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GEORGIA**

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**ARCHAEOLOGICAL INVESTIGATIONS
AT SITE 9MG90**

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ARCHAEOLOGICAL INVESTIGATIONS AT SITE 9MG90,
WALLACE RESERVOIR, GEORGIA

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PREFACE

This report represents the final report for site 9Mg90, the excavation of which was provided for (in exchange for Mg89 and Mg92) in Appendix 6 of the Archaeological Salvage Agreement between the University of Georgia and the Georgia Power Company.

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INTRODUCTION

Site 9 Mg 90 is located on the west bank of the Oconee River approximately 1.2 km upstream from Park's Mill (Figure 1). Universal Transverse Mercator grid coordinates for the site are N 371036 E 288000. The site is approximately 128 m (420 ft) above mean sea level.

The Wallace Reservoir lies within the Piedmont physiographic province of north central Georgia. The Piedmont is a strongly dissected highland area which gently slopes toward the Coastal Plain. Lithologically, the Piedmont is made up of metamorphic rocks which are frequently crystalline and quite resistant. It is this resistant nature of the rocks that controls the drainage of the Piedmont, and produces a topography that is generally hilly with steep slopes and narrow valleys. Soils are rich in mineral nutrients, although nitrogen and phosphorus levels are low. The narrow valleys and steep gradient of the stream beds generally restrict the development of alluvial floodplains throughout most of the province (Larson 1971:23).

The Piedmont province has been divided into several districts by Clark and Zisa (1976). The Washington Slope District, which includes the Wallace Reservoir, is characterized as follows:

The Washington Slope District is characterized by a gently undulating surface which descends gradually from about the 700 foot elevation at its northern margin to about the 500 foot elevation at its southern edge. Streams occupy broad, shallow valleys with long, gentle side slopes separated by broad, rounded divides. Relief throughout this district is 50-100 feet (Clark and Zisa 1976).

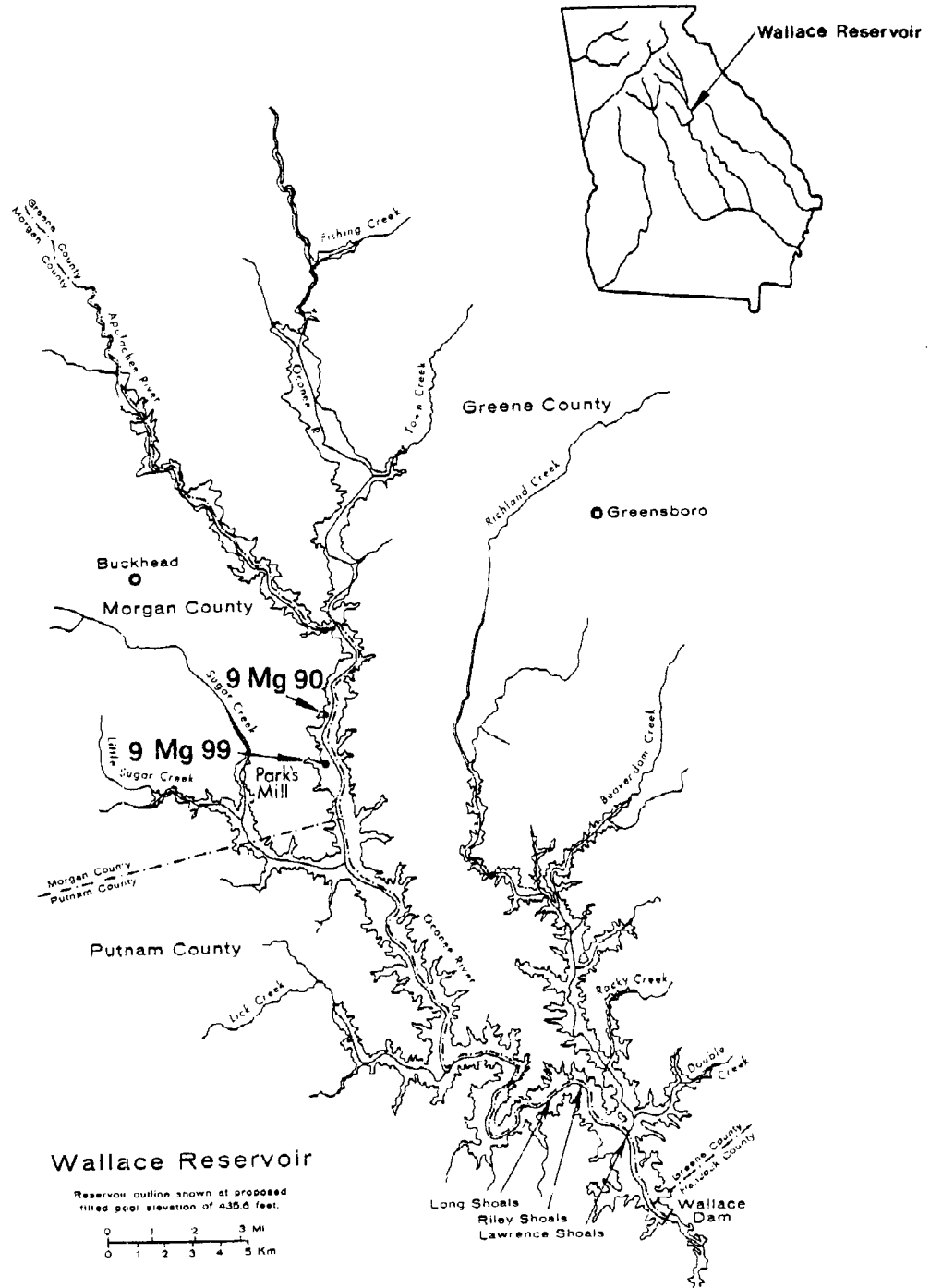


Figure 1. Location of Mg90 within the Wallace Reservoir

Forest cover of the Piedmont consists largely of hickory, shortleaf and loblolly pine, and white and post oak species. The area can be viewed as a transition zone between the oak-chestnut dominated Blue Ridge province and the longleaf pine forests of the Coastal Plain province (Larson 1971:23-24).

The climate of the area "is characterized by warm to hot summers and by moderately cold, but highly variable winter weather. The precipitation pattern shows a maximum early in spring, a minimum in fall, and fairly even distribution for the rest of the year" (U.S.D.A. 1965:2). Rainfall averages about 47.5 inches per year, and the frostfree growing season averages 255 days from late March to early November.

The floodplain of the Oconee River is only 300 m wide in the vicinity of Mg 90 (Figure 2). Two levee ridges parallel the west bank of the river for several hundred yards above and below the site. The ridge closest to the river rises approximately two meters above the surrounding floodplain and is apparently the more recent in age. A larger ridge (Plate 1), rising to a height of approximately four meters above the floodplain, is located to the west of the smaller ridge. The flattened crest of this larger ridge is five to ten meters wide. Mg 90 is located on this ridge.

A small creek enters the river near the southern boundary of the site. At the time of excavation, the site was still wooded, as it was to be a wildlife refuge area within the lake.

The site was discovered during subsurface testing of the levee by DePratter and Wood in 1975.

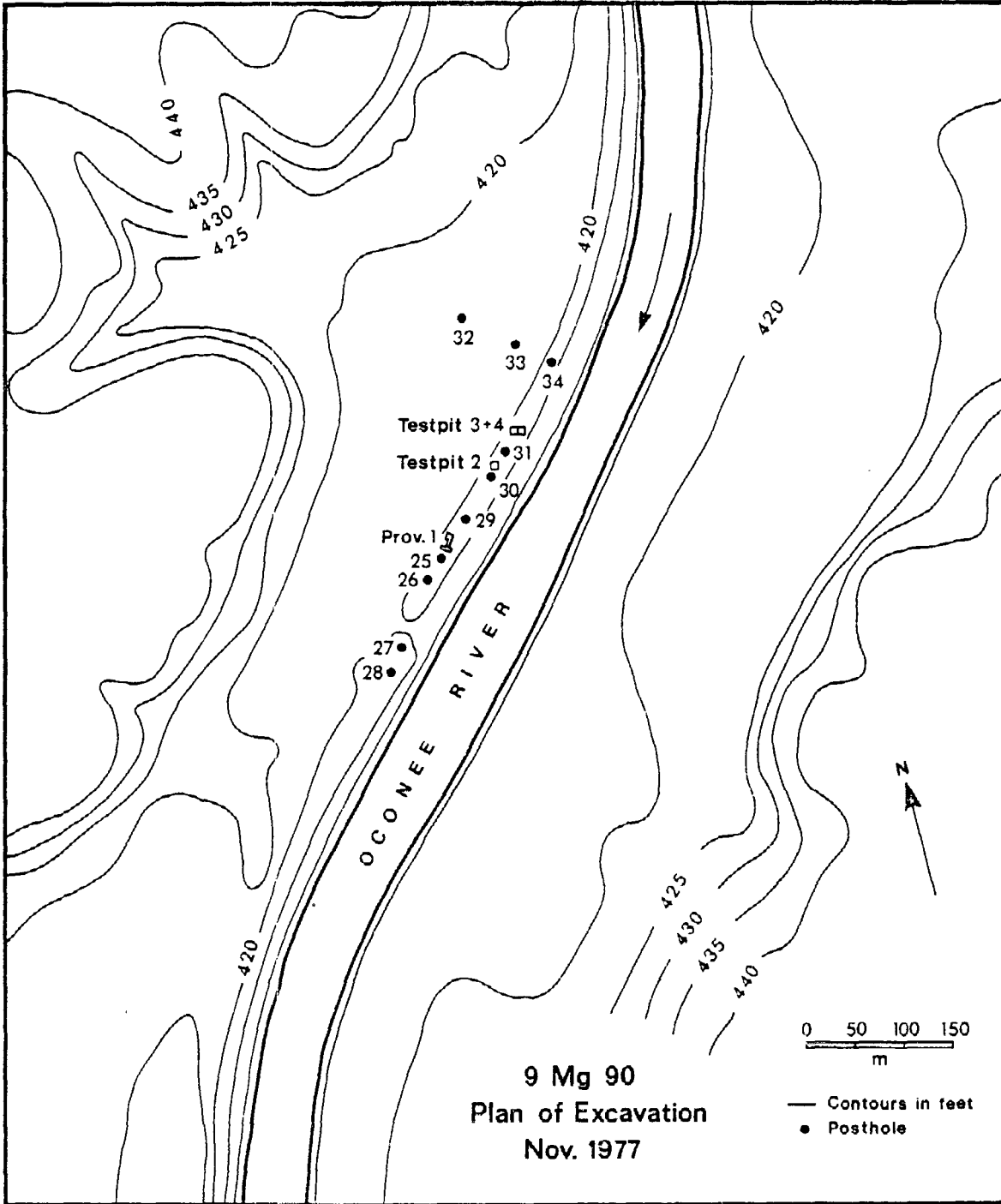


Figure 2. Location of posthole tests and excavation units at Mg90

The site was located by posthole testing along the crest of the large ridge. No surface materials were present. The site was first encountered in posthole test 25, where two quartzite rocks were found at 45 cm and a single Lamar Burnished Plain sherd was found at 80 cm. Yellow sand extended from the surface to 150 cm, and was underlain by a mottled red and brown clay loam lens. Posthole tests 26-34 were excavated to determine the extent of the site, with tests 29, 30, and 31 each producing rocks associated with the site's occupation. Posthole 29 contained 9 small rock fragments at 125 to 140 cm; posthole test 30 contained 6 quartzite rock fragments at 140 cm; and posthole test 31 contained one large rock at 45 cm. All four posthole tests contained yellow sand with thin horizontal clay bands near the bottom.

At least two buried occupation zones were indicated by the posthole testing: a pottery bearing strata at 80 cm and a strata containing numerous rocks, probably fire-cracked, at 140-150 cm. In order to further appraise the extent of the site's occupation, two test units were excavated on the site. A 1.5 by 1.2 m test pit was excavated around posthole test 25 on the crest of the ridge. The entire test pit contained yellow sand which was broken only by thin, horizontal clay lenses which grew more numerous toward the bottom of the test pit. Between the surface and 70 cm in undifferentiated yellow sand were one Lamar Plain sherd and two small fragments of quartzite rock. Between 120 and 156 cm were 20 chert waste flakes, 1 chert angular fragment and five quartzite rock fragments. These were found in yellow sand which was between the 5th and 9th clay loam lenses counting down from the top. After completing the excavations and consulting a geologist (Dr. Robert E. Carver, University of Georgia), it was determined that each clay lens and yellow sand layer directly above probably represents a single flood episode. The yellow sand would have been deposited during the early stages of the flood when sufficient energy was available to push the large sand particles up onto, and over, the ridge. Eventually, the flood would have peaked, and the water level would have been stable just prior to the drop of the river back toward its normal level. During this time when the waters were fairly stable, the fine clay and silt particles would have settled out, and it is these fine particles which make up the clay lenses exposed by our test pit.

The same clay lenses were encountered in a profile cut [Figure 3] excavated into the river side of the levee between posthole tests 25 and 29. The cut was 150 cm wide in the beginning, but at 220 cm below the surface, it was narrowed to 70 cm. Excavations were terminated at 290 cm. The upper 35 cm of the profile was composed of red and brown sands and clay loams which are apparently the result of recent flooding. Between 35 and 60 cm was a zone of sterile yellow sand. Between 60 and 280 cm were alternating clay bands and zones of yellow sand. A total of 19 clay bands and 18 sand zones were exposed

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in the profile, with occupational evidence present only between the 5th and 8th bands. At a depth of 110 to 130 cm between the 5th and 6th clay bands, a rock hearth (Feature 4) was encountered (Figures 77 and 78). The hearth was truncated by the profile cut, but the section in the profile was later cleared and exposed. The hearth was composed of approximately 50 fist-sized rocks arranged in a rough oval divided into two compartments of unequal size. Surrounding the hearth was a gray stain, probably created by leaching of ash, which extended from the 5th to 6th clay lens, and was approximately 65 cm in diameter. A large portion of this gray stained area was floated, but only very small, undiagnostic charcoal fragments were present. No artifacts were found in association with the hearth, but a single chert flake and 20 quartzite rocks were found between the same two clay lenses. Thirteen quartzite rocks and fragments were found directly below the 8th clay band, but no diagnostic artifacts were found at that level either. (DePratter 1976:201-202)

Based on his testing, DePratter concluded that the site was a campsite which extended along the levee ridge for a distance of at least 150 m. He estimated the width at 10-15 m. While none of the cultural material recovered from the lower levels was diagnostic, DePratter suggested an Early Archaic date for the occupation on the basis of the cracked rock features and the abundance of chert (DePratter 1976:202). He recommended further excavation.

The decision to excavate Mg 90 was made at the time the research design for the entire reservoir was formulated in 1976. Selection was based on several considerations. The site was buried, and thus presumably not disturbed by later human activity. There was some evidence of stratification. It was believed to date to the Early Archaic, a period poorly represented in the Reservoir. Finally, it occupied a distinct environmental zone--the sand levee of the Oconee River.

RESEARCH GOALS AND STRATEGY

Investigations at Mg 90 were expected to yield data on tool assemblages and features which would permit a functional interpretation of the site. It was anticipated that features would yield subsistence data and perhaps indicate the season(s) of occupation. Site Mg 90 was ultimately to be interpreted within the broader context of Archaic period settlement systems in the Reservoir.

In order to achieve the research goals, we hoped to excavate all or a large portion of an intact occupation stratum. This stratum was to be located and horizontally delineated by 2 X 2 test pits placed along the levee. Once the stratum was delineated, overburden was to be removed with power equipment, and a large area was to be excavated by hand.

SITE EXCAVATIONS IN 1977

Excavation began by placing a series of 2 X 2 m test units along the levee (Figure 2). These tests were excavated in 20 cm levels, with all deposits being screened through 1/4 inch hardware cloth. Test Unit 1 was located 2 m from DePratter's profile cut. Since it was located near a known aboriginal feature, it was expected to yield evidence of occupation. Test Unit 2 was located 98 meters to the north on a particularly high section of the levee. Test Units 3 and 4 were located further north along the levee in an area where reservoir clearing had exposed a dark soil stain and cracked rock.

Test Unit 1 revealed evidence of occupation in several levels. Three cracked quartzite rocks were present in Level 4 (60-80 cm below

surface). Additional quartzite rock was located in Level 5, along with chert flakes. Cracked rock was ultimately discovered to a depth of 140 cm below the surface (Level 7).

Test Unit 2 proved to be less prolific. A few flakes were found in Level 6 (100-120 cm below surface) and Level 7 (120-140 cm) and one cracked rock was found in Level 8 (140-160 cm). At this point it became necessary to step the excavation and it was continued as a 1 X 2 m unit down to level 12 where it was further reduced to a 1 X 1 m unit. Test Unit 2 was culturally sterile from Level 8 to Level 13, that is to a depth of 260 cm below surface. Since so few artifacts were recovered in the upper levels of this test, occupation of the area was considered to be light and no further investigations were conducted.

Test Units 3 and 4 were laid out in order to investigate a cracked rock feature exposed by a bulldozer cut in the levee. Due to the large expanse of bulldozed area, the depth of the feature below ground surface could not be accurately determined, but a distant profile cut suggests that up to 75 cm of levee soil may have been removed. Excavation of Test Units 3 and 4 consisted of troweling to expose the cracked rock concentration for mapping (Plate 2). The concentration of cracked rock and dark, stained soil, designated Feature 1, was mapped, half sectioned, and finally completely removed, along with a flotation sample. No flakes or tools were associated with the feature, and the flotation sample yielded only pine wood and resin. Further excavations did not appear warranted, since the area was so badly disturbed.

Based on these limited tests along the levee, it seemed most productive to center investigations around Test Unit 1, where DePratter had originally located a cracked rock concentration and some flakes at a depth of 120-150 cm. Eventually nine additional 2 X 2 m units were excavated in this area, designated Provenience 1 (Figure 4, Plate 3). An arbitrary datum point was established as the top of the northeastern corner stake of Test Unit 1. This datum was approximately 20 cm above the surface of the ground. All depths are expressed in cm below this point. Units 5-13 were excavated by first removing 120 cm of "overburden" with a shovel. This somewhat arbitrary depth of 120 cm was selected since neither DePratter's tests or Test Unit 1 showed any appreciable concentration of aboriginal material above it, while immediately below it flakes and cracked rock were numerous. Since the research strategy called for exposure of a large area of "living floor", it was imperative that the first meter of largely sterile sand be removed as rapidly as possible. We had intended to employ power equipment for this purpose; however, poor roads and a creek prevented access to the site.

Below 120 cm, excavation proceeded in 10 cm levels. All flakes and firecracked rock were mapped in situ when possible on the horizontal plain, but vertical provenience was limited to the 10 cm level. Mapped items were not given individual field numbers, but rather were provenienced by unit and level. Table 1 lists levels excavated in each unit. Unit 5 was excavated in six 10 cm levels between 1.20 m and 1.80 m below datum. Only a few rocks were recovered from Levels 3, 4, 5, and 6; the major portion of the occupation being limited to Levels 1 and 2. Most other units were excavated to Level 3 or 4, but unit 12, which was nearly

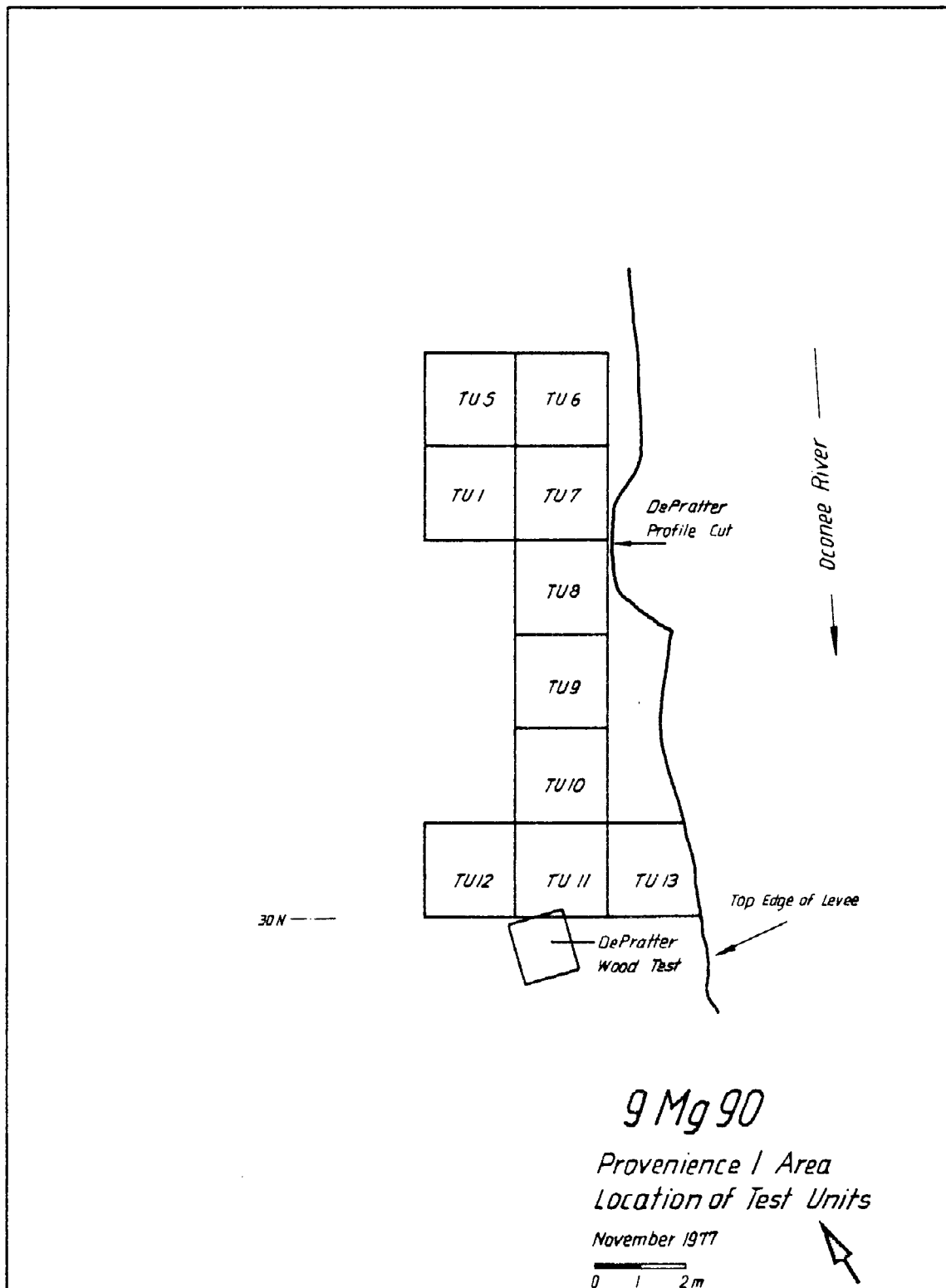


Figure 4. Provenience 1 and 1974 test units

TABLE 1: Excavation Levels Expressed in cm Below Datum

Test Unit	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Level 4</u>	<u>Level 5</u>	<u>Level 6</u>	<u>Level 7</u>
1					100-120	120-140	140-160
5	120-130	130-140	140-150	150-160	160-170	170-180	
6	120-130	130-140	140-150	150-160			
7	120-130	130-140	140-150				
8	120-130	130-140	140-150				
9	120-130	130-140	140-150	150-160	160-170		
10	120-130	130-140	140-150	150-160	160-170		
11	120-130	130-140	140-150	150-160			
12	120-130	130-140					
13	120-130	130-140	140-150	150-160			

devoid of cultural debris, was only excavated to Level 2.

Generally units were excavated down to the point where cultural material became infrequent. The emphasis was on exposing a large horizontal expanse of "living floor," rather than defining deeply stratified components.

Several areas of stained earth were designated as features in the field. These were mapped and carefully excavated. Soil samples were saved for laboratory processing. These samples were water screened through 1/8 inch mesh in the laboratory.

Numerous excavation problems accompanied work at Mg 90. Excavation generally extended to approximately 1.5 m below the surface in pure sand, making profiles hard to maintain. Excavation took place during November, December, and January of 1977-78. Extreme cold hampered crew efficiency and frozen ground delayed excavation. Frost heaving also collapsed profiles. Numerous rain delays were also incurred. Eventually 83 man days were expended on site Mg 90.

Stratigraphy at the site consisted of a narrow band of humus at the surface, followed by banded flood deposits of sand to the bottom of the excavation. No cultural strata--that is, midden stained soil--were visible during excavation or in unit profiles.

ARTIFACTS

Artifacts recovered from site Mg 90 will be discussed by material categories: ceramics, lithics, and floral remains. No faunal remains, bone or shell, were recovered at Mg 90. Teresa P. Rudolph and the author identified all lithic remains, while Elizabeth Sheldon identified

the floral remains. Interpretations of these different remains has been conducted by the author.

Ceramics

Only three sherds were recovered at Mg 90. Two are Plain Grit tempered body sherds, while the other is a Rough Plain grit tempered body sherd. These sherds apparently represent light utilization of the area during the Lamar period. They were found in the overburden of Units 6, 11, and 13. DePratter (1976) reports one Lamar Plain and one Lamar Burnished Plain sherd from the site.

Lithics--flaked

Only one chipped stone tool was recovered during excavations at Mg 90, including the excavations by the 1975 survey. This tool (Plate 4a) is the basal portion of a late Archaic Savannah River point. This point was recovered in the overburden of Unit 7 at a depth of 118 cm below datum. It was located near the northeastern corner of the unit. Since this elevation is just 2 cm above the arbitrarily determined first excavation level, and since Level 1 (120-130 cm) of Unit 7 contained the largest number of flakes found in any level of that unit, it is probable that the point belongs to the component investigated.

Total debitage from Provenience 1 at Mg 90 is listed in Table 2 and the distribution of mapped flakes by level is shown in Figures 5-8. Items identified and mapped in the field as flakes were not always determined to be debitage when cleaned in the lab; however, the distribution of mapped flakes is believed to be generally representative. Taken as a whole, the collection consists of 47.5% quartz flakes, 50.9% coastal

TABLE 2: Provenience 1 Debitage

LN	TU	LEVEL	QUARTZ			CHERT			RHYOLITE		
			Percussion	Thinning/ Retouch	Debris	Percussion	Thinning/ Retouch	Debris	Percussion	Thinning/ Retouch	Debris
2	1	5			2			1			
3	1	6			2						
6	5	1			1		1			1	
7	5	2		2	4		1				
8	5	3		2	1						
11	5	4			1		1				
17	6	1	1	1	2	1	2				
18	7	1	5	1	4						
20	7	2			1						
21	6	2	2		3					1	
30	6	3	1		7		2				
31	6	4			2		1				
32	8	1	1	1	2						
33	8	2	1		4		1		1		
40	9	1	4	4	6	1					
42	9	2	1	2	9	1	3				
45	9	3			2	1	5	64			
48	10	1			5	1					
49	10	2		1	6	1	5				
51	10	3			7	8	9		1		
52	10	4			3	4	12				
54	11	2		1	3	1	3				
57	11	3			4	1	2	6	1		
60	9	4		1	9	1	5	17			
61	13	1		1	2	2	1				
62	13	2	1		8	1	4	6			
63	10	5	1		4	2	4				
64	13	3	4	3	10	10	21			1	
65	9	5		1	1		2				
66	13	4	2	4	3	1	1	11			
69	11	4			1	1	3	8			
Number (=354)			24	25	119	7	51	122	3	3	
Percent (=100%)			6.8	7.1	33.6	2.0	14.4	34.5	0.8	0.8	
Percent by Stone Type (=100%)			47.5			50.9			1.6		

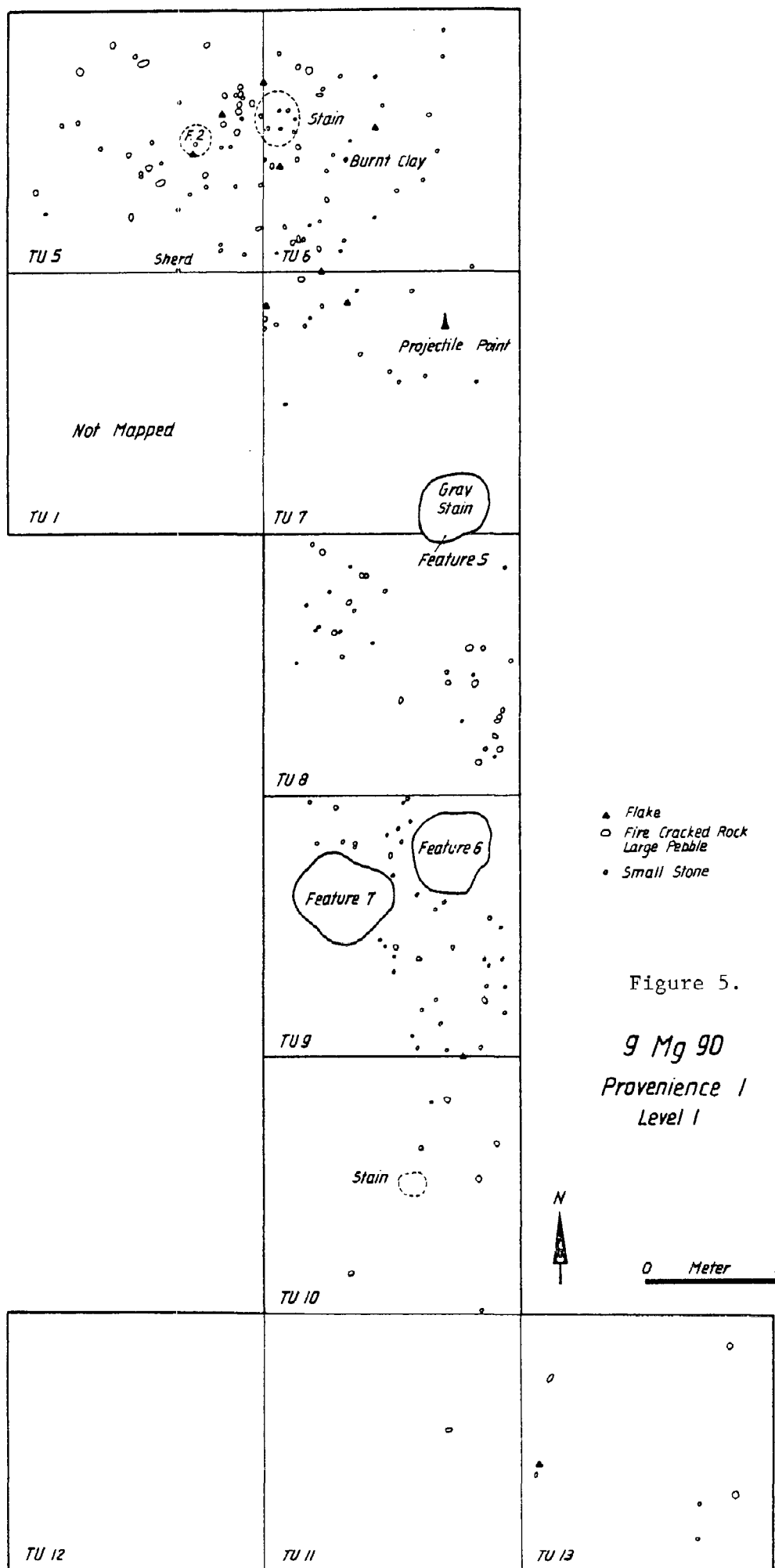
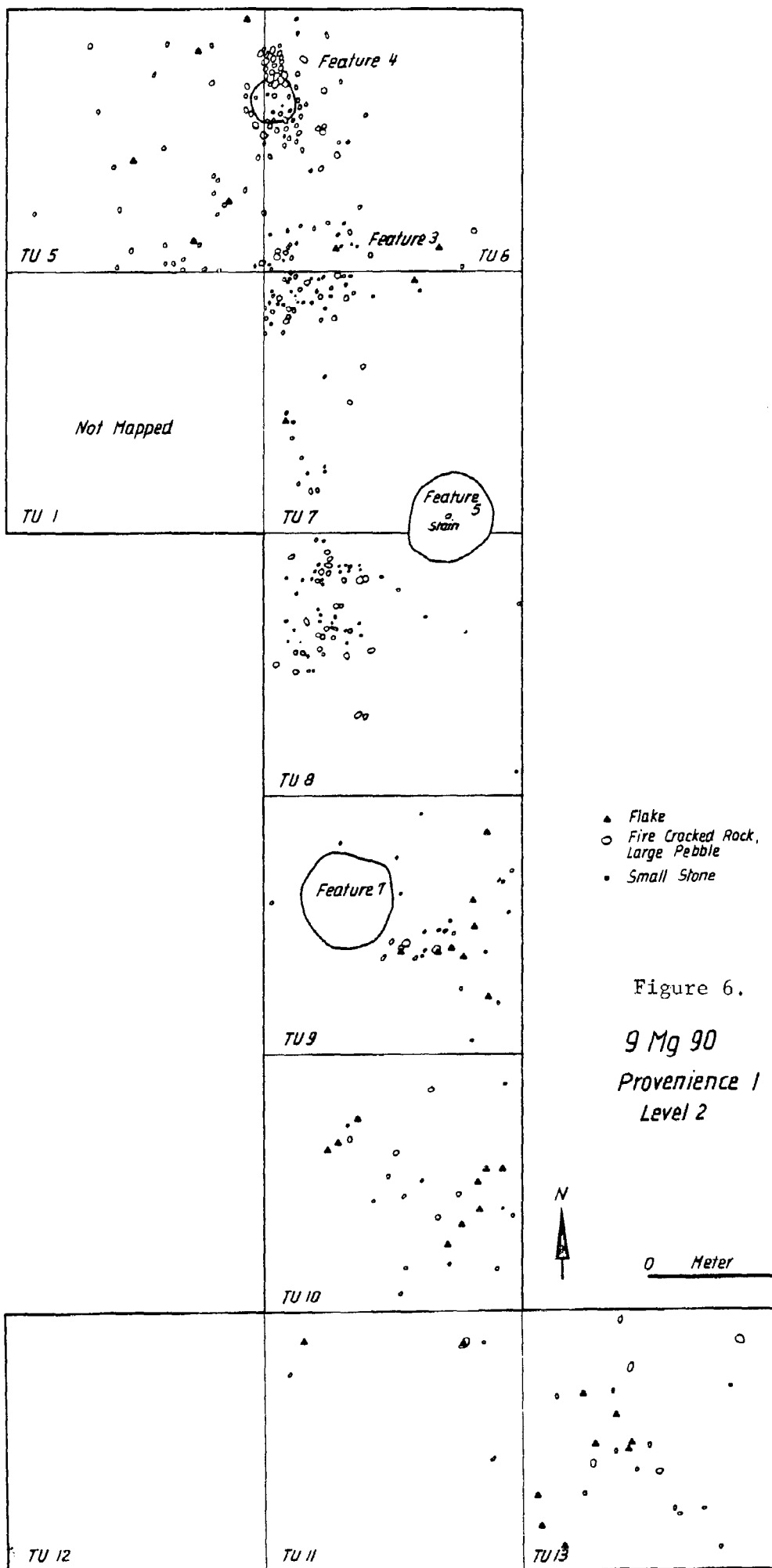
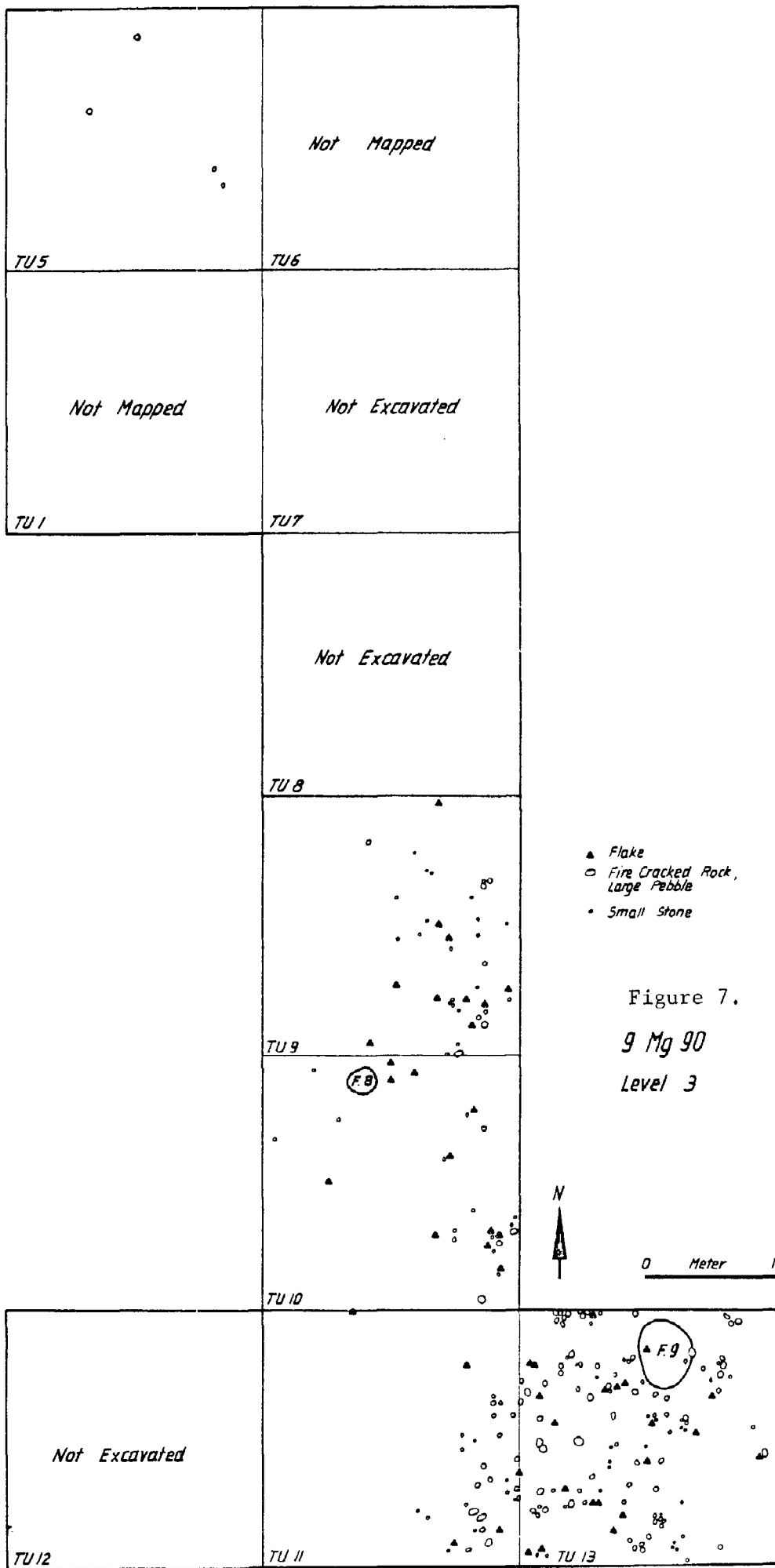


Figure 5.
9 Mg 90
Provenience 1
Level 1





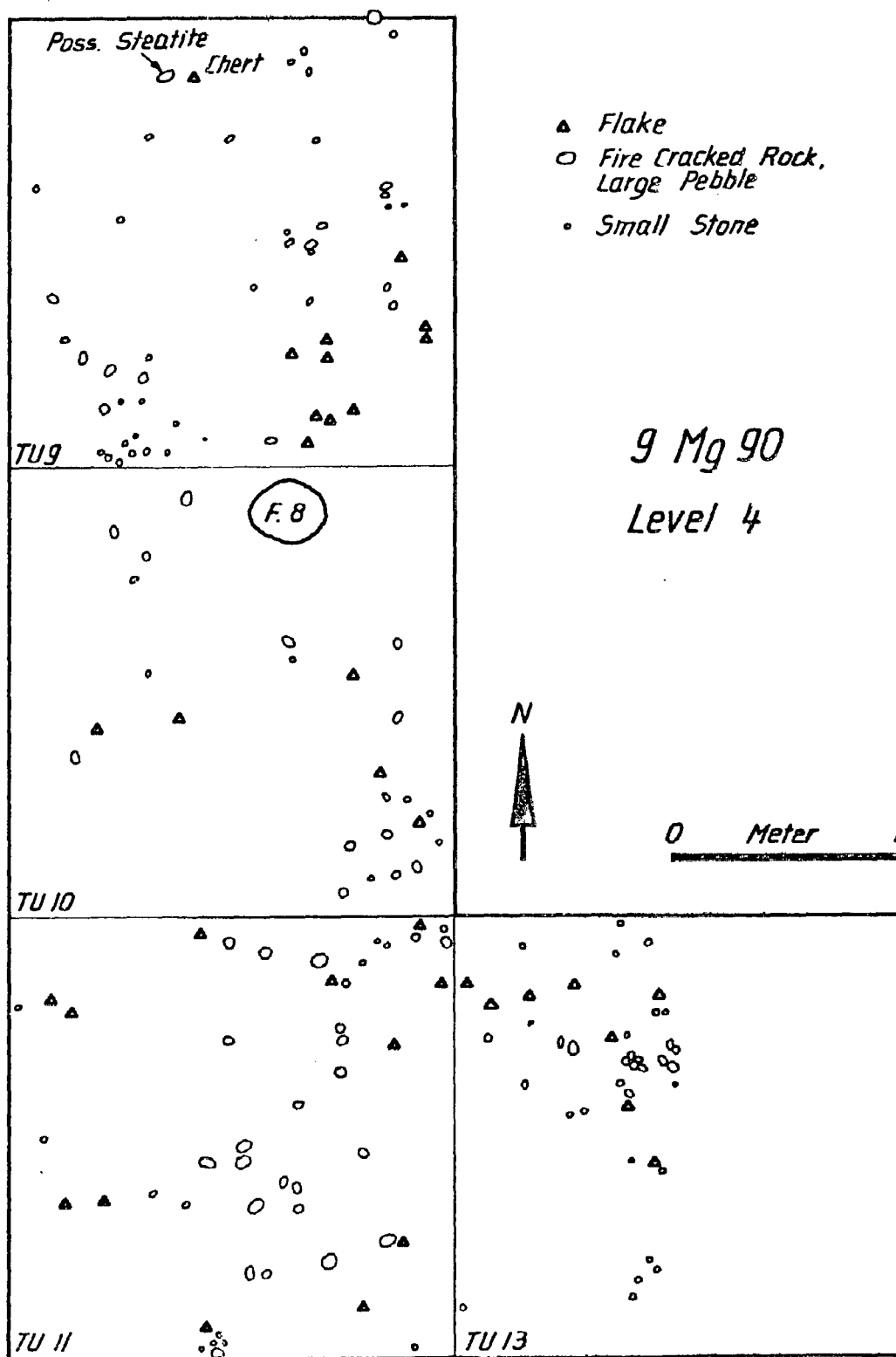


Figure 8. Provenience 1, Level 4, mapped artifacts

plain chert flakes, and 1.6% Rhyolite flakes. The Rhyolite and quartz are locally available, so it is surprising that over half of the lithic material was imported.

Flakes were also analyzed in categories reflecting their stage of reduction from cores to tools and maintenance as tools. These categories are Cortical, Part Cortical, and Non Cortical pieces; and Percussion Flakes, Thinning/Retouch Flakes, and Debris. The results of the analysis of 354 flakes are shown in Table 3. Most flakes were classified in the debris category (63.9%) and similarly most (87.4%) were noncortical. Both cortical flakes (3.4%) and percussion flakes (8.8%) were rare, indicating that tools were probably not manufactured from cores at the site. Most lithic activity seems instead to have been of the tool maintenance type, which would produce an abundance of small, noncortical thinning/retouch and debris flakes.

Lithics--ground

Ground stone artifacts from Mg 90 were rather rare (Table 4). Most were not recognized in the field as having been worked, and therefore were not mapped. The most common item was steatite bowl fragments; two sherds and four possible sherds being identified. Four other fragments of apparently unworked steatite were also recovered. Steatite can be locally obtained within the Reservoir (Elliot 1981), but must have been transported onto the levee.

Two rhyolite tools were also recovered. One is a flat slab of fine grained rhyolite or diabase, roughly rectangular in shape, measuring 73 by 55 mm. The upper, slightly concave surface shows some evidence of grinding (Plate 4b). This tool was located in Level 4 of Unit 9. Its

TABLE 3: Flake Type by Cortex Category

	QUARTZ			CHERT			DIABASE	
	Percussion	Thinning	Debris	Percussion	Thinning	Debris	Thinning	Debris
Cortical	3		6			3		
Part Cortical	4	2	7	2	6	11		
Noncortical	17	21	104	5	45	108	3	3

TOTAL:	N	%	TOTAL:	N	%
Cortical	12	3.4	Percussion	31	8.8
Part Cortical	32	9.1	Thinning/ Retouch	79	22.3
Noncortical	306	87.4	Debris	244	68.9
	350*	99.9		354	100.0

* four flakes not classified

TABLE 4

Distribution of Ground Stone in Provenience 1

Test Unit	Level	Unworked Steatite	Worked Steatite	Rhyolite	Hornblend Schist	Quartzite
1	6	1				
1	7					
5	1		4			
5	2		1			
10	4	3			1	
11	2		1			
9	4			1		
13	3			1		1

small size probably indicates that it was not used in food preparation. It could have functioned as a whetstone for bone tool sharpening, or for platform preparation in flaked stone tool manufacture. This tool closely resembles the abrader with ground hollows type of tool (Type 2) recognized at the early historic King site in northwestern Georgia (Pennington 1977:37).

The second rhyolite tool is an irregular cobble fragment with battering marks near the center of one relatively flat face (Plate 4c). It was found in Level 3 of Unit 13 and appears to have been used as a hammer or anvil stone. Again, its small size (working surface 52 by 34 mm; battered area only 20 by 15 mm) argues against its use as a food preparation implement. This tool conforms to the description of the random anvil type tool (Type 11) reported from the early historic King and Little Egypt sites in northwestern Georgia (Pennington 1977:68).

A third tool is a fragment of hornblende schist with evidence of grinding along one edge, found in Level 4 of Unit 10. This tool measures 56 by 26 mm and is 9 mm thick. The worked edge is rounded (Plate 4d). The edge may have been flaked before it was ground, or a naturally fractured edge may have been utilized as a grinding surface. This tool resembles the straight edge type tool (Type 23) recognized at the Little Egypt and King sites (Pennington 1977:107). Pennington suggests that these may have functioned as saws.

Finally, one quartzite cobble hammerstone was recovered from Level 3 of Unit 13 (Plate 4e). This cobble shows slight evidence of battering on one end, and a large spall has been removed from another surface. Cobble

hammerstones are common in most archaeological sites, and have been reported for the King and Little Egypt sites (Pennington 1977:72).

The steatite bowl fragments indicate that the component represented in Levels 1-4 of Provenience 1 dates to the late Archaic period. The remainder of the ground stone assemblage is non-diagnostic both with respect to time and function.

Other stone

Cracked rock was the most common type of cultural material recovered at Mg 90. The weight of cracked rock is listed in Table 5 by unit and level, and its mapped distribution in Provenience 1 is shown in Figures 5-8. Specimens identified and mapped in the field as cracked rock are almost without exception angular chunks of vein quartz.

Archaeologists (Chapman 1973, Coe 1964, McCollough and Faulkner 1973) in the southeastern United States have traditionally identified abundant large angular fragments of non-chert rock in pre-ceramic sites as fired cracked and have identified concentrations of such rock as hearths. The evidence from Mg 90 tends to support these interpretations. Cracked rock occurred in great quantity--over 80 lbs was recovered in the limited excavations--suggesting that whatever kind of activity it was involved in must have been relatively common. There was a tendency, furthermore, for much of the rock to occur in rather dense concentrations which may represent the in situ remains of individual hearths or heating episodes. Finally in the case of Features 1 and 4, dark charcoal stained soil was spatially associated with rock concentrations.

If the cracked rock recovered from Mg 90 is indeed related to heating or cooking activities, several distinct uses can be suggested for it. It

TABLE 5
 Distribution of Cracked Rock by Weight in Ounces
 in Provenience 1*

Test Unit	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Features
1	--	--	--	--	--	30	7	
5	26	12	4	6	9	3	--	3
6	77	94	43	4	--	--	--	260
7	16	110	4	--	--	--	--	
8	76	263	68	--	--	--	--	17
9	35	30	16	40	4	--	--	
10	13	20	12	20	8	--	--	
11	2	8	36	45	--	--	--	
12	0	0	--	--	--	--	--	
13	16	12	126	24	--	--	--	3

*Unexcavated levels are indicated by dashed line

may have been used to line hearth basins, as heating stones for boiling or pit roasting, as heating stones for sweat bathing or as heating stones for warming habitation structure during cold weather. Features 1 and 4 in which rock concentrations are accompanied by charcoal stained soil suggest rock lined hearths or the heating of stones in a fire for use elsewhere. More diffuse scatters of cracked rock such as occur in Level 3 of Units 11 and 13 (Figure 7) may represent rock discarded after use in cooking or heating.

FEATURES

Nine features were identified during excavation of Mg 90 in 1977. All but one were located in Provenience 1. The distribution of these is shown in Figures 5-8.

Feature 1 was discovered in bulldozer cut in the levee 140 m north of Provenience 1. The feature consisted of a gray stain containing charcoal flecks and rock and measuring 60 cm in diameter and 16 cm thick (Plate 2). Additional cracked rock was scattered over an area measuring approximately 2 m in diameter.

Feature 2 was an oval shaped pit located in the east-central portion of Unit 5. It was first detected at 123 cm below datum. Its maximum length was 37 cm, maximum width was 40 cm, and maximum depth was 25 cm. The fill was a dark gray-brown sand, surrounded by a lighter brown stained soil. Two noncortical quartz debris fragments, one noncortical chert debris fragment, and 3 oz of cracked rock were recovered. Floral remains recovered by flotation include 0.4 g of hickory shell and 7.0 g of pine wood. A small burrow or root originated in the feature. It is not clear

if Feature 2 represents an intentional pit or posthole or if it was an animal borrow or tree.

Feature 3 was a cluster of cracked rock (40 oz) located in the southwest corner of Unit 6 and the north west corner of Unit 7. No stain was associated with this rock concentration. The concentration was 60 by 18 cm and was detected between 130 and 140 cm below datum. No flotation sample was taken.

Feature 4 was a concentration of cracked rocks (220 oz) associated with a dark gray stain (Plate 5). It was located in the northwestern quadrant of Unit 6 and extended into Unit 5. This feature was detected in Level 1 and extended to a depth of 152.5 cm below datum. It was best defined in Level 2, where it measured 50 cm east-west and at least 70 cm north-south. Although it was not formally sectioned, the excavator reported that the feature was conical in form. Apparently the rocks were situated in a pit. No flakes were recovered. A flotation sample yielded 0.15 g of acorn shell and 6.5 g of pine wood. This feature definitely represents aboriginal activity--probably a hearth.

Feature 5 was an amorphous area of brown stained sand, charcoal fragments, and a few cracked rocks (17 oz) and pebbles located in Test Units 7 and 8 (Plate 6). It was seen near the base of Level 1 and was mapped at 129 cm below datum. At this point it measured 50 by 54.5 cm and was 30 cm deep. Upon excavation, a modern root trace intruded it and an old root trace originated within it. The excavators believed that the feature was a stump hole. No flakes were recovered from it, and a flotation sample yielded 13.45 g of pine and hardwood. The presence of two different wood types can be explained by the intrusive root and does

not necessarily indicate an aboriginal feature. The quantity of rock encountered was not significantly different from the surrounding area.

Feature 6 was an amorphous oval gray stain with charcoal flecks located in Unit 9. It was first detected at 99 cm below datum, well above the main aboriginal deposits. The feature measured 44 by 40 cm and was 10 cm deep. The profile revealed a slightly basin shaped pit. The excavator did not believe that Feature 6 was the result of aboriginal activity. No flakes were found in it, and no flotation sample was taken.

Feature 7 was a circular stained area with charcoal fragments located in Unit 9. This feature was first detected in Level 1 at 124 cm below datum. It measured 70 cm by 69 cm and was 18 cm deep. Cracked rock (5 oz) and other stone (1 oz) were recovered from the fill. Five bags of flotation material were saved yielding the following: 0.6 g of hickory shell, 0.05 g of acorn shell and two unidentified husk fragments, 16.90 g of wood (identified as oak or chestnut and pine), and one indeterminate item, perhaps a nutmeat. In the absence of any indications that Feature 7 was a natural feature, it can be attributed to aboriginal activity. It appears to be a type of hearth, but differs from others in not having an abundance of rock. There was no evidence of fired soil.

Feature 8 was a small gray-brown stain with charcoal flecks that was located in the northeastern quadrant of Unit 10. It was detected at 154 cm below datum (Level 4). This feature measured 23 by 22 cm and was 24 cm deep. The fill contained one noncortical chert thinning/retouch flake and one noncortical chert debris fragment. Three bags of soil were floated yielding 1.1 g of pine wood. This feature may have been a posthole.

Feature 9 was a dark gray-brown stain, 37 X 35 cm and 19 cm deep, located in Unit 13. It was detected at 150 cm below datum. One chert noncortical thinning/retouch flake, 3 noncortical chert debris fragments, 3 oz of firecracked rock, and 3 oz of other stone were recovered. A flotation sample yielded one grape seed (Vitis sp.) and 1.5 g of hardwood. Feature 9 definitely represented aboriginal activity, however, the nature of this activity could not be determined.

Floral Remains

In addition to the material recovered from features by flotation discussed above, small quantities of charred material were recovered from 10 cm levels by 1/4 inch dry screening. This material is listed in Table 6. Some hickory shell was recovered from Level 1 of Units 5 and 9, but most remains were identified as wood. Pine is most common of the identified woods, but oak, "hardwood," and beech or maple were also identified. These woods were probably locally available along the levee. Their preservation by burning probably indicates their use as firewood, although a forest fire is another possibility.

ANALYSIS AND INTERPRETATION

Within the area of Provenience 1, there is a tendency for cracked rocks and flakes to occur with greater frequency in Levels 1 and 2 in Units 5-9 and to occur with greater frequency in Levels 3 and 4 in Units 9-13 (Table 7). This pattern is most evident when artifact distribution maps for each pair of levels are combined (Figure 9 and 10). Features have a similar distribution. Features 2-5, and 7, and the

TABLE 6

Provenience 1

Floral Remains in Grams

Provenience		Hickory (<u>Carya</u> sp.) Shell	Acorn (<u>Quercus</u> sp.) Shell	Grape (<u>Vitis</u> sp.)	Wood
Unit	Level				
5	1	0.5			0.5
5	2				0.45 pine
6	1				0.2 hardwood & resin
6	3				0.4 pine
7	1				0.35
7	2				0.55 pine & hardwood
9	1	0.2			1.2 oak
9	2				0.4 pine
9	3				0.1 pine?
10	1				0.1
10	stained area				1.1 pinewood & resin
13	2				0.2 beech or maple
13	4				0.1 hardwood
Feature	2	0.4			7.0 pine
Feature	4		0.15		6.5 pine
Feature	5				13.45 pine & hardwood
Feature	7	0.6	0.05		16.90 pine & hardwood
Feature	8				1.1 pine
Feature	9			1	1.5 hardwood

TABLE 7

Distribution of Flakes and Cracked Rock
by Level in Units 5-13*

		Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13
Level 1	Flakes	3	7	10	4	15	6	0	0	6
	Cracked Rock	26	77	16	76	35	13	2	0	16
Level 2	Flakes	7	6	1	7	16	13	8	0	20
	Cracked Rock	12	94	110	263	30	20	8	0	12
Level 3	Flakes	3	10	0	0	12	25	14	--	49
	Cracked Rock	4	43	4	68	16	12	36	--	126
Level 4	Flakes	2	3	--	--	33	19	13	--	22
	Cracked Rock	6	4	--	--	44	20	45	--	24
Level 5	Flakes	--	--	--	--	4	11	--	--	--
	Cracked Rock	--	--	--	--	4	8	--	--	--

*Flakes are listed by number, cracked rock by ounces. Unexcavated levels are indicated by dashed line.

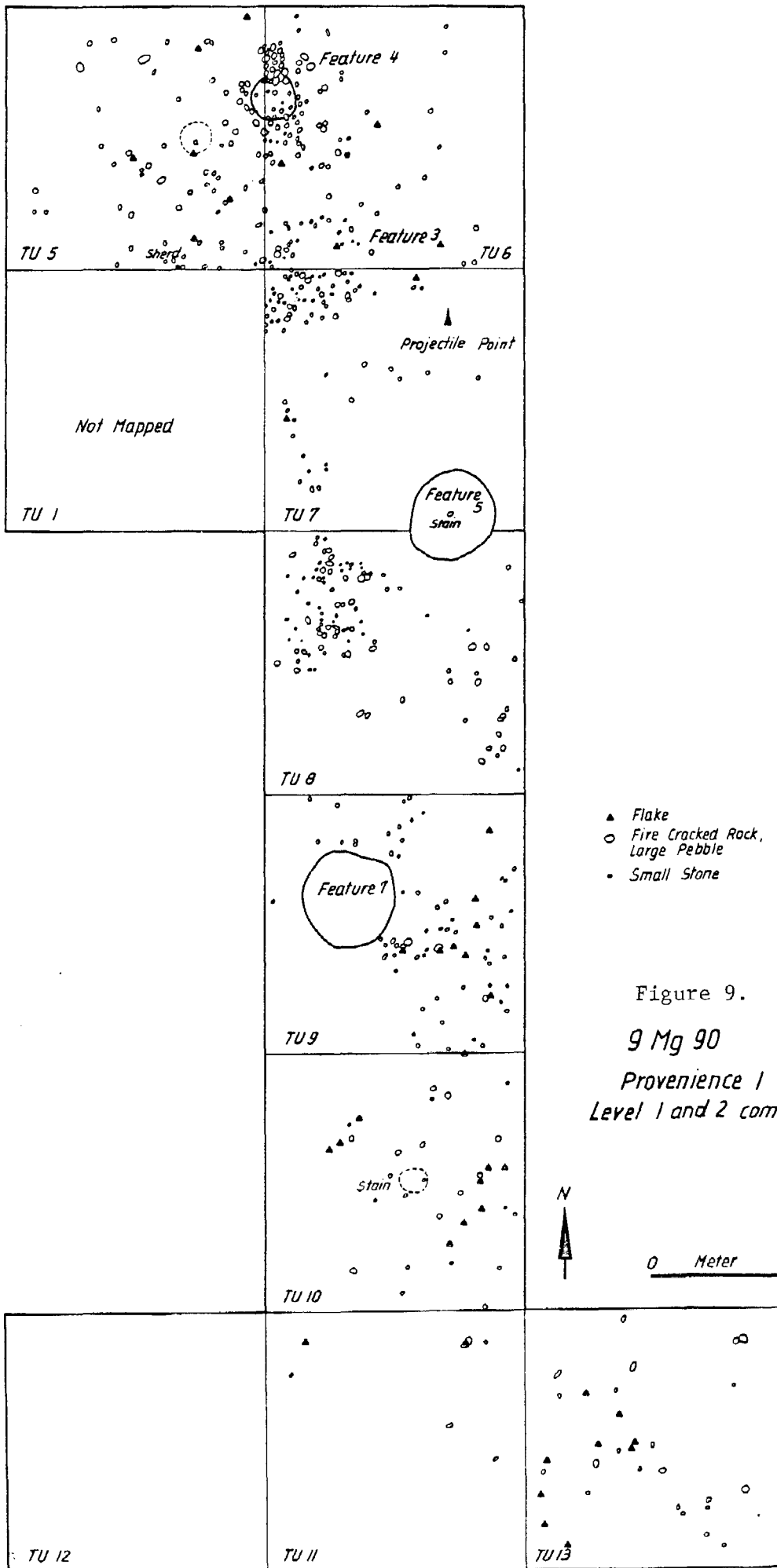
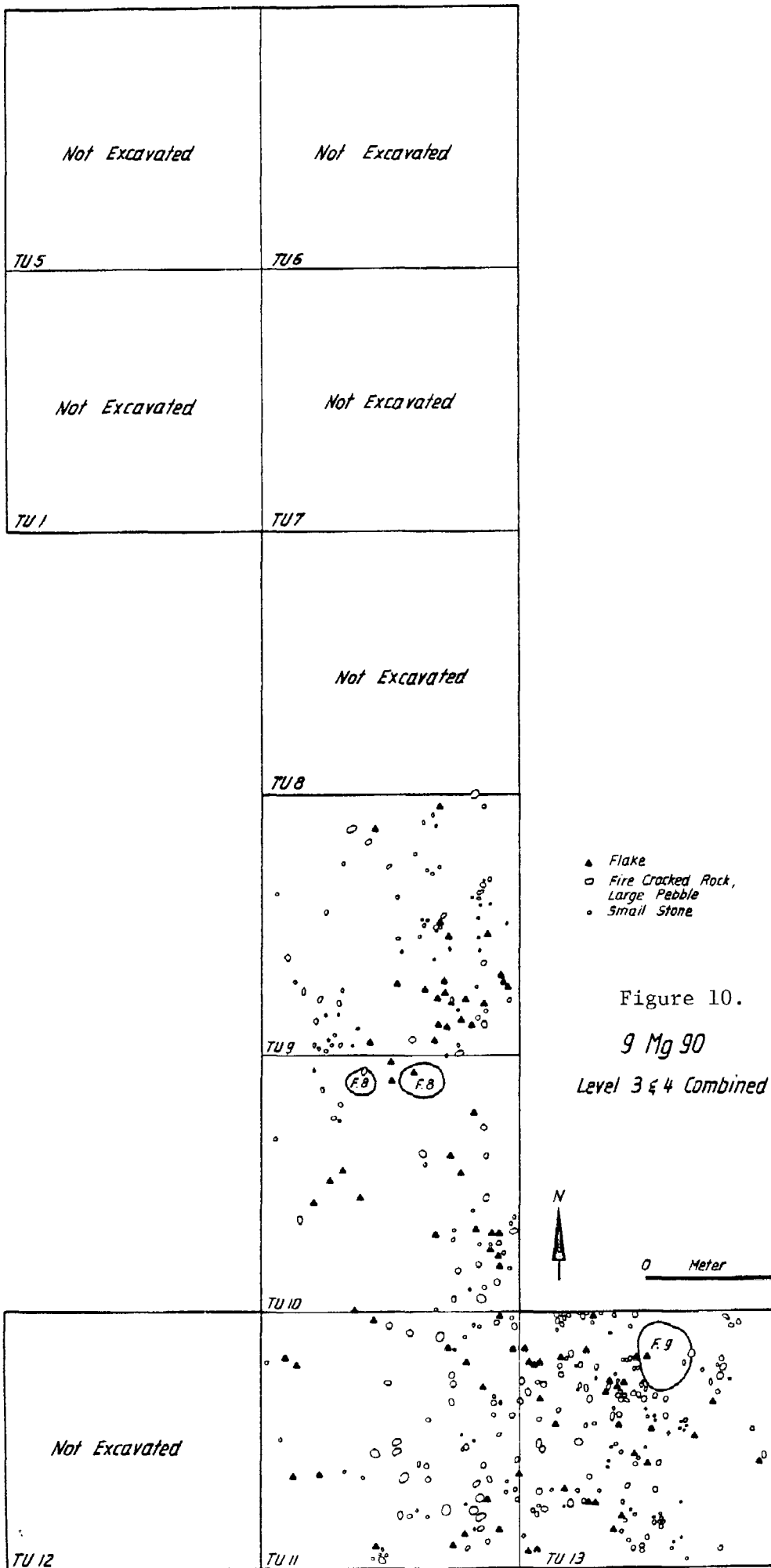


Figure 9.
9 Mg 90
Provenience 1
Level 1 and 2 combined



cracked rock cluster excavated by DePratter in 1975 occur between 120 and 140 cm (Levels 1 and 2) in the northern units, while features 8 and 9 in the southern units occur below 140 cm (Levels 3 and 4).

Variability in the frequency of quartz flakes versus chert flakes parallels the distribution of artifacts and features (Table 8). Chert flakes are more common than quartz flakes in the lower levels of Units 9-13, while the opposite is true in the upper levels of Units 5-10.

Together, these data indicate that the Provenience 1 area of Mg 90 may have been occupied at two different times, with the later occupation being centered several meters north of the earlier occupation. In the absence of diagnostic artifacts, it is difficult to determine the amount of time separating the two occupations. Given the general similarity in artifact content and the small stratigraphic separation between them, it seems likely that the two occupations occurred relatively close in time.

It is clear from Figure 9 that artifact densities in Levels 1 and 2 drop off in the southern units of Provenience 1. Unfortunately, it is not possible to conclusively demonstrate a similar decrease in the opposite direction in levels 3 and 4 (Figure 10). Two northern units (Units 7 and 8) were not excavated below Level 2, and an additional two units (Units 5 and 6) were not excavated below Level 3. Only one northern square (Unit 6), furthermore, was mapped below Level 2. What stratigraphic evidence there is (Table 6, Figure 10), however, does suggest that artifacts are indeed infrequent in the lower levels of the northern units and thus that the observed stratigraphic distribution pattern is real.

TABLE 8

Distribution of chert and Quartz Flakes
by Level in Units 5-13

		Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13
Level 1	Quartz	1	4	10	4	14	5	0	0	3
	Chert	1	3	0	0	1	1	0	0	3
Level 2	Quartz	6	5	1	5	12	7	4	0	9
	Chert	1	0	0	1	4	6	4	0	11
Level 3	Quartz	3	8	--	--	2	7	4	--	17
	Chert	0	2	--	--	10	17	9	--	31
Level 4	Quartz	1	2	--	--	10	3	1	--	9
	Chert	1	1	--	--	23	16	12	--	13
Level 5	Quartz	--	--	--	--	2	5	--	--	--
	Chert	--	--	--	--	2	6	--	--	--

Most artifacts in Levels 1 and 2 occur in concentrations. The largest and most distinct concentration occupies adjacent portions of Units 5, 6, and 7.¹ As mapped in Units 5, 6, and 7, the concentration covers an area approximately 3.5 m in diameter and contains 16 flakes and approximately 162 pebbles and rock fragments. Two cracked rock clusters, identified as features (Features 3 and 4) at the time of excavation, are located within the area of artifact concentration. One of these (Feature 4) is associated with a dark gray soil stain and may represent a hearth. Feature 2, a dark gray brown soil stain measuring 37 X 40 cm, is also located within the area of artifact concentration.

Additional artifact concentrations occur in the northwest corner of Unit 8 and in the eastern half of Unit 9. Both may extend beyond the excavated units to the east and west, but whether they are part of larger artifact concentrations can not be determined.

Most artifacts in Levels 3 and 4 occur in one large concentration which covers adjacent portions of Units 10, 11, and 13. Assuming that it does not extend very far beyond these units to the northeast, this concentration can be said to cover an area approximately four meters in diameter. It consists of 50 mapped flakes and approximately 210 mapped pebbles and cracked rock fragments. Feature 9, a dark gray brown stain measuring 37 X 35 cm, is located within the area of this concentration.

¹The small number of flakes (6) and cracked rocks and pebbles (38 oz) recovered from Levels 1 and 2 of Unit 1 indicate that the concentration does not extend very far into that square.

An increased density of artifacts in Levels 3 and 4 of Unit 9 suggests that a second artifact concentration is present in this location. This concentration measures approximately two meters in diameter and contains 24 mapped flakes and approximately 75 mapped pebbles and cracked rock fragments. Feature 8, a gray brown stain measuring 23 X 22 cm, is located near its southern margin.

Not all artifacts occur in concentrations, nor do all features occur in the immediate vicinity of artifact concentrations. Given this situation, it is possible to propose two alternative interpretations for the overall artifact and feature distribution in each pair of levels.

1. The excavated area may have been occupied on several different occasions over a short period of time; each occupation being centered in a slightly different location along the crest of the levee and being represented by a distinct concentration of artifacts.

2. Alternatively, the total artifact scatter present in each pair of levels may represent only a single occupation characterized by multiple, possibly functionally distinct activity areas.

Without more extensive excavation and more precise stratigraphic control, it is not possible to choose between these alternatives with any degree of certainty. The fact that three cracked rock clusters (Features 4 and 6 and DePratter's feature) occur in Levels 1 and 2 within a fairly small area and nowhere else within Provenience 1, however, suggests that functionally distinct locals do indeed exist. This situation in turn supports the second interpretation; that a single relatively large occupation area is represented in each of the pairs of excavation levels.

Relatively little can be reconstructed concerning the nature of the occupation of Mg 90. There were at least two different occupations, probably dating to the Late Archaic period--roughly 2000-3000 B.C. Artifact yield of each was quite low both in terms of frequency and variety.

The occurrence of hickory and acorn shell in flotation lots and features from Levels 1 and 2 suggests that the later occupation occurred during the late fall. The presence of one grape seed in Feature 9 suggests a late summer occupancy for the earlier occupation. Little faith can be placed in these seasonal indicators, however, since the botanical samples are so small and so little is known concerning the manner in which botanical material was being charred at the site (Hally 1981).

Hickory nut, acorn and grape were apparently being consumed at the site. For the reasons cited above, however, it is not possible to determine how important these species were in the aboriginal diet nor whether they were the only plant foods consumed during site occupancy. Evidence of plant food utilization at other Late Archaic sites (Ash et al 1972; Chapman 1981) in the eastern United States makes it probable that the inhabitants of Mg 90 were utilizing a variety of nuts, hard seeds and fruits.

The absence of animal bone in excavated lots doubtless reflects poor preservation conditions rather than the kinds of subsistence activities that were engaged in by the inhabitants of Mg 90. Again, comparative data from other Late Archaic sites indicate that white

tailed deer, turkey and a variety of small mammals as well as fish, turtle and shellfish would have been exploited by the late Archaic inhabitants of the Reservoir (Stoltman 1972:51). Which, if any, of these kinds of animals were being exploited at Mg 90 unfortunately can not be determined. The absence of extensive shoals in the Oconee River near Mg 90 makes it likely that fishing and shell fish collecting were not important activities at the site.

Only one feature (Feature 8) can be tentatively identified as a posthole. The absence of additional structural features may be due to the coarse textured soil which comprises the site. Evidence of postholes that did not burn would be unlikely to survive in this type of soil. Permanent structures can be expected to occur in Late Archaic contexts in the Georgia piedmont. Whether they were erected on small levee ridge sites such as Mg 90 can not unfortunately be determined with the evidence available.

The low frequency of tools and chert debitage recovered in the excavated portion of Mg 90 suggests that occupation of the site was either very brief or that only a bare minimum of activities were carried out during site occupancy. The abundance of cracked rock indicates that fires were built and, by inference, that food was cooked and/or shelters heated. The small amount of chert, quartz and rhyolite debitage indicates that little tool manufacturing occurred on the site. The absence of cores and the relatively low frequency of percussion and cortical flakes, furthermore, suggest that what stone flaking there was was restricted largely to tool maintenance.

Three sites--Lake Spring, Stallings Island and Rabbit Mount-- provide the most meaningful comparisons with Mg 90 (Claflin 1931; Miller 1949; and Stoltzman 1972). All three sites belong to the Late Archaic Stallings Island culture. They date to approximately 1000-2500 B.C. and yield a projectile point type similar to the one recovered in Unit 7. Thus, although these sites post-date the introduction of pottery in the area, there is a strong likelihood that they are not too different in age or cultural affiliation from Mg 90.

All three sites are large shell middens and are located in the flood plain of the Savannah River: Lake Spring and Stallings Island, above the fall line; and Rabbit Mount, some distance below the fall line. All three sites have yielded a variety of animal remains, with shell fish being most abundant. All three sites also yield a variety of stone tools --flake tools, bifacial knives, chert adzes, net sinkers, grooved axes and gorgets--and bone tools--awls, pins, projectile points, fish hooks and flakers. Features, however, are limited in variety. Other than hearths and a single packed clay "floor" at Rabbit Mount, there is no evidence of habitation structures.

The contrast between Mg 90 and the three Stallings Island sites is quite marked. Mg 90 yielded only one flaked stone tool and only a few hundred pieces of debitage. Cracked rock clusters are not reported from the shell midden sites. Pottery and fresh water mollusk shell are abundant at the Stalling Island sites but absent at Mg 90. The absence of pottery at Mg 90 probably reflects the site's slightly greater antiquity. The remaining differences may reflect differences in the functional nature of the two sets of sites.

Stoltman (1972:52) proposes that the Stallings Island settlement system was of a "Central-Based Wandering" type.

Intensively occupied sites like Rabbit Mount and Stallings Island must have served as the focal points or "base camps" around which the annual gathering cycle revolved. From such base camps, smaller groups no doubt departed to perform specific tasks such as to gather certain nuts in season, hunt deer, or quarry chert, only to return again from their temporary "work camps" to the central base.

The available evidence indicates that, the position of Mg 90 in such a settlement system would be that of a seasonal or short term occupation work camp visited by small groups of people for the purpose of conducting a limited variety of specific activities.

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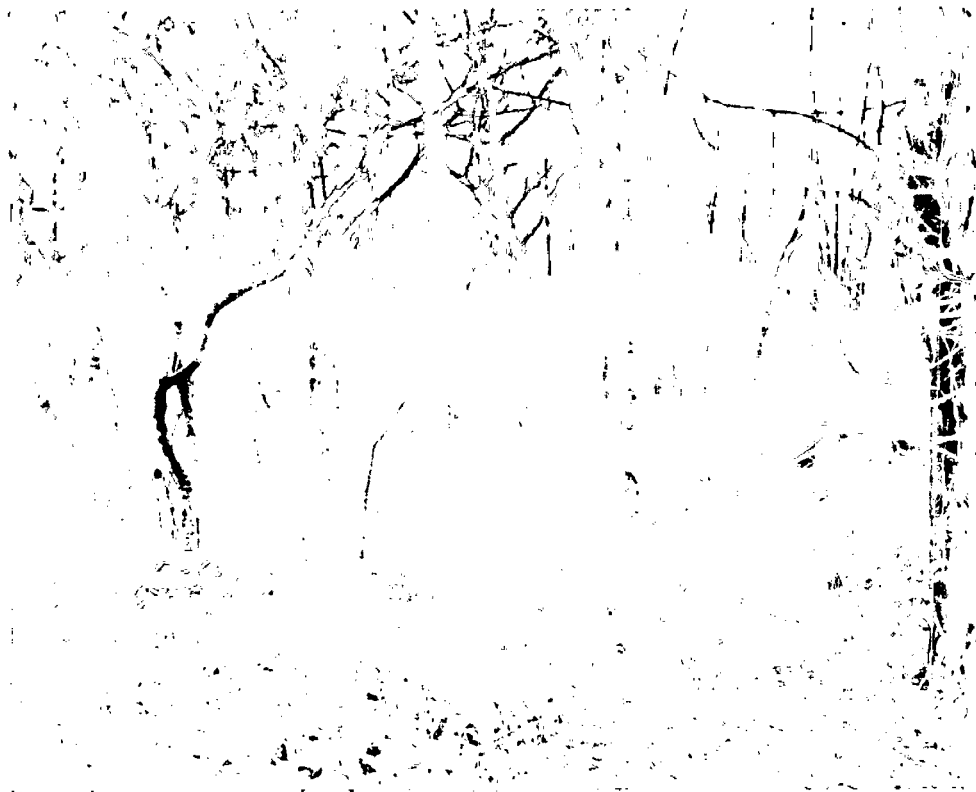


Plate 1. View of larger levee from the northeast.



Plate 2. West Units 3 and 4 and Feature 1 from the west.

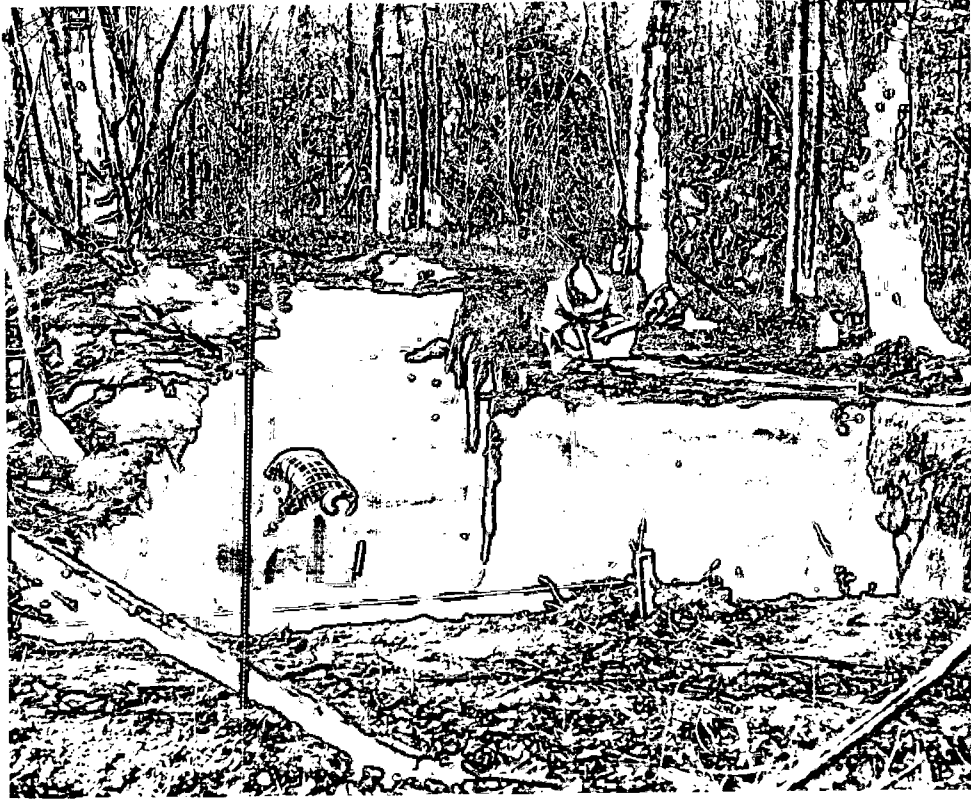


Plate 3. Provenience 1 excavation from the north.

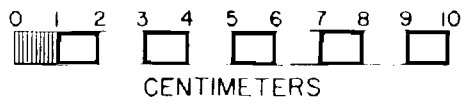
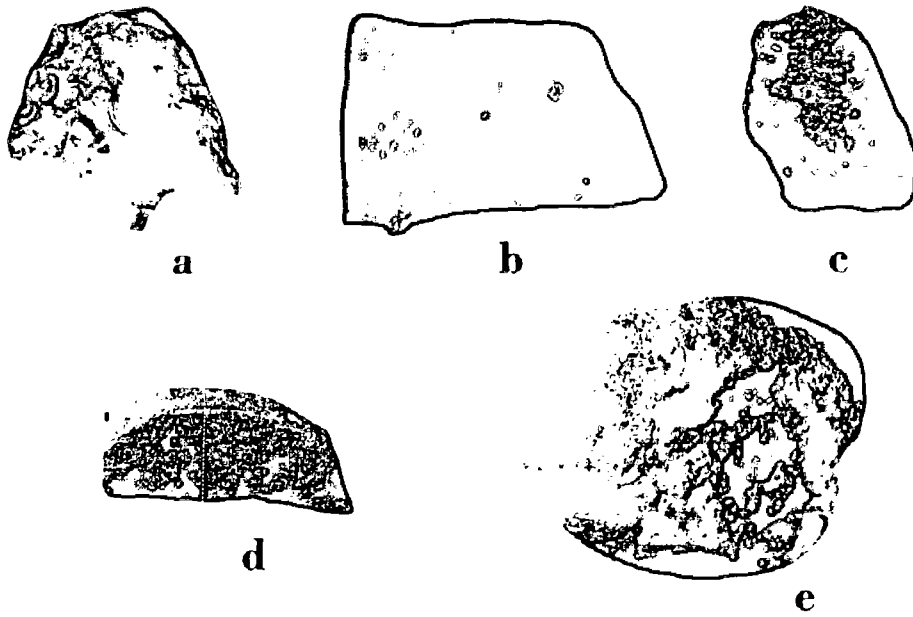


Plate 4. Artifacts recovered from Provenience 1.



Plate 5. Feature 4, cracked rock concentration, from the east.



Plate 6. Feature 5, stained soil and charcoal, from the south.

