GADARA - UMM QEIS
PRELIMINARY REPORT ON THE 1991 AND 1992 SEASONS[1]

by
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Research activities on behalf of the German Archaeological Institute, Berlin, finished work at the Monumental Gate (area XV) and the nearby hippodrome (area XXVIII), continued work at the Western Gate (area VII) and started at the southwestern corner of the acropolis hill (area XLII). The aim of the work of the German Protestant Institute for Archaeology, Amman moved towards the water-system (area XXXIX and XLI), the city's fortifications (area XL) and the domestic quarters of the city (area XLIV).

The Monumental Gate (Area XV)

The excavation of the Monumental Gate west of Gadara was finished in 1991/1992. In a limited area west of the southern gateway, all the elements had been left in their original position (Pl. I, 1) in order to give visitors an idea of the site before the excavation had started, and most of all to protect the southernmost pier from total collapse. The pier is preserved to a height of nearly 4m but is badly damaged by earlier military activities.

Documentation and classification of all moulded elements coming from the Monumental Gate (253 of limestone, 230 of basalt) was accomplished. Some supplementary and hitherto unknown architectural elements had been found or newly identified in 1991 and 1992: the top of the gate building consisted of three superimposed crowning profiles, while socle profiles were missing. Like all the other decorative elements of the building they were made of limestone. Apparently the attic of the Roman triumphal arch was transformed into a multistory crowning cornice and lost its original function: most probably no inscriptions and no statues —integral parts of a Roman arch— existed. Thus in addition to the segmented barrel vault of the main gateway, features of regional traditions were strong in this building. Furthermore the crowning profile of the flanking towers —a wide projecting *sima* of basalt— was identified. All the main details of the monument are by now known.

An additional trench was made outside, to the west, to solve the problems of differing levels between the gate itself and the adjacent western terrain. This is nowadays sloping down very steeply and there would be no possibility for chariots to go either down or up. It turned out that not only was the street pavement robbed out, but the whole situation west of the Monumental Gate was changed. A sort of a rough pavement was found at a distance of only 15m from the gate at a level of nearly 4.5m below its threshold, which was made of rubble stones and laid directly onto virgin soil.

In favour of a huge open air water reservoir, the natural depression west of the Monumental Gate (still called 'el-birkeh' today)[2] was presumably dug out and deepened to this level. At the same time the pavement of the Roman street as well as its foundations must have been taken away. Most probably the ramp which was once going up to the gate was constructed completely of earth and is therefore completely eroded. So nothing remained of the original situation here.

All this must have happened earlier than the collapse of the Monumental Gate

1. For the reports of the previous seasons see Weber 1987; 1988; 1991b; Weber and Hoffmann 1990; Bol *et al.* 1990.

2. Schumacher (1890: 76) erroneously used "el Birket" for the Monumental Gate. Cf. Wagner-Lux *et al.* 1978: 143.

caused by the earthquake of the eighth century AD (Russell 1985: 37ff, 49). Fallen elements from the monument were found on the ground of the presumed water reservoir which by the centuries filled up with eroding earth to the present level.

The Hippodrome (Area XXVIII) (Fig. 1)

Excavations were made at the eastern and western ends of the hippodrome, in addition to the trenches of 1987 and 1989 at its northern side. As at Gerasa, curved ends and entrance buildings (*sphendonai* and *carceres*) were suggested by previous scholars (Wagner-Lux *et al.* 1978; Weber 1989: Plan p. 18f, no. 22), but could not be confirmed at Gadara. In the east, the southern wall of the tribune building stops at a certain point, as does the northern wall, which extends only a few metres to the east (Pl. I, 2). From the podium of the northern tribune building only some remains of a socle profile could be found. This profile diverges at its eastern end from the main axis to the south as at Gerasa (Ostrasz 1989: Fig. 3), but here the diversion is much more accentuated (6° in Gadara and 2° in Gerasa). This feature is well known from Roman circuses and fits the generally obliquely placed *carceres*, the building for the starting boxes. However, no remains of such an arrangement, which was at least planned, exist in Gadara. On the contrary there is increasing evidence that the Gadarene hippodrome was never finished, perhaps for lack of funds. Even the very solid and deep foundation walls do not continue to the east.

The turning point should thus have been next to the Monumental Gate at the western end of the hippodrome. Excavations here again proved that the walls of the tribune building stop at a certain point and a *sphendone* was neither built nor had the foundation walls been prepared. The preserved length of the unfinished hippodrome is 283m, that is 23m less than at Gerasa.

Next to the westernmost walls of the hippodrome three tombs were excavated in 1992 (Pl. II, 1). Most important is the southern one (tomb 1) which contained the skeletons of five persons, three adults and two children, and associated objects. The most interesting finds were two small glass vessels, which may date the tombs to the fourth/fifth century AD (Pl. II, 2) (see Weber 1988: 350, Pl. LII, 2). Possibly the hippodrome was abandoned only one century after its construction was begun in the early third century AD. Pottery from the foundation trenches date the hippodrome to this period.

The Western City Gate (Area VII) (Figs. 1 and 2)

After first soundings in 1987 and 1989, the central part and the northern tower of the western city gate (already identified by Weber 1990: 219f), and the adjoining city wall were excavated in 1991 and 1992 (Pl. III, 1). Only one course and very little of a second one remained but the plan of the whole building is quite clear. The central gateway, which once probably was vaulted, has a width of 4.55m and is 3.65m deep. The doorcase with a simple profile to the western exterior causes the narrowing of the street again to about 4m (Pl. III, 2). Pivots behind the doorcase prove that the gate could be closed with doors. The flanking rectangular tower measures 9.1 x 8.6m. Its walls are 2.2m wide except for the inner one (looking to the gateway), which is only 1.5m. The whole building is constructed of reused material, basalt blocks for the walls and predominantly limestone for the fill. All this belonged to richly decorated buildings: there are, for example, bases, column shafts, pilasters with bases and capitals. The city wall on the other hand is constructed of presumably newly cut limestone ashlar blocks. It is 3.3m wide and goes straight to the north. Column shafts and cornices of basalt were used here only for the founda-

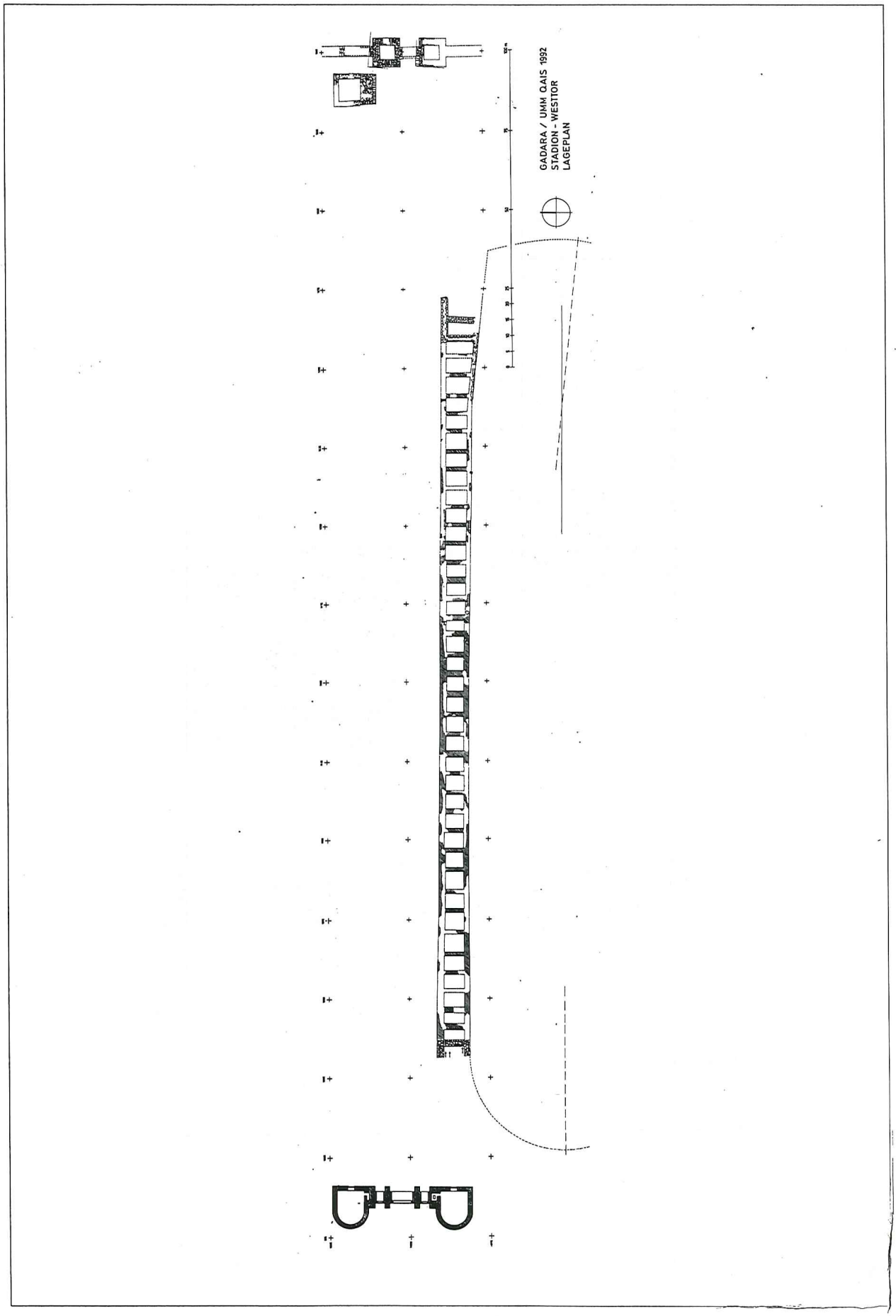


Fig. 1. Area of the Monumental Gate, the Hippodrome and the Western Gate.

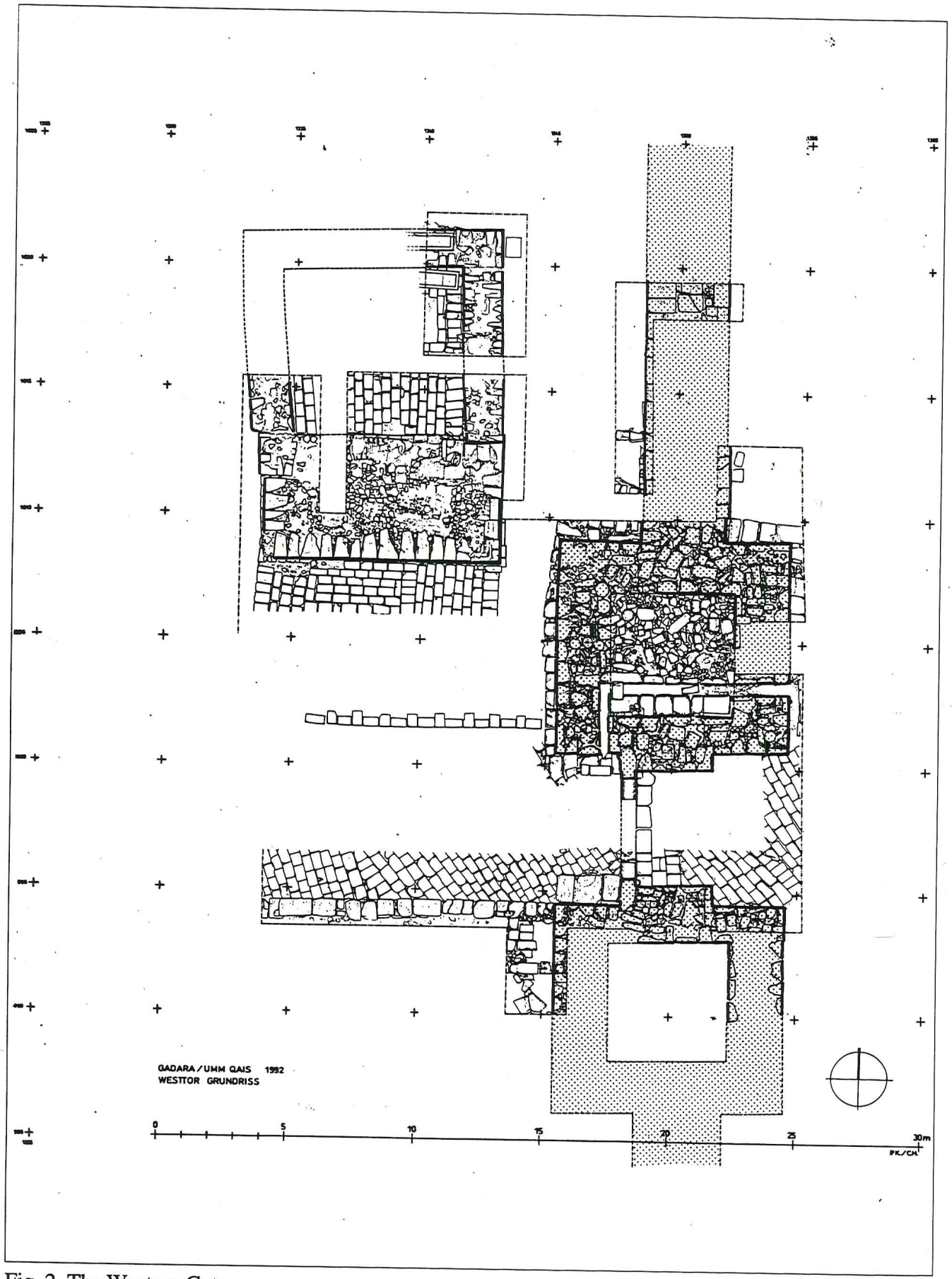


Fig. 2. The Western Gate.

tion wall.

The foundations of the gate are formed by reused older foundations. These older foundations are made of limestone blocks, and in some parts they are much bigger than the gate tower itself, and differ in orientation as well as in their levels. Only one of these older foundations can be seen in full size, northwest of the northern tower at a distance of 2.3m are the remains of a very solid foundation of basalt (9.25m x 4.95m, Fig. 2; Pl. IV, 1). The building was presumably destroyed when the gate was erected. The foundations go down 3.3m but only one course above ground level is left. Two blocks at the eastern side indicate that there might have been steps going around the building. The basalt blocks are very well cut and there is good reason to think that part of the architectural elements reused for the gate and some others scattered around the area belonged to this building. Though no tomb was found it could well have been a tomb building, such as a mausoleum, perhaps with two stories. The other foundations may have served for similar structures. The Western Gate thus was set into a densely used necropolis. The only direct evidence in this regard is given by two sarcophagi standing at the backside of the stepped building (Pl. IV, 2).

The road passing the gate is 7.65m wide. It is diagonally paved with basalt blocks and lined by orthogonally paved sidewalks (Pl. III, 1, 2). These and part of the street were moved off for the construction of the gate (some blocks of the pavement were used for fill inside the tower) and thus must be of an earlier date.

The well preserved basalt pavement rises at the middle of the street (Pl. III, 1, a great part of the missing blocks were pushed away by modern bulldozing) and one may suggest that a drain was running underneath. This however could not be proved by a test trench; the rising must have been caused by an earthquake. Instead of building a drain the street was inclined to the north and waste water ran off to the west along the northern sidewalk. To avoid banked-up water in front of the threshold, a channel was conducted through the northern tower, entering at its eastern side and coming out at the northwest corner.

Some evidence for dating the different structures comes only from the foundation fills, from the rather thin layers underneath the street and the refilling of the sidewalk around the tower. Pottery of the Late Hellenistic and Early Imperial periods is common here, the latest material gives a date of around the middle of the first century AD for the tomb buildings as well as for the pavement. The gate and the city wall, however, were built at a much later date, probably in the early fourth century AD, at the same time when the city wall of Gerasa was constructed (Seigne 1992: 341; 1986: 42ff).

The City Wall and the Residential Quarter near Khaled al-Gindi (Area XLII)

In 1989, south of the city wall along the acropolis hill, a trench into a dense dump area produced a big quantity of homogeneous Hellenistic pottery and small finds. It presumably came from a nearby residential quarter on top of the hill. A location for new excavations was determined in 1991 by a short survey that brought numerous sherds from the Late Hellenistic/Early Roman period, mostly from an area southeast of modern Umm Qeis, called Khaled al-Gindi. This was strengthened by similar material found from freshly dug robbers' holes in the neighbouring Bait Melkawi II, which in addition showed the remains of several mosaic floors. An upstanding *trikonchos* building of fine limestone ashlar masonry that was integrated into the late Ottoman farmstead caught further attention (Pl. V, 1) (cf. Wagner-Lux *et al.* 1978: 137). After cleaning the area in 1991 excavation started here in 1992.

The area investigated was densely settled in all periods and deposits to a depth of 1.7-2m from bedrock go from the first century AD to modern times. Not all of the different building phases can yet be separated and dated precisely and because of the limited area, there is no complete housing unit nor is the layout of the quarter known. But it is evident that the quarter was used as a residential area, probably connected with some workshops. The orientation of this quarter is inclined about 20° to the southwest in respect to the orthogonal layout of the Ottoman settlement on top of the hill which most probably reflects the layout in antiquity.

The level of the modern courtyard of the Bait Melkawi II is very close to that of an ancient mosaic floor which is badly destroyed but whose pattern is still easily recognizable (Pl. V, 2). It is very close to examples excavated in Dohaleh near Irbid (Sari 1990: 6, Fig. 1) and in Ma'in (Piccirillo 1986: 73, Fig. 62). Both of them date to the late sixth century AD and this could be the date of the mosaic floor in Gadara as well. The walls belonging to the mosaic are of very poor quality and there is no connection to the nearby *trikonchos* structure. This is founded directly onto the bedrock and no dating material could be found since the whole area was used down to the bedrock in modern times. Thus the dating and identification of the *trikonchos* will only be possible by an analysis of the connecting architecture which is still going on. There is, however, evidence that it might be connected to neighbouring structures of the Roman Imperial period rather than to the remains of later buildings on higher levels which belong to the Mamluk period.

A few metres south of these structures a section of the city wall was excavated in 1992 (Fig. 3; Pl. VI, 1) which turned out to belong to a rather early and hitherto unknown building period at Gadara. Seven courses of the city wall which is founded directly onto the bedrock are preserved, five of them belonging to the original construction with a width of 2.7m at the bottom and 2.2m at the top (Fig. 4; Pl. VI, 2). The slightly protruding socle of the wall is three courses high, a great part of which was covered originally by fill. The limestone ashlar blocks are smoothly dressed and with narrow joints set most exactly into slim layers of lime mortar.

By the pottery finds from a substantial, well stratified layer outside the city wall the structure may be dated to the first half of the second century BC, that is to the Seleucid period of Gadara after the conquest of Antiochos III (Polybios *Hist.* V: 69-70; cf. Kuhnen 1990: 34). A destruction layer is datable to the beginning of the first century BC, which might be caused by the Hasmonaean king Alexander Jannaeus as reported by Flavius Josephus (*Ant. Jud.* XII: 356; cf. Kuhnen 1990: 35).

In addition to this in 1992, a test trench was opened at the northeastern corner of the city (area X) where the late Ottoman farmstead of Bait Melkawi used part of the ancient fortification as a foundation wall (Pl. VIII, 1). Two corners on the 14m long wall point to a strong tower at this exposed and endangered corner of the city wall. It was here set onto the bedrock too but no dating material could be found. Probably in Roman times a very solid reinforcement on newly constructed high foundations was built adjacent to the tower and all the strata outside the tower were dug away for it. The excellent building technique of the tower is characterized in the lower parts of the wall by stones which are beveled at all edges and therefore build triangular joints (Fig. 4). This technique surpasses that of the city wall at Bait Melkawi II, and perhaps is of even earlier date than there.

Thus for the first time there is some detailed information on the early history of Gadara which is connected to monumental architecture. Soon after the Seleucids had

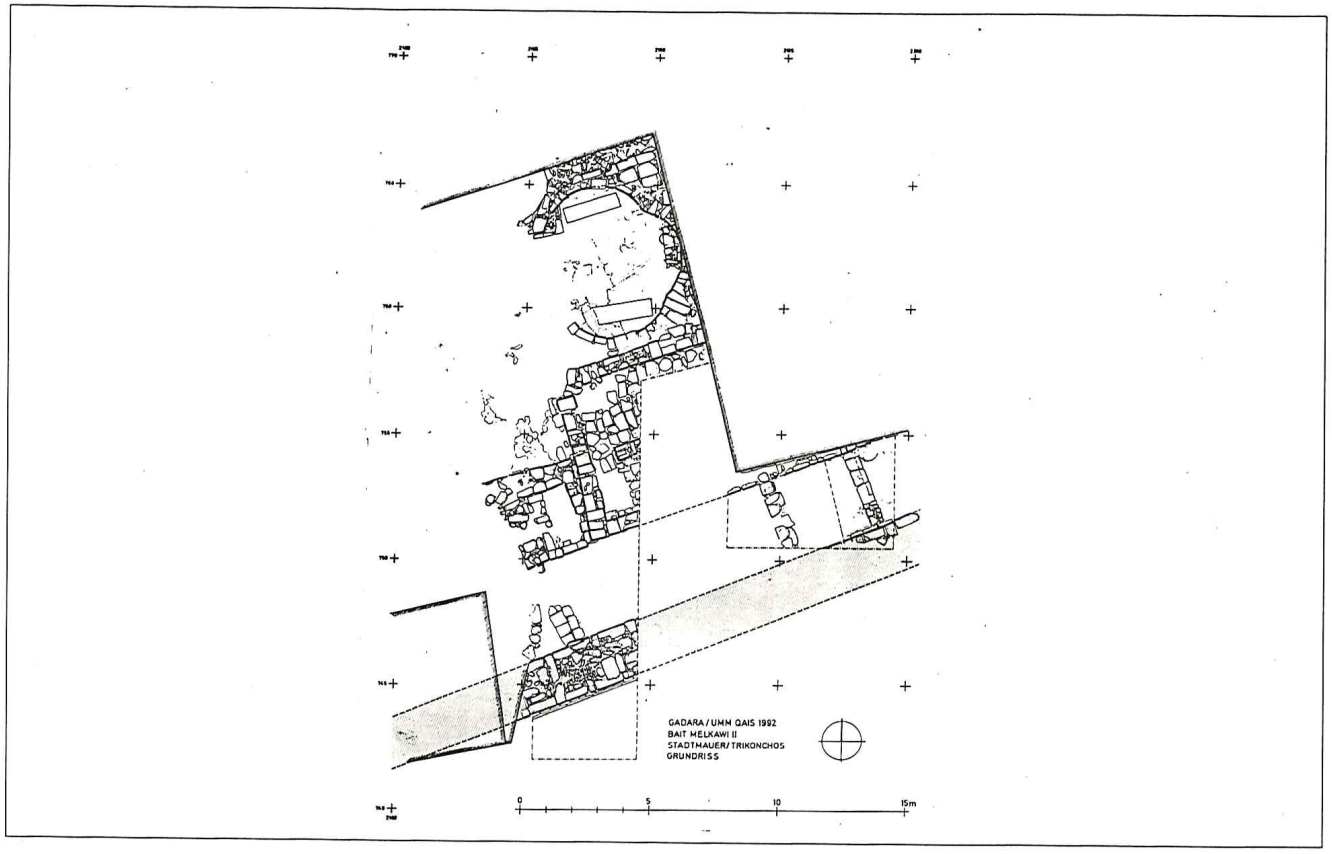


Fig. 3. Area XLII with the city wall and the *trikonchos* building.

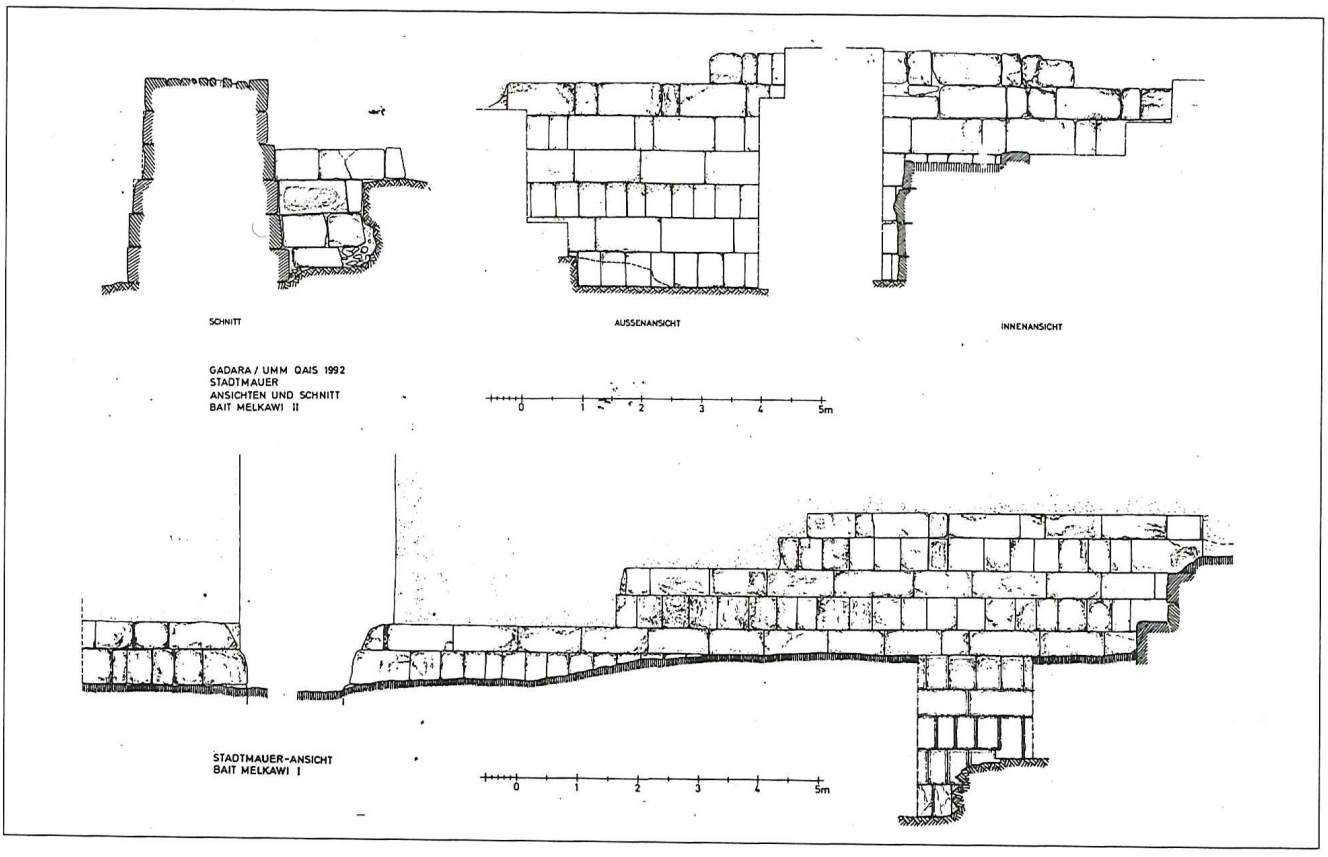


Fig. 4. The city wall in area XLII and under Bait Melkawi, details.

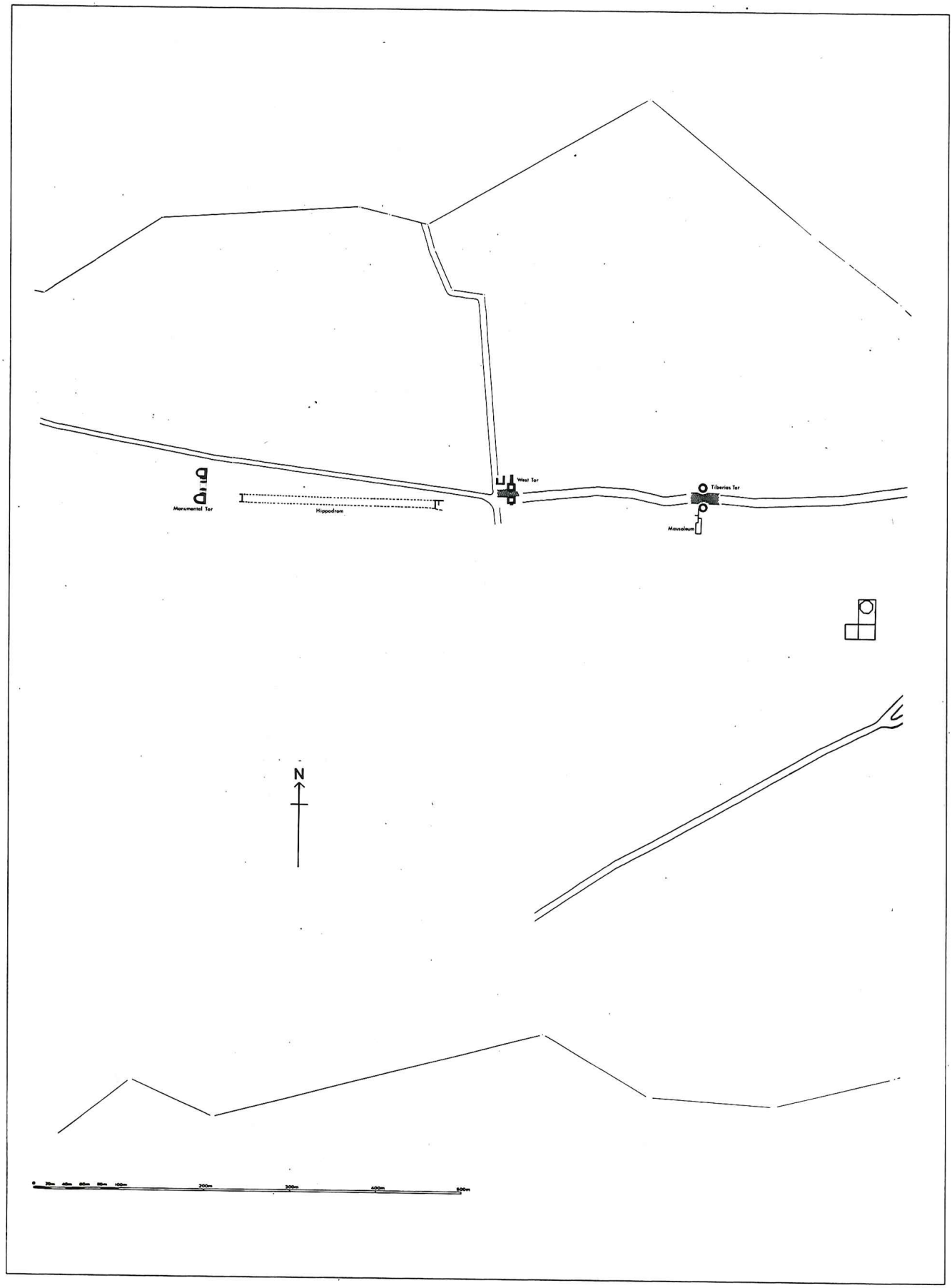
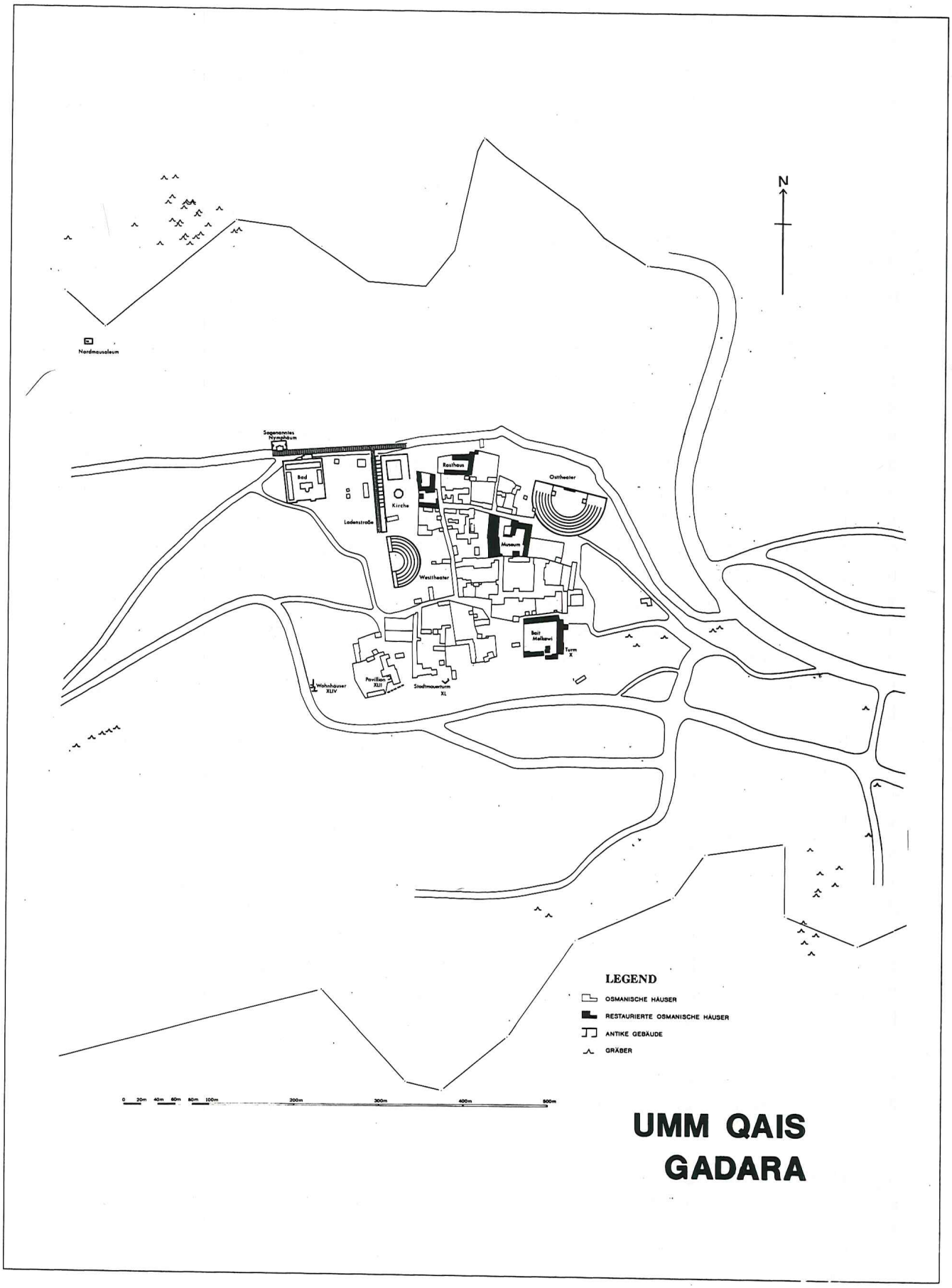


Fig. 5. General plan of Umm Qeis.


N
Nordmausoleum
Sogenanntes Nymphäum
Bad
Kirche
Ladenstraße
Rasthaus
Osttheater
Museum
Westtheater
Beit Mallawi
Turm X
Pavillon XLII
Wohnhäuser XLIV
Stadtmauerturm XL
LEGEND
OSMANISCHE HÄUSER
RESTAURIERTE OSMANISCHE HÄUSER
ANTIKE GEBÄUDE
GRÄBER
0 20m 40m 60m 80m 100m 200m 300m 400m 500m
UMM QAIS
GADARA

taken the town from the Ptolemies, they reinforced its fortification and enlarged the city as the wall going down the southeastern slope presumably did not belong to the settlement's nucleus on top the acropolis hill.

(A.H.)

The City Wall and the Oldest Remains (Area XL) (Fig. 5)

In area XL we started working at another tower in 1992, which was most probably connected with the city wall, although the wall line was not found during the season. All stones seem to have been robbed out at the northern side of the tower, where a large and deep pit was filled up only in the last thirty years. The pit itself and the stone-robbing might date back to the end of the last century, when the Ottoman houses close to the tower were built. The tower was arrow-shaped (Fig. 6), and might connect with the city wall at an odd angle.[3] It was very probably built in the second century BC, and was used for vernacular purposes later in the first century (see Kerner, in press). The tower was exposed to a depth of 2m (6 courses). It has arrow-slits and is built in headers-stretchers (Pl. VII, 2) without mortar.[4] Presumably this tower belongs to the same stage of the city wall as the remains in area XLII.

In 1989 some metres south of this tower (see the preceding section), a test trench was dug into the slope at the cut of the modern road. Seven layers of mainly burned debris without any architectural remains were excavated. However, pottery, glass, terracotta and stamped amphora handles, all in surprisingly good condition, were found. The pottery from the lower levels dates clearly back to the third century BC, which is therefore the oldest material found in Umm Qeis. It includes imported wares coming probably from Egypt (Greenish glazed ware) and Greece (West-slope ware) and only in the upper layers some Eastern Terra Sigillata was found.

Vernacular Architecture and Domestic Quarters (Area XLIV)

In area XLIV work started in 1992 at a cut caused by the modern road. The main feature was a large terrace wall of 10m length and 4m high, which supported the terrace to the north and also formed the rear wall of the rooms to the south (Fig. 7). The terracing of slopes for living quarters is widely used in Hellenistic and Roman times.[5] The terracing wall (M 1, M 4) and the walls M 2, M 7, M 10 and M 11 are all built on bedrock, which also creates the floor of the rooms (Pl. VIII, 1). The walls were plastered and the plaster was painted with geometrical designs in at least two colours. Due to the short period of the season we could not uncover an entire house plan, which will be the aim for the next season. Finds in the debris proved that similar elaborate decoration can be expected from occupation further up the slope. The general direction of the terracing wall and the rooms is parallel to the street system in the main area of Gadara (Fig. 5: *decumanus maximus*). The southern half of the trench (west of M 2) showed several changes in use: the room became an open area with a *ṭabun* (Pl. VIII, 2) and was later built over by less carefully made walls (M 3). Under the whole area south of M 1 is a large cis-

3. The city wall in Umm Qais seems to have lots of changes in direction, which has parallels at Samaria: Kuhnen 1990: 44, as well as in Western Asiatic Hellenistic towns like Ephesos: Benndorf 1899: 15ff; Kiel 1912: 183ff.
4. The excavation was continued by the German Archaeological Institute (DAI) in spring 1993 and it turned out that the tower is 6m high and founded on bedrock.
5. As it is known from places like Caesarea, Knidos (Love 1970: 152; 1972: 65ff, 397ff), and Ephesos (Vetters 1976: 12ff; 1977: 17ff).

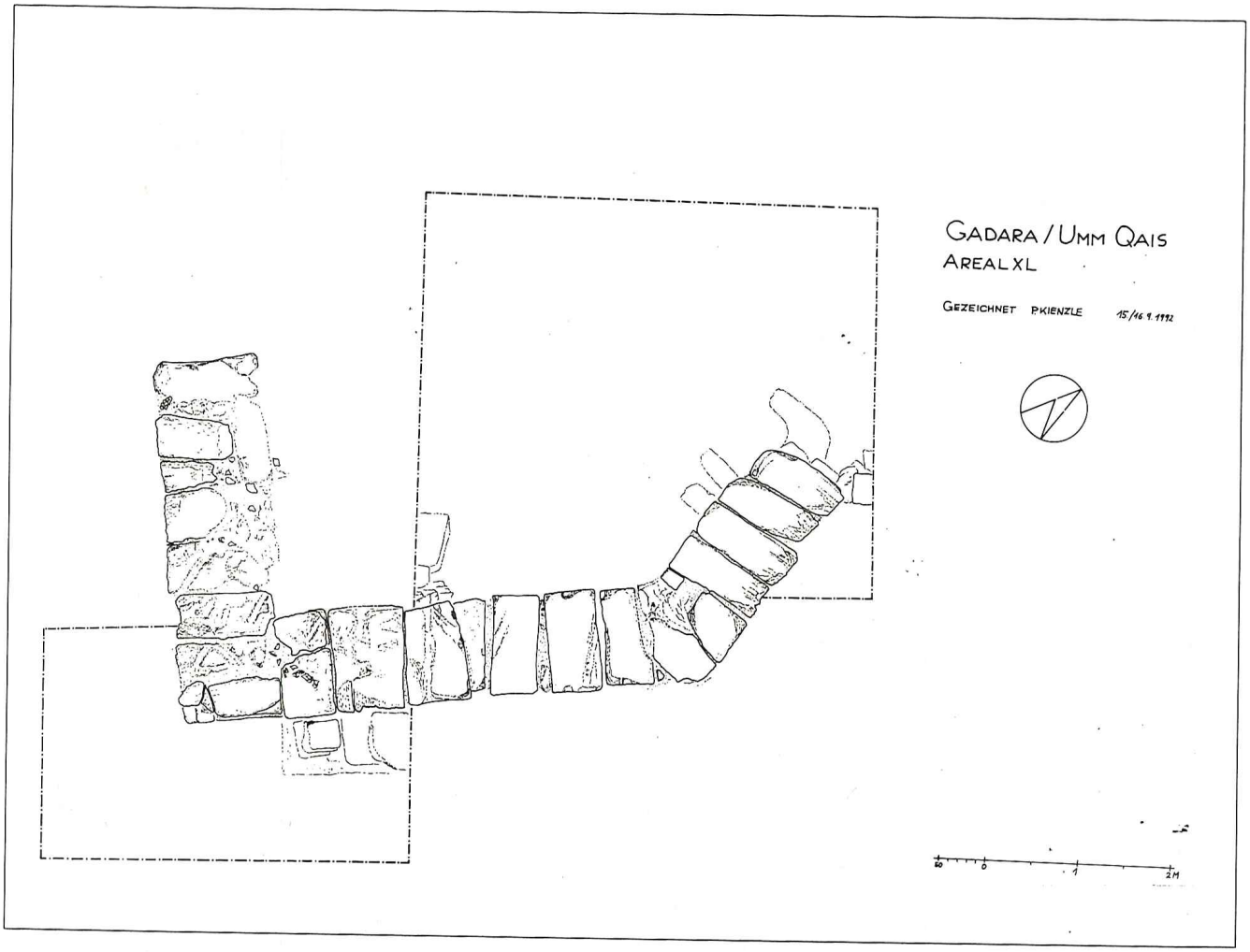


Fig. 6. The tower in area XL.

tern of 14m length and 8m width.

At the upper terrace east of M 1, a corner of the building on the next level was found, again built over by later walls (Pl. IX, 1). The main occupation seems to date back to the first century BC.

The Water System/Qanawat al-Fir'aon

Some work had been done on the water system of Gadara in former years (Weber 1991a: 127; 1991b: 224ff). Two tunnels exist under the acropolis of Gadara (Fig. 8), which have been under examination in 1991 and 1992. The main tunnel, called Qanawat al-Fir'aon, is 380m long, up to 2.50m high and between 0.80 and 1.50m wide. The course of the ceiling generally follows the layers of flint, which are much harder than the limestone. The floor is very uneven, partly not finished and certainly not levelled —as proved by the fact that the eastern end (the probable entrance in the hill) is 60cm lower than the western end (the probable exit). Oil lamp holes are cut in the walls at different heights with widely varying distances between them. The course of the tunnel is extremely curved and bent, which cannot be explained by either geological reasons (for the course of the stone would have led straight from entrance to exit), nor by technological reasons such as water-flow or construction mistakes. The single parts of the tunnel might have been built starting from the several entrances, which appear at widely differing distances. These *putei* are generally narrow shafts, which have steep stairs leading down from the town level. The western exit was exca-

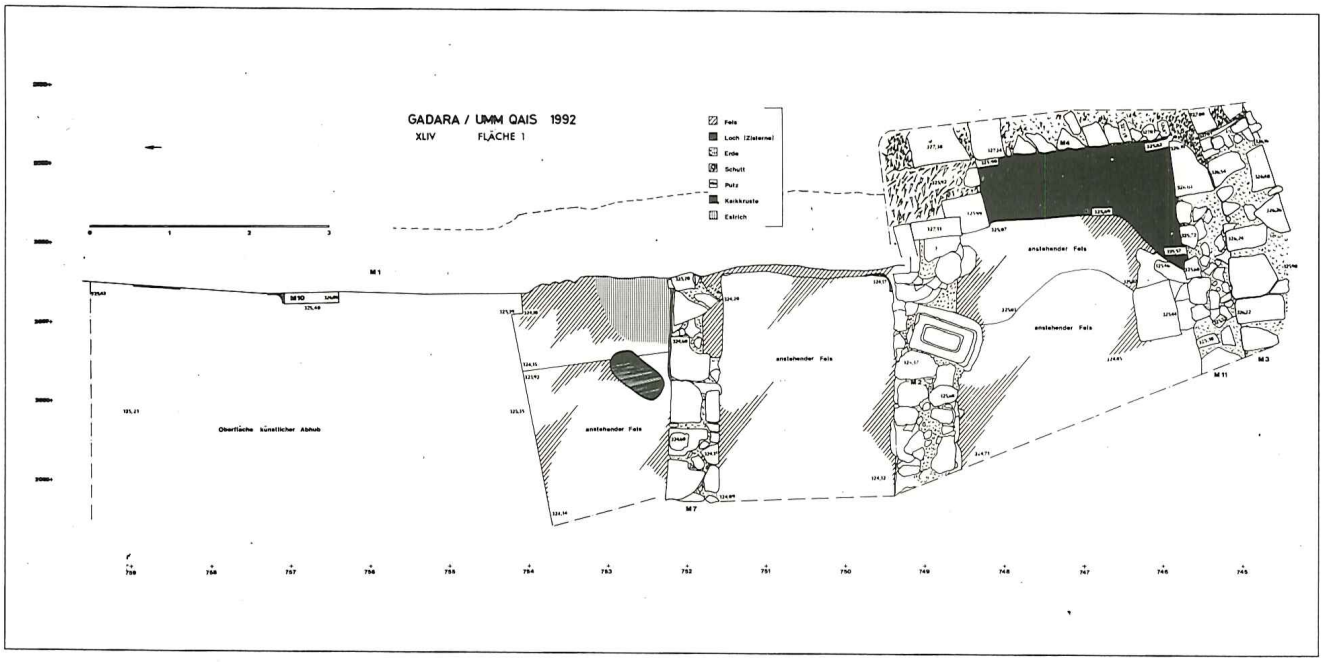


Fig. 7. The southern part of area XLIV.

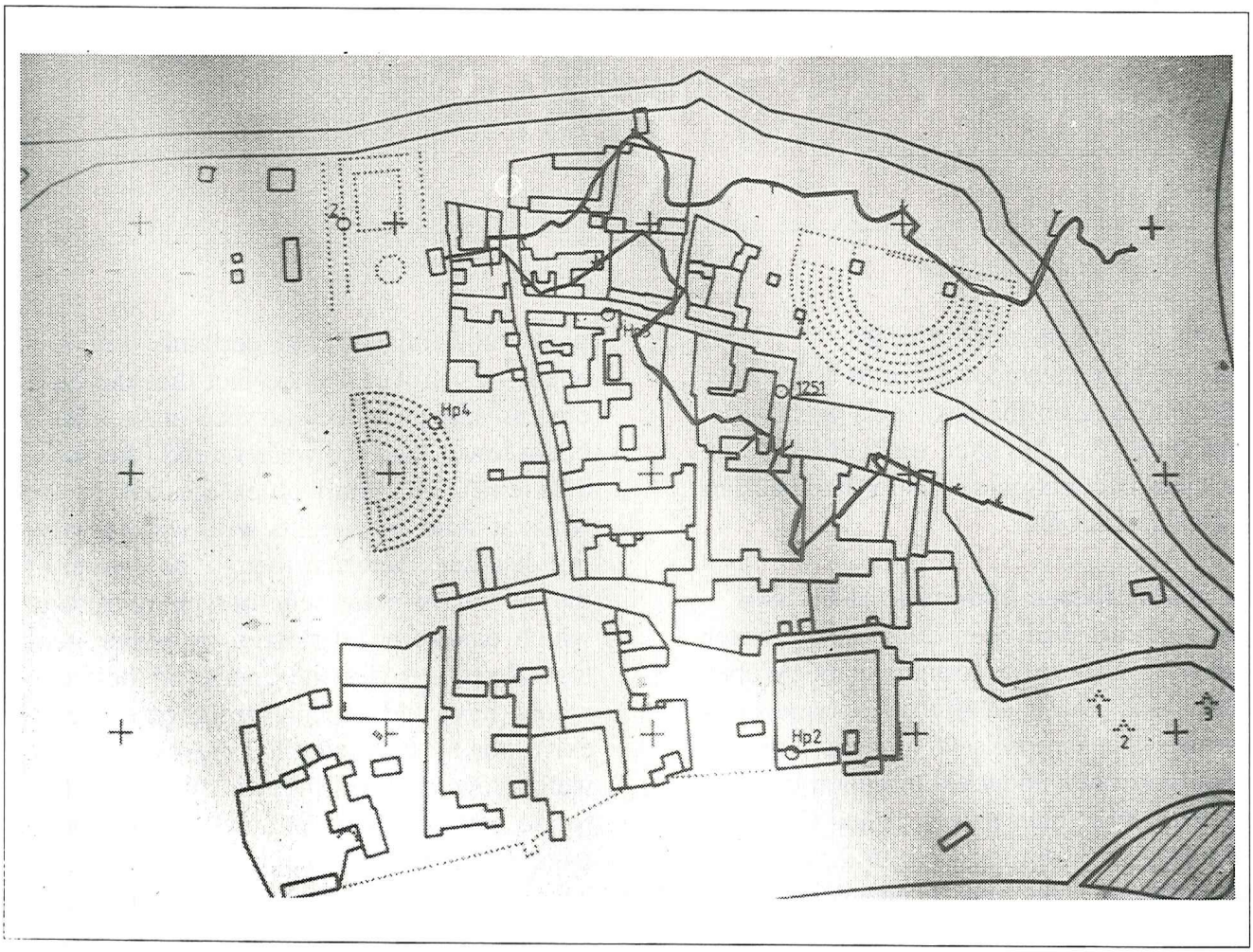


Fig. 8. The tunnels under the acropolis.

vated until it turned out that the recent building on top endangered work in the *qanawat*, and it was decided to remove the modern house. The western end is an exit at the edge of the natural hill. A carefully hewn entrance with a small tunnel at the bottom of the *qanawat* was revealed. The outer facade is smoothly finished. The system of water distribution from the *qanawat* towards the city needs further clarification, as it is hidden under the modern building.

At the eastern end (the entrance into the hill) the tunnel crosses through a natural cave (Fig. 9) and is narrowed by walls on both sides. The plaster along the walls continues on the natural bedrock for around 50m to the west, were it breaks off completely. Shortly east of the cave the tunnel changes into an open channel, cut out of the bedrock (Pl. IX, 2). This open channel continues for 15m towards the east, all cut into the bedrock and sometimes supported and repaired by walls. The bedrock slopes down at this eastern end of the natural hill. It is not clear yet as to where the tunnel continues, but if it continues eastward, as should be expected from the appearance of another tunnel in the next hill to the east, it has to change its layout again. Thus from the channel leading from the tunnel, the water would have to be carried by aqueduct to the next hill to the east where there is another tunnel. This hypothesis might be strengthened by Schumacher's description of an aqueduct in Umm Qeis (Schumacher 1890: Plan p. 47, 78).

At 300m (from the east), the main tunnel is crossed by another channel. This channel is not yet cleaned nor excavated, therefore exploration was rather difficult and the surveying has not been finished yet. This channel is on a 1.20m lower level than the tunnel. The crossing point showed some signs that the lower channel was covered by large stone slabs, so the upper tunnel would have had an even floor. The channel is around 360m long and follows roughly the course of the main tunnel. The channel is entirely plastered on its floor and at both walls up to 1.20m, and the plaster is stained by water. In parts this channel shows a small conduit in the middle, which is also carefully plastered.

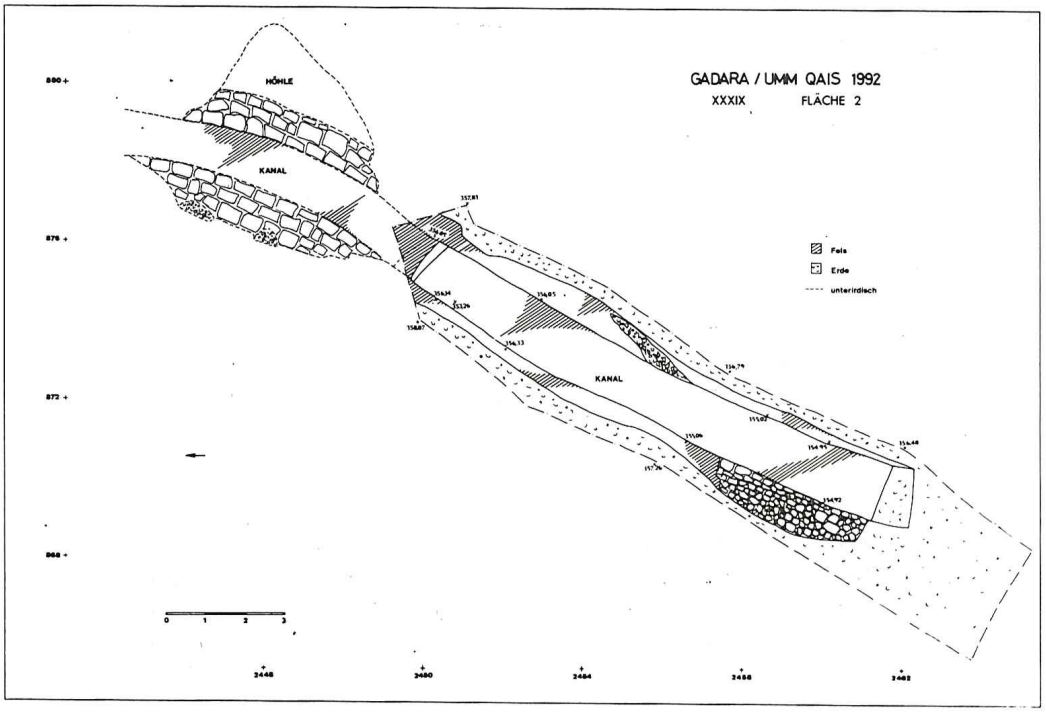


Fig. 9. Plan of the tunnel (east end).

Restoration Work

In 1992 a fourth building of the Ottoman village on the acropolis hill was restored.[6] With funds from the German Ministry of development and aid, and with the help of the German embassy in Amman,[7] the German Protestant Institute was able to restore the house, which directly overlooks the ruins from the east. Therefore the building is very well suited to serve as the office of the Department of Antiquities (Pl. X).

Work was also done at the Western theatre in Umm Qeis. In preparation for future consolidation work the theatre was surveyed and test-trenches outside the facade carried out. The whole building was divided up into areas, which were photographed and then tumble stones were removed into a designated area outside. All moulded stones were photographed, examples drawn and a computer based list of all stones installed. This work was carried out in cooperation by Wajih Karasneh and Munthir Dahash from the Department of Antiquities and the German Protestant Institute (see their report in the Arabic section of this volume).

(S.K.)

Acknowledgements

We have to thank the Department of Antiquities of Jordan and its Director General Dr. Safwan Tell, who kindly granted the excavation permit. The representatives of the Department of Antiquities were Wajih Karasneh and M. Omar Reshaidat. The teams of the German Archaeological Institute consisted in 1991 of S. Bachem, M. Delfs M.A., O. Dussard, M. Gerber, K. Gerken, S. Habash, H.H. Hirth, Dr. E. Hochstein-Mintzel, S. Kerner M.A., C. Körber M.A., Dr. G. Schauerte, Dipl.-Ing. J. v. Sichart and in 1992 of S. Bachem, Dipl.-Ing. C. Bührig, M. Delfs M.A., Dipl.-Ing. Chr. Dettinger, M. Gerber, H.H. Hirth, M. Jung M.A., Dr. Ph. Kenrick, P. Kienzle, E. Knobloch, C. Körber M.A., E. Posselt, Dr. G. Schauerte and Dipl.-Ing. J. v. Sichart. The team of the German Protestant Institute in 1992 included S. Bachem, W. Böser, Th. Ernst, H. Feiler, M. Gerber, A. Gramlich, H.H. Hirth, M. Neuberger, K. Rielly, I. Ruben and D. Vieweger. Plans have also been drawn by Tamara Mehyar and Hugh Barnes. To all of them the authors are very grateful.

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6. In 1988 the Bait Melkawi (now excavation house) and in 1990 the Bait Rusan (now museum) were restored with funds from the German Cultural Aid, administered by the German Embassy in Amman to which we owe deep thanks. In 1991 another house was restored into a rest house by funds from USAID.
7. The work was achieved with the help of Mr. O. Reshaidat, who administered the work in Umm Qeis directly and the labour of all the workmen, who changed a ruin into a working building.

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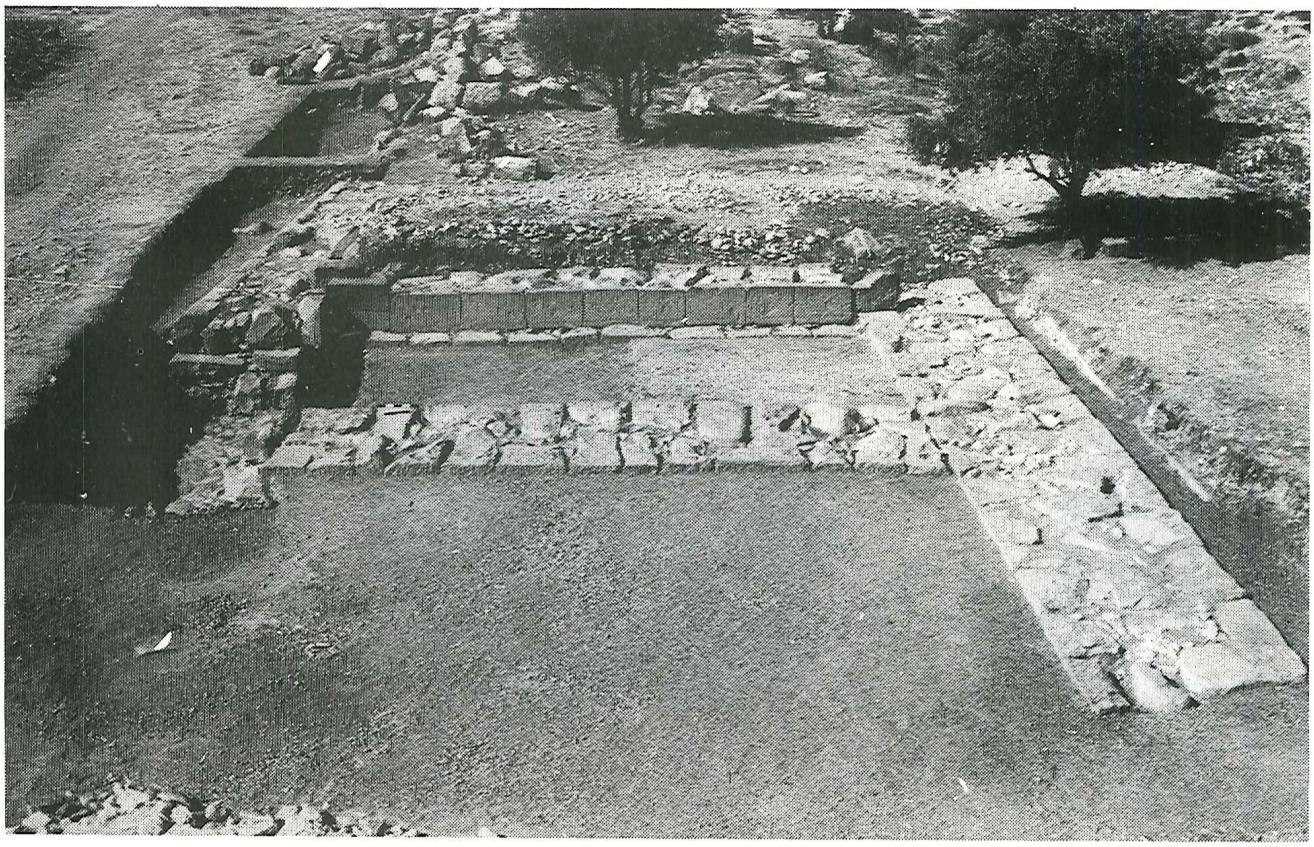
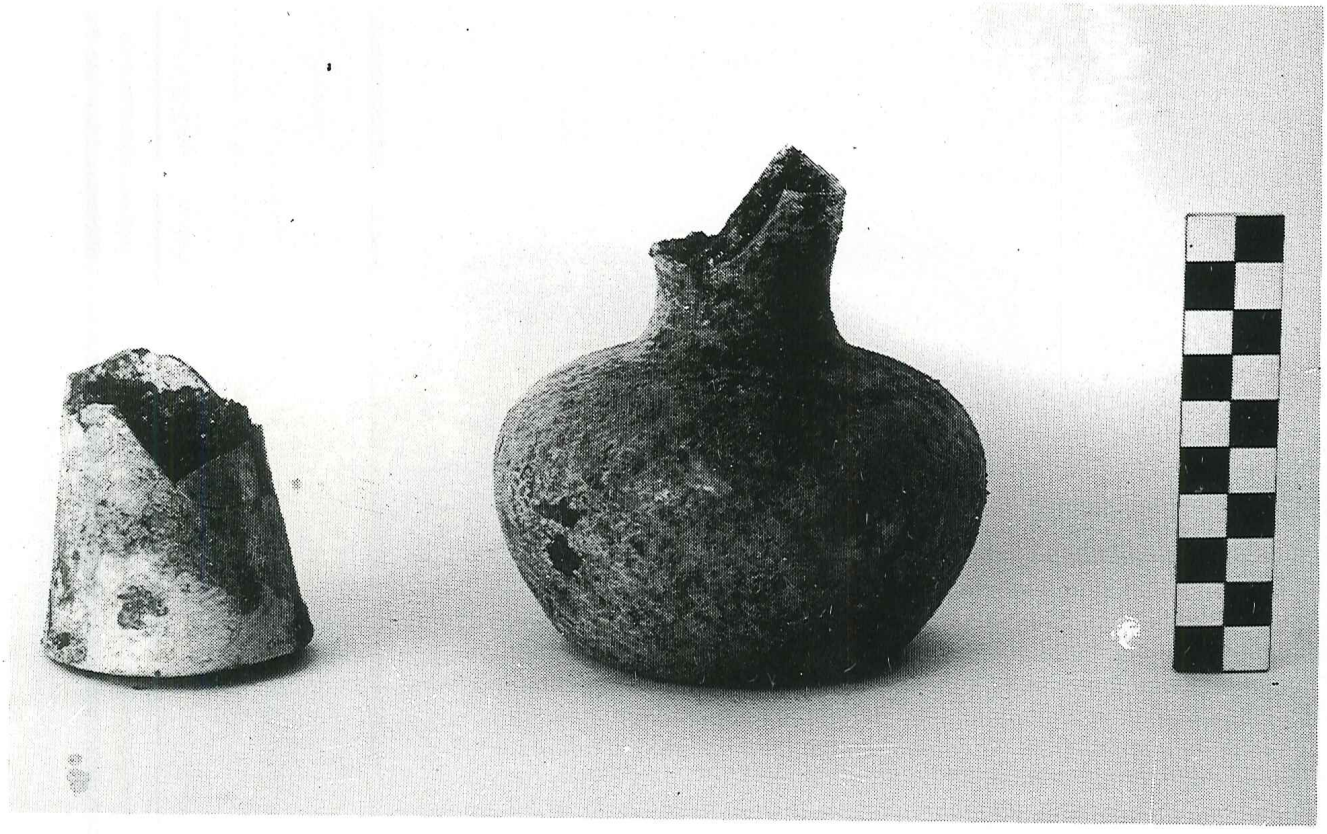
1. Gadara, Monumental Gate, view from the west (UQ 91/7-34).



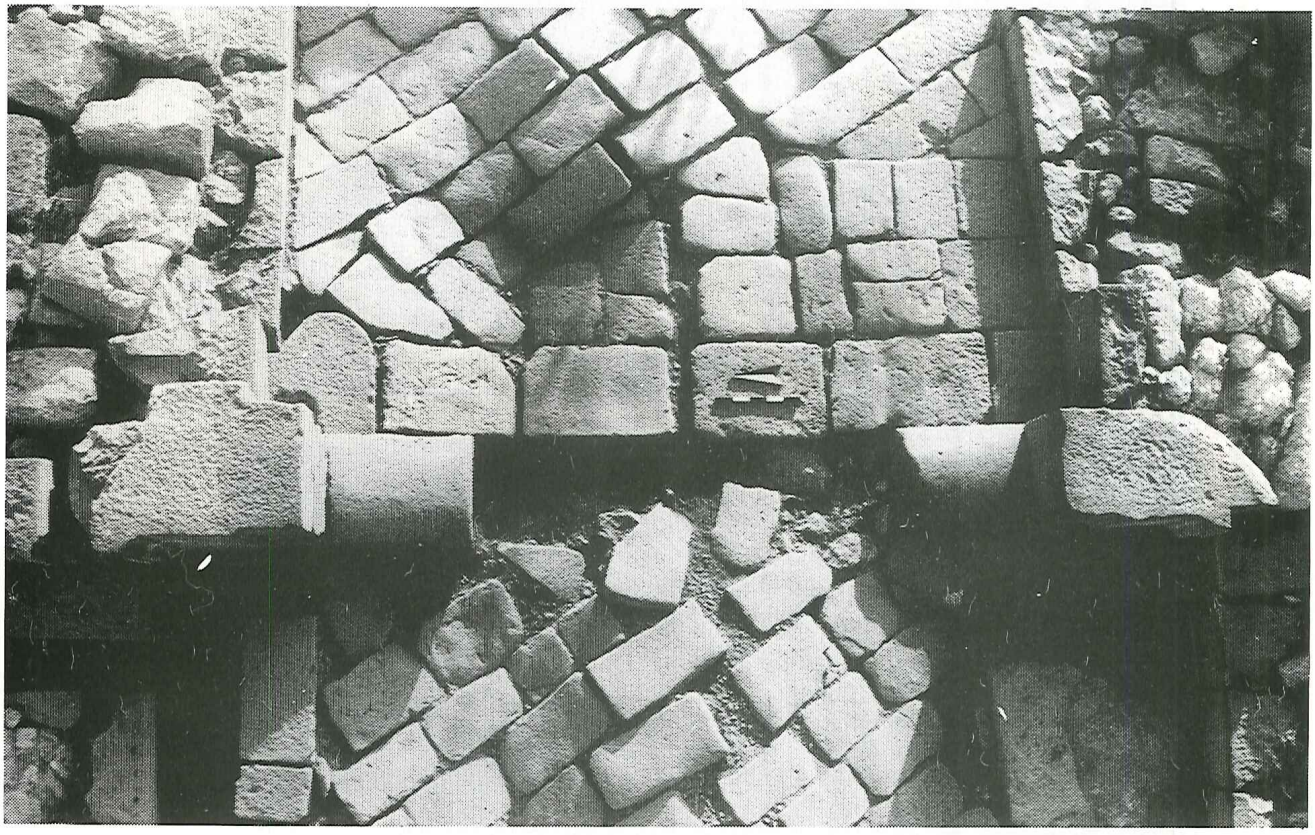
2. Hippodrome, view from the east (UQ 92/29-25).

1. Hippodrome, tombs at the west end, from the west (UQ 92/30-11).

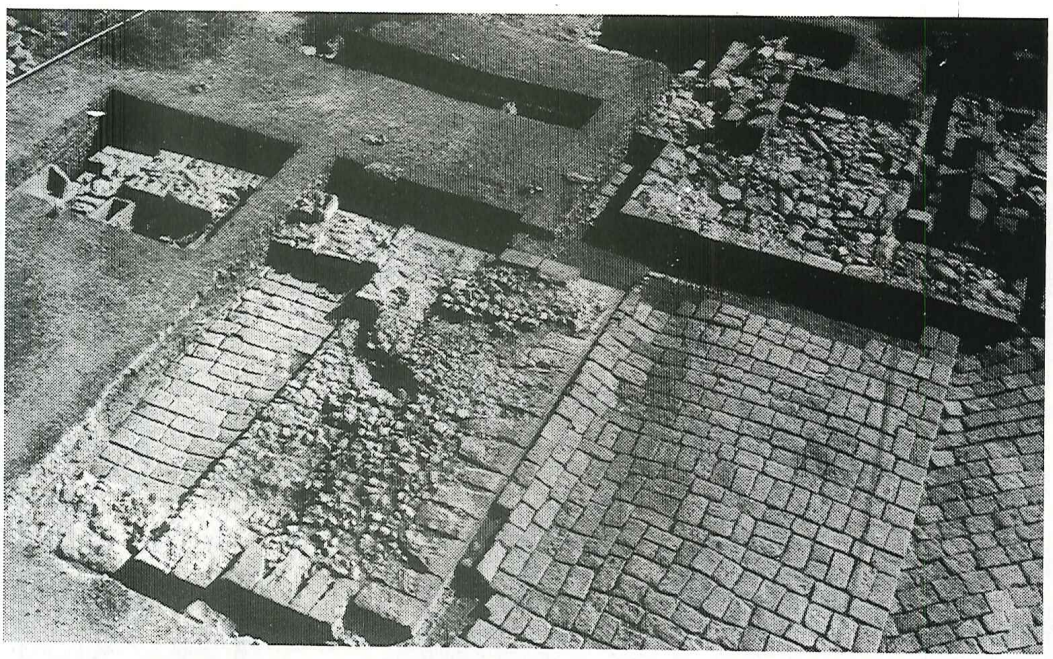


2. Hippodrome, glass vessels from tomb 1 (UQ 92/25-1).

1. Western Gate, view from the northwest (UQ 92/29-9).



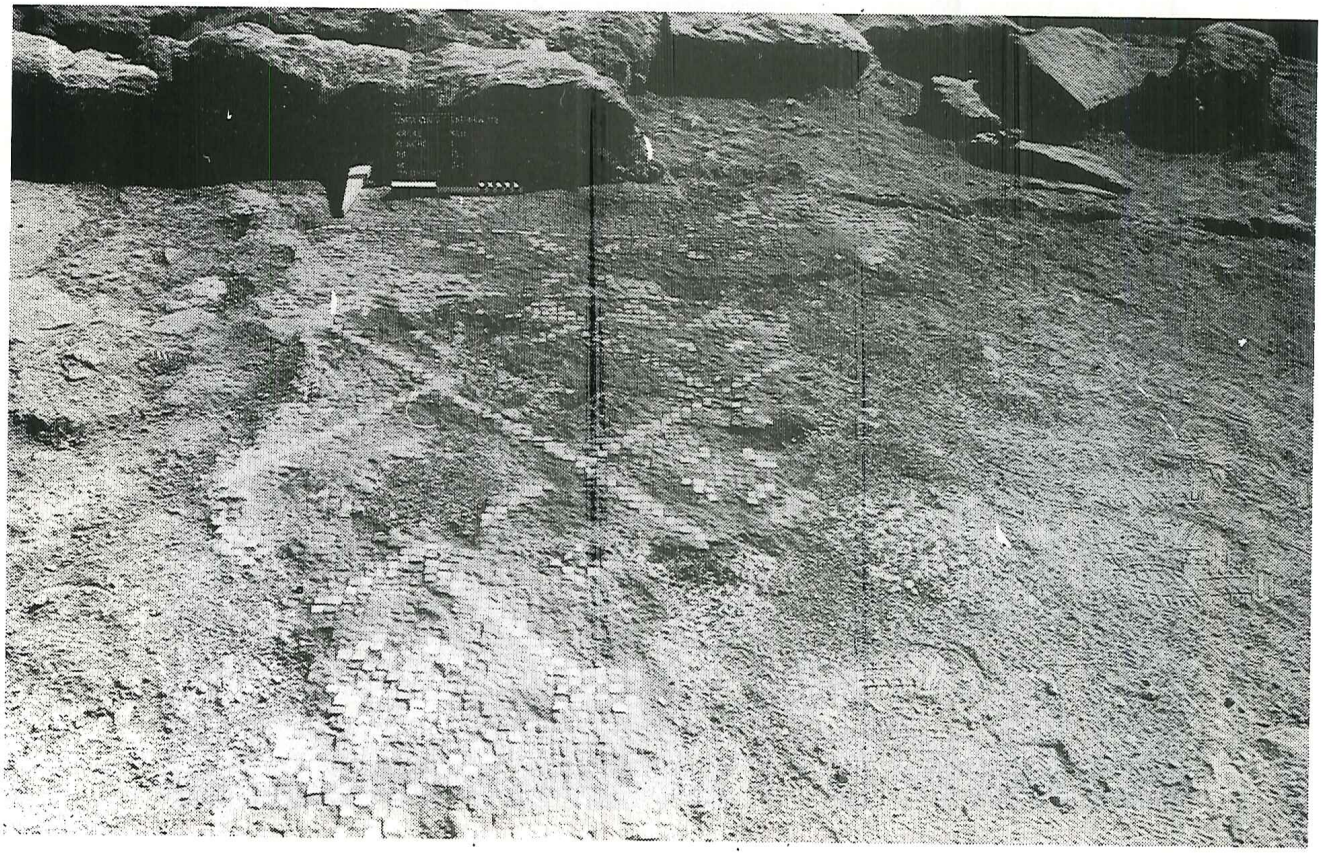
2. Western Gate, detail of the gateway from the west (UQ 92/27-23).



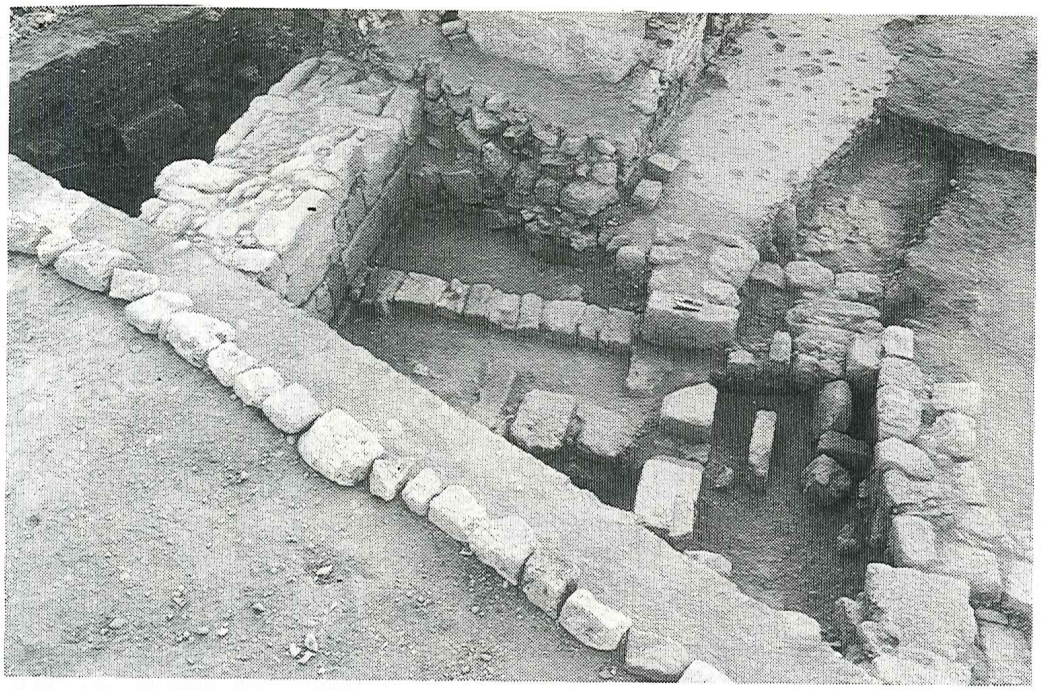
1. Tomb building at the Western Gate, view from the southeast (UQ 92/29-10).

2. Tomb building at the Western Gate, sarcophagi (UQ 92/23-9).

1. Area XLII, *trikonchos* building (UQ 92/26A-10).



2. Area XLII, mosaic floor of the late sixth century AD (UQ 92/5-10).

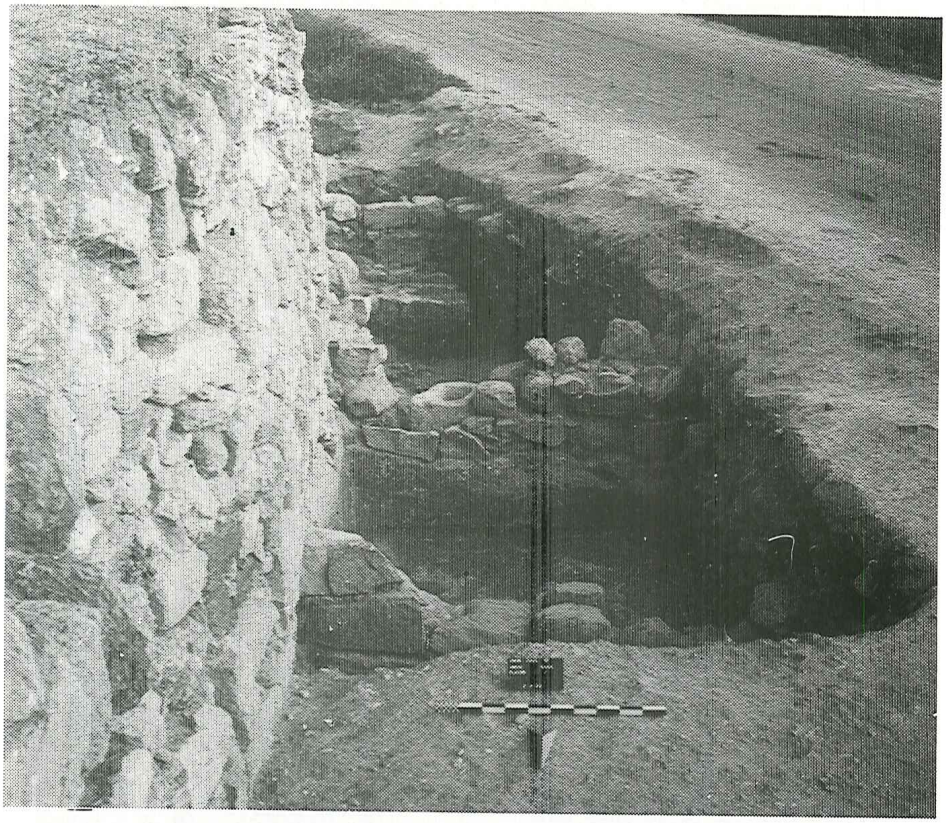


1. Area XLII, city wall, view from the east (UQ 92/26a-12).

2. Area XLII, city wall, detail (UQ 92/14-8).

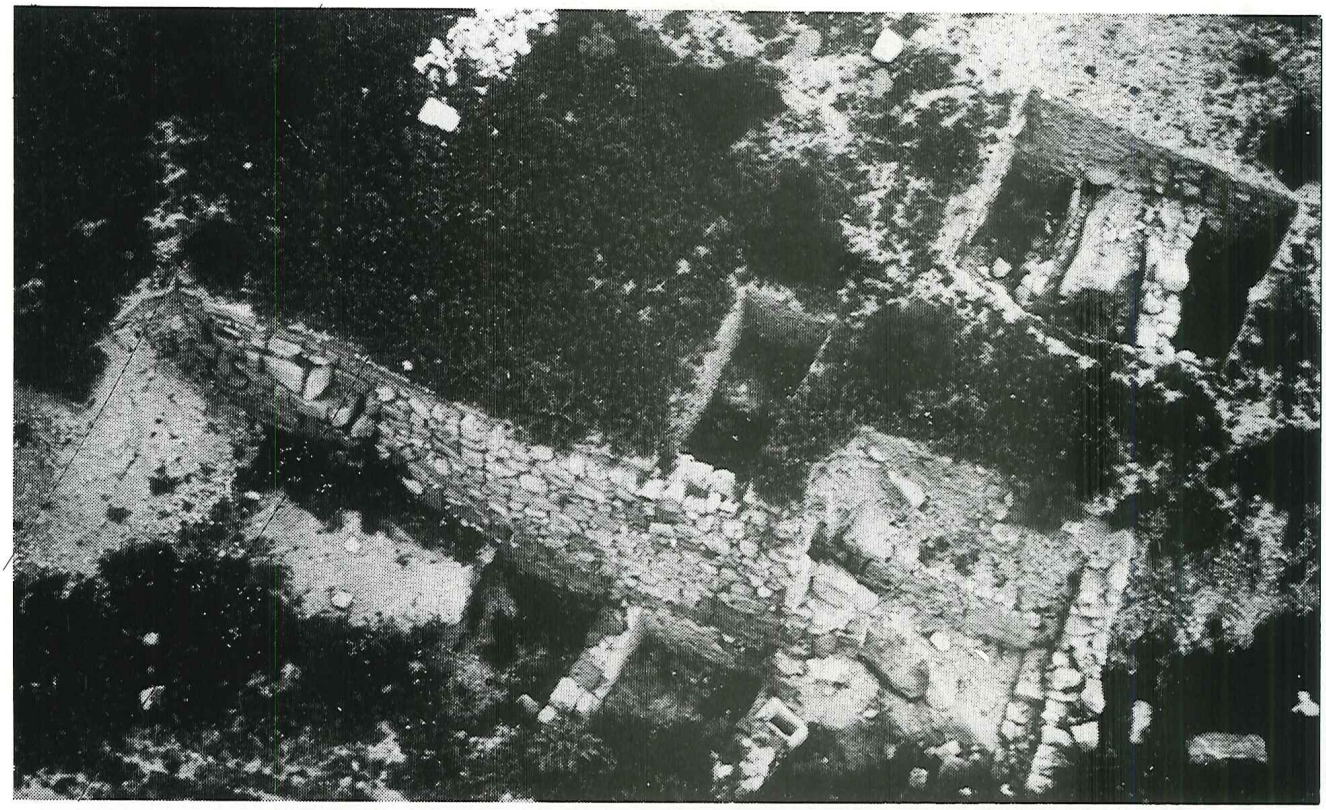
1. Tower of the city wall under Bait Melkawi, detail (UQ 92/15-4).

2. Tower in area XL from the south.



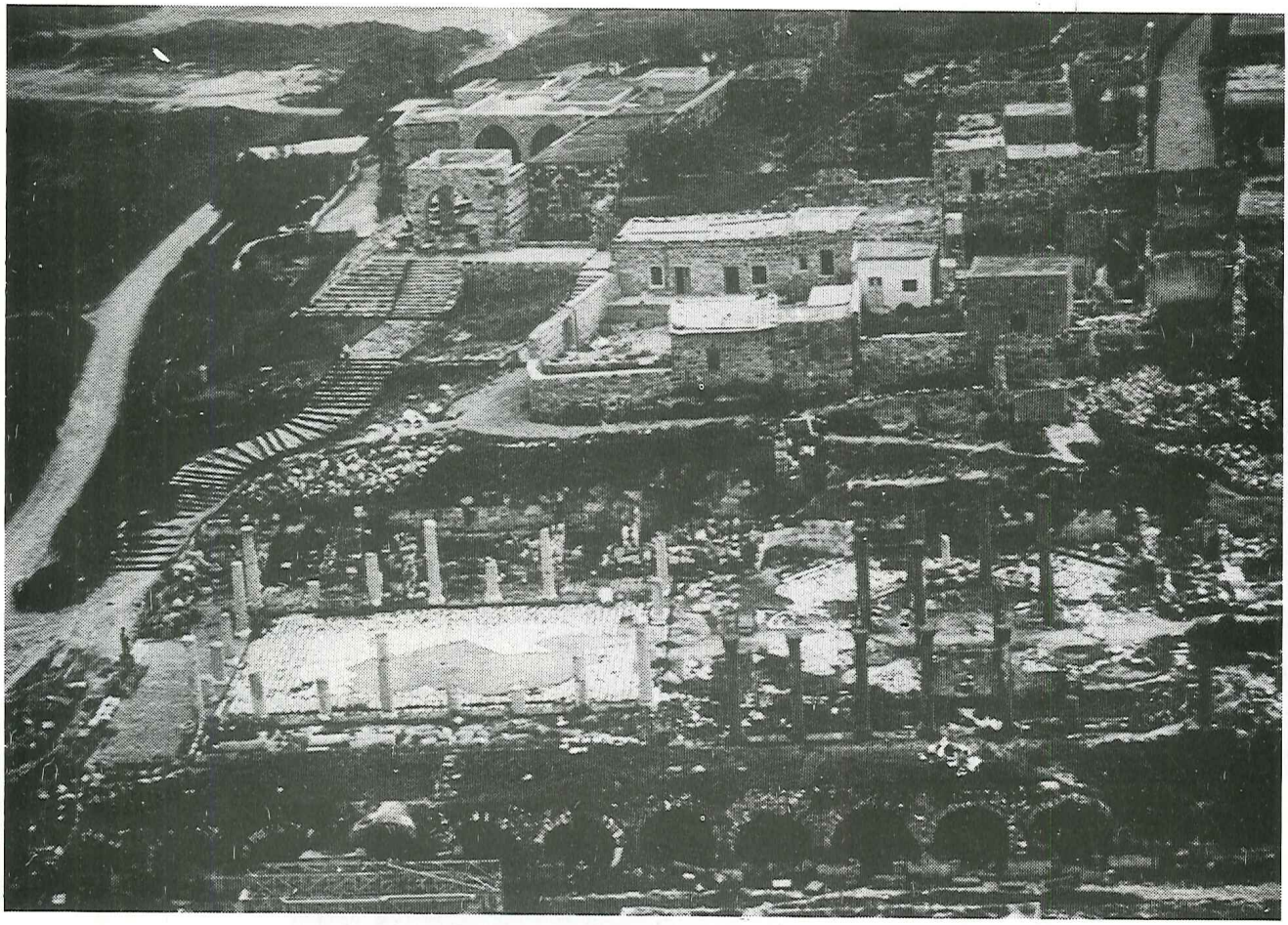
1. View of Wall 1 with the adjacent rooms to the right, view from the north.

2. *Ṭabun* in the western half of area XLIV.



1. Aerial photo of area XLIV.

2. East-opening of the tunnel from the east.



In the background: the newly restored house in the Ottoman village.