RU-007

44RU7 ARCHAEOLOGICAL TEST EXCAVATIONS AT A LATE WOODLAND VILLAGE IN THE LOWER UPLANDS OF SOUTHWEST VIRGINIA

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Keith Edward Bott

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Volunteers also assisted. Charles Weisfeld and Dr. Charles Bartlett of the Wolf Hills ASV Chapter informed the VRCA of the construction impacts. Without their surveillance the data recovered by this effort would have been lost. Charles Weisfeld also helped significantly in the field. His assistance excavating and his donation of the artifacts recovered from the earlier salvage efforts have had a positive influence on this study. Special thanks go to Ms. Celia Reed who found time in her schedule to travel from Knoxville, Tennessee to spend several days in the field. Her experience and training significantly increased the scope of the field work conducted at 44RU7.

ABSTRACT

The Virginia Research Center for Archaeology (VRCA) tested, and salvaged archaeological data from, 44RU7 during November 1979. 44RU7 is located in Russell County, Virginia on a sloping upland near two small streams that eventually drain into the North Fork of the Holston River. Archaeological testing and salvage were initiated after the VRCA was informed that privately funded land development was impacting portions of the site. Data was collected confirming C. G. Holland's (1970) identification of the site as a Late Woodland village. The data further indicate that there may be two culturally distinct archaeological deposits at 44RU7 and that one of these may be surrounded by the remains of a palisade. An examination of the regional context of 44RU7, including an evaluation of the agricultural potential of several of the region's soils, has resulted in the formulation of alternative explanations for 44RU7's unexpected location away from the major floodplains. Recommendations for further work at the site and in the region are made. Detailed base maps have been compiled to help direct future investigations.

CHAPTER I: INTRODUCTION

Project Background

In November 1979, the Virginia Research Center for Archaeology (VRCA) undertook an emergency archaeological field investigation of a prehistoric site (44RU7) in Hansonville, Virginia. This effort was initiated after members of the Wolf Hills Chapter of the Archaeological Society of Virginia (ASV) reported their growing concern that development in Hansonville threatened to destroy substantial portions of the site. Of immediate concern was the installation of a private landowner's sewage drainfield (Plate 1). Trenching in preparation for the drainfield's installation exposed numerous cultural features, including the remains of 4 human burials. In response, the VRCA acted 1) to accurately record the exposed features, 2) to systematically investigate selected portions of the site most closely associated with the disturbed area, 3) to determine the limits of the archaeological deposit(s), 4) to explain as fully as possible the results in terms of the regional context, and 5) to offer suggestions toward further research at the site and within the region.

It is understood that salvage archaeology is rarely considered favorably. The exigent field conditions are usually completely undesirable. The field techniques so often necessitated are generally held suspect. And, the ultimate value of the results is commonly questioned (cf. King 1977:475). Consequently, the description and explanation of the test excavations at 44RU7 have been approached cautiously, and the conclusions reached by this report are necessarily tentative. However, if through such work the need for further systematic field work in the region is emphasized and if some direction for future problem-oriented research is outlined, then primary objectives will have been achieved.

Previous Studies

To date, the only published reference to 44RU7 is provided by C. G. Holland, who described the site as having an occupation area of approximately 1 acre situated on a "...slope northwest of Mountain Creek" (1970: 31). Collected materials included 1 drill, 1 flake scraper, 1 Madison Triangular point, 1 Dallas Triangular point, 65 chert flakes, 69 New River Series sherds, and 13 Radford Series sherds. A collector who reportedly "dug into" the site also claimed to have recovered a "fenestrated shell gorget with a rattlesnake design (Ibid). Holland's publication was based on field work done during the summers of 1963 and 1964, with 44RU7 recorded in July 1963 (VRCA Site Inventory).

With the exception of the incalculable activities of the local collectors, the existence of 44RU7 was largely overlooked until 1978. At that time the Emory and Henry Regional Preservation Office of the VRCA received reports that"...major damage was occurring to the site due to house and road construction" (Turner 1979b: 1). E. Randolph Turner subsequently visited the site on two occasions, reporting that "site destruction was noted by the only road construction by also the

Plate 1: A graduate student from the University of Tennessee mapping features exposed in profiles of drainfield trenches. The VRCA's 40-foot X 100-foot control grid encompassed all the trenches. Survey pins were accurately placed at 10-foot intervals so that cultural features could be precisely recorded.

laying of water and sewer lines, land leveling down to clay subsoil, and the building of houses" (Ibid). Although Turner's efforts were limited to brief surface examinations, data was collected that refined Holland's description. Archaic as well as Woodland Period artifacts were observed, burials and other features intruding into the subsoil were noted, a dark black-brown, plow disturbed occupation midden was measured to depths up to and occasionally exceeding 12 inches, and the dimensions of the site were estimated to be at least 150-200 meters x 50-100 meters, an area significantly larger than Holland's estimated 1 acre. The field notes compiled and the artifacts collected by Turner are deposited with the Emory and Henry Regional Preservation Office in Emory, Virginia.

Immediately prior to the initiation of field work by the VRCA, limited salvage excavation was conducted by members of the Wolf Hills Chapter of the ASV. They removed 2 of the burials encountered during the trenching for the sewage drainfield. The materials recovered by these efforts have been deposited at the VRCA in Williamsburg (now in Richmond) for study, curation,and storage. They are considered by this report in conjunction with the materials recovered by the VRCA's field work. Importantly, the cooperative interaction between members of the Wolf Hills Chapter and the private land owner greatly limited adverse impacts to the archaeological data base at 44RU7.

Two small collections from 44RU7 have also been donated to the VRCA. One received in 1977 contained 5 limestone tempered sherds and 1 shell tempered sherd. In 1978, Howard A. MacCord, Sr. collected materials from 44RU7. Included in his collection are 11 flakes, 18 utilized flakes, 2 preforms, 8 bifaces, 7 projectile points, 1 ground stone fragment, 18 shell tempered sherds, 1 limestone tempered sherd, and 2 sand tempered sherds (VRCA Site Inventory). These materials are deposited at the VRCA in Williamsburg, Virginia, (now in Richmond, 1990) where they are available for review and analysis.

It is also known that individuals have been periodically vandalizing 44RU7 for some time (see Holland 1970: viii, 31; Gardner 1979: 18). Local informants have freely admitted to potting many burials in the area, and accounts are easily obtained of how "hundreds of arrowheads" have been collected from the site on at least several occasions. These uncontrolled and unrecorded activities will undoubtedly distort any attempt at reconstructing and explaining the past cultures represented by the site's archaeological remains.

Objectives

The objectives of the archaeological investigations at 44RU7 can be grouped into 3 major categories: salvage, description, and explanation. The objectives of the salvage and description phases can be summarized explicitly.

The general salvage objective was to recover as much information from the site as possible within the given time period of 1 week (7 working days) without unnecessarily disturbing those portions of the data base that were not immediately threatened. Specific precautions were taken against attempting to excavate too much before explicit problem orientations were developed or before the precise nature of

effects threatening the site were fully understood. A crisis orientation was, in other words, strictly avoided. After examining the project area and assessing the extent of project impacts, specific objectives formulated were;

1) To record precisely all cultural features exposed by the trenching for the drainfield.

2) Through systematic testing to estimate as accurately as possible the extent of the site that remains undisturbed, so that the need for further emergency operations at 44RU7 could be evaluated as objectively as possible.

3) Through limited test excavation of previously undisturbed areas, to obtain data that could be reliably used for comparative studies.

4) To carefully examine at least one of the burials encountered during excavation of the drainage trenches.

5) To establish a detailed base map to help direct future excavations and to aid in the evaluation of future impacts.

The aims of the investigation's descriptive phase also reflect a primary orientation of the study. Detailed descriptions of certain attributes of the site have been momentarily set aside in order to focus more clearly on those characteristics that emphasize the site's role within its regional context. In light of these considerations, the objectives formulated for the descriptive phase were:

1) To identify all ceramic and lithic artifacts collected by the VRCA and donated by the ASV, and to summarize them quantitatively.

2) To calculate artifact frequencies for various areas of the site that appeared, after preliminary analysis, to be temporally distinct or representative of discrete activity foci. This operation should lead to an evaluation of whether or not more homogenous sampling strata can be identified for further study.

3) To calculate the artifact densities of the controlled subsurface tests and the density of cultural features occurring across the site in order to aid a subjective understanding of the density and duration of occupation at the site.

4) To make preliminary comparisons of the functional, temporal, and spatial variability of artifacts on an intra-site basis and to evaluate the feasibility of extending such comparisons to an inter-site analysis.

After 7 days of field work by the VRCA and volunteers from the Wolf Hills Chapter of the ASV and the University of Tennessee, all of the above objectives were realized. They are summarized in the results

section of this report. The explanation of these findings is developed by the final discussion.

Field Techniques

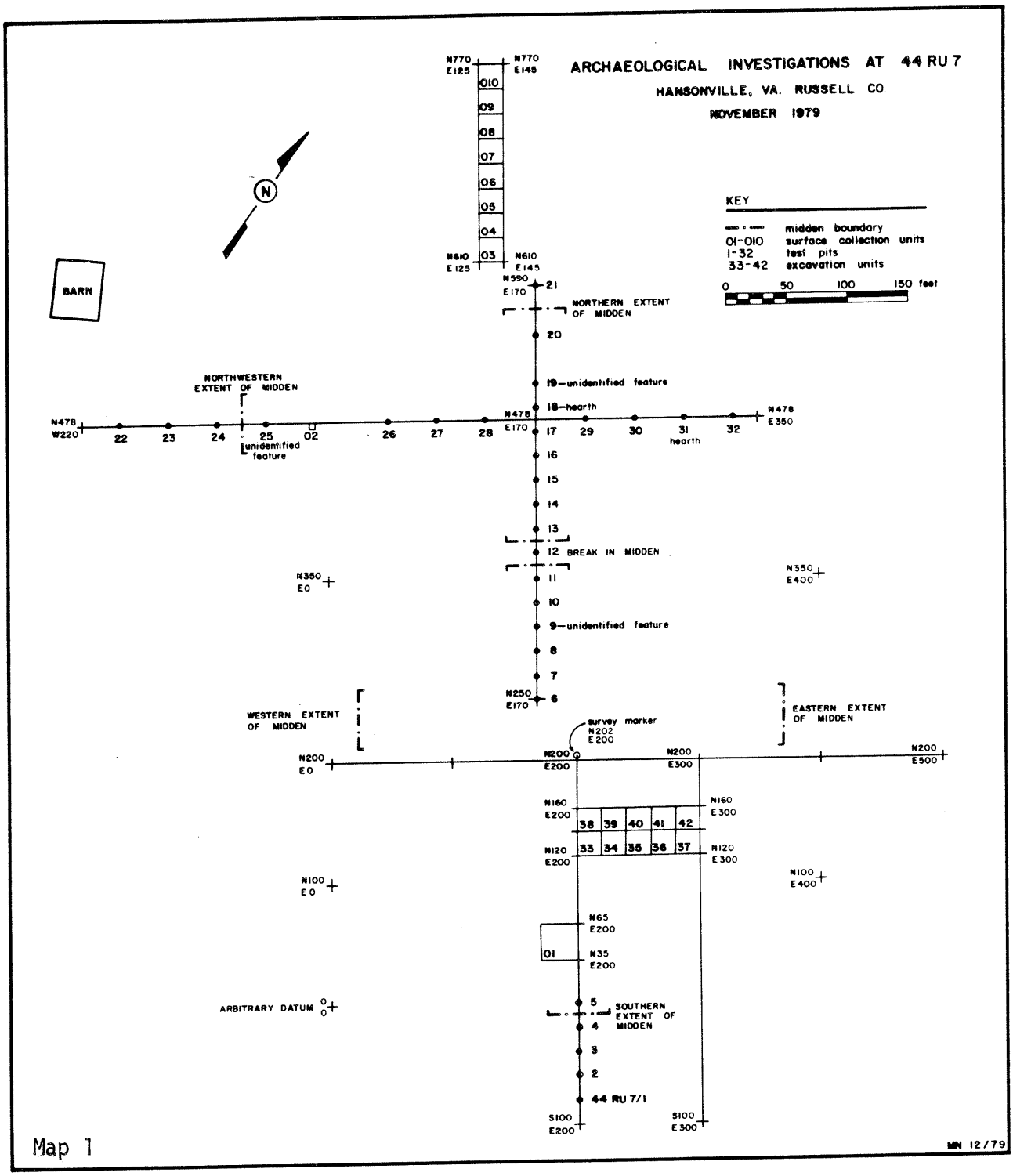
As with most salvage archaeology, the conditions confronted at 44RU7 and the specific objectives that were formulated significantly influenced the field techniques utilized. Since the primary salvage objective was to record the exposed features, establishment of 2 baselines was the first task accomplished. These baselines provided horizontal control for recording the features and for the remainder of the survey (Map 1).

The primary control baseline was designated as the North 200 foot line. It was located parallel to the local road and tied into a permanent survey marker (N202E200) that had been established when the area was subdivided into individual property lots. This line was extended for 500 feet (from N200EO to N200E500) with survey pins placed at 50-foot intervals. The secondary control baseline was designated as the East 200 foot line. It could be aligned conveniently along an existing and identifiable property line that ran perpendicular to the North 200 foot line. This line was extended for 100 feed (fromN100E200 to N200E200). These control baselines formed two major axes of a larger grid system with an arbitrary datum (NOEO) selected so that the majority of the field work could be confined to the northwest quadrant (Map 1).

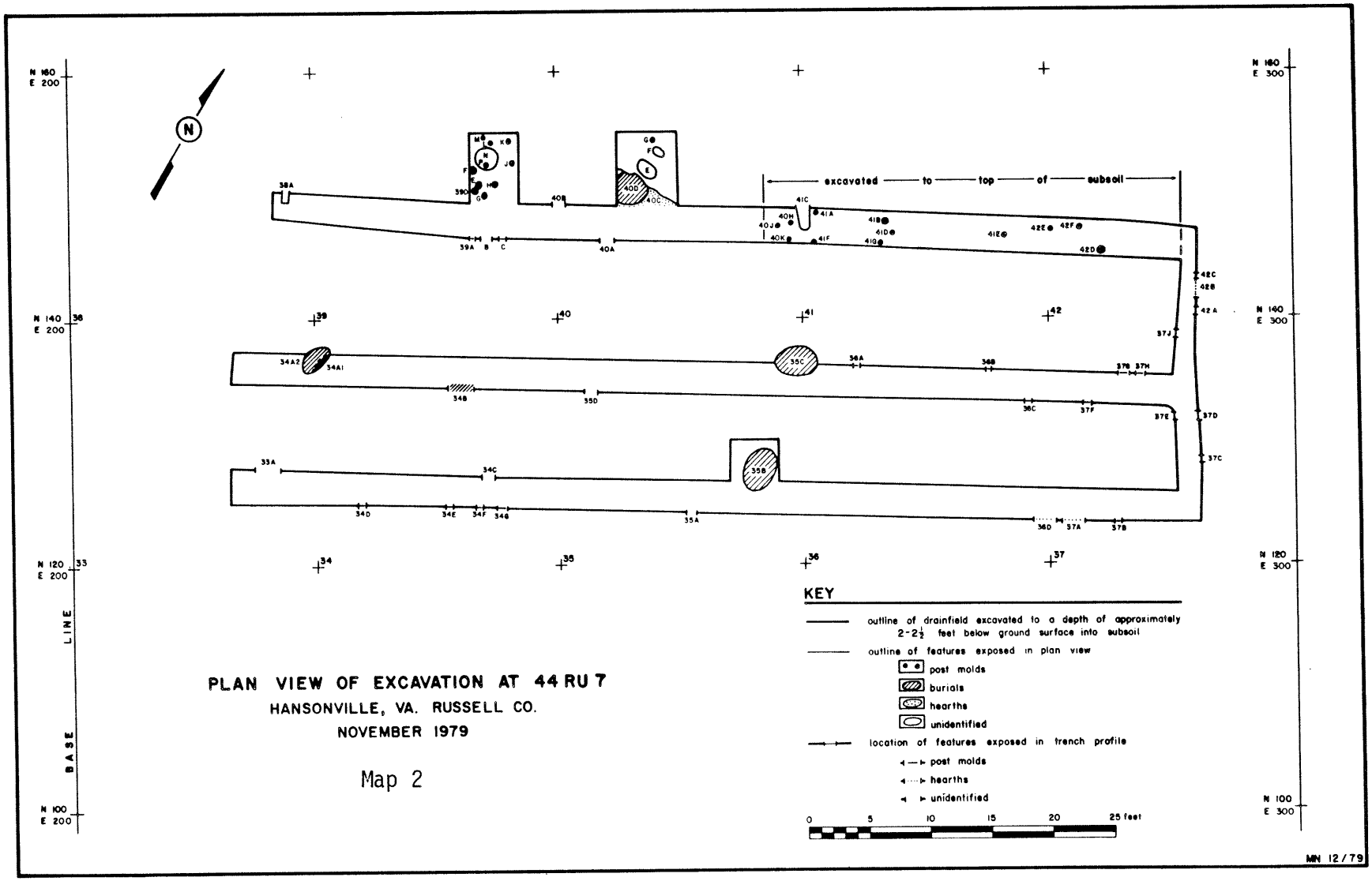
After these lines were established, a smaller 40-foot X 100-foot grid with 20-foot cells was laid over the area disturbed by the drainfield trenches (Map 2). Map 1 shows the four corners of this grid (N120E200, N160E200, N160E300, N120E300). Survey pins were then placed at the corner of each cell. This smaller grid greatly facilitated the accurate recording of the exposed features.

Not all of the features exposed by the trenching of the drainfield were as disturbed as those revealed in profile. One section of the northernmost trenches was not completely excavated when the VRCA's field work began. This 35-foot stretch had only its topsoil to clear its surface for inspection. This was done and the cluster of features that was revealed was recorded in plan view (Map 2).

After all the exposed features were recorded (Map 2) and detailed profiles drawn (Appendix B), shovel testing was initiated to determine the horizontal extent of 44RU7. These tests were aligned along three axes (Map 1): the East 200 foot line, the East 170 foot line, and the North 478 foot line. Each test was given a number from 1 through 32 and was most often placed at a 20-foot interval. Exact locations have been recorded on Map 1. These tests extended until subsoil was reached. The removed soil was carefully trowelled through to recover all artifacts, and close attention was paid to whether or not the disturbed occupation midden was present. No evidence of occupation midden was recovered from shovel tests 1, 2, 3, 4, 12, 21, 22, 23, and 24. In addition to the 32 shovel tests, the local road cut was examined because it provided clear indications of the eastern and western limits of the occupation midden. The


ARCHAEOLOGICAL INVESTIGATIONS AT 44 RU 7
HANSONVILLE, VA. RUSSELL CO.
NOVEMBER 1979
KEY
midden boundary
01-010 surface collection units
1-32 test pits
33-42 excavation units
0 50 100 150 feet
N
BARN
N770 E125
N770 E145
N610 E125
N610 E145
N590 E170
NORTHERN EXTENT OF MIDDEN
NORTHWESTERN EXTENT OF MIDDEN
N478 W220
N478 E170
N478 E350
unidentified feature
hearth
BREAK IN MIDDEN
N350 E0
N350 E400
N250 E170
WESTERN EXTENT OF MIDDEN
EASTERN EXTENT OF MIDDEN
survey marker N202 E200
N200 E0
N200 E200
N200 E300
N200 E500
N160 E200
N160 E300
N120 E200
N120 E300
N100 E0
N100 E400
N65 E200
N35 E200
ARBITRARY DATUM 0 0
SOUTHERN EXTENT OF MIDDEN
44 RU 7/1
S100 E200
S100 E300
MN 12/79

Map 1



PLAN VIEW OF EXCAVATION AT 44 RU 7
HANSONVILLE, VA. RUSSELL CO.
NOVEMBER 1979

Map 2

limits that have been identified from the shovel testing as well as the inspection of the road cut have been marked on Map 1.

An initial inspection of the artifacts and features encountered by the shovel tests and the apparent differential occurrence of occupation midden were taken as preliminary indications that temporally or functionally distinct areas might be identified at 44RU7. In order to more accurately evaluate this initial impression, 3 areas of the site were subjected to intensive surface inspection. Time limitations and the surface conditions that prevailed across the majority of the site limited the selection of these surface collections to areas that had been previously cleared. The areas chosen for surface collection included a 30-foot square section of a private garden (01), a 5-foot square clearing exposed along the North 478 foot line (02), and 8 20-foot squares covering a major portion of a recently harvested tobacco field (03 through 010). Considering the variation in sample size, these surface collections have not been relied upon too heavily to support specific conclusions. They have instead been used to suggest general directions that might be pursued by more systematic and controlled testing.

After completion of the shovel testing and surface collection, 2 locations were selected for controlled subsurface testing. The first location was selected to investigate an area surrounding a hearth (40C) revealed in the profile of the most northern trench. A 5-foot X 5-foot test unit was used (Map 2 and Plate 2). The second location was selected to evaluate the assumption that the identified hearth was the approximate center of a circular house pattern. Since a clustering of post molds (40H, 40UJ, 40K, 41A, and 41F) had been uncovered approximately 15 feet to the east of the hearth (Map 2), the second test, a 4-foot X 5-foot unit, was placed so that it would uncover an area 11-15 feet to the west of the hearth (Plate 3). In both test units the midden topsoil was removed by shovel and sifted through 1/4 inch mesh screen so that artifact densities could be calculated and reliably compared.

Five human burials were encountered at 44RU7: 34A, 34B, 35B, 35C, and 40D (Appendices A and B). Two of these (34A and 35C) were removed by members of the ASV as part of their salvage excavation preceeding the arrival of the VRCA field crew. Only a small portion of 34B was left undisturbed by the drainfield trenching and it was not identified as a human burial until after the materials donated by the ASV were analyzed in the VRCA laboratory. The top of burial 40D was not uncovered until the last day of excavation and it was decided that the pit should be preserved and that no further excavation of the burial should be attempted. The remaining burial (35B) was carefully excavated in order to obtain data on the burial practices at 44RU7 and to determine the extent to which burials at the site have been previously disturbed.

The scope of work and the objectives formulated for investigation of 44RU7 did not allow time for an intensive consideration of all of the potentially significant environmental data recoverable from the site. However, soil samples were taken from the pit fill of features 35B, 39N, 40D, and these have been water screened through 1/4 inch and

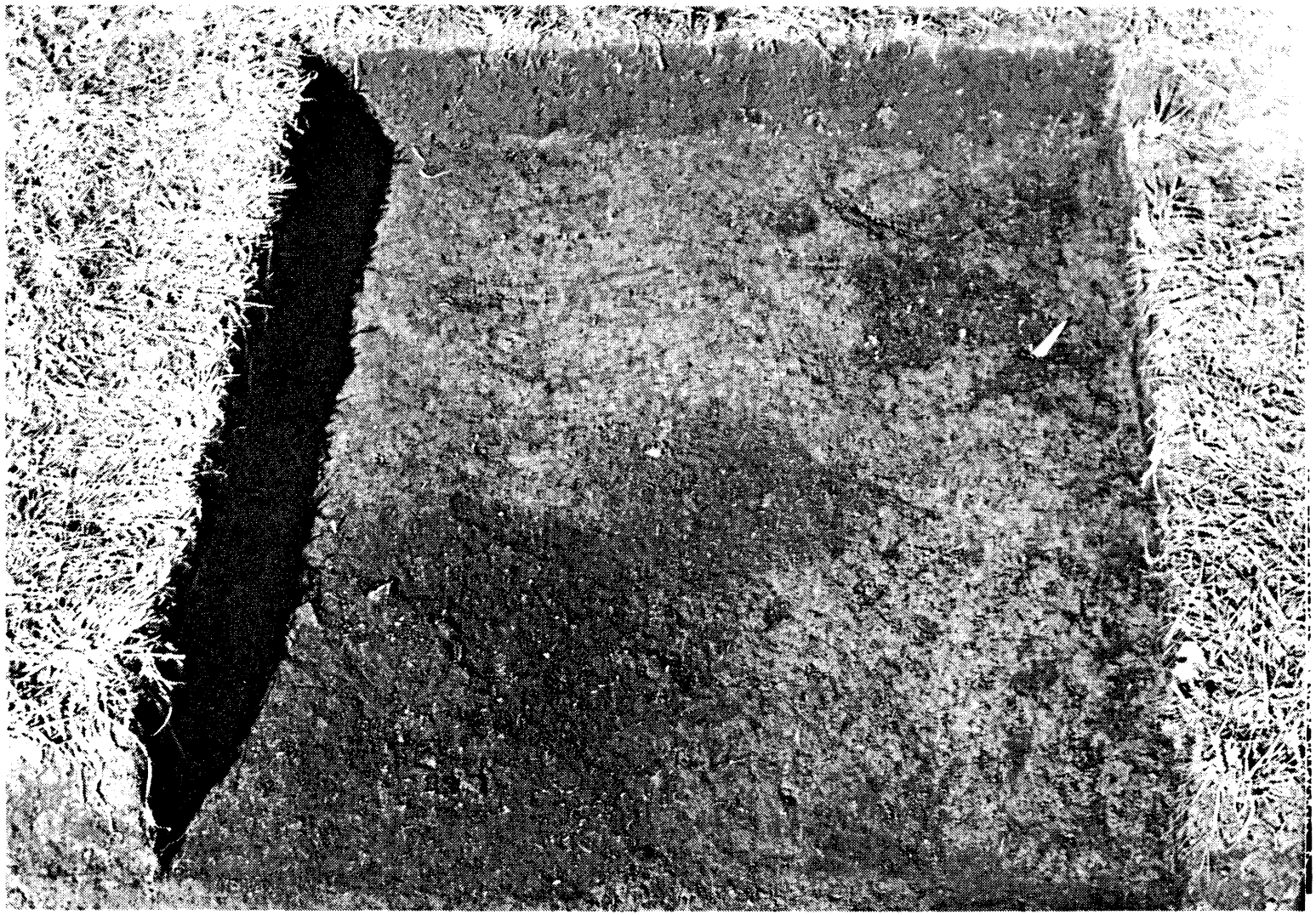


Plate 2: Plan view of features exposed in 5-foot X 5-foot test unit, 44RU7/40. Four features and one postmold were revealed (see also Map 2).

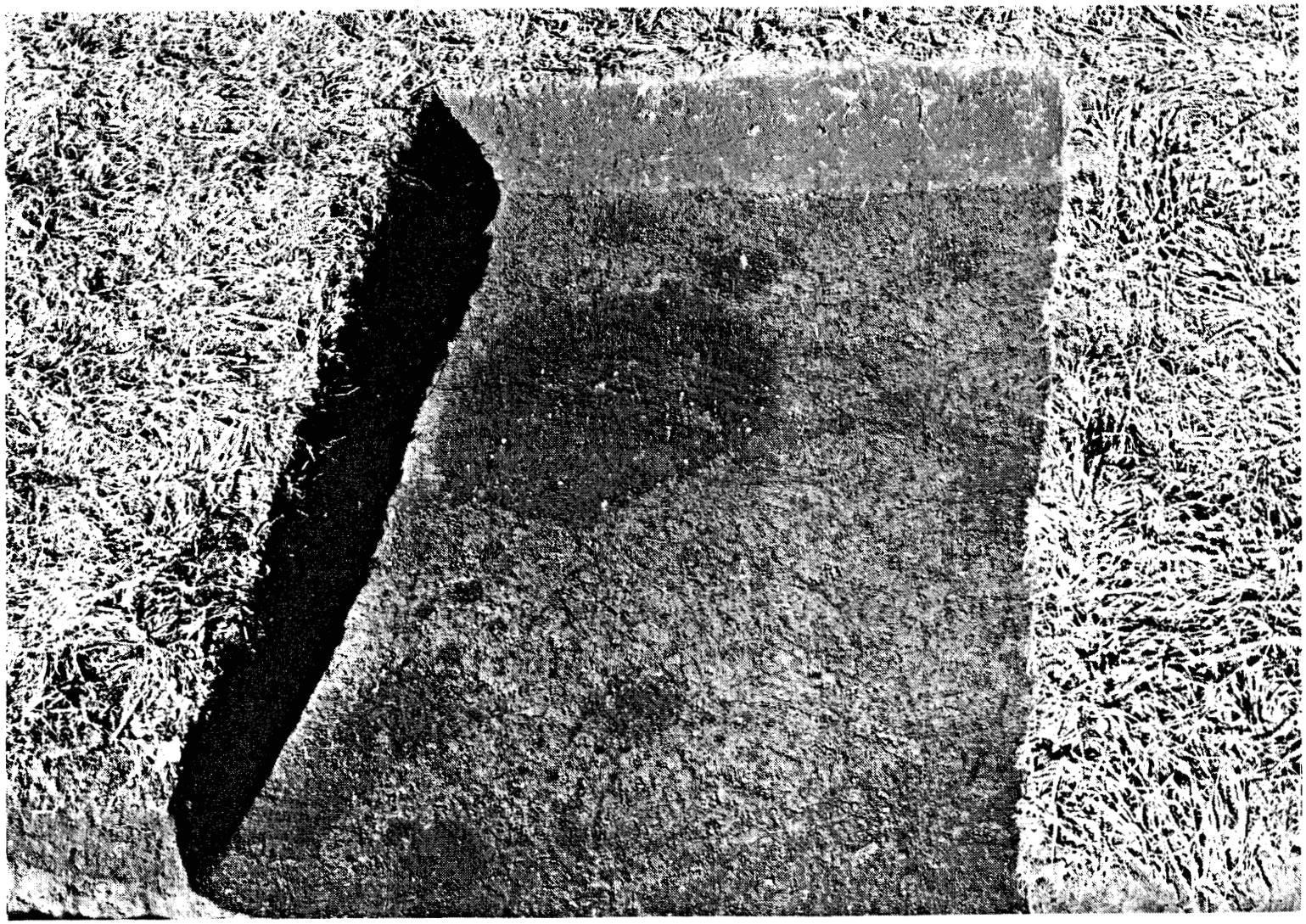


Plate 3: Plan view of features exposed in 4-foot X 5-foot test unit, 44RU7/39. One feature and 9 postmolds were initially revealed. Another postmold was uncovered when the pit fill was removed, indicating that the pit was a later intrusion. (See also Map 2).

CHAPTER II: SUMMARY OF FINDINGS

Ceramics

A brief review of the ceramics collected at 44RU7 indicates that shell tempering clearly predominates. Of the ceramics collected by Holland (1970:31), 83% were shell tempered, and MacCord's small sample contained 80% shell tempered ceramics. The work conducted by the VRCA (including the ASV donation) accounted for 332 ceramic sherds, of which 90.5% were tempered with shell. Rather surprisingly, one collection from 44RU7 that was donated to the VRCA in 1977 contained 5 (83.3%) limestone tempered sherds and only 1 (16.6%) that was tempered with shell. The possible importance of these frequencies will be discussed below.

Focusing upon the frequency of tempering agents, and specifically on the variation between shell and limestone, follows a line of inquiry that is well established for Southwest Virginia. Works by both Holland (1970:63-64, 67) and Evans (1955: 104) stress the importance of the temporal and regional relationships between shell and limestone tempered ceramics. They disagree over the chronological positioning, however. Holland considers shell to be earlier than limestone, while Evans sees limestone tempering as an earlier manifestation that was gradually replaced by shell tempered ceramics. Based on his excavations at Daugherty's Cave (44RU14) Benthall (1970) suggests that shell tempered wares replaced those tempered with limestone.

Several investigators (Holland 1970: 63; Egloff and Reed 1980:24; MacCord 1979:29; and Applegarth, Adovasio and Donahue 1978: 85) have suggested tentative sources for Southwest Virginia's shell tempered ceramics, but these suggestions remain inconclusive and the significance in terms of prehistoric culture patterns has only been hinted at. Possibly of greatest significance to investigations at 44RU7 are suggestions from West Virginia (cf. Applegarth, Adovasio, and Donahue 1978: 85 and Graybill 1980: 55-59) that shell tempered wares in Southwest Virginia are imperfectly dated and that the typological usefulness of the New River Series first defined by Evans (1955) has been diluted by the uncritical lumping of all shell tempered ceramics into this one series. In a continuing analysis of the ceramics from 44TZ1, Egloff (personal communication) has recognized two types of shell tempering, one with a predominance of periwinkle and the other utilizing mussell shell.

In light of these previous studies, consideration was given to how past and future investigations at 44RU7 might help in the understanding of the distribution, source, variety, temporal limits, and cultural significance of shell and limestone tempered ceramics in Southwest Virginia. The potential for 44RU7 appears to be quite high. As noted above, 90.5% of the 322 ceramic sherds collected at 44RU7 were tempered with shell. Reference to Table 1 further indicates that 7.2% were tempered with limestone, 0.9% were tempered with sand, and 1.5% used steatite tempering. These overall frequencies calculated for the entire area investigated may not be telling the entire story, however. For example, if the area investigated is stratified horizontally and if tempering frequencies

TABLE 1*

Ceramic Frequencies At 44RU7 By Provenience

	SHELL									LIMESTONE							SAND		STEATITE			TOTALS
	NIm	NRd	Rgd	CMd	CCI	SSt	Inc	Pln	Und	NIm	NRd	Rgd	CMd	CCI	Pln	Und	NIm	Rgd	CSt	Rgd	Und	
44RU7/01			14	1					2			1				1						19
44RU7/02												2						1			1	4
44RU7/03				1					1								1					3
44RU7/04																					1	1
44RU7/05																				1		1
44RU7/08			1													1						2
44RU7/5			1																			1
44RU7/12																				1		1
44RU7/13																1						1
44RU7/18													1									1
44RU7/25																		1				1
44RU7/30															1							1
44RU7/31				1																		1
44RU7/32															1							1
44RU7/34A1				1		1		1					1			1						5
44RU7/35		1																				1
44RU7/35B		37		8				1	7	1			2									56
44RU7/35C	55			9					11													75
44RU7/39			8	4	1				2			1	1		1							18
44RU7/39N	7										1		1									9
44RU7/40			44	7			1		1			2	2	1								58
44RU7/40D1		7		5				2	2													16
44RU7/40D2		2	1	5					2													10
44RU7/40D3		6		6	5			1	17													35
44RU7/40D4		1																				1
44RU7/41C		2		1																		3
44RU7			3	1					2										1			7
TOTALS	62	56	72	50	6	1	1	5	47	1	1	6	8	1	3	4	1	2	1	2	2	332

Key: NIm--Net Impressed; NRd--Net Roughened; Rgd--Roughened; CMd--Cord Marked; CCI--Corn Cob Impressed; SSt--Simple Stamped; Inc--Incised; Pln--Plain; CSt--Complicated Stamped; Und--Unidentified.

* This table does not include ceramic fragments measuring less than 1 inch along the longest dimension, ceramic pipe fragments, or fired and unfired, modified clay fragments. These miscellaneous ceramic fragments are summarized by provenience in Appendix C.

are calculated for each stratum, potentially significant frequency variations are noted. When the site is stratified into 3 distinct areas - the southern occupation midden, the northern occupation midden, and the area of the tobacco field which does not reveal evidence of occupation midden - the frequencies summarized in Tables 2, 3, and 4 are noted.

Admittedly, the rationale used to stratify the investigated area can be questioned. The total soil exposure permitted by 32 shovel tests and one road cut may not be sufficient to determine exact boundaries or to conclude that 2 distinct occupation middens are present. The preliminary results obtained by the stratification are encouraging, however, and they seem to support the assumption that at least 2 culturally distinct occupations are represented by the archaeological deposit at 44RU7. Until more evidence is available, these areas will be considered as the hypothesized northern and southern occupation middens. Evidence supporting this preliminary classification stems in part from the striking drop in the frequency of shell tempered ceramics noticed when the strata are compared. The hypothesized southern occupation midden (as defined by shovel tests 15 through 11 and proveniences 33 through 42) contained 94.1% shell tempered ceramics. The northern occupation midden (as defined by shovel tests 13 through 20 and 25 through 32) contained only 1 (10%) shell tempered sherds, with 6 (60%) sherds tempered by limestone. Although only 10 sherds were recovered from the northern occupation midden by November's field work, it is suggested here that the 1977 collection containing 83% limestone tempered ceramics was probably taken from this same area and that this collection tends to support the assumption that frequencies reported in Table 3 are relatively accurate reflections of spatial variations in the archaeological deposits at 44RU7.

Of course, the extreme difference in sample sizes prohibits a firm conclusion at this time. However, these preliminary results can be used to argue for the formulation of an explicit testable hypothesis: that 44RU7 exhibits evidence of at least 2 distinct occupations. This distinction should be discernable in significant differences in the material remains of each of the 2 occupation middens. It should further be possible to test for these differences through careful examination of the plow zones of these areas.

It is not being suggested that the plow zone of 44RU7 is all that needs to be considered. Certainly site formation processes that have resulted in the present archaeological context (after Shiffer: 1976) must be fully examined and understood. It has further been cautioned (Ward n.d.:15) that the relationship between the spatial distribution of artifacts within the plow zone and the distribution of undisturbed cultural features cannot be assumed to be a direct 1 to 1 relationship. Most likely, the relationship is complementary, but the nature of this complementarity needs to be demonstrated and explained before behavorial statements can be offered. What is being suggested is that culturally significant relationships do exist within the spatial distribution of plow zone materials and that the material differences hypothesized above can be carefully and expediently tested by a more intensive examination of the plow zone. Futhermore, it is imperative that such an examination be attempted by future investigations of the site. If it is then shown that the

TABLE 2*

Ceramic Frequencies From Southern Occupation Midden**

	SHELL	LIMESTONE	STEATITE	TOTALS
Net Impressed	62	1		63
Net Roughened	56	1		57
Net or Fabric Roughened	68	4		72
Cord Marked	46	7		53
Corncob Impressed	6	1		7
Simple Stamped	1			1
Complicated Stamped			1	1
Incised	1			1
Plain	5	1		6
Unidentified	47	2		49
TOTALS	292	17	1	310

* This table does not include ceramic fragments measuring less than 1 inch along the longest dimension, ceramic pipe fragments, or fired and unfired, modified clay fragments. These miscellaneous ceramics are summarized by provenience in Appendix C.

** Southern Occupation Midden includes 44RU7/01; 44RU7/5-11; 44RU7/33-42.

TABLE 3*

Ceramic Frequencies From Northern Occupation Midden**

	SHELL	LIMESTONE	SAND	STEATITE	TOTALS
Net or Fabric Roughened		2	2		4
Cord Marked	1	1			2
Plain		2			2
Unidentified		1		1	2
TOTALS	1	6	2	1	10

* This table does not include ceramic fragments measuring less than 1 inch along the longest dimension. These ceramics are summarized by provenience in Appendix C.

** Northern Occupation Midden includes 44RU7/02; 44RU7/13-20; 44RU7/25-32.

TABLE 4

Ceramic Frequencies From The Tobacco Field*

	SHELL	LIMESTONE	SAND	STEATITE	TOTALS
Net Impressed			1		1
Cord Marked	1				1
Unidentified	2	1		2	5
TOTALS	3	1	1	2	7

* The Tobacco Field includes 44RU7/03-010.

different occupation middens present at 44RU7 are characterized by significant differences in the occurrence of shell and limestone tempered ceramics, it will be possible to formulate a convincing argument to continue studies at the site directed at clarifying the typological and (possibly) cultural relationships that may exist between the shell and limestone tempered wares.

Certain stylistic attributes were also noted on the ceramics from 44RU7 that may warrant more formal analyses by future ceramic studies of the area. The majority (63.3%) of the shell tempered ceramics have surfaces treated with either net impressing, net roughening, or roughening produced by either a fabric or a net (see Table 1). Plate 4 illustrates a few of the better preserved examples of the net impressing. Only 16.6% of the shell tempered ceramics are definitely cord marked. Table 1 also indicates that only 33.3% of the limestone tempered ceramics are net impressed or roughened, and that 33.3% are cord marked. These findings, coupled with the knowledge that shell tempered ceramics traditionally associated with New River and Tennessee River drainage influences quite often exhibit plain and cord-marked surfaces (Egloff, personal communication) are used to suggest that future ceramic analyses focus more closely on the distributions and correlations of surface treatments.

The shell tempered ceramics also exhibit several types of rim treatments. At least 1 rim sherd has an unmodified applied fillet. Two others have applied fillets with finger pinching. Another has an applied fillet with an attached lug handle. In addition, there are 3 mended sherds that have plain surfaces and a thickened rim with notching (see Plate 5). This limited sample indicates further that the ceramics at 44RU7 will usually exhibit slightly everted rim profiles. Also of interest is the occurrence of 1 curvilinear complicated stamped, steatite tempered sherd, 1 ceramic discoidal fragment, and a shell tempered sherd with crossed cork markings (Plate 6).

Lithics

Examination of the lithic artifacts recovered from 44RU7 proceeded along two lines. First, an attempt was made to refine the understanding of the site's spatial distribution by examining differences in the lithic assemblage that might be explicable in terms of site utilization and function. Next, the recognizable projectile points or hafted bifaces were identified by type in order to facilitate cross-dating of the site. The results are described below.

It has been convincingly argued that "lithic assemblages variation is best interpreted along a continuum of determinants, at one extreme comprising tool-use needs at a particular activity location and access to raw material sources at the other [extreme]" (Pokotylo 1980:7). Considering the relative ease with which usable raw materials can be procured throughout much of Southwest Virginia, it is assumed that access to raw material will have only minimal effect on a lithic assemblage's variability and that the majority of the variability will therefore be attributable to the subsistence activities carried out at the site. In terms of what kinds of

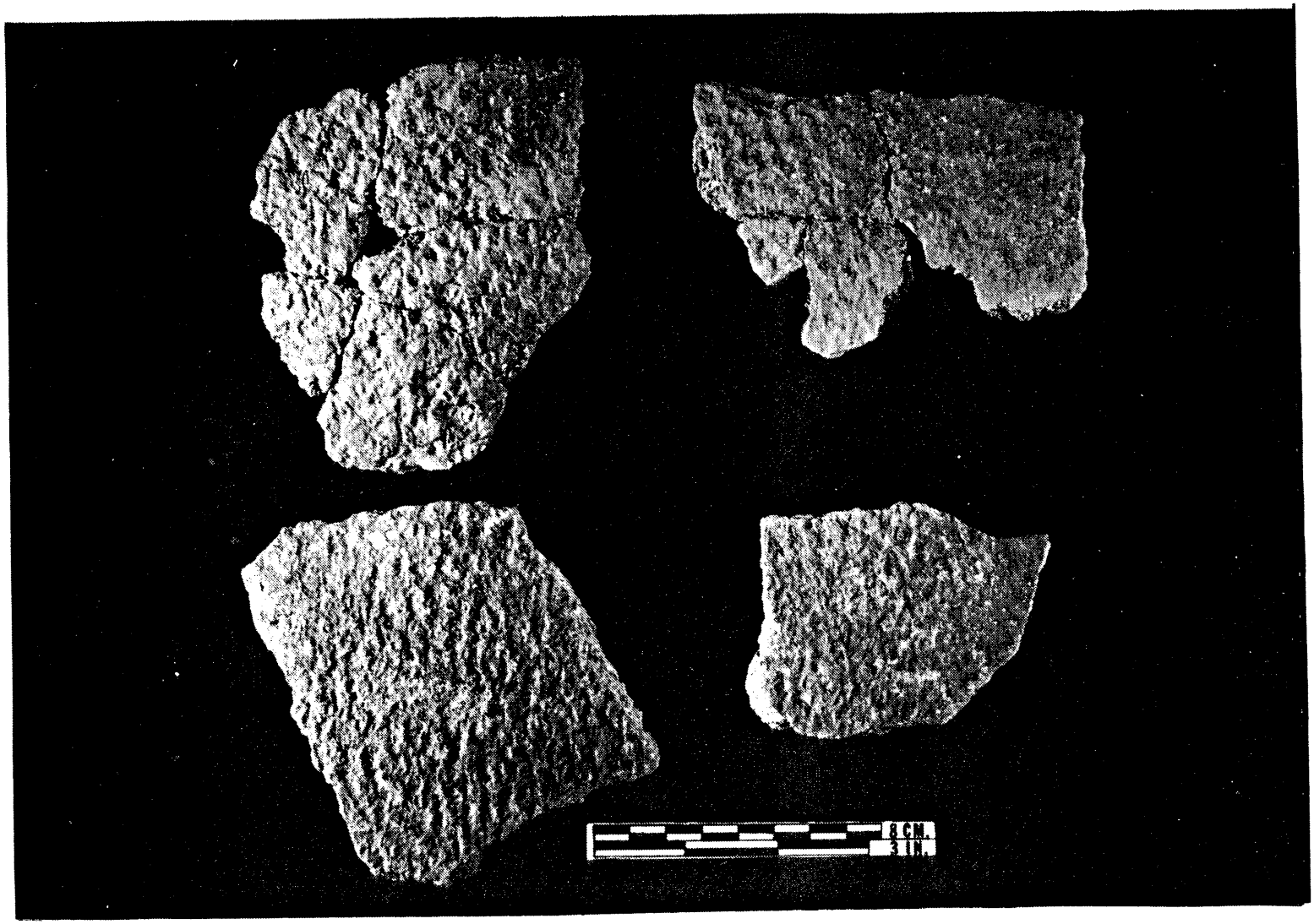


Plate 4: Shell tempered, net impressed body sherds recovered from the burial fill of 44RU7/35C.

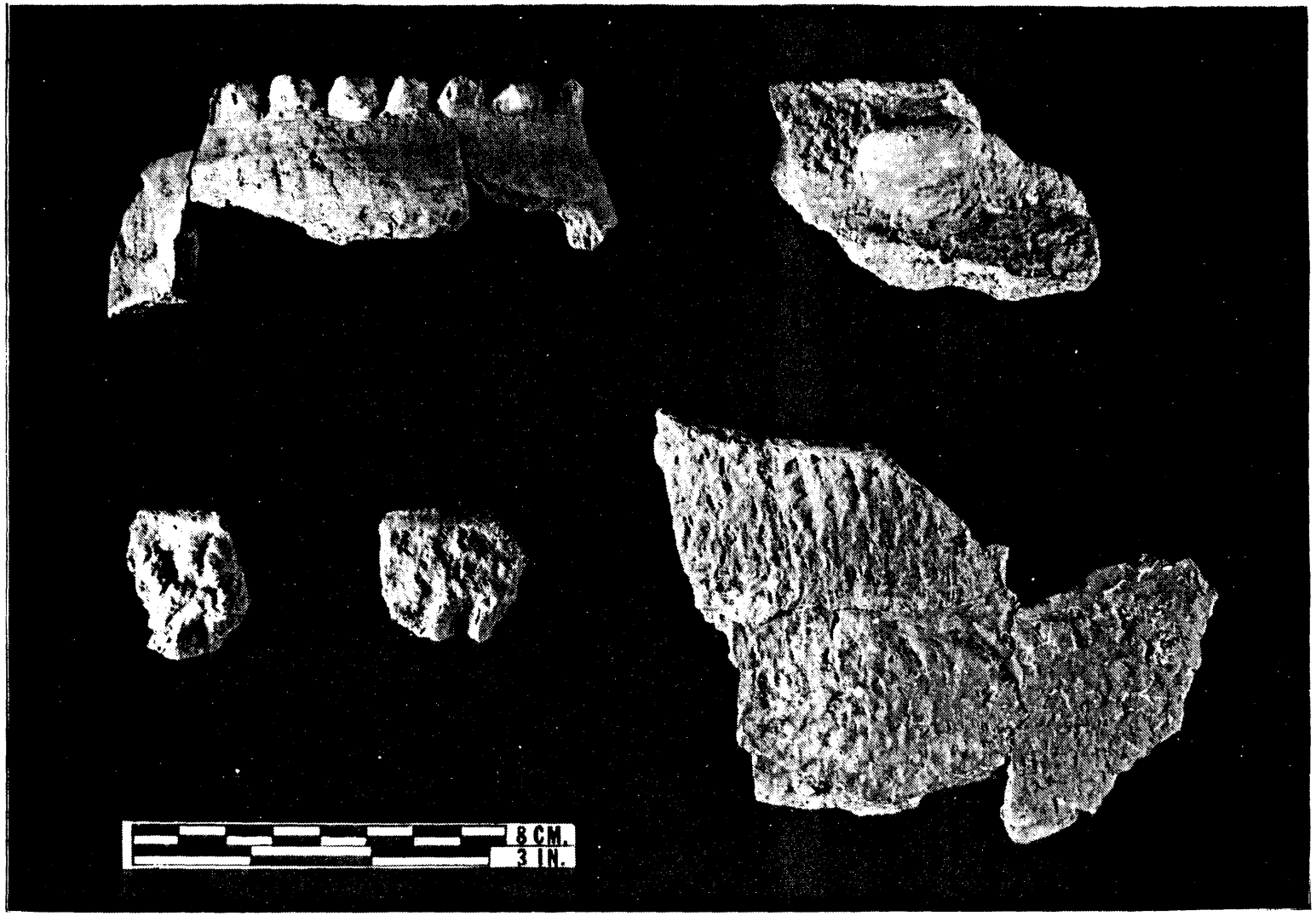


Plate 5: Shell tempered rim sherds. The 3 mended sherds in the upper left have a plain surface and a thickened rim with notching. The net impressed sherd in the upper right has an applied fillet with an attached lug handle. The 2 sherds in the lower left have applied fillets with finger pinching approximately 1 inch below the rim. The net impressed, mended sherds in the lower right have an unmodified applied fillet.

Plate 6: Miscellaneous ceramic fragments from left to right include a shell tempered discoidal fragment, a steatite tempered, curvilinear complicated stamped sherd, and a shell tempered sherd with crossed cord markings.

subsistence activities that have been carried out at site and how these can be identified, it has been suggested, (Ibid.:8) that:

> ...lithic debitage in archaeological contexts represents distinct reduction processes in the manufacture and maintenance of stone tools and that these reduction processes may be spatially differentiated relative to the degree to which maintenance and extractive activities are distributed over different site locations.

Use of such a concept can provide a basis for developing a refined regional typology of site function.

Considering site utilization and function at 44RU7 it was first assumed that both the northern and southern occupation middens would have lithic assemblages reflecting long term habitation (maintenance activities). However, the precise nature of these assemblages would be skewed to some extent since a great many projectile points have been collected but not reported upon. Thus, the tool: debitage ratio, which will vary meaningfully depending upon site class (Nicklehoff 1980), has been significantly distorted. Nevertheless, other variables that presumably have not been affected by uncritical surface collecting can be beneficially examined. For the analysis of 44RU7 the focus was one that intended to examine variation in broad categories of tool types. A preliminary examination was also begun on identifying stages in the lithic reduction process. Since both the northern and southern occupation midden are tentatively classed as villages on the basis of the occurrence of midden soil and a relatively high frequency of features, their lithic assemblages were considered as controls against which to measure variation in the third area identified, the tobacco field.

The 1,111 lithic artifacts recovered from 44RU7 (Table 5) were first broken into broad categories of flakes, chunks, utilized flakes, and bifaces. Of these, 79.2% have been identified as flakes, 7.6% have been classified as chunks, 7.5% have evidence of utilization or unifacial reduction and utilization and were therefore classifiable as utilized flakes, and 5.8% have been classified as bifaces. These categories are very broad and more sensitive variables could be identified. But even general classes are useful.

Supporting the assumption that general classifications of this sort can offer insight are the frequencies that result when the lithics are stratified by the same criteria used to group the ceramics. Tables 6 and 7 compare the frequencies of lithics in the hypothesized southern and northern occupation middens and in the area of the tobacco field. Table 6 includes ceramic counts while Table 7 excludes these counts in order to evaluate the amount of distortion potentially attributable to their inclusion. In both cases the frequencies of utilized flakes increases as proximity to the tobacco field increases.

Explaining this variation is largely problematic. It is tempting to suggest that the greater frequency of utilized flakes clearly indicates a greater on-site use of tools relative to tool manufacture. But such a suggestion may be over-simplified. A

TABLE 5

Lithic Artifact Frequencies At 44RU7 By Provenience

	FLAKES	CHUNKS	UTILIZED FLAKES	BIFACES	TOTALS
44RU7/01	13		4	2	19
44RU7/02	9	9	3		21
44RU7/03	7			1	8
44RU7/04	8		1		9
44RU7/05	2				2
44RU7/06	3		7		10
44RU7/07	7		2	1	10
44RU7/08	2				2
44RU7/09	2				2
44RU7/010				1	1
44RU7/1	2				2
44RU7/2	2				2
44RU7/3	1				1
44RU7/5	1				1
44RU7/6	6	2	1	1	10
44RU7/7	1		3		4
44RU7/8	2				2
44RU7/9	1	1		1	3
44RU7/10	2				2
44RU7/11	1	1			2
44RU7/13	3				3
44RU7/14	1				1
44RU7/15	6	7		1	14
44RU7/16	3		1		4
44RU7/17	8		1		9
44RU7/18	2				2
44RU7/19	4		1		5
44RU7/20		1		1	2
44RU7/23	2				2
44RU7/25	8		1		9
44RU7/26	3				3
44RU7/27		1	1	1	3
44RU7/28	7				7
44RU7/29	2		1		3
44RU7/30	1				1
44RU7/32	4				4
44RU7/34A1	6	6		1	13
44RU7/35	6		2	2	10
44RU7/35B	79	2		5	86
44RU7/35B1	1				1
44RU7/35C	15	6	4	6	31
44RU7/37G	1				1
44RU7/37H		1			1
44RU7/39	189	9	19	8	225
44RU7/39H	2				2
44RU7/39N	18	9		3	30
44RU7/40	366	22	26	19	433
44RU7/40C1	1				1
44RU7/40C2	1				1
44RU7/40D1	20	7	2	2	31
44RU7/40D2	5			1	6
44RU7/40D3	26		3	1	30
44RU7/40K	1				1
44RU7	15			6	21
TOTALS	880	84	83	64	1111

TABLE 6

Artifact Frequencies By Type, Including Ceramic Counts

	Southern Occupation Midden		Northern Occupation Midden		The Tobacco Field	
	#	%	#	%	#	%
Ceramics	312	24.6	10	14.1	7	13.2
Flakes	772	61.0	36	50.7	33	62.3
Chunks	66	5.2	17	23.9		
Utilized Flakes	64	5.1	6	8.5	10	18.9
Bifaces	52	4.1	2	2.8	3	5.7
TOTALS	1266		71		53	

TABLE 7

Lithic Artifact Frequencies By Type

	Southern Occupation Midden		Northern Occupation Midden		The Tobacco Field	
	#	%	#	%	#	%
Flakes	772	80.9	36	59.0	33	71.7
Chunks	66	6.9	17	27.9		
Utilized Flakes	64	6.7	6	9.8	10	21.7
Bifaces	52	5.5	2	3.3	3	6.5
TOTALS	954		61		46	

subsequent analysis of flake size that also determined whether a flake was primary or secondary indicated that there is little difference between the frequencies of primary and secondary flakes as they occurred within the 3 identified strata. The majority of the assemblages (from 48.9% - 63.8%) consisted of primary flakes. Further, the curve depicting flake size remained relatively constant for each of the areas. On the whole, and as would be expected, primary flakes tend to be larger than secondary flakes and utilized flakes tend to be larger than non-utilized flakes. This analysis examined units that were similarly collected. Units from the southern occupation midden that had been screened through 1/4-inch mesh were excluded to avoid skewing the frequencies. Tables 5 and 6, which do not exclude screened materials, may be revealing a degree of bias in the lower frequency of utilized flakes recovered from the southern occupation midden. Thus, the occurrence of a high frequency of utilized flakes may just as easily be a result of the collection techniques as a reflection of site utilization or function.

Materials from the tobacco field were collected during a surface inspection. Materials from the northern occupation were collected by shovel test which had their soil carefully examined by trowelling. Materials from the southern occupation midden were collected by both shovel tests and surface collections but included excavation units screened through 1/4-inch mesh. It therefore is probable that smaller materials were differentially selected for depending upon the collection technique and that the relative frequency of the larger utilized flakes increased as the incidence of smaller flakes decreased.

Although these results are partially disheartening because they fail to refine our present knowledge of the 3 hypothesized strata or aid in the understanding of site function, they nevertheless provide valuable information. Specifically, these results demonstrate that the profile of a lithic reduction process can be significantly skewed depending largely upon the collection technique utilized. Since it is important for an identification of site function to recognize the distinct reduction processes in the manufacture and maintenance of stone tools, it is equally important to insure that collection techniques are adequate. Further work at 44RU7 should provide the data necessary for making comparisons between discrete lithic assemblages. Results of such comparisons should provide valuable information for developing site typologies sufficiently refined to aid the study of regional settlement systems and the processes that conditioned adaptations within these systems.

Of the 64 bifaces and biface fragments recovered from 44RU7, 25 could be identified as projectile points, knives, or preforms. These tool types are generally considered to be temporally or functionally diagnostic and they often offer insight into cultural affiliations. However, it should be understood that ascribing cultural identity to any artifact is at best speculative. Further, projectile points, and in particular triangular points from the Woodland Period tend to be less sensitive reflectors of cultural variation than ceramic artifacts. It was with these cautions in mind that the projectile points from 44RU7 were identified by type.

Plate 7: Projectile points identified by type. Top row: Dallas-Clarksville. Second row: Dallas. Third row: Madison. Fourth row: Levanna. Fifth row (from left to right): triangular preform, Jack's Reef, and Buffalo Expanding stem.

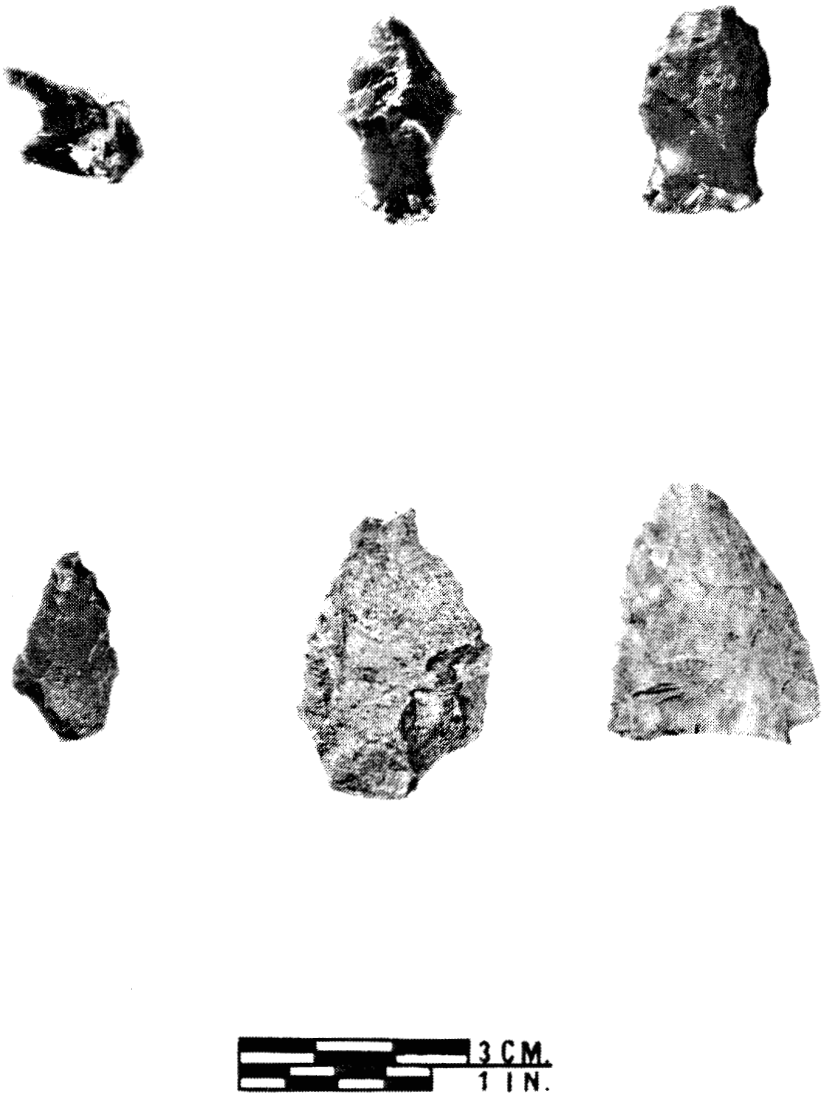


Plate 8: Unidentified biface fragments. The limestone fragment in the center of the bottom row has been only tentatively described as a biface.

The types of projectile points recognized include 1 Buffalo Expanding Stem, 1 Jack's Reef, 3 Levanna, 4 Madison, and 4 Dallas. In addition, there are 5 projectile points considered to be similar to Dallas and Clarksville and were therefore classified as Dallas-Clarksville. There are also 6 projectile points and fragments and 1 triangular preform that could not be identified as to type (Plates 7 and 8). With the exception of the Buffalo Expanding Stem and the 6 unidentified bifaces the projectile points from 44RU7 can be dated by analogy to the Late Woodland Period (ca. A.D. 1000-European contact).

The Buffalo Expanding Stem is considered by Broyles (1976:12) to be similar to other Late Archaic Period stemmed forms with a possible connection to the Early Woodland Period. The Jack's Reef point type has been assigned to the late Middle Woodland Period or the early Late Woodland Period (Ritchie 1971: 26). Ritchie has also placed the Levanna point type into the late Middle Woodland Period, but does not believe that it became predominant until the transition into the Late Woodland (Ibid.: 31; Holland 1970:89). It is important to note that the Levanna point type was apparently replaced by the Madison point type, which is dated to the Late Woodland to early Historic Periods with associations to Middle and Late Mississippian Periods. Finally, Coe (1964: 112) indicates that the Clarksville point type is associated with the 17th and 18th centuries. Thus, by connecting some of the Dallas-like points found at 44RU7 with the Clarksville type, it is suggested that there are late influences at the site.

The identification of projectile point types from 44RU7 does not significantly aid in the understanding of the site. Although it is safe to assume that the majority of the site dates to the Late Woodland Period (cca. A.D. 1000 - European contact), and probably to the later stages of this period, it is not possible to use these identifications to further refine an understanding of the 3 hypothesized strata because only 2 of the identifiable points came from the northern occupation midden (a Dallas and a Dallas-Clarksville) and only the triangular preform came from the tobacco field.

Artifact and Feature Densities

Using archaeological data to examine cultural evolutionary and cultural ecological questions requires that the regional context of the data be understood. When one site is being examined, attempts must be made to identify its chronological position, its function in terms relative to other sites within the same regional settlement system, its population dynamics, and the resources exploited by the site's residents. It is equally important, primarily due to the enormous scope that regional studies necessarily assume, to examine methods by which these variables can be quickly and reliably determined.

In the preceding section it was argued that the identification of site utilization and function could be refined by careful examination of the reduction processes exhibited by a site's lithic assemblage. It was also pointed out that problems exist with pushing the 44RU7 data too far in this regard. Consequently, other methods focusing on site function and population were pursued in order to more firmly

identify the role of 44RU7 within the regional settlement. Following suggestions by Turner (personal communication), it is argued that the density of artifacts within an archaeological deposit will reflect the density and/or duration of occupation at the site. If these figures are evaluated in conjunction with feature density data and the degree of artifact assemblage homogeniety or variability it may be possible to determine whether the site was occupied intensively for a short period or repeatedly over a more extended period. By comparing these data with similar data collected from other sites in the region it should be possible to begin reconstructing the regional settlement systems and to eventually identify cultural processes operative within the systems.

At 44RU7 artifact densities were calculated for two areas within the southern occupation midden at points where controlled test excavations were conducted. The test pits excavated were originally set as a 5-foot X 5-foot square and a 4-foot x 5-foot unit. The tests were slightly enlarged by removing the bulks between their southern walls and the northern-most drainage ditch (Map 2). Resulting irregularities were precisely measured to insure comparability. The 5-foot X 5-foot unit was enlarged to a 5-foot X 5.7-foot unit and the 4-foot X 5-foot unit was enlarged to a 4-foot X 5.5 foot unit. Each test removed 0.7 feet of plow-disturbed midden soil before subsoil was reached, and only artifacts from the midden soil were considered. The volume removed from the first test (44RU7/40) equaled 19.95 cubic feet, and from the second test (44RU7/39) 15.4 cubic feet. Soil from each was sifted through 1/4-inch mesh. Artifact densities calculated include all artifacts recovered (Tables 1, 5, and Appendix C). Table 8 lists the densities for each test.

Immediately striking is the difference between the test units' artifact densities, 16.2 artifacts/cubic foot for 44RU7/39 and 25.4 artifacts/cubic foot for 44RU7/40. These differences might be explained by reviewing their relationship with the subsurface features. The first test (44RU7/40) possibly uncovered an area towards the center of a structure while the second test (44RU7/39) revealed a pattern of postmolds that perhaps represents the wall of the structure. However, relationships between plow-zones artifacts and subsurface features must be rigorously demonstrated (c.f. Ward n.d.: 15). This relationship need to be more intensively examined at 44RU7. What these data do reveal is that there are definite discernable spatial variations in the densities of plow-zone artifacts. More work will be needed to plot these spatial distributions and their correlations with subsurface features. Importantly, neither component of the archaeological context can be ignored by future study.

Artifact densities from 44RU7 can also be advantageously compared with other sites in the region, assuming that the data retrieval techniques used allow comparability. As an example, another site in Russell County (44RU28) has been excavated (Turner 1979a) using field techniques comparable to those used at 44RU7. Turner isolated two areas at the site that had average artifact densities of 7.6 artifacts/cubic foot and 7.8 artifacts/cubic foot. This site was identified as a Middle to Late Woodland Period hunting camp occupied

TABLE 8*

Test Pit Artifact Densities

	44RU7/39	44RU7/40
Volume Excavated (Cubic Feet)	15.4	19.95
Number Artifacts	250	505
Artifacts/Cubic Foot	16.2	25.40

* This table includes all miscellaneous ceramics as summarized in Appendix C that were recovered from the plow disturbed midden soil of test units 44RU7/39 and 44RU7/40.

Plate 9: Vandalized burial, 44RU7/35B, was partially exposed in the profile of the drainfield trench. After excavation and preliminary analysis by the VRCA, evidence of 2 individuals was discovered.

principally in the fall (Ibid.: 11). Thus, it is clear that densities will register differences between different types of sites within a region. What remains to be determined is the sensitivity of artifact density ranges and their value as predictive variables usable in regional survey.

Feature densities across the exposed portions of the southern midden were also calculated, first for those areas that had only the midden soil removed to reveal the top of subsoil. These included the two test pits and a portion of the northern drainage ditch. The square footage revealed equaled (4′ X 5.5′) + (5′ X 5.7′) + (34′ X 2.8′) or 145.7 square feet. Reference to Map 2 indicates that 20 features were exposed in this area. This is the equivalent of 0.2 features/square foot, or approximately 5 features per 5-foot square.

To evaluate the consistency of this density estimate, the features exposed only in profile were then counted and compared to the linear measurements of the drainage ditch profiles. Since an area measurement cannot be strictly calculated for the linear profiles, it was assumed that the profile effectively revealed an area 1-foot wide. The 216 linear feet were thereby converted to 216 square feet. Using this assumed measurement, an estimate of 0.16 features/square foot was derived, or approximately 4 features per 5-foot square. Thus, it was concluded that feature density is relatively constant across those portions of the site exposed by the drainfield and controlled excavation of the VRCA.

The drainage ditches probably destroyed all traces of 51 to 72 features. This estimate was derived by looking at the square footage in the drainfield that could have been examined in plan view had the trenches not been excavated to 2 1/2 feet below the surface before the VRCA field work began. This area equaled 537.17 square feet. Using both the 0.16 and 0.2 features/square foot estimates, the expected number of features would be either 88 or 107. Since only 35 features were revealed in profile, it is suggested that 51 to 72 features probably were destroyed by the installation of the drainfield.

The relatively high density of artifacts occurring within the southern occupation midden, the extent of the plow-zone disturbed midden, the homogeniety of the ceramic assemblage, and diversity of the tool types tend to confirm the village identification for this portion of the archaeological deposit. But the feature density appears relatively low when compared to other Late Woodland village sites (such as 44TZ1) that were occupied repeatedly over an extended period. Feature density at 44RU7 is even lower than at least one other camp site in the area, 44WG220, (Turner, personal communication) that was apparently less densely occupied but that was possible occupied over a much longer period. Two explanations for the 44RU7 data are possible at present: 1) the village was densely occupied but for only a brief period or 2) the VRCA excavations concentrated in a "plaza" area that would have had far fewer feature than surrounding areas. Determining which of these alternative explanations is most correct will be critical to a complete understanding of the role played by 44RU7 within its regional settlement system.

Four features, 2 hearths and 2 features that have not been identified (Appendix A), were encountered by 4 of the 16 shovel tests dug within the northern occupation midden. Local informants recalled that human burials often were encountered in this area. These facts and the extent of the plow disturbed midden also tend to suggest a village identification for the more northern portion of the archaeological deposits. More intensive excavation will be needed however to fully evaluate the suggestion that 2 separate village occupations are represented at 44RU7.

Burials

The burials at 44RU7 are problematic. Five features (34A, 34B, 35B, 35C, and 40D) hold evidence of human bone and had similarly shaped pits (Appendices A and B). The actual amount of bone varied, apparently depending upon the extent to which the feature had been vandalized. The pits were roughly oval, measuring from 1.5 to 2.5 feet on their shorter sides to 2.5 to 3.5 feet on the longer sides. No attempt has yet been made to derive specific age estimates although preliminary analysis indicates that none of the burials contained infant bones.

While the data are inconclusive, it is probably significant that the burials appear to have been placed in extremely small pits were relatively numerous, and at least one evidently occurred within a house pattern (44RU7/40D) partially covered by a hearth. Burial of non-infants within structures may be a significant variation from the burial pattern at other sites in the region where limestone tempered ceramics predominate (Egloff and Reed 1980; MacCord 1973:17). It may reflect cultural affinities with Cherokee areas further south (Keel 1976). The burial pattern at 44RU7 probably reflects a demographic profile that ideally could aid in the identification of site function (e.g. what type or class of village), population, and duration of occupation.

But these suggestions will remain speculative until undisturbed burials at 44RU7 can be isolated and studied. Although no direct evidence of vandalism (e.g. shovel scars or modern artifacts in the fill) was noted, the deposition of the bones (Plate 9), their largely fragmentary condition, and the availability of local reports confirming the activity indicate that, with the possible exception of 44RU7/34A (Appendix A), the burials so far investigated at 44RU7 have been severely disturbed. As a result, what is usually a most important variable in understanding an archaeological site, appears presently to have severely restricted potential.

Site Size and a Consideration of Population Trends

Although artifact and feature densities may provide general impressions of relative population densities, it would be more convenient if actual population estimates could be reliably derived from the archaeological remains. When compared on a regional basis such estimates would provide a very strong foundation for statements on the direction and change of population growth and pressure. In the explanation of cultural evolution, population growth and pressure are repeatedly cited as critical variables. Caniero (1970 and 1974)

and Cohen (1977) view population growth and pressure as prime movers in culture change. Although Flannery (1972: 421) does not see them as necessary factors in cultural evolution, he nevertheless regards them as important socio-environmental conditions that often effect change. Even Cowgill (1975: 129), who strongly disagrees with the emphasis and causal relationships for population growth assumed by many anthropologists, stresses the importance of understanding the interaction of demographic variables with other cultural factors. It is apparent, then, that if data from an archaeological investigation are to be used to explain or refute that portio of modern anthropological theory dealing with cultural evolution, some consideration of population is needed.

Estimating actual population from archaeological remains is no simple task, however. Early attempts at deriving formulas to calculate such estimates have been made (e.g. Naroll 1962: 588) and qualifications and refinements of these formulas have been offered (Binford et. al. 1970: 84-87; Wissener 1974: 349). These efforts have largely focused on the hypothesized relationship between living space and population size. Despite the general optimism, cautionary notes have been heard (LeBlanc 1971: 210-211; Casteel 1979:807). It is generally unclear whether usable formulas can be derived to account for cross cultural variations in the amount of living space that is perceived as necessary, and it has even been suggested (LeBlanc 1971:210) that intra-cultural variation may be too great to allow for the generation of reliable predictors.

The problems encountered when trying to estimate a specific site's actual population are greatly compounded when these estimates are applied to an evolutionary perspective. This particularly so when population dynamics are focused upon since many factors distort an understanding of the direction population change through time. The number of sites identified, the nature of site preservation, and the representativeness of the sample of sites that are sufficiently excavated can all affect the accuracy of a population estimate for any given cultural period. If preservation favors later sites and if decisions to excavate also fall to the later periods, when the cultural sequence is reviewed and the different periods are compared it will probably appear as if the later periods experienced much greater population densities and possibly even "population explosions" (See Holland 1970: 117). Thus, even attempts relative densities through time are subject to distortion and of providing inappropriate support to one theoretical position or another. Caution must be urged, therefore, whenever site specific data are being used to discuss population change through time.

When considering population potential at 44RU7, these cautions have not been ignored. Although it is tempting to use the estimated extent of the occupation midden to derive area 1 estimates, and to use the estimates to approximate the populations, such a procedure would provide only extremely tentative results that could mislead future studies. Nevertheless, areal estimates of 44RU7 may prove useful in comparing the site with others in the general region. These estimates are preliminary, however, and necessarily in need of refinement.

After inspecting the occurrence of midden soil and the kinds of artifacts recovered across the site, 44RU7 can be tentatively stratified into three areas. These are the same areas referred to above in reviewing the lithic and ceramic artifact frequencies. The areas probably represent distinct sites. Assuming that they do, approximations of site size can be offered for two of the areas. No data are presently available to indicate how large the site is that was observed in the tobacco field.

The occurrence of midden soil offers the most expedient method to estimate the size of the two occupation areas. The northern occupation midden measures 190 feet along its north-south axis and at least 400 feet along its east-west axis. The southern occupation midden appears to be nearly circular, with an east-west axis measuring 350 feet and a north-south axis of approximately 400 feet (Map 1). Although it may be dangerous to give too much significance to the extent of the midden soil, at another major Late Woodland Period site in Tazewell County (44TZ1) the evidence of occupation midden virtually disappeared beyond the limits of the palisade (Egloff, personal communication). Thus, considering the consistency of the midden soil observed, its apparently circular shape, and the abruptness with which it disappears along three of its boundaries, it seems reasonable to suggest that a palisade may once have been erected along the perimeter of the area identified as the southern occupation midden. At the very least, the southern occupation midden appears to be the result of a highly nucleated settlement. These suggestions are based on the assumption that the refuse patterns at 44RU7 are comparable to those a 44TZ1.

Again, the village interpretation of at least the southern portion of 44RU7 is strengthened. The significance of such a relatively large village situated along the headwaters of the Holston River will be discussed in greater detail below.

CHAPTER III: DISCUSSION

Environmental and Cultural Setting

44RU7 is located in Russell County, Virginia. The county's climate is continental and generally favorable for agriculture with an annual average of 178 frost-free days, an annual rainfall of approximately 50 inches, and an average annual temperature of 54 degrees Fahrenheit. However, a range in elevation from 1350 feet above sea level to 4700 feet above sea level does influence considerable climatic variation throughout the county.

From a more regional perspective, 44RU7 is situated within the Ridge and Valley Province of the Southern Appalachian Highlands. Topographically, the area is characterized by southwest-northeast trending mountain chains with transverse ridges at approximately right angles. The local geology is complicated by conical hills of resistant shale and karst topography. Streams and rivers, formed at the divides of major mountain chains and along the transverse ridges have created a complex mosaic of intertwining waterways.

These waterways are often referred to whenever cultural diffusion into or out of Southwest Virginia is considered. The area's mountain chains, which might otherwise constitute formidable cultural barriers (cf. Kroeber 1963: 95) are often breached and access between river systems is greatly facilitated (see Holland 1970:2). Holland's reference to the region as a cultural cross roads (Ibid.: 115-117), is based on the observance that Southwest Virginia can be relatively easily reached by river systems draining into the Tennessee, Ohio, Roanoke, and Dan rivers. In recognition of the region's accessibility, it is commonly argued that the Late Woodland cultures of Southwest Virginia were influenced by Mississippian and Cherokee cultures to the south, Fort Ancient (which according to Prufer and Shane 1970 is a Mississippian manifestation) and Monongahela cultures to the north, and Dan River cultures to the east.

But the conceptualization of Southwest Virginia as a cultural cross roads betrays an emphasis on material culture and does little to advance studies focusing on cultural ecology and evolution. As important as it is to discover from where and how the area's material culture was being influenced, it is equally important to know how and why the area's environment was being exploited and what kinds of social systems evolved over time.

The VRCA's investigation of 44RU7 never lost sight of the potential for examining cultural ecological and cultural evolutionary questions within the regional context of Southwest Virginia. Of particular interest has been that 44RU7 is apparently a Late Woodland village site (with tentative evidence of at least two separate, possibly culturally distinct, occupations) that is not located along an extensive floodplain of a major river. It therefore does not meet one of the major criteria stipulated by the prevailing model of late prehistoric settlement. It is instead situated along a relatively steep sloping valley floor, over 600 feet from its nearest reliable water source, the confluence of two small perennial streams feeding into the North Fork of the Holston River. The site in fact occupies

a low position on the uplands. Holland earlier noted (1970: 31) that Late Woodland villages in Southwest Virginia were not restricted to the river bottoms; but, because his survey was primarily a reconnaissance, no particular attention was given to the potential differences between floodplain villages and upland villages. Identifying and exploring these differences with data from 44RU7 scrutinized two factors: 1) the site's location relative to the regional topography and 2) the site's agricultural potential relative to other village sites within the region.

Travel Routes and Regional Topography

Although not absolute barriers, the mountains of Southwest Virginia are formidable obstacles to transportation. The region's naturally dense vegetation and narrow ridge-tops restrict travel even further. As Charles Wentworth notes (1922: 6):

> When the first settlers came into this mountain country they found it entirely covered with a dense growth of large trees which included chestnut, several varieties of oak, tulip, or yellow poplar, hickory, basswood, beech, buckeye, maple, hemlock, several species of pine, and black walnut. In addition there was a heavy undergrowth of rhododendrun..., mountain laurel..., sassafrass, and a wealth of other shrubs, herbs, mosses and other plants. Grapes and other vines grew to great size and added to the difficulty of penetrating the forests.

Wentworth further explains (Ibid.: 8) that in the Russell Coal Field, a mountainous region along the northwestern boundary of Russell County, the "upland is too deeply dissected to permit travel for any considerable distance along the ridge-tops." To the southwest of the Clinch River the terrain encompassing 44RU7 is less severe, but even in this area the "ridge-tops are almost uniformly narrow, amounting to little more than mere peaks in the large majority of the cases" (O'Byrne 1922: 151).

Travelling through Southwest Virginia has never been a simple, straight-forward task, and it can be safely assumed that the larger prehistoric archaeological sites are not going to be found too far from the major routes of travel. In general, the major rivers of the region have provided the least obstructed transportation routes. It is not surprising, therefore, that many archaeological sites are found along their banks; and, it is easy to understand why a model of late prehistoric settlement emphasizes the importance of the broad floodplains of these major rivers.

The rivers have not, however, provided the only travel routes. As was noted above, the mountain chains of Southwest Virginia are not continuous. Erosional forces have formed periodic gaps through highly soluable limestone formations facilitating travel through the mountains and between the major river valleys. 44RU7's location at the mouth of Little Moccasin Gap is, therefore, undoubtedly significant. It is, for example, probably no coincidence that an early historic pioneer trail, approximately following the alignment of modern U.S. Route 19, led from Russell's Fort through Little

Moccasin Gap to Abingdon, and that it became the chief highway of the county (Woodward 1938: 13).

Delineating potential travel routes through Southwest Virginia should prove to be most valuable in predicting and explaining both prehistoric and historic settlement patterns. Landforms and water courses can probably be shown as forming a superstructure of a regional transportation system. Hypothetically, the primary routes should extend northeast to southwest following the major water courses (see Myer 1928) with the secondary routes cross-cutting the mountain chains at roughly right angles where gaps such as Little Moccasin Gap have formed. Demonstrating the interrelationships of such a transportation system with past cultural systems will be a major challenge to future archaeological investigations in Southwest Virginia.

After examining 44RU7's location in relation to the regional topography, a potential explanation of the site's function was developed:

> 44RU7 served as a strategic link in a regional transportation network of trade and/or communication by controlling access through the adjacent mountain gap leading to the North Fork of the Holston River.

This explanation warrants further evaluation by testing explicitly formulated hypotheses that can demonstrate the extent to which the inhabitants of 44RU7 participated in regional cultural networks. It is based on the conclusions that 44RU7 was the site of nucleated village settlement on the observance that it is located at the mouth of a major gap through Clinch Mountain, and in recognition of the severe limitations which terrain and natural vegetation place on travel through Southwest Virginia.

Future work at 44RU7 should focus on describing what role, if any, the site played in the regional settlement. Was the site independent or was it tied into a larger settlement system with capitals or ceremonial centers located along the major rivers? Was the site location selected to control trade or access through Little Moccasin Gap or was its selection dependent upon other factors? Answers to these questions will facilitate an evaluation of Turner's suggestion (1981) that ranked societies were developing during the Late Woodland Period in Southwest Virginia.

Thus, in terms of 44RU7's location relative to the regional topography, it appears as if the proximity to Little Moccasin Gap could have greatly conditioned the selection of the site and significantly influenced the site's function. It is also likely, however, that other factors influenced site function and settlement. Assuming that Late Woodland villages such as 44RU7 would have been at least partially dependent upon agriculture for their subsistence, it seems reasonable to suggest that the agricultural potential of the site would have been an important contributing factor influencing its settlement.

Agricultural Potential

Above it was argued that the broad floodplains of major rivers were not the only foci of late prehistoric settlement in Southwest Virginia. Building upon this argument, it can be suggested that any model emphasizing floodplain locations to the exclusion of other potentially important locations (i.e. gap situations) is deficient because it assumes that all settlements within a given settlement system are equally dependent on agriculture. This assumption implicitly disallows the full range of potential redistributive or specialized functions of a hierarchical settlement system having interdependent elements. As will be discussed below, a floodplain focus model may also be weakened by its primary assumption that floodplain soils are necessarily the best suited for agriculture and that they were therefore the most desirable and first settled.

There are, to be sure, many advantages to floodplain locations. They are adjacent to what were probably the primary transportation routes. They tend to be extremely fertile, being frequently replenished with fresh sediments from flooding. They also form in relatively large expanses easily adapted to extensive farming techniques. Possibly most important is that floodplain soils tend to be easy to cultivate which could have been a major advantage given the limitations of aboriginal agricultural practices.

Considering these potential advantages and the possibility that floodplain soils were, in fact, the most desired, an alternative explanation for the settlement of 44RU7 was developed:

> Growing populations during the Late Woodland Period forced the formation of new settlements away from the major floodplains into more isolated and, presumably, marginal areas.

This explanation is not mutually exclusive of the one presented above that stressed the strategic positioning of 44RU7. Both the pressures of growing populations and the site's strategic location could have influenced the settlement of 44RU7.

Of course, the assumption that floodplain soils were necessarily the most desired during the Late Woodland period needs to be carefully demonstrated. There are several subtle aspects to the problem that add to its complexity and that cast considerable doubt upon simplistic explanations that uncritically accept a priori assumptions which boil down to "all things being equal, they would have settled the floodplains first." As adequate as this may be for many time periods and areas, it might not be completely accurate for Southwest Virginia. A closer examination of the productivity of the floodplains has led to some very interesting conclusions that in turn have led to the development of two more alternative explanations concerning the settlement of 44RU7 and the ecological adaptations and evolution of Late Woodland societies in Southwest Virginia.

The complex geology of Southwest Virginia can be conceptually simplified by nothing that the region's underlying limestones, shales, and sandstones have been predominant factors influencing the

formation and fertility of the soils. In general, the stronger, more productive soils have formed from parent materials containing the greatest amounts of calcium carbonate (i.e. high grade "Pure" limestone). The poorer soils are derived from siliceous sandstones. Between these extremes, contributing parent rock formations include (in descending order of potential productivity): interbedded limestone and shale, dolomitic limestone, cherty limestone, and noncalcerous shale (Obenshain et al. 1945: 20-21).

In the uplands, the soils are formed in colluvial materials eroded from nearby rock formations or directly over the underlying formations. The result is that relatively small pockets of soil are formed that are of highly variable quality. The types of local rock formations greatly determine the kind of soil formed. There is minimal mixing of parent materials. Further-kinds of soil formed. There is minimal mixing of parent materials. Furthermore, since limestones are less resistant to weathering and dissolve readily, they tend to form soils with smooth surfaces, even in the uplands. On the floodplains, however, the soils are formed in alluvial materials transported from a variety of sources. There i a greater mixture of a wider range of parent rock. Thus, although larger expanses are formed, the alluvial soils are usually not as fertile as smaller pockets of soils formed directly over the purer limestones. The floodplain soils are not as homogenous. The end result is that upland soils are often formed with relatively smooth surfaces that are potentially more productive than the floodplain soils.

With this knowledge, an examination was initiated of the soils at 44RU7 and 7 other Late Woodland sites in Russell and Washington counties. The Russell County sites other 44RU7 include 44RU9 and 44RU11 (the Castlewood site). Both are upland sites identified as villages by Holland that have a predominance of shell tempered ceramics. The Washington County sites include 2 upland villages associated with gaps, 44WG1 (Keywood) and 44WG12 (Sullins). Both sites appear to have a majority of limestone tempered ceramics, although reports from 44WG1 (Holland 1970: 41) indicate that over 42% of the ceramics recovered have been shell tempered. The soils of three floodplain villages were also inspected, 44WG10 (Mendota), 44WG15 (Osborne), and 44WG35 (Cornelius). Both 44WG10 and 44WG15 apparently have a vast majority of limestone tempered ceramics. A ceramic analysis of 44WG35 has not yet been completed.

The 3 floodplain villages are all located on first-class terrace soils identified as Sequatchie loam, a brown mellow soil developed from alluvial deposits of sand, silt, and clay. Of the upland villages in Washington County, 44WG1 is located on a first-class colluvial slope identified as Emory Silt Loam, a soil accumulated from surface soils of adjacent soil underlain by limestone. 44WG12 is located on or near 2 soil types: 1) Dunmore Silt Loam, Undulating Phase, a heavy first-class solid developed from dissolved limestone that cannot be plowed too soon after heavy rains and 2) Greendale Silt Loam, Sloping Phase, a second-class soil formed from soils washed from adjacent slopes (Jurney et al. 1945).

The Russell County sites are located on two soil types. 44RU9 and 44RU11 are on Hagerstown Silt Loam, Rolling Phase, a rather heavy

first-class soil that is developed from highly calcareous limestone and that is subject to considerable erosion unless properly managed. 44RU7 is located on Pisgah Silt Loam, Rolling Phase, a rather heavy first-class soil developed from residual products high in calcium carbonate that is not as erodible as Hagerstown Silt Loam (Obenshain et al. 1945).

Productivity ratings for these soil types have been prepared that assume no special agricultural practices to "rehabilitate, maintain, or increase productivity" by using manure, commercial fertilizers, lime or other amendments or by selecting or rotating crops to "return organic matter to the soils" (Jurney et al. 1945: 76). These ratings are summarized in Table 9 in terms of the soils' potential to grow corn and vegetables. The ratings are compared to a regional standard of 100. If a soil has a productivity rating of 100 it is as productive as the best soils in the region. If its rating is only 50, the soil is about 1/2 as productive as the region's most productive soils. Since these ratings assume no special agricultural practices they should fairly accurately reflect the natural conditions faced by late prehistoric agriculturalists.

In terms of archaeological sites, these ratings indicate that 2 of the 3 "gap" sites (44WG1 and 44RU7) are located on the most productive soils, Emory Silt Loam and Pisgah Silt Loam, Rolling Phase. Data presented in this report and elsewhere (Holland 1970: 41) tentatively indicate that these may be two of the largest upland village sites in the region. The other gap site (44WG12) is located on or near two of the least productive soils examined here, Dunmore Silt Loam, Undulating Phase and Greendale Silt Loam, Slope Phase. The 2 upland villages in Russell County not associated with gaps (44RU9 and 44RU11) are located on soils that are moderately productive, but readily eroded, Hagerstown Silt Loam, Rolling Phase. The floodplain villages, which by presently available accounts appear to be among the largest of any village types in the region (44WG10, 44WG15, and 44WG35), are located on the least productive first-class soil that has been examined here, Sequatchie Loam. Only the Greendale Silt Loam, Slope Phase, which may or may not have been utilized by the inhabitants of 44WG12, is rated lower than the Sequatchie Loam.

These findings may reflect distinctions of only minor importance to the prehistoric cultures. It must be remembered that all but one of the soil types described above are first-class soils. They are all well suited for agriculture. Nevertheless, it is important to consider the possibilities. Assuming that the benefits of even slightly more productive soils would have been discernable to the trained eye of the prehistoric agriculturalist, it is possible that upland soils such as Pisgah Silt Loam and Emory Silt Loam were preferred. They could have conceivably yielded more produce per man hour of labor than the less productive floodplain soils. Considering this possibility, an alternative explanation for the settlement of 44RU7 can be proposed.

> In some cases, upland soils in Southwest Virginia are more productive than the terrace soils. These differences would have been recognizable and semi-

TABLE 9*

Soil Productivity Ratings

SOIL	CROP PRODUCTIVITY INDEX Corn	Vegetables
Dunmore Silt Loam, Undulating Phase	65	65
Emory Silt Loam	100	75
Greendale Silt Loam, Slope Phase	55	50
Hagerstown Silt Loam, Rolling Phase	65	70
Pisgah Silt Loam, Rolling Phase	90	75
Sequatchie Loam	60	60

* This table was compiled from data presented in Table 5 of Jurney et al. (1945) and Table 4 of Obenshain et al. (1945). The ratings compare the productivity of each soil for corn and vegetables to a standard of 100. This standard is derived from approximate average acre yields obtained from the better soil types in which these crops are grown. The ratings presented above "...refer to the yields that may be expected if no special practices are used to restore, maintain, or increase productivity. These are the yields that are obtained without the use of manure, lime, commercial fertilizer, or soil improving crop rotations" (Obenshain et al.: 1945).

> agricultural groups would have selectively settled upland locations permitting greater yields per man hour. As populations increased and importance of agriculture grew, the less productive floodplain soils would have been more intensively settled. The floodplains would have required more work per unit produced but since they form in larger expanses than the upland soils, larger populations could have been supported.

The explanations of 44RU7's settlement presented above have relied heavily upon the regional context of Southwest Virginia. The last two have also stressed the potential importance of mounting populations pressures.

Theories of population growth and pressure must always be rigorously demonstrated, and it is not being suggested that either proposal can yet be supported more vigorously than the other. What is being suggested is that population pressures could have very easily influenced socio-cultural adaptations in Southwest Virginia.

This suggestion appears more feasible when it is is realized that in Russell County only slightly more than 3% of the land has first-class soils, with Pisgah Silt Loam, Rolling Phase accounting for 0.2% of the county's soils and Hagerstown Silt Loam, Rolling Phase accounting for 1.3% of the County's soils (Obenshain et al. 1945). In Washington County 16.0% of the soils are first-class, with Sequatchie Loam accounting for only 0.8% while Emory Silt Loam accounts for 4.1% of the county's soil (Jurney et al. 1945). Thus, it is reasonable to suggest that an increasing dependence on agriculture and the concomittant sedentism would have allowed populations to increase at a greater rate though at the cost of intensified competition for an already scarce resource, usable agricultural soils.

One final proposal warrants consideration. It may be that the slight productive advantage of the upland soils was minimized by the fact that floodplain soils are noticeably easier to cultivate (Jurney et al. 1945: 21) and that they usually form larger areas suitable for planting. In other words, it is possible, given the limitations of prehistoric farming technologies, that the differences between the agricultural potential of the first-class soils would have been negligible and that other factors would have determined why and how the locations were settled. Considering this possibility, a final alternative explanation for the settlement of 44RU7 has been developed:

> Upland soils and floodplain soils were settled concurrently by similarly organized social groups. With time, the advantages and disadvantages of the particular locations began to influence and effect socio-cultural change. Many floodplain locations would have been conducive to larger populations necessitating new means of socio-cultural interaction (see Turner 1981: 1). Although the availability of locations within first-class soils in the uplands would have limited growth, many of these locations would have been well situated to control

trade and communication with the larger settlements in the floodplains.

This explanation is the most multivariate of the 3 presented earlier and incorporates aspects of them all. Its basic assumption is that the variable environment of Southwest Virginia could have easily induced the evolution of functionally diverse site types that would then have developed complex interdependencies. The complexity and strength of these interdependencies would have greatly influenced the socio-cultural complexity of the groups inhabiting Southwest Virginia. If the upland villages had similar functions as, and were independent of, the floodplain villages, it would be possible to conclude that the late prehistoric societies of Southwest Virginia were probably tribal or egalitarian. If, on the other hand, the upland villages served different functions from, and were closely connected to, the floodplain villages, then it would be possible to conclude that more complex, possibly rank, societies were probably evolving. Obviously, demonstrating these functional differences or similarities and the extent of independence or interdependence will be a major challenge to future archaeological work in Southwest Virginia.

Summary

The 4 explanations described above have been presented in an attempt to establish a theoretical framework within which to pursue future archaeological investigations in Southwest Virginia. At this time they are only possible conclusions that will need to be evaluated by future testing of explicity formulated hypotheses. It is not within the scope of this report to attempt to detail the specific testable hypotheses. However, it can be suggested that the hypotheses should focus on evaluating: 1) functional differences in site types in an effort to develop a refined regional site typology, 2) cultural affiliations and contemporaneity of the different site type, 3) temporal relationships among the upland villages and floodplain villages, and 4) percentages of food resources exploited at each site in an effort to identify changes in resource exploitation that might reflect the presence or absence of population pressure as a factor in socio-cultural adaptation (cf. Cohen 1977).

CHAPTER IV: RECOMMENDATIONS TOWARD FURTHER STUDY

A Research Design

In an article on northeastern North American archaeology, Ford (1974: 385) points out that ecology has become a major framework for archaeological investigations. Possibly of greater significance is his subsequent suggestion (Ibid.: 387) that at least for northeastern North American archaeology, "the most obvious new direction...is not new theory or ideas - they have been present for a long time - but it is truly a methodological revolution." This latter statement might be revised to suggest that in Southwest Virginia the most obvious new direction lies in generating an explicitly theoretical framework, deciding upon and devising the methods that can best be used to evaluate this framework, and beginning to test (and thereby accept, reject, and/or refine) the particulars of the theoretical framework.

Although this may seem to be the familiar, somewhat over-stated cry of the hypothetico-deductivists, it really is far less formal. It is nothing more than a plea for explicitly formulated problem oriented research. Whether the hypotheses are induced from the existing data base or deductively derived from formal tests is of less consequence than insuring that the effort is made to outline exactly what the region's archaeological questions are and directing ongoing efforts toward answering them. Following Ford's initial remark, it is likely that many of the problem orientations formulated will be taken from an ecological perspective. It is just as likely, however, that such traditional concerns as cultural chronologies will need ongoing attention. The ultimate goal is to produce a research design as broadly based as possible, so that data collection carried out today will not limit future analyses.

A Summary of Known Sites

For An Archaeological Survey of Southwest Virginia Holland (1970) surveyed 18 counties in the southwestern corner of Virginia and recorded 224 sites. Since Holland's survey, over 800 new sites have been added to the rosters of these 20 counties (VRCA site survey file). In spite of this quantum leap in the number of sites recorded, no attempt has been made to summarize the sites by any of a number of potentially significant criteria (see Gardner 1979: 18). For example, it is not known how many of the sites represent the various cultural periods. Nor has any attempt been made to determine which sites have been destroyed and which warrant further study. The only synthetic statement that has been attempted for the region has apparently relied on data from 12 sites to define the "Intermontane Culture" (MacCord and Buchanan 1980: 150). Of these 12 sites, 8 were recorded as a result of Holland's survey. It should be clear, however, that if an understanding of the broader patterns of Southwest Virginia's prehistory are to be discovered, more than a few sites dating to the Late Woodland Period need to be considered. The efforts that have located more than 1,000 sites in the last 20 years will have to be exploited.

It is for this reason that the first recommendation toward further study in Southwest Virginia focuses on the need to summarize the

known data. How many sites date to the Late Woodland Period? How many are located on floodplains? How many others are on ridgetops and along secondary water sources? How many have been reported upon? How representative is the existing data base? Answers to these and other questions should lead to the formulation of specific models and research questions. Is population pressure a factor in the area's cultural adaptation? Are symbiotic redistribution systems evolving? Are preferred resources being controlled by centralized settlements? Can models developed for other areas (e.g. Gardner 1979) be advantageously applied to the region? Can evidence for the development of rank societies be found? What sites can be studied further to answer these questions?

In the past, archaeology has suffered from the perpetuation of untested, implicit assumptions. Merely making many of these assumptions explicit and testing their validity would constitute a major advancement. A careful summary of what is known archaeologically in Southwest Virginia would expose many of the assumptions upon which archaeological investigations have traditionally proceeded.

The Need to Collect Environmental Data

The explanation of the processes of cultural evolution has become a primary anthropological orientation. Most recent attempts to explain cultural evolution archaeologically have focused upon the interrelationship of man and his environment. Some (e.g. Gardner 1979 and others) have stressed the importance of major environmental changes and the cultural adaptations these changes necessitated. Others (e.g. Carniero 1970, 1974; Cohen 1976) have pointed to the more immediate role played by human population growth in determining cultural change. Still others (especially Flannery 1972) have argued that explanation of cultural evolution lies in understanding the systemic processes. For Flannery, it is the transmission of information (Ibid.: 400) and how this transmission is affected by a variety of environmental and cultural variables that are necessary to understanding the evolution of cultures. Unless an attempt is made to account for all possible effects to the system, the approach is not truly ecological.

Although there are major theoretical differences in all of these approaches, they coincide in insisting that the articulation of man and environment receive careful consideration. Changes in the environment have to be tested for their correlations with changes in settlement patterns and exploitation strategies. The ways in which human groups exploited their environments must be measured so that changes through time can be traced. Specific socio-environmental conditions selecting for evolutionary mechanisms and pathologies that speed up evolutionary processes need to be identified. It is clear, therefore, that if current evolutionary theories are to be adequately evaluated, environmental variables cannot be taken too lightly, no matter what the particular theoretical bias of the individual investigator.

Having identified the problem, we are once again confronted by Ford's caution (1974: 385). Modern archaeology faces a methodological

challenge. To trace environmental change, population pressure, or other socio-environmental conditions requires careful sampling of numerous variables and critical evaluations of the representativeness of those samples. Regional environmental potentials need to be calculated. Traces of the resources exploited at each site need to be rigorously searched for. Contemporaneity, cultural affiliation, and functional relationships of sites within hypothesized settlement systems need to be assessed.

A Final Word on Future Directions

It cannot be over emphasized that whenever objects are taken from an archaeological site (whether by vandal, amateur, or professional), data held by the site, if not destroyed, are at least forever disturbed. If the extent of this disturbance is not fully contemplated before the actual data collection begins, and if proper techniques are not utilized to record the disturbance, much data will be effectively destroyed. Although it is probably inevitable that some information will be lost, this loss should diminish as training increases and awareness of the potential ends to which the data can be put broadens.

The archaeological investigation of 44RU7 has been approached from this perspective. By design, only limited excavation was conducted. Far more time was spent recording the previously exposed features, making preliminary assessments of the site size and function, and trying to fit the data and the potential for recovering more data into a broader theoretical framework than was spent actually excavating the site.

Continued work at 44RU7 and in the region of which it is a part should proceed cautiously, with its goals clearly in mind and explicitly stated up front. The business of archaeology is as much in the design of the work to be done, as it is in the digging.

APPENDIX A: FEATURE AND POSTMOLD DESCRIPTIONS

Northern Occupation Midden

44RU7/18: Hearth. Burnt red clay discovered in shovel test 1.2′ below surface. Fill included charcoal and periwinkle (not collected.) Artifacts and bone collected may not be from feature context.

44RU/19: Unidentified. Dark brown silt-loam, midden deposit discovered in shovel test below normal depth of subsoil. Midden deposit with charcoal and periwinkle continued to at least 1.5′ where shovel test was terminated. Artifacts and bone recovered from shovel test may not be from feature context.

44RU/25: Unidentified. Dark brown silt-loam, midden deposit discovered in shovel test below normal depth of subsoil. Midden deposit, with charcoal, continued to at least 1.4′ below surface where shovel test was terminated. Charcoal was not collected. Artifacts recovered from shovel test may not be from feature context.

44RU/31: Hearth. Burnt red clay with grey and white ash discovered in shovel test 0.8′ below surface. Artifact and bone fragment recovered from shovel test may not be from feature context.

Southern Occupation Midden

44RU7/9: Unidentified. Dark brown silt-loam, midden deposit discovered in shovel test below normal depth of subsoil. Midden deposit continued to at least 2.0′ below surface where shovel test was terminated. Artifacts recovered from shovel test may not be from feature context.

44RU7/33A: Unidentified. Discovered in north profile of drainage ditch. Not excavated. Drawn in plan on Map 2 and in profile in Appendix B.

44RU7/
34A1 & 34A2: Burial. Excavated by ASV prior to VRCA field work. Drawn in plan on Map 2 and in profile in Appendix B. Discovered by landowner during hand excavation for drainage ditch. Prompted ASV involvement. 34A1 was part of burial disturbed by drainage ditch. A C14 sample was taken from 34A2, the part not disturbed by the drainage ditch excavated by the ASV. Artifacts an non-human bone (some charred) were recovered from the burial fill. Preliminary analysis of the human bone indicates interment of two individuals. Color snapshots were taken and donated to the VRCA. It appears that the burial had not been vandalized and the individuals were articulated and flexed together.

No drawings are available of the skeletal remains *in situ*.

44RU7/34B: Burial. Removed by ASV prior to VRCA field work. Not recognized as a burial until human bone fragments were identified in the VRCA lab. Location shown in plan on Map 2. Drawn in profile in Appendix B. Human bones recovered include a right humerus and 2 unidentified longbone fragments.

44RU7/34C: Unidentified. Discovered in north profile of drainage ditch. Excavated by ASV prior to VRCA field work. Located in plan on Map 2 and drawn in profile in Appendix B. No artifacts were recovered.

44RU7/34D: Postmold. Discovered in south profile of drainage ditch. Excavated by ASV prior to VRCA field work. Located in plan on Map 2 and drawn in profile in Appendix B. No artifacts were recovered.

44RU7/34E: Postmold. Discovered in south profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

44RU7/34F: Postmold. Discovered in south profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

44RU7/34G: Postmold. Discovered in south profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

44RU7/35A: Unidentified. Discovered in south profile of drainage ditch. Excavated by ASV prior to VRCA field work. Located in plan on Map 2 and drawn in profile in Appendix B. No artifacts were recovered.

44RU7/35B: Burial. Discovered in north profile of drainage ditch. ASV began excavation prior to VRCA field work. VRCA finished excavation. Drawn in plan on Map 2 and in profile in Appendix B. Excavated burial shown in Plate 9. Apparently disturbed. Artifacts, shell, and non-human bone were collected from burial fill. A C14 sample was taken and a soil sample has been water screened through 1/4" and 1/16" mesh. Sample from 1/16" mesh has not been sorted. Another soil sample has been saved for future analysis. Preliminary analysis of human bone indicates interment of 2 individuals.

44RU7/35C: Burial. Discovered in north profile of drainage ditch. Excavated by ASV prior to VRCA field work. Photographed after burial was removed (not in report). Drawn in plan on Map 2 and in profile in Appendix B. Artifacts, shell, non-human bone, and a C14 sample were taken from the burial fill and donated by the

ASV. No photographs or drawings of the burial before excavation or removal of the skeleton are available. Preliminary analysis of human bone suggests interment of only 1 individual.

44RU7/35D: Unidentified. Discovered in south profile of drainage ditch. Excavated by ASV prior to VRCA field work. Located in plan on Map 2 and drawn in profile in Appendix B. Four periwinkle shells and 1 burnt bone fragment were recovered.

44RU7/36A: Postmold. Discovered in north profile of drainage ditch. Excavated by ASV prior to VRCA field work. Located in plan on Map 2 drawn in profile in Appendix B. No artifacts were recovered.

44RU7/36B: Postmold. Discovered in north profile of drainage ditch. Excavated by ASV prior to VRCA field work. Located in plan on Map 2 and drawn in profile in Appendix B. One ceramic fragment and a periwinkle fragment were collected.

44RU7/36C: Postmold. Discovered in south profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

44RU7/36D: Hearth with unidentified portion below. Discovered in south profile of drainage ditch. Unidentified portion excavated by ASV prior to VRCA field work. Hearth was not excavated. Located in plan on Map 2 and drawn in profile in Appendix B. No artifacts were recovered.

44RU7/37A: Hearth. Discovered in south profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

44RU7/37B: Postmold. Discovered in south profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

44RU7/37C: Postmold. Discovered in east profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

44RU7/37D: Postmold. Discovered in east profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

44RU7/37E: Postmold. Discovered in west profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile Appendix B.

44RU7/37G: Postmold. Discovered in north profile of drainage ditch. Excavated by ASV prior to VRCA field work. Located in plan on Map 2 and drawn in profile in Appendix B. An unmeasurable amount of bone, a chert

flake, and 1 periwinkle shell were recovered from the fill.

44RU7/37H: Postmold. Discovered in north profile of drainage ditch. Excavated by ASV prior to VRCA field work. Located in plan on Map 2 and drawn in profile in Appendix B. Three bone fragments and 1 cert chunk were recovered.

44RU7/37J: Postmold. Discovered in west profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

44RU7/38A: Unidentified. Discovered in north profile of drainage ditch. Not excavated. Drawn in plan on Map 2 and in profile in Appendix B.

44RU/39A: Postmold. Discovered in south profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

44RU7/39B: Unidentified. Discovered in south profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B. Dotted line in profile drawing indicates slight soil changes.

44RU7/39C: Postmold. Discovered in south profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

44RU7/39D: Postmold. Discovered in 4′ X 5′ test. Not excavated. Drawn only in plan on Map 2.

44RU7/39E: Postmold. Discovered in 4′ X 5′ test. Not excavated. Drawn only in plan on Map 2.

44RU7/39F: Postmold. Discovered in 4′ X 5′ test. Not excavated. Drawn only in plan on Map 2.

44RU7/39G: Postmold. Discovered in 4′ X 5′ test. Excavated by VRCA. Drawn on Map 2 and in profile in Appendix B. No artifacts were recovered.

44RU7/39H: Postmold. Discovered in 4′ X 5′ test. Excavated by VRCA. Drawn in plan on Map 2 and in profile in Appendix B. Two chert flakes were recovered.

44RU7/39J: Postmold. Discovered in 4′ X 5′ test. Not excavated. Drawn only in plan on Map 2.

44RU7/39K: Postmold. Discovered in 4′ X 5′ test. Excavated by VRCA. Drawn in plan on Map 2 and in profile in Appendix B. No artifacts were recovered.

44RU7/39L: Postmold. Discovered in 4′ X 5′ test. Excavated by VRCA. Drawn in plan in Map 2 and in profile in Appendix B. No artifacts were recovered.

44RU7/39M: Postmold. Discovered in 4′ X 5′ test. Excavated by VRCA. Drawn in plan in Map 2 and in profile in Appendix B. No artifacts were recovered.

44RU7/39N: Unidentified. Possibly a shallow storage pit. Discovered in 4′ X 5′ test. Excavated by VRCA. Drawn in plan in Map 2 and in profile in Appendix B. Artifacts, shell, non-human bone, and a C14 sample were taken from the feature fill. A soil sample has been water screened through 1/4" and 1/16" mesh. Sample from 1/16" mesh has not been sorted. Another soil sample has been saved for future analysis.

44RU7/39P: Postmold. Discovered in 4′ X 5′ test. Not excavated. Drawn in plan in Map 2.

44RU7/40A: Unidentified. Discovered in south profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

44RU7/40B: Unidentified. Discovered in north profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

44RU7/40C: Hearth. Discovered in north profile of drainage ditch. Partially excavated by VRCA. Drawn in plan on Map 2 and in profile in Appendix B. Two chert flakes and 3 bone fragments were recovered.

44RU7/40D: Burial Pit. Discovered in 5′ X 5′ test. Excavated to top of "false bottom" manifested by compacted mottled clay. It is possible that an <u>in situ</u> skeleton is preserved. There was not enough time to remove the false bottom to investigate. Drawn in plan on Map 2 and in profile in Appendix B. Artifacts, shell, non-human bone, and floral material were collected from burial fill. Three soil samples have been water screened through 1/4" and 1/16" mesh. The samples from the 1/16" mesh have not been sorted. Another soil sample has been saved for future analysis. Human bone was recovered from fill on top of the "false bottom," suggesting at least partial vandalism. The burial pit being adjacent to an partially below the hearth (40C) is reminiscent of Cherokee burial practices.

47RU7/40E: Unidentified. Discovered in 5′ X 5′ test. Not excavated. Drawn only in plan on Map 2.

44RU7/40F: Unidentified. Discovered in 5′ X 5′ test. Not excavated. Drawn only in plan on Map 2.

44RU/40G: Postmold. Discovered 5′ X 5′ test. Excavated by VRCA. Drawn in plan on Map 2 and in profile in Appendix B. No artifacts were recovered but a C14 sample was taken from the fill.

44RU7/40H: Postmold. Discovered in excavation of drainage ditch. Excavated by the VRCA. Drawn in profile in Appendix B and in plan on Map 2. No artifacts were recovered.

44RU7/40J: Postmold. Discovered in excavation of drainage ditch. Excavated by the VRCA. Drawn in Map 2 and in profile in Appendix B. No artifacts were recovered.

44RU7/40K: Postmold. Discovered in excavation of drainage ditch. Excavated by VRCA. Drawn in plan on Map 2 and in profile in Appendix B. On chert flake was recovered.

44RU7/41A: Postmold. Discovered in excavation of drainage ditch. Excavated by VRCA. Drawn on Map 2 and in profile in Appendix B. No artifacts were recovered.

44RU7/41B: Postmold. Discovered in excavation of drainage ditch. Not excavated. Drawn only in plan on Map 2.

44RU7/41C: Unidentified. Partially excavated by VRCA. discovered in excavation of drainage ditch. Drawn in plan on Map 2 and in profile in Appendix B. Artifacts and non-human bone were recovered from the feature fill.

44RU7/41D: Postmold. Discovered in excavation of drainage ditch. Not excavated. Drawn only in plan on Map 2.

44RU7/41E: Postmold. Discovered in excavation of drainage ditch. Not excavated. Drawn only in plan on Map 2.

44RU7/41F: Postmold. Discovered in excavation of drainage ditch. Not excavated. Drawn only in plan on Map 2.

44RU7/41G: Postmold. Discovered in excavation of drainage ditch. Not excavated. Drawn only in plan on Map 2.

44RU7/42A: Postmold. Discovered in east profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

44RU7/42B: Hearth. Discovered in east profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

44RU7/42C: Postmold. Discovered in east profile of drainage ditch. Not excavated. Located in plan on Map 2 and drawn in profile in Appendix B.

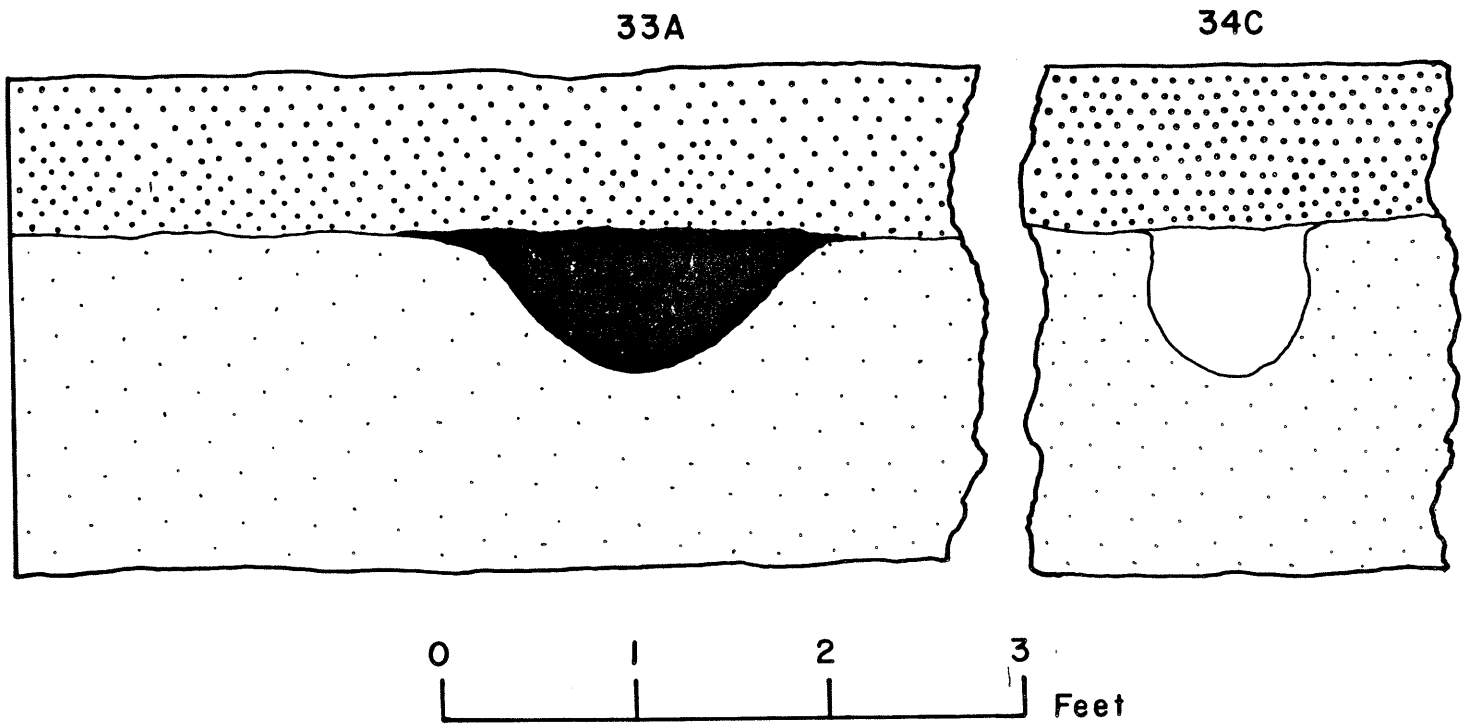
44RU7/42D: Postmold. Discovered in excavation of drainage ditch. Not excavated. Drawn only in plan on Map 2.

44RU7/42E: Postmold. Discovered in excavation of drainage ditch. Not excavated. Drawn only in plan on Map 2.

44RU7/42F: Postmold. Discovered in excavation of drainage ditch. Not excavated. Drawn only in plan on Map 2.

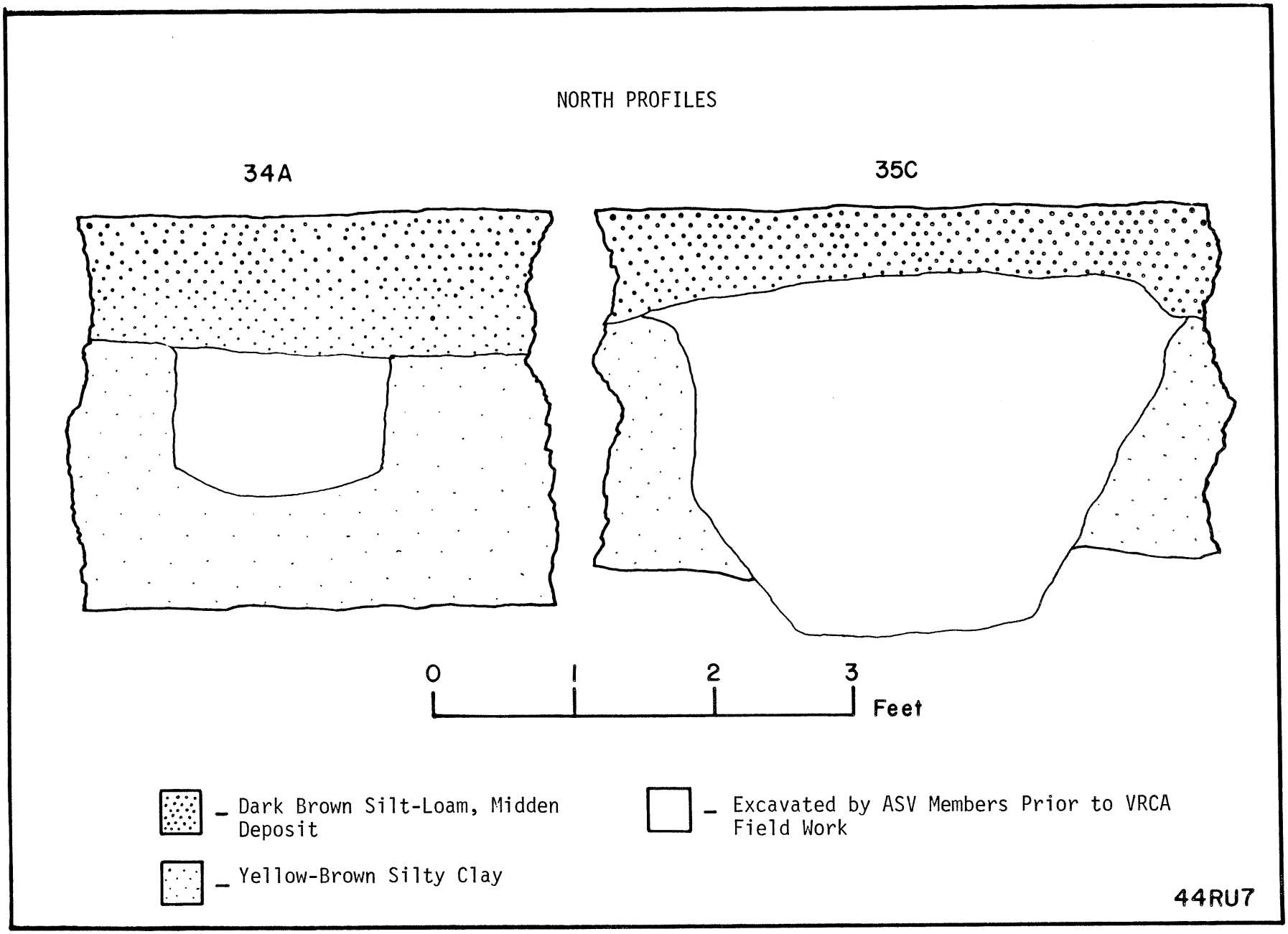
APPENDIX B: FEATURE AND POSTMOLD PROFILE

NORTH PROFILES

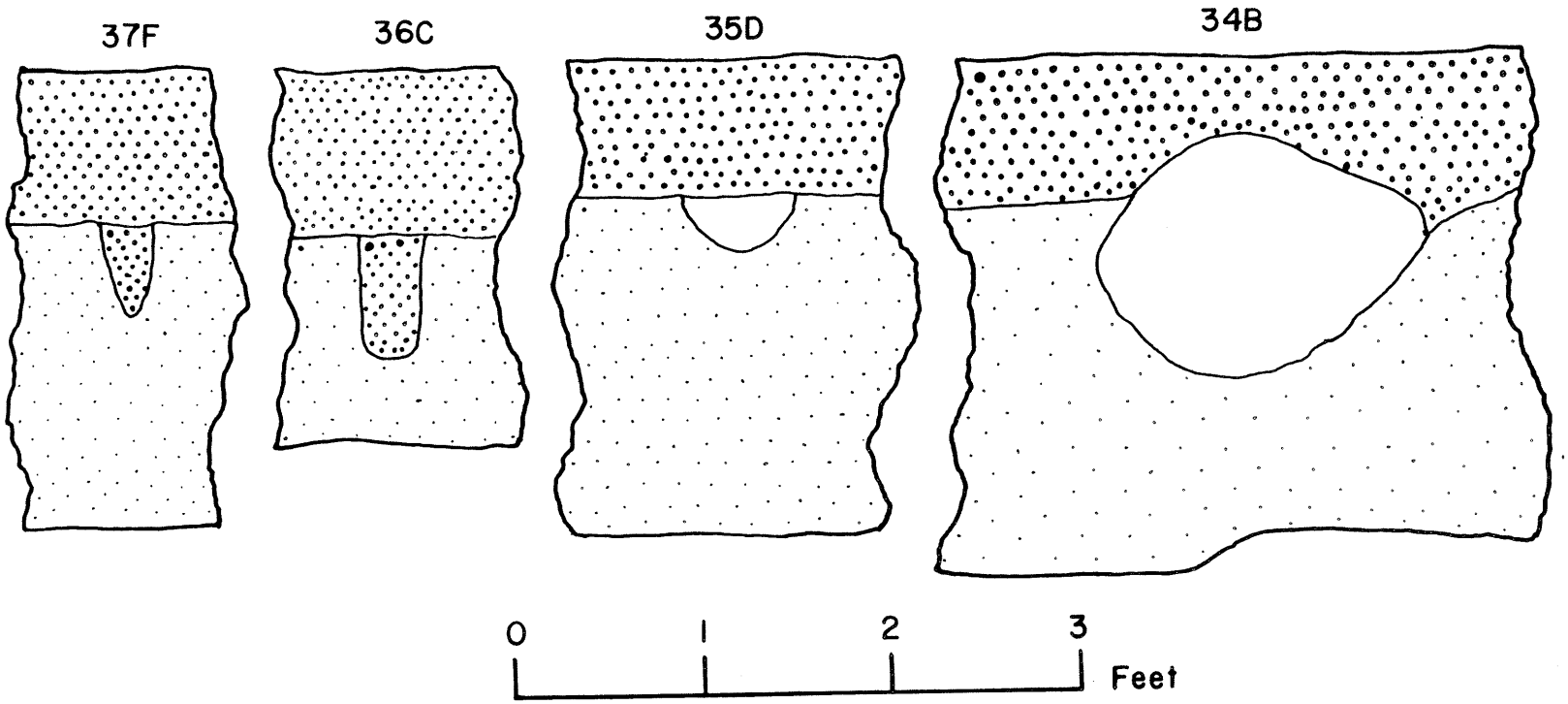


- Dark Brown Silt-Loam, Midden Deposit
- Yellow-Brown Silty Clay
- Excavated by ASV Members Prior to VRCA Field Work
- Dark Brown-Black Loam with Limestone

44RU7


NORTH PROFILES
34A
35C
0
1
2
3
Feet
Dark Brown Silt-Loam, Midden Deposit
Yellow-Brown Silty Clay
Excavated by ASV Members Prior to VRCA Field Work
44RU7

SOUTH PROFILES



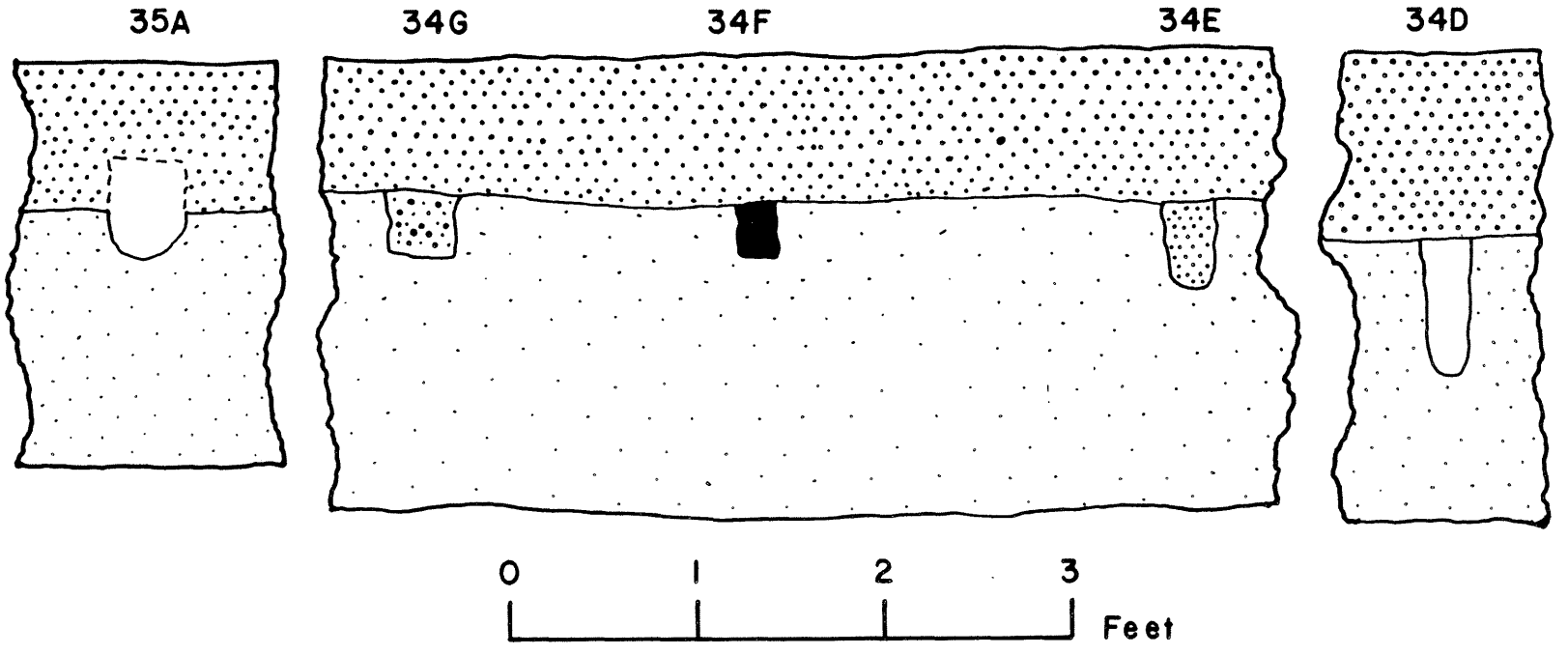
– Dark Brown Silt-Loam, Midden Deposit

– Yellow-Brown Silty Clay

– Excavated by ASV Members Prior to VRCA Field Work

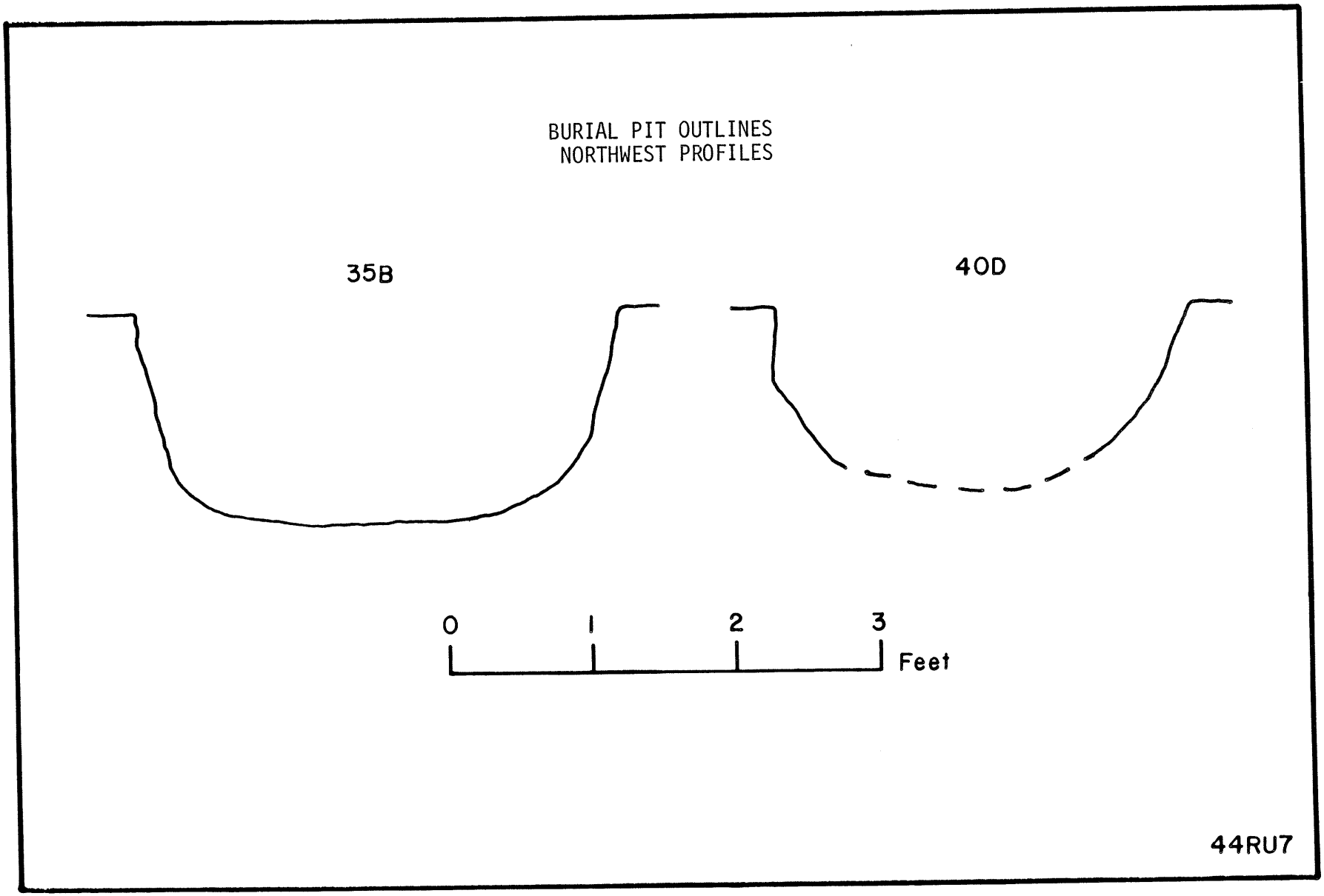
44RU7

SOUTH PROFILES

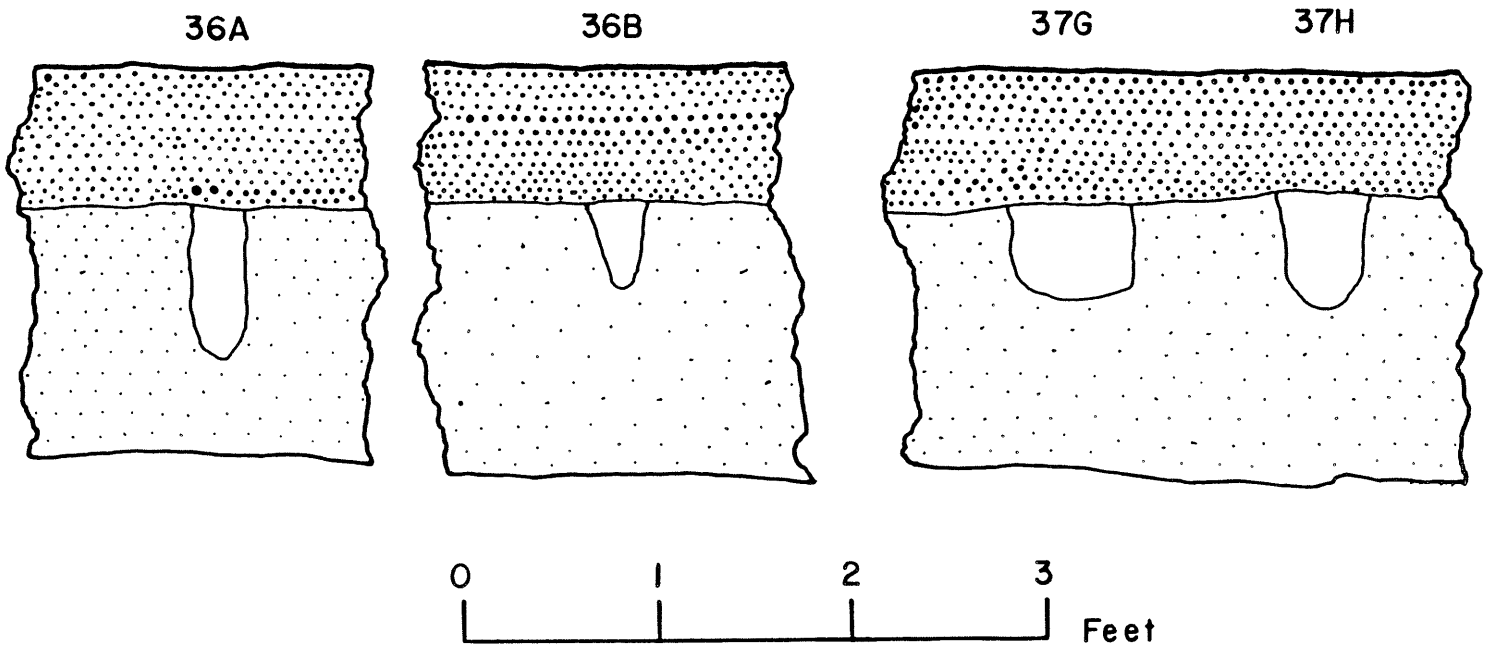


- Dark Brown Silt-Loam, Midden Deposit
- Dark Brown Silt-Loam Mottled with Yellow-Brown Silty Clay
- Yellow-Brown Silty Clay
- Excavated by ASV Members Prior to VRCA Field Work
- Dark Brown-Black Loam Fill

44RU7


BURIAL PIT OUTLINES
NORTHWEST PROFILES
35B
40D
0
1
2
3
Feet
44RU7

NORTH PROFILES

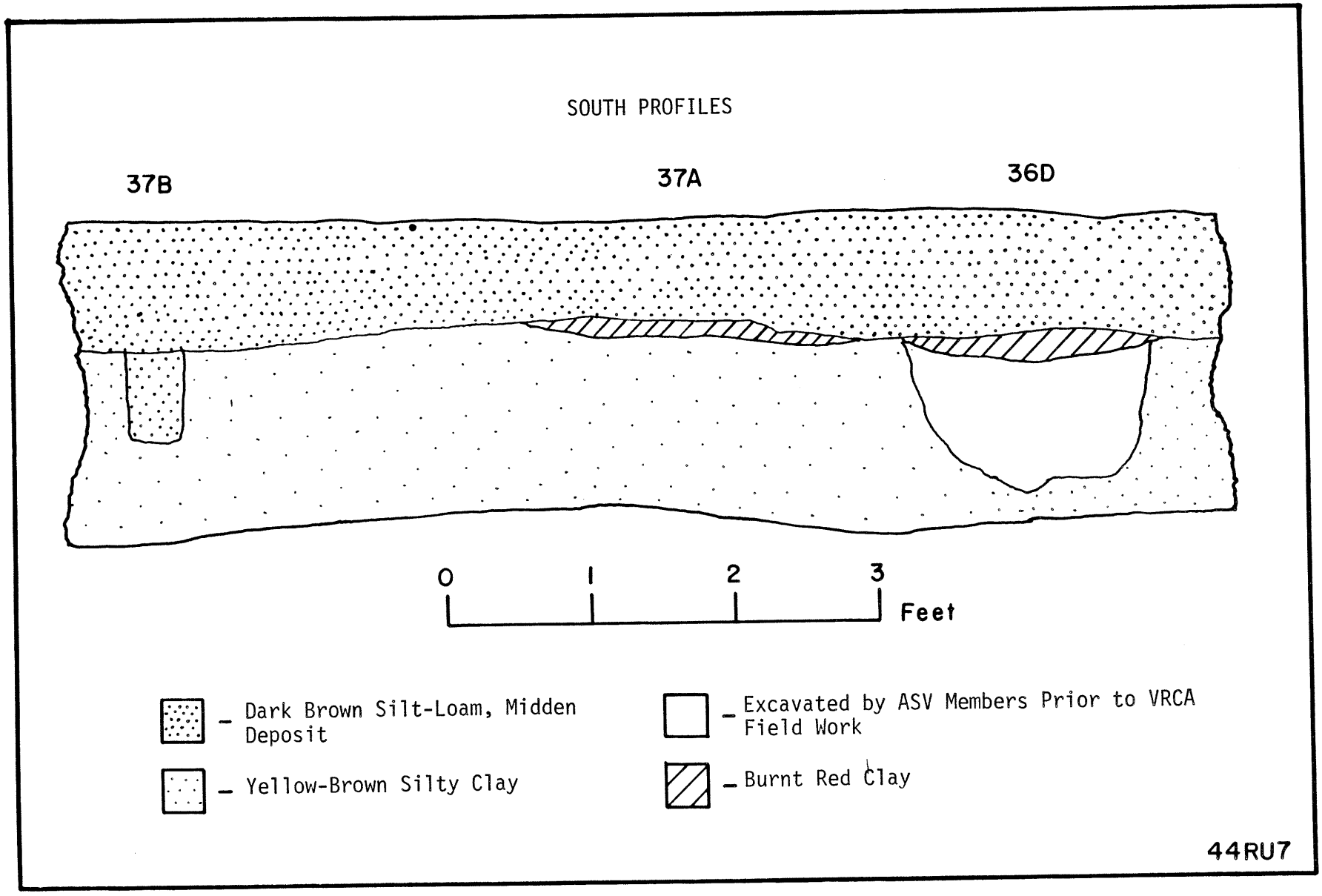


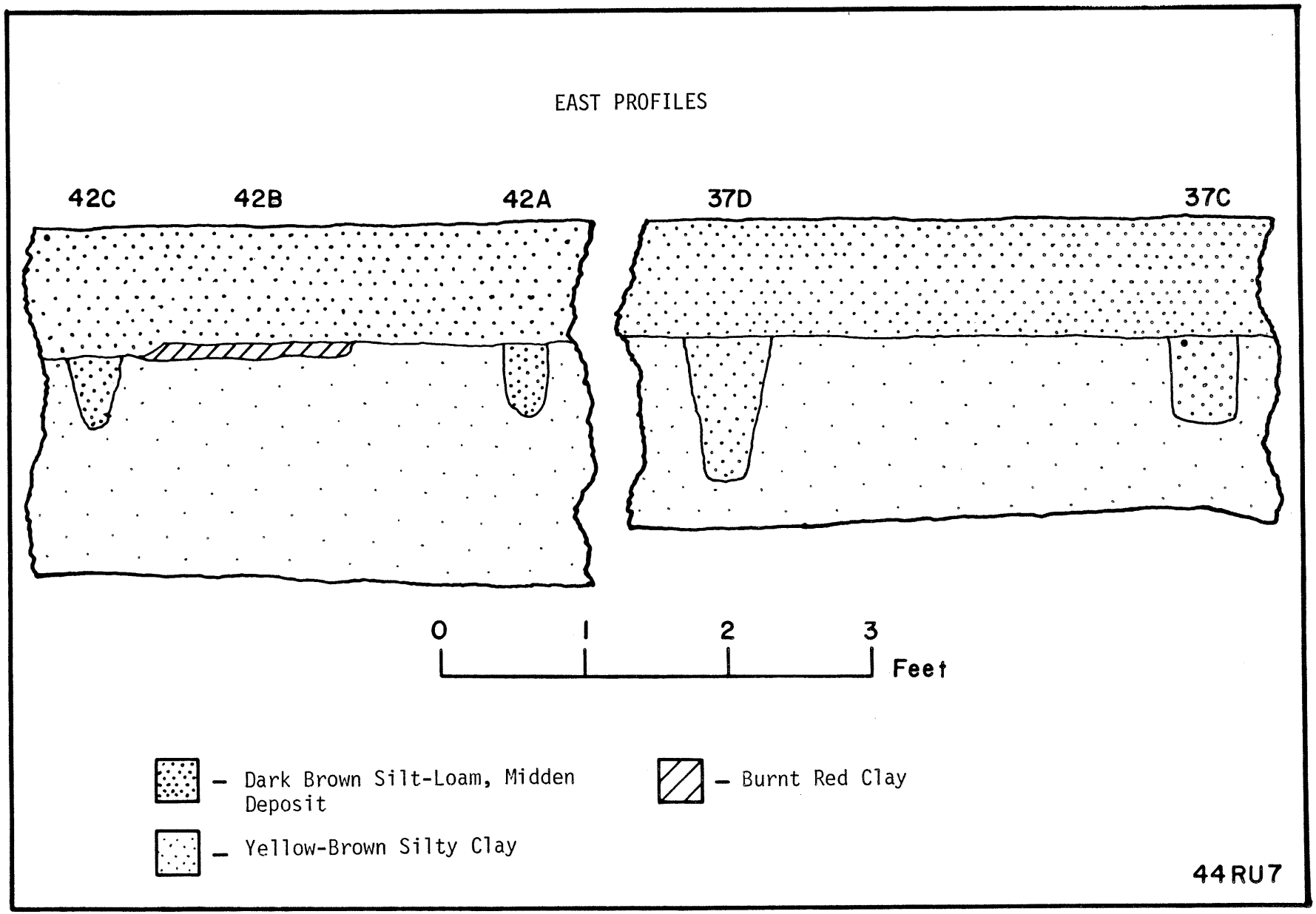
– Dark Brown Silt-Loam, Midden Deposit

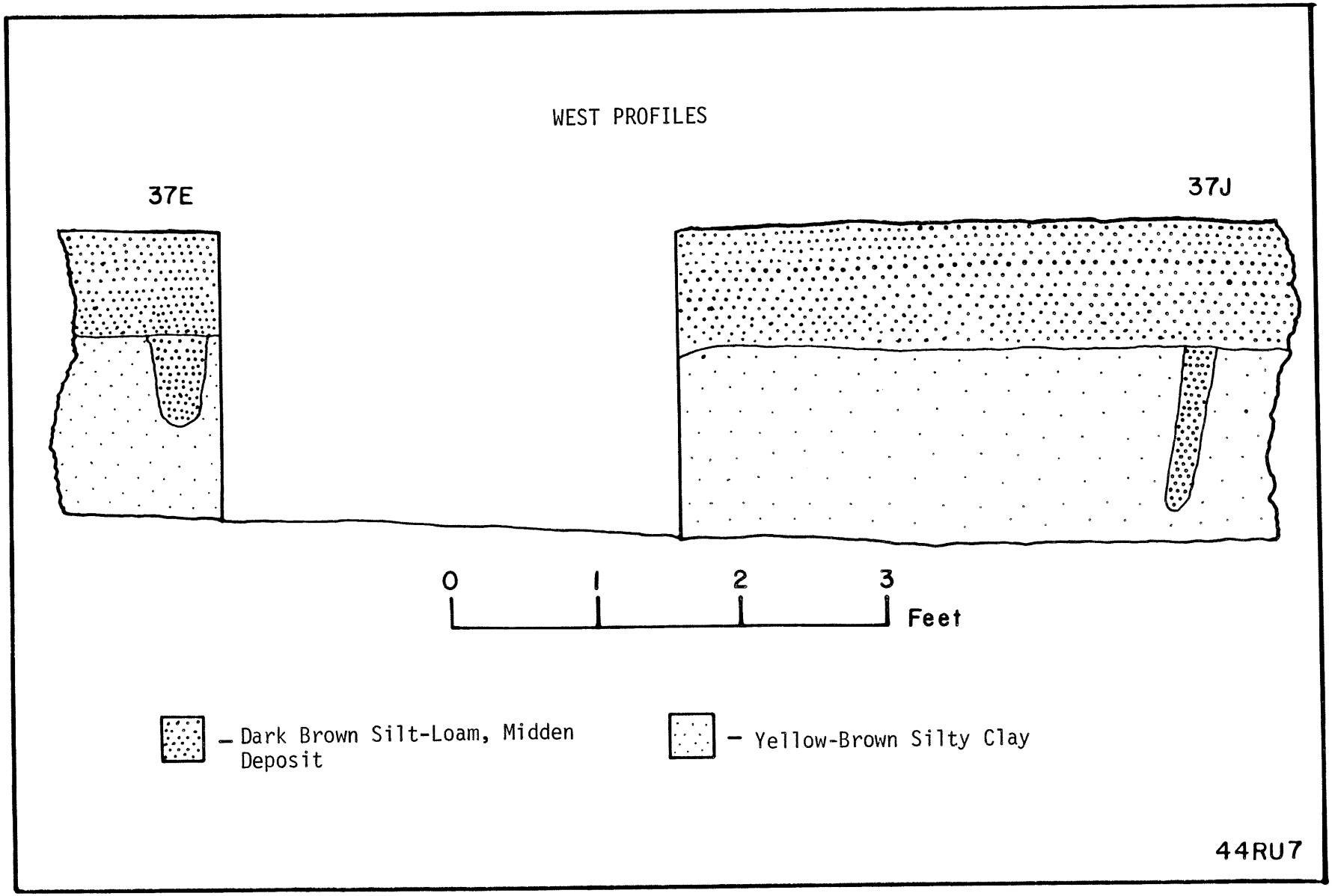
– Yellow-Brown Silty Clay

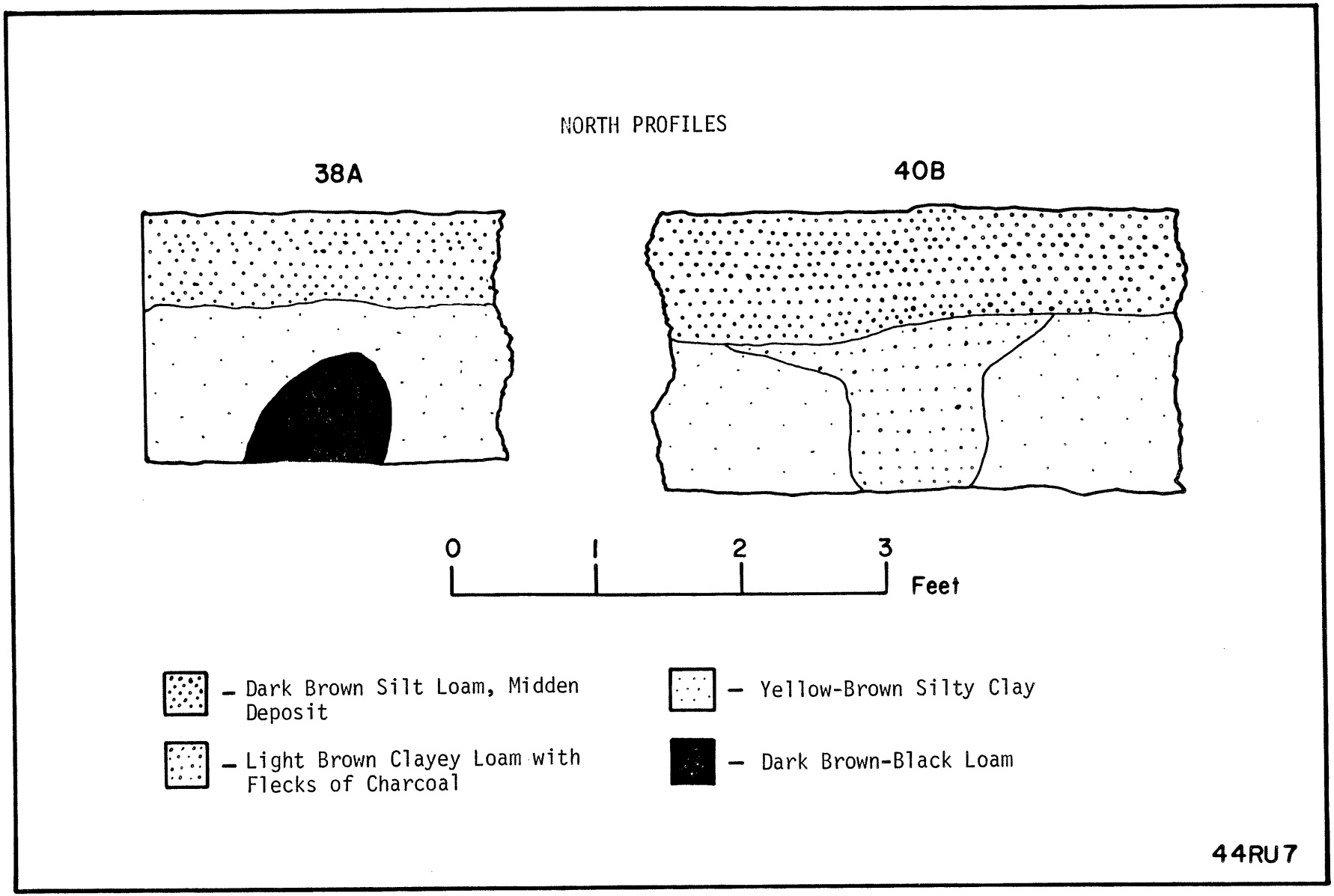
– Excavated by ASV Members Prior to VRCA Field Work

44RU7

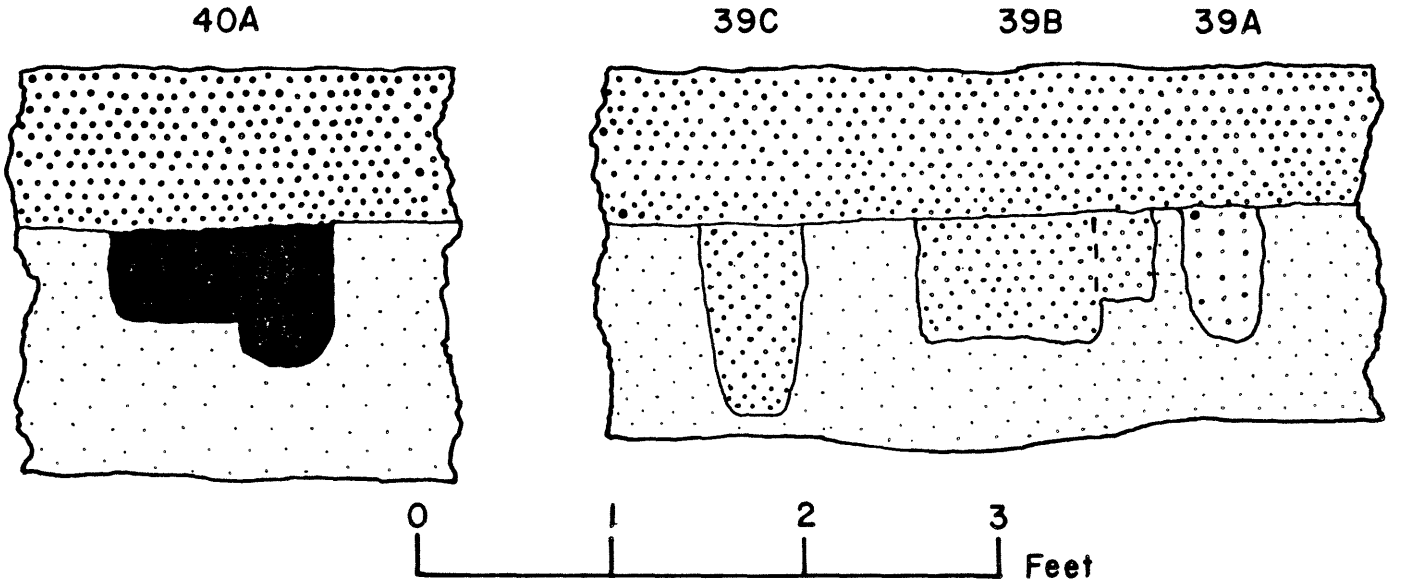

SOUTH PROFILES
37B
37A
36D
0
1
2
3
Feet
Dark Brown Silt-Loam, Midden Deposit
Yellow-Brown Silty Clay
Excavated by ASV Members Prior to VRCA Field Work
Burnt Red Clay
44RU7


EAST PROFILES
42C
42B
42A
37D
37C
0
1
2
3
Feet
– Dark Brown Silt-Loam, Midden Deposit
– Yellow-Brown Silty Clay
– Burnt Red Clay
44RU7


WEST PROFILES
37E
37J
0
1
2
3
Feet
– Dark Brown Silt-Loam, Midden Deposit
– Yellow-Brown Silty Clay
44RU7


NORTH PROFILES
38A
40B
0
1
2
3
Feet
– Dark Brown Silt Loam, Midden Deposit
– Light Brown Clayey Loam with Flecks of Charcoal
– Yellow-Brown Silty Clay
– Dark Brown-Black Loam
44RU7

SOUTH PROFILES

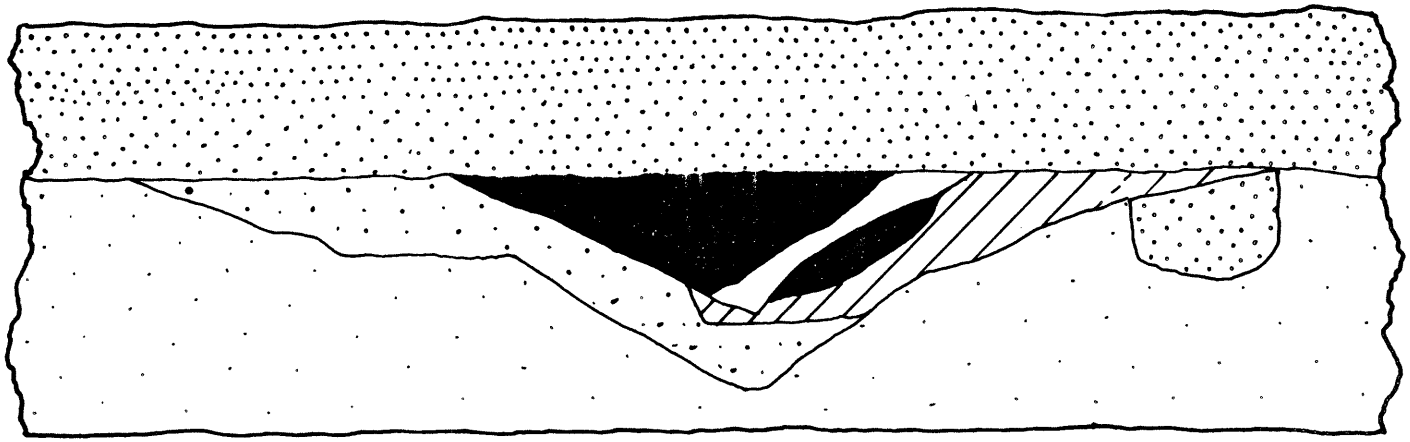


- Dark Brown Silt-Loam, Midden Deposit
- Dark Brown Silt-Loam Mottled with Yellow-Brown Silty Clay
- Yellow-Brown Silty Clay
- Dark Brown-Black Loam Fill with Charcoal and Periwinkle

44RU7

NORTH PROFILES

40C

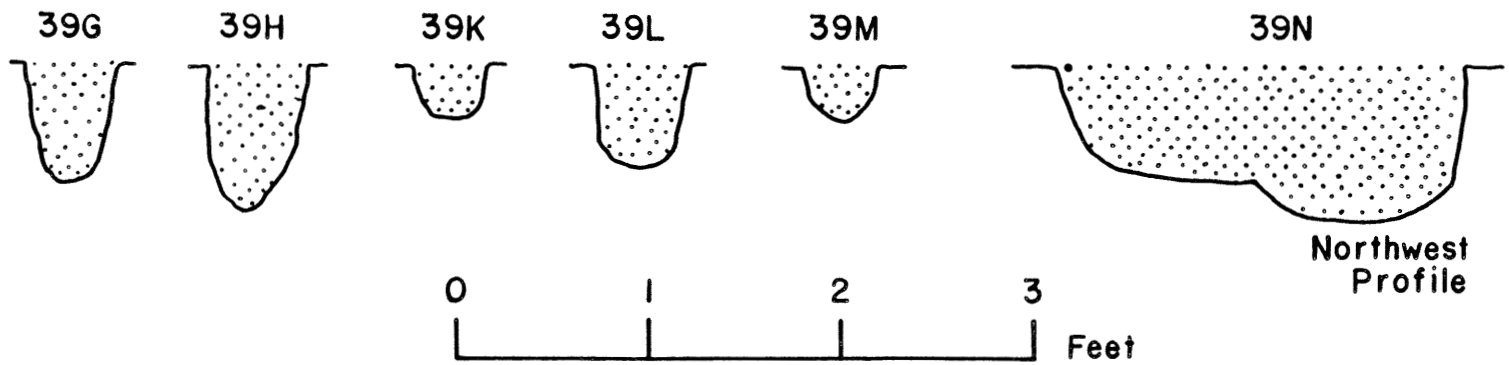


0 1 2 3 Feet

- Dark Brown Silt-Loam, Midden Deposit
- Tan Fill
- Yellow-Brown Silty Clay
- Burnt Red Clay
- Gray Ash
- Dark Brown-Black Loam Fill

44RU7

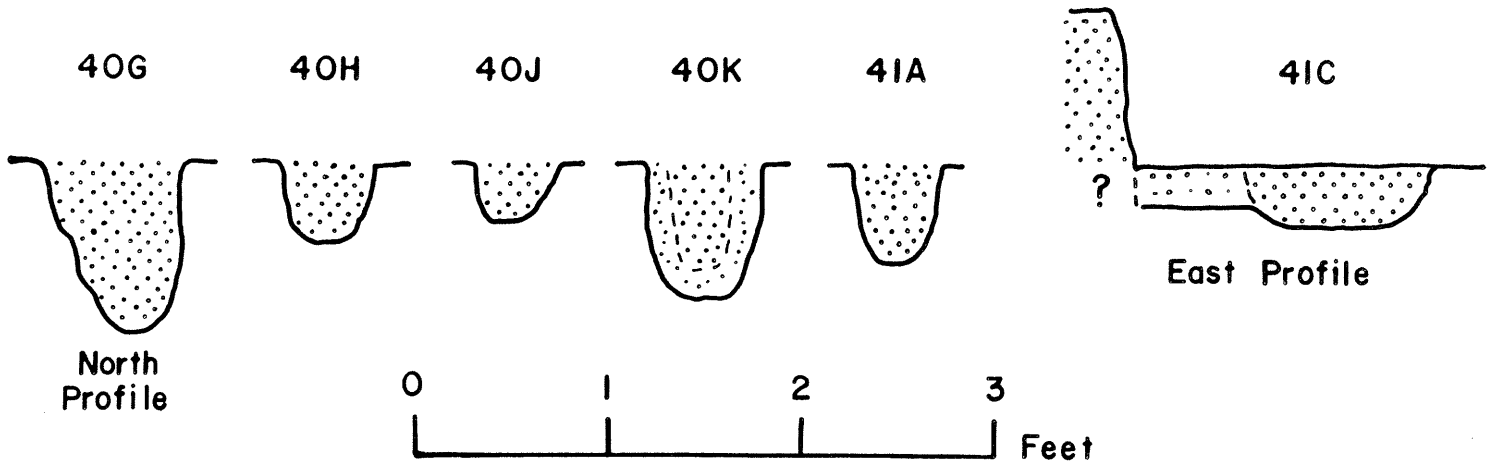
POSTMOLD AND FEATURE PROFILES
EXPOSED IN PLAN VIEW BY 4' X 5' TEST



—Dark Brown Silt-Loam, Midden Deposit

44RU7

POSTMOLD AND FEATURE PROFILES EXPOSED IN PLAN VIEW BY
5' X 5' TEST AND THE EXCAVATION OF THE DRAINFIELD



— Dark Brown Silt-Loam, Midden Deposit

— Dark Brown Silt-Loam Mottled with Yellow-Brown Silty Clay

44RU7

APPENDIX C: MISCELLANEOUS CERAMICS

	Fragments Less Than 1 Inch	Pipe Fragments	Modified Fired Clay	Modified Unfired Clay
44RU7/01	3			
44RU7/15	2			
44RU7/17	1			
44RU7/26	1			
44RU7/28	2			
44RU7/34A1	2			
44RU7/35B	81	1		
44RU7/35C	10		1	
44RU7/36B	1			
44RU7/39	6			1
44RU7/39N	37			
44RU7/40	11	1		2
44RU7/40D1	56		6	
44RU7/40D2	1		6	
44RU7/40D3	49		7	
44Ru7/40D4	3			
TOTALS	266	2	20	3

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