4.0 RESULTS

Twenty-five archaeological sites were located within the ROW for the proposed SR 1 corridor and were identified for Phase II archaeological evaluation (Section 1.3). Prior to initiating fieldwork, Parsons, DelDOT, and the Delaware SHPO agreed that several sites in close proximity would be combined to create site complexes. Sites 7NC-H-95F, 7NC-H-95G, and 7NC-H-95H were combined into one complex, as were 7NC-H-95J, 7NC-H-95K, and 7NC-H-95L. Sites 7NC-J-199 and 7NC-J-200 were investigated as a single entity. Sites 7NC-J-97, 7NC-J-98, and 7NC-J-99 comprise the Frederick Lodge Site Complex and Sites 7NC-J-227 and 7NC-J-228 form the Sandom Branch Site Complex.

Twelve sites or site complexes were evaluated for eligibility to the NRHP and recommended as not eligible. These sites or site complexes include Sites 7NC-H-93B, 7NC-H-95A, 7NC-H-95B, 7NC-H-95D, 7NC-H-95FGH, 7NC-H-95JKL, 7NC-H-95M, 7NC-J-192B, 7NC-J-195A, 7NC-J-199/200 and the Buckson Site (7NC-J-207) (Appendix D). Information on the Reynolds Tenancy Site (7NC-J-224) was collected during Phase II fieldwork; however, the site core was located beyond the project boundaries on private land. The Reynolds Tenancy site remains unevaluated.

Phase II archaeological investigations of sites considered not eligible for NRHP inclusion consisted of the excavation of 741 STPs, 168 1 m x 1 m test units, 68 10 m x 10 m SCUs, and mechanical stripping of eight trenches totaling 175 linear meters. Collectively, these evaluations resulted in the recovery of 29,287 artifacts: 1,505 Native American and 27,782 historical (Table 4-1).

Table 4-1. Shovel Test, Test Unit, Surface Collection Unit, and Artifact Counts from Phase II Sites in the SR1 Corridor.

Site	Type	STPs	Test Units	SCUs	Native American Artifacts	Historical Artifacts
7NC-H-93B	Native American	20	3	--	46	--
7NC-H-95A	Native American	18	0	--	0	--
7NC-H-95B	Native American	58	19	--	240	--
7NC-H-95D	Native American	20	3	--	18	--
7NC-H-95FGH	Native American /Historical	229	19	--	449	3
7NC-H-95JKL	Native American	107	34	--	349	--
7NC-H-95M	Native American	32	19	--	35	--
7NC-J-192B	Native American	33	--	--	0	--
7NC-J-195A	Historical / Native American	25	5	--	64	1,326
7NC-J-199/200	Historical	29	--	--	1	352
7NC-J-207	Historical/ Native American	170	56	--	302	25,487
7NC-J-224	Historical	--	11	68	--	614
Total		**741**	**168**	**68**	**1,505**	**27,782**
TOTAL ARTIFACTS				**29,287**		

4.1 HERRING RUN SITES

The Herring Run feeder stream and associated wetlands occur in the northern end of the project area. This area represents an interstream divide between upper reaches of the Appoquinimink River drainage and the Blackbird Creek drainage. Soils of the Fallsington Series dominate the Herring Run vicinity. Fallsington soils, both the loam (Fs) and sandy loam (Fa), tend to erode and accumulate, "in small local dips and depressions" (USDA-SCS 1970:22). Accordingly, much of the Herring Run portion of the project area is characterized by undulating, hummocky topography.

Vegetation across throughout the Herring Run area was relatively consistent. The area supported moderately dense, mature and immature, deciduous and coniferous growth. Representative deciduous species included white oak, pin oak, beech, and poplar. Conifers included Virginia pine, yellow pine, and juniper. Edible fruit bearing tree species, including cherry, black walnut, hickory, and pawpaw appeared in the Herring Run drainage. Undergrowth varied from moderately dense to dense from site to site. Undergrowth included species such as fern, poison ivy, and green briar. Dense layers of leaf occurred across the project area limiting surface visibility throughout the Herring Run section of the corridor. However, fragmented quartz, quartz outwash, and several cobble bars appeared in the stream channel.

The SR1 corridor trends north/south bisecting this interstream divide. The Herring Run sites, located at the northern end of the proposed SR 1 corridor (Figure 1-1) include sites 7NC-H-93B, 7NC-H-9A, 7NC-H-95B, 7NC-H-95D, 7NC-H-95FGH, 7NC-H-95JKL and 7NC-H-95M.

4.1.1 7NC-H-93B

Site Description. In 1996, UDCAR identified site 7NC-H-93B which measured 15 m x 6 m (Bedell and Busby 1997:28). The site, located along the eastern banks of Herring Run in a level area, occurred within a jurisdictional wetland (Bedell and Busby 1997) (Figure 1-1). The recovery of a chert flake and numerous thermally altered stone (TAS) fragments, possibly indicating a hearth feature, defined the site (Bedell and Busby 1997). UDCAR recommended Phase II testing to determine the NRHP eligibility of the site.

Test Results. Parsons excavated 20 STPs established on a 5 m interval grid set at 330 degrees and roughly paralleling the ROW. A 5 m interval grid was used because of the small area of the site. Three 1 m x 1 m test units were also excavated at 7NC-H-93B (Figure 4-1). No artifacts were recovered and no features were identified from any of the STPs. However, all three test units yielded Native American materials; 46 artifacts were recovered. The site contained no discernable features. Test unit N99 E228 yielded 38 artifacts including flakes and chips; all are manufactured from quartz. Test unit N90 E228 yielded a total of seven artifacts, including quartz and quartzite chips and flakes. Test unit N95 E223 resulted in the recovery of a single quartz flake. Overall, the site contained 46 flakes and chips from the Phase II investigation and the single flake and 10 possible thermally altered stones from the Phase I investigations.

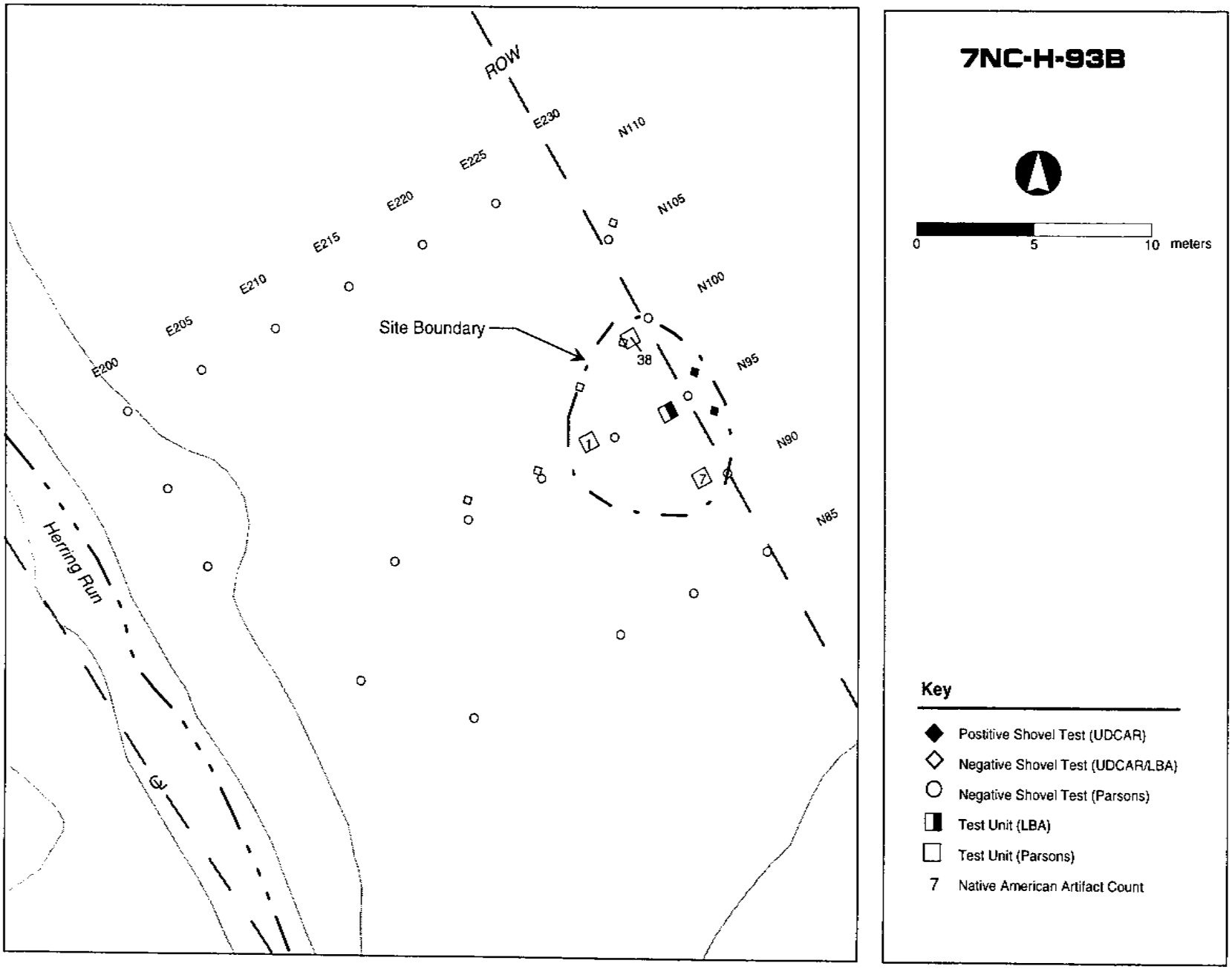

Figure 4-1. Site 7NC-H-93B STPs, Excavation Units and Artifact Distribution

Site stratigraphy generally consisted of three distinct strata. Test unit N90/E228 provides a representative profile (Figure 4-2). The first stratum consisted of a brown (10 YR 4/3) silty loam or very dark grayish brown (10YR3/2) silty sand containing a dense root mat and leaf debris with numerous rocks and pebbles. This stratum represented an intact topsoil/humus layer that extended to a depth of 9 cm below surface. No plowzone was identified. The second stratum consisted of a yellowish brown (10 YR 5/4-5/6) silty sand; increased gravels were noted at the base of this stratum from 12 to 15 cm below ground surface. The second stratum was underlain by a light yellowish brown (10 YR 6/4) silty sand. Gleyed soils (with iron oxide) were noted in test units N99 E228 and N95 E 223 at 11 cm and 32 cm below surface respectively.

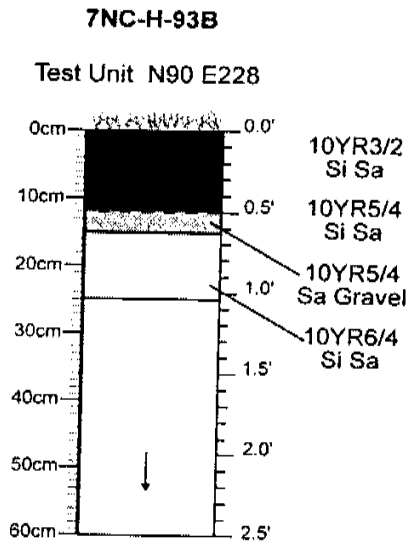

Figure 4-2. Representative Stratigraphic Profile from Site 7NC-H-93B.

Artifacts were recovered from all three strata with the greatest frequency recorded in the second stratum with 27 artifacts from two units (Table 4-2, Figure 4-3). The archaeological materials were recovered from undisturbed contexts to a depth of 21 cm.

Table 4-2. Artifact Distribution by Stratum for Site 7NC-H-93B

Stratum	Native American Artifact	Historical Artifact	Total
A	18	0	18
B	27	0	27
C	1	0	1
Total	**46**	**0**	**46**

Artifact Description. The Native American component of 7NC-H-93B yielded a total of 46 artifacts during the Phase II investigations (Table 4-3). The artifact assemblage consisted exclusively of waste materials from stone tool production, either chips or flakes, all either of quartz or quartzite (Table 4-4). No diagnostic artifacts were recovered. None of the flakes exhibit evidence of retouch or use. Fourteen of the 46 flakes and chips exhibit some cortical material indicating early or mid-stage reduction (Table 4-4). Thirty-two flakes and chips were identified as non-cortical indicating late stage reduction. The majority of the debitage represent smaller size grades (less than 3 cm in maximum dimension) (Table 4-4) and is suggestive of late stage reduction.

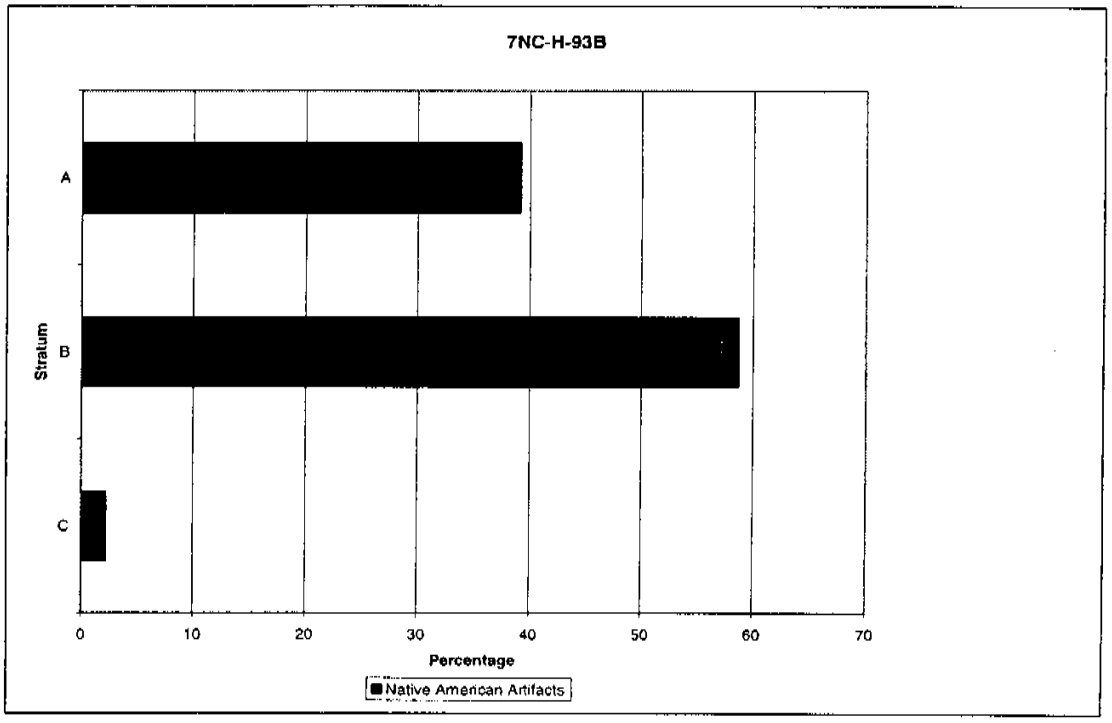

Figure 4-3. Artifact Frequency Distribution with Depth at 7NC-H-93B

Table 4-3. Native American Artifacts by Type and Material Recovered from Site 7NC-H-93B

Artifact	Quartz	Quartzite	Count
Flake	38	2	40
Chip	6	--	6
Total	**44**	**2**	**46**

Table 4-4. Flaking Debris Size and Lithic Material Type from Site 7NC-H-93B

Material	<1 cm	1-2 cm	2-3 cm	3-4 cm	4-5 cm	>5 cm	Total
Quartz	1 (1)	21(4)	11 (5)	6 (2)	2	3 (1)	44 (13)
Quartzite	--	1	--	1 (1)	--	--	2 (1)
Total	**1 (1)**	**22 (4)**	**11 (5)**	**7 (3)**	**2**	**3 (1)**	**46 (14)**

(n) indicates cortex frequency of total

Spatial Distribution. Comparisons of cortical and non-cortical debitage distributions revealed no discrete reduction areas.

Site Summary. Site 7NC-H-93B represents a small quartz pebble or cobble reduction area. The presence of thermally altered stone, documented during the Phase I study, and minimal lithic reduction activity suggests that this location may represent a short term or single use transient camp site.

4.1.2 7NC-H-95A

Site Description. Originally identified by UDCAR and recorded by LBA (Bedell and Busby 1997), this small lithic scatter occurs in a generally flat, poorly drained area and adjacent to a small pond (Figure 1-1). The site is approximately 10 m x 12 m in size. Vegetation consists of a moderately dense mixed deciduous and coniferous woods with a moderate understory. The site was recommended for further work due to the potential for finding Native American materials in an unplowed context.

Test Results. An initial walkover survey conducted prior to the excavation of close interval shovel tests indicated a mapping discrepancy from the previous site maps and the actual location on the ground. As Parsons re-surveyed the area, it became clear that the entire site area, as defined during previous work, was located outside the ROW to the east. However, it was decided in consultation with DelDOT and the Delaware SHPO that close interval (5 meter) shovel testing would be conducted as close to the identified site as possible while staying inside the ROW.

Eighteen STPs were excavated on 7NC-H-95A interspersed at 5 m intervals along two parallel transects aligned at about 350 degrees (Figure 4-4). The typical stratigraphic sequence, derived from STP N160/E155, began with a shallow, eight to 10 cm deep, dark grayish brown, (10YR4/2) sandy loam topsoil (Figure 4-5). No plowzone was identified. Gleyed soils (clayey loam), ranging in color from strong brown (7.5YR5/8) to dark yellowish brown (10YR4/6), mottled with gray (10YR6/1) occurred beneath the topsoil.

Artifact Description. No artifacts were recovered during the Phase II investigations.

Spatial Distribution. Site deposits were not located in the ROW.

Site Summary. The absence of cultural materials during Phase II investigations indicates that the previously identified site most likely occurred beyond the ROW.

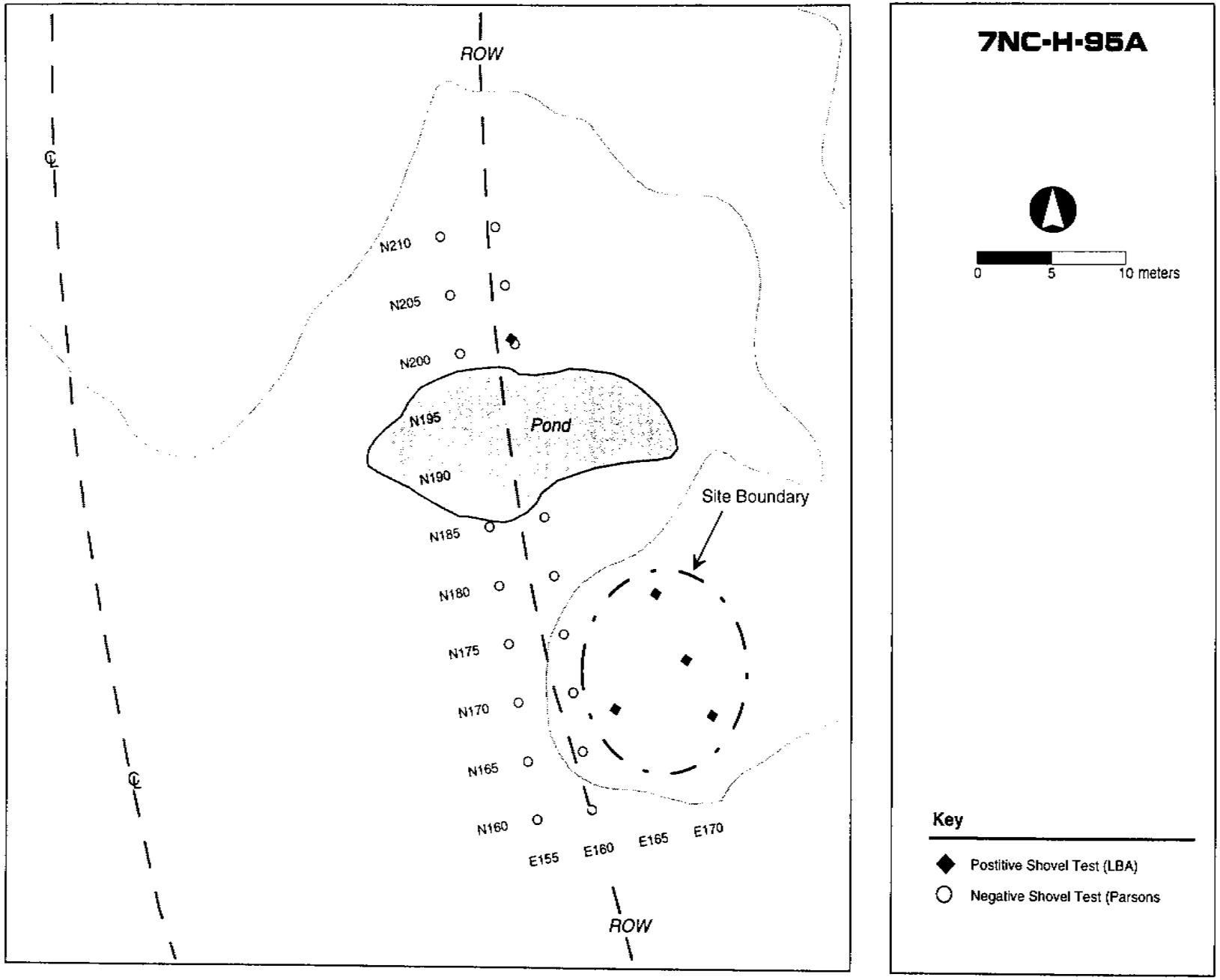

Figure 4-4. Site 7NC-H-95A STPs.

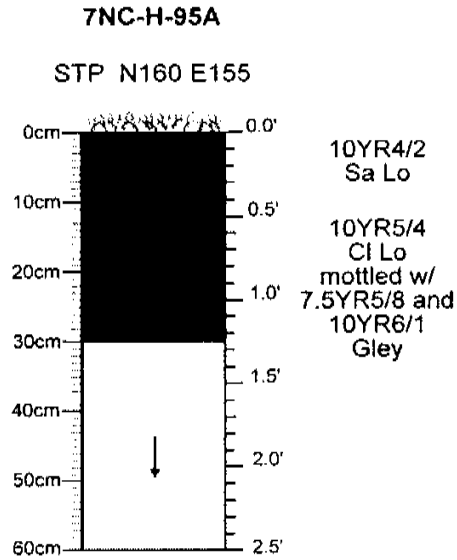

Figure 4-5. Representative Stratigraphic Profile from Site 7NC-H-95A.

4.1.3 7NC-H-95B

Site Description. Site 7NC-H-95B is situated on a small rise to the east of an active wetland, 120 meters north of the headwaters of Herring Run (Figure 1-1). The site is approximately 15 m northeast to southwest by 60 m northwest to southeast. Vegetation at the site consists mostly of mixed oak, maple, and conifers. A dense layer of leaf litter was noted throughout the Herring Run vicinity. The site contained signs of disturbance including logging activities as evidenced by age of the growth at the time of the evaluation and by a possible logging roadbed. Stump removal and dumping were also noted across the site. LBA recovered the only diagnostic artifact from the site, a small jasper, contracting-stemmed projectile point (Bedell and Jacoby 1998). The point is not representative of an identified type, but is generally characteristic of the early Woodland I Period (Custer 1989).

Test Results. The site was tested using close interval (5 m) shovel testing and excavation of 1 m x 1 m units. Collectively, 58 STPs and 19 test units were excavated (Figure 4-6). Of the 58 STPs, six yielded Native American cultural material.

Soils observed during the Phase II investigation of 7NC-H-95B varied. STP N314/E141 provides a representative profile (Figure 4-7). Soils consisted of a topsoil/humus stratum ranging between dark grayish brown (10YR4/2) silty loam to brown (10YR4/3-5/3) sandy loam and varying in depth from ground surface to approximately 5 cm to 10 cm below surface. No plowzone was observed. This stratum was followed by a light yellowish brown (10YR6/4) to brown (10YR5/3) silty loam that extended between 30 cm and 60 cm below ground surface. Yellowish brown (10YR5/4) sandy loam was occasionally noted as a second stratum. Yellowish brown (10YR5/6-5/8) clay loam was the most frequently encountered subsoil. The percentage of gravel inclusions generally increased with depth.

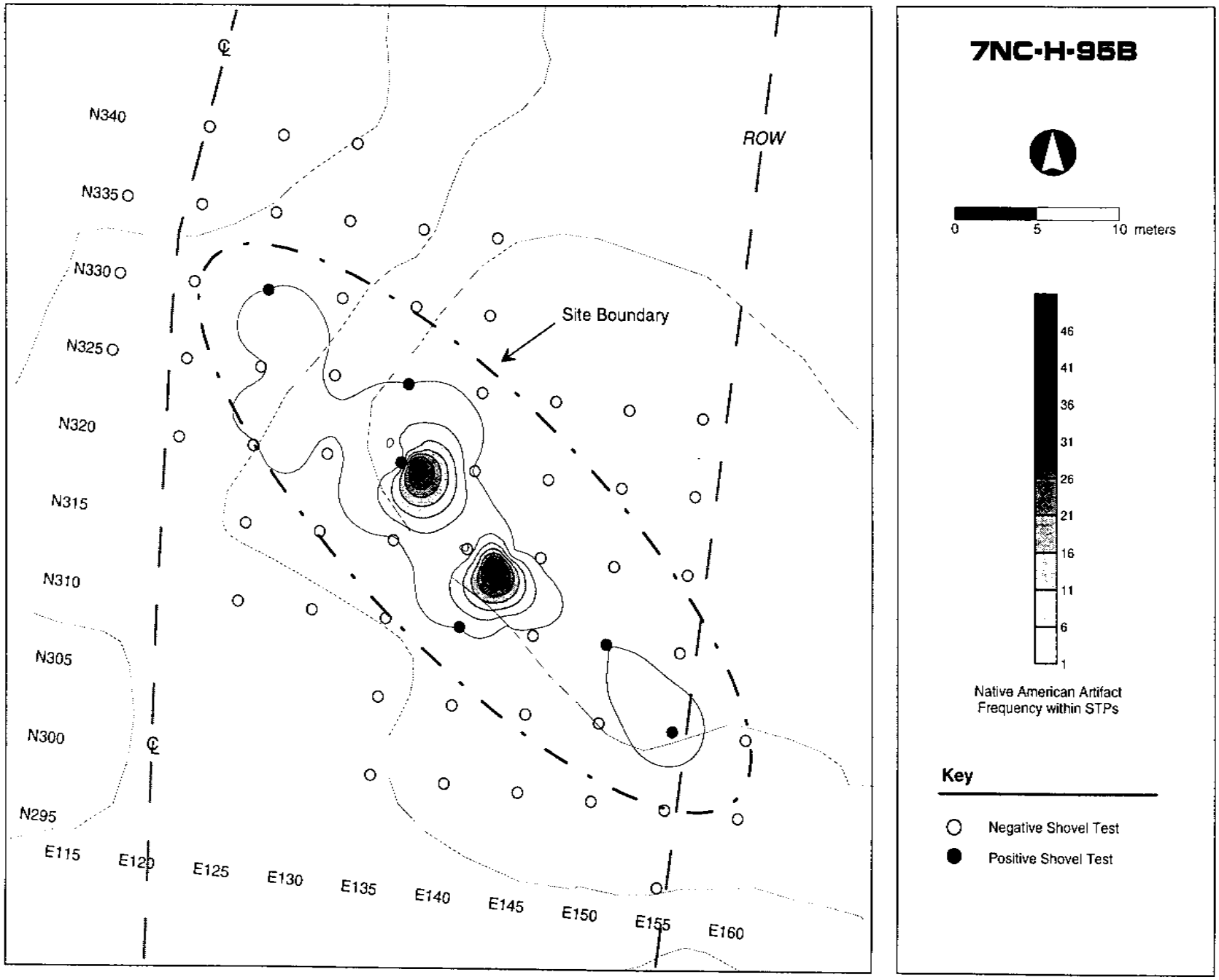

Figure 4-6. Site 7NC-H-95B STPs and Artifact Distribution.

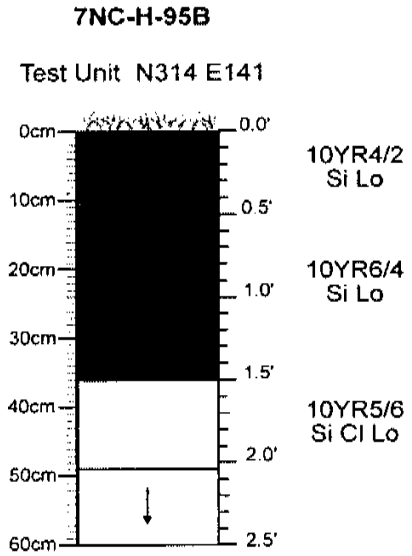

Figure 4-7. Representative Stratigraphic Profile for Site 7NC-H-95B.

Stratigraphic variation was observed across the site. Test units along the N321 line exhibited overburden (OB) as their initial stratigraphic unit, followed by the sequence observed elsewhere on site. This overburden yielded artifacts, but its origin could not be determined.

All three natural and intact stratigraphic units contained Native American artifacts (Table 4-5, Figure 4-8). Of the 240 artifacts recovered, eight occurred in the overburden, 22 in stratum A, 139 in stratum B, and 71 in stratum C. The archaeological materials were recovered from undisturbed contexts to a depth of 65 cm.

Table 4-5. Artifact Distribution by Stratum for Site 7NC-H-95B

Stratum	Native American Artifact	Historical Artifact	Other*	Total
OB	8	0	0	8
A	22	0	0	22
B	137	0	2	139
C	71	0	0	71
Total	**238**	**0**	**2**	**240**

*includes charcoal

Artifact Description. Phase II excavations of 7NC-H-95B yielded 238 lithic artifacts and two pieces of charcoal (Table 4-6). The site assemblage recovered during the Phase II investigations includes one retouched flake, one utilized flake, 203 pieces of debitage, 33 pieces of thermally altered stone, and two pieces of charcoal. Lithic material types include andesite, chalcedony, chert, jasper, quartz, quartzite and sandstone.

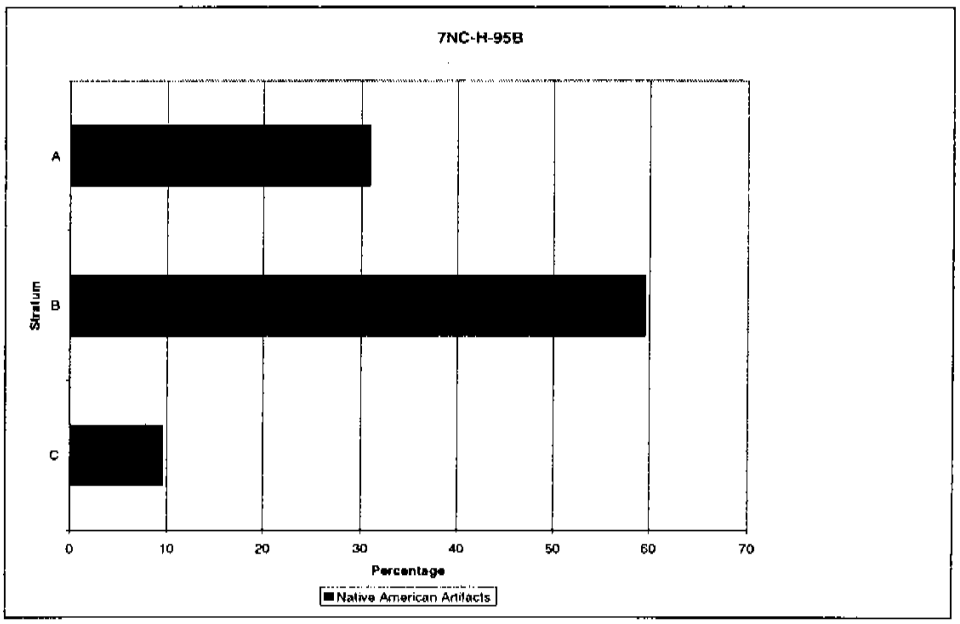

Figure 4-8. Artifact Frequency Distribution with Depth at 7NC-H-95B

Table 4-6. Native American Artifacts by Type and Material Recovered from Site 7NC-H-95B

Artifact	Andesite	Chalcedony	Chert	Jasper	Quartz	Quartzite	Sandstone	Count
Flake Tool	--	--	1	1	--	--	--	2
Flake	33	1	33	80	34	2	--	183
Chip/Potlid	--	--	1	16	3	--	--	20
TAS	--	--	--	9	10	9	5	33
Total	**33**	**1**	**35**	**106**	**47**	**11**	**5**	**238**

The retouched flake tool (#33-1) is a brown to tan jasper flake with unifacial retouching on the ventral side with unifacial microflake removal and rounding/grinding along the edge suggesting use. The tool edge measures 65 degrees. The utilized flake tool (#24-4) is a gray chert flake with unifacial microflake removal, polishing, and rounding/grinding on the dorsal side. The tool exhibits a 71 degrees edge angle. Both flake tools contain edge angles that suggest use for heavy scraping or cutting activities such as heavy scraping, sawing, cutting or working of hard materials. The removal of unifacial microflakes along the edges indicates scraping use wear; the polish and rounding/grinding may indicate use on soft materials such as vegetal matter (wood or grasses) or hides.

Approximately one quarter (23.8%) of the flakes are cortical, suggesting some primary reduction activities (Table 4-7). The two cortical flakes of quartzite may indicate incidental testing of local cobbles and does not suggest any form of lithic reduction. The higher counts of non-cortical flakes for andesite, chert and jasper may indicate secondary reduction or tool finishing activities. Most of the flakes are smaller than 2 cm in size also suggesting secondary or tool finishing activities (Table 4-7).

Table 4-7. Flaking Debris Type and Lithic Material Type from Site 7NC-H-95B

Material	<1 cm	1-2 cm	2-3 cm	3-4 cm	4-5 cm	>5 cm	Total
Andesite	--	10 (2)	11 (2)	7 (2)	3 (2)	2 (2)	33 (10)
Chalcedony	--	1	--	--	--	--	1
Chert	1	27 (3)	6 (1)	--	--	--	34 (4)
Jasper	6 (2)	72 (22)	16 (3)	2 (2)	--	--	96 (29)
Quartz	--	22 (4)	6 (2)	6 (5)	1 (1)	2 (2)	37 (14)
Quartzite	--	1 (1)	--	--	--	1 (1)	2 (2)
Total	**7 (2)**	**133 (32)**	**39 (8)**	**15 (9)**	**4 (3)**	**5 (5)**	**203 (59)**

(n) indicates cortex frequency of total

The artifact assemblage contains a total of 33 pieces of thermally altered stone with a combined weight of 1138.5 grams (Table 4-8).

Table 4-8. Thermally Altered Stone Count and Weight from 7NC-H-95B

Material	Count	Weight (in grams)	Mean Weight	Individual Weight Range
Jasper	9	6.5	0.72	0.4-0.8
Quartz	10	73.2	7.32	0.1-9.8
Quartzite	9	843.6	93.73	1.65-389.45
Sandstone	5	215.2	43.04	26.9-66.25
Total	**33**	**1,138.5**		

Spatial Distribution. Spatial distributions were generated illustrating location and density of artifact by type, by lithic material, and by cortical content. These distributions provided no evidence of discrete activity areas or any discernable clustering within these categories (Figure 4-9).

Site Summary. Site 7NC-H-95B is a general lithic reduction scatter. The size, types and material of artifacts recovered indicate that site activities focused on the procurement and reduction of local gravels that are available from Herring Run. This interpretation is supported by the presence of cortical flakes (approximately 28% of the debitage) and the paucity of completed tools. Andesite comprised about 16 percent of the raw materials indicating use of non-local lithic sources. The flake tools suggest expedient tool manufacture, use and discard and indicate limited heavy scraping activities on soft materials. The artifact types encountered and their frequency indicate only occasional or short-term Native American activity at this location.

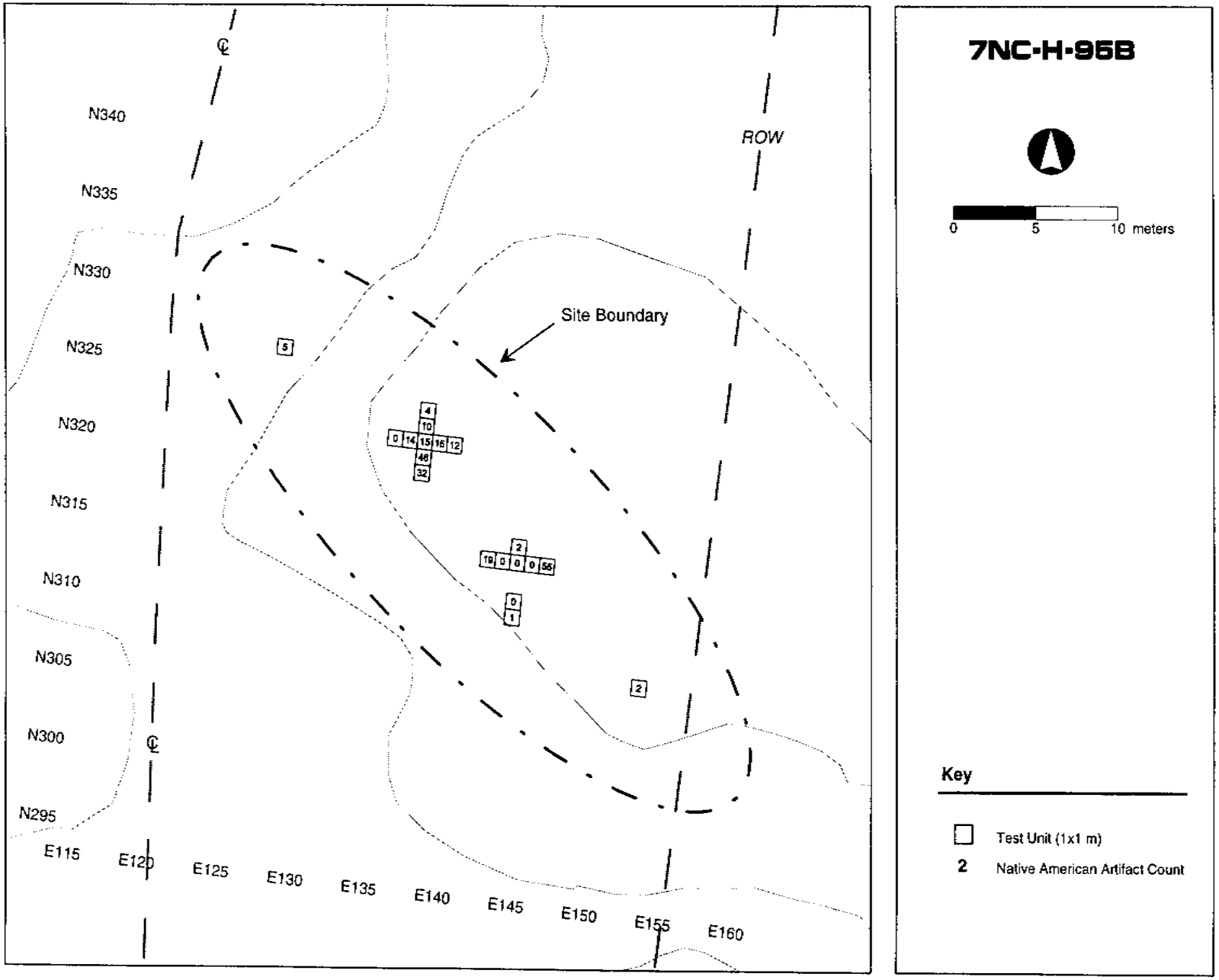

Figure 4-9. Site 7NC-H-95B Test Units and Artifact Counts

4.1.4 7NC-H-95D

Site Description. Sandwiched between northern and southern wetlands, the site occurs on a slight rise east of Herring Run (Figure 1-1). The site area measures approximately 10 m north/south by 12 m east/west. Disturbances, such as deflation and erosion, were noted throughout the site. In 1996, UDCAR identified 7NC-H-95D by the presence of a jasper biface, two flakes, a piece of quartz shatter, a possible hammerstone and a tested cobble recovered from a series of six positive STPs (Bedell and Busby 1997). LBA recommended Phase II testing to determine NRHP eligibility of the site.

Test Results. Site evaluation consisted of the excavation of 20 STPs placed at 5 m intervals (Figure 4-10). Two STPs contained debitage. Additionally, a total of three 1 m x 1 m units were excavated. One test unit, N405 E140, was placed directly over a shovel test that yielded four chert flakes. The test unit yielded an additional 12 flakes and one chert core. The remaining units were culturally sterile.

The typical stratigraphic sequence at the site, as observed in test unit N405/E140, began with a thin humic stratum ranging between brown (10YR 4/3) and very dark grayish brown (10YR3/2) silty sand, followed by an E horizon consisting of pale brown (10YR6/3) silty sand (Figure 4-11). No plowzone was observed. Subsoil normally consisted of yellowish brown (10YR 5/6) to light olive brown (2.5Y5/6) silty sand. In places, an interface or transitional stratum below the E horizon and third stratigraphic unit appeared, consisting of a light yellowish brown (10YR6/4) silty sand. The first stratum extended to approximately 9 cm below surface, the second from 9 to 20 cm below surface. The transitional stratum between the E horizon and subsoil occurred at 30 cm below surface. Gravel content in some excavations increased within the final stratum beginning at a depth of 40 cm below surface. The sand and gravels of the Columbia Formation were encountered at 50 to 52 cm below surface.

Artifacts were recovered from all three stratigraphic units (Table 4-9, Figure 4-12). The humic layer, Stratum A, yielded only one artifact, as did Stratum C. Stratum B, identified as an E horizon contained the greatest concentration with sixteen artifacts, indicating an intact subsurface deposit. The majority of the archaeological materials were recovered from undisturbed contexts to a depth of 20 cm.

Artifact Description. A total of 18 Native American artifacts were recovered from the Phase II investigations of 7NC-H-95D (Table 4-10). Lithic materials consist of a mottled grey and white chert, jasper and quartz. The core is multidirectional and made of mottled grey and white chert. The flakes include 13 cortical chert, one non-cortical chert, and two cortical jasper examples (Table 4-11). The majority of the flakes are less than 3 cm in size (Table 4-11).

Spatial Distribution. The number of artifacts recovered is insufficient to generate meaningful artifact distributions.

Site Summary. Site 7NC-H-95D represents a limited activity site associated with flint knapping. The primary activity was the reduction of a chert core. Two cortical flakes of jasper suggest either preliminary testing of a jasper cobble that was then removed or knapping of a curated item bought in and carried out. This site indicates a single short term activity associated with lithic material testing and initial reduction.

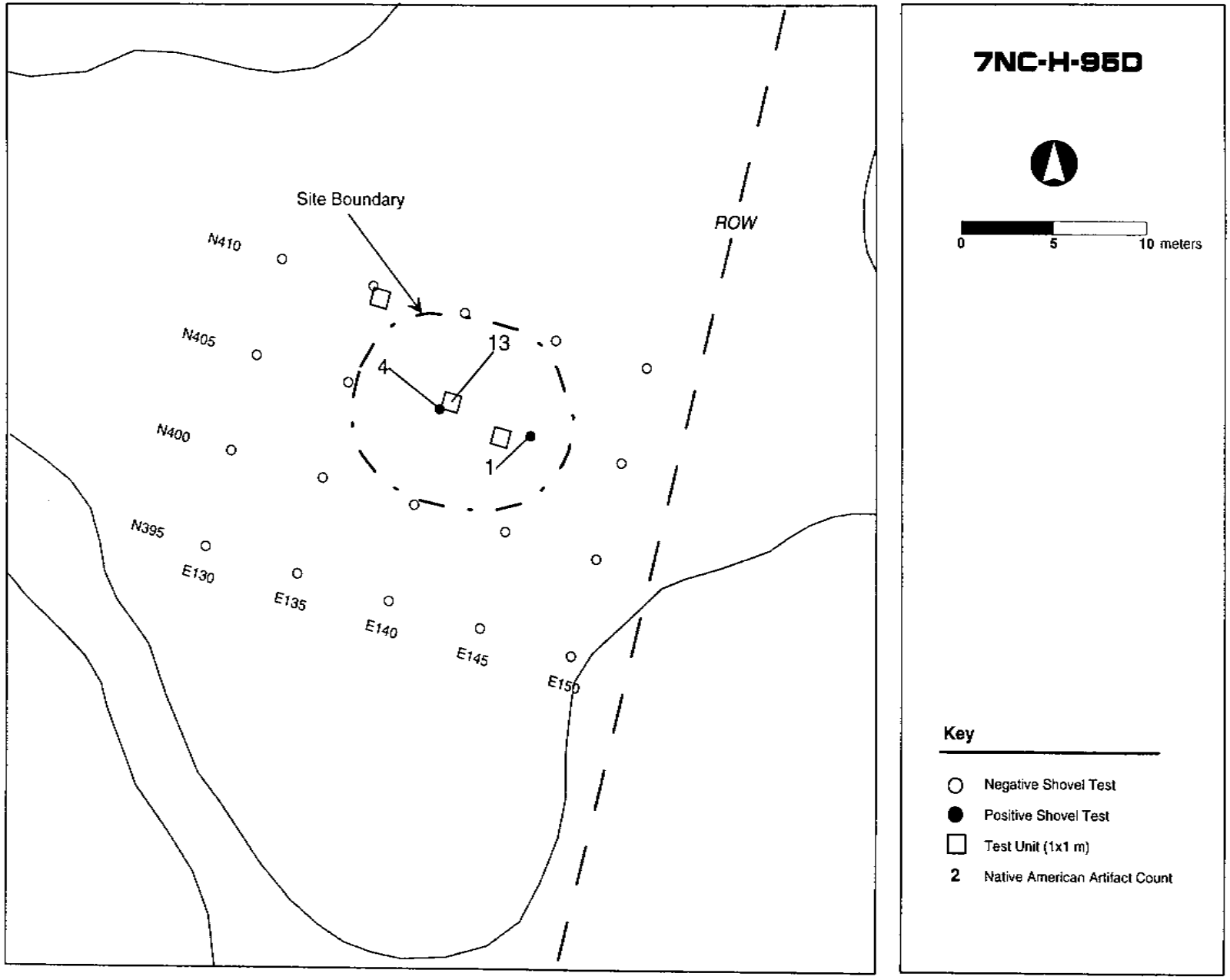

Figure 4-10. Site 7NC-H-95D STPs, Test Units and Artifact Counts.

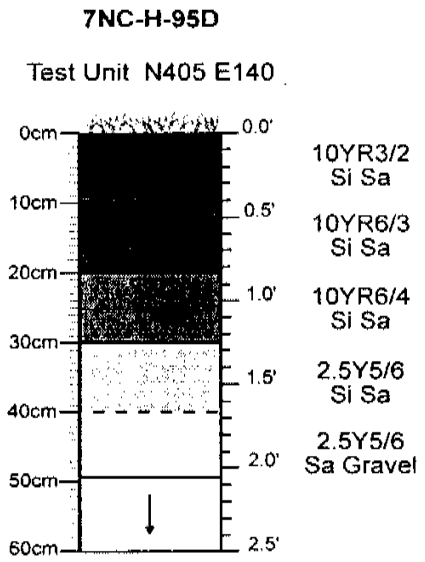

Figure 4-11. Representative Stratigraphic Profile from Site 7NC-H-95D.

Table 4-9. Artifact Distribution by Stratum for Site 7NC-H-95D

Stratum	Native American Artifact	Historical Artifact	Total
A	1	0	1
B	16	0	16
C	1	0	1
Total	**18**	**0**	**18**

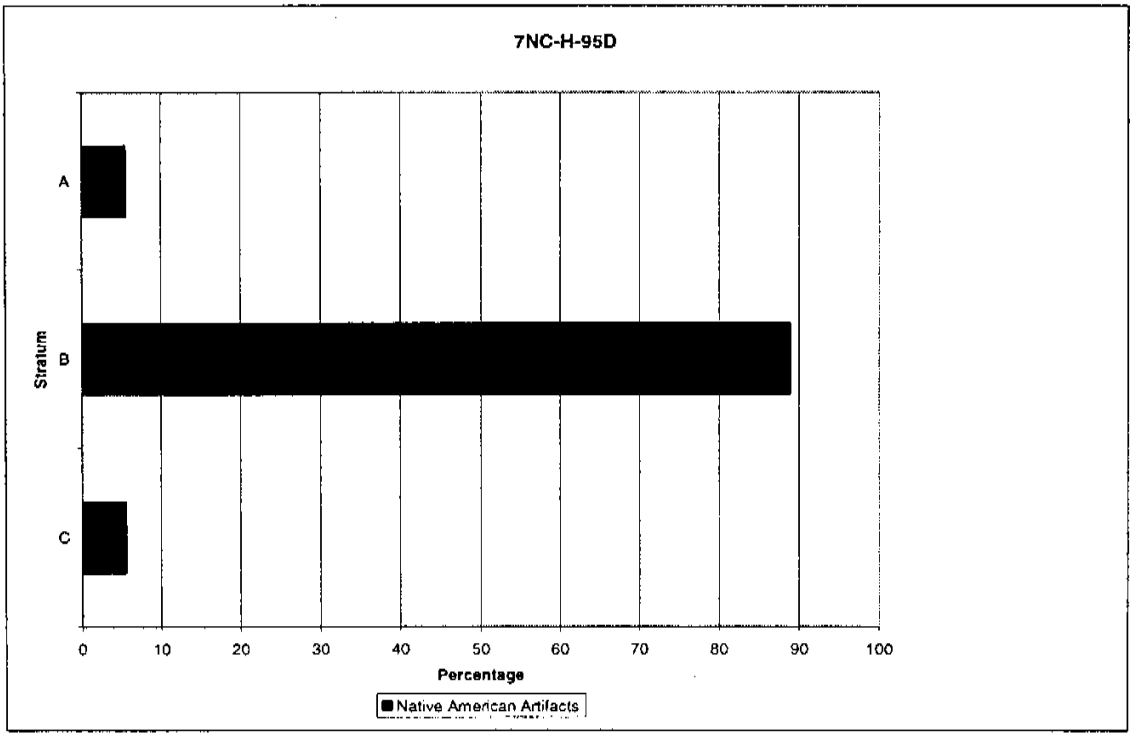

Figure 4-12. Artifact Frequency Distribution with Depth at 7NC-H-95D

Table 4-10. Native American Artifacts by Type and Material Recovered from Site 7NC-H-95D

Artifact	Chert	Jasper	Quartz	Count
Core	1	--	--	1
Flake	14	2	--	16
Chip	---	--	1	1
Total	**15**	**2**	**1**	**18**

Table 4-11. Flaking Debris Size and Lithic Material Type from Site 7NC-H-95D

Material	<1 cm	1-2 cm	2-3 cm	3-4 cm	4-5 cm	>5 cm	Total
Chert	--	4 (3)	7 (7)	1 (1)	2 (2)	--	14 (13)
Jasper	--	1 (1)	1 (1)	--	--	--	2 (2)
Quartz	--	1	--	--	--	--	1
Total	--	**6 (4)**	**8 (8)**	**1 (1)**	**2 (2)**	--	**17 (15)**

(n) indicates cortex frequency of total

4.1.5 7NC-H-95FGH

Site Description. Sites 7NC-H-95F, 7NC-H-95G, and 7NC-H-95H are situated on a slight elevation surrounded by wetlands east of Herring Run (Figure 1-1). In 1996, UDCAR identified these sites which consisted of areas of Native American activity (Bedell and Busby 1997; Bedell and Jacoby 1998). The sites were originally identified separately along the skirts of a bay/basin (Bedell and Busby 1997). In coordination with the Delaware SHPO, DelDOT and Parsons, several of the Herring Run sites were joined to form site complexes including 7NC-H-95FGH. The combined site complex is approximately 55 m x 37 m. Localized disturbances at the site included a large man-made pond, signs of logging activities, and erosion.

Test Results. A total of 229 STPs were excavated at a 5 m interval set at 15 degrees, paralleling the ROW, on site 7NC-H-95FGH (Figure 4-13). Thirteen STPs contained cultural material. Isolated artifacts were observed in several STPs; the densest concentration occurred in the northeastern portion of the site. Nineteen test units were excavated with eleven devoted to the northeastern corner of the site (Figure 4-13). Of the eleven test units in the northeast corner, ten formed an excavation block and one was peripheral (Figure 4-14); the remaining seven test units were placed adjacent to positive shovel tests across the site (Figure 4-14).

The soil profile in the northeastern portion of the site indicated a natural basin-shaped, in-filled stream channel lined with coarse sand and boulder-sized lithic material. The sand and materials were not deposited by size, indicating a very high velocity fluvial event where the channel was cut and filled in a very short period of time. The crystal quartz debitage and the patinated jasper uniface were recovered from this old stream channel.

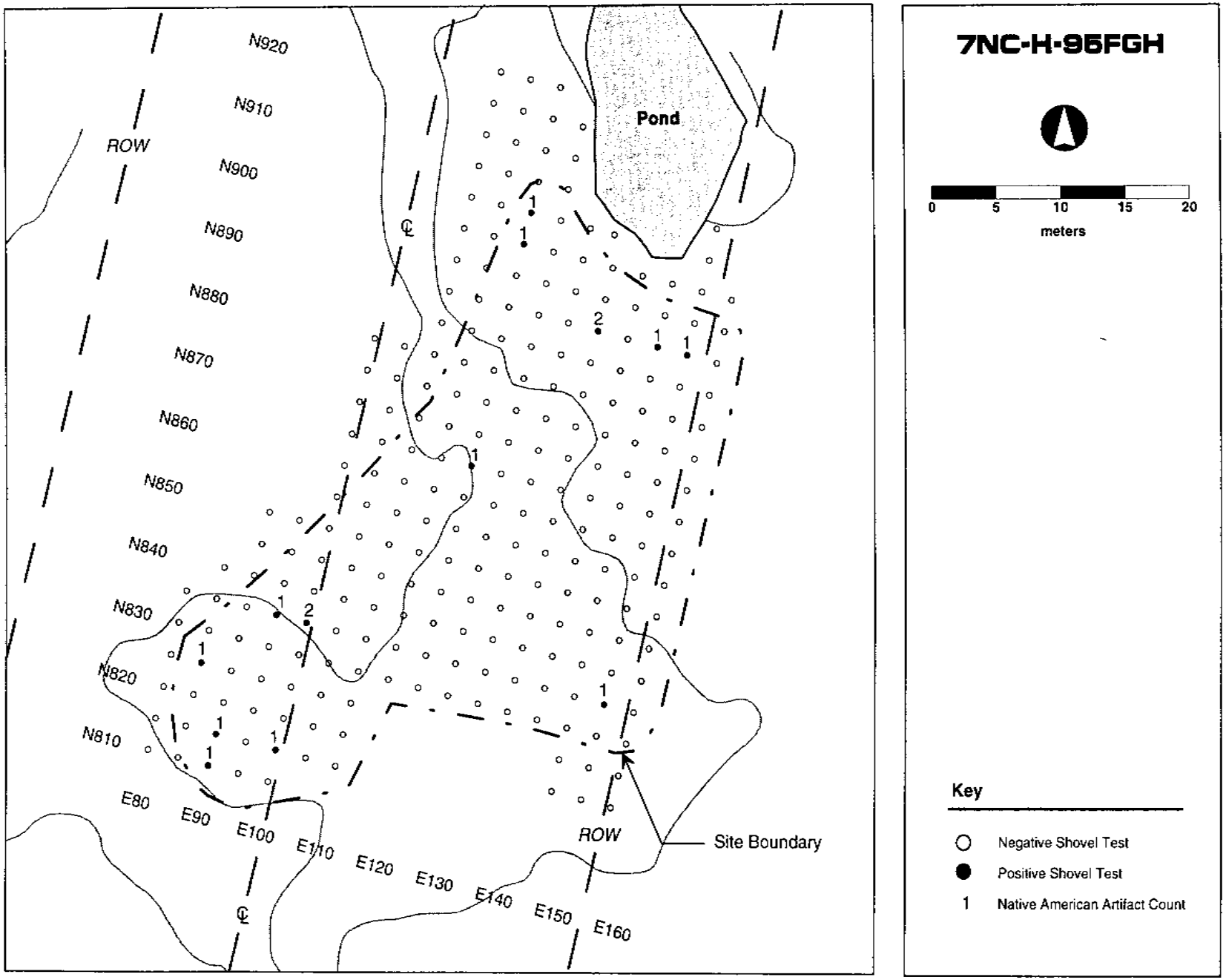

Figure 4-13. Site 7NC-H-95FGH STPs and Artifact Distribution

Figure 4-14. Excavation at Site 7NC-H-95FGH, looking southeast

Although variation was observed across site, test unit N825/E87 provides a representative stratigraphic profile. Topsoil consisted of a very dark grayish brown (10YR3/2) silty sand humus layer extending approximately 12 cm below surface (Figure 4-15). No plowzone was identified. The second stratum consisted brown (10YR5/3) silty sand extending to approximately 40 cm below the surface. The third stratum consisted of a light yellowish brown (10YR6/4) silty sand extending to approximately 60 cm below surface. Below this, extending to approximately 78 cm below surface, was a yellow (10YR7/6) silty sand subsoil. Gleyed soil was noted below this stratum consisting of a very pale yellowish brown (10YR7/2) silty sand mottled with light yellowish brown (10YR6/4).

The three historical artifacts were located in the top humus layer. The majority of Native American artifacts were recovered from Stratum B however, both Strata A and C contained cultural materials, (Figure 4-16, Table 4-12). The majority of the archaeological materials were recovered from disturbed contexts (in filled stream channel) in the northeastern portion of the site.

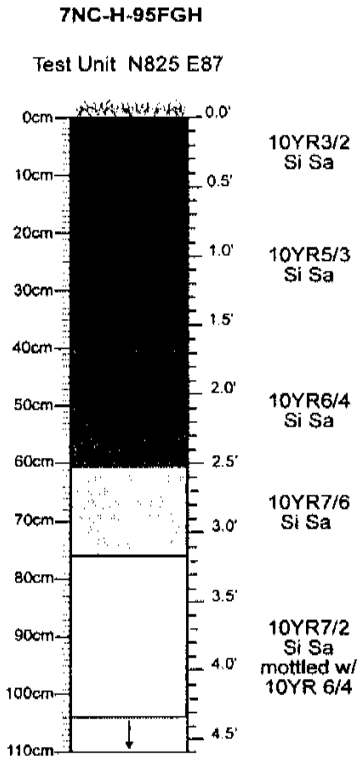

Figure 4-15. Representative Stratigraphic Profile from Site 7NC-H-95FGH.

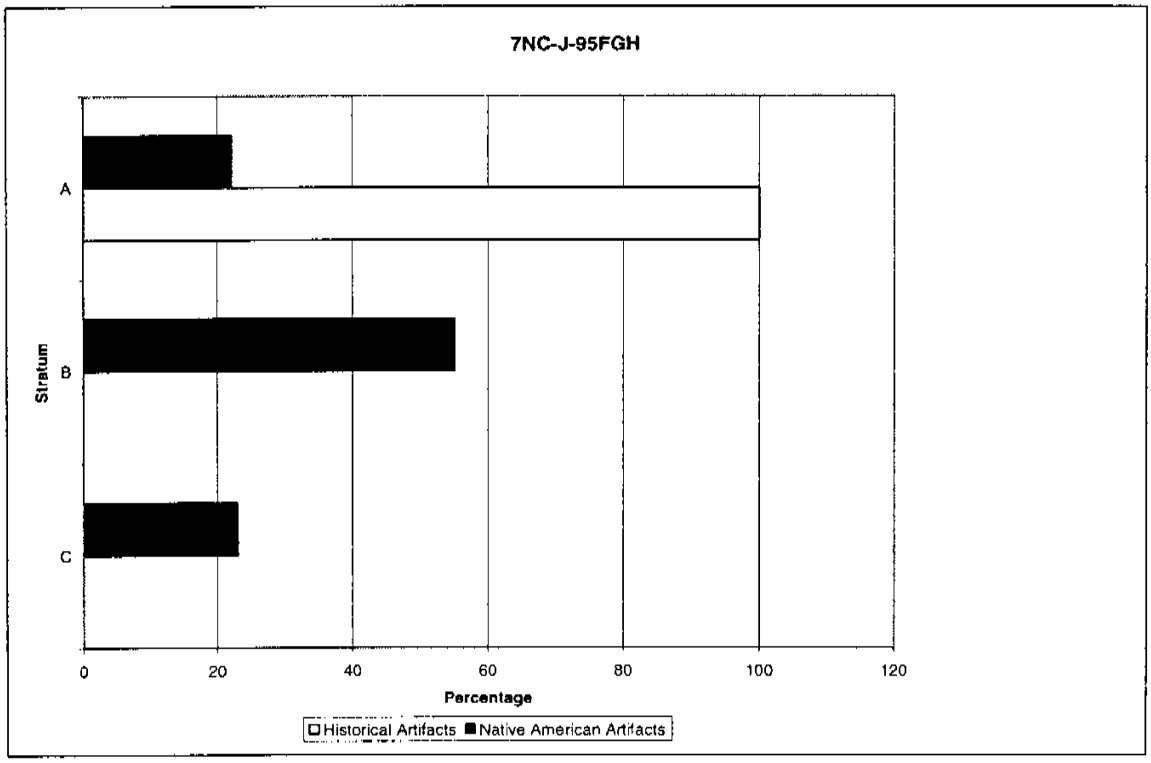

Figure 4-16. Artifact Frequency Distribution with Depth at 7NC-H-95FGH

Table 4-12. Artifact Distribution by Stratum for Site 7NC-H-95FGH

Stratum	Native American Artifact	Historical Artifact	Other*	Total
A	102	3	5	110
B	244	0	0	244
C	98	0	0	98
Total	**444**	**3**	**5**	**452**

*includes faunal remains

Artifact Description. Phase II excavation at 7NC-H-95FGH yielded 444 Native American artifacts, five faunal remains, and three historical artifacts (Table 4-13). Native American artifacts include a biface, flake tools, hammerstones, flakes, chips/potlids, and thermally altered stone fragments. Lithic materials include chert, jasper, quartz, quartzite, sandstone and siltstone.

Table 4-13. Native American Artifacts by Type and Material Recovered from Site 7NC-H-95FGH

Artifact	Chert	Jasper	Quartz	Quartzite	Sandstone	Siltstone	Count
Biface	--	1	--	--	--	--	1
Flake Tool	--	1	3	--	--	--	4
Flake	1	9	308	9	--	--	327
Chip/Potlid	--	3	78	--	--	--	81
Abrader/Hammerstone	--	--	--	1	--	--	1
Hammerstone	--	--	--	2	--	--	2
TAS	--	--	14	10	1	1	26
Total	**1**	**14**	**403**	**22**	**1**	**1**	**444**

Native American Artifacts. A yellow jasper early stage biface (#38-1) was recovered from site 7NC-H-95FGH (Figure 4-17). The artifact measures 43.0 mm long by 34.2 mm wide by 13.0 mm thick. Cortex covers 85 percent of the dorsal side. The ventral side exhibits heavy step fractures; a flake platform appears on the base. One edge exhibits an edge angle of 64 degrees with bifacial retouch and bifacial microflake removal; the opposite edge contains a 46 degree edge angle with bifacial retouch and unifacial microflake removal along the edge. The microflakes removed along both edges are irregular and may be indicative of platform preparation rather than use wear.

Four utilized flake tools were recovered. A smoky quartz utilized flake (#41-1) measuring 82.1 mm long by 42.8 mm wide by 17.5 mm thick, exhibits a triangular cross-section; the dorsal side retains cortical material. The single EU displays a 64 degrees edge angle with bifacial microflaking on a rounded tip. The edge angle and use wear suggest cutting activities, perhaps on soft materials (rounding). A clear quartz utilized flake (#52-7) measures 45.5 mm long by 25.7 mm wide by 12.1 mm thick. The artifact is 35 percent cortical and triangular in cross-section. The single EU has an edge angle measuring 70 degrees and contains unifacial microflaking on three tip edges. A counter-clockwise use wear pattern indicates use as a drill tip; the unifacial microflake removal indicates use on hard materials. A second clear quartz utilized flake (#52-8) measures 52.7 mm long by 24.8 mm wide by 8.6 mm thick and contains two EUs. One edge angle is 50 degrees and the other is 53 degrees. Both edges exhibit bifacial

microflake removal; the 50 degree edge is also rounded. This tool was most likely used for medium cutting activities with one edge used on soft materials. The fourth utilized flake is jasper (#64-1) and measures 38.1 mm long by 18.6 mm wide by 7.7 mm thick. Three EUs are present and measure 46 degrees, 45 degrees, and 43 degrees. Each edge contains unifacial microflakes on the dorsal side. Rounding occurs on the 46 degree and 45 degree edges and slight rounding on the 43 degree edge. This tool was used for scraping of soft materials.

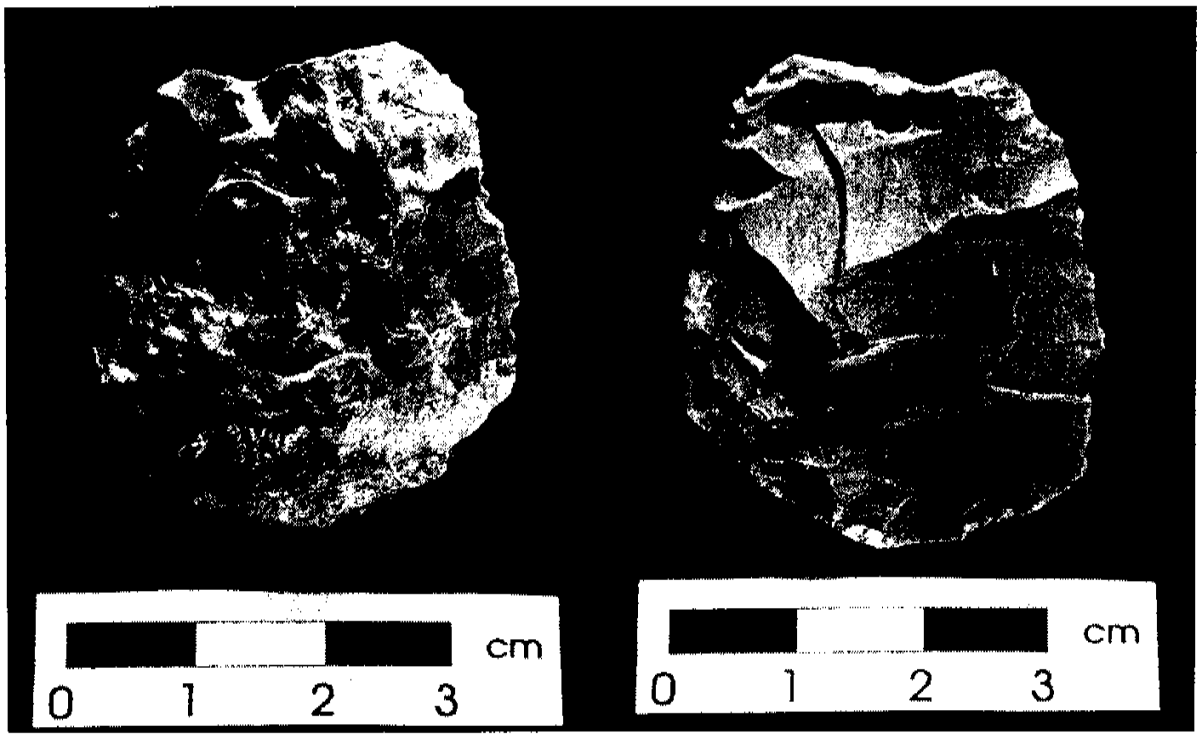

Figure 4-17. Jasper Biface (#38-1), both faces, from Site 7NC-H-95FGH.

Three cobble tools were identified: two hammerstones and one abrader/hammerstone. One complete hammerstone (#19-1) consists of a quartzite cobble 103.6 mm long by 86.4 mm wide by 59 mm thick, with one heavily battered side and two lightly battered points on the opposite side (Figure 4-18). A sandstone, or fine grained quartzite cobble tool (#61-1) measures 115.2 mm long by 72.3 mm wide by 50.1 mm thick (Figure 4-18). This tool exhibits battering on one end and a massive flat fracture opposite the battered end (possible natural). A large abraded edge contains polish and dark staining. A possible second abraded surface occurs on one face and may represent smoothing resulting from hand/palm friction during use. These observed characteristics indicate use as both a hammerstone and an abrader. The second complete hammerstone (#62-1) is a banded quartzite cobble and measures 112 mm long by 82.1 mm wide by 49.4 mm thick (Figure 4-18). Both ends display evidence of battering; one end has a single flake removal. Banding occurs within the quartzite that comprises this artifact.

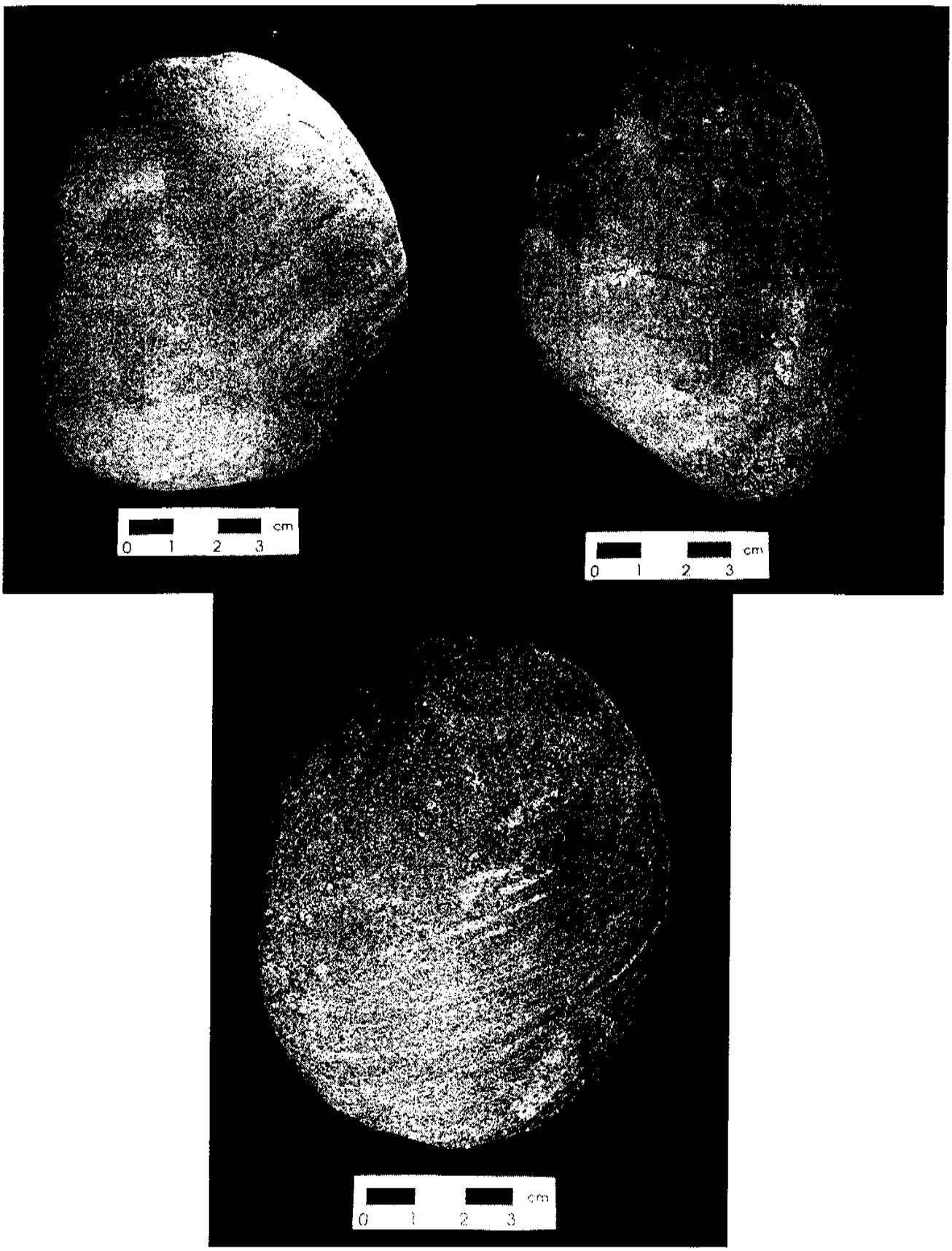

Figure 4-18. Cobble Tools from Site 7NC-H-95FGH (#19-1, #61-1 and #62-1)

The site collection contains 406 pieces of debitage (Table 4-14). The majority of the lithic debitage recovered (95 percent) is quartz. Twenty five percent of the debitage exhibits cortical material indicating limited primary reduction (Table 4-14). Most of the debitage represents smaller flakes under 3 cm in maximum dimension (Table 4-14).

Of the 386 quartz artifacts recovered, 380 or approximately 98 percent consist of clear quartz suggesting reduction from a single cobble. The cortical flakes are distributed across all sizes (Table 4-15); the non-cortical flakes are concentrated in the 1 cm-3 cm size groups (Table 4-16).

The artifact assemblage contains a total of 26 pieces of thermally altered stone with a combined weight of 2358 grams (Table 4-17). Five bone fragments also were collected; however, these fragments are neither burned nor calcined and most likely represent recent faunal remains.

Table 4-14. Flaking Debris Size and Lithic Material Type from Site 7NC-H-95FGH

Material	<1 cm	1-2 cm	2-3 cm	3-4 cm	4-5 cm	>5 cm	Total
Chert	--	1	--	--	--	--	1
Jasper	--	4 (2)	3 (3)	4 (4)	1	--	12 (9)
Quartz	35 (5)	180 (29)	98 (23)	46 (14)	19 (13)	8 (5)	386 (89)
Quartzite	--	2 (1)	3 (2)	2 (2)	--	2 (2)	9 (7)
Total	**35 (5)**	**187 (32)**	**104 (28)**	**52 (20)**	**20 (13)**	**10 (7)**	**408 (105)**

(n) indicates cortex frequency of total

Table 4-15. Cortical Flake Analysis of Quartz Cobble Reduction

Flake Size	Cortical Flakes			
	Count	Weight (in grams)	Percent of Total Count	Percent of Total Weight
<1 cm	4	.08	1.1	0.1
1-2 cm	29	25.2	7.6	1.8
2-3 cm	20	62.2	5.3	4.2
3-4 cm	12	59.8	3.2	7.5
4-5 cm	13	236.6	3.4	16.5
>5 cm	7	339.4	1.8	23.6
TOTAL	**85**	**769.8**	**22.4**	**53.6**

Table 4-16. Non-Cortical Flake Analysis of Quartz Cobble Reduction

Flake Size	Non Cortical Flakes			
	Count	Weight (in grams)	Percent of Total Count	Percent of Total Weight
<1 cm	29	4.4	7.6	.3
1-2 cm	151	76.5	39.7	5.5
2-3 cm	73	162.0	19.2	11.3
3-4 cm	32	219.7	8.4	15.3
4-5 cm	7	111.7	1.8	7.8
> 5 cm	3	92.6	.8	6.4
TOTAL	**295**	**666.9**	**77.6**	**46.4**

Table 4-17. Thermally Altered Stone Count and Weight from Site 7NC-H-95FGH

Material	Count	Weight (in grams)	Mean Weight	Individual Weight Range
Quartz	14	586.1	41.86	0.35-156.6
Quartzite	10	1,356.3	135.63	8.4-326.1
Sandstone	1	16.2	16.2	--
Siltstone	1	627.6	627.6	--
Total	**26**	**2,586.2**		

Historical Artifacts. Three historical artifacts were recovered and consist of one fragment of depression-era glass and two fragments of clear bottle glass. The depression-era glass is yellow or amber with a floral design matching the "Madrid" pattern from the Federal Glass Company (1932-1939) (Florence 1994:118; Schroy 2002:281). The depression-era glass fragment is curved, probably broken from a cup or bowl.

Feature Description. The site contained four large piles of stones. Two of these rock piles were selected and one unit was excavated in each feature (Figure 4-19). Excavation in the immediate vicinity of the rock piles yielded no artifacts. Both features constituted surface manifestations situated entirely in the humus; no subsurface pits were associated with the rock features. The rock features are of unknown function and were presumably placed during historical times. A single fragment of depression-era glass also was recovered from the site surface.

Figure 4-19. Rock Pile Feature from Site 7NC-H-95FGH, looking south

Spatial Distribution. Artifact distributions were generated for each stratum and for the site as a whole. Additionally, thermally altered stone frequency was plotted. Because thermally altered stone can range in size from small fragments to large cobbles, distributions of thermally altered stone by count as well as by weight were created. All maps illustrated that highest frequency of total artifacts, artifacts by stratum, thermally altered stone by count, and thermally altered stone by weight to occur in the northeast corner of the site (Figure 4-20). Minor artifact deposits were observed extending diagonally towards the southwest.

Site Summary. Site 7NC-H-95FGH is interpreted as a limited activity site associated with lithic reduction of a single crystal quartz cobble, expedient tool manufacture, use, and discard, and warming or food preparation activities indicated by the presence of thermally altered stone. The presence of a small biface with cortex suggests expedient biface manufacture from local materials or resharpening or reworking of a curated biface and final discard. The flake tools suggest expedient tool manufacture, use and discard and indicate cutting activities on soft materials, drilling or boring tasks on hard materials (i.e. the drill tip), and scraping activities on soft materials. The three cobble tools indicate flint knapping activities (hammerstones) and abrading tasks possible associated with flint knapping, wood working or hide preparation. The artifact types encountered and their frequency indicate a variety of activities and suggest that this location was used as a short term transient camp site.

4.1.6 7NC-H-95JKL

Site Description. Sites 7NC-H-95J, 7NC-H-95K, and 7NC-H-95L are located on a large rise surrounded by wetlands in the headwater area of Herring Run (Figure 1-1). UDCAR identified each of the sites in 1996. The sites were originally identified separately along the skirts of a bay/basin (Bedell and Busby 1997). In coordination with the Delaware SHPO, DelDOT and Parsons, several of the Herring Run sites were joined to form site complexes including 7NC-H-95JKL. The combined site area measured 53 m x 28 m. Site conditions included a large man-made pond, signs of logging activities, and erosion.

Test results. Parsons excavated 107 STPs within a 5 m interval grid on site 7NC-H-95JKL; 13 contained cultural material (Figure 4-20). The grid was aligned at 10 degrees and paralleled the ROW. Thirty-four 1 m x 1 m test units were subsequently excavated in areas of greatest archaeological potential based on the STP artifact distributions (Figure 4-21 and Figure 4-22).

A typical stratigraphic sequence was encountered in test unit N1065/E82 (Figure 4-23). Stratum A consisted of a very dark grayish brown (10YR3/2) silty loam extending to approximately 7 cm below surface and representing the topsoil/humus layer. No plowzone was observed. Stratum B consisted of light yellowish brown (10YR6/4) silty loam extending to a depth of 35 cm. The third stratum consisted of a yellowish brown (10YR5/6) loamy sand extending to 48 cm below surface. This stratum was underlain by a slightly darker shade of light yellowish brown (10YR5/8) loamy sand. Shovel tests extending below 75 cm recorded increasing gravel content in some places (Columbia Formation), gleyed soils in others.

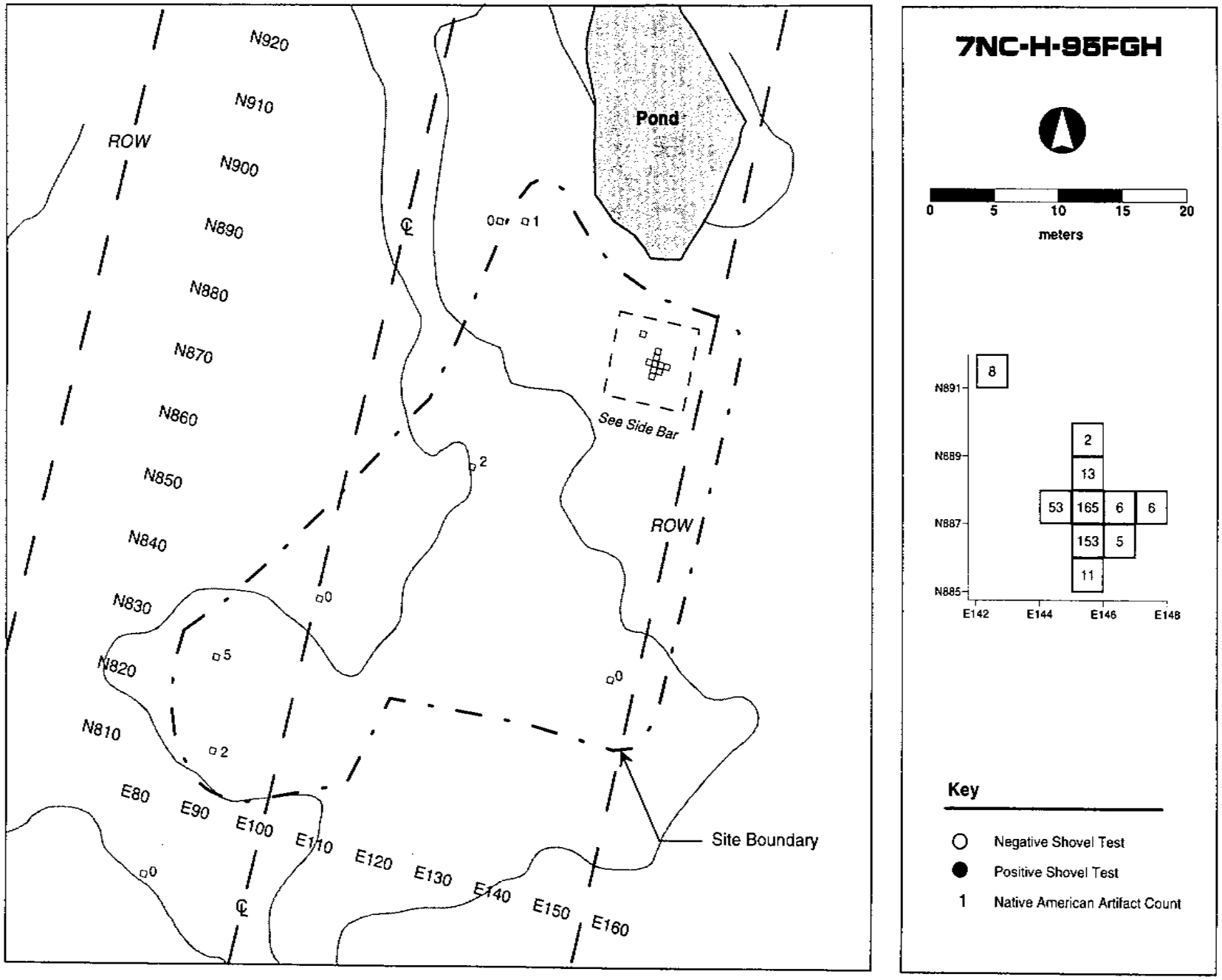

Figure 4-20. Site 7NC-H-95FGH Test Units and Artifact Counts

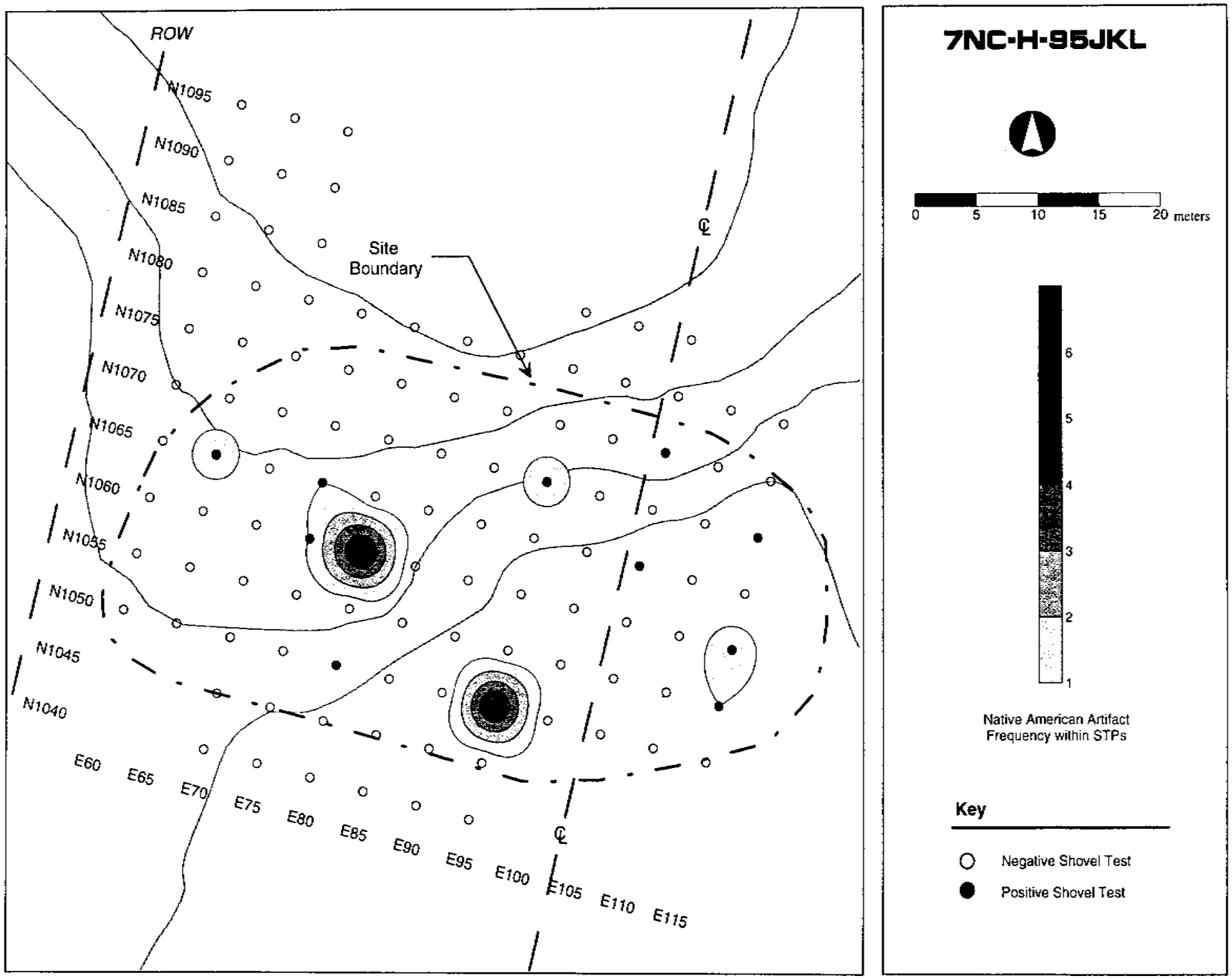

Figure 4-21. Site 7NC-H-95JKL STPs and Artifact Distribution.

Figure 4-22. Excavation at Site 7NC-H-95JKL, looking west.

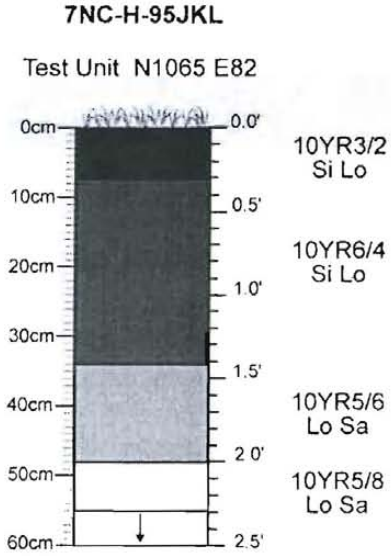

Figure 4-23. Representative Stratigraphic Profile for Site 7NC-H-95JKL.

The top three stratigraphic units contained cultural materials, with the majority (approximately 85 percent) occurring in Stratum B (Table 4-18, Figure 4-24). The archaeological materials were recovered from undisturbed contexts to a depth of 48 cm.

Artifact Description. The 7NC-H-95JKL site complex yielded 349 artifacts, consisting primarily of Native American ceramic sherds and debitage (Table 4-19). Of the total, 155 (44 percent) are pottery sherds. All of the sherds were recovered from five continuous, 1 m x 1 m

test units and are consistent with descriptions of the Wolfe Neck type. In addition to the ceramics, the assemblage includes a unifacial tool, cores, flakes, chips/potlids, and thermally altered stone. Charcoal (n=2) and clay fragments (n=85) were also recovered. Lithic material consists of chert, jasper, quartz, quartzite, rhyolite, sandstone, and siltstone.

Table 4-18. Artifact Distribution by Stratum from Site 7NC-H-95JKL

Stratum	Native American Artifact	Historical Artifact	Other*	Total
A	20	0	0	20
B	208	0	87	293
C	23	0	0	23
Disturbance	11	0	0	11
Total	**262**	**0**	**87**	**349**

- includes charcoal and clay fragments

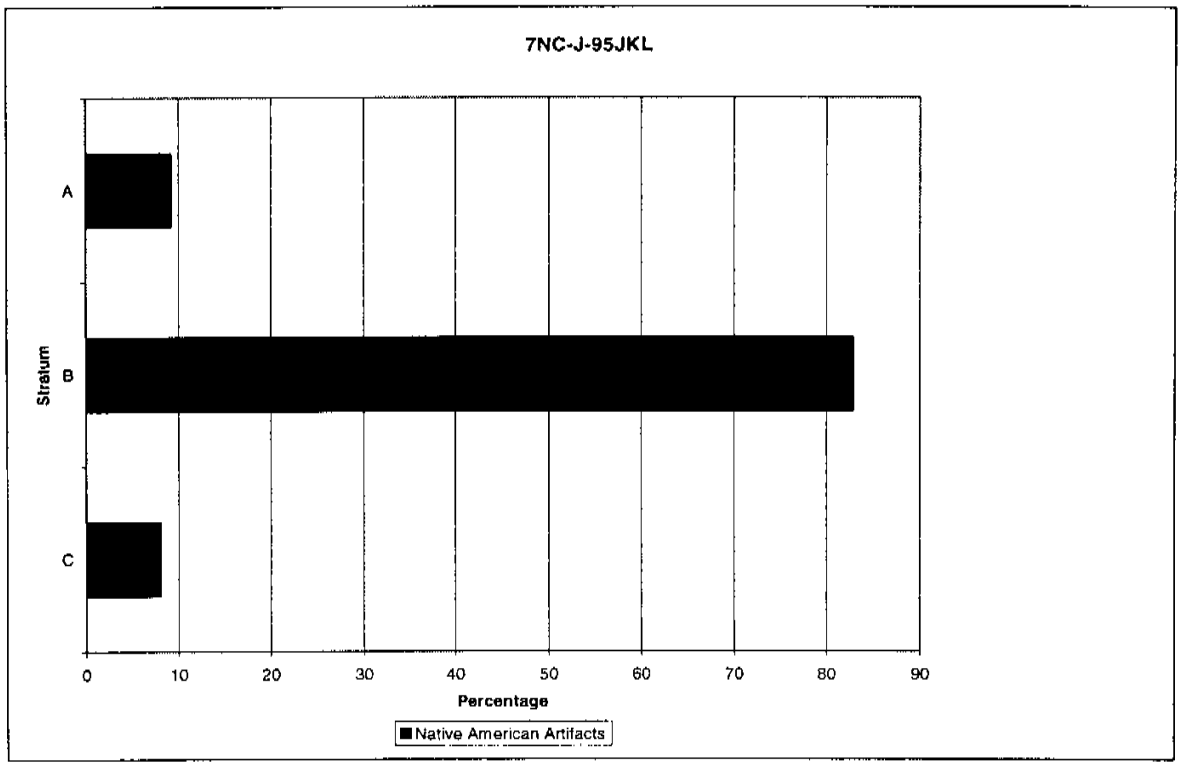

Figure 4-24. Artifact Frequency Distribution with Depth at 7NC-H-95JKL

Table 4-19. Native American Artifacts by Type and Material Recovered from Site 7NC-H-95JKL

Artifact	Chert	Jasper	Quartz	Quartzite	Rhyolite	Sandstone	Siltstone	Count
Ceramic	--	--	--	--	--	--	--	155
Uniface	1	--	--	--	--	--	--	1
Core	--	1	1	--	--	--	--	2
Flake	4	12	17	--	13	--	--	46
Chip/Potlid	2	8	6	--	--	--	--	16
TAS	1	--	2	11	--	26	2	42
Total	**8**	**21**	**26**	**11**	**13**	**26**	**2**	**262**

A total of 155 sherds (four rim fragments and 151 body or basal fragment) were recovered from this site and consolidated into a single vessel lot (Figure 4-25; Appendix E). The primary tempering element included in the paste of this vessel is a poorly sorted sand which comprises 5-10 percent of the paste. The majority of temper consists of quartz grains, but chert is also present. This vessel lot also contains a small quantity of random pieces of crushed quartz. Fragments of iron oxide also appear within the paste.

Figure 4-25. Ceramic Vessel Lot from Site 7NC-H-95JKL.

The exterior surface is deeply cord-marked. At the rim edge, markings extend vertically at a slight angle to the edge of the vessel. The cord is formed with an S-twist (Figure 4-26). Twist segments of varying thickness and lengths indicate utilization of several cords in the decorative process. These range from narrower cords with twist segments .05 mm thick and 4 mm long, to thicker cords with twist segments 1.5 mm thick and 9 mm long. The interior surface is smoothed. One rim sherd shows interior cord marking, which is incompletely smoothed over. Some fragments exhibit depressions that appear to be formed by finger impressions. A variety ofscraping is also present. These marks range from .05 mm to 4 mm wide suggesting the use of several instruments or the use of different edges of the same instrument. One reconstructed portion of the vessel exhibits parallel narrow scrape marks criss-crossed at a 90-degree angle with a second similar set (Figure 4-27).

Figure 4-26. Clay Impression showing the S-Twist Cordage from the Ceramic Vessel Lot, Site 7NC-H-95JKL.

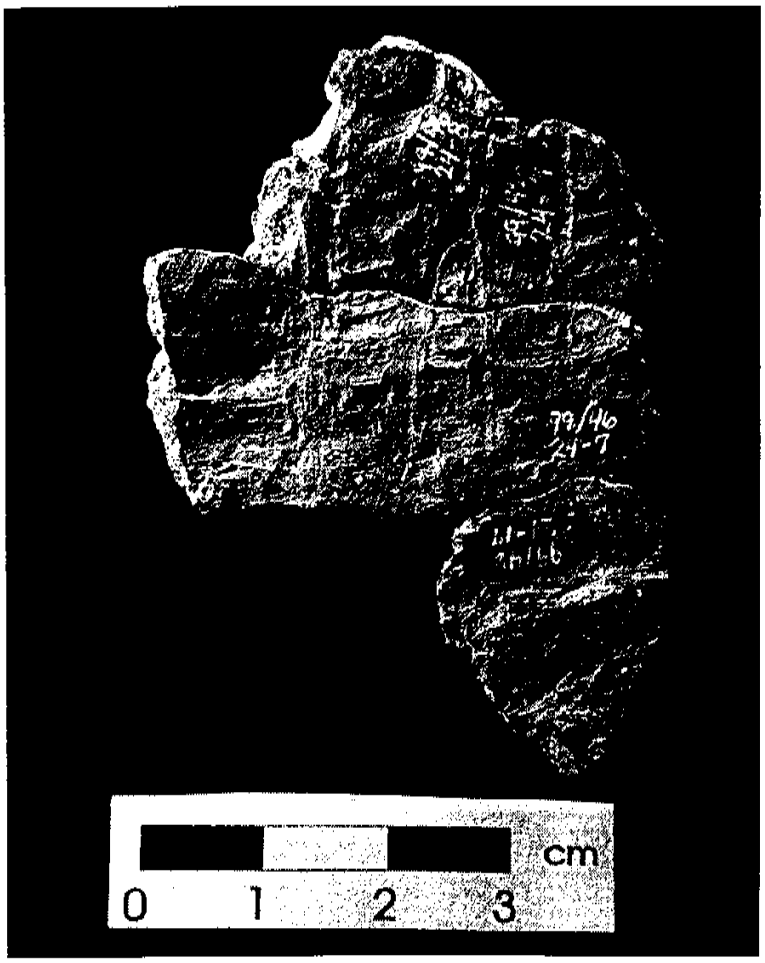

Figure 4-27. Scraping Marks on the Vessel Interior, Site 7NC-H-95JKL.

The lip of this vessel is smoothed flat. The clay slightly overlaps on to the cord-markings on the exterior. This suggests that the lip was flattened and smoothed with a motion moving from the interior to the exterior of the vessel. Faint remnants of smoothed-over cord-markings are still visible on one rim fragment. The rim sherds have irregular lips ranging from 3 mm-6 mm thick. The existing rim sherds are short. The wall of the vessel, however, appears to rise straight to the edge although one small rim fragment is slightly everted. Breaks along coil lines are common. The overlap of coils is slight and appears to be made in the same direction on the interior and exterior of the vessel.

The tempering, surface treatments, and rim finish of this vessel lot exhibit characteristics typical of Wolfe Neck ware. These include the crushed quartz tempering, the cord-marked exterior, the smoothed and scraped interior, and the flattened rim with the vessel wall rising straight to the vessel lip. However, the additional inclusions in the paste, the unsorted sand and clay inclusions, deviate from established Wolfe Neck typology. The composition of the various temper materials conforms to Wolfe Neck cognates, especially Nassawango, which contains sand and clay tempering, and Coulbourn, containing clay tempering. However, the unsorted nature of the sand in this vessel and the small and random size of the clay pieces suggest that these elements could be natural inclusions in the paste. The quartz fragments, while minimal, are purposefully added tempering.

The single tool recovered from the site complex is a chert uniface (Figure 4-28). The uniface (#62-1) is made of black chert that is patinated grey with a tan cobble cortex on the dorsal surface. The artifact measures 33.3 mm long, 28.3 mm wide and 7.4 mm thick. The uniface bit exhibits a 46 degree edge angle with unifacial retouch on the dorsal surface. Use wear on this EU consists of unifacial microflake removal and rounding. The second EU along the right lateral

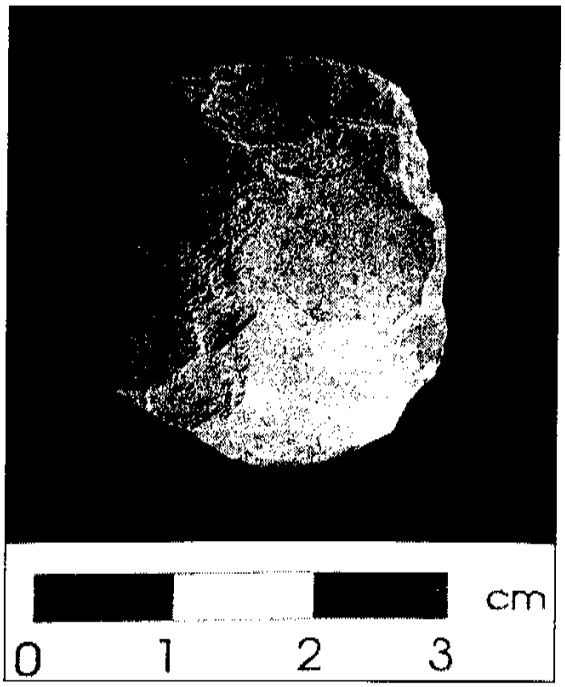

Figure 4-28. Uniface (#62-1) from Site 7NC-H-95JKL.

edge is unifacially retouched on the dorsal surface, with unifacial microflake removal on the dorsal surface and an edge angle of 63 degrees. The third EU along the left lateral edge is also unifacially retouched on the dorsal surface with no use wear and an edge angle of 57 degrees. Based on the edge angle and use wear, this uniface was used as a scraper for soft materials such as hide working or soft woods and grasses.

Two multidirectional cores were recovered from this site complex: one quartz and one jasper. Site 7NC-H-95JKL produced 22 pieces of cortical debitage and 40 pieces of non-cortical (Table 4-20). Higher frequencies of chert and jasper debitage contained cortex but are smaller flakes (Table 4-24), suggesting that initial testing or primary reduction of local cobbles occurred. Quartz and rhyolite debitage are mostly non-cortical and smaller flakes suggesting secondary or later stage core reduction. Rhyolite is considered a non-local lithic material and was most likely brought into the site as reduced bifaces, curated tools or quarry blanks.

Table 4-20. Flaking Debris Size and Lithic Material Type from Site 7NC-H-95JKL

Material	<1 cm	1-2 cm	2-3 cm	3-4 cm	4-5 cm	>5 cm	Total
Chert	1	4 (3)	1 (1)	--	--	--	6 (4)
Jasper	1	8 (6)	10 (10)	1	--	--	20 (16)
Quartz	1	14 (1)	4	2	2 (1)	--	23 (2)
Rhyolite	1	12	--	--	--	--	12
Total	**4**	**38 (10)**	**15 (11)**	**3**	**2 (1)**	**--**	**62 (22)**

(n) indicates cortex frequency of total

The artifact assemblage contains a total of 42 pieces of thermally altered stone with a combined weight of 6467.2 grams (Table 4-21). Eighty-five clay specimens and two charcoal samples were also retained.

Table 4-21. Thermally Altered Stone Count and Weight from Site 7NC-H-95JKL

Material	Count	Weight (in grams)	Mean Weight	Individual Weight Range
Chert	1	7.9	7.9	--
Quartz	2	37.8	18.9	14.9-22.9
Quartzite	11	4,268.3	388.27	1.2-2324.6
Sandstone	26	2,076.2	79.85	1.2-422
Siltstone	2	77.0	38.5	16.5-60.5
Total	**42**	**6,467.2**		

Spatial Distribution. Individual maps depicting the location and density of ceramics, cortical debitage, non-cortical debitage, and specific lithic materials were created. As stated above, five continuous test units contained all of the ceramic sherds. Accordingly, the ceramic distribution does not extend beyond the boundaries of these units, N1058 E86, N1059 E85, N1059 E86, N1059 E87, and N1060 E86 (Figure 4-29). The dense concentration of ceramic fragments, with multiple mends and all of the same typology, is highly indicative of a single depositional event, likely a single pot-break.

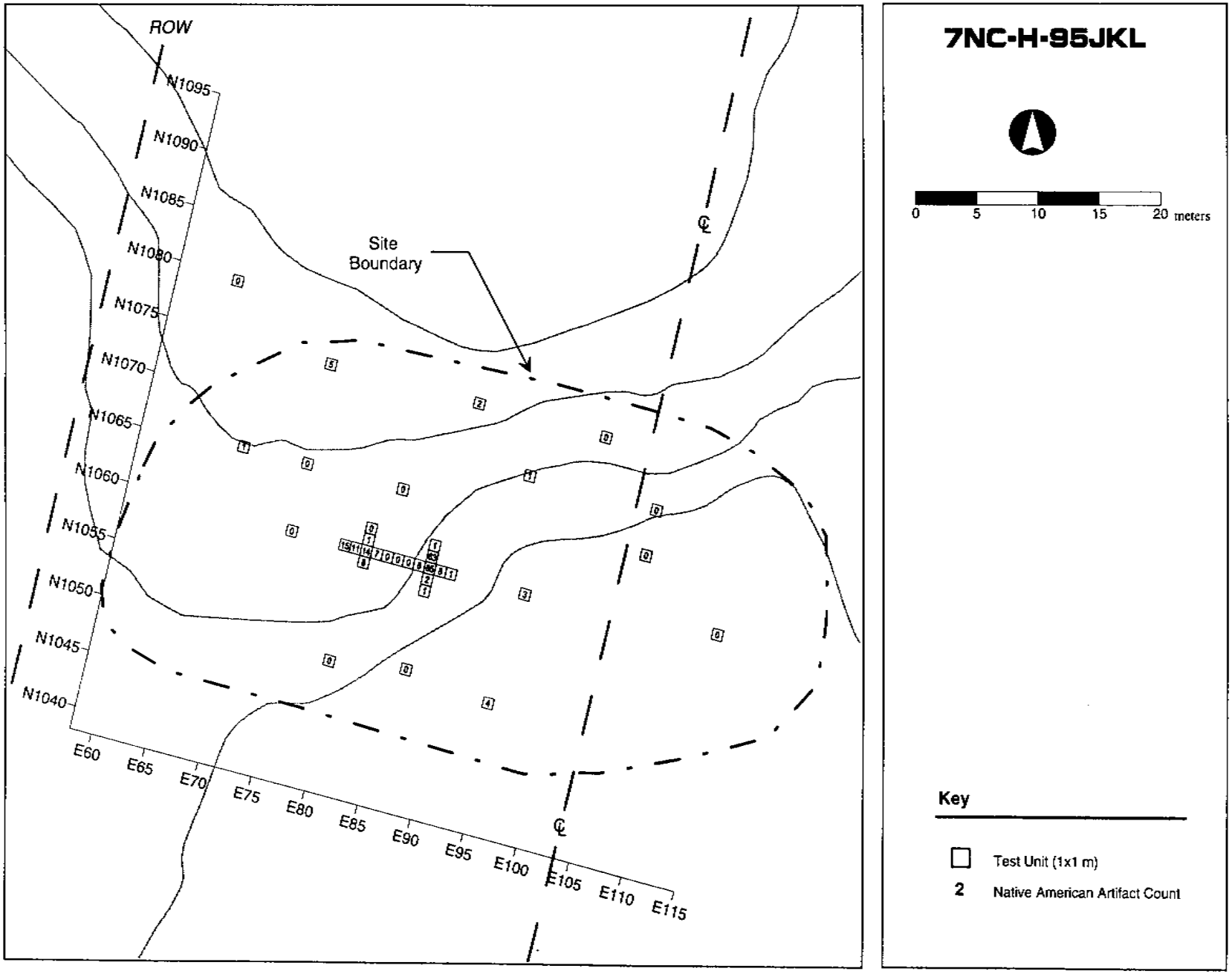

Figure 4-29. Site 7NC-H-95JKL Test Units and Artifact Counts

Distributions of cortical and non-cortical debitage may indicate isolated activities. Cortical waste fragments concentrate towards the western edge of the site. Non-cortical pieces cluster in three distinct areas in the southeast portion, in the northwest portion, and in the center, the final cluster corresponding to the location of the suspected pot-break. Thermally altered stone also occurs with the greatest frequency towards the site center, near the ceramic fragments.

Spatial analysis suggests a limited occupation, possibly consisting of a short site occupation by a small number of individuals. It should be noted however, that the sample sizes available for lithic distribution were small and the loci could merely represent statistical anomalies. It is possible that the concentrations observed constitute individual activities centered around a single hearth.

Site Summary. 7NC-H-95JKL represents a short occupation campsite based on the presence of ceramic sherds and thermally altered stone. The 155 ceramic sherds represent a single vessel lot that is a variant of the Wolfe Neck type. Wolfe Neck ceramics are indicative of a Woodland I context. The single ceramic vessel lot may constitute a single pot-drop episode. The distribution of thermally altered stone roughly corresponds to the location of the ceramics. The presence of a small uniface with cortex suggests expedient tool manufacture from local materials, use and discard. It was used as a scraper on soft materials such as hides, soft woods or grasses. Cores, cortical and non-cortical debitage concentrations occur around the periphery of the thermally altered stone and ceramic area, possibly indicating individual task activities. Flint knapping activities on the site included initial testing or primary reduction of small local chert and jasper cobbles; secondary reduction or later stage core reduction was evident for quartz and rhyolite. Rhyolite comprised about 21 percent of the raw materials indicating use of non-local lithic sources, transported to the site as reduced bifaces, curated tools or quarry blanks. The artifact types encountered and their frequency indicate a variety of activities and suggest that this location was used as a short term transient camp site.

4.1.7 7NC-H-95M

Site Description. Site 7NC-H-95M is located on a small rise surrounded by wetlands near the headwaters of Herring Run (Figure 1-1). The site measures approximately 12 m north/south by 24 m east/west. Site disturbance consisted of evidence of erosion.

Test Results. Parsons excavated a total of 32 STPs and 19 1 m x 1 m test units (Figure 4-30 and Figure 4-31). Of the 32 STPs, five yielded seven Native American artifacts collectively. All test units contributed to the assemblage, adding an additional 28 artifacts.

The typical soil profile at 7NC-H-95M, as observed in test unit N1191/E65, consisted of dark brown (10YR3/3) humus that extended to 8 cm below ground surface (Figure 4-32). No plowzone was observed. The second stratum consisted of a brownish yellow (10YR6/6) sandy loam, extending to 25 cm below surface. The third stratum consisted of light gray (10YR7/1) silty clay mottled with brownish yellow (10YR6/8).

Only the first and second stratigraphic units yielded cultural materials (Table 4-22, Figure 4-33). The majority of artifacts were recovered from Stratum B between 8 and 25 cm below surface.

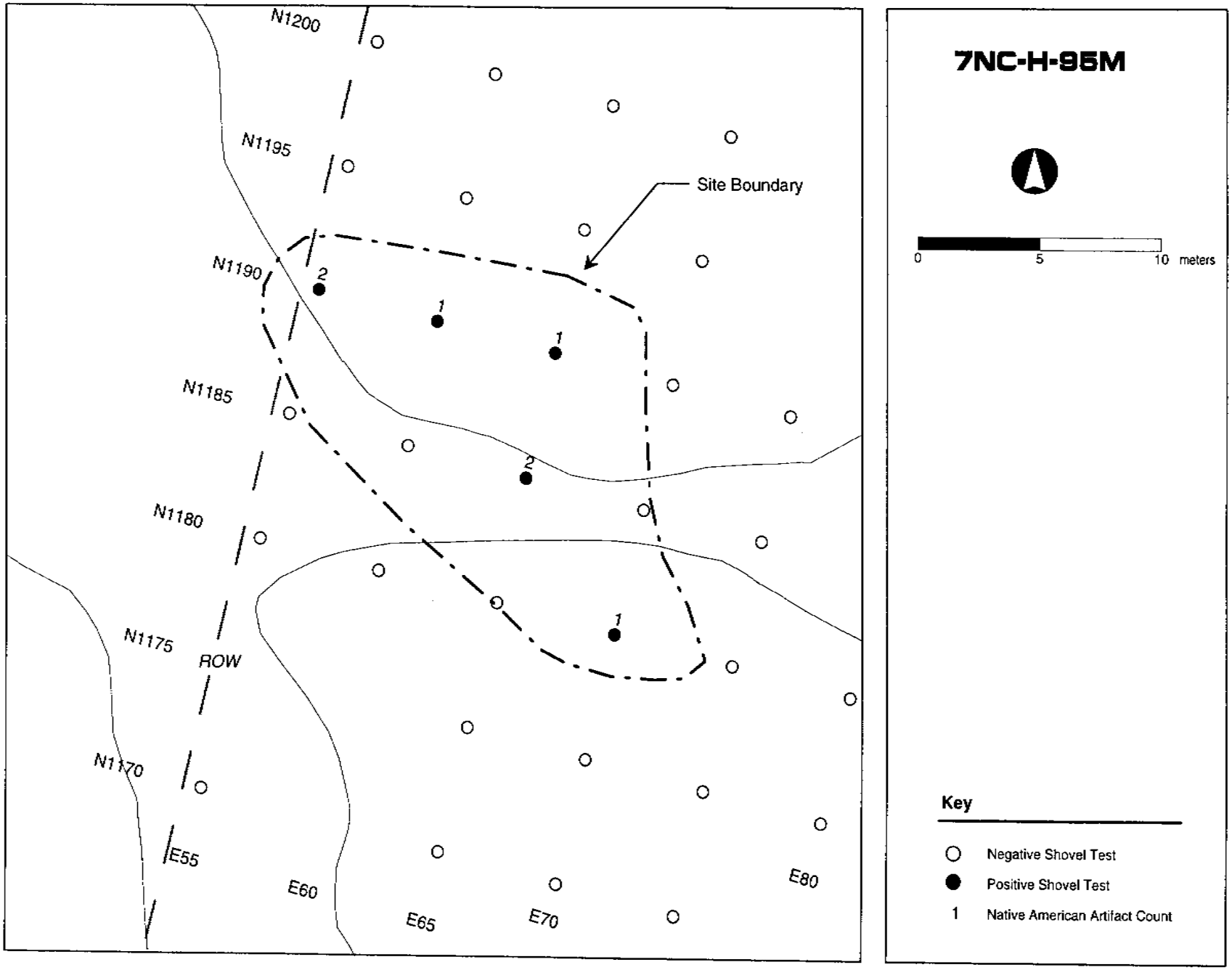

Figure 4-30. Site 7NC-H-95M STPs and Artifact Distribution.

Figure 4-31. Excavation at 7NC-H-95M, looking northwest

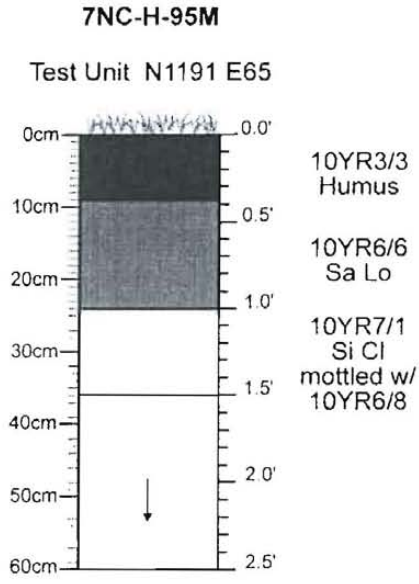

Figure 4-32. Representative Stratigraphic Profile from Site 7NC-H-95M

Table 4-22. Artifact Distribution by Stratum from Site 7NC-H-95M

Stratum	Native American Artifact	Historical Artifact	Total
A	6	0	6
B	29	0	29
Total	**35**	**0**	**35**

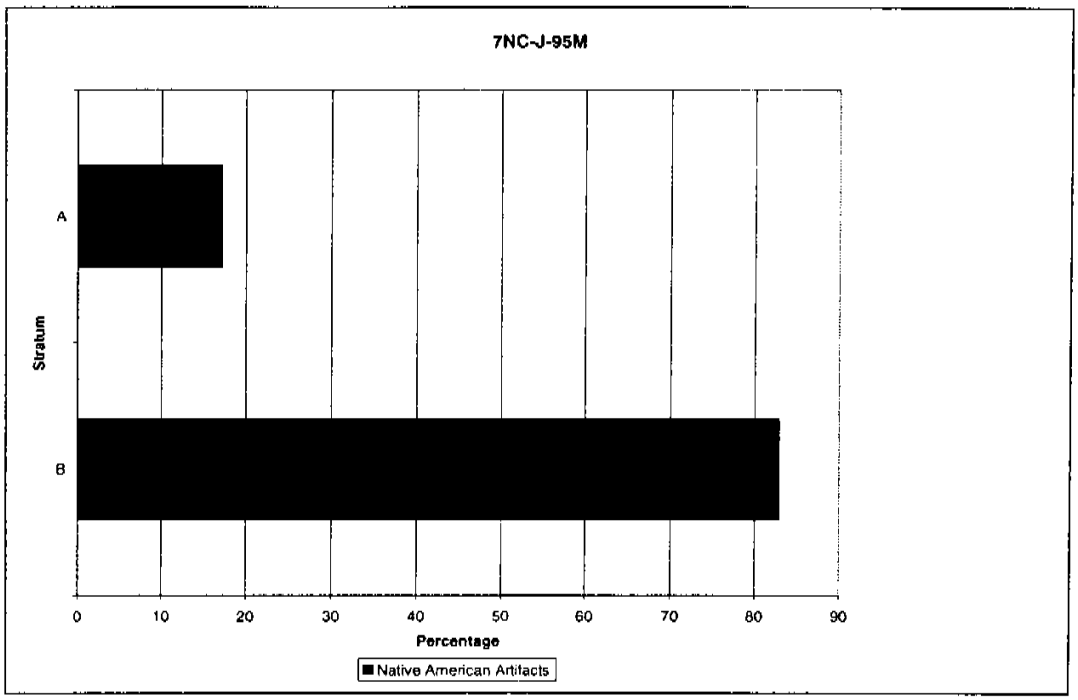

Figure 4-33. Artifact Frequency Distribution with Depth at 7NC-H-95M

Artifact Description. Site 7NC-H-95M yielded 35 artifacts and one unmodified cobble. Artifact types include two projectile points, a core, flakes, chips/potlids, a hammerstone, a cobble, and thermally altered stone (Table 4-23). Lithic material types consist of chert, jasper, quartz, and quartzite.

Table 4-23. Native American Artifacts by Type and Material Recovered from Site 7NC-H-95M

Artifact	Chert	Jasper	Quartz	Quartzite	Count
Projectile Point	2	--	--	--	2
Core	--	1	--	--	1
Flake	11	5	2	--	18
Chip/Potlid	--	5	--	--	5
Hammerstone	--	--	--	1	1
Cobble	--	--	--	1	1
TAS	1	1	2	3	7
Total	**14**	**12**	**4**	**5**	**35**

The two projectile points include a contracting stemmed point fragment (#8-1) and a teardrop projectile point (#6-1); both are made of black chert with shiny black inclusions (Figure 4-34). The contracting stemmed point measures 22.7 mm wide at the shoulder, 16.0 mm wide at the stem, and 6.2 mm thick. The edge angles measure 49 degrees and 50 degrees. No use wear on the edges or facial polish (suggesting hafting) is present. The blade tip does not display an alternate bevel which would indicate resharpening on the haft. The stem exhibits ground edges. The complete teardrop point measures 34.5 mm long by 15.8 mm wide by 5.8 mm thick. The blade angles measure 53 degrees and 62 degrees respectively. Neither use wear on the edges nor facial polish (suggesting hafting) is present. The blade tip does not display an alternate bevel which would indicate resharpening on the haft. The teardrop point is temporally associated with the Woodland I Period.

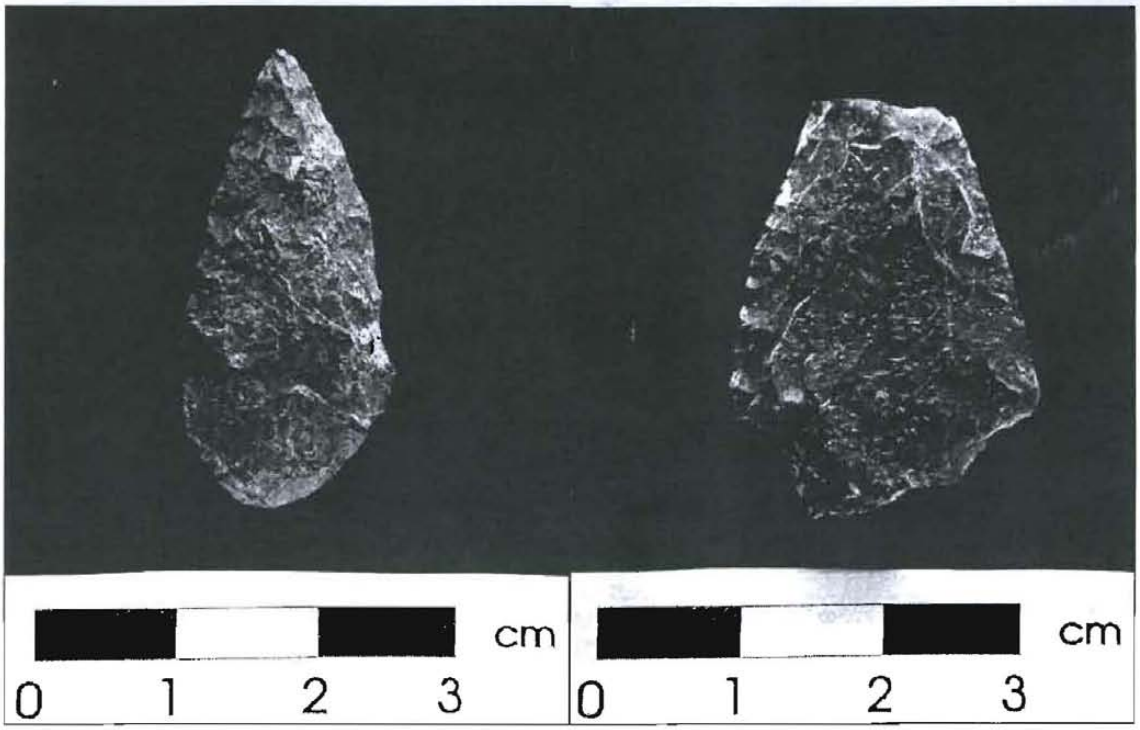

Figure 4-34. Projectile Points (#6-1and #8-1) from Site 7NC-H-95JKL.

The quartzite hammerstone (16-1) measures 119.4 mm long by 78.6 mm wide by 50.7 mm thick (Figure 4-35). One end exhibits heavy battering; the other end exhibits smoothing. One side contains linear battering which occurs across approximately 20 percent of the perimeter.

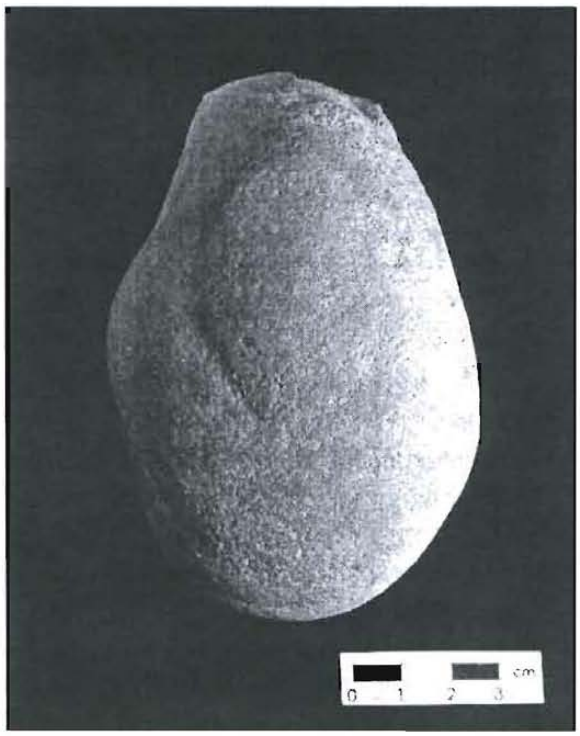

Figure 4-35. Hammerstone (#16-1) from Site 7NC-H-95JKL.

One multidirectional jasper core was recovered. Site 7NC-H-95M produced 14 pieces of cortical and 9 pieces of non-cortical debitage (Table 4-24). All jasper debitage exhibits cortex and are smaller flakes (Table 4-24) indicating primary reduction most likely of small local cobbles. Chert debitage are mostly smaller flakes with no cortex suggesting secondary reduction.

Table 4-24. Flaking Debris Size and Lithic Material Type from Site 7NC-H-95M

Material	<1 cm	1-2 cm	2-3 cm	3-4 cm	4-5 cm	>5 cm	Total
Chert	--	8 (1)	1	2 (2)	--	--	11 (3)
Jasper	--	2 (2)	7 (7)	--	1 (1)	--	10 (10)
Quartz	--	1	--	1 (1)	--	--	2 (1)
Total	**--**	**11 (3)**	**8 (7)**	**3 (3)**	**1 (1)**	**--**	**23 (14)**

(n) indicates cortex frequency of total

The artifact assemblage contains a total of seven fragments of thermally altered stone with a combined weight of 352 grams (Table 4-25).

Table 4-25. Thermally Altered Stone Count and Weight from 7NC-H-95M

Material	Count	Weight (in grams)	Mean Weight	Individual Weight Range
Chert	1	0.5	0.5	--
Jasper	1	0.3	0.3	--
Quartz	2	51.7	25.85	14.7-37
Quartzite	3	297.5	99.0	53.4-122.05
Total	**7**	**351.0**		

Spatial Distribution. The number of artifacts recovered is too small to generate significant artifact distributions by either type or material (Figure 4-36). The absence of faunal or other food remains and the relatively small number of thermally altered stone recovered suggest single or short-term Native American use.

Site Summary. 7NC-H-95M represents a limited activity location with the primary site activities centered on tool manufacture or maintenance, and limited warming or food preparation activities. The two projectile points suggest hunting activities; the absence of black chert debitage indicates either weapon maintenance where the projectile points were removed from the haft for replacement or incidental discard. Flint knapping activities are evident with the presence of a hammerstone, a jasper core and debitage. Initial testing or primary reduction of small local jasper cobbles and secondary reduction of gray chert materials occurred. The debitage is relatively small in size with low frequencies, and represents only a few material types suggesting tool finishing or resharpening activities. This site represents a short term transient camp associated with hunting activities.

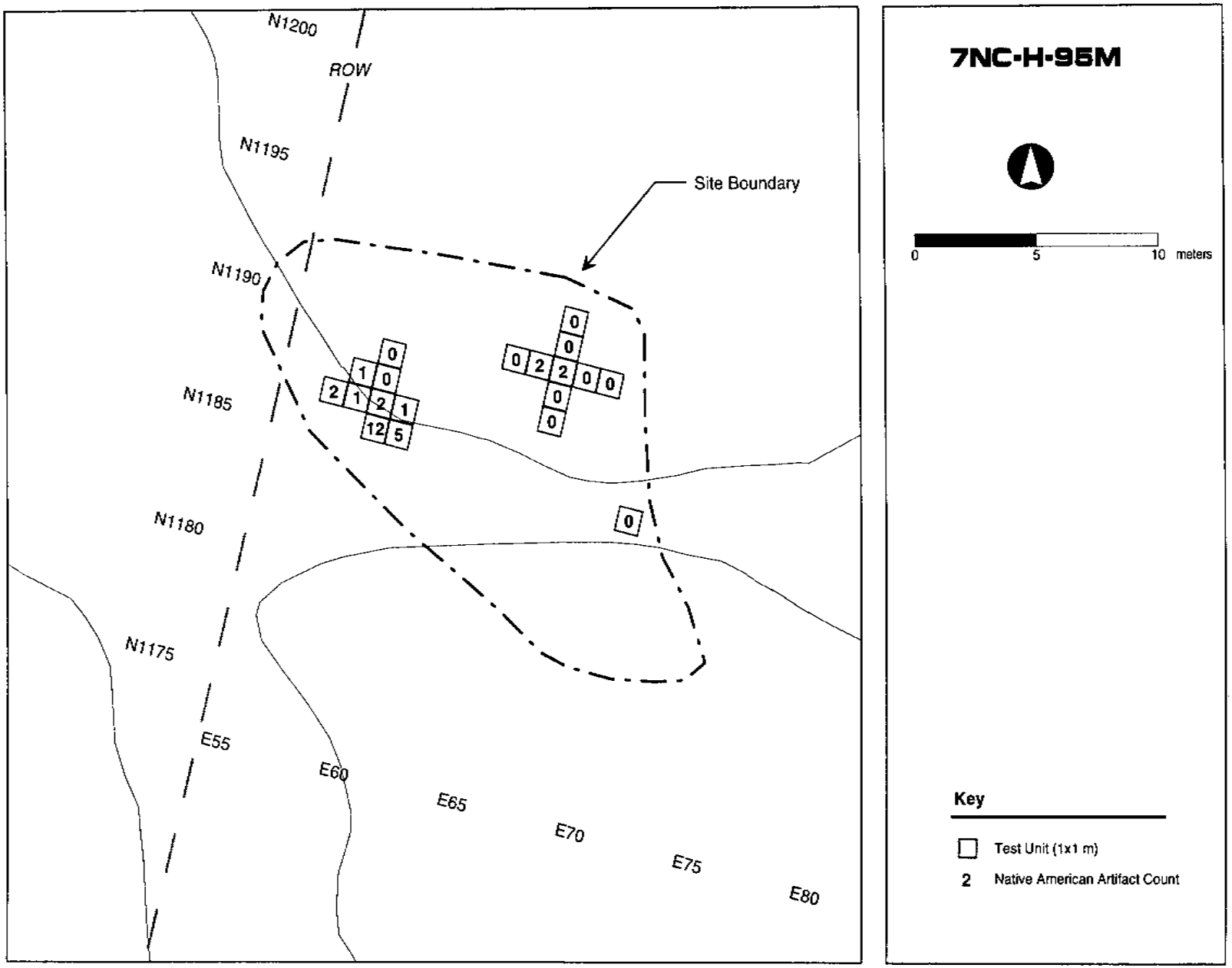

Figure 4-36. Site 7NC-H-95M Test Units and Artifact Counts.