

## EXCAVATIONS AND RESTORATION AT SARDIS-1972

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The fifteenth campaign of the Harvard-Cornell Archaeological Exploration of Sardis took place from May 23 to the end of September, 1972. C. H. Greenewalt, Jr. directed the campaign as Acting Field Director from the beginning to August 1; G. M. A. Hanfmann supervised the final phase. Under the supervision of architect M. C. Bolgil, restoration and landscaping were carried on through September by T. Yalçinkaya. The program was supported by Grant No. 6435-72-264 from the National Endowment for the Humanities, a terminal grant for student training from the Ford Foundation, and grants from the participant institutions. The Department of Antiquities continued its grant to a Trust Commission (Emanet Komisyonu) for the restoration of the gymnasium. Throughout the season, our Commissioner, Güldem Yügrüm gave us most efficient help. We benefitted again by the collaboration with K. Z. Polatkan as representative of the Trust Commission and as Director of the Manisa Museum; we are also grateful to the staff of the Manisa Museum for aiding our researchers. For their cordial interest we are beholden to the Director General of Antiquities, Hikmet Gürçay, and the Associate Director, Burhan Tezcan. Special thanks are due to the Vali of Manisa, V. Kitapçigil for initiating very effective steps for preservation of Sardis antiquities.

### *Artemis Precinct:*

From May 23 to July 19, K. J. Frazer made ten soundings in the Temple of Artemis (Fig. 1). His object was to detect

possible traces of an archaic dipteral temple. No archaic architectural traces were found, nor was definite proof of a dipteral arrangement obtainable in Trenches 1 and 6. Trenches 3 and 9 proved that the foundations of the east wall were originally planned to carry a solid wall, not a door. Probably still in Hellenistic times, it was decided to add the door and the finely worked Hellenistic steps and to make the temple a two-cella temple. G. M. A. Hanfmann believes that this change may have occurred already under Achaeus (220-213 B. C.); Frazer would place it later. Trench 8 proved that two earlier Hellenistic column bases were incorporated into the latter, westernmost wall, as already surmised by G. Gruben (cf. E. Akurgal, *Ancient Civilizations* [1970] 128, fig. 45). The only well stratified sequence was found in Trench 5; Lydian sherds were dominant at \* 98. 75-98.12 level (the floor of the south colonnade being taken as \* 100.). A Hellenistic or Early Roman terra-cotta water pipe was bedded on a rubble wall within that stratum. This corresponds to observations made in 1960, when a sixth century B. C. layer of sherds was observed (Fig. 2).

Many broken pieces of marble architecture were found in Trench 2. They included part of a Hellenistic capital from the temple, which has received the number "H", to conform with the designation of previously known capitals "A" - "G" published by H. C. Butler (*Sardis II* [1925] Atlas, pls. xii ff). A toe from a colossal statue (S 72.8) was also found. The burial of these marble fragments may have occurred at

the time of Constantine, as a coin of Constantine II (324-330 A. D.) was found at this level (\* 98. 76). An inscription of four signs inscribed (secondarily?) on a marble block (IN 72. 6) is not Lydian, according to R. Gusmani. It is not Greek either. A noteworthy find in Trench 3 was a weight or a plumb bob of lead with an iron ring at the top (M 72.1). It weighed 1,340 grams.

A program of cleaning and ordering the temple area is to be undertaken in 1973.

#### *Pactolus River:*

During the past few winters, the Pactolus River has been furiously assaulting its eastern bank near the Temple of Artemis and advancing dangerously toward the temple area. Through the good offices of Güldem Yügrüm, Commissioner, C. H. Greenewalt, Jr. was able to enlist the cooperation of the State Water Works (DSI), Erosion Division in Bornova and Salihli. In July and early August, breakwaters supplied by DSI were set up (Fig. 3). From September 1 to 4, a bulldozer made a new channel. The immediate danger to the temple has been averted. In this connection, we acknowledge gratefully the help of E. Tunali, of 2. Bölge, DSI Bornova, and of E. Demirsoy and M. Ercanli of DSI Salihli.

#### *Pactolus North:*

In the sector Pactolus North, architectural historian H. H. Buchwald, archaeologist A. Ramage, and architects K. P. Zygas and E. D. Russell worked to elucidate the history of Church "E", (Fig. 4). Between July 1 and 27, several soundings were made, five inside and two outside the church. The foundations are 2 metres deep and very wide. They are made of re-used ashlar, brick, and mortar. A system of timbers (0.10 by 0.10) consisting in each wall of two parallel timbers and short cross timbers then fastened to each other may have been intended to provide coherence to the structure. A rectangular pit with marble floor and painted walls was investigated

in the south aisle. Three burials were found under the floor of the pit. One (Grave 72.2, Fig. 5) was excavated. It was only slightly more than 1 m. long. The skeleton was that of an adult; a Roman glass bottle was placed next to the bones. H. H. Buchwald suggests that the bones may be those of a saint reburied under the church. The pit would then qualify as a "martyrion".

According to Buchwald, "the church had four small domes on windowless drums grouped around a larger central dome. Saucer domes covered the flanking apse chapels. The exterior of the main dome was apparently decorated by blind brick arcades, the lunettes of which were ornamented with herringbone brickwork, while the exterior of one of the minor apses was decorated by a brick chevron frieze. The northern and southern walls were articulated by recessed brick arches, the lunettes of which were perforated by checkerboard patterns of brick and cement. The lower portions of the external walls were richly decorated by a mixture of brickwork and ashlar masonry, adding a strong polychrome effect. Friezes of hollow quatrefoils made of clay pipes inserted into the mortar joints enforced some major features, such as arcades, by adding chiaroscuro shadow lines.

"Remnants of an exedra wall of brick standing to ca. 1 m. height and built of alternating courses of brick and rubble (Fig. 6) were found east of the angular apse of Church "E". The wall was decorated with frescoes and modelled plaster. A cross was among the surviving motifs. As the floor which goes with this wall is lower than that of Church "E" and its curvature wider, the wall may be the apse of an earlier and larger church. However, so far no other walls belonging to the same building were found."

One of the domes is lying upside down in the center of the church. Excavation has weakened the earth on which it rests, and a support of brick was constructed to make the dome secure.

*Acropolis:*

On the Acropolis, the walls discovered on the north slope in 1960 and 1971 were again uncovered to permit the study of the masons' signs by R. Gusmani. In his view, one of the signs may be identical with the monogram found in the tomb of Gyges. Four other signs may correspond to known Lydian letters. A masonry wall found on the southern slope of the Acropolis, several meters south and below the Byzantine barracks partly freed by C. H. Greenewalt. Further investigation is planned for 1973.

*Gymnasium Area, Palaestra:*

In pursuance of the advice given in 1971 by the Department's inspector, the largest excavation activity took place in the gymnasium area (Fig. 7). The huge task of lowering the level of the palaestra entailed the moving of some 4,000 cbm of earth and lasted from May to late September. It was guided by T. Yalçinkaya. Only in the northwest corner and very sporadically along the east side was the original marble paving extant. In the center of the palaestra was a curious crossing of two cobbled roads which we are preserving. A number of columns have been re-erected, especially at the southwestern and southeastern corners of the palaestra. On this occasion, more fragments of the fine Byzantine replacement capitals were found (PA 72.17 and 72.18). They were studied for publication by F. K. Yegül. He also made a test trench in the western palaestra colonnade (PAW) to investigate the course of a late drain which took water out of the Marble Court.

Following designs by M. C. Bolgil, a storage area has been created along the east side of the palaestra (Fig. 8). Architectural parts of the Marble Court not used in the reconstruction and pieces from the palaestra are housed in this storage area which is concealed from view by earth ramps. The pieces are grouped according to types (column bases, shafts, capitals,

entablatures) and are accessible for study (Figs. 9-10).

The sheds for guards and for storage of materials, which were previously located within the palaestra and were partly blocking the view of the restored Marble Court have been moved to the southeast corner of the palaestra colonnade where they are largely screened by the re-erected columns.

To be completed in 1973 is a short extension of the eastern wall of the palaestra just northeast of the Synagogue (Fig. 15; E 118/N29. 5-35). This will permit a much needed addition of storage. Yet to be done is the eastern entrance. It is planned to put the entrance for visitors next to the preserved but very fragile marble-paved passage of the ancient eastern entrance.

*Long North Hall (LNH):*

Two trenches were made to ascertain the positions of the eastern and of one the northern doors in this building (Fig. 7: f1 and f2). A coin of Justin I (no. 1012, 518-527 A. D.) was found on the floor near the eastern door. A sloping ramp of earth (Fig. 7, "berm") was made along the southern side of this structure after the southern wall had been restored to a uniform height.

*Hall BE-W ("Aeipterion"):*

Following the suggestion of the Department's inspector, the earth supporting the west wall was removed (Fig. 11). It appeared that the piers of the arches were severely damaged and might yield to the pressure of earth piled some 5 m. high on the other side of the wall. The piers have been restored.

Excavation by T. Yalçinkaya of the pool which occupies nearly the entire length of the hall revealed that a very large vaulted drain, ca. 2.20 m. high, goes northward for 41 m. from the center of the semi-circular northern end of the pool (Figs. 12-13). Three deep shafts lead into this huge drain from above; they have in turn sideways extensions at the top.

An important find made near a niche of the western wall was the inscribed base, IN 72.26 (Fig. 14). It bears a poem in six lines, which says that Basiliskos, Governor of Lydia, set up a fountain with snakes of gilded bronze which spouted water from their mouths; the fountain had previously stood "in the middle of the road." The date might be later fourth century A. D. Such a fountain of bronze has been found in the middle of a pool in the gymnasium at Herculaneum (cf. V. Catalano, *Storia Di Ercolano* [1963] fig. 21; J. J. Deiss, *Herculaneum* [1966] 3, 127).

An unexcavated area was left in the center so that visitors can easily cross the pool and vehicles can still be used to evacuate earth from the central hall (BCH), where a sloping ramp is planned, which would lead from the unexcavated central and western parts down into hall BE-W.

#### *Central Hall (BCH):*

To lighten the pressure upon the common wall between the room with the pool (BE-W) and the central hall of the central unit of the gymnasium (BCH), T. Yalçınkaya sought to remove the earth west of the wall and just beyond the central gate and the two side gates leading from BE-W into BCH. Working together with F. K. Yegül, he discovered an interesting feature of the plan in the two marble revetted circular pools (diameter 2.90 m.) located at the northeast and southeast corners of BCH (Fig. 15, Plan; Fig. 16). Yegül also freed temporarily the upper part of the marble-framed central door between the central (BCH) and southern (BSH) halls of the central building. The top of the door was at \* 98.90, ca. 2.50 m. above the floor.

#### *South Hall (BSH):*

An important contribution to the dating of the entire central part of the gymnasium complex was Yegül's trench "f6" (Fig. 7). He proved that the platform with the inscription of a statue of Lucius Verus known since 1958 (*TAD* 9: 1 [1959] 5,

fig. 10) was bonded into the west wall of the South Hall. As the emperor probably visited Sardis in 166 A. D., the statue may have been set up either just before or shortly after the imperial visit. The building must have been completed at that time. (Fig. 17).

#### *Room BE-B:*

The room is located at N 1-10/E 30-36. Excavation by F. K. Yegül (Fig. 7, trench f5) of the central foundation and eastern half of the room revealed various brick walls with tops at c. \* 96., ca. 0.60 below the Roman floor. The fountain which may have had three or even four spouts is the result of a late revision but one which had occurred before the breakdown of the water system in 616 A. D. A rudimentary paving on top of the brick walls made them into a platform for a primitive structure leaning against the eastern wall. This structure was probably built before the destruction of the lower city in 616 A. D. Apparently nothing can be retrieved of the original arrangement of the room, nor is it possible to determine when this room belonged to the Synagogue. Some staff members have expressed the view that the passage from the main hall of the Synagogue into Room BE-B was made only after 616. If this were true, then there would be no cogent reason to assume that the room belonged to the Synagogue.

Ten coins (Nos. 1020-1026) were found in fill with levels from \* 96.10-96.40. All are dated between 402 and 450 A. D. From the same fill came the head of a satyr, perhaps a Roman copy of the dancing satyr from the so-called "Invitation to Dance" group, which once stood in Cyzicus (Fig. 18).

#### *Room BE-C:*

This hall, left half-excavated in 1966, was excavated by J. S. Crawford and J. Wrabetz. Two important discoveries were made. At the north wall there appeared an inscribed marble base, 2.62 m. long (Fig.

19). As read by Clive Foss and elucidated by L. Robert, the inscription, IN 72.1, records a dedication under Geta (211-212 A. D.) by Glykon, son of Glykon, of statues of "Children of Kore", namely *Koros*, *Eupo (sia)*, and a third female, whose name is lost.

The second discovery was that of a large (diameter 4.85 m.) circular, relatively well-preserved limekiln built of bricks (tiles) (Fig. 20). As it was built right on the mosaic floor of the room, it must have started operations very shortly after the building was abandoned in 616. J. S. Crawford suggests that coins of Constans II (641-668) date the beginning of the lime-burning operations to the time when the troops of Constans II were rebuilding the Main Avenue as the so-called "Byzantine Road." The cemented bedding they laid down required considerable amounts of lime, (cf. *BASOR* 166, April 1962, 45). In an unpublished study C. Foss proved that the rebuilding of the road after the destruction of 616 occurred under Constans II; cf. G. E. Bates, "Post-Destruction Occupation", *Sardis Monograph 1, Byzantine Coins* (1971) 2.

Among the fragmentary sculptures partly burned or about to be burned, was a nice fragment of a female head from a relief of ca. 250-300 A. D., S. 72.9 (8191) (Fig. 21) and two small reliefs, a woman and child, S 72. 6: 8186, and a charioteer, S 72.7: 8187, both of late third or fourth century.

A poor grave along the southern wall (Grave 72. 4) may be that of a squatter of the seventh century. A cross was incised on one of the slabs which covered it.

#### *Area B West:*

F. K. Yegül's trenches f8 and f9 (Fig. 7) served to elucidate the plan of the largely unexcavated western part of the gymnasium baths. Possibly constructed first, this part used more masonry. The long west wall had parts constructed of small brick-like limestone blocks (*petit appareil*).

The north wall of the *caldarium* (hot bath) was built of limestone masonry.

A deep sounding at Pier E 3 (Fig. 7, trench f7 and Fig. 22) revealed, at the lower part of the pier, terracotta box tiles (*tubuli*) for circulation of hot air. Marble revetments adorned the wall and floor. Because the joints are watertight, Yegül interprets the area as part of a plunge bath or pool of the *caldarium*. A vaulted passage between piers E 3 and is viewed as possibly part of a *praefurnium* (furnace room). Provisions for heating may have been located in chambers just outside the long west wall of the complex (trench f8).

#### *Byzantine Shops:*

On August 6, J. S. Crawford and J. wrabetz began the cleaning of the eastern shops, E II-19; for the plan and designations, see G. E. Bates, *Sardis Monograph 1, Byzantine Coins* (1971) Map 4. This was combined with making a path for access alongside the shops, and with beginning the terracing of the slope just west of the shops (Fig. 23, "Level 96.5"). Some burned wooden beams (rafters) from the colonnade in front of the shops were found. South of shop E 11, a number of iron implements such as shovels and pickaxes were piled on the ground. The shops need to be consolidated and preserved. This work was begun in September 1972 but a number of the eastern shops and the facades of the entire row of western shops (W 1-15) remain to be cleaned and conserved.

#### *Synagogue:*

The great task of lifting, consolidating, and putting back in place of the mosaics of the Synagogue was completed with the exception of two replacement panels which were cast in white cement, but remain to be painted in order to replace originals taken to the Manisa Museum. This procedure was also adopted for the valuable apse mosaic (Fig. 24) and for all longer mosaic inscriptions. L. J. Majewski painted the copies of the apse mosaic and of several

others with epoxy enamel colors; two were done by P. A. Lins. These copies have been installed in the positions of the original panels. Some smaller panels were lifted and rest in the entrance porch.

Two major tasks had to be performed before the installation could be termed complete. A great number of small holes and seams had to be filled in with mosaic cubes to provide a coherent, continuous surface; and the deposit of water and lime which had spread over the mosaics when they were being reset had to be removed. Upon L. J. Majewski's suggestion, a technician operating his own electric cleaning and polishing equipment (Bosch Rotary Sander with carborundum disks) was hired and successfully removed the deposits. The mosaics were then thoroughly washed and sealed with a synthetic resin-oil floor varnish for cement (OXAN) mixed with turpentine, attaining a clean and colorful surface effect.

Important evidence for interior decoration of the upper part of the Synagogue was studied and put together by Majewski from the beautiful dark green, blue, and gold mosaic fragments. The conservation work, which also included resetting the marble panelling in Hall BE-C, was conducted until late July by Majewski, and thereafter by his assistant, P. A. Lins. An important article on the architectural development of the Synagogue by A. R. Seager has appeared (*American Journal of Archaeology*, 76 (1972), 425-435, pls. 91-94).

*Planning of Area South of Gymnasium and Synagogue :*

In consultation with G. M. A. Hanfmann and T. Yalçinkaya, E. D. Russell and K. P. Zygas formulated a plan for these areas (Fig. 23). They had been used since 1960 for dumping of earth and debris excavated in the gymnasium and Synagogue. It was decided to create two major platforms, one in the east, the other in the west, separated by the excavated

stretch of the ancient Main Avenue. In their outlines and subsequently by lines of trees both of the platforms are to indicate the alignment of the ancient Avenue and its colonnades.

The wider eastern platform (width varies from 14-20 m.) will reach from the western end of the Synagogue to some forty meters beyond the eastern end. A passage along the Byzantine Shops, ca. 1.5 m. wide (marked by level "96.50") is bounded by a slope and a narrow terrace at \*98.25. This terrace continues the alignment of the front of the northern colonnade of the Main Avenue. The major platform at the \* 100. level is to have a refreshment structure at its eastern end. Washrooms (toilets) and parking for 7 to 10 passenger cars will be located farther east, across the eastern access road. Trees are to be planted in two lines.

The western platform, ca. 130 meters long, will also have a passage along the western series of Byzantine Shops but will have only one level terrace (width narrowing from ca. 17 to ca. 10 m. westward) with the top at ca. \*100.72. At its eastern end, however, there will be a step-down terrace (at \*98.25) and a sloping ramp as transition towards the excavated ancient avenue. Two rows of trees are to be planted, one only for a short stretch.

West of the western platform will be an entrance large enough for busses to enter the extensive parking space to be provided in a field west of the gymnasium, formerly known as "West W-B." The existing excavated areas are to be preserved. The capacity of this space is ca. 50 autobuses.

The development plan was approved by the Director General of Antiquities, Hikmet Gürçay on August 27. Owing to the vigorous interest of the Vali of Manisa and the State Director of YSE (Village Ministry, Roads, Water, and Electricity Division) Manisa, a bulldozer from the Soil Conservation Ministry (Toprak Su) did most of the necessary levelling between

August 29 and 31. Similar generous support was extended for the grading of the site early in September, 1972. Further earth moving and landscaping will be done by the Expedition in 1973.

*Maussoleum of Claudia Antonia Sabina :*

Preserved as a ruin up to the lower walls of the chamber for many years, this structure is famous because of the great sarcophagus found by H. C. Butler in 1913 and because of Butler's intriguing restoration of the architecture of the maussoleum in drawing (*Sardis* I [1922] 170 ff., III. 18 G, location; 189-192, condition found. C. R. Morey, *The Sarcophagus of Claudia Antonia Sabina* [1924] Ch. 1. III. 1-2). On August 25, 1972, the architects K. P. Zygaz and E. D. Russell with G. M. A. Hanfmann sought to plot the location of the maussoleum for the topographical map of Sardis. They found that the ruin, which was still clearly visible in 1965, has become completely invisible. The plot is divided between the garden of Ali Yavuz and the house and courtyard of the carpenter Mehmet Gökduman. The government guard stated that he brought two complaints trying to protect the ruin when the owners first began to build, but the suit was dismissed by the court in Salihli because the owners had valid titles to the land. M. Gökduman stated that already the previous owner had demolished the ruin. He and others recalled demolishing an arch. At present only a line of rubble marks what may be the north wall of the maussoleum.

*Research Activities:*

Much of the season was dedicated to pre-publication research. C. H. Greene-

walt, Jr. continued his studies on Lydian pottery, especially on the so-called "pot hoards" found at the sectors HOB and PN. F. K. Yegül and J. S. Crawford continued to work on the publication of the Gymnasium and the Byzantine Shops respectively. K. P. Zygaz and E. D. Russell worked on general topography and on an index of all ruins observable at Sardis. R. L. Vann completed his text and a great number of drawings of unexcavated buildings. D. Van Zanten rechecked his work on the city wall of Sardis and made comparative studies at Alaşehir and Manisa. J. A. Scott continued with her work on lamps, L. J. Majewski with the volume of mosaics and wall paintings; J. Wrabetz started a study of Roman sigillate pottery; A. Ramage worked on Lydian architectural terracottas, and G. M. A. Hanfmann on stone sculptures for the sculpture volume. J. S. Crawford also completed an article on an Early Byzantine lion lamp of brass or bronze with analyses furnished by Maden Tetkik Arama Enstitüsü, Ankara. Roberto Gusmani came to revise his manuscript on Lydian and Carian inscriptions. *A Guide to the Excavations at Sardis*, by Commissioner Güldem Yügrüm, was kindly translated into English by the Turkish American Association of Izmir, by courtesy of -Dr. Selcke. We have now reviewed it, and suitable illustrations have been ordered from the U. S. A.

During the next season, the work of cleaning and ordering the areas of the Gymnasium and Synagogue will be completed. We also hope to carry out modest cleaning and ordering at the Temple of Artemis.

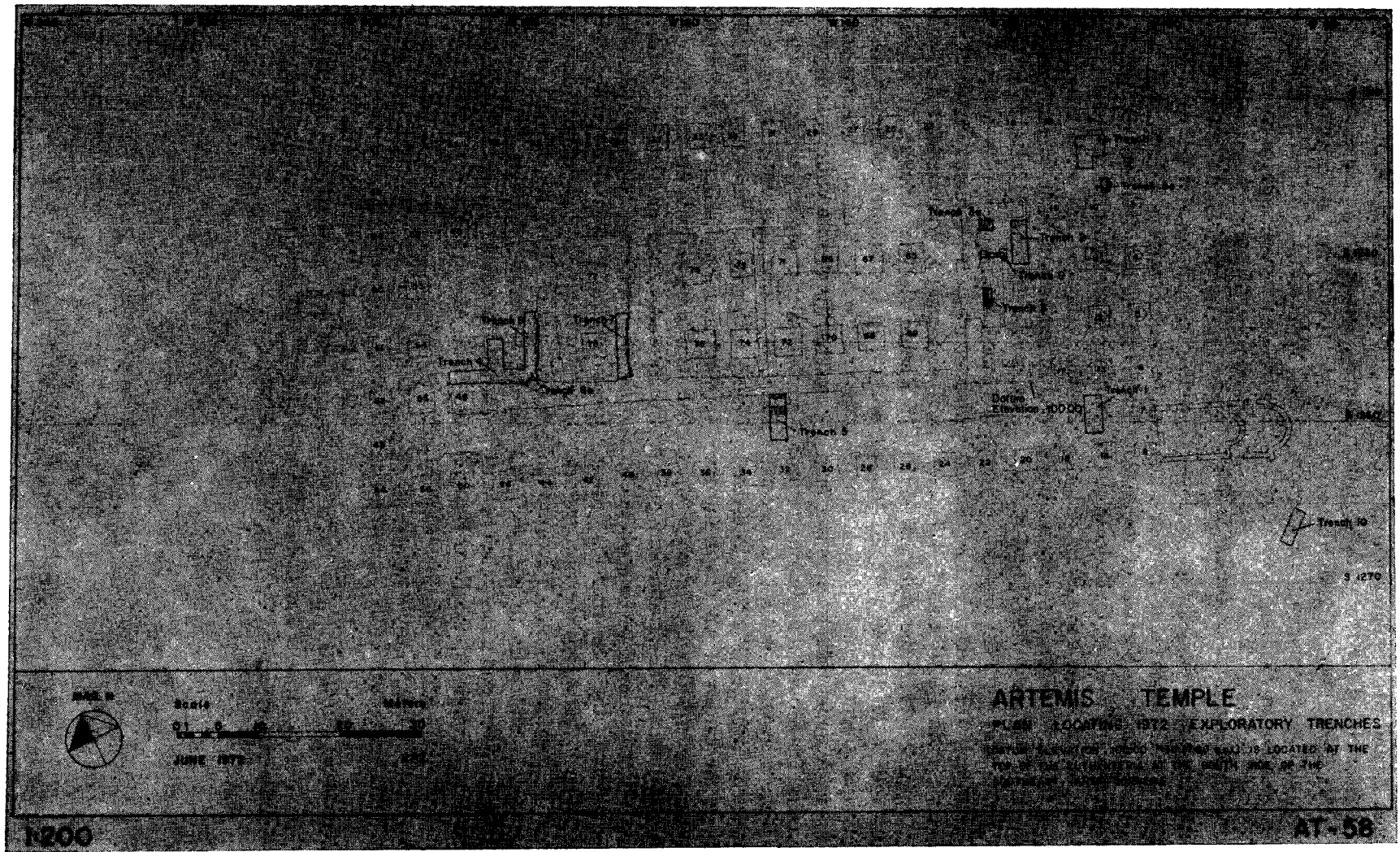


Fig. 1 — Plan of Artemis Temple with 1972 trenches.



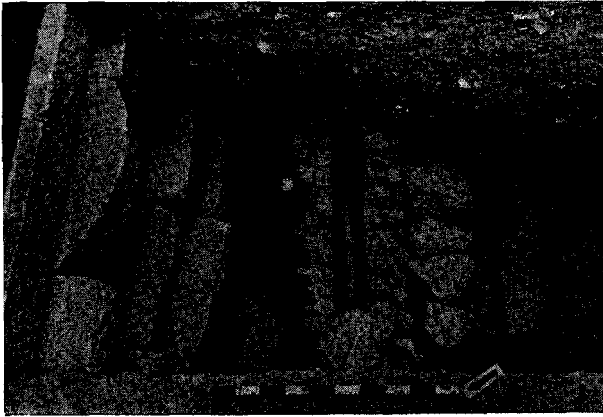


Fig. 2 — Artemis Temple trench 5; Hellenistic or early Roman water pipe exposed.

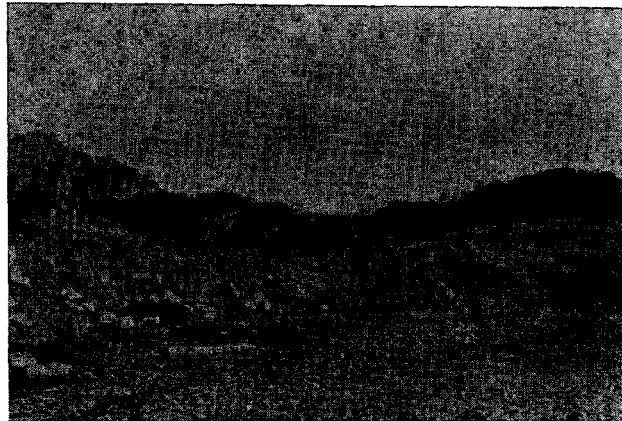


Fig. 3 — Eroded east bank and water-breakers in the Pactolus (prior to channelling).

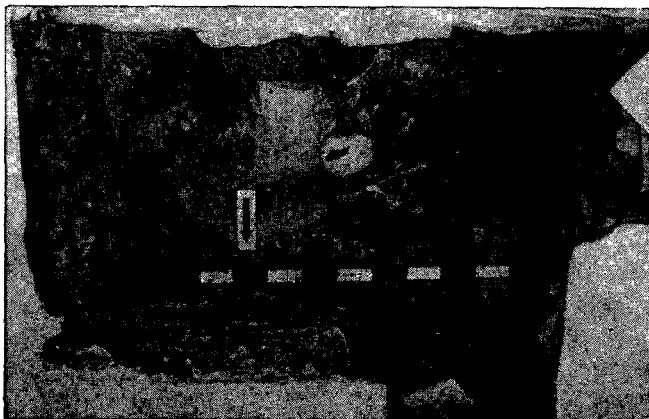


Fig. 5 — Church "E". Grave 72.2 under the pit in south aisle.

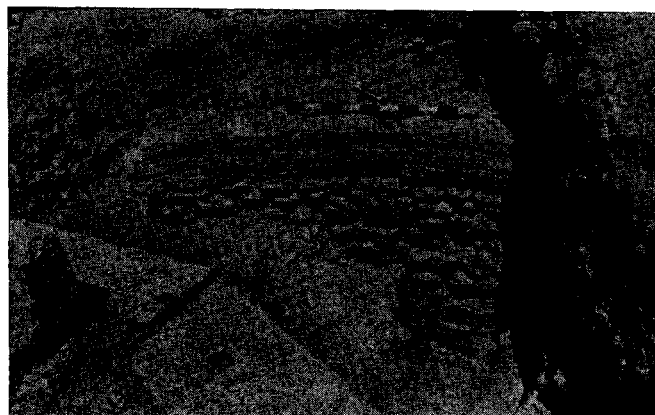


Fig. 6 — Earlier apse found east of Church "E".

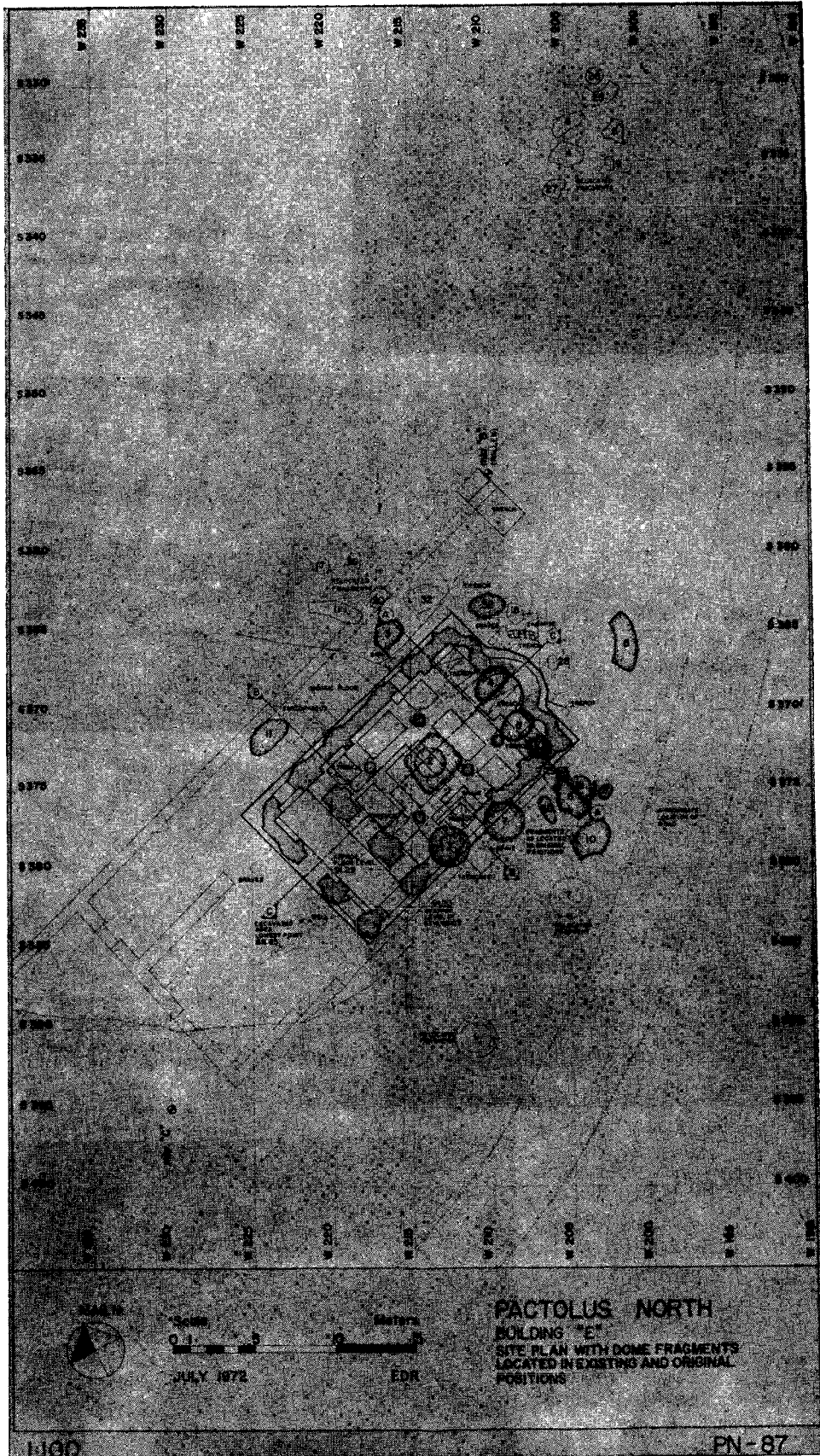


Fig. 4 — Pactolus North, Church "E". Site plan 1972.

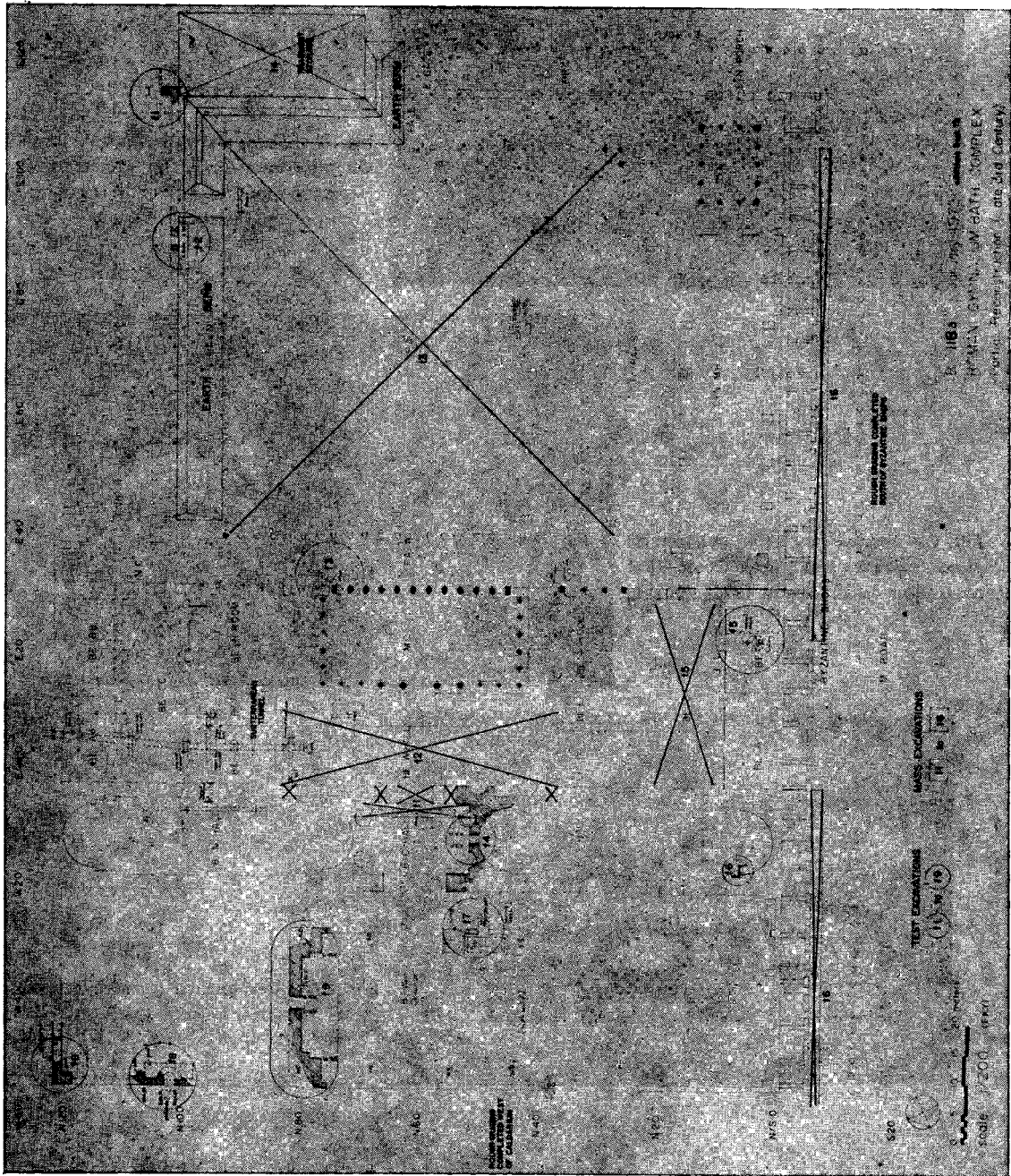


Fig. 7 — Plan of gymnasium-bath complex showing excavations of 1972.



Fig. 8 — Earth and stone removal from the palaestra. Storage for architectural pieces in the background. Looking northeast.

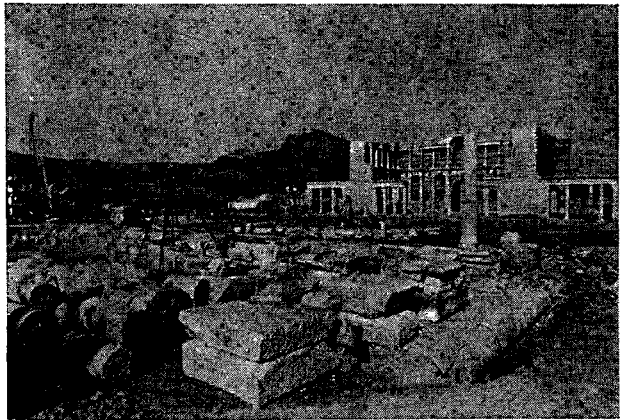


Fig. 9 — Storage area for architectural pieces, palaestra and Marble Court (after removal of sheds, August 1972), looking southwest.

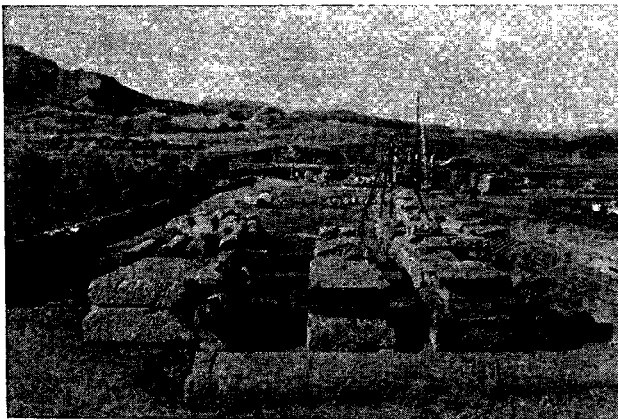


Fig. 10 — Storage area for architectural pieces, looking south.



Fig. 11 — Clearing the northern part of hall BE-W, along west wall.

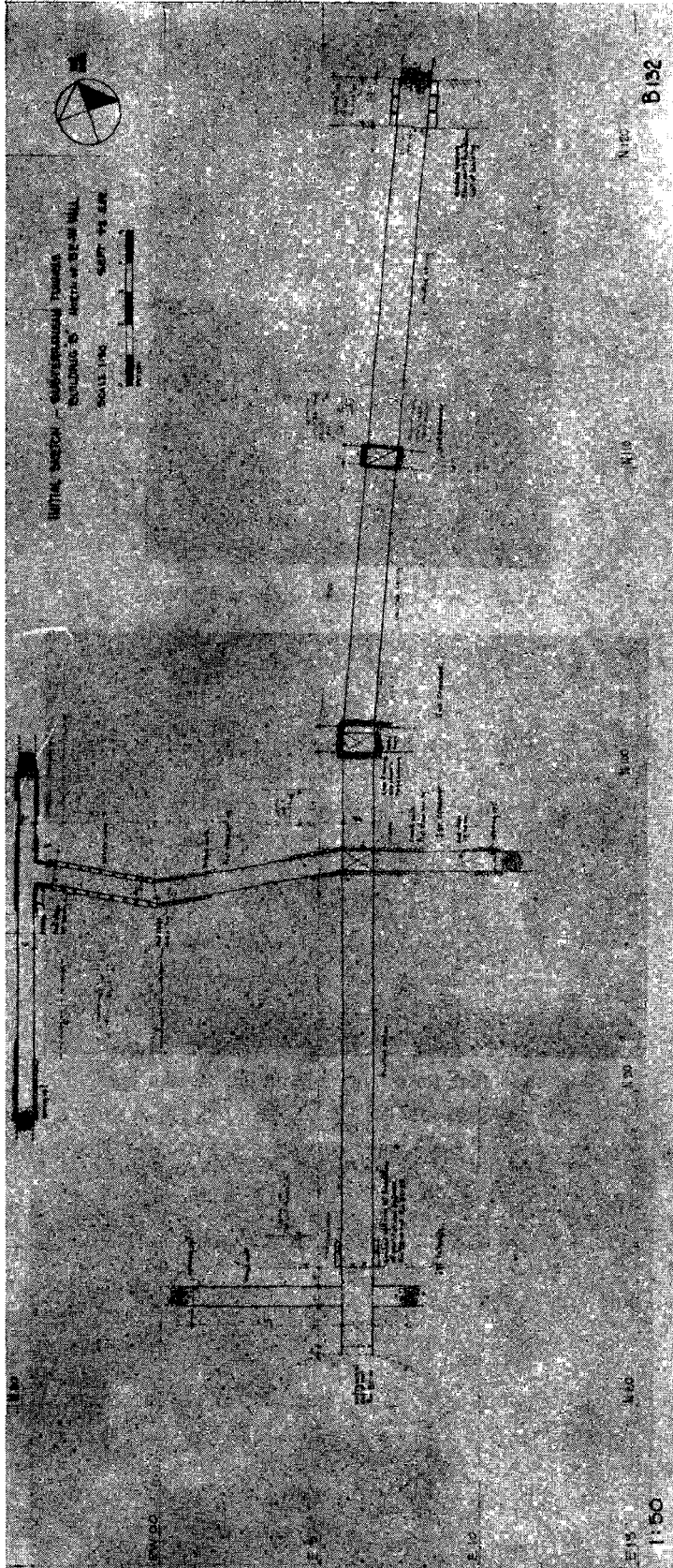


Fig. 12 — Sketch plan of drainage tunnels under hall BE-W.

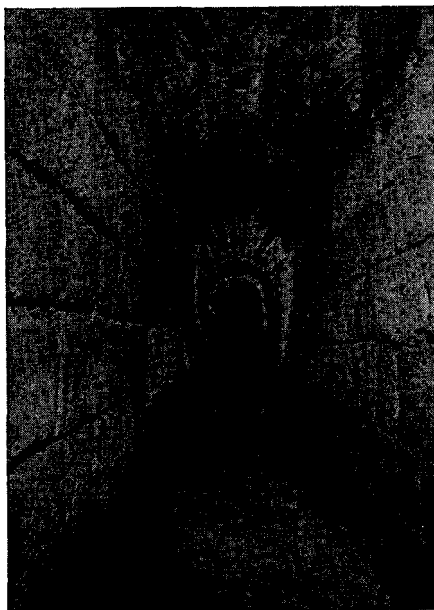


Fig. 13 — Large vaulted drain at BE-W.

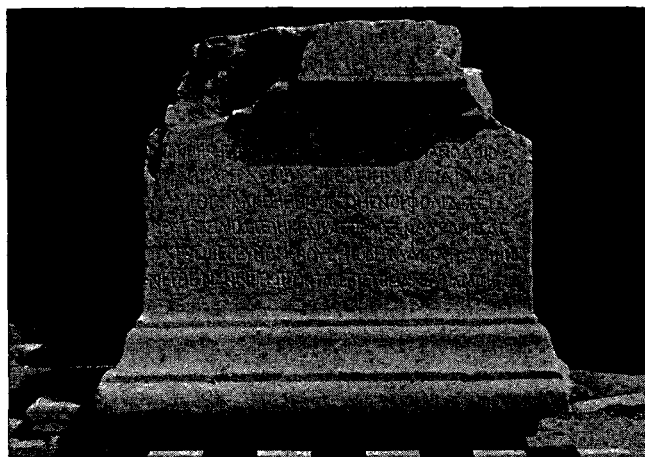


Fig. 14 — Base for a fountain with late Roman inscription IN 72. 26.

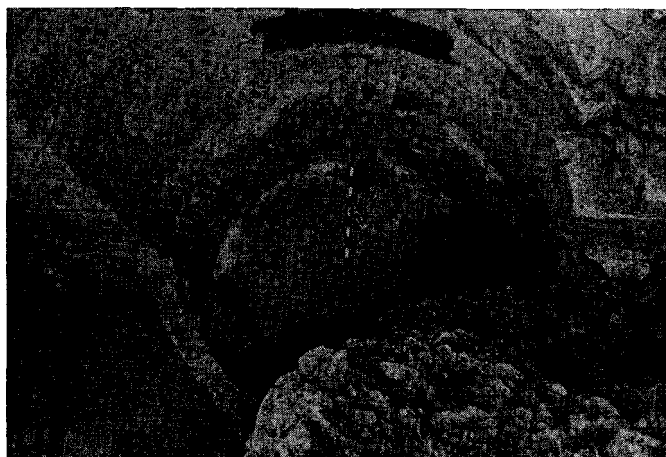


Fig. 16 — Semicircular niche and circular pool in hall BCH, southeast corner, looking down, and south.

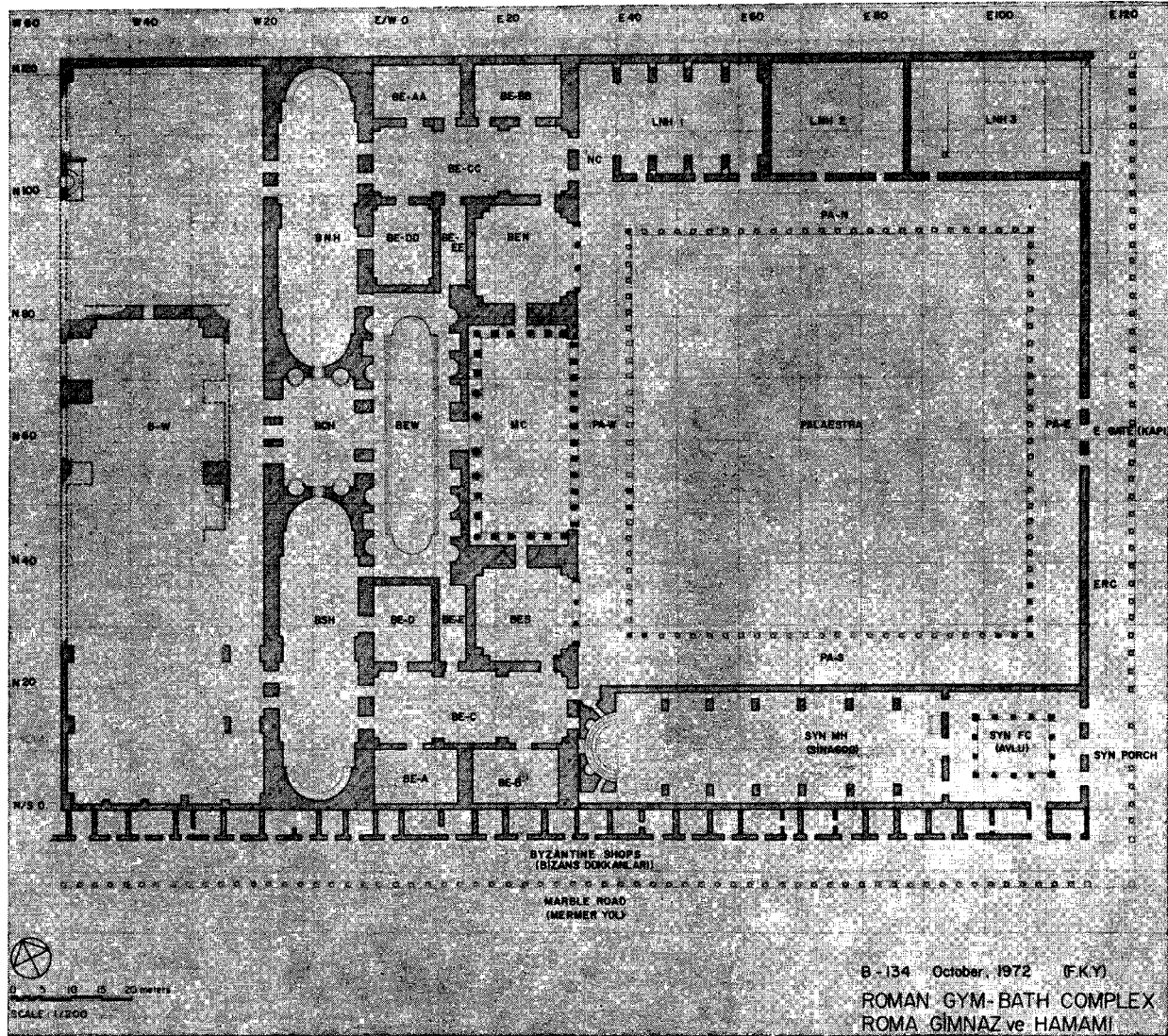


Fig. 15 — Plan of Roman gymnasium-bath complex.

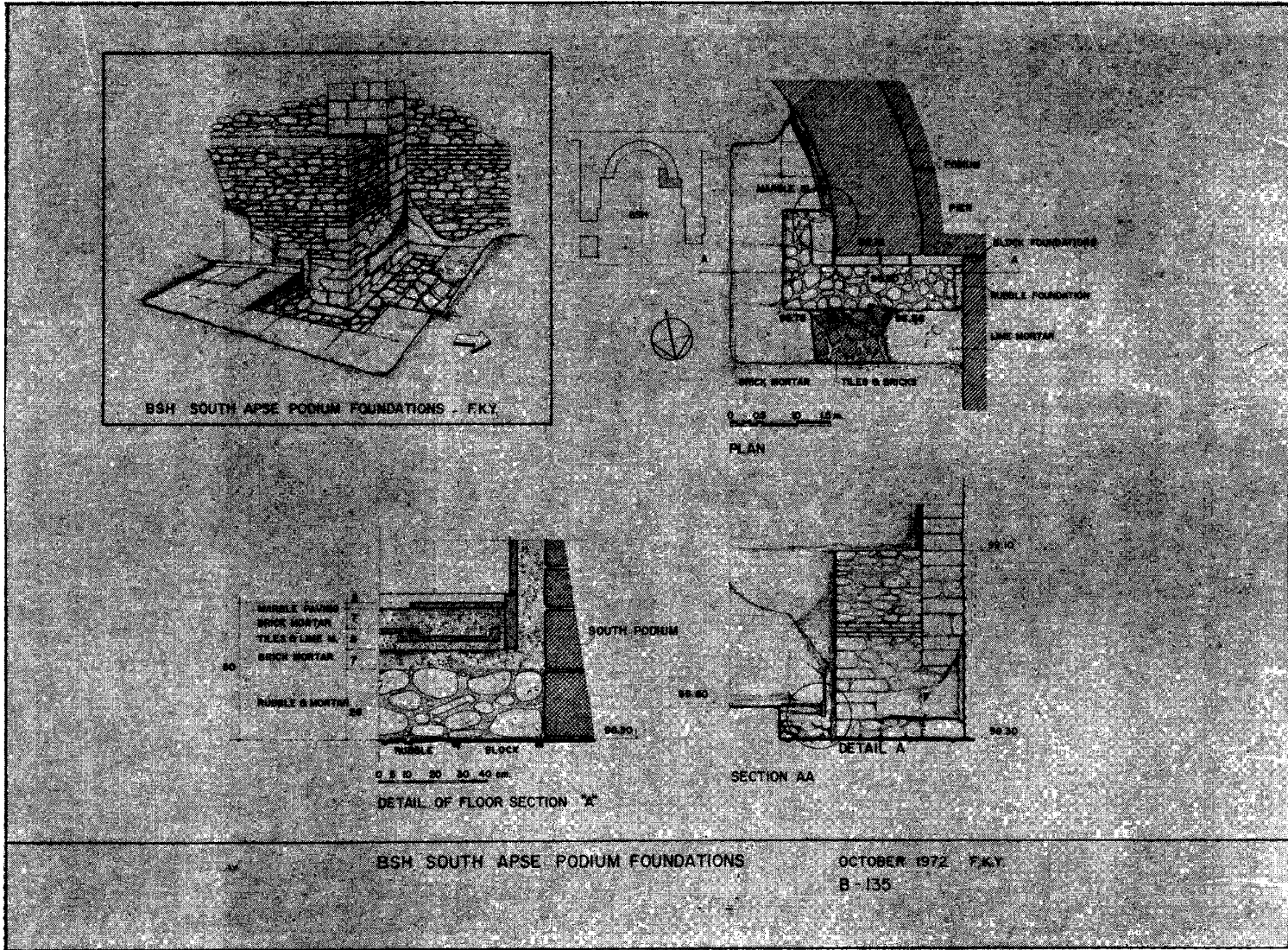


Fig. 17 — Plan and section of BSH south apse podium foundations.



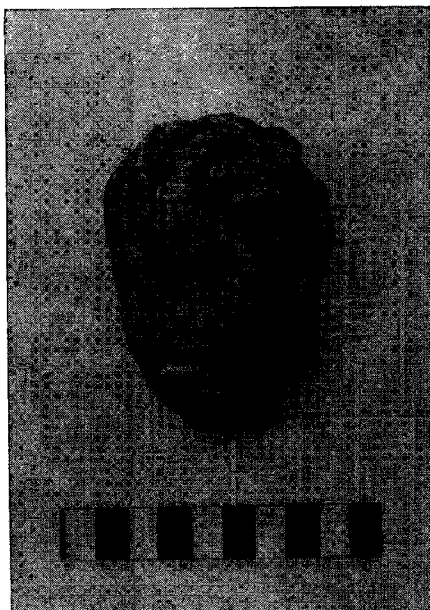


Fig. 18 — Small marble head of satyr found in hall BE-B (S 72. 5: 8182).

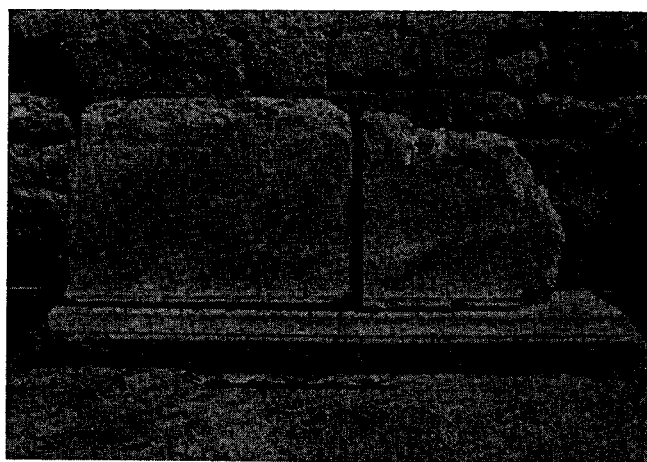


Fig. 19 — Base for statues of Three Children of Kore dedicated by Glykon in 211 A. D. (IN. 72.1).

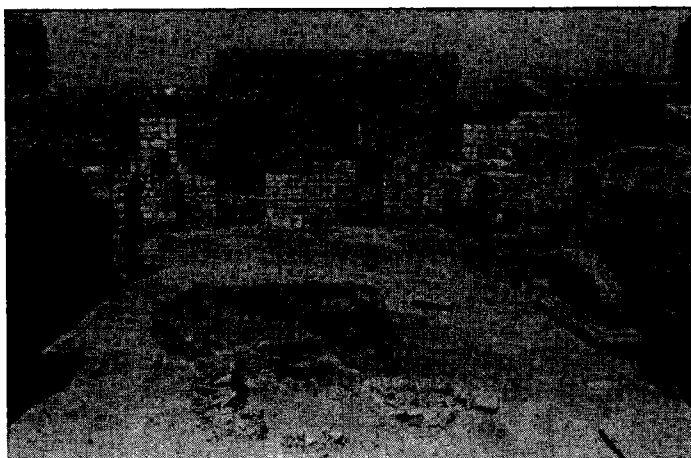


Fig. 20 — Hall BE-C after excavation. Limekiln in center, base of Glykon on the right.



Fig. 21 — Fragment of the head of a woman found near limekln in BE-C.

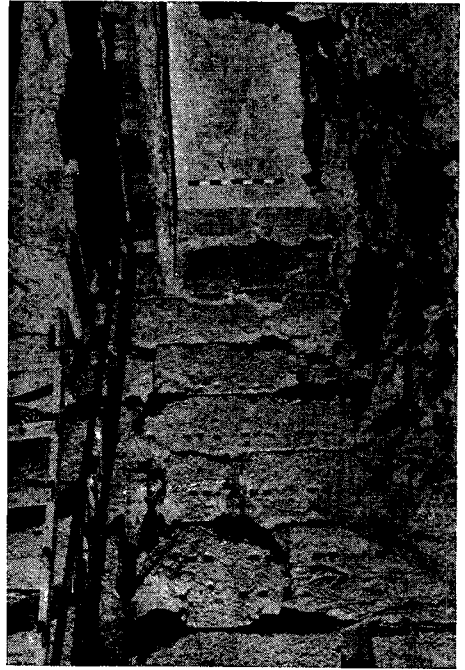


Fig. 22 — Gymnasium (B) west area. Deep sounding at pier E 3.



Fig. 24 — Schematic proposal of land form and development of the area south of Byzantine Shops and gymnasium.

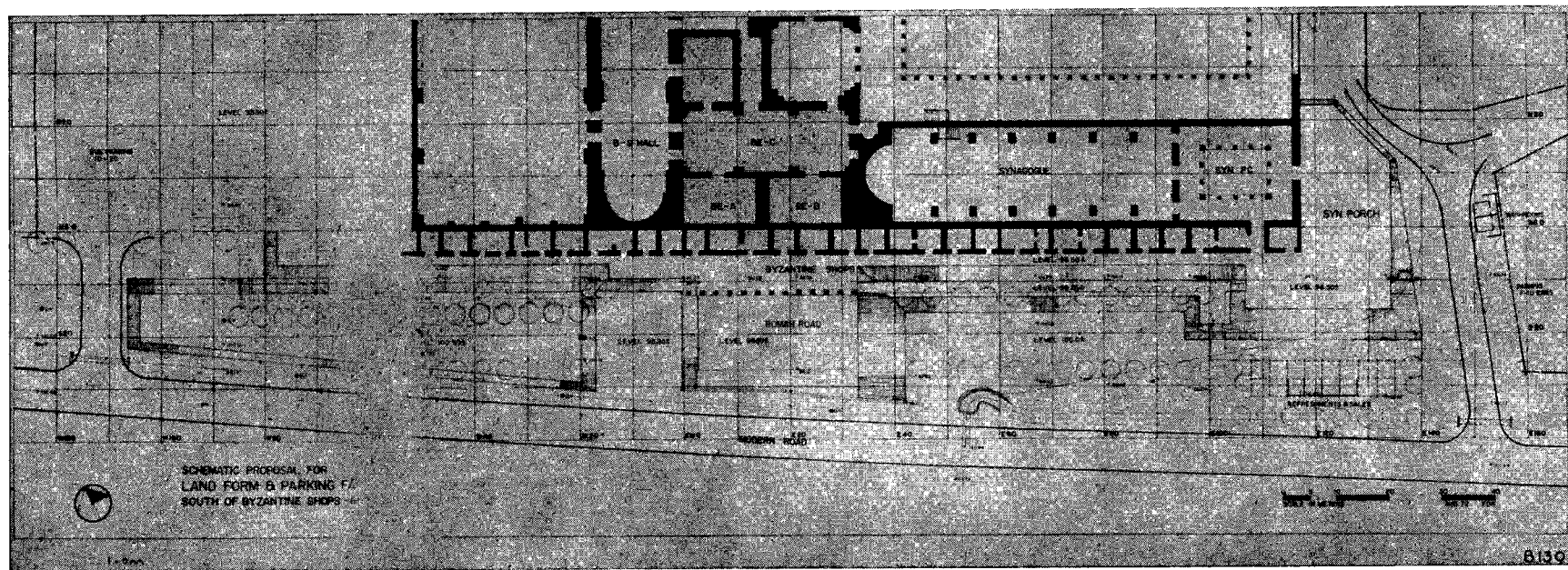


Fig. 23 — Painted cast of the Synagogue apse mosaic in place.