped feature was built above either as an altar or a marker—although one apparently just below the original soil level (see Oleson *et al.* 1993a: 129, pl. II). The backfill contained Nabataean ceramics of the first, second, and possibly third centuries, and a first century AD Nabataean coin, probably of Aretas IV. Another possible burial trench visible in the baulk to the north was empty.

The heap of soil thrown up by the grave robber contained many fragments of human bone, some still embedded in a very hard matrix of concreted sand. The east 0.80 m of the fill within the grave (Locus 39), however, was undisturbed and contained the lower legs and feet of the individual interred there, an older male whose skeleton revealed signs of dental disease, serious arthritis in the knees and vertebrae, and possibly tuberculosis. The only grave goods recovered were a polished bone ornament, a few small fragments of bronze beads (?), and a few small and worn sherds of Middle Nabataean coarse ware. These sherds, together with those collected from the backfill above the grave, reveal that it was closed well before the Byzantine church was built directly above.

Since it is rare to find a burial in the centre of a habitation area, it is possible that the area around B100 was a Nabataean sanctuary or temple area which attracted burials. The numerous fragments of Early and Middle Nabataean architectural elements found reused in the later B100 structures may stem from a Nabataean temple on the spot. The Byzantine church could later have been placed in the same location to take advantage of its sanctity. In any case, the subsequent reuse of the church itself was enthusiastic, and ultimately a warren of

rooms was built within it in the Early Islamic period. The function of this later complex remains uncertain, although the presence of numerous small rooms and of *tābūn* ovens suggests habitation.

The question still remains of the character of the structures that formed the core of the mound at the east end of the B100 complex. Probes in Room B in 1991 and in Room G in 1992 revealed the presence of very substantial walls deep below the surface, possibly Byzantine in date, but extending deep into Nabataean levels. The function of the structures to which these walls belonged is still to be determined, but we can note that ancillary structures were found attached to both the other Byzantine churches at the site.

Field E116: Roman Fort

All visitors to Ḥumayma have commented on the remains of the large Roman fort clearly visible at the very north edge of the site (Fig. 5; see Brünnow and von Domaszewski 1904: 476-478; Gregory and Kennedy 1985: 322-325; Parker 1986: 104-105; Kennedy and Riley 1990: 146-148). The rectangular plan of the fort (Fig. 6), with a gate in each of the four walls, its dimensions (206.32 x 148.32 m; ca. 500 x 700 Roman feet—henceforth abbreviated as RF) and those of the reservoir in its north-west corner (29.40 x 14.20 x 3.05 m; ca. 100 x 50 x 10 RF) indicate that the complex belongs to the Roman or Byzantine periods. The east and west walls are oriented 10 degrees east of north. The location of Ḥumayma on the *Via Nova Traiana*, and its probable inclusion in the *limes* system for Provincia Arabia have long suggested to scholars that the fort should date sometime between the second and the fourth centuries (Parker 1986: 105; Bowersock 1983: 94; Eadie and Oleson 1986: 51). Excavation in 1993 was designed to provide information on the chronology of the fort's construction and development, and its design. To this

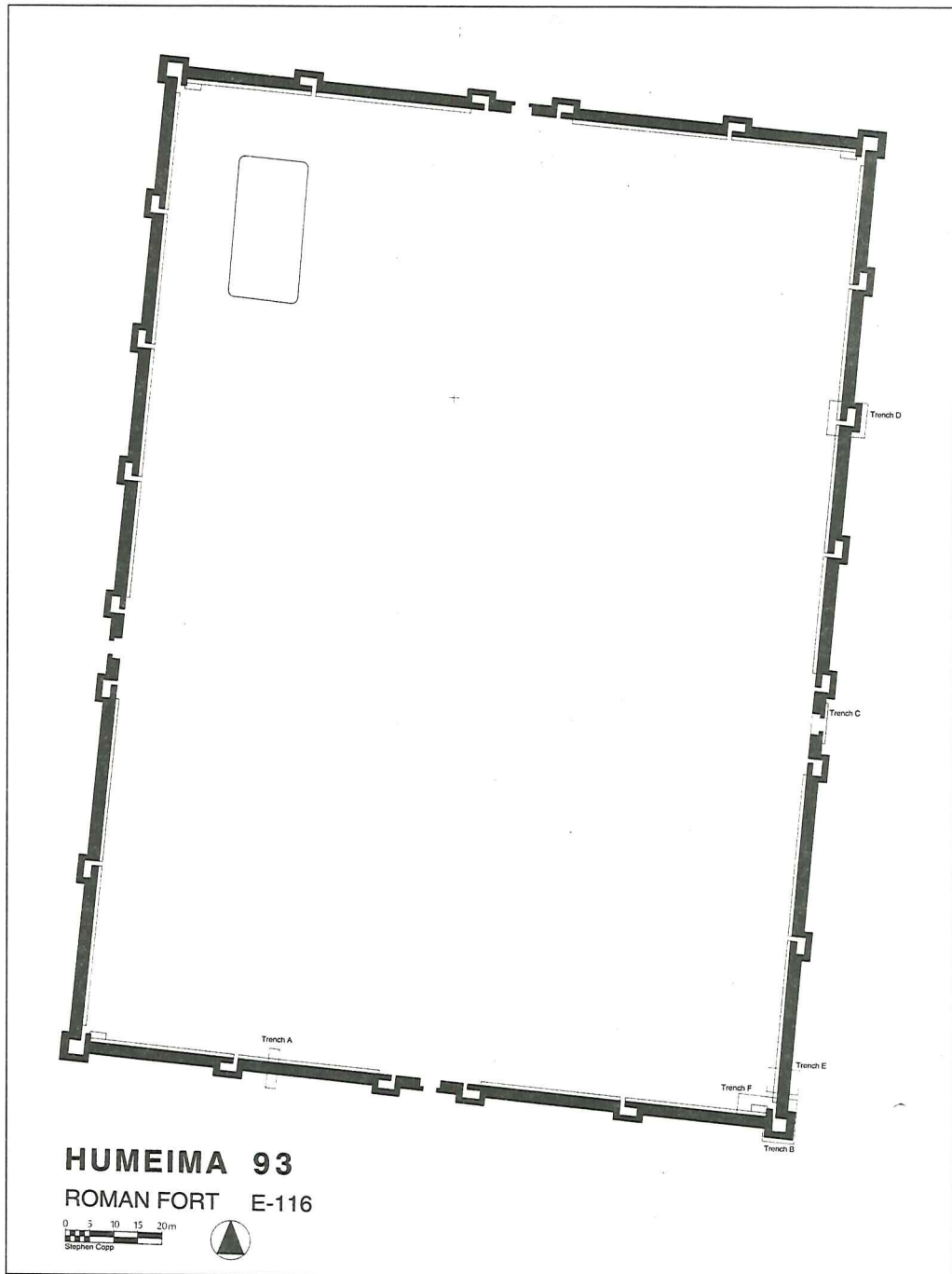


5. E116: Aerial (Photo: W. and E. Myers).

end, six trenches were laid out: Trench A across the western portion of the south wall, Trenches B, E, and F across the southeast corner tower, Trench C across the east gate, and Trench D across an intermediate tower on the east wall north of the east gate. Although no evidence was found for rebuilding or reoccupation of the fort after the Early Byzantine period, there has been much robbing of ashlar facing blocks from the upper courses of the walls and towers, particularly along the west side of the structure. Most of this probably took place in the Early Islamic period and the last century. Many of the blocks remaining in place vary in dimensions, material, and surface finish and clearly were themselves taken from pre-existing structures by the Roman engineers.

Survey and excavation in 1993 determined that the fort had corner towers 5.85 m (ca. 20 RF) square, projecting 1.85 m (ca. 6 RF) beyond the adjacent walls, square projecting towers flanking the east gate

(and probably the other three gates as well), and 12 square, projecting intermediate towers, probably two on the north and south walls in addition to those flanking the gates, three on the east and west walls north of their gates, and one to the south of them, in addition to those flanking the gates. Only half of these 24 towers are clearly visible on the surface, but in view of Roman practice elsewhere, it is likely that the overall arrangement was symmetrical. The towers did not project inward from the wall face. All the gate and intermediate towers are 5.97 m (ca. 20 RF) wide and project 1.80 m (ca. 6 RF) from the wall face. The walls of the fort are 3.00-3.06 m thick (ca. 10 RF), of which 0.69 m (2.5 RF?) is a rampart walkway. This walkway is built up against the inside face of the fort wall, but does not bond with it. Exposure of the foundation in several trenches, however, showed that the wall and rampart belong to the same construction period.



6. E116: Plan of Roman Fort.

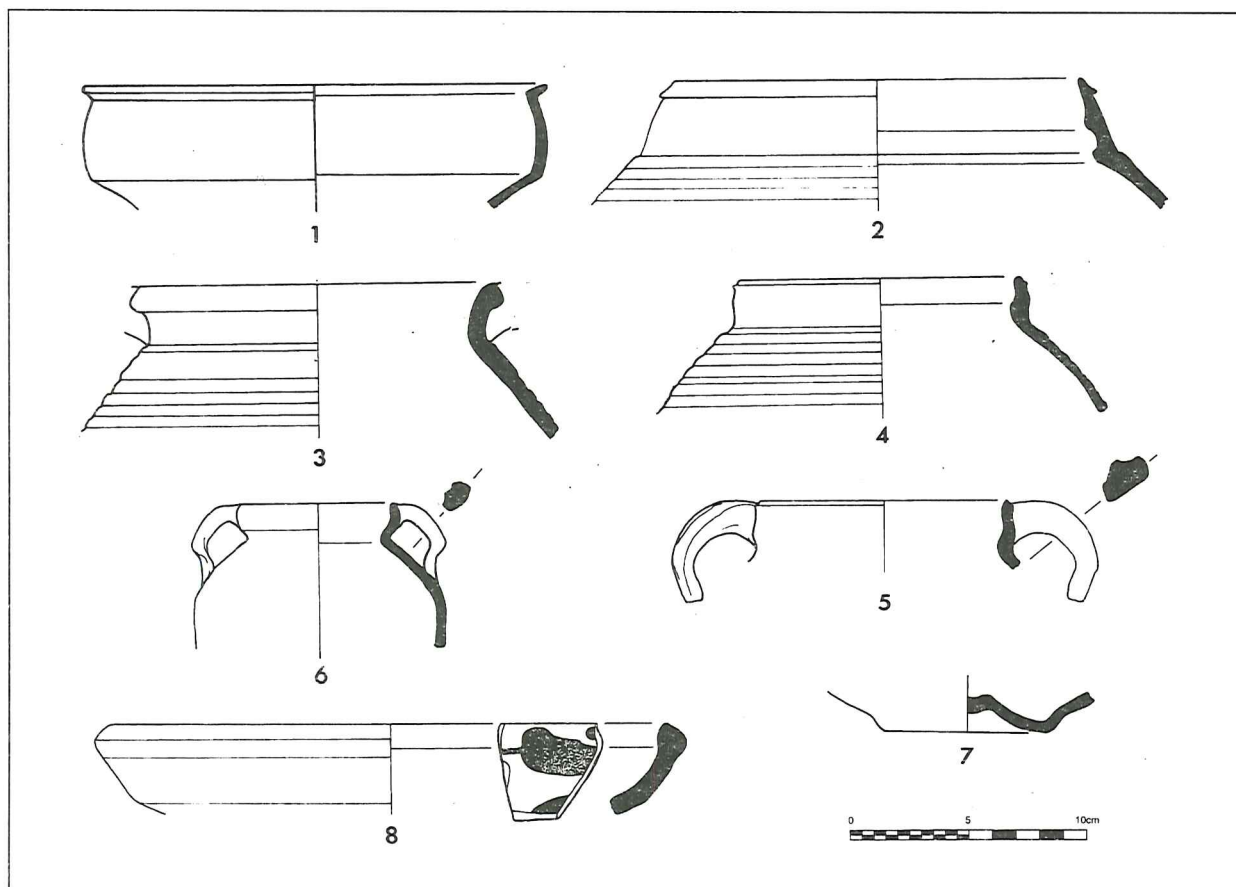
The east and west gates are not located in the centre of their respective walls, but have been shifted to the south: the east wall extends 119 m north of the centre point of the east gate, and 87 m south of it (probably 400 and 300 RF, respectively). Since there is no topographical reason for this irregularity, it probably was enforced by the pres-

ence of the large headquarters building and parade ground, barracks, and possibly stables, in the northern half of the fort. The well-preserved east gate was 4.20 m (ca. 14 RF?) wide. The remains of the north gate are much less prominent, possibly because that gate was smaller than the others, access to it being largely blocked by the presence

of the *principia* building. The outlines of that structure can be seen, and it frames a central courtyard that opens to the south on the *decumanus*. There are numerous traces of walls, and mounds of structural debris throughout the interior of the fort, and the pattern of barracks blocks and ancillary structures can be seen in the aerial photographs taken in 1992 (Fig. 5; Oleson *et al.* 1993b: 488).

Analysis of the surface sherds indicated that occupation of this part of Auara began in the first or second century and continued through the fourth, with lesser evidence for the fifth and sixth centuries. The stratified ceramics and coins, however, revealed that the fort was built in the second century, and that the major period of occupation extended only through the fourth century (Fig. 7). The fort predates Diocletian's reorganization of the frontier system.

Trench A. Trench A was laid out across the south wall of the fort at a point west of the south gate where both the inner and outer faces of the wall appeared to be well preserved, 50 m east of the southwest corner of the camp (Fig. 6). The purpose of the sounding was documentation of the design, height and construction of the wall, and the recovery of datable artifacts from the foundation levels. The wall itself (locus 01) is 2.45 m thick, while the walkway built up against its north face (locus 08) is approximately 0.70 m thick. Some facing blocks had been robbed out of both the north and south face of the wall, allowing the core of cobbles and earth to spill out in both directions. The remaining facing stones are an eclectic mix of reused sandstone blocks with Nabataean trimming, roughly-shaped blocks of sandstone and limestone, and untrimmed boulders. The parapet walkway



7. E116: Ceramics (Drawing: M. S. Malkawi and J. Mason; descriptions in appendix).

was built up against it with somewhat smaller stones and blocks. No mortar was observed between the facing blocks or in the core of the wall. The facing blocks used on the outside of the fortification wall were larger and more regular in shape than those used on the interior face and the walkway.

Excavation outside the wall revealed sloping layers of rubble collapse, dump, and windblown soil containing cultural material dating from the second to the sixth centuries. The original ground surface (locus 06) was a thin (0.03-0.12 m thick) stratum of very compact, sandy red soil and numerous small quartz pebbles which ran up to and slightly under the foundation of the wall at 959.25. The surviving top of the wall at this point is at 960.71. This stratum contained only Middle Nabataean ceramics. The wall was built directly on this surface without any foundation offset. The very hard, red sandy level beneath (Locus 07) was sterile.

On the north, a very deep layer of fill had built up or been dumped against the wall, containing miscellaneous clippings of metal, fragments of glass and bones, third and fourth century coins, and second through fifth century ceramics. Within it, Locus 13 was a layer of compact beige soil containing a great deal of ceramic material, animal bones, glass, plaster painted with polychrome tendril designs, and three Roman bronze coins of the third quarter of the third century. The ceramics dated to the Middle and Late Nabataean, Early Roman, and Early Byzantine periods, from the late first to the early fourth century AD. Since it rests on the foundation level, this stratum should represent a living-surface associated with the fort's major period of use.

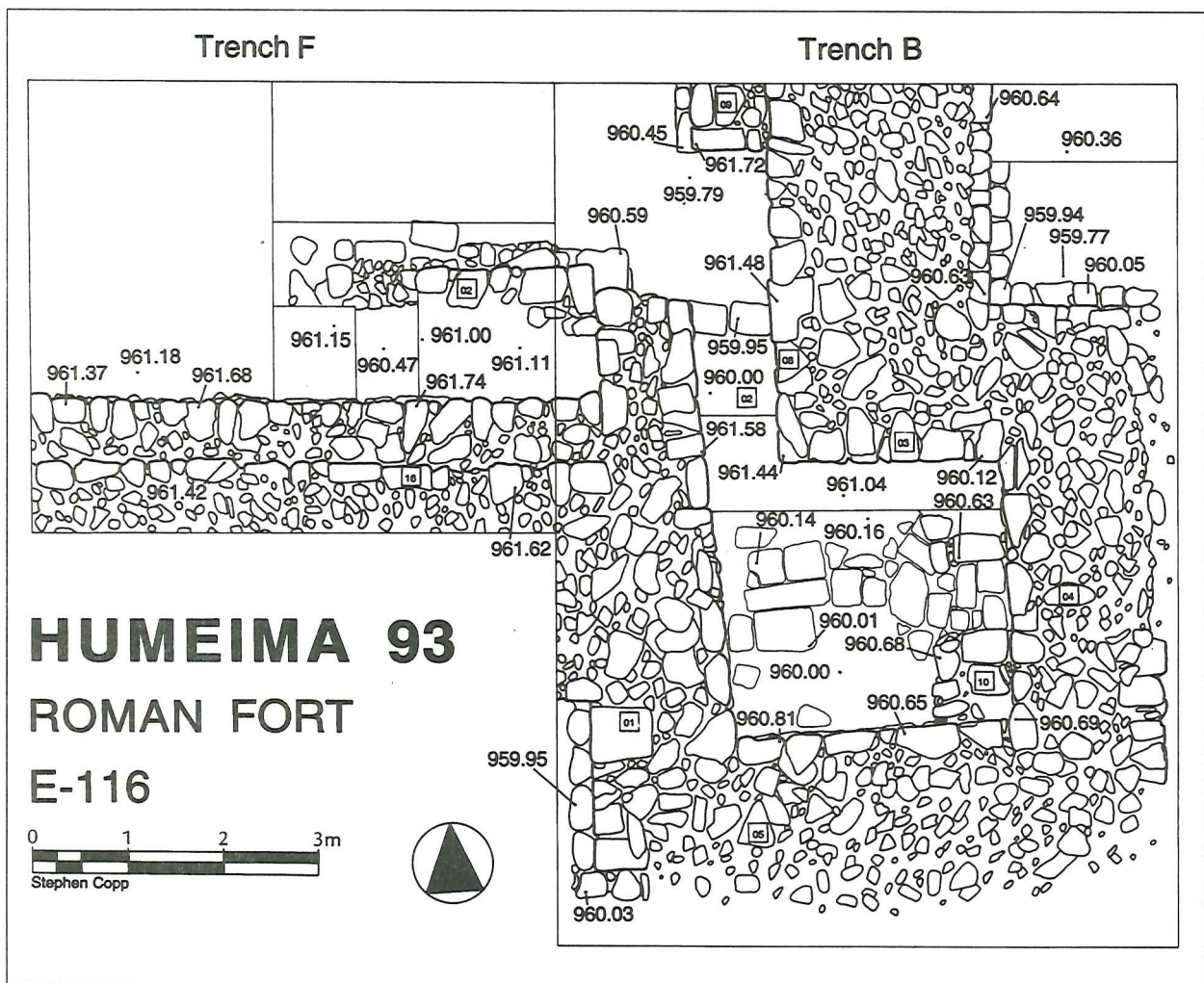
Surprisingly, Middle Nabataean sherds, dating predominantly to the second century, continued to appear in the fill even below the foundations of the wall. This layer represents either fill brought in to level the construction area, or debris resulting from early occupation of the site. There may

have been a Nabataean fort in the area, or a favoured campground near the Nabataean reservoir no. 63.

Trenches B, E, F. Trench B was laid out over the southeast corner of the fort, which appeared to be the least disturbed of the four corners, in an attempt to document the presence or absence of a projecting corner tower, its design, and the chronology of the foundation and occupation deposits (Fig. 8). After delineation of the tower, Trench E was laid out inside the adjacent fortification wall to the north and Trench F along the adjacent fortification wall to the west, to reveal the relationship between the rampart walkways and the corridor leading to the room within the tower.

As in Trench A, robbing of blocks from the outside of the fortification walls had brought about the collapse of the core of the wall and the spilling of rubble and flint cobbles toward the outside. Removal of the surface rubble revealed a square tower projecting 1.80 m (6 RF) from the east and south walls of the fort. The tower, 5.80-6.02 m square (20 RF), enclosed a room (Room A), which measured 2.90-2.98 m (10 RF). A corridor (02) gave access to Room A from inside the fort. The walls were constructed in the same manner as in Trench A, although the tower walls seem to have had a more substantial core. One difference in construction was the presence around the tower of a foundation offset, composed of partly trimmed blocks and rubble projecting approximately 0.20 m beyond the wall face.

Excavation within the tower (Room A) revealed that virtually the entire depth of fill was taken up with a single stratum (Locus 06) 1.20 m thick, composed of a light loessal soil containing a great deal of rubble and a modest amount of ceramic material. There were also fragments of bone, glass, and shell. The ceramics recovered belonged to the Middle and Late Nabataean, Late Ro-



8. E116: Trench B, plan of Southeast Tower.

man (?), Byzantine, and Late Byzantine periods, closing chronologically in the fifth century. This fill rested directly on an irregular paving (Locus 14; elev. 960.10-960.22 m) composed of rough slabs of sandstone and limestone, with some patches of packed earth and lime. The paving is associated with a bin constructed of reused blocks in the southeast (Locus 10) and possibly another in the northeast corners of the room. The paving has been robbed out in the south, exposing Locus 15, a very soft ashy soil. Two pavers were lifted, exposing Locus 15 along the west wall (01) of the room, a stratum of very soft loess 0.17-0.20 m thick, with a small amount of cobbles and a few Middle Nabataean sherds of the late

first to second century. This stratum lay on a floor of packed earth and lime (Locus 29) at 959.93-959.96. This floor, which appears to be the original one in the tower, is identical in appearance to the floor in the corridor (Locus 27), 0.20 m lower. Excavation into this floor exposed the foundation of the wall and yielded a single Middle Nabataean sherd of the second century. From this and other datable evidence, it seems very likely that the tower was constructed some time in the later second century. The bottom course of the wall (at 959.82) lay on a course of cobble packing which rested at 959.74 on very fine, sterile red-brown sand.

Excavation of the fill within and outside corridor 02, in an open space framed by the

termination of two rampart walkways and feature 02 of Trench F, revealed much the same sequence, although there was much more fallen rubble. There were several strata containing Middle Nabataean through Byzantine ceramics, along with miscellaneous rubbish, clearly dumped in the area, above a layer of wind-blown soil probably laid down during a period of complete abandonment.

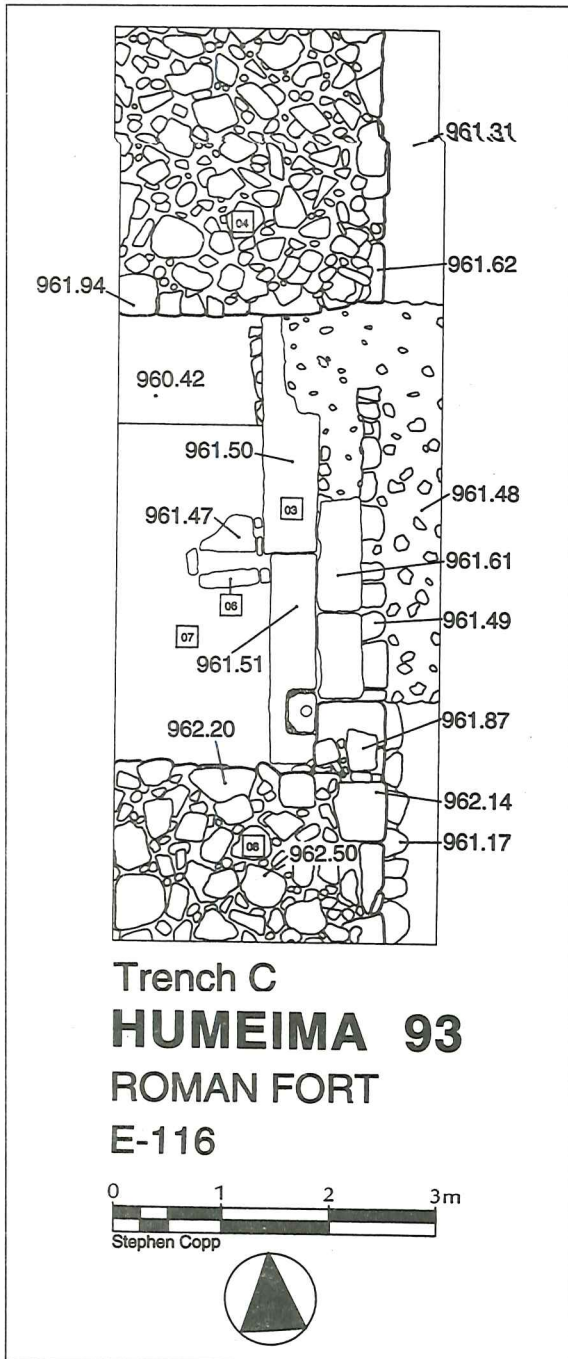
Locus 21, immediately below Locus 19, is a firm layer of packed earth and clay 0.20 m thick at approximately 960.25, containing a few Middle Nabataean sherds of the second to third centuries. Since it is quite regular and horizontal, and coincides with offsets in the rampart walkways on the south and east walls, it may represent a floor surface from a late reoccupation of the tower. Below this layer was a thick (0.70 m) stratum of soft, light brown, loessal soil containing a small amount of cobble, but very rich in Middle Nabataean ceramics, along with a few Roman and Late Roman ceramics, bones, and metal. The metal included small snippets of bronze, iron nails, and a large number (ca. 40) of small iron rings (diameter 0.008 m) and hooks, probably the hardware from some leather footwear, clothing, or armour. Locus 27, the original floor of the corridor, slopes gently from 959.77 at the centre of the corridor opening to 959.57 at the north end of the trench, as if providing a transition from the tower floor to the level of the fort interior, which was slightly lower. Excavation of this floor yielded a few Middle Nabataean sherds of the late first or second century, suggesting the same construction date for the fort as the strata in Room A. The Locus 27 surface extends to the faces of all the surrounding walls. The foundation of the rampart walkway and the east fort wall both rest on Locus 28, a level of red sand containing pebbles and a few cobbles. Beneath the fort wall, however, the cobbles are sup-

plemented with a packing of large, unshaped limestone boulders (diameter up to 0.50 m), similar to the foundation packing of the east gate. The arrangement of the foundation reveals that even though the rampart walkway does not bond with the fortification wall, they both belong to a single construction period.

A long trench, Trench E, was opened just north of Trench B, in order to define the relationship between the rampart and the approach to the tower. Removal of the surface debris and loose tumble revealed the east wall of the fort (08) and the rampart (09). Locus 01, some very loose, sandy soil just below the root line, surrounded a large number of well-cut sandstone blocks that lay as they had fallen off the wall into the fill. The neatness of the pattern suggests that the destruction was the result of an earthquake. This destruction, which can be seen in Trench B as Locus 07, must have come long after the abandonment of the fort, since over a metre of debris had already accumulated before they fell.

Trench F, was opened to the west of the tower approach, to clarify the relationship of the south rampart walkway to the tower. Although the context is badly disturbed, it is possible that there was a mudbrick or earth ramp providing access to the rampart walkway at this point.

Trench C. This trench, laid out across the opening of the east gate and the remains of the towers flanking it, was designed to document the design of the gateway and the towers, the possible presence of flanking towers on the interior of the wall, and any modifications made to the original gate complex (Fig. 9). The dimensions (width 2.48 m) and design of the wall at this point were the same as in Trenches A and B, except for the presence of a 0.02 m thick coating of mud plaster on the exterior face of the wall north of the gate. It is possible ei-



9. E116: Trench C, plan of East Gate.

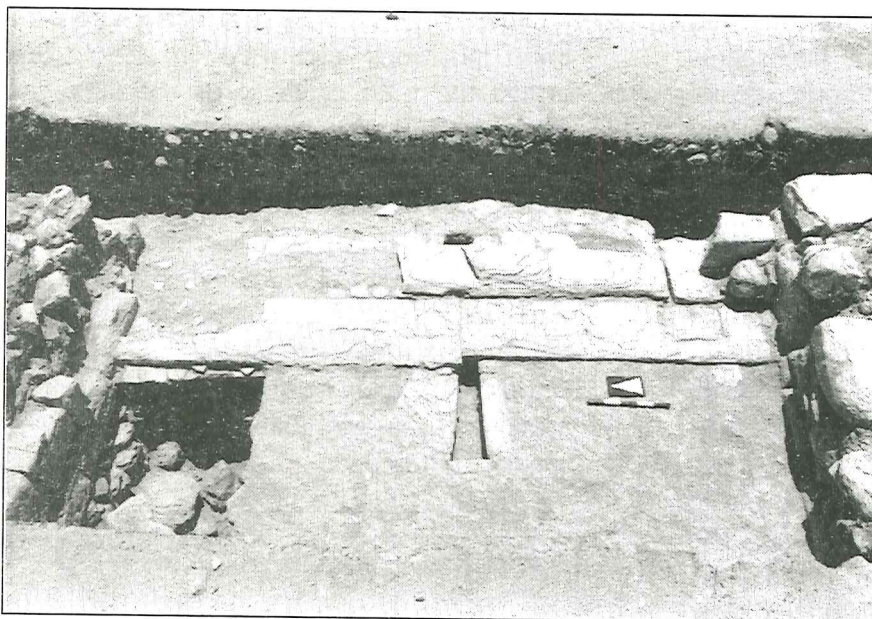
ther that the outside face of the entire fortification wall was covered with mud plaster but that it has survived only here, or that the gates were singled out for more careful finishing. Although the context is disturbed, the parapet walk appears simply to stop short of the gate both to the north and

south. The footing of the east wall, exposed south of the gate, was composed of a single course of flat sandstone slabs, projecting 0.18 to 0.25 m from the east face of the wall (elev. 961.17 m).

The width of the gate is 4.20 m at its east side and 4.16 m at its west side (14 RF?). The walls simply terminate at the gate and its door jambs, with a short spur at either outside edge to protect the hinge beams of the gates. A door sill (Locus 03) constructed of slabs of sandstone, occupied the outer half of the gate (Fig. 10). The sill was constructed of a lower course of slabs on the east (width 0.22 m, elevation 961.49 m) aligned with the east face of the east wall, an upper course (width 0.42 m, elevation 961.61 m) which formed a stop for the gate doors, and a lower, inside course on the west (maximum width 0.52 m, elevation 961.50 m). The sill blocks are reused sandstone slabs with Nabataean dressing.

The inner sill consists of two large sandstone slabs, the north one 2.20 m long and 0.52 m wide; the south one 1.94 m long and 0.46 m wide. A rectangular recess has been cut into the south slab and a hard limestone pivot block (0.31 x 0.27 m) with a central socket for the gate hinge has been mortared in place. Rust stains and thick iron fragments from the iron-shod pivot were found in and around the socket, along with heavy iron spikes from the carpentry of the doors. The cutting for a comparable socket block was found near the north end of the north inner sill slab, but this, along with a section of the upper sill and the corner block at the southeast corner of the north side of the gate, are missing. West of the sill and almost in the middle of the gate is a possible drain (Locus 06) framed by sandstone slabs and extending under the sill structure to the east.

The presence of the upper sill, functioning as a door stop, indicates that the doors opened toward the interior of the fort. The



10. E116: Trench C, E gate from west (Photo: C. Mundigler).

gate thus consisted of a single portal closed by double wooden doors. Since no evidence has been found for a central stone pier, the central support may have been wooden. No evidence has been found for an arch over the gate, and the small amount of surface rubble suggests that the superstructure may have been built of timber or mudbrick.

The surface outside the fort, in front of the gate, was paved with a hard layer of pebbles and earth, as wide as the gate and cambered slightly. West of the sill, a compacted earth surface approximately 0.18 m thick extended throughout the gate interior to the west baulk of the trench. A probe cut through this floor revealed a thin (0.03-0.07 m) underlying layer of looser soil and pebbles (Locus 10), and below that a substantial foundation packing of cobbles, boulders, and clay some 0.85 m thick extending under the wall and sill—the same arrangement found in the southeast tower. Apparently foundation trenches were excavated for the gates and corner towers somewhat wider than the structures themselves, to provide a more stable base for these important parts of the fortification.

Surface cleaning revealed that the gate was flanked by two towers (3.80 m north

and 3.62 south of the gate) projecting 1.82-1.85 m (6 RF) from the wall. The towers, which bond into the wall, are 5.84-6.01 m wide (20 RF), forming rooms 3.48-3.49 m (12 RF?) long and 1.83-1.88 m (6 RF) wide. From each room, a passage leads from the corner closest to the gate interior to the west face of the wall; the relation of the tower entrances to the parapet walk is not clear.

No ceramics or other evidence of human occupation were recovered from the foundation loci lying below the Locus 07 compacted earth floor west of the sill (i.e. loci 10, 11, 12), although all soil removed was carefully sifted. Middle Nabataean ceramics recovered from the interior of the drain (Locus 05) which cuts the Locus 07 floor belonged to the early second century. Ceramics from the excavated section of the Locus 07 floor were Middle Nabataean and Roman. Ceramics from these loci included fine, coarse, and kitchen wares.

Middle and Late Nabataean fine, coarse, kitchen, and storage wares dating as late as the fifth century were recovered from Locus 02 west of the sill and above the Locus 07 floor. Similar ceramics were recovered from Locus 01 east of the sill. Ceramics in the surface locus extending throughout

Trench C ranged from Middle Nabataean to Umayyad in date, although the late sherds were few. A construction date in the second century and abandonment sometime before the fifth century are likely.

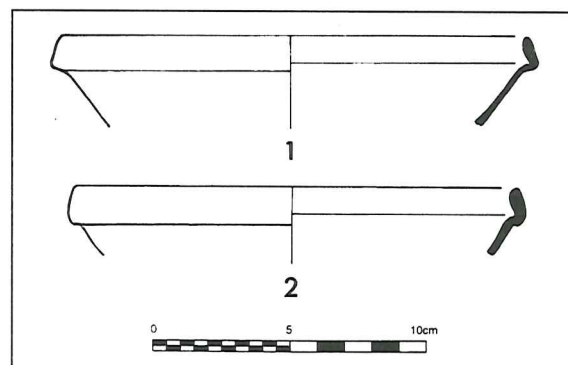
Trench D. Trench D (8.0 m by 7.5 m, with the longer dimension roughly east/west) was laid out over the remains of the second intermediate tower south of the northeast corner of the fort, the tower which from surface remains appeared to be the best preserved of those around the fort (Fig. 6). Limited surface clearing was carried out to establish its design and dimensions. The tower projects 1.80 m (6 RF) beyond the wall of the fort and is 5.97 m (20 RF) wide. The access door is at the south end of the room. The thickness of the east fortification wall narrows from 2.50 to 1.10 m along the west wall of the room, yielding a space 4.0 m long and 2.05 m wide; the exterior wall is 0.90 m (3 RF) thick. The parapet walkway appears to extend right up to either face of the door, suggesting that there was originally some means of access to their upper surface.

Field A: Tomb Survey

The Tomb Survey begun in 1992 was continued in 1993, concentrating on several hills north and west of the site. In addition, soundings were made in four tombs to gather further evidence for the design and chronology of the tombs and necropoleis. Twenty-nine new tombs were recorded in the course of the 1993 survey, a large ceramic surface sample was recovered, along with fragments of four inscribed headstones, one in Greek and three in Nabataean script. The excavations of the tombs has also given more of an insight on tomb construction, particularly the use of plaster and mortar to seal the capstones.

Each of the tombs studied this season were designed for a single individual, for a

total population of 29; together with the 81 tomb positions identified in 1992, this brings the total capacity of the surveyed tombs to 110. Datable ceramics recovered from the surface suggest that the necropoleis spread outward from the site, and that the tombs farthest away are the latest. The tombs found at A117, which dated to the first century AD (Fig. 11), are an exception, but the enormous amount of pottery found at this spot, and the presence of inscribed headstones, suggest that it had some sort of special significance.



11. A117: Ceramics (Drawing: M. S. Malkawi; descriptions in appendix).

Field C101: Lower Church

The 1993 season of excavations was the third at the Lower Church. During the 1991 and 1992 seasons, in the central nave of the church interior (Room 1) the deposits were excavated down to the pavement, as well as four sub-pavement burials and a sub-pavement probe in the apse. Much of the Northeast sacristy room (Room 2) was also excavated down to the pavement, along with a sub-pavement probe. Portions of the Southeast room (Room 3) were also excavated down to the pavement, as were portions of the Northwest room (Room 4) around the north exterior doorway. In addition the Southwest room (Room 5) was completely excavated, in which was found a remarkable cluster of some 17 pottery vessels from the mid-seventh century (see 'Amr and Schick, forthcoming), and part of

a far Southeast square (Square 6) was also dug.

During the 1993 season, limited excavation continued in the church interior (Room 1) where a fifth burial was excavated. Another portion of the Northwest room (Room 4) was excavated in the southeast corner to expose completely the staircase and doorway into the north aisle of the church (Fig. 12). The excavation of Square 6 was continued and the wall lines of several rooms to the south and east of the church were traced in order to establish their plan (Rooms 7 and 8).

Room 1: The Nave. Excavation of Burial 4 in the nave resumed with the removal of additional pavers immediately to the north of the 1992 probe. The sandy fill below the pavers covered the capstones of the burial, approximately 1.30 m below the church floor, ca. 0.30 m deeper than the other four graves found at the church. The absence of side slabs is an atypical feature of this grave, which consists of a trench dug in the compact earth and roofed with capstones laid on an offset above. The body had been wrapped in a shroud, which survived only as a dark discolouration on parts of the skeleton, especially the skull. The left arm was draped across the belly, while the right arm was draped across the pelvic region. The close proximity of the leg bones to each other suggest that the legs had been bound before burial.

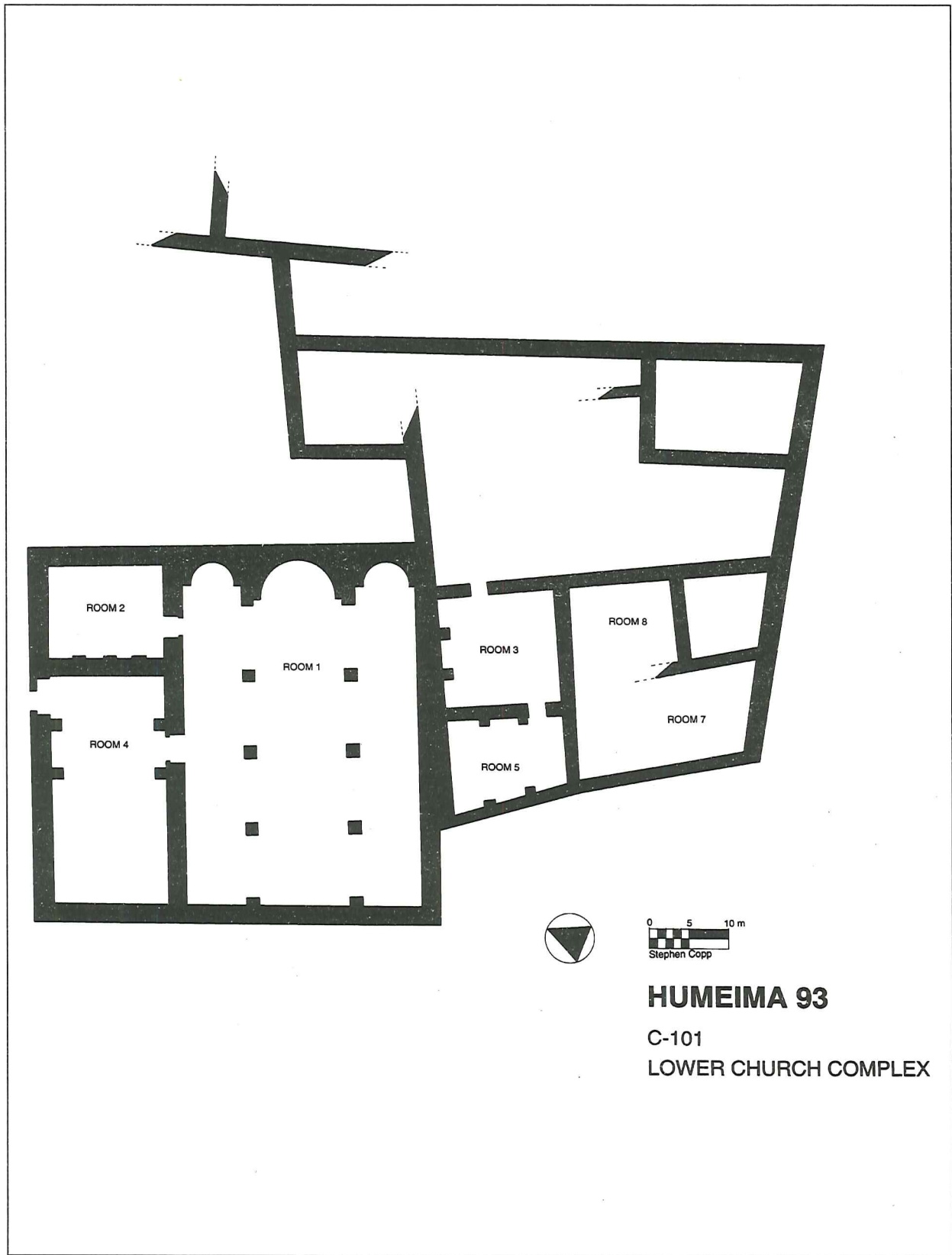
Only three artifacts were found associated with the skeleton: a pair of badly deteriorated leather sandals, a small, cylindrical, bone pin found among the left hand bones, possibly used to close up the burial shroud, and a small bronze clasp or pendant found underneath one vertebra.

Based on the small size of the mastoid process, the angle of the mandible, and the size of the orbital sockets, the skeleton should be that of a female, the second fe-

male burial found at the church. Based on the dental condition and cranial sutures, her age at death was approximately 25 to 30 years. The wisdom teeth had erupted, but there was no sign of any wear, while the right lower first molar showed extreme wear, almost down to the pulp cavity. Clearly the woman had favoured the right side when chewing. The cranial sutures were quite clear and the zig-zag patterns were present. No other pathological conditions could be studied due to the poor condition of the skeletal material.

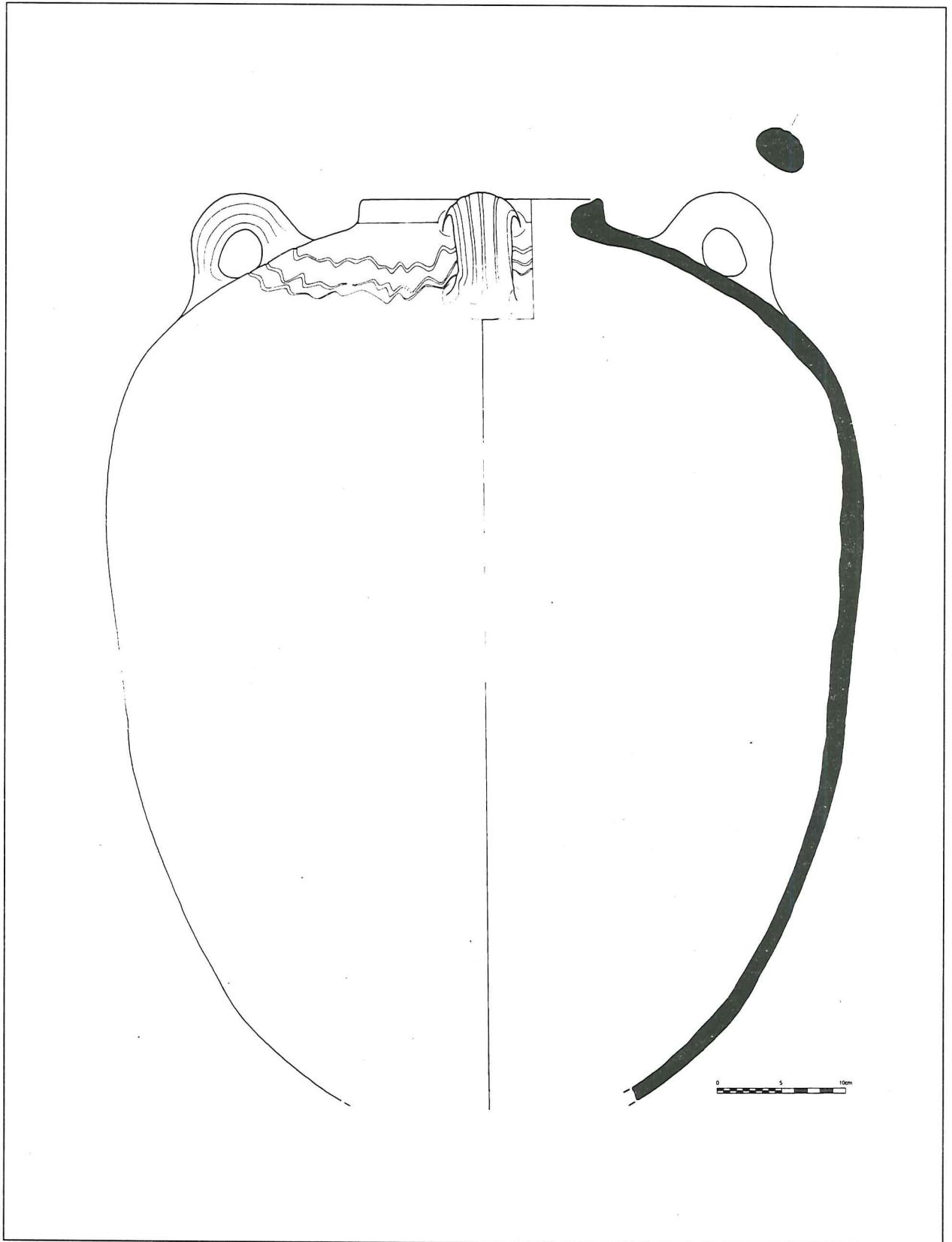
Room 4: Entrance Hall. Excavation was continued in the Northwest room (Room 4). In 1993 an area 5.0 x 3.4 m was excavated in the southeast corner of the room in order to uncover the southern portion of the staircase and expose the doorway in the middle of the south wall that led into the north aisle of the church. A sequence of layers of tumbled rubble containing little pottery filled the room—including several fallen stair blocks made from reused marl conduit blocks. No clear alignment of the tumble was observed, except in the west baulk, which preserved the original arrangement of the arch blocks from the easternmost north-south arch in the room.

Below the tumble were layers of silt, containing substantial quantities of sherds, and lenses of ash. A layer of silt at the level of the threshold of the south door contained large numbers of storage jar sherds (Fig. 13), concentrated around the arch pier east of the door leading into the church. Since placement of storage jars so close to the door would have made access into the church awkward, the jars may belong to a post-church phase of use of the room (dated to the mid-seventh century: 'Amr and Schick, forthcoming). Fragments of several marble panels robbed from the church were dumped in the same area. The pottery-rich silt rested on a layer of compacted sandy



HUMEIMA 93
C-101
LOWER CHURCH COMPLEX

12. C101: Plan of Lower Church and associated rooms.



13. C101: Storage jar from Room 4 (Drawing: L. Najjar; description in appendix).

soil above the beaten earth floor of the room, which is at the level of the landing in front of the door leading into the church.

In the southeast area of the room, immediately to the south of the staircase was an installation, presumably associated with the layer of storage jars. It consisted of a cobble pavement set in ashy soil around one larger, thin sandstone disk. Another installation in this corner of the room consisted of large dressed blocks placed in a quarter circle on a layer of flat cobbles and boulders with compacted silt around them (Fig. 14). One of the blocks at the bottom was a re-used fragment inscribed with a cross. Below was another layer of four blocks placed in a quarter circle in compacted, ashy soil. The installations, seemingly hearths, were above the beaten earth floor of the room.

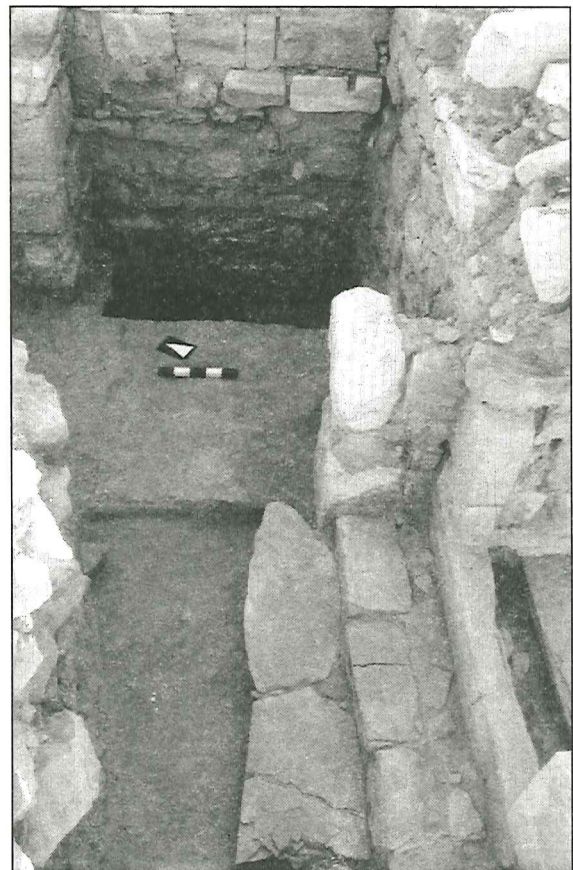
Portions of the soil deposits below the beaten earth floor were excavated in a 1.0



14. C101: Room 4, bottom of Locus 28, 31, 32 looking north (Photo: C. Mundigler).

m wide trench along the east wall, dug to an arbitrary depth of 1.0 m below the floor (Fig. 15). The fill composed of layers of ashy, silty soil with many small sherds and animal bones, resembled that excavated in the northeast room (Room 2) and in the probe in the central apse in 1992.

Room 6. Excavation was continued in 1993 in a room identified in 1992 at the southeast corner of the church, east of Room 3. The north and west walls forming the room lay on compacted silty soil. The wall extending east from the southeast corner of the church showed evidence for two construction phases. The upper portion consisted of two rows of header-stretcher construction, including the bottom portion of a cupboard. Below was a wall of ill-defined courses of roughly dressed rocks and cobbles with mud packing chinked with pebbles. The wall appears



15. C101: Room 4, final looking west (Photo: C. Mundigler).

to have been built against the south wall of church. The east wall of Room 3 was preserved to a height of eight irregular courses; the wall was two courses thick, constructed of roughly dressed stone set in mud chinked with pebbles. It is likely that this space was an open air courtyard rather than another room.

Room 7. This large room (9.50 x 4.5 m) was identified in 1993 south of Room 5. Numerous sherds, including a sizable number of storage jar sherds, were collected during the removal of topsoil to expose the wall lines. The wall lines of the room were fully exposed everywhere except along the north part of its east wall (shared with Room 8), where substantial excavation would be necessary to establish the possible presence of a door.

Room 8. The wall lines of this room were traced south of Room 3; the north part of the west wall (shared with Room 7) was missing. In order to trace the course of the east wall and establish the possible presence of a door, it proved necessary to excavate a 5 x 1 m trench along the east wall to a depth of over a meter before the east wall appeared, preserved three courses lower than the other walls of the room, with no trace of a door. Further wall lines are clearly visible to the south and east of the church, indicating the presence of additional rooms that have not been investigated.

Summary

The three seasons of work devoted to the Lower Church revealed a large, triple-apsed Byzantine basilica. While the church did not have a mosaic floor, it did contain elaborate marble furnishings and a number of burials. The pottery corpus from the 1992 season in Room 5 shows that the church continued in use into the mid-seventh century, at which point it seems to have been

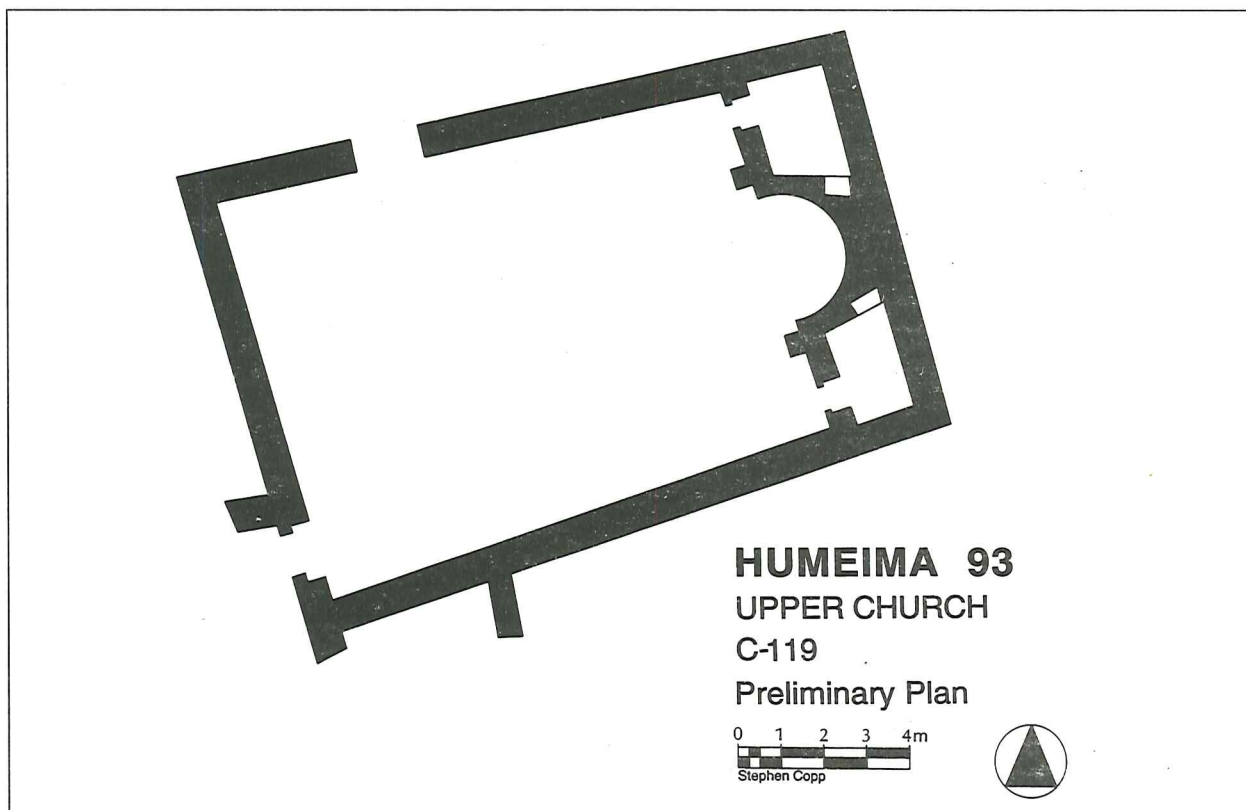
peacefully abandoned rather than destroyed. Later on, the marble furnishings were mostly robbed out and the building used for domestic occupation, as shown by the oven in Room 2.

While work in the rooms south and east of the church, as well as in the incompletely excavated Rooms 3 and 4 would certainly provide additional information about the church complex, other areas at Humayma have a higher claim to attention in future seasons.

Field C119: Upper Church

During the last two weeks of the 1993 season, clearing and excavation were carried out at a small church at the far west edge of the site (C119), identified as the Upper Church. Surface rocks and small amounts of top soil were removed to clarify the wall lines and allow production of a preliminary plan of the church (Fig. 16). A room in the southeast corner of the church was also excavated in order to sample the stratigraphy and provide some evidence for dating the building.

The removal of surface rocks and soil in the church interior (Room 1) revealed that the structure was a single-apsed basilica with two small rooms flanking the exterior of the apse. There was a door in the middle of the north wall, a corresponding door in the middle of the south wall, and a third door in the south end of the west wall leading into an adjoining room. The east wall of the church was poorly preserved, particularly the northeast corner; its exterior face had fallen down the steep slope to the east. Wall lines were identified of two rooms attached to the southwest corner of the church; there clearly are additional rooms to the west of the church, but their wall lines remain uncertain. The interior faces of the church walls were covered with plain white plaster. Numerous fragments of red painted plaster were recovered from the apse.



16. C119: Plan of Upper Church.

The southeast room (Room 2; Fig. 17), attached to the exterior south edge of the apse, was entered through a door at the end of the south aisle. It contained topsoil and tumbled rubble; a layer of silt below contained two large fragments of marble chancel screen panels and a large fragment of a marble colonnette shaft, probably from a leg of the ambo. Below was a further layer of silt containing several thousand fragments of liturgical glass oil lamps, which clearly were stored there, above the packed earth floor of the room. The north wall of the room contained a cupboard. After the abandonment of the structure, enough time passed for wind-blown silt to accumulate before the marble furnishings of the church were robbed out, and a few pieces dumped in the southeast room. The major structural collapse of the building occurred later.

Field D120: “Islamic Fort”

During the last week of the 1993 season,



17. C119: Room 2, looking north (Photo: C. Mündigler).

two small probes were dug in a large, multi-roomed structure at the northwest part of the site (D120) in order to collect pottery and gain evidence for the chronology and of the structure and its potential for further excavation. In 1983 John Eadie, without any justification, had identified the structure as an "Islamic Fort" (Eadie and Oleson 1986: 53). No overall plan was produced, but the surface remains show a cluster of rooms grouped around two irregular courtyards. Although the wall tumble suggests that the structure was a massive one, there is no reason to identify it as a fort or as specifically Islamic in date.

Surface sherds were collected from the entire area of the structure. A large number of sherds from three storage vessels were found in one small spot where illicit diggers had churned up some soil. This spot was designated square 01, and a small portion of the top layer of disturbed soil was excavated to retrieve additional sherds. Surface rocks were also removed from the immediate vicinity to clarify the wall lines of a rectangular room, with traces of plaster on one interior wall face. A second excavation square (02) was dug in the corner of a room that flanked one of the interior courtyards. This trench was dug through topsoil, thick tumble, and a 0.60 m thick deposit of mostly sterile silt, before time ran out. No floor level was reached. An arch springer was revealed along one wall.

Byzantine sherds predominate in the pottery collected from D120, but Early Islamic period sherds are present.

Field F102

The structure in Field F102 is a large Early Islamic complex, probably intended for habitation, built on top of a Middle Nabataean structure that also has Byzantine lev-

els (Fig. 18). Work in 1993 was directed at the clarification of the structure's architectural features, completion of the probe in the northwest corner of Trench 01, and establishment of the stratigraphy associated with Cistern 64 to the east, in Trench 07.

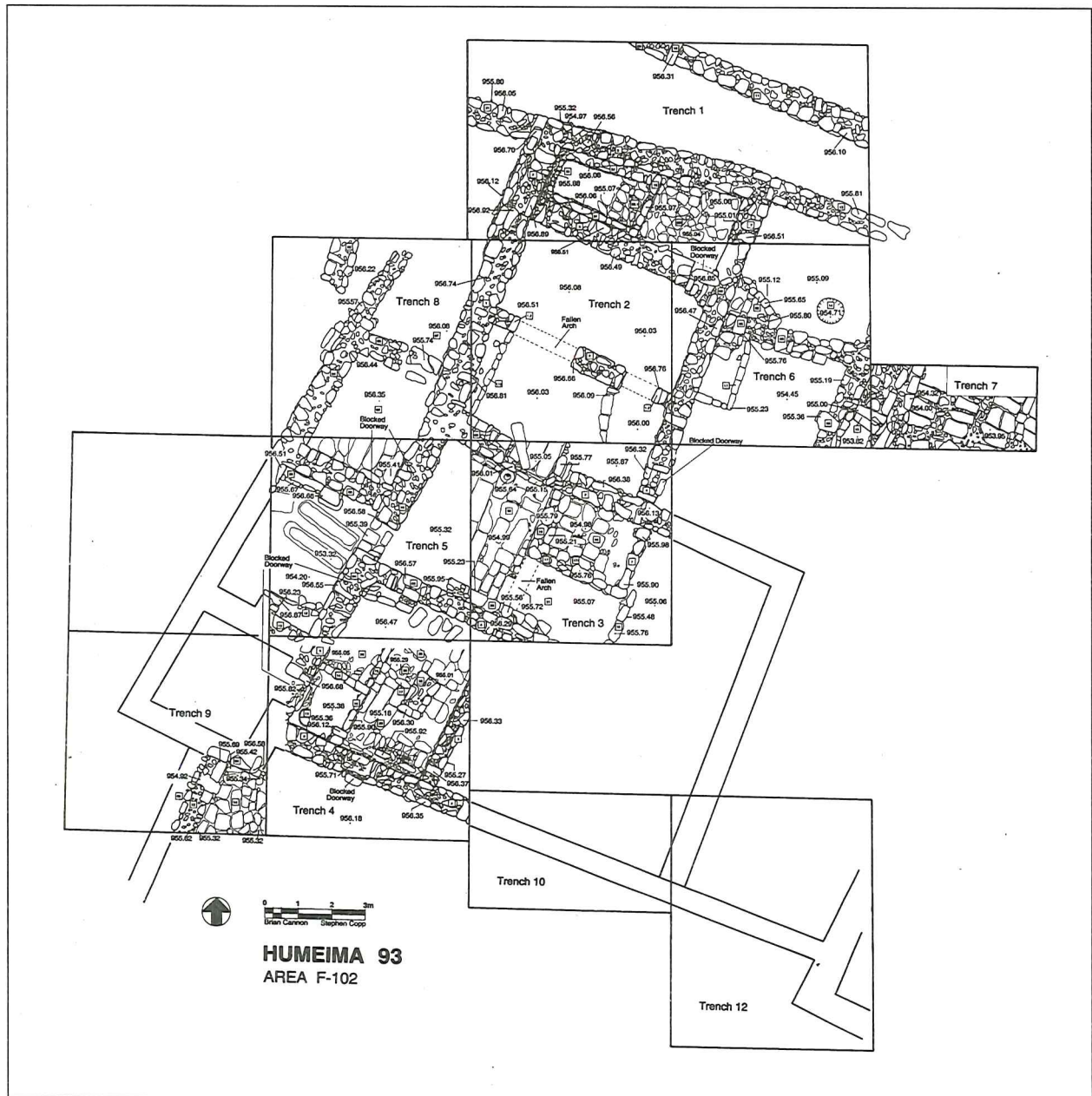
Small-scale excavation was continued in Trenches 01, 03 and 06, and four new trenches were opened in 1993: Trench 07 excavated to the east of Trench 06 in order to connect the structure with Cistern 64; Trenches 08 and 09 opened in the west to determine the western extent of the structure; Trench 10 opened adjacent to the southeast corner of Trench 04 to search for a gate in the main southwestern wall of the structure; and Trench 12 opened to the east of Trench 10, in order to investigate the architectural features in that section.³

Trench 01. The deep sounding in the northwest corner of Trench 01 was started in 1991 and continued in 1992. This season, Feature 46 was investigated (see Oleson *et al.* 1993a: 141). It proved to be compacted soil with patches of sand and ash containing second century AD pottery (Fig. 19.7), lying on top of extremely hard, sterile reddish brown soil, similar to the soil through which the graves were cut in Trench 05, excavated in 1992 (Oleson *et al.* 1993a: 142; 1993b: 483-484). A geological formation of very hard gritty brown soil with many pebbles was exposed at the bottom of the sounding, at 953.62.

Trench 03. A doorway was found in the northeast corner of this trench, in Wall 03, 0.40 m northeast of where it abuts Wall 02. The doorway was cleared down to approximately 0.50 m from the top of the wall, where the ashy deposits typical of the Phase 2 cooking installations were reached. This

3. Trenches 07 and 12 were excavated by Iain Glover; Trenches 08 and 10 by Dennine Dudley; and Trenches 01, 03, 06 and 09 by Khairieh 'Amr.

For the Phases mentioned in this report, refer to Oleson *et al.* 1993a, b.



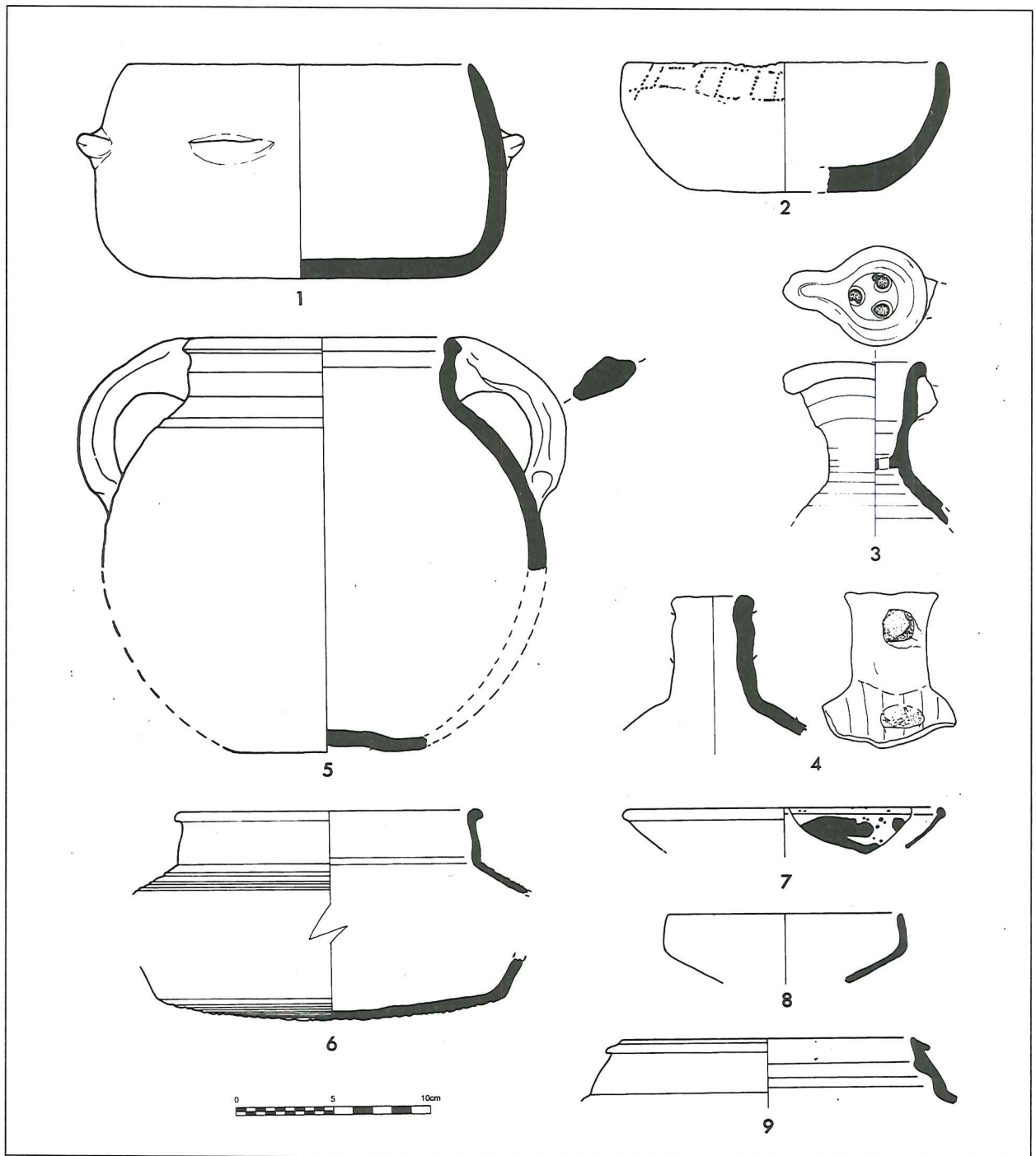
18. F102: Plan of Early Islamic complex.

doorway is obviously not original to the Phase 5 structure.

Trench 06. Trench 06 suffered damage from clandestine diggers between the 1992 and 1993 seasons which revealed a foundation offset protruding 0.16-0.20 m from the western wall of Room D (Wall 06) at 955.02, confirming its assignment to Phase 5, and a possible northwest-southeast wall

in the south baulk. It also revealed below Locus 24 an extensive dump sealed by a later tamped-earth floor. The disturbed dump contained many vessels dated to the seventh century AD (Fig. 19.3).

Excavation during the 1993 season was conducted in the triangle in the northwest corner left unexcavated during the previous seasons, to clarify the limits of Room A of Trench 01. A blocked doorway was re-



19. F102: Ceramics (Drawing: M. S. Malkawi, L. Najjar and K. 'Amr; descriptions in appendix).

vealed next to Wall 06. It is 0.80 m wide and was part of the Phase 4 building of Wall 03. The blockage ends at 955.65 m, thus being associated with Phase 2. A restorable Ottoman period pottery vessel was found in the top levels of this triangle (Fig. 19.1).

Trench 07. Trench 07 was laid out to determine the relationship between Structure F102 and Cistern 64 to the east. The only possible connection found elsewhere were three steps exposed in the southeast corner of Trench 06, dated tentatively to Phase 3

(see Oleson *et al.* 1993a: 139; 1993b: 480).

Prior to excavation, an extensive modern, rubble retaining wall surrounding the cistern area was removed. This wall was built at the time the cistern was cleared out and a water intake trench dug, probably in the Ottoman period. The system, however, has been out of use since at least 1983. Below this, another north/south wall (03) was found, only one course high, possibly also a retaining wall. It partially covered the Phase 03 steps; Ottoman pottery was found within the mud mortar, indicating it belongs to Phase 1. The Phase 3 steps had been built on top of yet another quite substantial, earlier wall (W 1.0 m) which extends alongside Wall 06/09 of Phase 5.

To the east of the above-mentioned walls, eroded soil covered the area above the cistern. Removal of the topsoil exposed large tumbled blocks and rubble, directly above a layer of very compact red-brown clay covering the roof of the cistern. This layer, which produced predominantly Late Byzantine/Early Islamic pottery (seventh century AD; Fig. 19.4-6), was most probably a sealant for the roof of the cistern, laid down contemporary with the Phase 5 construction of Structure F102. Excavation revealed that the cistern is circular, with a curb of well-dressed stones rising 0.35 m above the flat surface of the roof slabs.

The location of Cistern 64 was determined principally by the need for proximity to the catchment area along the wadi to the east. The cistern and its settling tank seem to have been kept within a courtyard opening off the east side of Structure F102. The settling tank (L 2.08; W 1.84; depth 0.98; cap. 3.8 m³), to the east of the cistern and Trench 07, was roofed with a single transverse arch which still survives. The cistern roof was built of sandstone slabs supported by three transverse arches which run in a north/south direction allowing the slabs to be laid in an east/west pattern (Fig. 20).



20. F102: Trench 07. Cistern roof, looking east (Photo: C. Mundigler).

This method of roofing with sandstone slabs is typically Nabataean in style, although there are known later examples in the area. By looking through the gaps between the roofing slabs, it was confirmed that the inner face of the cistern wall is directly below the inner face of the curb. The cistern seems to have an interior diameter of ca. 3.8 m and is more than 4.50 m deep, but only 3.80 m deep below the overflow, giving it a capacity of at least 43 m³.

To determine the dating of the cistern, a small probe was dug in the southwest corner of the trench, behind the curb. Level with the top of the curb was a layer of fine reddish brown sand, below which was a substantial sand layer with ash and burnt bone. The excavation of the probe stopped 0.23 m below the level of the cistern roof. At this point there was a small curved wall

of stones 0.25 m west of the cistern curb which may have acted as a supporting wall for the outer edge of the cistern. The probe produced pottery of the early second century AD (Fig. 19.8, 9), suggesting a Phase 8 date for the cistern.

Trench 08. Excavation was conducted in this trench to define the northwestern limit of Structure F102, and the connection between Trenches 02 and 05. The topsoil contained the stone tumble found over most of the structure, and surface clearing defined the boundaries of Room G (partially exposed in Trench 05 in 1992). The northeastern wall of the room was modified during a late phase to create a doorway next to the Phase 1 face of Wall 10 (see Oleson *et al.* 1993b: 478, Fig. 6). Another wall, Locus 06, was uncovered in the northwest corner of the trench; it is poorly built and not in alignment with the other walls of Structure F102.

The interior of Room G was left unexcavated, as the stratigraphy had been established in 1992, and work was limited to the northern part of the trench. Removal of the surface tumble at this point uncovered extensive patches of wind-blown sand (Locus

03) covering a compacted surface of loess and cobbles containing numerous plaster fragments (Locus 07). Wall 06 was built on top of this surface, as was the outer face of Wall 10, thus dating Surface 07 and Wall 06 to Phase 1. Assuming that the top collapse is due to the 1927 earthquake, then Locus 03 indicates a period of abandonment between the earlier Phase 1—see Trench 07 above—and the collapse. Such a sequence is in agreement with the hypothesis that very little pottery was produced in southern Jordan during the 19th and the early 20th century, too little for it to be an effective dating tool for the Late Ottoman period (Fig. 19.2; see Oleson *et al.* 1993a: 137; 1993b: 479).

Removal of the Phase 1 Surface 07 revealed the continuation of the northwest wall which belongs to Phase 5 of the building (Fig. 21). Its “truncation”, as well as the doorway in the northeastern wall, belong to Phase 1. Thus we still have not uncovered the extreme northwest corner of Structure F102.

Trench 09. This trench (L 12.0 m) was opened to the west of Trenches 05 and 04 to define the southwestern limit of F102.



21. F102: Trench 08. Continuation of Phase 5 walls below Phase 1 floor (Photo: C. Mundigler).

Several wall lines could be seen on the surface prior to excavation, but none was well defined. Removal of topsoil defined Room F (mostly excavated in Trench 05 in 1992). The walls all bond and belong to Phase 5.

In the southern part of Trench 09, the baulk left at the west of Trench 04 in 1991 was removed. A square room (Room J; 1.30 x 1.30 m) was found to the west of the doorway in Wall 04/05. Its walls bond, establishing a Phase 5 date for all of them. Room J is peculiar in that its southwestern corner protrudes 1.20 m from what is thought to be the southwestern limit of Structure F102.

To the south of Room J, Wall 03 runs in a northeast/southwest direction and its line could be traced at the surface for around 9.50 m, at which point it seems to make a bend. To establish its phasing, a probe was excavated in the southeast corner of Trench 09, where a stone bench (H 0.28-0.32 m) and associated pavement were found (Fig. 22). The pavement, which does not extend under the bench, slopes from 955.42 in the north to 955.32 in the south, over a distance of about 2.0 m. Both the bench and the edge of the pavement were cut by a pit. The pit was filled with very loose soil containing very little pottery and bone. The presence of the pit allowed a probe under the pavement, where a compacted level (floor?) was reached at 955.19, above a layer of mixed sand and cobbles containing a deposit of Late Byzantine pottery. The probe also revealed an uneven face of Wall 03 beyond the bench, probably foundations. Thus Wall 03, bench and pavement could be dated to Phase 4, when a large paved courtyard was added to the structure.

Trench 10. This trench was opened in the hope of finding a central gate along the main southwestern wall of Structure F102. It does not conform in its north and south limits to the grid of the area because it was



22. F102: Trench 09. Wall 03 with Phase 4 bench and pavement (Photo: C. Mundigler).

meant to include as much of the wall as possible within its 6.00 m width. The southwestern wall was found badly preserved within the trench, although its outline could be determined. No indication of a gate was found, but, instead, an inner wall, running northeast/southwest. Due to the limited exposure it was not possible to determine whether it constitutes the remains of a fallen arch, as in the case of Wall 04/03. Much plaster was found in the soil surrounding the main southern wall, and a few patches of plaster were found on its northeastern face.

Directly to the south, the removal of the usual surface tumble revealed two neat lines of blocks, parallel to the main southern wall and resting on approximately the same level. The appearance of these stones, which presumably fell from the wall, indicates an instantaneous collapse (Fig. 23). Under the stones were traces of a compacted surface covered with a few centimetres of sand (see



23. F102: Trench 10. Stone collapse (Photo: C. Mundigler).

also Trench 08 above).

Trench 12. This trench was opened to determine whether a “protrusion”, symmetrical to Room J in the southwest (Trench 09 above), existed in the southeast corner of Structure F102. Removal of top tumble confirmed this symmetry. To the south, the stone tumble showed the same phenomenon of neat alignment already noted in Trench 10 above.

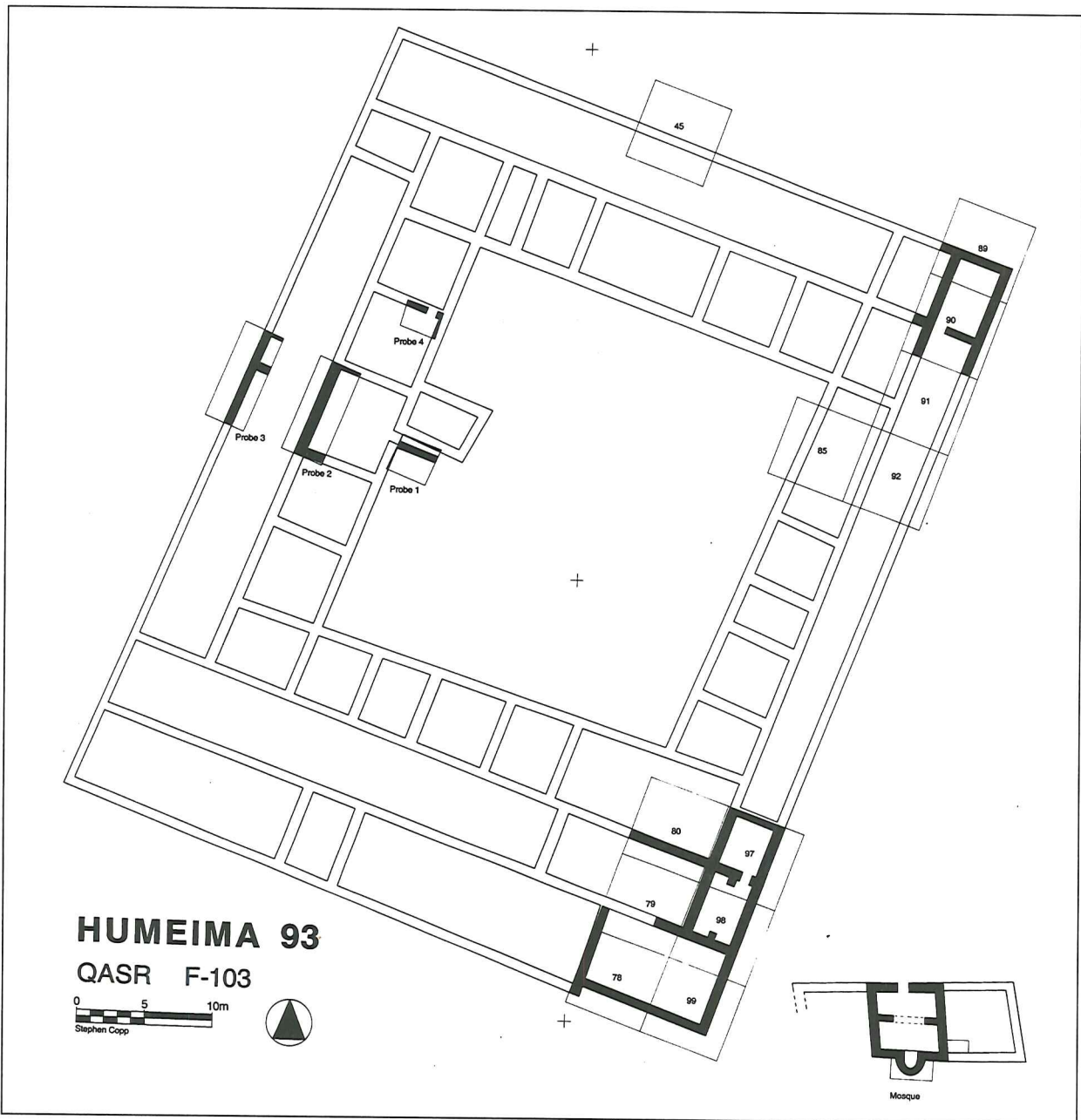
Conclusions

The 1993 season at F102 clarified several architectural details, utmost among them are the “main” Phase 5 western and southern limits of the structure. It also clarified at least in part the relationship between the structure and the cistern, and the dating of Cistern 64. The major question raised during this season is the function of the rooms at the southeast and southwest corners, along with the overall function of the structure itself. The Phase 5 dimensions of the structure are too large for an “average” household. The addition of a large paved courtyard to the south during Phase 4 also

precludes ordinary household identification. A positive identification is not readily available yet.

Field F103: The Early Eighth Century AD (Abbasid Family) *Qaṣr*

Two seasons of excavation at F103, located on the eastern outskirts of the Ḥumayma settlement, have established a date of foundation, function, and probable patron for this large and well-preserved structure (61 x 50 m; Fig. 24). The 1992 season allowed establishment of a preliminary plan—an irregular rectangle—and a date of foundation to the Early Islamic period. In 1993 it was discovered that the eastern perimeter wall of the building was not inset to form an irregular projection in the southeast as indicated in the 1992 plan (Oleson *et al.* 1993: 144, fig. 5). Ceramics from foundation trenches along the eastern perimeter wall and an internal cross wall (Sq. 98 Wall 02) confirm that the building was erected in a single phase during the “Umayyad” period. Further excavation will be necessary to reconstruct the sequence of any subsequent phases. Although the struc-

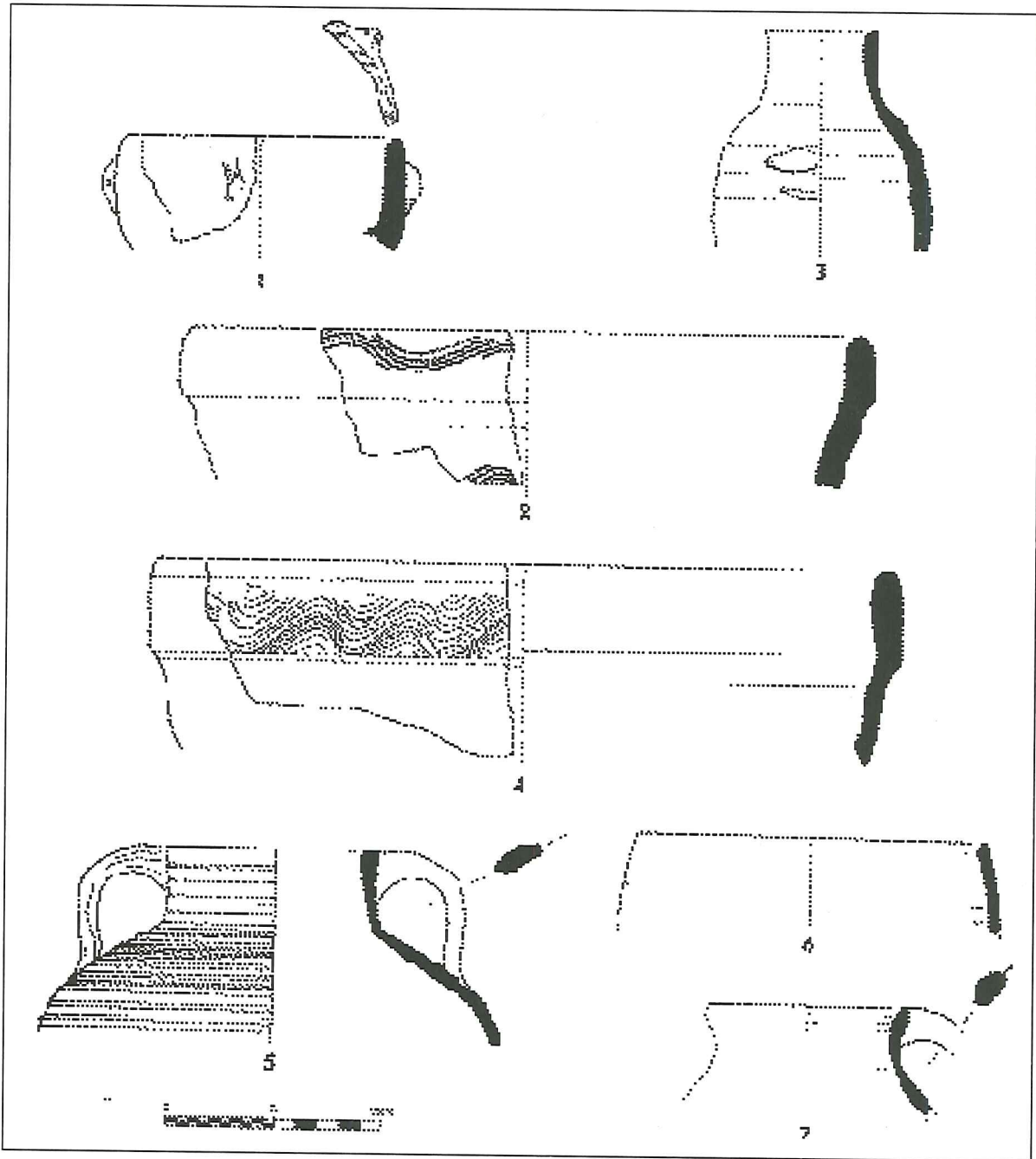


24. F103: Plan of Abbasid Qasr and Mosque.

ture seems to have gone out of use within the early Abbasid period, there is evidence for later phasing due to upper level occupational deposits and architectural additions during the Late Islamic period (Fig. 25).

The discovery in 1992 of painted wall plaster incorporating tendril designs in probe 02, located over a central room in the western wing of the structure, led to the suggestion that F103 was an early Islamic

qasr (manor estate) rather than a *castellum* or *caravanserai*. The discovery in 1993 of finely carved ivory panels in the painted room has reinforced this impression. During the last days of the 1993 campaign a small mosque was identified just a few metres southeast of the *qasr*, and contemporaneous with it. The findings correspond with textual sources accounting that the Abbasid family built a complex consisting of a *qasr*



25. F103: Ceramics (Drawing: M. S. Malkawi and L. Najjar; descriptions in appendix).

and mosque at Ḥumayma in the early eighth century.⁴ The Abbasids remained based at the Ḥumayma qaṣr for over forty

years before their mid-eighth century overthrow of the Umayyad Caliphate, at which point they left Ḥumayma for Iraq. Major oc-

4. Al-Bakri (1945-51) and the anonymous chronicle *Akhbār ad-Dawla al-'Abbāsiya* (al-Duri and al-Mutallabi 1971 - see also Schick forthcoming). Several Arabic texts also speak of 500 olive trees planted by the Abbasids near their *qaṣr*. The principal wadi runs through Ḥumayma about 60

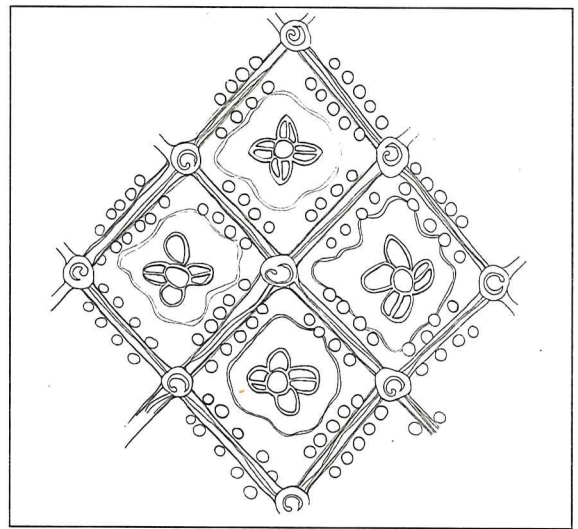
m east of the *qaṣr*/mosque complex, and the area in between would have been provided with excellent run-off from the wadi to water such trees. A search for roots or root cavities will take place in a future season.

cupation of the structure seems to have ended at this time.

During the 1993 season, excavation of the painted wall plaster in probe 02 continued. The painted portion cleaned and restored so far consists of a dado executed in a solid red zone below tendril and lozenge patterns, executed in true fresco technique. The red plaster remains affixed to a maximum height of 0.48 m along the base of both walls exposed at the southwest corner of the room (Walls 01 and 02). During destruction of the room by fire, the patterned plaster higher along the walls collapsed onto the white plastered floor, where it was found among mudbrick debris fallen from the superstructure and burnt palm wood and palm fronds that probably formed part of the roof (Locus 13; Fig. 26). Though fragmented and damaged by the fire, patterns, mostly floral, set within a continuous pearl-beaded band, could be reconstructed. Work is in progress to find more joins and to reconstruct the total fresco cycle (Fig. 27).⁵ The same type of border and similar floral motifs can be seen at al-Ḥallābāt (Bisheh



26. F103: Fresco *in situ* (Photo: C. Mundigler).



27. F103: Reconstruction of fresco (Drawing: R. Wenstob).

1982: 271, pl. 54), Qaṣr al-Ḥayr al-Gharbi (Schlumberger 1986), and Khirbat al-Mafjar (Grabar in Hamilton 1959: pl. 60-62), yet at these places figure scenes and a wider variety of colours are also found. A later, Fatimid fresco recently discovered in the Pavilion Building at 'Aqaba has a strikingly similar lozenge pattern, but less elaboration of detail (Whitcomb 1988: 210, fig. 2). The original range of colours is difficult to determine because of changes caused by the heat of the fire. Allowing for this handicap, the original colours seem to have included black, grey, rust, orange, mauve, salmon, yellowish-green and white. The pigments were all mineral compounds. Since only a 1.75 x 1.75 area of the room (which measures over 6 x 5 m in its entirety) has been excavated to floor level. At least one more season of excavation will be required in this room.

Trimming the east baulk of Probe 02 in 1993 exposed finely-carved ivory fragments resting on the floor.⁶ Although fragile and

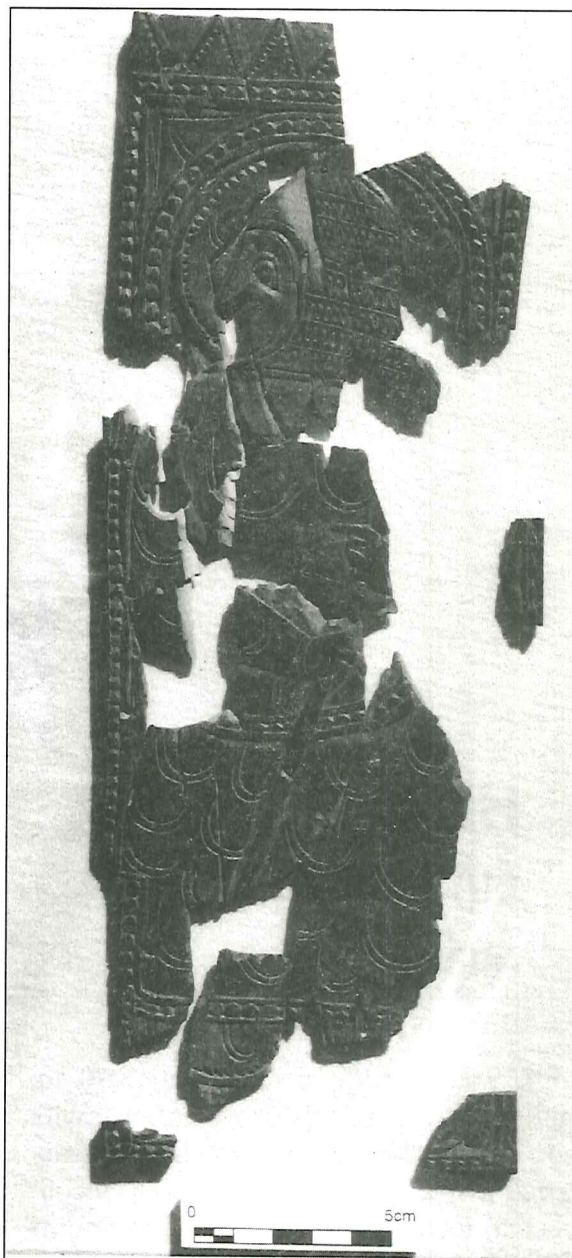
5. The excavator and project director are very grateful to Judy Logan, the project conservator, for taking time away from her responsibilities at the Canadian Conservation Institute to work on this project. She supervised conservation and reconstruction of the fresco fragments, and arranged for analysis of the pigments back at CCI by Iain

Wainwright, Alison Murray, and Marie-Claude Corbeil.

6. Judy Logan of the Canadian Conservation Institute very kindly arranged for the identification of this material as ivory. The analysis was carried out by Gregory Young of the CCI.

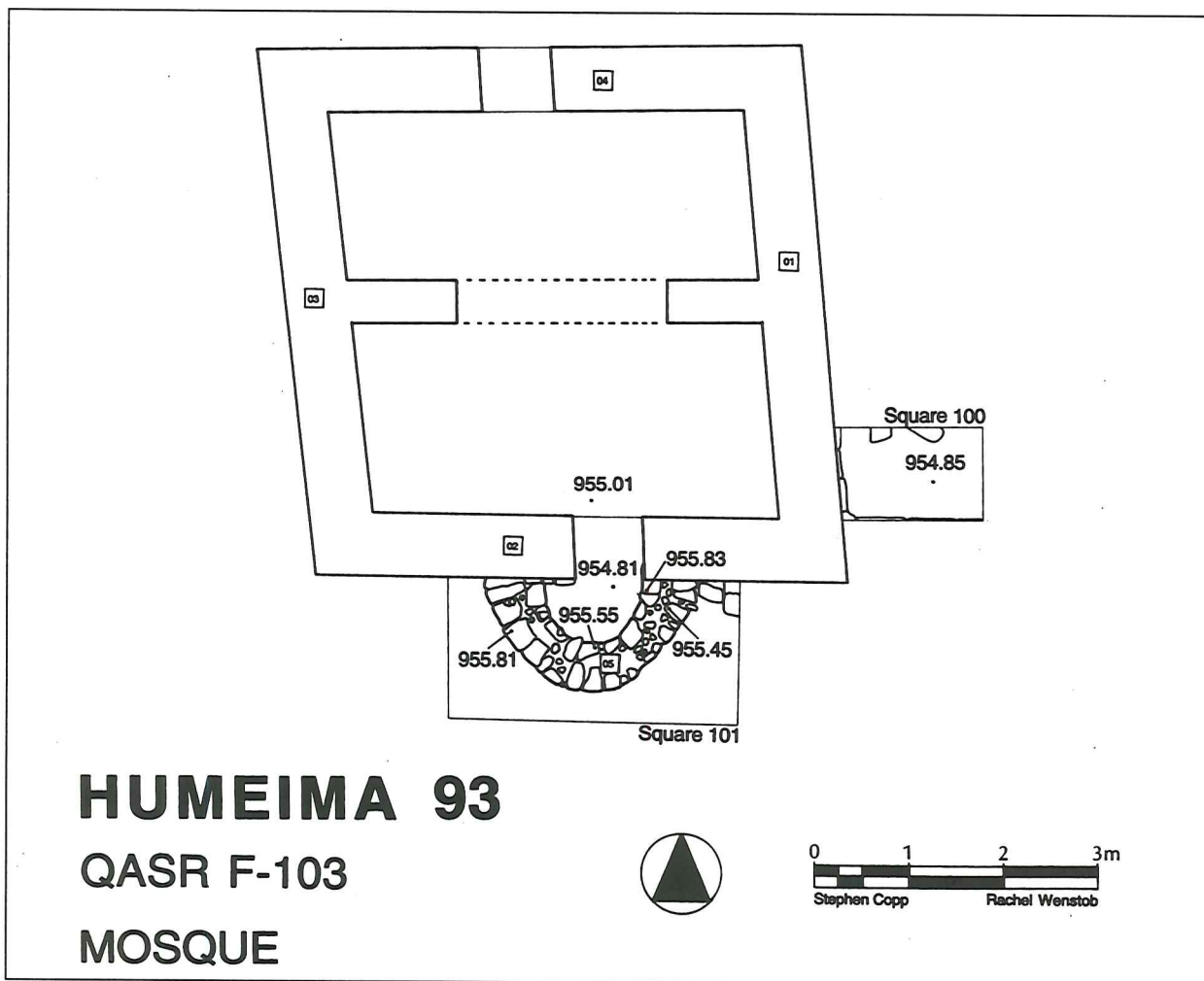
possibly burned by the fire which destroyed the room significant fragments with portions of at least two figured scenes were recovered. The rest will be retrieved in 1995 when systematic excavation of the entire section is scheduled. The ivory, which was worked in sheets of surprising size (W 0.10, L 0.30, Th 0.003-0.005 m), varies in colour from a very light brown to a rich brown-grey. Enough has been assembled to identify two panels. One, which appears to be about 60% extant, is carved in relief with a scene representing a male figure standing frontal, his head in profile, wearing military head-gear; he holds a long rod or oar vertically, in front of himself with both hands (Fig. 28). The designs were carved carefully into the panel, in a vigorous, rounded style, the highest surfaces of the figures at the same level as the surrounding frame, which was richly-decorated with geometric motifs. The other panel, of which only fragments were recovered, carried a relief scene in the same style involving fish and winged figures. After the restoration, many small fragments remained which could not be assigned a place. Small holes drilled into the panels and iron pieces found in context (some still affixed) suggest that they were once assembled by iron fasteners, possibly to form a box with angle irons at the corners standing on out-turned feet, or that they were veneer panels of furniture. This is clearly a luxury item, one that general stylistic considerations suggest should be eastern (Persian, Indian, Chinese or Sogdian) in origin, although no close parallels have been identified as yet.

The search for a mosque in the southeast section of the *qaṣr*—a projection seemingly oriented towards Makka—was a major focus of the 1993 season but was unsuccessful. In the final days of the season, however, the foundation walls of a modern structure less than 10 m outside the southeast corner of the *qaṣr* were explored. It



28. F103: Ivory panel (Photo: J. P. Oleson).

turned out that this structure had been built with reused ancient blocks on top of ancient walls. The characteristic *miḥrāb* niche was exposed below a modern door in the south wall of the building, indicating it was a mosque (Fig. 29). Foundation pottery, foundation levels, and construction technique all proved that it belonged to the early eighth century, contemporary with the *qaṣr*. The mosque is small and rhomboidal in plan



29. F103: Plan of Abbasid Mosque.

(north wall L 5.75 m; east wall 5.70 m; south wall 5.64 m; west wall 5.60 m), with two interior springings which originally carried a single east/west arch (now reconstructed) to support the roof. The *mihrāb* is oriented almost due south. Although true *qibla* orientation would be a bit more easterly, the orientation of Early Islamic mosques is often only approximate. Up to three courses of the original walls remain and are, like those of the *qaṣr*, composed of trimmed and rough stone blocks, some with Nabataean dressing, boulders, and cobbles. If there was any original ornamentation, none remains now. The original doorway (now blocked) can be seen clearly in the north wall. Since the entire interior was cleared out when the structure was rebuilt

in the present century, no Abbasid occupation deposits likely survive there.

Among the other regional Early Islamic *qusūr*, extra-mural mosques are found at al-Ḥallābāt (Bisheh 1982: 133-43), Jabal Says (Creswell 1979: 472-77), al-Qaṣṭal (Carlier and Morin 1986), ar-Risha (Helms 1990), Umm al-Walid (Bujard 1992), and Khān az-Zabīb (King *et al.* 1983: 399-405). While the mosque Ḥumayma is less than half their average dimensions, it shares many features with that at Jabal Says, for example: square shape, exterior *mihrāb* articulation, single-arched vaulting (though the Jabal Says mosque is wide enough to require a relieving pier) and entry opposite the *qibla* (though the Jabal Says mosque also has one at the east). In addition to com-

paring the Ḥumayma *qaṣr* to other regional Early Islamic examples with respect to plan, building traditions, and later Abbasid palaces, it will also be important to explore why the mosques of some *quṣūr* are located within them and others conceived as a separate structure.⁷

Conclusions and Future Plans

The 1993 campaign of the Ḥumayma Excavation Project was particularly successful. The chronology and design of several major monuments were defined and some splendid works of art unearthed that cast new light on the history and architectural development of this small town. Although there is still a great deal to be learned about the original Nabataean settlement, the water-supply system suggests that it accommodated a significant number of individuals and their flocks. Many tombs and a few walls of this early period have been identified over the past few years, but a major goal of the 1995-1996 seasons remains the identification and excavation of a well-preserved Nabataean house. The Roman and Late Roman periods, in contrast, are now well-documented through excavation of the fort and bath building. Work will continue inside the fort in 1995. The Byzantine period, too, is well-known through three churches, many tombs, and numerous occupation levels in the domestic structures. It is still puzzling, however, to find so

many churches in such a small community. Finally, it is now clear that the Early Islamic period, particularly after the purchase of Ḥumayma by the Abbasid family, was one of intense occupation and a certain degree of prosperity. Literary sources document the long-distance political connections and growing influence of the Abbasid family as they lived in their *qaṣr*, and the remains in the *qaṣr* itself reveal the sophisticated taste and long-distance trading connections of the family. We hope to be able to build on all these accomplishments in the next two excavation seasons.

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7. For example, the use and sensibility of public vs. private spaces; mosques functioning also as

majlis (detached reception hall of a residence).

Appendix: Pottery Plates

The illustration number is followed by bag number; area.trench.locus. The descriptions of the inclusions and voids are as judged with the naked eye, their sizes indicated as: small <1.0mm; medium 1.0-2.0mm; large 2.0-3.0mm; very large >3.0mm.

Fig. 3: B100 ceramics from the fill between the two pavements of the church

1. H93.0063; B100.01P1.06. "Ayla amphora" rim. Wheelmade. Ware: 5YR 7/5 pink; exterior: 7.5YR 7/4 pink; interior: 10YR 8/3 very pale brown. Many small to medium round and subangular white, grey and sand inclusions, some mica flecks; few small round and oval voids. Medium hard.
Parallels and dating: 'Aqaba kilns (Melkawi *et al.* 1994: fig. 10.e, mid-late seventh century AD); Ḥumayma ('Amr and Schick forthcoming: fig. 3.1, mid-seventh century AD).
2. H92.0494; B100.F.13. "Ayla amphora" rim. Wheelmade. Ware: 7.5YR 8/4 pink; exterior and interior: 2.5Y 8/2 white. Many small to medium round and subangular white, mineral red and sand inclusions, some mica flecks; few small round and oval voids. Medium hard.
Parallels and dating: 'Aqaba kilns (Melkawi *et al.* 1994: fig. 10.e, mid-late seventh century AD); Ḥumayma ('Amr and Schick forthcoming: fig. 3.1, mid-seventh century AD).
3. H93.0063; B100.01P1.06. "Ayla amphora" base. Wheelmade. Ware and upper interior: 2.5YR 6/6 light red; exterior and lower interior: 10YR 8/3 very pale brown. Many small to medium round and subangular white, mineral red and sand inclusions, some mica flecks; few small round and oval voids. Medium hard.
Parallels and dating: 'Aqaba kilns (Melkawi *et al.* 1994: fig. 10.m, mid-late seventh century AD); Ḥumayma ('Amr and Schick forthcoming: fig. 3.1, mid-seventh century AD).

Fig. 7: E116 ceramics

1. H93.0333; E116.A.16. Bowl. Wheelmade. Ware, interior and exterior: 2.5YR 6/8 light red; exterior upper rim down to just beyond the carination: 2.5Y 8/4 pale yellow. Many sand inclusions; few small round and angular voids. Hard.
Parallel and dating: Petra (Stucky *et al.* 1994: fig. 16.I, early second century AD).
2. H93.0285; E116.B.24. Cooking pot. Wheelmade. Ware and interior: 10R 5.5/8 light red/red; thin uneven slip exterior: 5YR 7/4 pink - 10YR 8/2 white. Numerous sand, few small to medium round and subangular white (calcite?) inclusions; some small to medium round and angular voids. Hard.
Parallel and dating: Petra (Stucky *et al.* 1994: fig. 16.B, early second century AD).
3. H93.0202; E116.A.10. Jar. Wheelmade. Ware and interior: 2.5YR 6/6 light red; slip exterior: 7.5 YR 8/4 pink. Many small to medium round and angular white, grey and brown inclusions; few small round voids. Hard.
Dating: Mid-fourth century AD.
4. H93.0218; E116.A.10. Cooking pot. Wheelmade. Ware and interior: 7.5YR 6/4 light brown; exterior (probably due to firing conditions rather than a slip): 10YR 5/1 grey. Many small to medium round and angular white, grey and brown inclusions; few small round voids. Hard.
Parallels and dating: Qaṣr Bshir (Parker 1987: fig. 94.33, L. Rom. IV/E. Byz. I: AD 284-363); Petra (Gerber and Fellmann Brogli 1995: fig. 2.1, AD 363 destruction level).
5. H93.0218; E116.A.10. Cooking pot with "pinched" handle. Wheelmade. Ware, interior and exterior: patches of 2.5YR 6/6 light red and 5YR 5/1 grey. Many small to medium round and angular white, grey and brown inclusions; few small round voids. Hard.
Parallel and dating: Petra (Gerber and Fellmann Brogli 1995: fig. 2.3, AD 363 destruction level).

6. H93.0202; E116.A.10. Small jar. Wheelmade. Ware, and interior: 5YR 7/6 reddish yellow; thin slip exterior: 5YR 6/1 light grey. Many small to medium round and angular white, grey and brown inclusions; few small round voids. Medium hard.
Dating: Mid-fourth century AD.
7. H93.0218; E116.A.10. Omphalos base. Wheelmade. Ware and interior: 2.5YR 5.5/6 light red/red; exterior base: 5YR 6.5/1 light grey, exterior body: 5YR 7/3.5 pink. Many small to medium round and angular white, grey and brown inclusions; few small round voids. Hard.
Dating: Mid-fourth century AD.
8. H93.0246; E116.A.13. Bowl rim. Wheelmade. Ware: 2.5YR 6/6 light red; thick core: 10YR 6/3 pale brown; interior: 10YR 8/2 white, interior paint: 10R 5/8 red; exterior: equal patches of 2.5YR 6/6 light red and 10YR 8/2 white. Numerous small sand inclusions; few small to medium round and subangular voids. Hard.
Dating: Fourth century AD (?).

Fig. 11: A117 ceramics

1. H93.0063; A117.-.00C. Bowl rim. Wheelmade. Ware, interior and exterior: 2.5YR 6/8 light red. Some sand inclusions. Hard.
Parallel and dating: Petra (Stucky *et al.* 1994: fig. 10.10, late first century BC - early first century AD; Schmid 1995: fig. 2.10, early first century AD).
2. H93.0063; A117.-.00C. Bowl rim. Wheelmade. Ware, interior and exterior: 2.5YR 6/6 light red; exterior rim (band down to carination): 2.5YR 6/2 pale red; wide core: N5/0 grey. Some sand inclusions. Hard.
Parallel and dating: Petra (Stucky *et al.* 1994: fig. 10.11, mid-first century AD).

Fig. 13: C101 storage jar from Room 4

H93.0264/0261/0266; C101.04.28 (sherds also from loci 26 and 29). Four handled storage jar, three handles equidistant, the fourth off-side at 1:2; shallow incised wavy line decoration on the shoulder; approximately two-thirds recovered. Handmade body and wheelmade rim. Ware: 5YR 4/2 dark reddish grey, very wide core: 10R 5/8 red; rim exterior: 2.5YR 6/7 light red, uneven slip dripping down in streaks covering exterior body, at the top mainly: 5YR 5.5/2 pinkish grey/reddish grey, bottom exterior mainly: 5YR 6.5/3 pink/light reddish brown; interior: 5YR 6.5/3 pink/light reddish brown and N6.5/0 light grey where the surface is raised. Numerous small to medium round and angular sand inclusions, some small round and subangular white (calcite?) inclusions; few small round and subangular voids. Smoothed exterior, rough sandy interior. Medium hard.
Parallel and dating: Mount Nebo (Bagatti 1985: fig. 16.7, 531-early seventh century). See 'Amr and Schick forthcoming for evidence of mid-seventh century AD date.

Fig. 19: F102 ceramics

1. H93.0099.01; F102.06.26. Bowl, wet smoothed. Handmade. Ware, exterior and interior: uneven firing 2.5YR 6/6 light red - 5YR 7/4 pink; very wide core: N4/0 dark grey. Many small to large round and angular lime and sand inclusions, many chaff impressions. Many small to medium round and angular voids. Soft.
Dating: 19th-early 20th century.
2. H93.0178; F102.08.01. Bowl, punctate decoration at rim. Handmade. Ware: 5YR 6/4 light reddish brown, wide core: 5YR 5/1 grey; exterior: 2.5 YR 6/6 light red with patches of 2.5YR 5/2 weak red; interior: 2.5YR 5/3 weak red/reddish brown. Some small round and angular mineral grey inclusions, numerous chaff impressions. Soft.
Dating: 19th-early 20th century.

3. H93.0038; F102.06.24A. Strainer neck jug. Ware and interior: 2.5YR 5/6 red; exterior: 10YR 8/1.5 white. Many small to medium round and subangular mineral white and sand inclusions giving rough texture, many mica flakes; some small to medium round and angular voids. Medium soft.
Parallels and dating: 'Aqaba kilns (Melkawi *et al.* 1994: fig. 10.c, mid-late seventh century AD); Humayma ('Amr and Schick forthcoming: fig. 10.30, mid-seventh century AD).
4. H93.0253; F102.07.10. Pilgrim flask rim, burnt and badly encrusted. Wheelmade. Original colour seems to have been "greenish cream". Abundant sand inclusions.
Parallel and dating: 'Aqaba kilns (Melkawi *et al.* 1994: fig. 10.j, mid-late seventh century AD).
5. H93.0252; F102.07.10. Cooking pot, approximately one quarter recovered, burnt base. Wheelmade. Ware and interior: 10R 5/7 red; slip exterior: 2.5YR 4/2 weak red. Abundant sand inclusions giving rough texture; few small round and oval voids. Hard.
Dating: Seventh century AD.
6. H93.0377; F102.07.12. Cooking pot, burnt at exterior base only. Wheelmade. Ware and interior: 10R 5/7 red; exterior: 10R 4.5/6 red - 10R 4.5/4 weak red. Some small round and subangular white, abundant sand inclusions, some mica flecks; few small round and subangular voids. Medium hard.
Dating: Seventh century AD.
7. H93.0078; F102.01.46. Painted bowl rim. Wheelmade. Ware and interior: 10R 5/8 red; exterior: 10R 6/6 light red, patch of 7.5YR 8/4 pink on exterior rim; interior paint: 10R 4/3 weak red. Few small round white inclusions; rare small round voids. Hard.
Parallels and dating: Petra (Stucky *et al.* 1994: fig. 11.20, second century AD; Schmid 1995: fig. 9, phase 3, second century AD).
8. H93.0414; F102.07.15. Wheelmade. Cup. Ware, interior and exterior: 10R 6/8 light red, rim exterior: 10R 6/4 pale red; thin discontinuous core: N5/0 grey. Some small round white, many small sand inclusions; few small round voids. Medium hard.
Dating: Early second century AD.
9. H93.0414; F102.07.15. Cooking pot rim. Wheelmade. Ware and interior: 10R 6/6 light red; thin slip exterior: 2.5YR 5/2 weak red. Some small round white, many small sand inclusions; few small round and subangular voids. Hard.
Dating: Early second century AD.

Fig. 25: F103 ceramics

1. H93.0123; F103.99.05. Bowl/cup. Handmade. Ware and interior: 2.5YR 6/6 light red, very wide core: 5YR 4/1 dark grey; exterior: 7.5YR 6/2 pinkish grey with patches of N4/0 dark grey. Some small to medium round and angular mineral white inclusions, some small chaff impressions; some small to medium round and angular voids. Medium hard.
Dating: Late Islamic.
2. H93.0008; F103.98.02. Large bowl, combed decoration exterior. Wheelmade. Ware: 10R 6/6 light red; exterior: 10YR 8/5 very pale brown/yellow; interior: 7.5YR 7/6 reddish yellow. Numerous small sand inclusions; few small to medium round and subangular voids. Hard.
Parallel and dating: 'Aqaba (Whitcomb 1989: fig. 2.h, AD 750-800). Mid-eighth century AD.
3. H93.0197; F103.78.06. Small jar. Wheelmade. Ware, interior and exterior: 2.5Y 8/2 white. Many small sand and few mineral red inclusions; few small to medium round and subangular voids. Medium soft.
Dating: Mid-eighth century AD.

4. H93.0197; F103.78.06. Large bowl, combed decoration at exterior rim. Wheelmade. Ware, interior and exterior: 2.5Y 8/2 white. Many small sand inclusions; few small to medium round and subangular voids. Medium soft.
Parallel and dating: 'Aqaba (Whitcomb 1989: fig. 2.a, AD 750-800). Mid-eighth century AD.
5. H93.0197; F103.78.06. Cooking pot, some burning on the exterior. Wheelmade. Ware and interior: 2.5YR 4/5 reddish brown/red; exterior: 2.5YR 4/6 red. Many small sand, some small to medium round and angular white (calcite ?) inclusions; some small to medium round and angular voids. Medium hard.
Dating: Mid-eighth century AD.
6. H92.0495; F103.03.02. Deep bowl. Wheelmade. Ware, exterior and interior: 10YR 8/2 white. Some small round and angular mineral white and grey inclusions, some mica flecks; some small round and subangular voids. Medium soft.
Parallel and dating: 'Aqaba (Whitcomb 1989: fig. 4.n, AD 750-800). Mid-eighth century AD.
7. H92.0495; F103.03.02. Jug, partially burnt. Ware: 5YR 6.5/8 reddish yellow; thick slip exterior and interior: 5YR 7.5/1 white/light grey. Many sand inclusions; some small round and subangular voids. Medium hard.
Parallel and dating: 'Aqaba (Whitcomb 1989: fig. 5.b, AD 750-800). Mid-eighth century AD.

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