CURRENT RESEARCH 7NC-E-43

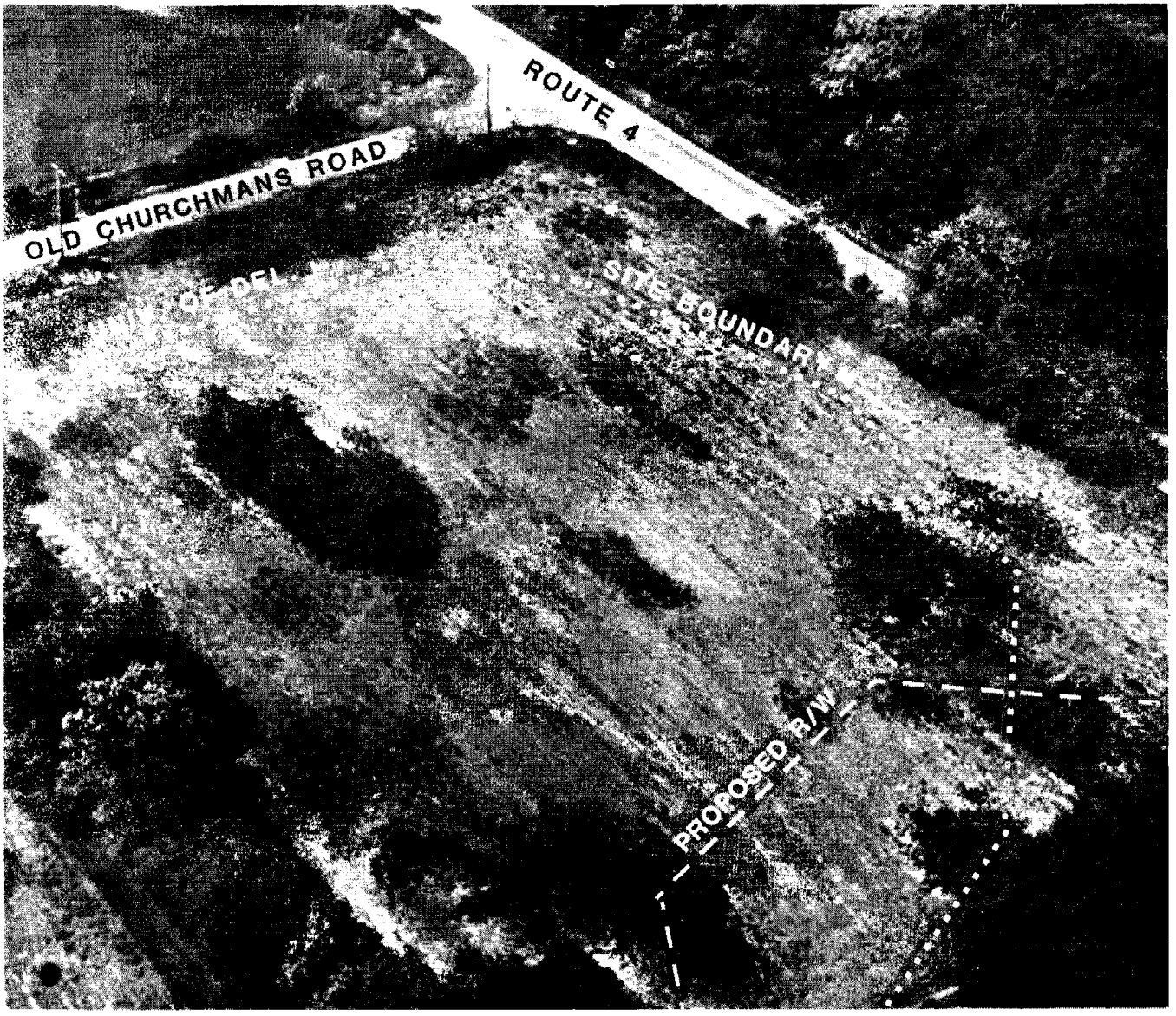
Introduction and Research Methods

The major research task of the current investigation of 7NC-E-43 was the determination of eligibility of the site for inclusion on the National Register of Historic Places. Factors in the determination of eligibility included analysis of the site's limits and its contextual integrity and its contribution to research on the prehistory of Northern Delaware.

7NC-E-43 is located southeast of the junction of Route 4 and Old Churchmans Road (Plate 2 & Figure 2). It is primarily flat except for the northeast portion which slopes to Old Churchmans Road. The site is bounded on the north and south by fallow field, on the east by residential property and fallow field, and on the west by Old Churchmans Road. About 100 meters to the north the active floodplain of the White Clay Creek begins with its channel lying an additional 200 meters north (Fig. 1).

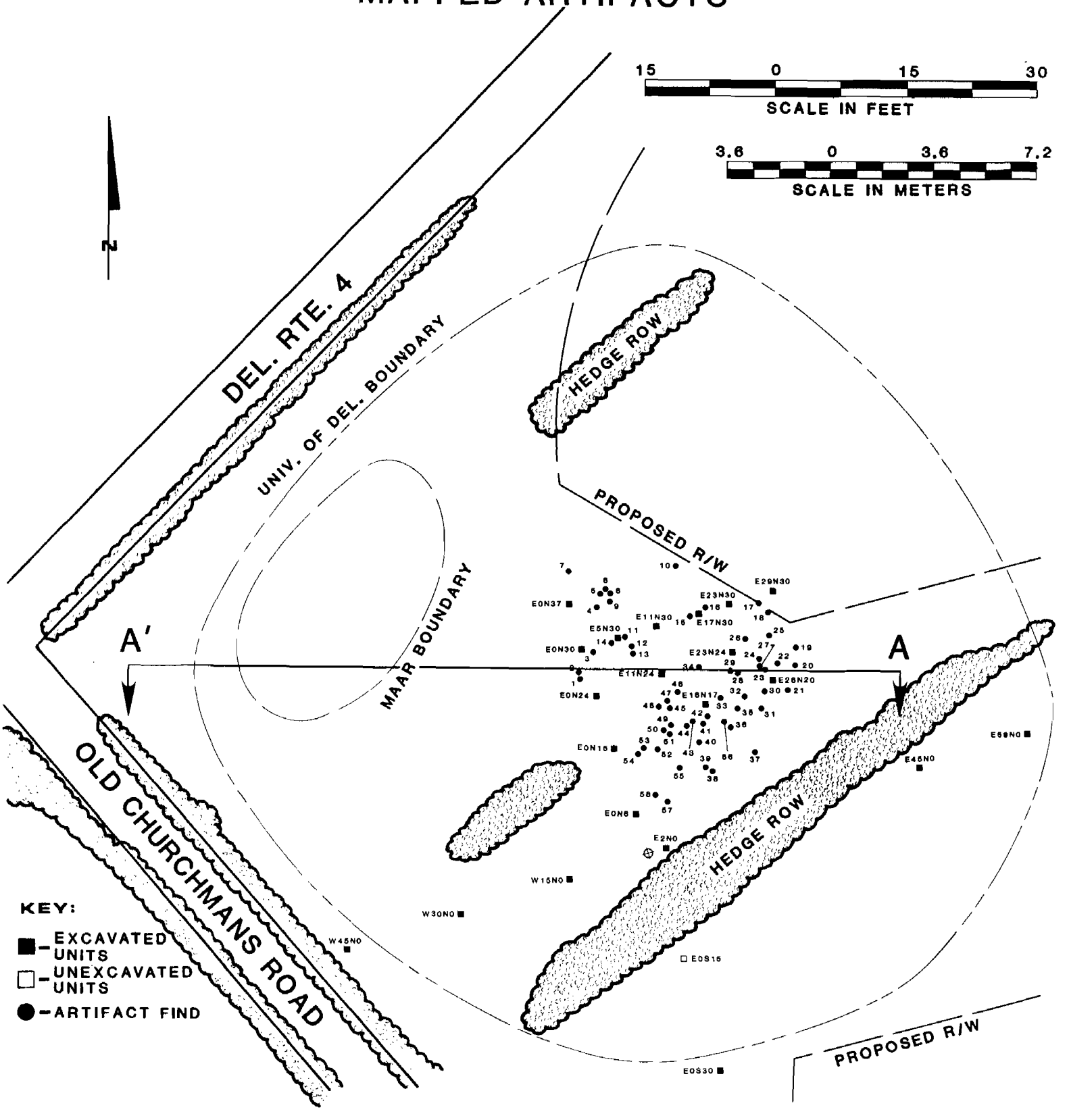
The field was lying fallow when excavations were begun in September of 1982 and had not been plowed for several years. The proposed research methods for the site included a controlled surface collection and subsurface test excavations. The purpose of the surface collection was to determine the artifact types present, their distribution, and density. This information was used to determine the placement of 1 x 1 meter test units along with considerations of varied topography. These considerations allowed the study of the soil stratigraphy and testing for the existence of buried landscapes. Surface viewing conditions were poor, however, and excavations were begun without the benefit of data from a surface collection. Eleven 1 x 1 meter units were laid out strictly in relation to topography to ascertain soil stratigraphy and the presence or absence of buried landscapes. Six were placed along the baseline of the proposed Route 4 right-of-way and five on a

PLATE 2



SITE LOCATION
7NC-E-43

FIGURE 2
SITE 7NC-E-43
TEST UNITS
&
MAPPED ARTIFACTS



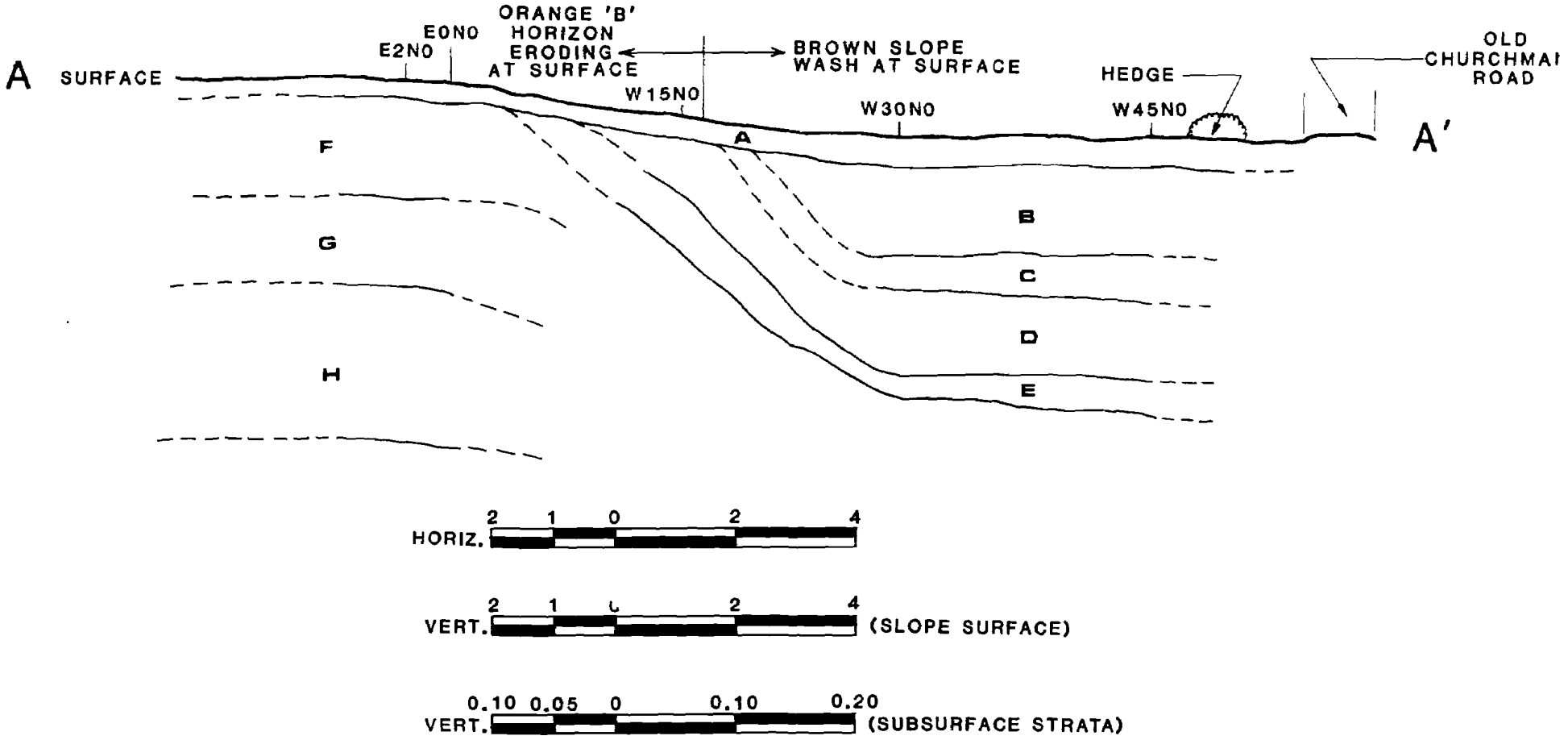
line perpendicular to and bisecting the baseline (Fig. 2). All units were flat-shoveled and all soil sifted through ¼" mesh screen. Excavation was by arbitrary 10 cm levels within natural soil strata, except for the plow zone, which was excavated as one level regardless of depth. (Similar methods were also utilized at the other two sites).

Results

Appendix I lists all test unit profiles and Appendix II provides a summarized artifact inventory. Test units W45NO and W30NO revealed a buried organic horizon at depths of 45 and 50 cm below surface (Horizon B, Fig. 3). This horizon contained both historic and prehistoric artifacts. Units W15NO and E2NO further up the slope were excavated to depths of 50 and 140 cm, respectively, and contained no indication of buried horizons (Horizons F, G. H, Fig. 3). Well-developed, blocky, clayey soils were encountered immediately below the plow zone. No artifacts or features were found below the buried horizon in either of the two units mentioned. Therefore, it is concluded that the buried horizon, because it included historic artifacts, is an early historic plow zone that has been buried by slope wash. Most of the historic artifacts are whiteware and 19th century redware and it is concluded that the majority of the historic deposition occurred after 1820. Because there were few (3) quartz flakes recovered from the buried horizon in test unit W30NO and no diagnostic artifacts and features in W30NO and W45NO it was concluded that no further testing of the buried stratum was warranted.

Test units EON15, EON30, E45NO, E59NO, EOS15, EOS30, and EOS40 were then laid out to determine presence/absence, density, and distribution of artifacts within the remainder of the site. Units EON15 and EON30 were placed to the north of the Route 4 baseline and yielded sizable numbers of

FIGURE 3
7NC-E-43
SOIL STRATIGRAPHY ALONG PROPOSED RTE. 4 BASELINE, LOOKING SOUTH



KEY:

A - PLOW ZONE WITH ARTIFACTS

B - DISTURBED HORIZON WITH HISTORIC & PREHISTORIC ARTIFACTS

C - ORANGE/BROWN & MED. BROWN SANDY LOAM (SLOPE WASH), WITH HISTORIC & PREHISTORIC SITES

D - ORANGE/BROWN & LIGHT BROWN SANDY CLAY, AND CLAY LOAM WITH PEBBLES, STERILE

E - ORANGE/BROWN & LIGHT BROWN CLAY, AND CLAYEY LOAM WITH POCKETS OF GRAY CLAY, STERILE

F - ORANGE/BROWN SILTY LOAM, STERILE

G - ORANGE/BROWN COARSE SANDY LOAM WITH PEBBLES, STERILE

H - TAN/ORANGE COARSE SANDY CLAY WITH CLAY LENSES, STERILE

jasper flakes in the plow zone (Appendix II). However, only two jasper flakes were found in the first 20 cm of the subsoil of EON30 and none in the subsoil of EON15. Excavations to depths of up to 120 cm below the surface revealed no intact buried horizons.

The other five units were placed south of the large hedgerow bisecting the site. Three units - E45NO, E59NO, and EOS30 - were excavated and yielded few artifacts. Aided by a post-hole digger, excavations were taken to depths below one meter. No artifacts or features were found below the plow zone and the subsoil consisted of blocky-structured clays and sandy clay loams more than 15,000 years old. Due to the antiquity of the soils and the scarcity of artifacts, excavation of units EOS15 and EOS40 was cancelled.

At this point surface viewing conditions improved due to plowing and discing, allowing a controlled surface survey of the site. The previous nine test units indicated that the majority of artifacts were located in the northern part of the site (units EON15 and EON30) and the soils here and a few meters to the northeast were considered to be the least eroded. Erosion and deposition in other areas made the validity of a controlled surface collection of them most dubious. Therefore, the controlled surface survey covered only the northeast portion of the site.

The surface survey recovered a total of 58 artifacts (Appendix II) and Figure 2 shows the location of these artifacts. The greatest concentration of artifacts, including a projectile point, occurred in the flat area east of unit EON15. Therefore, units E16N17 and E28N20 were opened in the area of concentration and excavated to depths of 15 cm into the subsoil (35 cm below surface). Fewer artifacts were recovered from the plow zones of these units than from the plow zones of EON15 and EON30, which were located in an area of lower surface artifact density. From these data it was determined that the

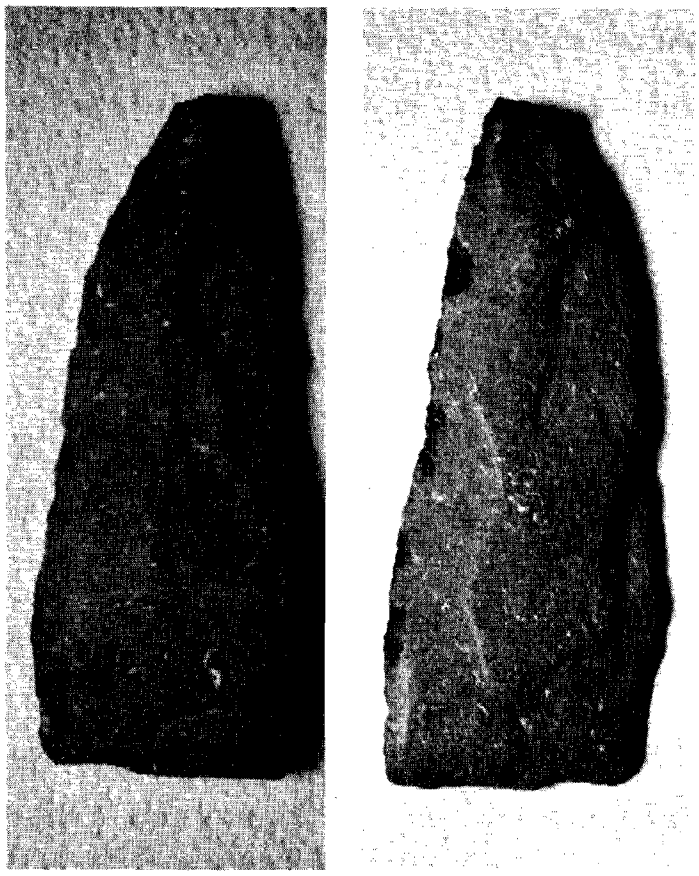
most economical method for extracting data from this badly eroded plow zone site with no subsurface features was to excavate a series of 1 x 1 meter plow zone squares in the vicinity of the squares with the least erosion and highest plow zone artifact densities. Excluding the eroded slope to the west of EON3O, ten test units were excavated and prehistoric, 19th century, and 20th century historic artifacts were found in all of these units. Diagnostic artifacts included a quartz notched projectile point with the base broken at the notch; a shoulderless squared-base purple argillite projectile point resembling a Fox Creek type; a sherd of Minguannan cord-marked ceramics; and flakes of quartz, quartzite, red jasper, brown jasper, and chert.

Summary and Conclusions

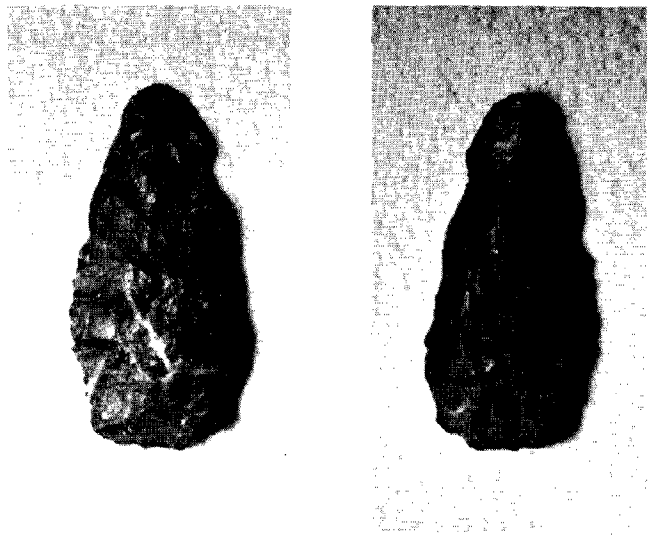
A controlled surface survey was conducted and twenty-one 1 x 1 meter test units were excavated. These yielded a total of 460 historic and prehistoric artifacts: 58 on the surface, 360 in the plow zone, and 42 in the subsoil. As evidenced by the approximately 60 cm of slope wash encountered in units W45NO and W3ONO, the shallow depth of the plow zone, and the great age of the subsoils, this site is heavily eroded. Most of this erosion has probably taken place within the last 150-175 years.

Diagnostic prehistoric artifacts included three Minguannan ceramic sherds from the Woodland II Period, one red jasper squared-base projectile point, one argillite squared-base shoulderless projectile point, and one notched quartz projectile point with the base snapped across the notch, the last three coming from Woodland I Period (Plate 3). The site's probable use was as a sporadically visited procurement site used by small bands. Its proximity to tributaries of the White Clay Creek places it in a favorable position for the hunting of water-attracted game animals. The most intensive prehistoric utilization of the site took place on the berm in the northeast section, closest to the White Clay Creek floodplain as evidenced by the accumulation

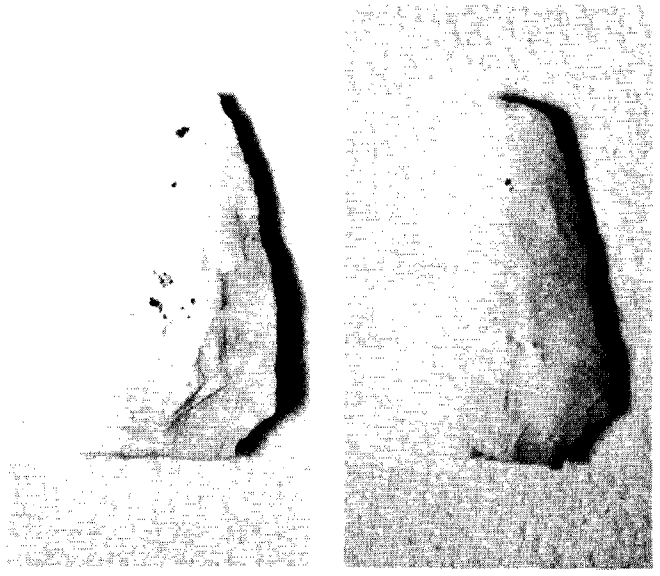
PLATE 3
SITE 7NC-E-43



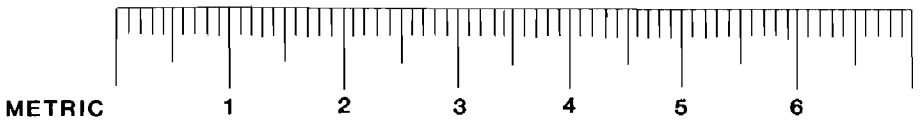
ARGILLITE PROJECTILE POINT



RED JASPER SQUARE BASE PROJECTILE POINT



QUARTZ PROJECTILE POINT



of artifacts in this area. The artifacts, including bifaces and flakes, are indicative of limited refurbishing of tool kits and processing activities. However, plowing and natural erosion along the berm have destroyed the primary context of any archeological remains. Moving away from the White Clay Creek to the south of the berm, prehistoric activities associated with the creek would be expected to diminish in frequency and the artifacts did exhibit such patterning. Consequently, it is concluded that moving south of the berm, artifacts are infrequent and the information potential of this section of the site is low. Because of the severe soil erosion of this site, the scarcity of artifacts in undisturbed contexts, the total lack of intact subsurface features, and the overall low density of artifacts, the site is not considered to be eligible for the National Register of Historic Places and no further work is recommended.

This site can be considered in the context of local settlement patterns. The environmental setting suggests that the area was attractive to game and a good hunting site. Archeological remains from the site indicate that it was used for the hunting and processing of game animals at least between 2500 B.C. and 600 A.D. with some later visitation by Woodland II groups (Custer 1983). Tools broken in use at the site were discarded and new replacements were manufactured from locally available cobble deposits. Throughout the history of its use, it is unlikely that the activities carried out at the site varied greatly. The evidence suggests a very specialized set of activities which remained relatively consistent for a period of at least 3000 years.

The site's major occupation seems to have been during the Woodland I Period, when societies became increasingly sedentary and were no longer engaged in a seasonal movement cycle. By this period, 7NC-E-43 was probably an outlying hunting station that helped to support a more sedentary population

at one of the nearby base camps, such as the Clyde Farm site near Churchmans Marsh (Custer 1982). Although the archeological remains at 7NC-E-43 reveal interesting patterns of human land use during the prehistoric past, the absence of in situ remains with good context precludes both its inclusion on the National Register and further work at the site.

CURRENT RESEARCH 7NC-E-45

Introduction and Research Methods

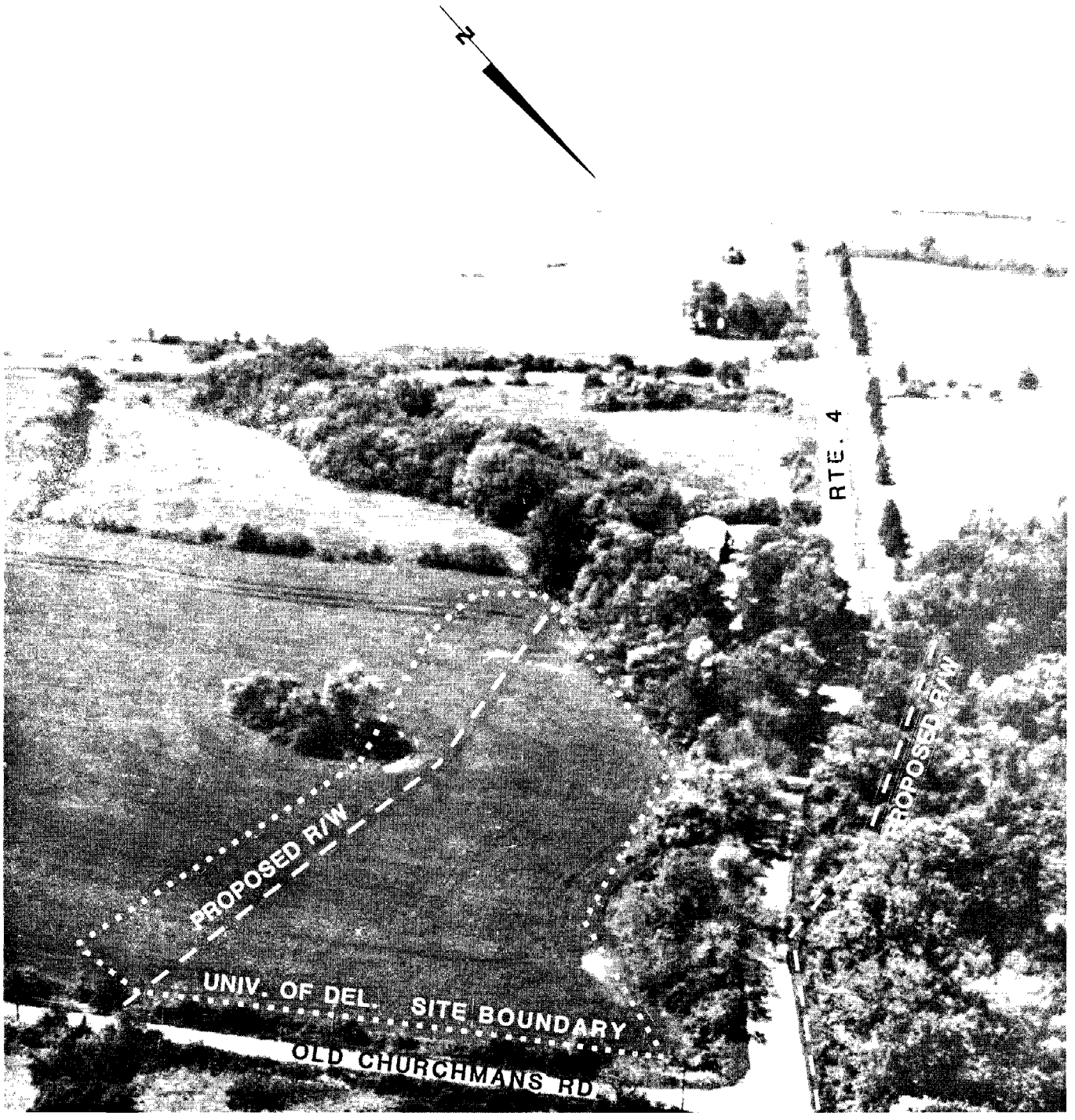
The primary objective of this investigation was the determination of the eligibility of 7NC-E-45 for inclusion on the National Register of Historic Places. Research included definition of the site limits, contextual integrity of the site, and the site's potential contribution to regional prehistory. The limits of the site were approximated by Thomas (1980) and were to be more clearly defined by this excavation.

7NC-E-45 is located to the west of Old Churchmans Road, opposite site 7NC-E-43 (Fig. 1). It is bounded on the north and west by the current Route 4, on the east by Old Churchman Road, and on the south by an undetermined boundary for the proposed Route 4 right-of-way (Plate 4 & Figure 4). The site is mostly flat but slopes upward to the southwest to a small knoll. The portion of the site within the proposed right-of-way extends 150 meters east-west and 50 meters north-south. It should be noted that were it not for the historic period intrusion of Old Churchmans Road, 7NC-E-43 and 7NC-E-45 might have been considered one continuous site. The research methods included a controlled surface survey and subsurface testing using 1 x 1 meter units, the placement of which was based upon the surface collection and the need to investigate buried landscapes.

Results

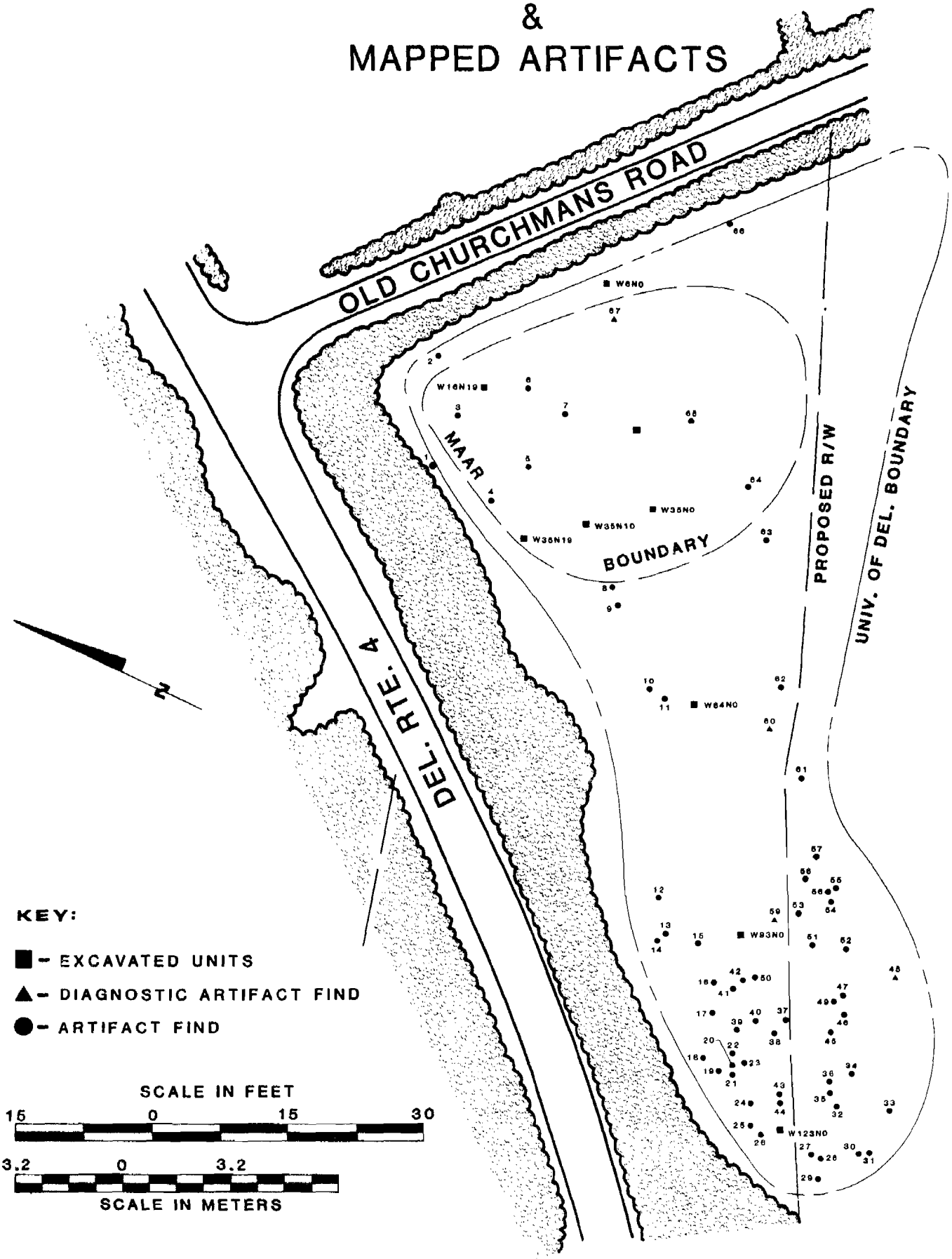
The field was plowed and weathered when work commenced in September, 1982. Initial inspection of the site included areas in and out of the proposed right-of-way. The knoll to the southwest and south of the site was examined as well as the intervening ground. Appendix III lists test unit profiles and Appendix IV provides a summarized artifact inventory. Artifacts

PLATE 4



SITE LOCATION
7NC-E-45

FIGURE 4
7NC-E-45
TEST UNITS
&
MAPPED ARTIFACTS



were sparsely scattered and only one small clustering was noted - in the western end of the right-of-way on the slope. This cluster included a small quartz contracting stem projectile point and several quartz flakes in an area covering approximately 25-30 square meters (Fig. 4). However, uncontrolled plowing activity by the tenant farmer between mapping and collection caused many of these artifacts to be lost. Subsequently, five test units (W6NO, W35NO, W64NO, W93NO, W123NO) were placed in line at 30 meter intervals running up the slope from east to west (Fig. 4). A sixth unit (W35N19) was placed 19 meters to the north, still within the right-of-way. Units W93NO and W123NO were situated on the slope while the remainder were in flat areas of the site. All of these units contained plow zones ranging in depth from 24 to 40 cm below the surface. The subsoils were excavated to depths of 65 to 120 cm below the surface. Test unit W35N19 contained laminated organic zones, most likely slope wash, to a depth of 57 cm below surface. Beneath this and in the previous five units were subsoils of yellow, orange, and brown sandy clays and clayey loams often containing many pebbles (Appendix III).

A total of 15 prehistoric and 35 historic artifacts were recovered from the units' plow zones (Appendix IV). The former were quartz, jasper, quartzite, and chert flakes and quartz chunks while the latter consisted of 19th century redware and plain whiteware and some bottle glass and badly oxidized nail fragments. Two jasper flakes were found at depths of 10 and 30 cm below plow zone in unit W35NO. No diagnostic prehistoric artifacts were found. In order to determine the slope of the original land surface between units W35NO and W35N19, another unit was placed at W35N10 (Fig. 4). It was excavated to a depth of 118 cm below surface and exhibited a shallower plow zone more similar to W35NO and a typical subsoil profile interrupted only by a probable rodent disturbance. Unit W16N19 was also excavated and contained

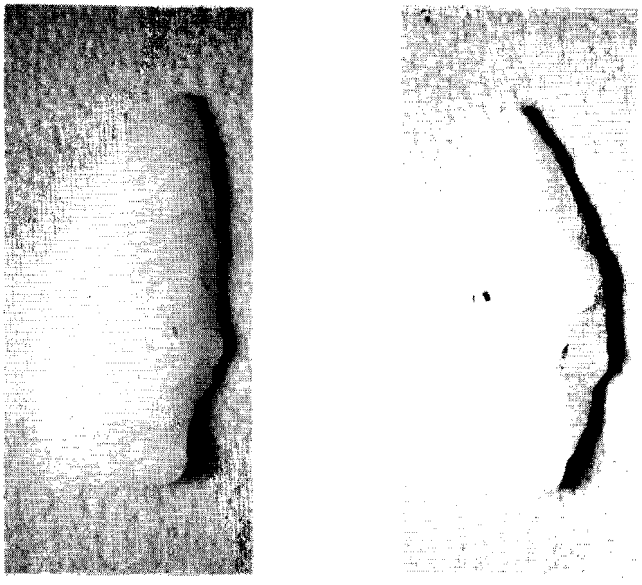
3 flakes in the plow zone and a quartz flake in the subsoil 20 cm below the plow zone.

The initial disrupted surface survey indicated that a widely scattered artifact distribution would be expected and a later (successfully mapped) surface survey was limited to a corridor 20 meters north and south of the proposed Route 4 right-of-way. It was felt that it would be unproductive to stray far out of the right-of-way, given the low density of artifacts encountered in the initial inspection. A total of 67 artifacts were mapped in the second survey, with over half (34) being quartz flakes. Four projectile points were found in the survey (Plate 5), with the remainder of the artifacts including 1 hammerstone, 1 quartz core, and non-diagnostic flakes, chunks, and fire-cracked rocks. Forty-eight of the artifacts were found in the vicinity of units W93NO and W123NO, up the slope on the west end of the site. Of that total, about half (25) were in the right-of-way. The plow zone of these sites yielded only 8 flakes and 2 quartz chunks and nothing from the subsoil. Two other points were found out of the right-of-way and are included in the collection of the earlier, disrupted surface survey. One is a small contracting stem quartz point and the other is the non-diagnostic medial section of a fine-grained gray chert biface. Thirty-six other artifacts, mostly quartz and jasper flakes and chunks, were also recovered.

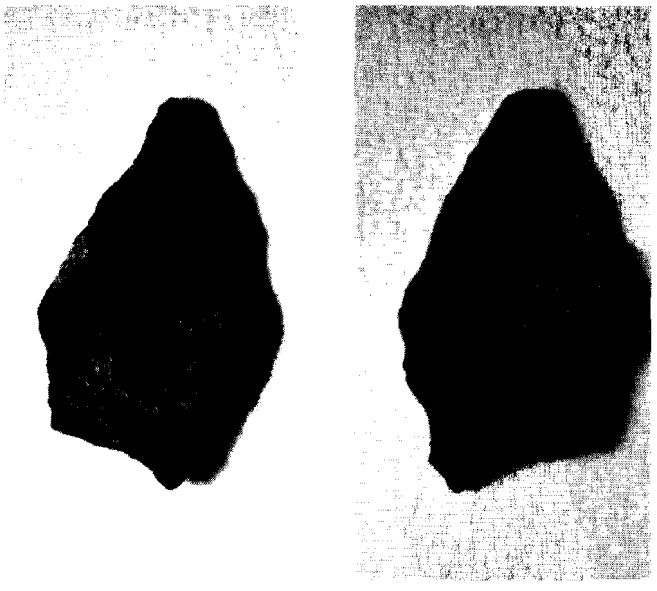
Summary and Conclusions

A controlled surface collection was conducted and eight 1 x 1 meter test excavations were excavated at this site. Of the 185 historic and prehistoric artifacts recovered, all but 4 were from either the surface or the plow zone. These exceptions were 2 jasper flakes, 1 quartz flake, and 1 redware sherd. No undisturbed buried horizons or other intact subsurface features were discovered during this investigation. The recovered prehistoric artifacts date

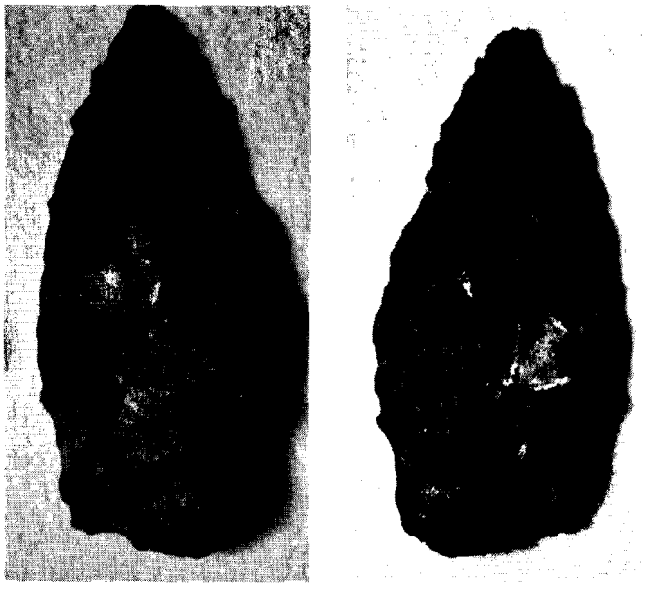
PLATE 5
SITE 7NC-E-45



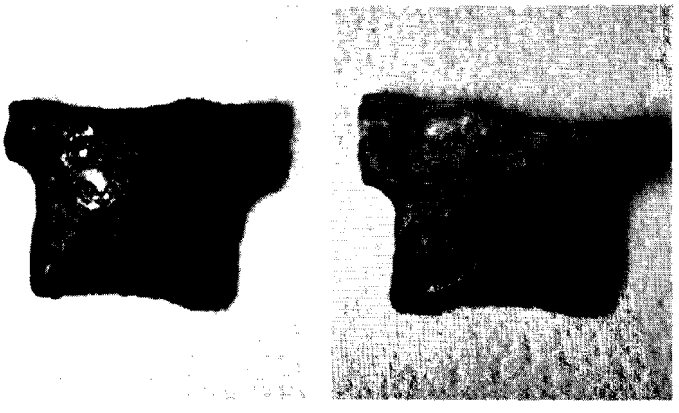
QUARTZ PROJECTILE POINT



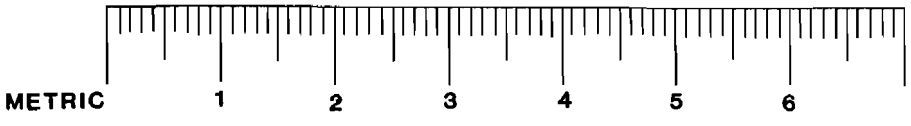
QUARTZITE PROJECTILE POINT



RED JASPER STEMMED PROJECTILE POINT



RED JASPER FOX CREEK LIKE PROJECTILE POINT



from about 2500 B.C. to 600 A.D., or entirely within the Woodland I period. 7NC-E-45 represents a hunting and processing station associated with nearby White Clay Creek and its place in local prehistory should be similar to that of 7NC-E-43. Because of the severe soil erosion present, the almost total lack of artifacts in undisturbed contexts, and the complete lack of intact subsurface features, this site is not considered to be eligible for the National Register of Historic Places and no further work is recommended.

CURRENT RESEARCH 7NC-D-75

Introduction and Research Methods

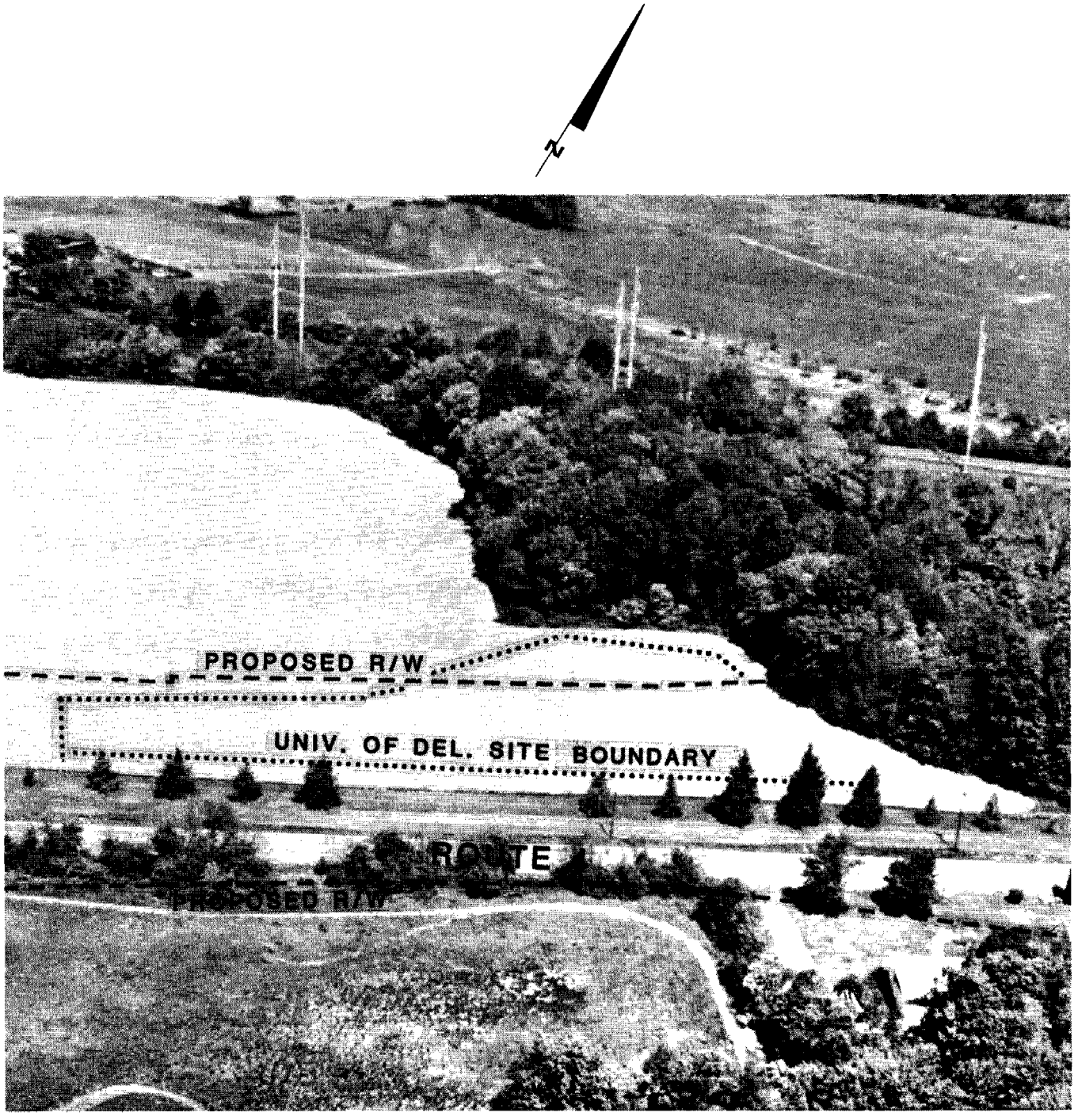
7NC-D-75 is located in a field under cultivation north-northeast of the intersection of New Churchmans Road and the existing Route 4 (Plate 6 & Figure 5). From the Delaware Park entrance road on the southwest, it slopes down to the northwest in an undulating fashion to a steep bank leading down approximately 20 feet to the White Clay Creek floodplain. Approximately half of the proposed 55 foot width of the Route 4 right-of-way lies in this field. The site measures approximately 200 meters northeast/southwest. At the time of the survey, the field was in soybeans with a surface visibility of less than 10%.

The primary purpose of the investigation was the determination of eligibility of the site for inclusion on the National Register of Historic Places. Determination of eligibility included definition of the site limits, determination of the contextual integrity of the site, and contributions the site could make to regional research. The planned research strategy included a controlled surface survey, a posthole grid, and 1 x 1 meter excavations. However, because of the low surface visibility and the fact that the tenant farmer was not planning to remove his crop until November, a controlled surface survey could not be conducted.

Results

In order to determine artifact types present, their density, distribution, and the presence or absence of undisturbed subsurface cultural features, six 1 x 1 meter test units were excavated (Fig. 5). Test units 1 and 2 were placed on the berm overlooking the sharp dropoff to the White Clay Creek floodplain, units 3 and 4 on the heel of a small terrace, about 100 meters southwest of the floodplain, and 5 and 6 on another terrace about 175 meters back. Each pair of units was placed so as to test specific landforms. Appendix V lists the profiles and Appendix VI provides artifact inventories.

PLATE 6

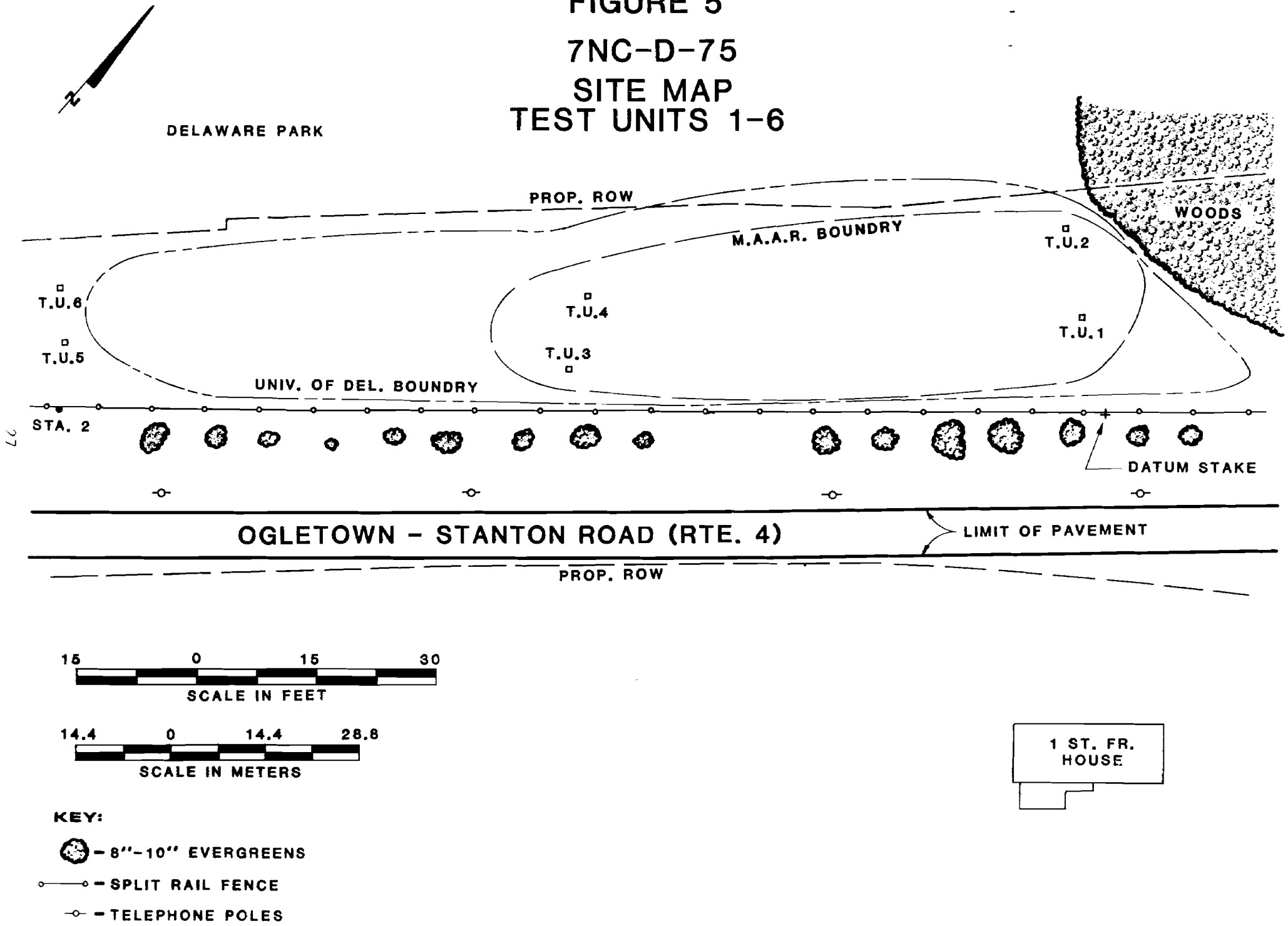


SITE LOCATION
7NC-D-75

FIGURE 5

7NC-D-75

SITE MAP
TEST UNITS 1-6



Units 1 and 2 were in an area of severe erosion, with gullies in the soil and large cobbles washing out on the surface. Unit 1 was excavated to a depth of 150 cm below surface. The plow zone yielded one sherd of Minguannan ceramics, several jasper, quartz, and chert flakes, and 19th and 20th century historic material. The plow zone extended to a depth of 20 cm below surface, with the subsoil being an extremely compact clay and clayey loam with many pebbles. From 0-10 cm below plow soil, 1 jasper flake scraper and 1 jasper flake were found. Unit 2 contained a plow zone of the same depth and produced 24 jasper, chert, and quartz flakes and a heavily reworked quartz biface with a basal configuration resembling a Susquehanna Broadspear point (Plate 7). Units 3 and 4 yielded several quartz, quartzite, jasper, and chert flakes. The plow zone of Unit 3 contained a non-diagnostic fragment of a red jasper biface. Two quartzite flakes were found in the first 10 cm below the plow zone. Due to the evident erosion and the extreme age of the B horizon in units 1-4, the subsoils of units 3-6 were not excavated beyond 3 or 4 centimeters below the plow zone. Units 5 and 6 produced a combined total of 5 quartz flakes, 1 quartzite Rossville-like projectile point (Plate 7), 11 red and whiteware sherds, and 1 glass fragment. These units contained a total of 127 historic and prehistoric artifacts, with the number decreasing away from the White Clay Creek floodplain.

Summary and Conclusions

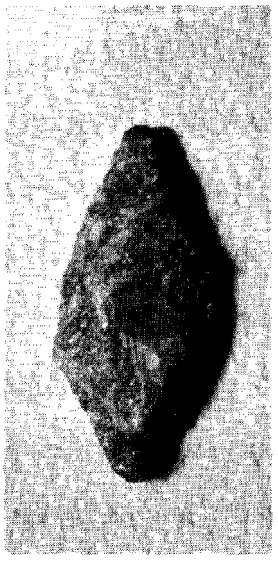
7NC-D-75 is the most severely eroded of the three sites discussed. There are no intact subsurface features; indeed, the plow zone overlies Pleistocene soils in all units and the surface is littered with eroded cobbles and pebbles. Only 5 of the 127 artifacts were recovered from the subsoil and these could be explained by normal rodent or root activity. All of the historic

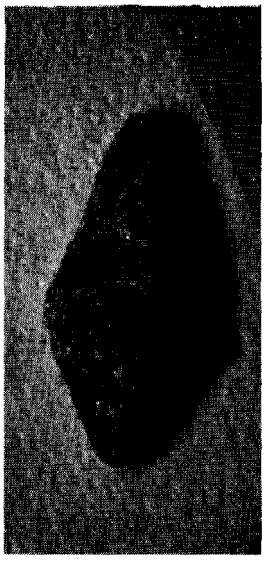
PLATE 7

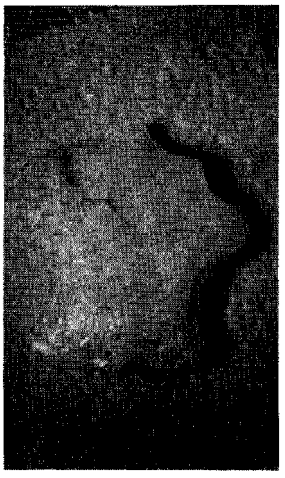
SITE 7NC-D-75

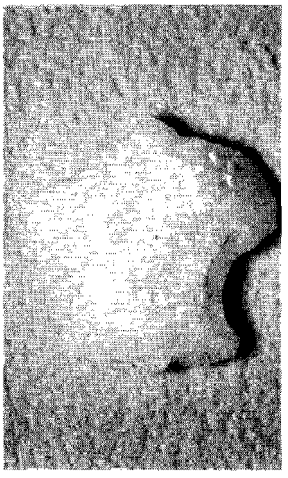
QUARTZITE ROSSVILLE LIKE

PROJECTILE POINT





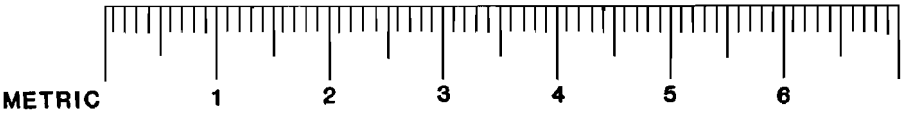




QUARTZ SIDE NOTCHED

SUSQUEHANNA BROADSPEAR

LIKE PROJECTILE POINT



artifacts postdate 1820 and the low density of artifacts in the units and the lack of any indication of subsurface features obviated the need for further investigation of historic cultural material. The diagnostic prehistoric artifacts include the sherd of Minguannan ceramics from the Woodland II Period, the Susquehanna Broadspear-like reworked quartz point, and the Rossville quartzite point from the Woodland I Period. The site's probable use was similar to 7NC-E-43 and 7NC-E-45: as a hunting and a food processing station associated with the game attractive area of the White Clay Creek floodplain during the Woodland I and II periods.

Because of the severe soil erosion present, the almost total lack of artifacts in undisturbed contexts, and the complete lack of intact subsurface features, this site is not considered to be eligible for the National Register of Historic Places and no further work is recommended. The research carried out to determine the eligibility of the site and previous work produced useful information but further data gathered from the site is most likely to be redundant.