

**THE MADABA PLAINS PROJECT
A PRELIMINARY REPORT ON THE FIRST SEASON
AT TELL EL-'UMEIRI AND VICINITY**

by
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After a hiatus of eight years, thanks to Prince Ra'ad ibn Zeid and Director-General of Antiquities Adnan Hadidi, Andrews University again sponsored an archaeological expedition in Jordan from June 18 to August 8, 1984. This new field effort was co-sponsored by Raouf Abujaber because it centered on his land at Tell el-'Umeiri in the Ammonite foothills on the northern edge of the Madaba Plains, some 10 kilometres south of Amman's 7th Circle by the new airport freeway. This project encompassed two spheres of research: Larry G. Herr supervised excavation at the tell proper, while Øystein S. LaBianca had the oversight of the regional surface survey within a 5-km. radius of the tell. The combined results of both team efforts are significant for the archaeology of Jordan. The following is a general preliminary report of the work done by, and discoveries of, the 75-member team engaged in this project in 1984.¹

1. Overview of the Project: Goals, Identification and Description of the Site, etc.

Goals of the Project

Our specific goals in this new project included expanding the temporal and spatial frame of our previous investigations at Tell Hesban and its environs,² centered some 8 km. to the southwest, where we uncovered the remains of nineteen superimposed cities covering a 2700-year span of history from about 1200 B.C. down to at least A.D. 1500. We tested hypotheses derived from those limited inquiries, using this time a wider range of cultural materials and greatly improved methods of instrumentation and information processing.

Possible Identification of Tell el-'Umeiri

The ancient-Near-Eastern identification for Tell el-'Umeiri is not yet known with certainty. During the course of the Hesban Project, it was Robert Ibach who first surveyed the site of 'Umeiri (Site 149) and called attention to its importance, suggesting it to be a candidate for the city of Siḥon, the Amorite (cf. Numbers 21: 21-30). Donald B. Redford considers it to

1. The primary author of this preliminary report, who served as project director, acknowledges his indebtedness to each of the 75-member staff who helped to make possible this report and particularly to the primary financial sponsors: Andrews University, California Society for Archaeological Research, and Raouf Abujaber who went out of his way in time, effort, and financial assistance to assure our success. Ali Ghandour, Chairman of The Royal Jordanian Airlines, arranged for substantial staff savings on airfare. And through the good offices of principal Wilson Tatum, the Baptist School in Amman turned over its facilities to the dig for our headquarters. The officers and staff of the American Schools of Oriental Research and its local affiliate, the American Center of Oriental Research in Amman, provided in-

valuable assistance — the latter's director, David McCreery, and former administrator, Laura Hess, must be particularly mentioned. Others within the country of Jordan without whom the excavation would not have been possible were Department of Antiquities Representatives Hufzi Haddad and Hanan Azar.

2. For the fullest report on Andrews University's five seasons of archaeological work at Tell Hesban and within a 10-km. radius of that site, see R.S. Boraas and L.T. Geraty, *et al.*, "Andrews University Heshbon Expedition, the Fifth Campaign at Tell Hesban (1976): A Preliminary Report," *AUSS* 16 (1978): 1-303 and 24 plates. It contains references to earlier publications, including *ADAJ*. Final publication of the results is now nearing completion.

be the biblical Abel-Keramim³ (cf. Judges 11:33). Its linguistic root can be related to a Semitic root meaning "to be plentiful, copious, abundant, abound (water); to overflow."⁴ If so, the name would obviously have reference to the tell's spring, the only natural water source between Amman and Madaba. (See Pl. XXVI,1 for a view of the spring.)

Description of the Site

The name 'Umeiri actually applies to three tells roughly 250 meters apart, and lying in a somewhat triangular position to the northeast, southeast, and west. The tells are now separated, not only by a wadi, but also by the freeway. Because of the new road, the entire region is open to activity destructive of ancient remains; and in a sense, our entire project can be seen as a salvage effort. (Pls. XXIII,1; XXV,1; XXVI,1 and XXVIII,2 for photographs of the site.)

The northeastern tell is the latest in terms of its occupation history: Islamic Period. The southeastern tell is smaller and earlier in terms of occupation: Hellenistic, Roman, and Byzantine Periods. The western tell is the largest, approximately 7 hectares in size; and it is also higher than the others — ca. 900m. in elevation, situated some 60m. above the wadi. At its base is the major natural water source already mentioned. This western tell is the one on which our 1984 excavations focused.

The slopes of this tell incorporate several terraces, but rise steeply on all sides except the west, where the hill joins a ridge. Considerable evidence of architecture is to be seen on the site, especially on the summit, which, though irregular, is fairly flat. It drops off abruptly on all sides along a scarp which has proved to be the line of a defensive wall. (See Pls. XXIII,2; XXV,1 and XXVI,1).

There were huge quantities of sherds to be found on the surface of the site. These range in date from Chalcolithic through Early, Middle, and Late Bronze (especially on the slopes) to Iron I and II (primarily on the summit) and to a very few that are Hellenistic, Roman, and Byzantine.

The Questions to Be Probed

What was the archaeological team looking for? The problem which lies at the heart of our continuing investigation is the tension which appears to have existed in this region since antiquity between the processes of sedentarization, on the one hand, and beduinization, on the other. Whereas sedentarization has to do with the gradual establishment of villages and towns whose inhabitants engage in varying degrees in the production primarily of crops, beduinization has to do with the gradual reestablishment of nomadic or beduin food-getting strategies on previously cultivated lands.

More specifically, we are interested in the following questions: What is the rate at which these processes of sedentarization and beduinization have occurred within the project area? What are the biophysical and wider socio-political factors which affect the tension between the two processes and the rate at which both occur? What were the specific structural arrangements which made possible the persistence, during certain periods, of a particular balance between the two processes? What were the specific structural arrangements that made possible or enhanced destabilization of the tension? What are the identities of the various actors who have played a part in the historical drama represented by these processes, and are any of them mentioned in ancient sources?

To seek solutions for these and related questions, we initiated both the strati-

3. This is based on his topographical and linguistic identification of toponym nos. 95-96 in the list of Thutmose III; cf. his "A Bronze Age Itinerary in Transjordan," *JSSEA* 12 (1982), 55-74.

4. See Brown, Driver, Briggs, *A Hebrew and*

English Lexicon of the Old Testament (Oxford, 1962), p. 771; cf. Hans Wehr, *A Dictionary of Modern Written Arabic*, 3d ed. (1976), p. 683 — a reference for which I am indebted to James Battenfield.

graphic and surface-survey inquiries referred to above. In a methodological innovation, both the excavation on the tell and the field survey utilized randomly chosen squares as a control on the judgment samples. The results pertaining to everything discovered were recorded on standardized forms that allowed all data to be computerized. A preliminary summary of these results follows. (Compare Fig. 1, the topographical map.)

2. Discoveries on the Tell — By Location

The westernmost tell at Tell el-'Umeiri was divided into four "fields" for excavation purposes (A and B in the west, C in the north, and D in the south). Where successive occupations were discernible in a "field," these "phases" were designated by number ("Phase 1" being the most recent, with numbers increasing with depth of the probe into the tell). This section of the present report provides a summary of the discoveries in each of the four fields.

*The Western Citadel: Field A*⁵

Field A was opened at the western end of the flat summit, in the expectation that a gate or entrance might be discovered. Instead, all four squares soon came down on what are apparently the interior walls and rooms of a large structure we are calling the "Western Citadel" — a building perhaps comparable in function and certainly in date to W.F. Albright's "Western Tower" at Tell Beit Mirsim.⁶ This structure appears to date from Late Iron II (ca. 7th century B.C.), after which the area appears to have had only more limited use.

(Pl. XXIV,1 and Fig. 2).

Two major phases of construction were noted, each followed by an ephemeral phase. Both phases utilized basically the same plan, had roughly similarly sized rooms (e.g., 6.4x1.7m., 5.5x4.0m., 4.0x2.5m.), and employed beaten-earth surfaces. On the floors of the earlier, Phase-2 building were found many smashed but restorable whole pots. These were in addition to stone ballista, pounders, whetstones, pendants, figurines, fibulae, spindle whorls, a cosmetic palette and spatula, etc. (see Pl. XXIV,2 and 3). The walls of the later, Phase-1 building revealed a reorientation of the Phase-2 structure. However, these walls were not as well built, nor were the floors as well done, as in the earlier construction.

The massive size of the building's plan and the width of the individual walls (up to 1.65m.) indicate more than a domestic function for the structure. Whether that function was official, administrative, for defensive purposes, or something else can be more certainly ascertained after future broader horizontal exposure.

*The Western Defense: Field B*⁷

Tell el-'Umeiri is joined by a saddle on the west to a ridge of hills running north-south. This topographical feature makes the tell's western slope the one most vulnerable to enemy assault. Our assumption, therefore, was that this would be the logical place to look for the town's defenses. The five squares opened up on this slope did indeed uncover some five phases of the Iron II defenses and perhaps an earlier one from Iron I. (See Pl. XXV,1

5. This account draws on the report of Field Supervisor John Lawlor (Baptist Bible College, Pennsylvania), who was assisted by the following Square Supervisors and their associates: 7K40 — Anabel Lazaro, Caryn Broitman; 7K41 — John Hackwell, Anne Crawford; 7K50 — James Fisher, Elsie Peterson; 7K51 — Mary Steratore, Glenn Montgomery.

6. Cf. the discussion in Ruth Amiran and I. Dunayevsky, "The Assyrian Open-Court Building and its Palestinian Derivatives," *BASOR* 149 (Feb. 1958), pp. 25-32, based on W.F.

Albright's *TBM III*, pp. 15, 38-48, and Pl. 6 — a reference for which I am indebted to Randall Younker.

7. This summary depends on the report of Field Supervisor Doug Clark (Southwestern Adventist College, Texas), who was assisted by the following Square Supervisors and their associates: 7J87 — Lloyd Willis, Vilmar Gonzalez; 7J88 — Kenneth Carlson, My Louc Erhard; 7J89 — Richard LaCom, Gillian Geraty; 7J98 — David Merling, Steven Hawkins; 7K90 — Helen Dates, Jean Gard.

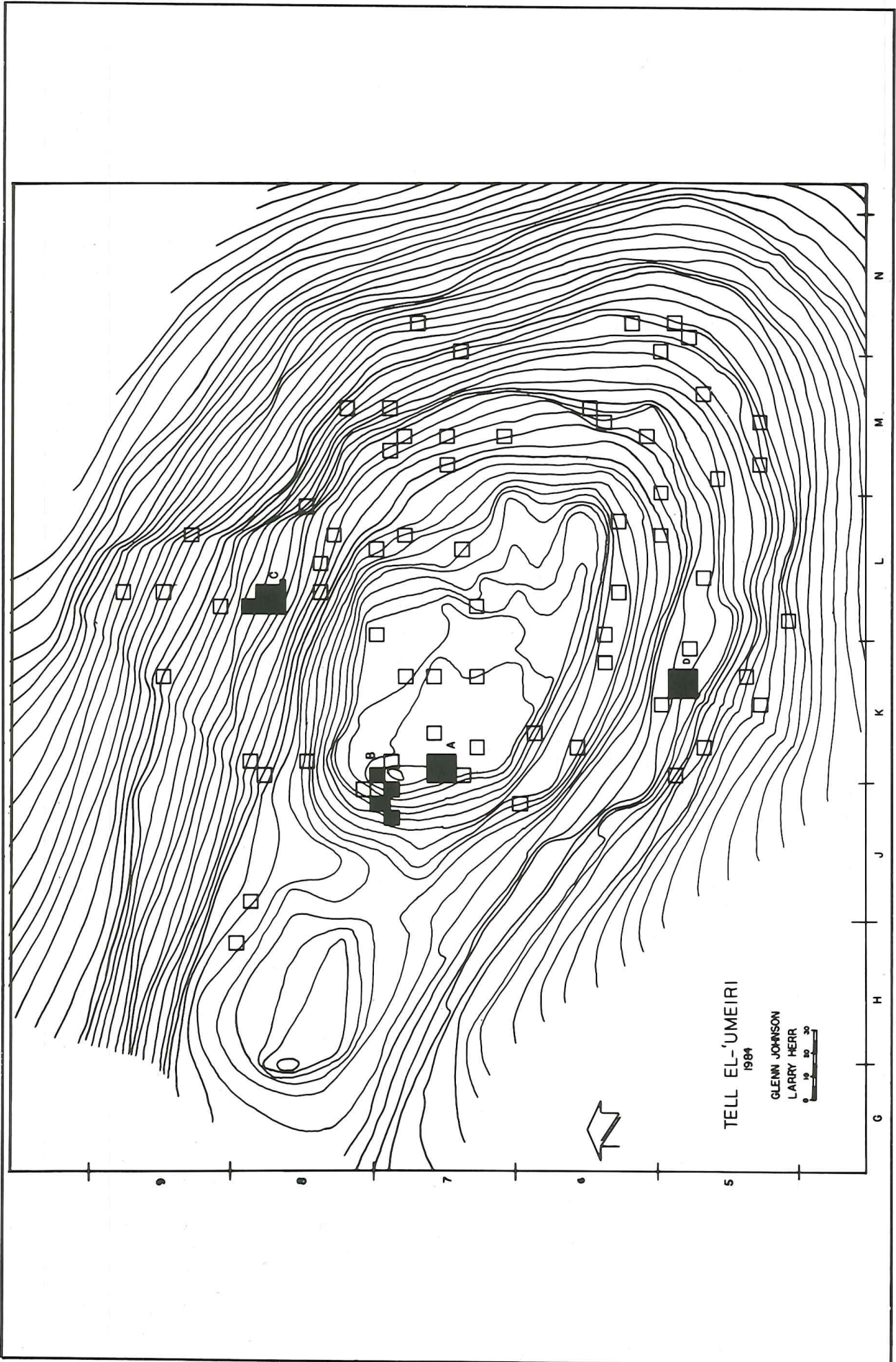


Fig. 1: A topographical map of Tell el-'Umeiri (West); permanent excavation fields begun in 1984 are in black; random squares are outlined.

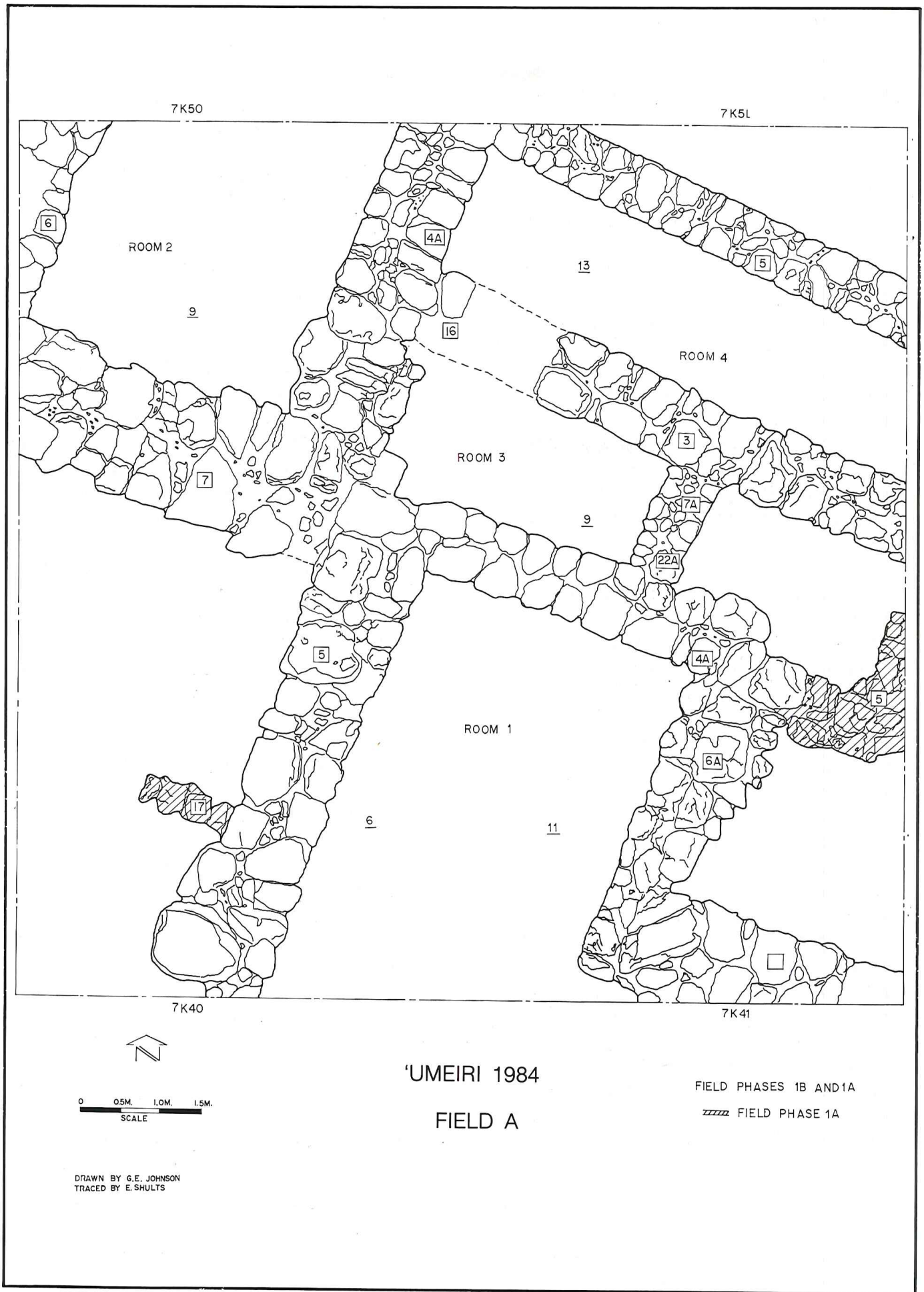


Fig. 2: The Ammonite Citadel remains in Field A; Field Phases 1A and 1B.

and Fig. 3).

Field B provides a section through the western slope not far from Field A, the Western Citadel. From top to bottom it uncovered a number of interesting features.

At the summit were found the remains of a massive mudbrick wall (platform? tower? tumble?), which appears to be Iron I (ca. 10th century B.C.) at the latest, though it was reused in Iron II. This wall covers nearly the entire square. The bricks either were purposely laid at angles during construction or their current position is the result of forceful destruction. From discovery of some five pits of varying sizes and shapes built on or into this mudbrick construction, it is apparent that the latter is at least 1.4m. deep, though probably much deeper.

At the crest of the hill lie two parallel stone walls, possibly a casemate defense, the outer wall being 2.0m. wide. Above this construction a storeroom destroyed in Early Iron II was found. The room's contents included three large Iron II collar-rimmed storejars *in situ* (set into the earthen surface supported by cobbles); a perfectly preserved juglet, whose floated contents were a few barley and flax seeds (the larger-than-expected size of these seeds indicating possibly an irrigation agriculture); and several stone ballista in the ashy remains of the destroyed room. Outside this perimeter wall on the downhill side, an impressive *terre pisée* glacis was found surmounted by a white chipped-*nari* layer held in place by stone rows whose section was pyramidal. The slope above this latter construction was 32°; below, it was 40°. The entire glacis was at least 2.0m. thick, and it may cover an earlier rampart below. (See Pl. XXV,2).

The Northern Terrace: Field C ⁸

Striking features of the north slope of the tell include wall lines originating at both eastern and western ends of the summit but which gradually converge at the bottom of the north slope in the vicinity of the important spring already mentioned. (See Pl. XXVI,1). In fact, the walled suburb may have been an attempt, at some point, to incorporate the spring within the walls (or at least to protect it). Crossing this isosceles-triangle-shaped area is a prominent bedrock shelf that contains in its eastern end, outside the wall, what looks like an Iron-Age tomb. Field C was laid out in such a way as to section this bedrock shelf and whatever lay below it.

The southern squares of the field came down immediately on the noted bedrock shelf. The face contained anomalies, but no tomb or cave entrance — possibly because this portion of the shelf was incorporated within the walls. The terrace in front of (to the north of) the shelf had evidently been used for quarrying. Most subsequent building remains had probably been robbed, for the excavators found only bits and pieces of walls, few surfaces to go with them, and mostly evidence of erosion. Some of our team theorized that this bedrock shelf may have been the path of a stairway from the spring to the summit. Just above bedrock, quantities of Early Bronze pottery were found, including a whole juglet. There were also numerous cupmarks in the bedrock — perhaps originally used to produce acorn meal (oak trees being abundant in the EB environment).

In the latest square to be opened to the north, farthest down the slope, a substantial revetment wall or tower appeared, dating possibly to Iron I, or even to the Late Bronze Age. Only further work will enable us to make better sense out of what has been found in this field.

8. The results in the field are credited to Field Supervisor James Battenfield (Grace Graduate School, California), who was assisted by the following Square Supervisors and their associates: 8L62 and 8L82 — Richard Davidson, Ross

Miller; 8L63 and 8L64 — Robert Merrill, Bryce Cole; 8L72 — Claire Peachey, Hanan Azar, and Stephanie Merling; 8L63 — Zdravko Stefanovic, Rene Stables.

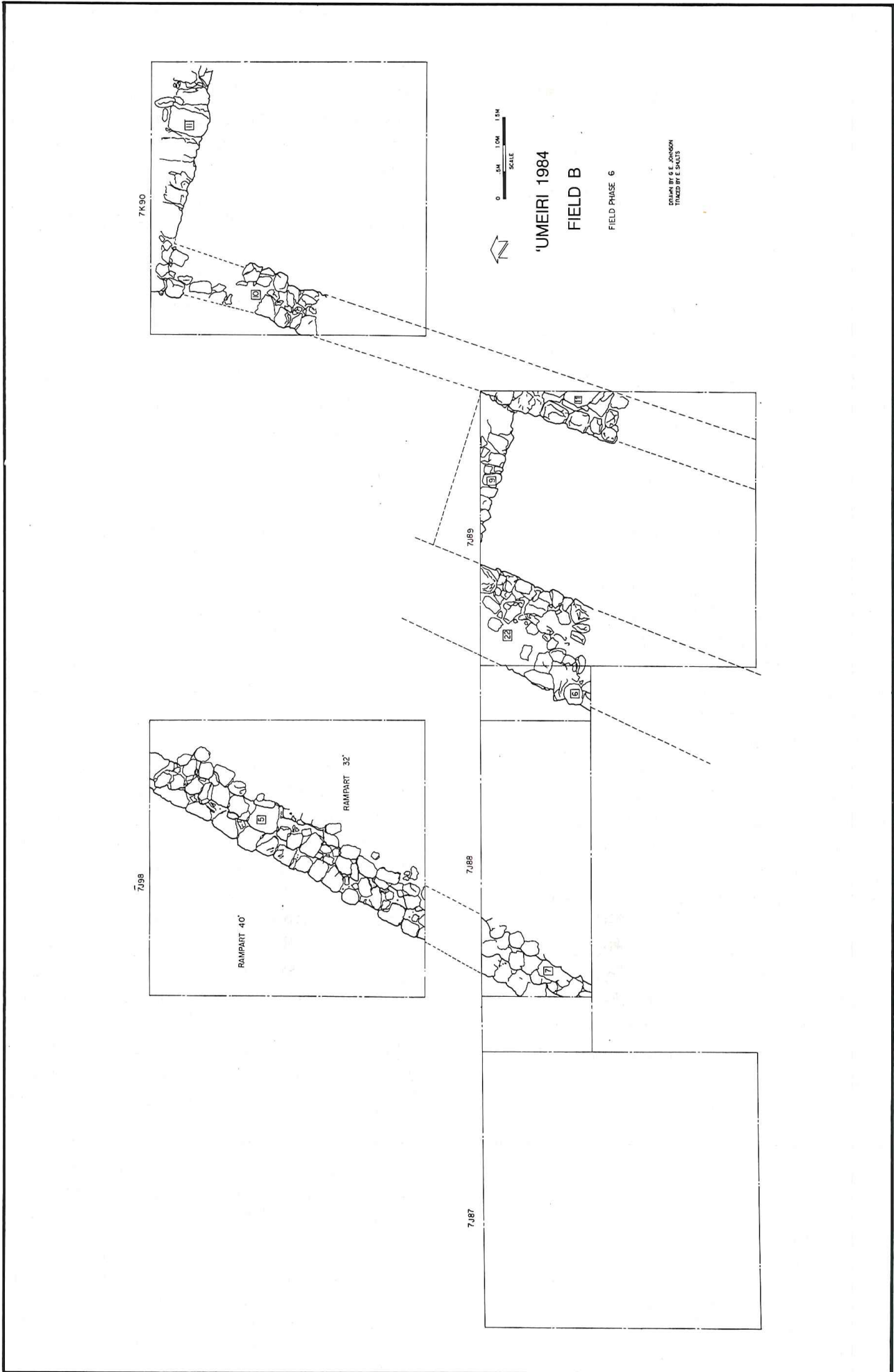


Fig. 3: The Western Defense System remains in Field B; Field Phase 6 with casemate wall and supporting rampart.

*The Lower Southern Terrace: Field D*⁹

The broad southern slope of the tell is made up of several terraces. Field D was opened up on the edge of the flattest, broadest (width of 20 to 30m.), and lowest terrace to be occupied. It proved to be a domestic housing area from the Early Bronze Age (third millennium B.C.).

Some five phases of occupation were identified here. Very little was exposed of Phases 5 and 4, the earliest phases that were reached. These phases appear to have walled rooms and may date to Early Bronze III and IV, respectively, though it is really premature to say.

Phase 3, possibly Early Bronze IV (ca. 2000 B.C.), was the most thoroughly preserved of the excavated remains. At least two houses were built into shallow pits some .50 to .75m. deep, with horizontal dimensions of approximately 4.0x4.0m. (See Pl. XXVI,2 and Fig. 4). In both cases, the door sills and steps leading down into the houses were preserved and showed wear patterns from ancient foot traffic. It must not be coincidental that both entrances are opposite the wadi overlook, at protective angles from the prevailing wind. Inside, the houses had beaten-earth floors, where the following features were found: mortars, a stone-outlined ash and refuse pit, a fine flint blade, and animal bones. In addition, each floor had a stone base for a central support pillar, placed approximately 1.6 to 1.8m. equidistant from the exterior walls. Originally, these would each have supported a wooden beam, which in turn would have supported roof rafters going out to the walls. Over the rafters, reeds would have been placed, many of whose impressions have been preserved in chunks of the fallen plaster.

Phase 2, possibly Early Bronze IVC (post-2000 B.C.), contained several walls, but no really cohesive plan emerged. The bits and tatters of Phase 1 dated to the Late Roman and Byzantine Periods, when the terrace was probably used for irrigation agriculture.

3. Discoveries on the Tell — By Type

A few general remarks are now in order concerning the kinds of material or objects found at the tell. These finds include a seal impression which is especially noteworthy as being a unique discovery of the name of an Ammonite king otherwise known only from Jeremiah 40:14.

*Pottery, Lithics, Objects*¹⁰

The chronological range of pottery sherds discovered on the tell has already been mentioned. Many whole pots were found, as well. Though not as abundant as the sherds, lithic-tool finds covered the same periods. The ongoing analysis of these two categories of artifacts will be of the utmost importance for the clearest understanding of our site.

Of some 500 objects found, about one-fourth may be considered household objects: millstones, grinders, mortars, pestles, whetstones, knives, spoons, flint tools, stoppers, rope stone weights, stone bowls, etc. About half are divided somewhat equally among industrial objects (spindle whorls, spindles, loom weights, weaving spatulas, burnishers, chains, etc.), weapons (slingstones, maceheads, and arrowheads) and unidentified objects. There are significant numbers of jewelry and cosmetic items (beads, pendants, bangles, earrings, cosmetic palettes, mir-

9. Field Supervisor Larry Mitchel (Pacific Union College, California) was responsible for the excavation and interpretation of the data summarized here, along with the following Square Supervisors and their associates: 7K76 — Marilyn Murray, Robert Collins; 7K77 — Steven Boozer, Howard Krug; 7K86 — Colin House, Jason Mitchel; 7K87 — Hans Curvers, Cheryl Jacob.

10. Larry Herr was responsible for pottery proces-

sing, assisted by Registrars Mary Ellen Lawlor and Hester Thomsen and the help of the Lawlor girls: Karis, Nancy, and Renee. Many other volunteers were involved in cutting, drawing, describing, reconstructing, etc. Michael Alcorn processed the lithics; and object registrars Elizabeth Platt and Siegfried Horn, assisted by Lotta Gaster, identified and catalogued all the small finds, which were drawn by artist Peter Erhard.

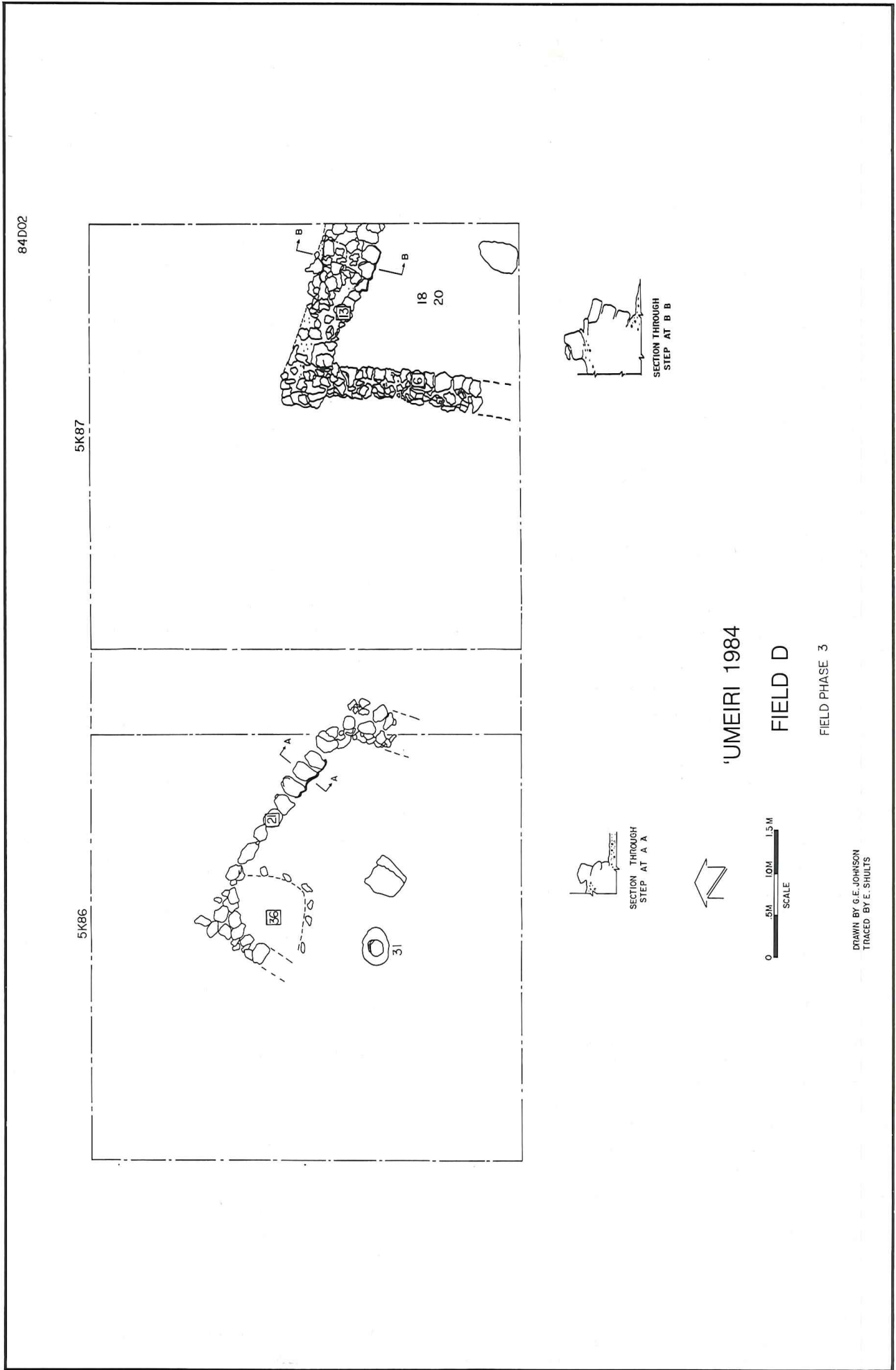


Fig. 4: The Lower Southern Terrace remains in Field D; Field Phase 3 consisting of EB IV domestic dwellings.

ror, etc.) and cultic objects (mostly figurines). The remainder may be classified as clothing (buttons, fibulae, pins), toys (cart wheels), agricultural implements (stone hoe), and miscellaneous (shells, glass, coins, ostraca, scarabs, seals, and seal impressions). Together, these objects beautifully illustrate life in the Bronze and Iron Ages especially.

*Seal Impression with Royal Name*¹¹

The single object that caused the most interest was a small ceramic cone found by Lloyd Willis (Spicer College, Pune, India) in the sift from soil near the mound's surface in a random square. (See Pl. XXVII, 1 and 2). Larry Mitchel immediately recognized it as inscribed on its flat end. Within a couple of days, Larry Herr had a definite reading: *lmlkm-'wr 'bd b'l-yš'* ("belong to Milkom-'ur, minister/servant of Ba'al-yasha"). The Ammonite script and design in the center (a winged scarab, flanked by two standards surmounted by sun discs and crescent moons) are typical of the 7th/6th century B.C. Paleographically, Herr dates the impression to ca. 600 B.C. Functionally, it may have served as a stopper — with identification mark — for a juglet with unknown contents.

Both of the personal names in the inscription constitute "firsts". Surprisingly,

the name of the owner, Milkom-'or ("Milkom is light") or Milkom-'ur (Milkom's flame"), is the first known occurrence of the well-known Ammonite divine name Milkom as one of the elements in an Ammonite proper name. Obviously, the person with this name was a prominent government official, because in these Iron-Age seals, the name which follows the one identified as "servant of" is invariably royal. In this inscription, that royal name, too, is a "first": Ba'al-yasha' ("Baal saves"), or Ba'al-yisha' ("Baal is salvation"), is the first extra-biblical confirmation of the Ammonite king Baalis mentioned in Jer 40:14.¹²

The difference between Jeremiah and our seal impression in the spelling of the royal name may be explained in at least three possible ways. It may represent an intentional pious change in the Bible to avoid heathen theology,¹³ an unintentional change reflecting the way the Judeans heard the name pronounced in Ammonite (partially preserved, perhaps, in Jer. 40: 14 LXX, as Βελισσα)¹⁴ or simply a hypocoristicon.¹⁵

4. Discoveries of the Regional Survey¹⁶

The work of the regional survey had a threefold focus. It investigated a series of

11. For a fuller discussion of this seal, see Larry G. Herr, "The Servant of Baalis," *BA* 48 (September 1985), pp. 169-172, and Randall W. Younker, "The Motifs on the Baalis Seal from Tell el-'Umeiri," *BA* 48 (September 1985), pp. 173-180.
12. During the excitement of discovery, it was Robert G. Boling who called Herr's attention to the reference in Jer 40:14 and suggested the identification of the two kings. This find is indeed the first-known extra-biblical reference to Baalis, despite G. Ernest Wright's claim about "Ba'lay" being on the Tell-Siran bottle (see his president's report in the 1973-74 *ASOR Newsletter*, No. 9, [April 1974], p. 3); he simply misunderstood F.M. Cross. Unfortunately, this misinformation is being perpetuated; cf. Charles L. Feinberg, *Jeremiah: A Commentary* (Grand Rapids, Mich., 1982), p. 272.
13. There are other examples of this in the Old Testament; an example contemporary with this name-occurrence in Jeremiah is called to attention by W.H. Shea, "Mutilation of Foreign Names by Bible Writers: A Possible Example

from Tell el-'Umeiri", *AUSS* 23 (Spring 1985), pp. 111-115. This general explanation was first proposed on the dig by Robert Boling.

14. This was suggested to Herr by Dennis Pardee. See also E. Puech, "L'inscription de la statue d'Amman et la paléographie Ammonite," *RB* 92 (1985), p. 20, 24.
15. F.M. Cross, Jr., "Notes on the Ammonite Inscription from Tell Siran," *BASOR* 212 (December 1973), no. 23 on p. 15; also in more detail in a personal communication to Geraty, Feb. 4, 1985.
16. The preliminary report and site list of Field Supervisor Robert G. Boling (McCormick Theological Seminary, Chicago) are the basis for what follows. He was assisted in the field by the following associates: Jon Cole, survey engineer and hydrologist; Michael Alcorn, biological anthropologist and lithicist; Randall Younker, zooarchaeologist and botanist; Bruce Cole, photographer; Mohammad Mihyar and Hanan Azar, translators; and Allison McQuitty, ethnoarchaeologist.

randomly chosen 200 x 200m. squares within a 5 km. radius of Tell el-'Umeiri; it engaged in site-seeking within the same territory; and it entailed specialized studies by various staff members. As the team carried out their research, they took special note of current patterns of land-use (especially water resources), as well as giving attention to plant communities (especially in relation to the geographical-environmental contexts of those plant communities). The team also carried out numerous interviews with villagers and farmers whom they met.

The season's goal was to survey a minimum of 30 randomly selected squares; 38 were actually surveyed. Interestingly enough, of these squares none was devoid of artifacts. Visits to several of them led the team members to other sites, many of which would probably have been found through no other means. Some 55 sites (a *site* being defined as "a place where one can find clustered evidence of ancient handiwork") were surveyed, mapped, and catalogued. For two reasons, most of the site-seeking was done in the northern portion of the 5 km. radius intensive survey region (Fig. 5): first, the rapidly-expanding urban growth in the region, aided by the new Amman-International Airport Freeway, means that the archaeological evidence is fast being destroyed; and furthermore, much of the southern half of the survey region had already been traversed by Robert Ibach's Hesban survey team in 1976.¹⁷

Pottery was naturally the most abundant artifact found. Absent or scarce were sherds from the following periods: Chalcolithic, Middle Bronze I (EB IV), Persian, Hellenistic, Nabataean, Abbasid, Fatimid, and Ottoman. Few sherds were found from Middle Bronze II, Late Bronze, and Modern. The Ayyubid/Mamluk Period was securely represented, but not abundantly so. Truly numerous were sherds from Early Bronze, Iron I and II, Early and Late

Roman, Byzantine, and Umayyad.

It is interesting to note that where data are most abundant, the percentages of correlations are closely comparable between this 1984 survey by Robert G. Boling's team and the earlier one in 1976 under the direction of Ibach. This result engenders confidence in the usefulness of both surveys, including the methodologically innovative random sampling employed in 1984. Where the figures are very different, i.e., the Hellenistic Period, there may be genuine historical/territorial factors to account for them.

Among the many interesting sites discovered, some warrant special mention. Possibly the oldest, largest, and richest Palaeolithic site (no. 53) yet discovered in Jordan was recognized first by Michael Alcorn during the sherding of an adjoining random square. (See Pl. XXVIII,1 for a photograph of this site.) The first inhabitants may have been drawn to the site by a seasonal lake to the southeast. In 1984 virtually the entire 300 x 1000m. site was under cultivation (today it is part of Radio Jordan's fenced-in transmission towers compound). In just a few hours, hundreds of lithic artifacts were collected, which, according to prehistorians Gary Rollefson and Al Simmons, include Acheulean hand-axes (Lower Palaeolithic), predominantly Lavalloiso-Mousterian tools (Middle Palaeolithic), and some Neolithic/Chalcolithic specimens; no good Upper Palaeolithic tools were recognized.

Opposite Tell el-'Umeiri, on the summit of the wooded hill just to the south, a 12 x 12m. Early Bronze watchtower (no. 2) was found. (See Pl. XXVIII,2). It would have been needed by the inhabitants of the slightly lower tell, in order to keep track of what was going on in the Madaba Plains.

From the Roman Period, a hitherto undiscovered station on Trajan's *via nova* (no. 18) was identified by remaining portions of the ancient road and by three milestones (uninscribed) — two of them in

17. Ibach has completed his manuscript for the final publication of the Hesban regional survey and it

will be out shortly from Andrews University Press as *Hesban III*.

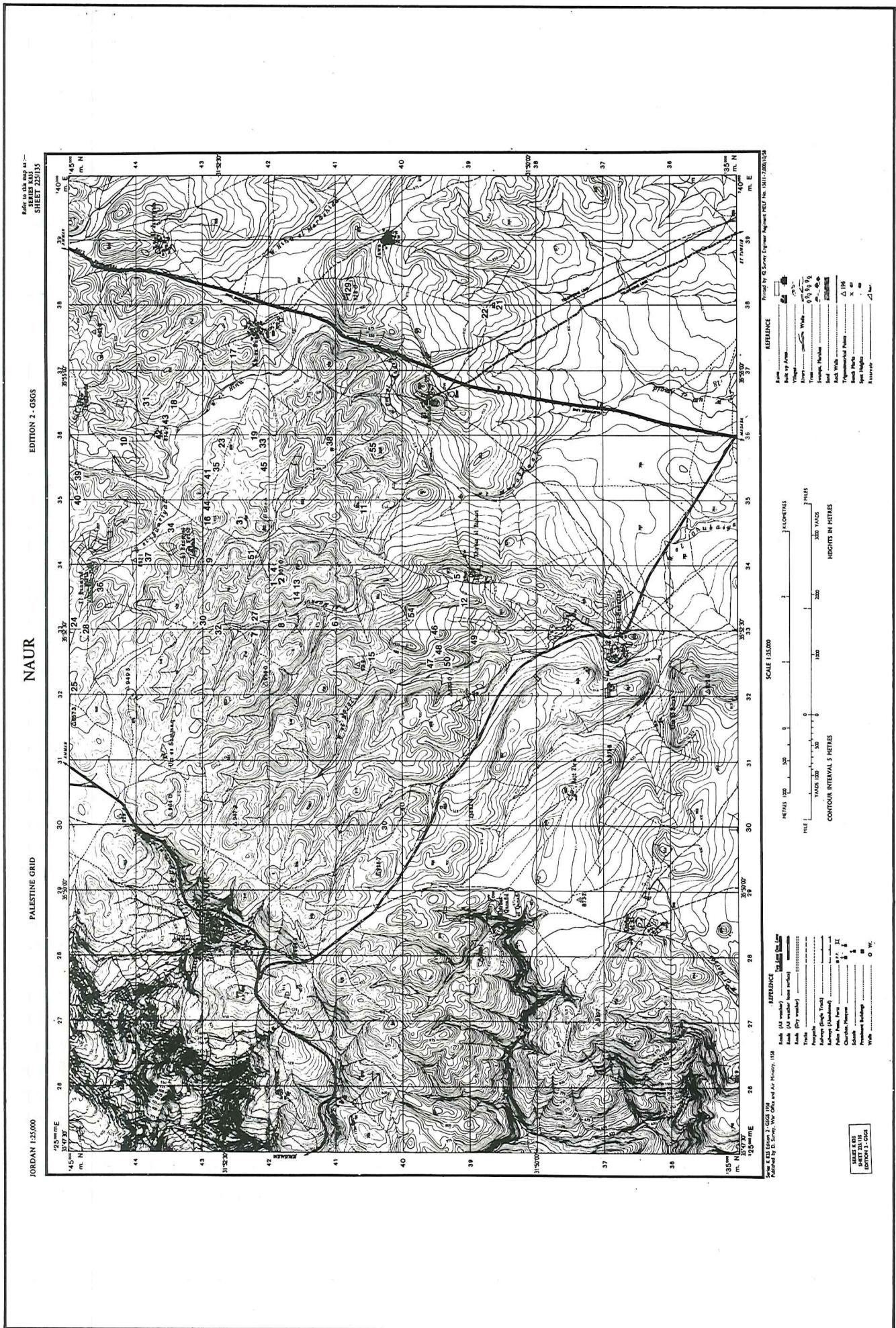


Fig. 5: The findings of the regional survey in a 5 km. radius around Tell el-Umeiri.

secondary use.¹⁸ (See Pl. XXIX,1). This find is thought to establish the route of the *via nova* south of Amman as running to the east near el-Yadoude, rather than to the west toward el-'Al.

An impressive columbarium (no.39) artificially carved out of the hillside, was found, dating possibly to the Byzantine Period. (See Pl. XXIX,2). More than 15m. on a side, it was composed of two chambers full of hundreds of shallow niches for cinerary urns.

From the "Classical" Period, numerous cemeteries were discovered. These included hundreds of opened tombs. Just to the north of the tell, a nearly completed rolling stone was identified in a Roman/Byzantine cemetery (no. 3). In another cemetery (no. 26), the team discovered a basalt stele carved in low relief; it appears to depict a Stylite monk standing before his "pillar." (See Pl. XXX,1).

Nearly half of the sites identified by the regional survey are characterized by

small rectangular (but sometimes round) "towers," with or without perimeter walls, and having associated structures (cisterns, wine presses, heaps of stones from field cleaning, etc.). The dating is mostly to the Iron Age (1200-500 B.C.). In most cases, these structures are too small (from 4.0x4.0m. to 18x18m.) or too poorly located to serve a military function. On the edge of what used to be forested ridges, they command broad views of farm fields today and probably did so in antiquity as well. (See Pls. XXX,2 and XXXI for photographs of such towers). Thanks to the cooperative work of archaeologists, zooarchaeologists, and palaeobotanists, we now have a clearer perspective on Iron Age agriculture and the important context it provides for a notable period of occupational intensity at Tell el-'Umeiri.¹⁹

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18. It should be noted that Ibach's team saw and described one of the three milestones, but did not recognize its significance (this information furnished to Geraty in a private communication from Ibach).

19. From the foregoing, it is obvious that other key personnel, in addition to those already mentioned, were involved in a cooperative endeavor, sometimes on the tell or in the region, but more often in the laboratory or headquarters camp. Relations with some fifty local workmen and numerous governmental authorities were eased through the assistance of Hufzi Haddad, inspector of the Amman Region for the Jordanian Department of Antiquities.

The photography team was headed by Don May, with the assistance all summer of Larry Coyle and Jonathan Hearon, Robert Artman developed a video program, in addition to his time-consuming role as handyman/engineer. Glenn Johnson supervised the preparation of a topographical map, the laying out of the grid, and the recording of architectural finds, with the assistance of Merling Alomia, Raschel Barton,

and Robert Loos.

Though Øystein LaBianca set up the ecology laboratory for the processing of animal bones (by Randall Younker and Larry Rich), plant remains (by Randall Younker), seeds (by Yvonne Hackwell), etc., it was Patsy Tyner who ran it. Claire Peachey assisted in the area of geology. James Brower built and operated the computer system used at camp, where he entered the field data and provided supervisors with integrated locus printouts.

David Merling headed a camp staff that provided everyone else with crucial services. Rachel Hallock presided over the kitchen, with the help of Myrtle Miller, Elvira Ferreira, and the younger Hackwells — Natalie, Bronwyn, and Andrew —, not to mention many volunteers. Nursing service was provided throughout by Jean Gard, and physicians who took turns were Erwin Syphers and Gary Frykman. The latter's family (Annette Frykman and sons Gregory, Philip, and Eric) all volunteered on the tell, as did certain residents of Amman from time to time. Lloyd Willis acted as chaplain and JoAnn Davidson did secretarial work.