

An Overview of Archaeological Research Conducted At Kenan Tepe During the 2001 Field Season

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During the summer of 2001 members of the Upper Tigris Archaeological Research Project (UTARP)¹ conducted a second season of archaeological research at the site of Kenan Tepe in the Ilisu dam area of southeastern Turkey.² The site of Kenan Tepe lies on a rock outcrop overlooking the Tigris River about twenty kilometers west of the confluence of the Tigris and Batman rivers (**figure 1**). During the course of the eight week field season, which took place between June 21st and August 24th, 2001, UTARP team members conducted various operations in seven areas of the site. UTARP team members also positioned the site on the Universal Transverse Mercator (UTM) world grid, made a high-resolution topographic map (**figure 2**), took nearly 2000 digital photographs, continued to develop a method of making trench maps using digital images, and perfected our database which now contains all of the data collected during the 2000 and 2001 field seasons. The purpose of this report is to briefly summarize the results of the research conducted during the 2001 field season and to highlight avenues for future research at this important site.

Area A

Area A is located at the top of Kenan Tepe's main mound (**figure 2**). During the 2001 field season UTARP team members continued two major operations begun in this area in the previous season. First, a team of osteologists from the University of Utah opened a series of 2 by 10 meter trenches radiating out from trench A1. The purpose of this

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operation was to illuminate the size, density and depth of Kenan Tepe's late period cemetery. And second, in order to determine the overall chronology of the site, UTARP team members continued excavation in the 2 by 25 meter step trench (trench A2).

In our report of the year 2000 field season (Parker et al. 2002a, 2002b) we described the discovery of nine burials in a single 5 by 5 meter trench (trench A1, **figure 2**) at the top of Kenan Tepe's main mound. During the 2001 field season Professor Richard Paine (University of Utah) led a small team of osteologists in the exploration of this cemetery. To determine the extent of Kenan Tepe's cemetery, UTARP team members laid out a series of 2 by 10 meter trenches (trenches A3 through A7). These trenches were excavated to the approximate level of the shallowest burials discovered in trench A1 (approximately 40 cm). Using this method, UTARP team members discovered a total of twenty-three burials in an area measuring approximately 80 square meters. The locations of individual burials were mapped as soon as the existence of burial pits or human remains were discovered and ten burials were chosen for complete excavation. The analysis of these remains is ongoing. Our preliminary estimates suggest that the excavated area represents slightly less than 10% of the total cemetery which could be as large as 800-900 square meters and may contain as many as 150-400 individuals.

We encountered two distinctive burial patterns in the Kenan Tepe cemetery. The more prevalent pattern excavated so far conforms to Islamic tradition. Individuals are extended, with their feet to the east, and arms crossed over their chest or pelvis. The occipital portion of the cranium is placed on a small stone or potsherd. These burials are found at different levels, between 40 and 80 cm below ground surface. This may reflect Islamic tradition, which calls for different burial depths for males, females, and children, or it may reflect multiple burial phases. The second burial pattern, referred to by regional archaeologists as cyst tombs, appears to conform to Roman period burial traditions in the region. In this burial pattern, individuals were interred in a stone lined burial chamber. Orientation is less precise than among the Islamic tradition burials. Our working theory is that the cemetery was in use during the transition between the Byzantine and Islamic periods.

Trench A2 is a 2 by 30 meter step trench located on the north slope of Kenan Tepe's main mound. The goal of this operation is to illuminate the stratigraphic sequence of the site by excavating this trench in several large steps to the bottom of the main mound. To reach this goal we laid trench A2 according to the natural slope of the hill, rather than the cardinal directions (**figure 2**). Trench A2 is thus far divided into three steps: Step 1 between the 0-5 meter markers; Step 2 between the 5-10 meter markers and Step 3 between the 10-25 meter step (this third step will eventually be further subdivided).

During the year 2000 field season UTARP team members exposed a series of east-west running walls and cobble surfaces tentatively dated to the Hellenistic period based on our initial impression of the ceramics (Parker et al. 2002a). Further excavation in this area during the 2001 field season uncovered earlier phases of surfaces and well preserved hearths. The highlight of excavation in this trench was the discovery of the impressions of a straw or reed basket resting on a well preserved surface. Excavation in steps 2 and 3

concentrated on removing topsoil, sub-topsoil and layers of disturbed fill and mud brick collapse. At this point we estimate that the step trench is approximately 50 to 60 percent complete. We will attempt to complete the excavation of this unit in during the 2002 field season.

Area B

During the year 2000 field season UTARP team members opened two five by five meter trenches in Area B (Parker et al. 2002a, 2002b). These trenches revealed that Kenan Tepe's main mound contains extensive remains dating to the Early Iron Age (ca. 1100-900). In order to increase our exposures to this period we broadened one of our existing trenches from a 5 by 5 to a 10 by 10 meter trench in Area B, and in Area C we opened two new 10 by 10 meter trenches (see below).

Trench B4, our newly widened 10 by 10 meter trench, is characterized by two levels of stones scattered across the entire northern and eastern parts of the trench. These stones, which appear to have been founded on soft ashy fill, do not seem to form a coherent structure or foundation course. A well preserved oven, securely dated by numerous examples of Early Iron Age corrugated wares, was discovered in the center of the trench west of the stone features resting on the same ashy deposit. Our working hypothesis is that the rocks may have toppled from a once-coherent structure or large wall that lies at least partially outside the trench.

Area C

During the year 2000 field season UTARP team members began two 5 by 5 meter trenches in Area C (trenches C1 and C2). Trench C2 initially produced architecture dated to the Early Iron Age by an abundance of Early Iron Age corrugated ceramics. Late in the 2000 season we reached an earlier architectural phase dated by the so-called "Red-Brown Wash Ware" assemblage for which we now have three carbon-14 dates. Trench C1 also produced architecture dated by these ceramics. These findings led us to open two new 10 by 10 meter trenches in Area C during the 2001 field season (trenches C3 and C4) and to continue work in the 5 by 5 meter trench C2 begun during the 2000 field season (see **figure 2**).

Early Iron Age remains in this area (trenches C3 and C4) are characterized by several tandoor type ovens which are surrounded by earthen work surfaces. Several of these contexts produced slag samples which are currently being analyzed at Oxford University. A substantial stone wall was discovered traversing the entire length of trench C3. The foundation of this wall is more than nine meters long and about one meter wide. A similarly large wall was unearthed in trench C4.

In trench C2 UTARP team members excavated the northeastern corner of what appears to be a well built domestic structure (**figure 3**). The archaeological contexts in and around this structure contained large amounts of ceramics belonging to the so-called Red-Brown Wash Ware assemblage (**figure 4**) and several carbon samples. The carbon samples,

which were taken from three different loci in and around this structure, yielded 2-sigma calibrated carbon dates of 1920 to 1680 B.C. (L2082 KT2584), 1950 to 1670 B.C. (L2087 KT2614) and 1940 to 1740 (L2084 KT 2576 [**figure 5**]). These dates thus anchor the Red-Brown Wash Ware assemblage to the period around 1800 B.C.

Several slag pits and an apparent metal processing area were also discovered in Area C. Although the analysis of these data is still underway, remains of copper, bronze and, surprisingly, iron, have been discovered in reliable early second millennium contexts. The early date of the iron finds from Kenan Tepe is notable, as is the fact that the iron slags lack most substances aside from iron and calcium carbonate. It is, however, difficult to determine whether the inhabitants of Kenan Tepe were intentionally making iron or whether these samples are a byproduct of other pyrotechnic activities. Nevertheless, the slag and iron debris analyzed thus far show little or no evidence of copper or tin except in very low trace levels. Furthermore, these samples have high levels of heavily reduced calcium and carbon. These observations would support the hypothesis that the discovery of iron-rich slag in early second millennium contexts at Kenan Tepe might be evidence of very early experimentation with iron production.

Area D

During the year 2000 field season UTARP team members opened two 5 by 5 meter trenches (D1 and D2) and one 2 by 2 meter sounding (D3) on a small protrusion on the steep eastern slopes of Kenan Tepe's main mound (Parker et al. 2000a). During the 2001 field season the two 5 by 5 meter trenches (D1 and D2) were combined into one 5 by 10 meter trench (renamed D5 [**figure 2**]). The fact that the 2 by 2 meter sounding (D3) yielded extraordinarily well preserved walls and associated surfaces prompted us to expand this unit into a 5 by 10 meter trench (renamed D4). Our findings in trench D4 proved to be one of the highlights of the 2001 field season. This operation yielded architecture and large amounts of ceramics belonging to the Red-Brown Wash Ware assemblage (**figure 6**). C-14 samples taken from contexts yielding identical ceramics in trench C2 show that this assemblage and its associated architecture dates to the early second millennium B.C. (see above).

Excavation in this unit unearthed what we believe to be a well preserved public building. This building included a series of floors that covered nearly the entire southern two-thirds of the trench. Large amounts of ceramics were contained within the matrix of these floors. The floors were abutted on the west by a narrow wall (**figure 8**). Three features were bonded to the east side of this wall. The first is a surface or pavement consisting of very large stones. Bordering this feature on the north was a single course of mud bricks forming a wall perpendicular to that mentioned above. These bricks were roughly square measuring approximately 40 by 40 cm. North of and bonded to the mud brick wall was a narrow pavement of upstanding river cobbles. The pavement is approximately 0.65m wide (north-south) and extends for 1.4m east-west before entering the east baulk of the trench.

The nature of the deposits in trench D4 suggests that all of these remains belong to a single large structure. The series of floors are certainly the remains of inside surfaces indicating that the east outside wall of this structure has been lost to erosion.

Area F

Area F is located northeast of the main mound on a flat terrace approximately 23 meters above the Tigris River (**figure 2**). During the 2001 field season UTARP team members opened two new trenches (F7 [10 by 10 meters] and F8 [5 by 10 meters]) and continued work on four existing trenches (F1, F2, F4, and F9 [formerly F3]). See **figure 7**.

For ease of discussion, we have organized our excavated contexts in Area F into seven levels. These levels generally correspond to contemporary stratigraphic layers, but since we have yet to fully connect many of these layers horizontally or by chronometric dating, we must emphasize that the current grouping is tentative and may change in subsequent reports.

Level 1

The first level in Area F consists of several simple pit burials that cut the cobblestone surfaces and other loci of level two. In most cases, preservation is too poor to determine sex or age, but analysis is ongoing. These burials and consequently this level are difficult to date.

Level 2

This level consists of contemporary cobblestone surfaces, found in trenches F1, F2, and F7, small ovens, found in trenches F2 and F8, and stone installations, found in trench F8. The finds discovered in trenches F7 and F8 during the 2001 season are consistent with those of the 2000 field season and reinforce our interpretation of this part of Area F as the location of outdoor activity areas. It is also likely that the cobbles encountered in F4 (**figure 8 #5**) also belong to this level.

We found a fragmentary cobblestone surface covered in pottery and animal bones in F2 and F7 that is at least 6-7m E-W by 2-4m N-S, and continues into the northern baulks (**figure 7**). During the 2000 season, an oven was found directly adjacent to this surface in F2. This oven is identical in dimensions and elevation to the oven found during the 2001 season just 4m to the south in trench F8. The cobblestone surface (F2-F7), two ovens (F2, F8), and three 0.50m diameter stone installations, which may be potstands, (F8) are indicative of an outdoor activity area occupying a space roughly 8m E-W by 10m N-S. If the cobblestone surface uncovered during the 2000 season in F1, located 5m west and 5m south of F8, is contemporary with the surfaces in F2 and F8, then this activity area covers 450 sqm.

Level 3

Level three consists of several perfectly round pits in trenches F7 and F8, a mudbrick wall in trench F7, thick ash deposits in trench F9 (formerly F3), and layers of fill in

trench F1. Excavations beneath the level 2 cobblestone surface in trench F1 yielded layers of fill but no features that can be associated with the pits and walls in trenches F7 and F8. Excavations of contemporary levels in trench F9 uncovered ash layers but no architecture, surfaces, pits or burials.

Levels 4 and 5

Levels 4 and 5 have only been reached in F1 and F4. Level 4 contains a mud brick pavement and an associated square structure, which is likely an oven or kiln. Level 5 contains a round oven/kiln, a pit, and ash deposits (**figure 7**). These levels are tentatively dated to the turn of the fourth – third millennium but additional study of artifacts and forthcoming C-14 dating is necessary before definitive statements can be made about the chronology.

Level 4

Hoping to reach the Late Chalcolithic layers of F4 from above, we opened trench F1 during the year 2000 field season just a few meters from F4 on the top of the hill. In 2000 we excavated the level 2 cobblestone surface, about 0.75m below the ground surface, and several intrusive level 1 burials (see above).

Beneath the cobblestone surface and burials, we encountered layers of fill (level 3), which overlay a mud brick pavement, a mud brick structure, and an area of baked clay. The pavement consisted of 0.20m – 0.40m by 0.10m bricks laid with the narrow or ‘stretcher’ side up, oriented E-W in a single course dozens of rows wide, covering nearly the entire northeastern 2/3 of the trench in a 3.5 by 3 meter area. This pavement abutted a 1.25 by 1.25m square brick structure (in F1) with single brick-row walls located just south of the center of the trench. This structure is likely the base of an oven/kiln. Both the interior and exterior of its walls were literally baked into a 0.02 meter thick black, pie-crust-like layer.

Level 5

Beneath the pavement, probable oven/kiln and baked clay area in trench F1, we uncovered the base of yet another pyrotechnic installation in the center of the trench, and a small pit in the southeastern corner of the trench. The feature was round, 1.60m in diameter, with thin, 0.10m wide brick walls preserved only one course (0.10m) high. A large clay stand was found inside this feature. This rectangular stand, essentially a large mud brick with dimensions 0.64m by 0.30m wide and 0.09m high, is located towards the eastern side of the oven/kiln. The stand had carefully formed sides, apparently smoothed with a spatula or similar tool. The center of the oven/kiln consisted of baked clay turned bright orange from heating, while the entire area of the trench surrounding this feature was covered with about 0.10m of dark black ash and some patches of yellow clay (similar to the clay discovered in F4, level 6 [see below]). A few bits of light weight, porous, greenish yellow slag were found in this ash in the northwest corner of the trench, but no other debris or tools were found that might indicate the function of the oven/kiln.

Levels 6-7

Levels 6-7 have only been reached in F4 and F5, and consist of remains dated to the Late Chalcolithic by ceramics and four C-14 samples (only F4 is discussed here, F5 is discussed in the 2000 report [Parker et al. 2002b]). Level 6 consists of ash-filled pits, fill, and the ash and debris layers found in and around a large oven/kiln (L4009, L4027). Level 7 is the oven/kiln itself, which is the earliest structure in Area F.

Late Chalcolithic remains eroding from the steep eastern slopes of Area F above the Tigris River were first explored during the 2000 season (Parker et al. 2002a, 2002b). Further excavation in trench F4 during the 2001 field season revealed a large mud brick oven/kiln approximately 2.0m in diameter, half buried in the western baulk 2.60m below the ground surface. A carbon sample (KT4061) excavated from locus 4004 near the top of the debris accumulated in the oven/kiln yielded a 2 sigma calibrated carbon date of 3350 to 2910 B.C. (**figure 7**). In total, 1.3m of debris were excavated from this feature. Figure 11 illustrates a sample of the ceramics recovered from within the oven/kiln. The earliest layer of debris yielded both a reasonably large corpus of ceramics and three more carbon samples. These samples yielded 2 sigma calibrated dates of 3360-3030 (KT4157), 3630-3570 and 3540-3360 (KT4229), and 3660-3620 and 3600-3520 (KT4253 [**figure 7**]). The walls of the oven/kiln were sunk into virgin clay and the walls of the kiln curved slightly inward, suggesting that the structure originally had a domed roof.

The material recovered from this oven/kiln yielded few clues to its function. Instead we interpret this debris as secondary trash deposits. These deposits were rich in artifacts, such as spindle whorls or loom weights made from bored pot sherds, a 12.4 by 2.8 cm chert blade (see Parker 2002b), and an anvil or kiln stand. Animal bones were the most common material found inside the kiln. These bones, many of which were burnt, represented a variety of animals including pig and wild sheep (a complete analysis of this material will be undertaken during the 2002 field season).

Conclusion

The above discussion illustrates that Kenan Tepe was occupied during four broad periods: the Late Chalcolithic, the first half of the Early Bronze Age, the early second millennium and the Early Iron Age.

Remains dating to the Late Chalcolithic and the first half of the Early Bronze Age were discovered in abundance in Area F. Since these remains are not covered by later material, the data suggest that Kenan Tepe probably reached its largest extent during the late fourth and early third millennia B.C. when the site may have been between four and six hectares in total size. Thus far, none of our trenches in Area F have yielded domestic architecture. Instead, these levels are characterized by several large pyrotechnic installations and significant ash deposits.

A preliminary analysis of the ceramics from Area F has not yet revealed any of the characteristic "Uruk" style ceramics. Instead, the ceramic assemblage appears to be of a

local flavor. The only exception to this is a nearly complete ceramic vessel that might be an example of an Uruk style "dropping spout" vessel (see Parker et al. 2002b). Nor have we recovered any of the other "markers," such as Uruk glyptic, clay cones and accounting tools, commonly used by scholars to argue for the direct involvement, or the presence, of southerners in the Mesopotamian periphery (Algaze 1993, 2001; Stein 1998, 1999, 2001). This being the case, the potential to research the effect that the so-called "Uruk Outreach" (Algaze 1993; Pollock 1992; Rothman 2001; Stein 1999, 2000, 2001) had on the local Late Chalcolithic population of southeastern Anatolia is obvious. In future seasons part of our research agenda will be to discover if production at this local Anatolian town was fueled by intra or interregional demand, to investigate whether or not local elites controlled production, and to examine how interregional contact affected the development of complexity at the site. In the mean time we are conducting a comprehensive analysis of the most reliable loci excavated from our Late Chalcolithic contexts in an effort to clarify the Late Chalcolithic ceramic sequence at Kenan Tepe and contribute to the analysis of the overall chronology of interregional interaction in this period (cf. Wright and Rupley 2001).

The carbon-14 dates (**figure 7**) suggest ashly debris in the lowest level of the oven/kiln in F4 began to accumulate during the late LC 3 or early LC 4 period (see Rothman 2001: 5-8 for a discussion of this terminology) somewhere around 3500 B.C. Furthermore, since this kiln is built into virgin soil the Late Chalcolithic occupation at Kenan Tepe, or at least the operation of the pyrotechnic facilities in Area F, may also have begun at or around the same time. The kiln fell out of use and filled with debris, the upper levels of which date to the middle or the end of the LC 5 period somewhere around 3100 B.C. These parameters also pertain to the ceramics illustrated in **figure 9**: this corpus should represent a relatively late set that slightly post-dates Hacinebi B2 (Pierce 2001; Pollock and Coursey 1995). Although preliminary, these data lead to several interesting conclusions. First, if we assume that the first layers of debris that accumulated in the oven/kiln mark the beginning of its use-life then this evidence suggests that occupation at Kenan Tepe probably begins quite late in the Late Chalcolithic sequence. Second, the dating of the F4 oven/kiln places Kenan Tepe's Late Chalcolithic occupation in the midst of the "contact period" at Hacinebi (period B2) when the material culture shows a significant amount of intrusive southern Mesopotamian elements. Although our exposures to this period are still limited, such elements are conspicuously absent from the material culture thus far excavated at Kenan Tepe.

The transition between the Late Chalcolithic and the Early Bronze Age is marked in Area F at Kenan Tepe by a curious phenomenon. It appears that the ash and other debris created by decades of production during the Late Chalcolithic Period was, by the beginning of the third millennium, too much for the inhabitants of Kenan Tepe to bear. To alleviate this problem the inhabitants of the Early Bronze Age town sealed the mess of the Late Chalcolithic levels by covering the debris by, in one case a mud brick pavement (in trench F1), and in another, re-deposited virgin soil (in trench F9). Upon this new foundation, the inhabitants of the Early Bronze Age town continued the tradition of production by constructing new pyrotechnic facilities and creating new deposits of ash and other debris. Continuity of settlement between the Late Chalcolithic and Early

Bronze Age is quite unusual, at least in comparison with upper Mesopotamia and the upper Euphrates basin. Surveys in the plains of northern Iraq (Wilkinson and Tucker 1995) and in the environs of Tell Leilan in the Upper Khabur area (Stein and Wattenmaker 1990) show substantial settlement dislocations in the transition from the fourth to the third millennium. Similar results have been reported in the Upper Euphrates (Wilkinson 1990; Algaze et al. 1991, 1994). Many scholars have argued that the decline of settlement observed in these areas is due, at least in part, to the collapse of the Uruk regional trade networks linking the markets of southern Mesopotamia with the resource zones of highland Iran and Anatolia (Algaze 1993). Although survey data from parts of the Upper Tigris river region (Algaze 1989; Algaze et al. 1991) suggest that some areas of southeastern Anatolia were affected by the "Uruk Expansion" our excavations at Kenan Tepe show a far greater degree of continuity between these periods. Our future research will concentrate on exploring the factors that might have caused this striking difference.

In the initial survey of the Upper Tigris River Valley (Algaze 1989; Algaze et al. 1991) no Middle Bronze Age sites were recognized suggesting that this part of Turkey was sparsely populated during this period. This theory came as somewhat of a surprise since elsewhere in upper Mesopotamia including the Cizre Plain in the far southeastern corner of modern Turkey (Algaze et al. 1991; Parker 2001), the Khabur plains of Syria (Meijer 1986; Stein and Wattenmaker 1990), the Sinjar plains of northern Iraq (Wilkinson 1990b; Wilkinson and Tucker 1995) and in the Upper Euphrates Basin (Algaze et al. 1994), the early second millennium is a period of great florescence. This situation led the authors of the survey report to conclusion that "either this portion of the Tigris basin was bypassed entirely by Middle Bronze Age development attested to elsewhere or, more likely, it is characterized by a thus far unreported and unrecognized assemblage (Algaze et al. 1991: 183)." The past two seasons of excavation at Kenan Tepe have confirmed this assumption by showing that the early second millennium in the Upper Tigris River region is marked, not by the Khabur ware assemblage of north Syria, nor by the monochrome wares of central Anatolia. Instead, this period is marked in the Tigris basin by the so-called Red-Brown Wash Ware assemblage.

Shapes and wares with this characteristic surface treatment occur at Kenan Tepe in the context of a larger assemblage that has not been previously documented, or even identified, as a coherent assemblage (**figure 6**). Excavations during the 2001 field season unearthed well-preserved architectural levels with numerous sealed contexts containing both an array of ceramics belonging to this assemblage and a number of carbon samples. An analysis of the carbon samples both confirmed our assumption that this assemblage dates to the early second millennium B.C. and at the same time underscored the importance of this as of yet unknown ceramic assemblage as a marker of the early second millennium B.C. in this part of southeastern Turkey.

In the case of Kenan Tepe's Early Iron Age settlement, it is quite clear that we are dealing with an indigenous Anatolian village. The ceramic assemblage includes numerous examples of "corrugated wares" (Bartle 1994) as well as types previously defined as "indigenous Iron Age" base on survey material from the Upper Tigris River

region (Parker 1997, 2001). Although many of the contexts dating to this period are somewhat disturbed do to the proximity of this material to ground surface, we are nevertheless in a good position to evaluate the nature of occupation during the Early Iron Age. To begin with, the chronology of the town appears to be limited to the Early Iron Age, as there is no indication of occupation during the Neo-Assyrian Imperial Period. In fact, it appears that the town was either abandon or destroyed in the wake of Assyrian colonization of the region in the ninth century B.C. (Parker et al. 2002a). Further excavation at Kenan Tepe might, therefore, illuminate the affects that Neo-Assyrian imperialism had on the indigenous population of the Upper Tigris River region.

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Figures:

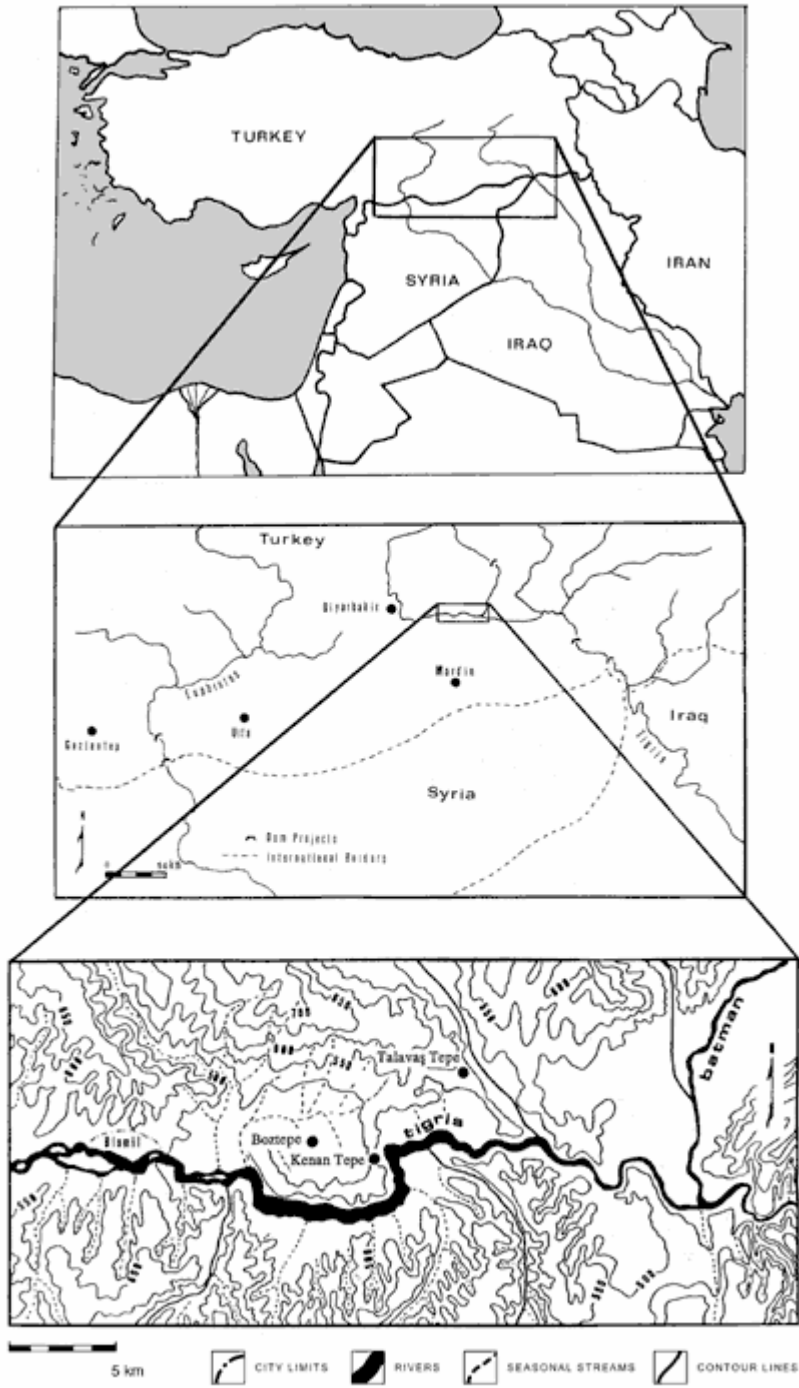


Figure 1: Map of Southeastern Turkey with Enlargements Showing the Upper Tigris River Valley and the Location of Kenan Tepe

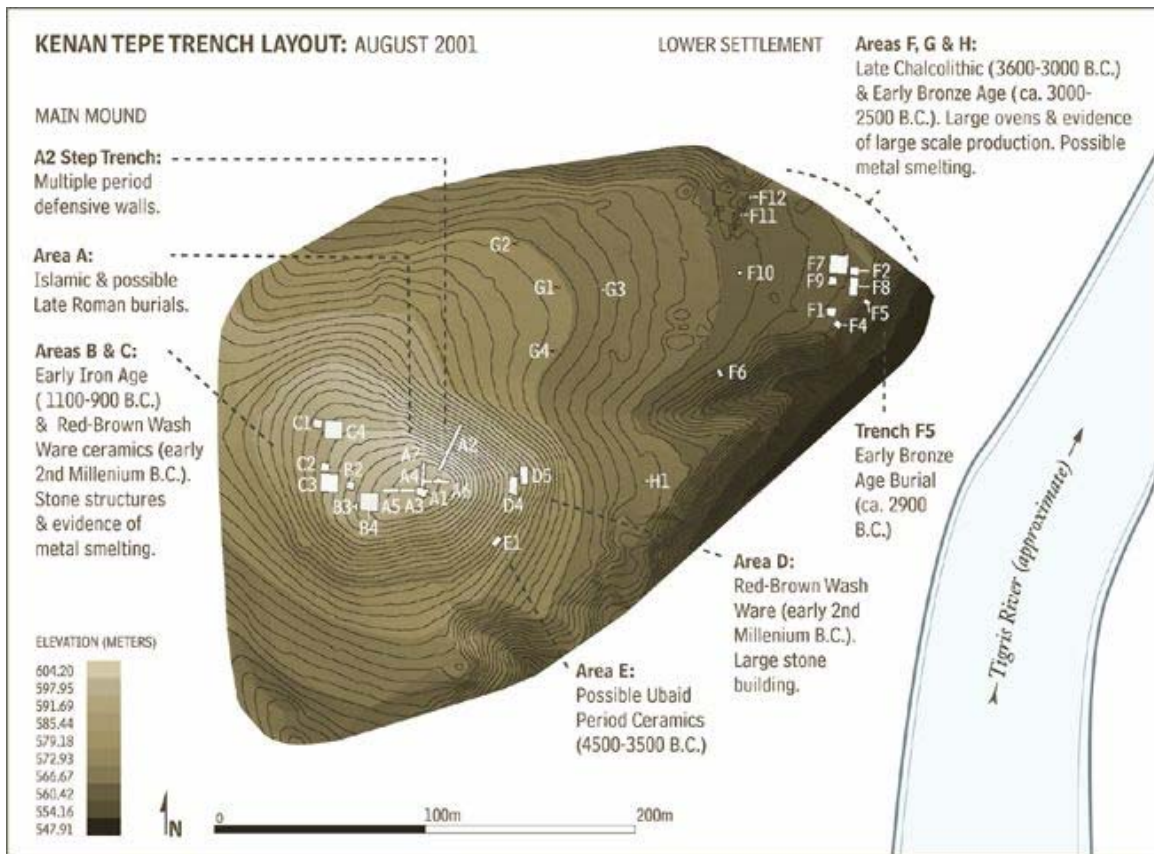


Figure 2: Map of Kenan Tepe with excavation areas listed.



Figure 3: *Digital top plan of Trench C2 showing the northeastern corner of an early second millennium domestic structure. Note that this top plan was constructed by superimposing 9 digital images.*

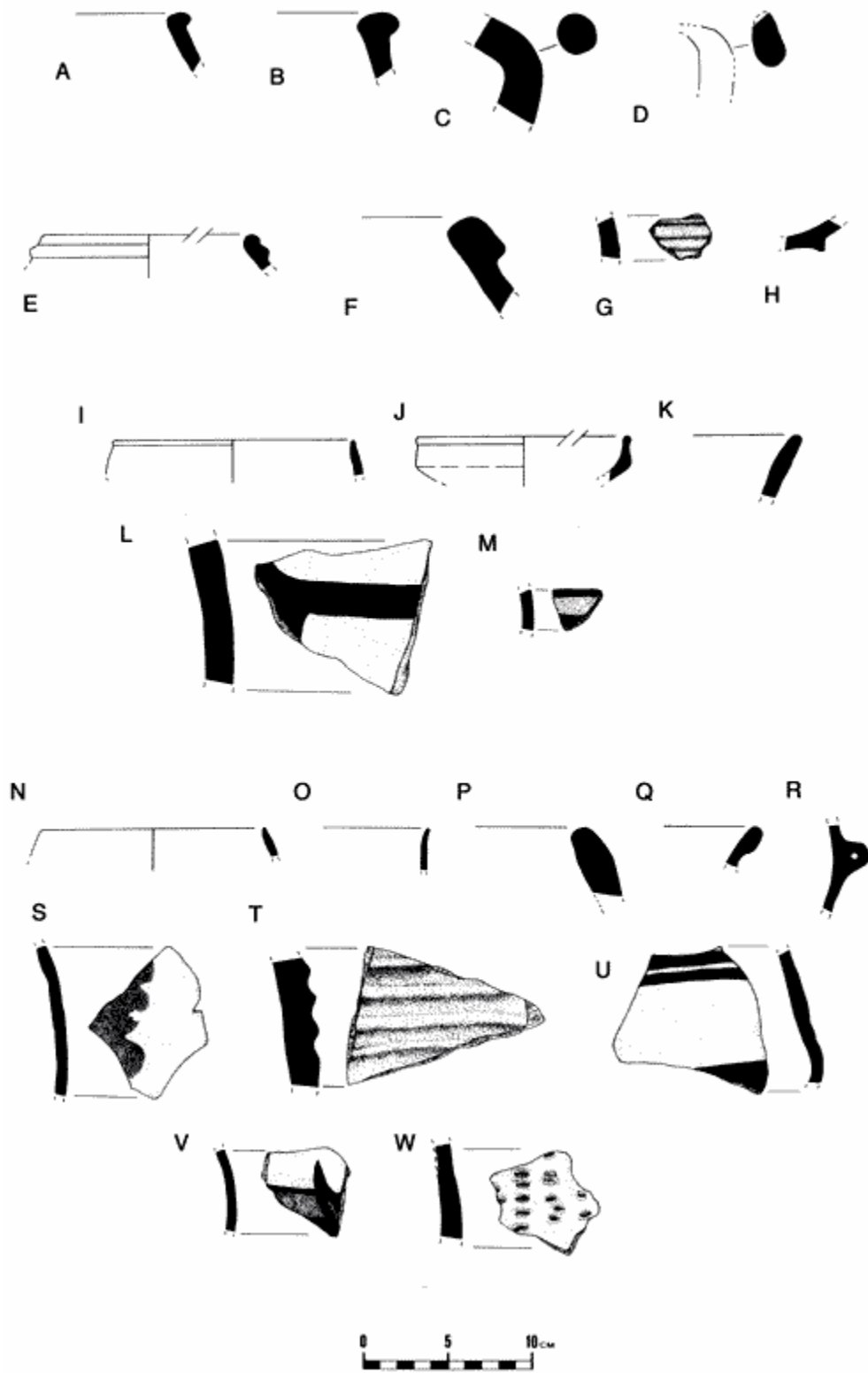


Figure 4: *Early Second Millennium Ceramics from Area C Loci 2022, 2034, 2036 and 2039*

Figure 4: *Descriptions of Early Second Millennium Ceramics from Area C*

A C2 L2022 KT2291 #6: Pink exterior surface (2.5YR 7/6). Red fabric (2.5YR 5.6) abruptly changing to a reddish yellow core (5YR 6/6). Light red interior surface (7.5YR 7/4). Medium grit temper.

B C2 L2022 KT2291 #8: Pink exterior surface (5YR 3/1) grading to a dark gray core (5YR 4/1). Very dark gray interior surface (7.5YR 7/4). Wash on exterior surface. Medium chaff temper.

C C2 L2022 KT2291 #4: Very dark gray exterior surface (2.5 YR 4/4). Reddish yellow fabric (5YR 7/6) abruptly changing to a black core (7.5YR 2.5/1). Reddish brown interior surface (5YR 3/1). Medium chaff temper.

D C2 L2022 KT2291 #5: Very pale brown exterior surface (10YR 7/4) grading to a dark gray core (10YR 4/1). Very pale brown interior surface (10YR 7/4). Black paint (10YR 3/1) on exterior surface. Medium chaff temper.

E C2 L2034 KT2204 #1: Light brown exterior surface (7.5YR 6/4). Yellowish gray fabric (5YR 5/6) grading to a dark gray core (5YR 4/1). Light brown interior surface (7.5YR 6/3). Medium grit temper.

F C2 L2034 KT2204 #4: Reddish brown exterior surface (5YR 5/6) grading to a dark reddish gray core (5YR 4/2). Yellowish red interior surface (5YR 5/3). Medium to coarse grit temper.

G C2 L2034 KT2204 #2: Light brown surface (5YR 5/4). Yellowish red fabric (5YR 5/8) abruptly changing to a dark gray core (5YR 4/1). Reddish brown interior (7.5YR 6/4). Fine grit temper.

H C2 L2034 KT2204 #3: Light brownish gray exterior surface (7.5YR 6/4). Strong brown fabric (7.5YR 5/6) abruptly changing to a dark gray core (7.5YR 4/1). Light brown interior surface (10YR 6/2). Dark gray paint (7.5YR 4/1) on exterior surface. Coarse grit temper.

I C2 L2036 KT2219 #4: Dark gray exterior surface (2.5Y 3/1). Gray core (2.5Y 5/1). Very dark gray interior surface (2.5Y 4/1). Wash on exterior surface with paint. Medium chaff temper.

J C2 L2036 KT2219 #2: Very pale brown exterior surface (10YR 7/4). Very pale brown core (10YR 7/4). Very pale brown interior surface (10YR 7/3). Yellowish red paint (5YR 5/6) on exterior surface. Fine chaff temper.

K C2 L2036 KT2219 #3: Light yellowish brown exterior surface (10YR 6/3) grading to a brown core (7.5YR 5/4). Pale brown interior surface (10YR 6/4). Fine chaff temper.

- L C2 L2036 KT2219 #1:** Very pale brown surface (10YR 7/4) abruptly changing to a gray core (10YR 5/1). Very pale brown interior surface (10YR 7/3). Medium chaff temper.
- M C2 L2036 KT2219 #5:** Light gray surface (10YR 6/3) grading to a reddish yellow core (7.5YR 6/6). Pale brown interior surface (10YR 7/2). Wash on exterior surface. Very pale brown paint on exterior surface (10YR 8/2). Very fine chaff temper.
- N C2 L2039 KT2235 #5:** Reddish yellow exterior surface (5YR 6/6). Reddish yellow core (5YR 6/6). Yellowish red interior surface (5YR 7/6). Chaff temper.
- O C2 L2039 KT2235 #2:** Red exterior surface (2.5YR 5/6) grading to a red core (2.5YR 5/8). Red interior surface (2.5YR 5/8). Fine chaff temper.
- P C2 L2039 KT2269 #5:** Pink exterior surface (7.5YR 7/4) grading to a light red core (2.5YR 7/6). Pink interior surface (7.5YR 8/4). Medium chaff temper.
- Q C2 L2039 KT2235 #3:** Pale brown exterior surface (7.5YR 6/3) grading to a brown core (7.5YR 5/4). Light brown interior surface (10YR 6/3). Medium chaff temper.
- R C2 L2039 KT2269 #4:** Light greenish gray exterior surface (GLE Y1 6/10Y) grading to a gray core (2.5Y 5/1). Greenish gray interior surface (GLE Y1 7/10Y). Burnished interior and exterior surfaces. Very fine grit temper.
- S C2 L2039 KT2269#2:** Pink exterior surface (10YR 7/4) grading to a reddish yellow core (7.5YR 7/6). Very pale brown interior surface (7.5YR 8/4). Wash on the exterior surface with dark reddish brown paint (5YR 3/2). Fine grit temper.
- T C2 L2039 KT2269 #3:** Gray exterior surface (7.5YR 5/2) grading to a dark gray core (GLE Y1 4/N). Brown interior surface (5Y 5/1). Wash on exterior. Incised bands on surface. Fine grit temper.
- U C2 L2039 KT2269 #1:** Very pale brown exterior surface (2.5Y 7/2). Reddish yellow fabric (7.5YR 6/6) grading to a pale brown core (10YR 6/3). Light gray interior surface (10YR 7/4). Wash on exterior surface. Dark reddish brown paint on exterior surface (5YR 3/3). Fine grit temper.
- V C2 L2039 KT2235 #1:** Pale red exterior surface (2.5YR 6/3) grading to a reddish brown core (2.5YR 5/4). Light reddish brown interior surface (2.5YR 6/2). Reddish brown paint on exterior surface (2.5YR 4/3). Fine chaff temper.
- W C2 L2039 KT2269 #6:** Light reddish brown exterior surface (2.5YR 6/4) grading to a reddish yellow core (5YR 7/6). Light reddish brown interior surface (5YR 6/4). Fingernail impressions on exterior surface. Very coarse grit temper.

Figure 5: 2001 Carbon 14 Data.

Carbon 14 data from Trench C2

<i>Sample Data</i>	<i>Measured Radiocarbon Age</i>	<i>13C/12C Ratio</i>	<i>Conventional Radiocarbon Age(*)</i>
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Beta - 165446	3500 +/- 50 BP	-26.5 o/oo	3480 +/- 50 BP
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SAMPLE : L2082 KT 2584

ANALYSIS : AMS-Standard delivery

MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid

2 SIGMA CALIBRATION : Cal BC 1920 to 1680 (Cal BP 3870 to 3630)

Beta - 165447	3520 +/- 60 BP	-26.8 o/oo	3490 +/- 60 BP
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SAMPLE : L2087 KT 2614

ANALYSIS : AMS-Standard delivery

MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid

2 SIGMA CALIBRATION : Cal BC 1950 to 1670 (Cal BP 3900 to 3620)

Beta - 165448	3520 +/- 40 BP	-25.2 o/oo	3520 +/- 40 BP
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SAMPLE : L2084 KT 2576

ANALYSIS : AMS-Standard delivery

MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid

2 SIGMA CALIBRATION : Cal BC 1940 to 1740 (Cal BP 3900 to 3690)

Carbon 14 data from Trench F4

<i>Sample Data</i>	<i>Measured Radiocarbon Age</i>	<i>13C/12C Ratio</i>	<i>Conventional Radiocarbon Age(*)</i>
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Beta - 155572	4430 +/- 60 BP	-24.4 o/oo	4440 +/- 60 BP
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SAMPLE : KT#4061
 ANALYSIS : AMS-Standard delivery
 MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid
 2 SIGMA CALIBRATION : Cal BC 3350 to 2910 (Cal BP 5300 to 4860)

Beta - 166341	4510 +/- 40 BP	-25.9 o/oo	4500 +/- 40 BP
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SAMPLE : KT#4157 (F4.4023.4157)
 ANALYSIS : AMS-Standard delivery
 MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid
 2 SIGMA CALIBRATION : Cal BC 3360 to 3030 (Cal BP 5310 to 4980)

Beta - 166342	4700 +/- 40 BP	-25.5 o/oo	4690 +/- 40 BP
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SAMPLE : KT#4229 (F4.4023.4229)
 ANALYSIS : AMS-Standard delivery
 MATERIAL/PRETREATMENT : (organic material): acid/alkali/acid
 2 SIGMA CALIBRATION : Cal BC 3630 to 3570 (Cal BP 5580 to 5520)
AND Cal BC 3540 to 3360 (Cal BP 5480 to 5310)

Beta - 166343	4820 +/- 40 BP	-24.9 o/oo	4820 +/- 40 BP
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SAMPLE : KT#4253 (F4.4023.4253)
 ANALYSIS : AMS-Standard delivery
 MATERIAL/PRETREATMENT : (organic material): acid/alkali/acid
 2 SIGMA CALIBRATION : Cal BC 3660 to 3620 (Cal BP 5610 to 5570)
AND Cal BC 3600 to 3520 (Cal BP 5540 to 5470)

Carbon 14 data from Trench F5.

<i>Sample Data</i>	<i>Measured Radiocarbon Age</i>	<i>13C/12C Ratio</i>	<i>Conventional Radiocarbon Age(*)</i>
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Beta - 156415	4210 +/- 40 BP	-22.1 o/oo	4260 +/- 40 BP
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SAMPLE : KT5030

ANALYSIS : AMS-Standard delivery

MATERIAL/PRETREATMENT : (bone collagen): collagen extraction: with alkali

2 SIGMA CALIBRATION : Cal BC 2920 to 2870 (Cal BP 4860 to 4820)

.....AND Cal BC 2800 to 2770 (Cal BP 4750 to 4720)

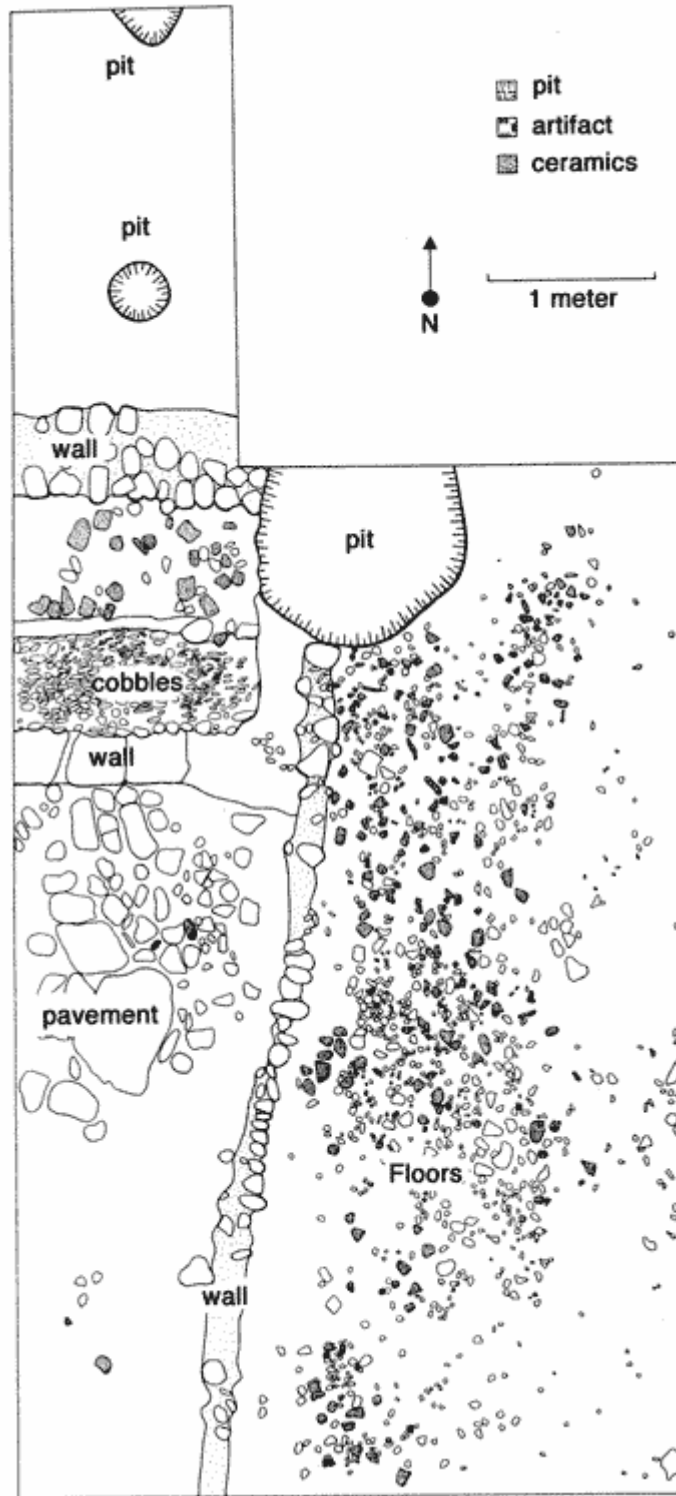


Figure 6: *Trench D4 Final Plan, Inked, 2001.*

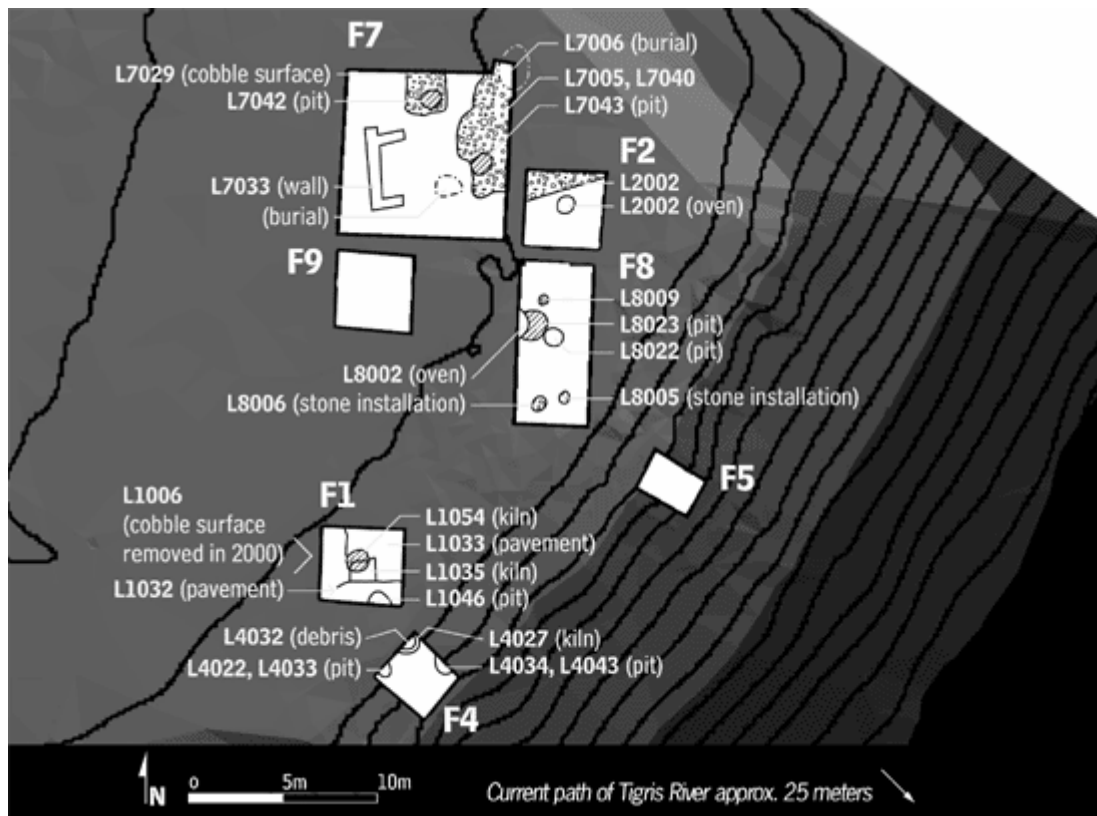
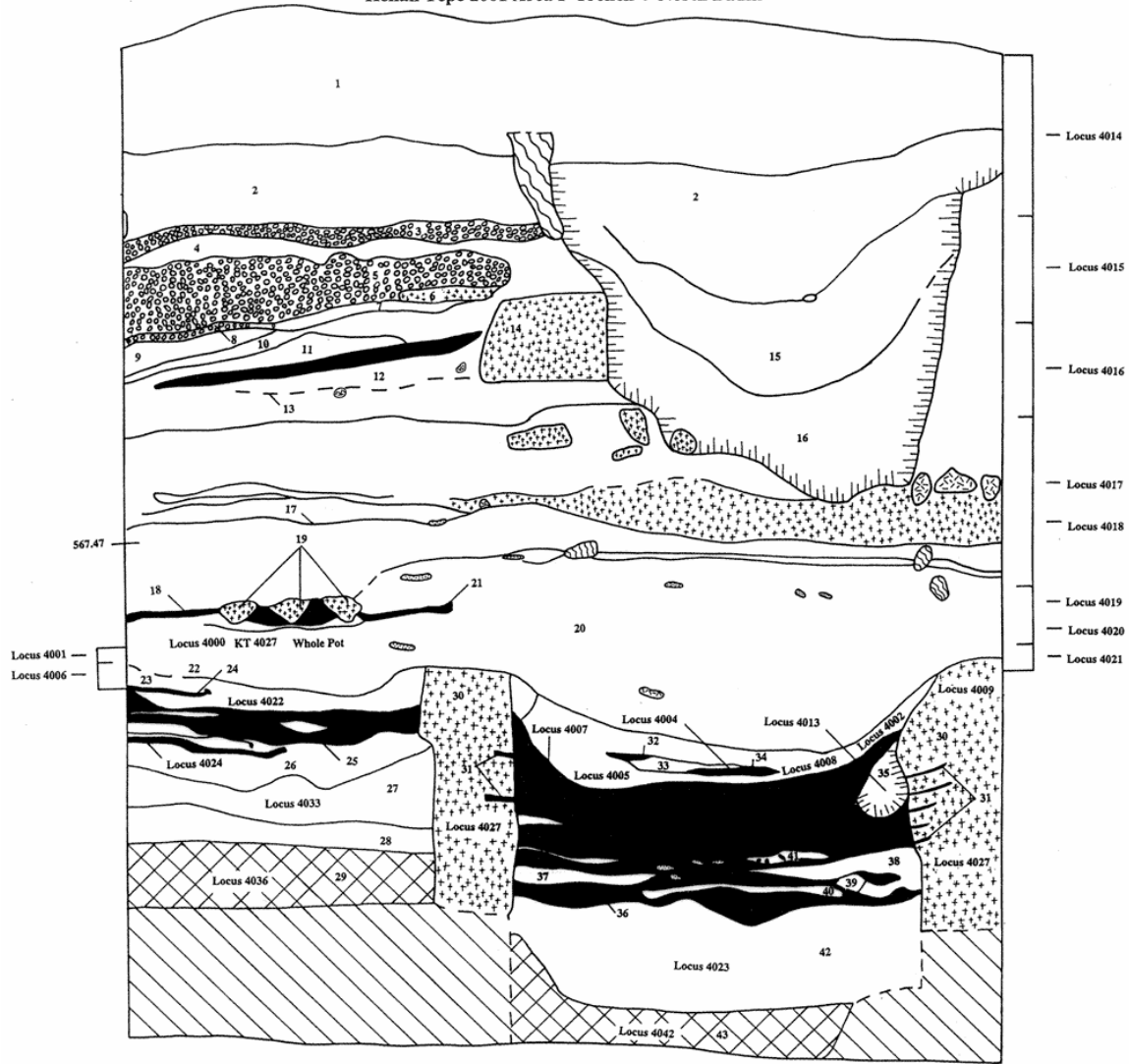


Figure 7: Map of area F. White boxes mark trenches F1 through F9.

Kenan Tepe 2001 Area F Trench 4 North Balk



1 METER

Line Elevation: 567.47

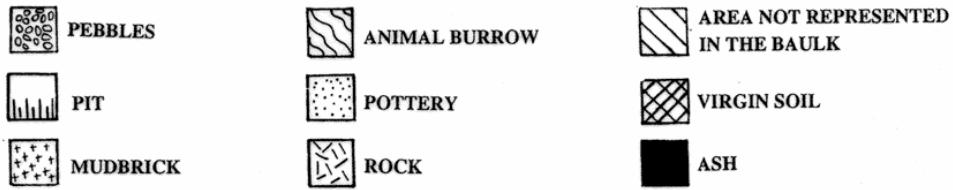


Figure 7: Trench F4 North Section. Note that the carbon dates came from L4004 and L4023.

Figure 8: Trench F4 North Section

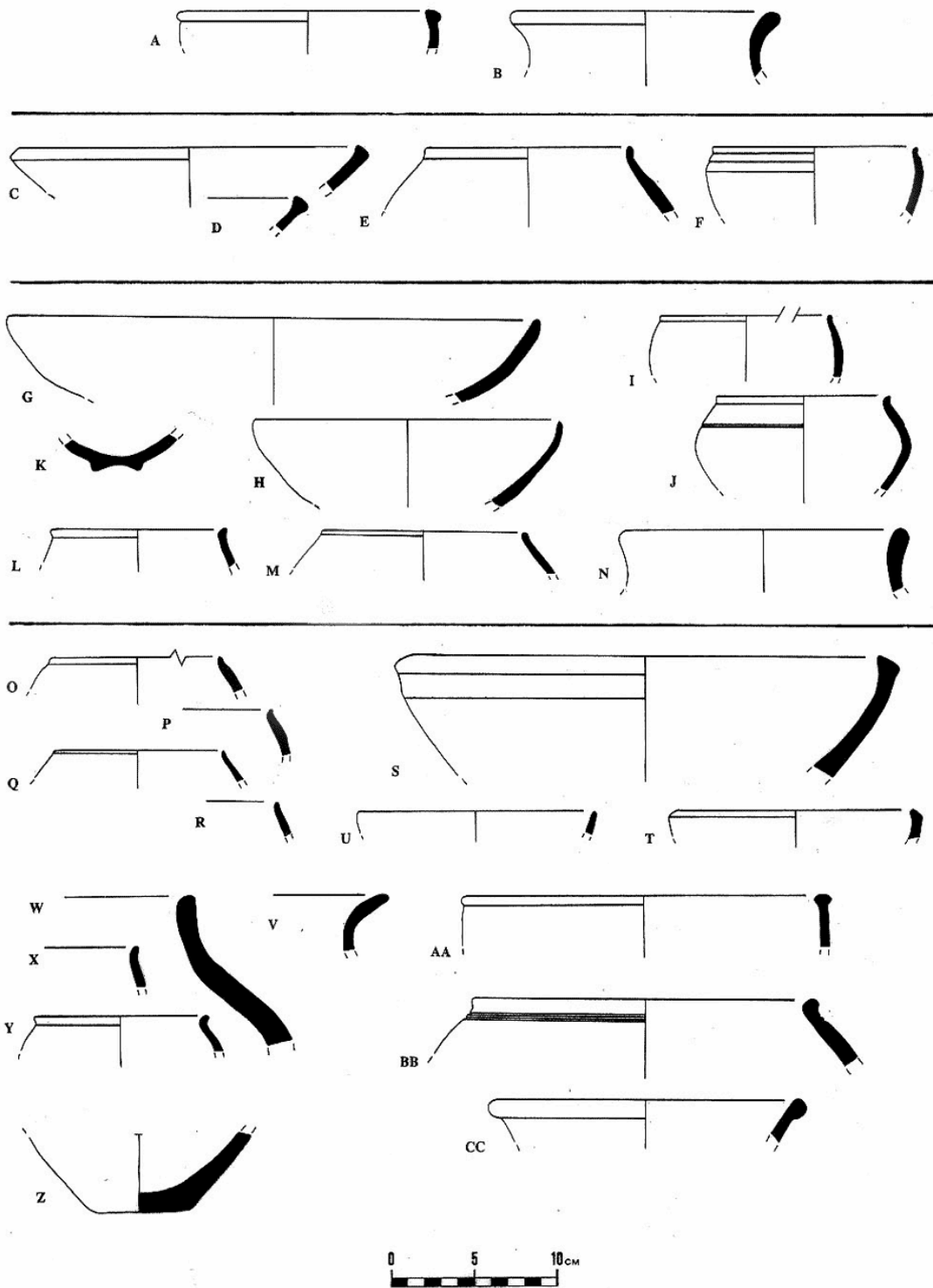


Figure 9: *Late Chalcolithic Ceramics from Trench F4*

Figure 9: *Descriptions for Late Chalcolithic Ceramics from Trench F4*

A. **F4 L4004 KT4047 #1:** Reddish yellow exterior surface (5YR 6/6) grading to a reddish yellow core (5YR 7/6). Reddish yellow interior surface (5YR 6/6). Burnished exterior. Fine grit temper.

B. **F4 L4004 KT4047 #2:** Light brown exterior surface (7.5 YR 6/4). Pink fabric (7.5YR 7/4) abruptly changing to a black core (10 YR 2/1). Pink interior surface (7.5YR 7/4). Medium chaff temper.

C. **F4 L4005 KT4062 #2:** Pink exterior surface (7.5 YR 6/3) abruptly changing to a pinkish gray core (7.5YR 6/2). Light brown interior surface (7.5YR 7/4). Pink wash on exterior surface (7.5YR 6/3). Fine chaff temper.

D. **F4 L4005 KT4062 #6:** Reddish yellow exterior surface (5YR 5/6) grading to a reddish yellow core (5YR 6/6). Reddish yellow interior surface (5YR 6/6). Reddish yellow wash on exterior surface (5YR 5/6). Pink paint on exterior surface (5YR 7/4). Very coarse chaff temper. Cmd. unknown.

E. **F4 L4005 KT4062 #4:** Reddish yellow exterior surface (5YR 7/3) grading to a reddish yellow core (5YR 6/6). Pink interior surface (5YR 6/6). Fine chaff temper.

F. **F4 L4005 KT4062 #5:** Reddish yellow exterior surface (5YR 6/6) grading to a yellowish red core (5YR 6/6). Reddish yellow interior surface (5YR 7/6). Reddish yellow wash on exterior surface (5YR 6/6). Very coarse chaff temper.

G. **F4 L4007 KT4086 #2:** Reddish yellow exterior (10 YR 7/4). Red fabric (2.5YR 5/6) abruptly changing to a reddish yellow core (7.5YR 7/6). Very pale brown interior surface (5YR 6/6). Reddish yellow wash on exterior surface (10YR 7/4). Medium grit temper.

H. **F4 L4007 KT4086 #1:** Reddish yellow exterior surface (5 YR 6/6) grading to a reddish yellow core (5 YR 6/8). Reddish yellow interior surface (7.5 YR 7/6). Non-visible temper.

I. **F4 L4007 KT4065 #2:** Reddish yellow exterior surface (7.5 YR 6/6) grading to a reddish yellow core (7.5 YR 7/6). Reddish yellow interior surface (5 YR 6/6). Fine grit temper. Cmd. unknown.

J. **F4 L4007 KT4077 #1:** Reddish yellow exterior surface (5 YR 6/4) grading to a light brown core (7.5 YR 6/4). Light reddish brown interior surface (5 YR 6/6). Fine grit temper.

K. **F4 L4007 KT4086 #5:** Light brown exterior surface (10YR 7/4) grading to a yellowish brown core (10YR 5/4). Very pale brown interior surface (7.5YR 6/4). Medium grit temper.

L. F4 L4007 KT4065 #1: Light brown exterior surface (7.5 YR 6/4) grading to a light reddish brown core (7.5 YR 6/4). Light brown interior surface (7.5 YR 6/3). Light brown wash on exterior surface (7.5 YR 6/4). Fine grit temper.

M. F4 L4007 KT4086 #3: Pale brown exterior surface (10YR 7/3) grading to a dark gray core (10YR 4/1). Very pale brown interior surface (10YR 6/3). Medium grit temper.

N. F4 L4007 KT4086 #4: Light brown exterior surface (10YR 5/3). Brown fabric (10YR 5/3) abruptly changing to a black core (10YR 2/1). Brown interior surface (7.5YR 6/4). Light brown wash on exterior surface (10YR 5/3). Burnished on interior and exterior surfaces. Coarse chaff temper.

O. F4 L4023 KT4111 #2: Very pale brown exterior (10YR 6/4). Yellow fabric (10YR 8/6) grading to a dark gray core (10YR 6/1). Light yellowish brown interior surface (10YR 7/3). Medium grit temper.

P. F4 L4023 KT4202 #2: Reddish yellow exterior surface (5YR 6/6). Reddish yellow core (5YR 6/6). Reddish yellow interior surface (5YR 6/6). Fine chaff temper. Cmd. unknown.

Q. F4 L4023 KT4217 #2: Reddish yellow exterior surface (7.5YR 7/6). Reddish yellow core (7.5YR 7/6). Reddish yellow interior surface (7.5YR 7/6). Burnished exterior. Fine grit temper.

R. F4 L4023 KT4202 #4: Pink exterior surface (7.5YR 7/3). Pink fabric (7.5YR 7/4) abruptly changing to a pink core (7.5YR 7/3). Pink interior surface (7.5YR 7/4). Fine grit temper. Cmd unknown.

S. F4 L4023 KT4202 #1: Pink exterior surface (10YR 6/6). Reddish yellow fabric (7.5YR 6/6) grading to a strong brown core (7.5YR 5/6). Very pale brown interior surface (7.5YR 7/4). Fine chaff temper.

T. F4 L4023 KT4111 #4: Pink exterior surface (7.5YR 6/4) grading to a reddish yellow core (7.5YR 6/6). Light brown interior surface (7.5YR 7/4). Fine grit and chaff temper.

U. F4 L4023 KT4217 #1: Reddish yellow exterior surface (7.5YR 7/4) grading to a reddish yellow core (5YR 7/6). Pink interior surface (5YR 7/6). Fine grit temper.

V. F4 L4023 KT4111 #1: Reddish yellow exterior surface (7.5YR 6/4) grading to a reddish yellow core (7.5YR 6/6). Light brown interior (7.5YR 6/6). Burnished exterior. Very coarse grit temper.

W. F4 L4023 KT4251 #1: Pink exterior surface (7.5YR 6/6). Light brown fabric (7.5YR 6/4) abruptly changing to a black core (7.5YR 2.5/1). Reddish yellow interior surface (7.5YR 7/3). Burnished exterior. Fine grit and chaff temper. Cmd. unknown.

X. F4 L4023 KT4202 #3: Reddish yellow exterior surface (5YR 5/6) grading to a yellowish red core (5YR 5/6). Yellowish red interior surface (5YR 6/6). Burnished exterior. Fine grit temper. Cmd. unknown.

Y. F4 L4023 KT4251 #2: Reddish yellow exterior surface (7.5YR 6/6) grading to a strong brown core (7.5YR 5/6). Reddish yellow interior surface. Fine grit and chaff temper.

Z. F4 L4023 KT4111 #6: Pink exterior surface (7.5YR 7/4). Pink core (7.5YR 7/4). Pink interior surface (7.5YR 7/4). Coarse chaff temper.

AA. F4 L4023 KT4111 #5: Reddish yellow exterior (7.5YR 7/4) grading to a reddish yellow core (5YR 6/6). Pink interior surface. Fine grit temper.

BB. F4 L4023 KT4111 #3: Yellowish red exterior surface (7.5YR 5/4). Brown fabric (7.5YR 3/3) grading to a yellowish red core (5YR 5/8). Brown interior surface (5YR 5/6). Yellowish red wash on exterior surface (7.5YR 5/4). Double incised bands. Coarse grit temper.

CC. F4 L4023 KT4251 #3: Light brown exterior surface (5YR 6/6) grading to a yellowish red core (5YR 5/6). Reddish yellow interior surface (7.5YR 6/4). Light brown wash on exterior surface (5YR 6/6). Fine grit and chaff temper.