ARCHAEOLOGICAL SITE TESTING AT INDIAN CREEK (10VY492/PY-584) KRASSEL WORK CENTER, PAYETTE NATIONAL FOREST A NATIONAL REGISTER PROPERTY

by
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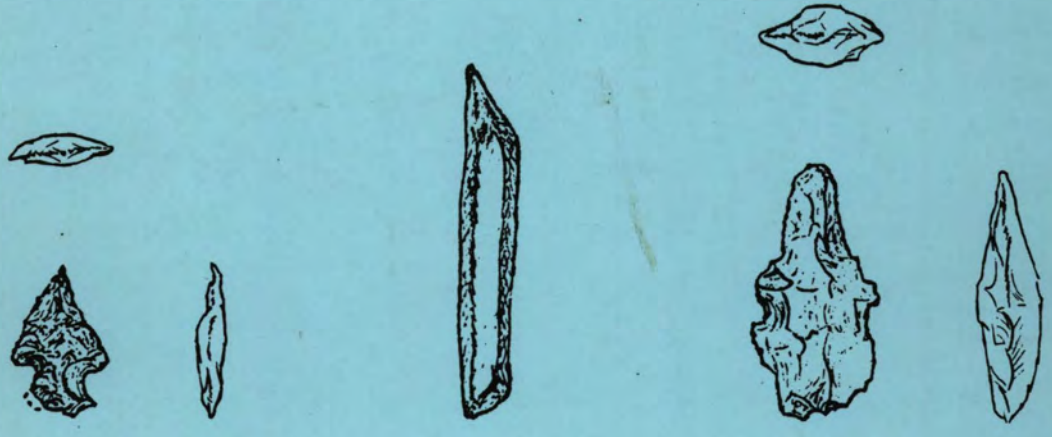

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PREFACE

In 1992, the Recreation Program on the USDA Payette National Forest proposed construction of a trailhead with vehicular parking, livestock loading ramp and outhouse. The Landscape Architect had designed a plan that placed the Centennial Trailhead Recreation Site within the boundaries of the USDA Forest Service historic Krassel Ranger Station, listed on the National Register of Historic Places in May of 1992. See pages 23 and 24.

In May of 1992, the Forest Archaeologist visited the location of the proposed Centennial Trailhead Recreation Site and conducted limited exploratory digging with a shovel and found historic and prehistoric artifacts. In the spring of 1994 the earth moving equipment was scheduled to begin construction. At that time the Forest Archaeologist emphasized the potential for an adverse effect to the archaeological site. A decision was made to evaluate the content and extent of the archaeological deposits.

All archaeological work that was conducted on this portion of the National Register property was conservative. The prehistoric hearths where radiocarbon samples were extracted remain intact. The exposed cultural features and deposits were covered with black plastic and reburied. Only enough data was collected to demonstrate that the Indian Creek prehistoric archaeological deposits are considered as a significant contributing element to the newly listed National Register property. The verified presence of the prehistoric archaeological site, exhaustion of limited Heritage Program funding for conducting archaeological site testing ($5,000), and no additional funding offered for further site mitigation discouraged the Centennial Trailhead Recreation Site development. Construction never took place. After the two exploratory archaeological trenchs were backfilled, a USDA Forest Service heritage protection sign was placed at the head of the excavation trench so as to easily identify this resource as part of the USDA Forest Service historic Krassel Ranger Station National Register Property, and discourage vehicular parking and camping impacts on this portion of the identified archaeological resource.

The following archaeological report presents the results of what was found and the potential of what remains to be learned from this archaeological site.

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The authors would like to express their gratitude to Mr. James Arp, Landscape Architect, with the USDA Payette National Forest, Idaho. Mr. Arp proposed and designed the recreational Centennial Trailhead parking area on the location of the Indian Creek prehistoric archaeological site. This proposed Federal undertaking required a Section 106 review in compliance with honoring the intent of the National Historic Preservation Act. This site needed to be evaluated for its content and provided the archaeologists with an opportunity to do archaeological site evaluation, interpretation and protection for this important archaeological resource. This site area was listed on the National Register of Historic Places in May of 1992. We now know more about the ancient occupants of the South Fork of the Salmon River. The significance of this prehistoric resource was such that it discouraged the trailhead construction.

The Forest Archaeologist, Lawrence A. Kingsbury is deeply grateful to the following people who worked on the archaeological site. Steven E. Stoddard of McCall and Jill Frye of New Meadows, Idaho cooperated with Kingsbury during the cold mornings and cool afternoons of March and April of 1994. The mornings were frigid enough to cause pain to our hands while excavating. We all worked as a team excavating, shaking screen, filling out forms, collecting carbon samples for radiometric dating and backfilling. Jill Frye did all of the artifact sorting, quantifying, tabulating and illustrating. Jill also provided culinary delights during evening meals. Jim Winfrey helped with the backfilling of the trench excavation and provided academic enlightenment. Steve and Jill provided editorial comment.

Special mention made of the valued comments provided my members of the Nez Perce Tribe. Mr. Chris Webb, Director of the Nez Perce Tribe's cultural resource management program requested ethnographic oral interviews of elder Nez Perce Tribal members who have knowledge of the area. The ethnographic interviews were undertaken by Mrs. Vonda Kirk, a Nez Perce Tribal member, and former USDA Payette National Forest employee. A special thanks to you all.

I. RESEARCH DESIGN

The setting is within a deep river valley carved by the South Fork of the Salmon River (SFSR), within the Salmon River Mountains of west-central Idaho. The majority of the SFSR is managed by the USDA Forest Service, Payette, and Boise National Forests.

During late March and April of 1994, the eastside of the Indian Creek prehistoric archaeological site (PY-584/10VY492) was evaluated for determining the quality of significance based upon guidelines set forth by the Department of the Interior, National Park Service. Motivation for making this determination was related to the proposed development of the Centennial Trailhead Recreational Site.

The principal criterion to be met in this evaluation is whether or not the site "has yielded, or is likely to yield, important information in history and/or prehistory" (36CFR1202.6.d). The question of what is important information must be framed within the context of one or more significant research problems identified for the study area within the valley of the SFSR physiographic zone. In a slightly more generalized form, the research problem is to explicate the cultural-historic sequence in the study area, with an emphasis on understanding the chronological sequence and identifying the difference between Plateau and Great Basin people using the natural resources within the area of the SFSR and the intramountain region. This is by no means a trivial research problem, given the lack of prior information on the cultural-historic sequence and associated adaptive strategies used at sites within the SFSR on the USDA Payette National Forest, Idaho.

In order for an archaeological site to make or have potential for making a significant contribution to this research question, it should contain the following information:

a) integrity of deposits, spacially and/or vertically;

b) potential for relative or absolute dating of the deposits through radiometric, chronometric, stratigraphic, typological, geochemical, or other means;

c) an artifact sample of sufficient size and/or diversity to allow reasonable determination of site function, i.e., at least partial assessment of the range of activities performed on-site by its makers and interpretation of the function of the cultural features found at the site location.

Thus, if the cultural site meets the above three conditions and in addition contains identifiable floral and faunal remains and/or other ecological-environmental information which are relevant to the study of site seasonality, then the site will be judged to be of yet higher significance.

With the above as research guidelines, archaeological site testing commenced during the last week in March of 1994 and concluded about six weeks later.

II. SITE DESCRIPTION AND EXCAVATION METHODOLOGY

The Indian Creek alluvial fan contains prehistoric archaeological deposits first demonstrated in 1989. This site has yielded and will likely yield additional information important to prehistory. This archaeological site is situated on the lowest river terrace at the confluence of Indian Creek, a tributary to the South Fork of the Salmon River (see Figure 2, page 24). This site is located on the southeastern edge of the USDA Payette National Forest's historic Krassel Ranger Station, now called the Krassel Work Center, within Valley County, Idaho.

Previous Archaeological Work

The first formal archaeological work to take place in the area of this National Register property took place during July of 1989. Three 1 X 1 meter test units were placed along the northside and adjacent to the road in preparation for the proposed road resurfacing along the existing road prism within the Valley of the SFSR. Archaeological site testing recoverd one late period Plateau style arrowpoint with corner notched, lithic debitage from stone tool manufacture and maintenance. Several bifaces and fire cracked rock was also found.

From May 14th thru the 25th of 1990, archaeologists from the Payette National Forest along with volunteers from the Idaho Archaeological Society conducted intensive archaeological testing of prehistoric components on the westside of the Indian Creek alluvial fan in the area behind the historic Ranger's house building #1113. This area was selected in preparation for a new septic system to be installed. The archaeologists excavated the rectangular trench and lead lines in preparation for the new installment. There are four buildings that make up the historic component of the Krassel Ranger Station.

In order to better access the extent of the buried archaeological deposits and to assure that the new septic tank installation did not destroy nor contaminate the archaeolological resource, an 17 additional, 1 X 1 meter test units were excavated in 1990. The prehistoric portion of the Krassel Ranger Station, in the vicinity of the Ranger's house produced some interesting artifacts. Based on a total of 20, 1 X 1 meter test units excavated to various (10 centimeter) levels, the site yielded over 700 lithic artifacts, including what appeared to be microblades, two small arrowpoints, three small shards of grey pottery, a midden of fire cracked rock (FCR), and a small amount of bone.

One of the recovered projectile points has been typed to the Eastgate Expanding Stem. Another projectile recovered from archaeological context was that of a Desert Side-notch. The pottery shards were of greyware and were probably associated with the Desert Side-notch arrowpoint.

The component closest to the surface and just below the sod level was noted in only one area and appears to represent a more recent Native American occupation. The next cultural level was at about 20 to 45 cm below surface. This is the cultural level that contained the greyware potshards. The earliest component was found at 55 to 65 cm below surface. No diagnostic artifacts nor organic material for radiometric dating was found.

The Indian Creek alluvial fan in the area of the archaeological site is approximately 160 meters wide. The prehistoric component on the east side of the alluvial fan was confirmed with the 1990 excavations. However, in 1992 it was confirmed that there was more to this archaeological site on the west side of the alluvial fan. The west side of the Indian Creek alluvial fan showed no surface evidence of prehistoric occupation. Shovel probes revealed an abundance of tertiary wasteflakes.

In March of 1994, when funding for this project was available, and when construction for the recreational trailhead was to begin, the archaeological site testing was started as soon as the ground thawed. The Forest Archaeologist with hired and volunteer personnel began formal archaeological site testing. The proposed project area for the recreational site was staked and laid out by the landscape architect in preparation for earth moving by heavy machinery.

Excavation Methodology

Based on the perceived earth moving impacts a datum point was established, and a north to south and east to west baseline was imposed over the project area. A posthole digging tool was used for removing soil at every two meter interval along these baselines. The soil was processed through a 1/8 inch dry screen for a presence/absence determination of cultural material and to gauge the extent of the subsurface deposits of the archaeological site.

Each post hole was about 15 cm in diameter. The depth of each post hole varied and depended on the size and amount of rock obstructing the post hole digging tool. The majority of the post holes had evidence of culture within them. Recovered cultural material found on the dry shaker screen consisted of tertiary wasteflakes and shatter produced during prehistoric stone tool manufacture and maintenance. The artifacts were sorted to size, lithic material, quantified and redeposited within each posthole. In this way the extent of the site area was determined.

Two areas were designated for exploratory trenches. (see Figure 3, page 25). A dry intermittent drainage divided the study area. A trench excavation was placed on each side of the intermittent drainage, one on the west and one on the east. The west trench measured 5 meters north to south by 2 meters east to west. (see Figure 4, page 26). The east trench measured 1 meter north to south by 2 meters east to west). Soil was removed using spades and trowels. All soil was processed through 1/8 inch dry screen and/or water screened, when the soil was rained upon for maximum data recovery. Excavation progressed with a single archaeologist excavating one 1 by 1 meter test units in 10 cm levels. Artifacts were identified and quantified according to levels within the test unit. All artifacts were collected and bagged. All bags were labeled. All lithic artifacts were washed, sorted, typed and identified to lithic material and quantified to percentages.

III. SOIL SCIENTIST REPORT

On June 30, 1994, Mr. Dean Martens, Forest Soil Scientist with the USDA Payette National Forest provided the following landform and soil description at the Indian Creek alluvial fan cultural resource property.

The soils described occur adjacent to the confluence of Indian Creek and the South Fork of the Salmon River on landtype 105, alluvial fan lands. Alluvial fans are cone-shaped deposits of alluvium created by streams when they flow downslope and out upon a level plane, or meet a slower moving stream, like the South Fork of the Salmon River. Parent material is derived from the surrounding granitic Idaho Batholith. The elevation is at 3781 feet above sea level and the sloping grades are nearly level in the area of the prehistoric Indian site.

The soil profile description was taken from the excavated trench #2, 16 meters north by 1 meter west. The soil is greater than 40 inches in depth. The soil is coarse textured, has low amounts of rock fragment content with the exception of a horizon from 4 to 12 inches in depth where rock fragments content exceeds 70%, has a very thin, dark colored horizon at approximately 12 inches depth.

The buried dark colored horizon lying immediately beneath the horizon with very high rock fragment content indicates that the dark colored horizon was once the surface of a soil that was later covered to at least an 8 inch depth by an alluvial flow deposit consisting dominantly of rock material. This event occurred, in most likelihood, as a result of a high flow/washout of Indian Creek. Since that time, 4 inches of soil and 1/2 inch of organic material has developed over the surface of the alluvial flow. The covering of areas with alluvial material, as occurred at this location, is the basis of the formation of this landtype and would likely be repeatedly observed if the depth of the soil pit was increased.

This soil, which supports species such as ponderosa pine, Douglas fir, ninebark, alder, and various grasses and forbs is considered to be productive as compared to most soils that develop from granitic parent material within the drainage of the South Fork of the Salmon River drainage.

For further description see Table 1. page 20.

IV. HEARTH FEATURES AND RADIOMETRIC DATING RESULTS

Three hearth features were uncovered within the 2 by 5 meter rectangular trench excavation. All three hearth features were clearly discernable by a mass of evenly sized angular granitic rock mixed with fewer water worn quartzite cobbles. Each of these evenly sized rocks were big enough for an adult to pick up with one hand. All of the rocks within the hearth concentration revealed crazed, cracked, irregular surfaces, some of which was stained with charcoal. The rocks in these hearths the archaeologists define as fire-cracked rock (FCR). Some of the granitic FCR wae red in color, probably from heating. Some of the soil surrounding the hearth was red in color whereas other areas within the hearth had blackened soil and appeared harder than the surrounding sandy granitic soil. Hearth Feature #1 contained the largest concentration of FCR and it measured 2.0 meters in length from northeast to southwest and 1.90 meters from north to south. The vertical thickness of Hearth Feature #1 ranged from 15 cm in the center tapering to 5 cm on the edges. All three hearth features are lenticular in cross section. The other two hearths were smaller. Hearth Feature #2 measured about one meter in diameter and appeared to be superimposed upon an older hearth feature. This was demonstrated to be the case with radiometric age determination of charcoal samples from each hearth. The superimposed hearth was younger than the one below. (see Figures 4,5,6,7 on pages 26-29).

Mixed between the fire cracked rocks in all three hearths was carbonaceous soil containing fragments and pockets of charcoal along with fragments of burnt and unburnt bone. Some complete faunal elements were present adjacent to the hearth features. Some of the bone fragments in the hearths and surrounding the hearths were in a calcined condition. Other cultural material found mixed in the hearths consisted of tertiary wasteflakes of cryptocrystaline silicates, basalt, and obsidian.

Artifacts surrounding each of the hearths included a higher frequency of tertiary wasteflakes and a lower frequency of secondary wasteflakes. Some of the broken waterworn cobbles could have been hammerstones. Other artifacts found adjacent to Hearth Feature #1 were two bone awls, small obsidian arrowpoints, and utilized flake tools.

Three radiocarbon samples were collected from the three different hearth features. All three carbon samples were wrapped in aluminimum foil, carefully packaged, and mailed to Yvonne Welter, Radiocarbon Dating Laboratory at Washington State University, Pullman, Washington, for radiometric age determination. (see Table 2, page 21).

Carbon sample #1, from Hearth Feature #1, Test Unit 5, was collected from a pocket of charcoal within the mass of FCR at 21 to 23 centimeters below surface. This sample (WSU# 4534) produced an age of 350 +- 80 years before the present.

Carbon Sample #2, collected from Hearth Feature #2, Test Unit 9, consisted of a large piece of burnt tree branch found at a depth of 10 to 20 cm below surface. This sample (WSU# 4536) produced an age of 270 +- 70 years before present.

Hearth Feature #2 was superimposed over Hearth Feature #3.

Carbon Sample #3 consisted of carbanaceous soil collected from Hearth Feature #3, test unit 10, taken from 10 to 20 centimeters below surface. This sample (WSU# 4537) produced an age of 340 +- 60 years before the present.

Typeable projectile points were associated with all three hearth features and radiometric dates. One Desert Side-notch arrowpoint was recovered in Test Unit 4 at -24 centimeters below surface, which is one meter from each of the three dated hearth features. A second Desert Side-notch arrowpoint was recovered from Test Unit 10, within level one. A third Desert Side-notch point was recovered from Test Unit 1, within level four. Also associated with these Desert Side-notched arrowpoints were two broken obsidian point tips that are not typeable. (see page 32). The stratigraphic depths of the radiocarbon dates in association with the three Desert Side-notch arrowpoints are close enough to say with confidence that these arrowpoints along with other associated artifacts dated from AD 1520 to AD 1680. The Desert Side-notch points found at some Great Basin sites date to after AD 1300 (Baumhoff and Byrne 1959; Heizer and Baumhoff 1961:128; and Clewlow 1967). Desert Side-notched arrowpoints occur at the Rose Spring site in the Early Cottonwood phase that dates from 1300 to 1840 AD, (Lanning 1963:254). (see Figure 9, page 31).

Another type of projectile point found at the Indian Creek site is that of what appears to be a late period arrowpoint called the Rose Spring Corner-notch. Three small Rose Spring Corner-notched points were recovered during excavation. Two Rose Spring Corner-notch points were found within levels 3 in Test Units 4 and 8, both within close proximity to the dated hearths, yet lower in stratigraphic context. A third Rose Spring Corner-notched point was recovered from a test unit #1, level 8, at a depth of 70 to 80 cm below surface. Two small obsidian point types were found within level 3 and 4. The wide separation of the Rose Springs Corner-notched projectile points and tips may have been due to bioturbation. Rodent tunnels were widely spaced and clearly discernable in all of the stratigraphy.

Because the Rose Spring points appear to occur deeper in the soil and are found with and below the Desert Side-notched arrowpoints, they are assumed to date contemporarily with the late prehistoric period. At Hogup Cave in Utah, Rose Spring points were found in stratigraphic relationship below Desert Side-notch points (Aikens 1970:56). Rose Spring Corner-notch points and Eastgate expanding stem points have been assigned a date range of 600 to 1300 AD (Lanning 1963; Clewlow 1967). One Eastgate Expanding Stem point had been recovered from the eastside of the Indian Creek site.

Desert Side-notched arrowpoints, Rose Spring Corner-notch arrowpoints, and the one Eastgate Expanding Stem projectile point types are all projectile points associated with Great Basin ethnic groups.

Given the absence of any diagnostic Plateau projectile points, the site appears to have been occupied by a Great Basin ethnic group. The recovered greyware potshards from the previous excavation on the west end of the Indian Creek alluvial fan site lends additional support to the probablilty that this site was occupied by Shoshonean-speaking people.

The chronology and diffusion of material culture as evidenced by the presence of pottery has long been a subject of controversy in Idaho (Butler 1979; Plew 1980 a & b; Harrison and Hanson 1980; Butler 1987). Although it has been generally accepted that Shoshonean speaking groups made the flat bottomed "flowerpot" style coarse low-fired pottery known as Intermountain Tradition Ware, it is by no means clear whether they were the only ones to do so (Butler 1979; Plew 1994).

Fortunately, it is well established that the Northern Shoshone group known as the Tukudika or Sheepeaters were settled in the drainage of the Middle Fork of the Salmon River during the ethnographic period (Steward 1938:188; Reddy 1995: 4-5; Pavesic 1978:9). Also, indicative of the Great Basin culture area during the late prehistoric period are projectile point types including the distinctive Desert Side-notch, Eastgate Expanding Stem, Rose Spring series, and Cottonwood triangular types of projectile points found throughout the Middle Fork of the Salmon River Drainage, denoting a presence prior to the protohistoric period (Knudson et al. 1982; Stoddard 1996). Since the South Fork of the Salmon River is a tributary to the Main Salmon River, and the Middle Fork of the Salmon River is a tributary to the Main Salmon River, the river systems being connected would have been travel routes for prehistoric people. Since there is confirmed evidence for the presence of Shoshonean speaking people within the Middle Fork, it can be assumed that the South Fork was also occupied by Shoshonean speaking people. However, it must not be assumed that all late period sites in the South Fork of the Salmon River were occupied by Shoshonean speaking people. Rockshelter site PY-60/10IH1580 (Winfrey 1993) contained Plateau styled arrowpoints. Also, the Nez Perce Tribe as well as the Shoshone-Bannock tribes seasonally visit the South Fork of Salmon River annually to procure Chinook salmon.

Typological cross-dating is a fundamental archaeological technique used by archaeologists (Jennings 1974:22). It has been used in conjunction with stratigraphic sequencing, and in association with radiometric dating. The Desert Side-notch and Rose Spring Corner-notch arrowpoints are two distinctive types, made only in certain regions of the American West over specific periods of time. When such diagnostic arrowpoints are found in stratigraphic sequence at an excavated site, their time of occurrence relative to one another is established. Thereafter it is possible to infer a tentative date as to when the same diagnostic types are found elsewhere on the Payette National Forest.

V. LITHIC TOOLS AND DEBITAGE

Projectile Point Descriptions

A total of six projectile points and four point tips were recovered from the Indian Creek alluvial fan excavation. Any discussion of projectile points must include some discrimination in style types. The identification and description of each style type is derived from the existing available archaeological literature. The present description will ascribed the projectile points from the Indian Creek site to the idealized point styles prevalent in the literature for the region. All of the following projectile points are considered arrowpoints.

Desert Side-notch (Figure 9 a-c see page 31)
Number of Specimen: (3)
Description: These are small obsidian arrowpoints. All three points are not complete and are broken and have missing parts. However, enough features remain on these three specimen to identify them as being Desert Side-notch arrowpoints. The diagnostic features identifying these points as Desert Side-notch are the side-notch and their overall size. Each point has one remaining tiny side-notch. On all three specimen the notch was placed at about 1/4 to 1/3 of the way up from the base on the lateral edge. There are no other small arrowpoint types, so far found, on the Payette National Forest that can be confused with the Desert Side-notch.
Material: Black semitranslucent obsidian

Measurement Ranges		Comparisons:
Length	:21.9 mm* - 15.4 mm	Baumhoff and Byrne, 1959
Width	:12.5 mm - 9.2 mm*	Heizer and Baumhoff, 1961: Figure 3, a-h
Thickness	: 2.8 mm - 2.4 mm	Gruhn, 1961: Plate 14, d-g
Neck Width:	incomplete (*)	Lanning, 1963: Plate 6, j
		Clewlow, 1967: Figure 18, a-c
		Fagan, 1974: Figure 14, u-y
		Kingsbury 1977: Figure 15, a-e

Rose Spring Corner-notch (Figure 9 d-f, see page 31)
Number of Specimen: (3)
Description: These are small obsidian arrowpoints. One point is complete and the other two are missing their tips. These points are lenticular on cross section. Their sides vary from straight to slightly convex and concave. The bases vary. On one point the base is straight and on the other two points the bases are rounded. Notches are placed at an angle displaying corner-notches. Corner-notches are clearly defined and are bigger than the notches in the Northern Side-notch points.
Material: Black semitranslucent obsidian

Measurement Ranges		Comparisons:
Length	:19.8 mm - 17.4 mm*	Jennings 1957: Figure 107
Width	:12.5 mm - 11.5 mm	Gruhn 1961: Plate 14, x-y
Thickness	: 3.8 mm - 3.5 mm	Lanning 1963: Plate 7, c
Neck Width:	6.8 mm - 5.5 mm	Clewlow 1967: Figure 2, a-z
		Heizer and Clewlow 1968: Figure 6, i-o
		Aikens 1970: Figure 18, g-i

Drill (Figure 11 a, see page 33)
Number of Specimen: (1)
Description: This single specimen has a short stubby chipped blunt point that is cylindrical in cross-section. From the drill's tip, the base expands which can be grasped between thumb and forefinger, or which could have once been hafted. There are side-notches at the base suggesting that this tool may have once been hafted.
Material: Black basalt
Measurements
Length :33.0 mm
Width :20.7 mm
Thickness : 7.1 mm
Neck Width: 9.0 mm

Comparisons:
Aikens 1970: Figure 33, a-d
Cinadr 1976: Figure 21, a-d
Dalley 1976: Figure 18, a-f
Kingsbury 1977: Figure 19, a-d

Biface Fragment (Figure 11 b, page 33)
Number of Specimen (1)
Description: This fragment of a tool had been flaked on two surfaces prior to fracturing lengthwise. This piece of semitranslucent black obsidian was the largest piece of obsidian found in the whole excavation.
Measurements
Length :32.9 mm
Width :19.3 mm
Thickness : 4.4 mm

Utilized Flake Tools (Figure 11 c,d and Figure 12 a-e, pages 33 and 34)
Number of Specimen: (7)
Description: Utilized flake tools are irrigularly shaped small flakes. They are made from various kinds of lithics that have the diagnostic indicator of a one sided chipped worked edge (uniface). The chipped worked edge on the utilized flake edge will be uniform and consistantly rendered. Some of the worked edges were finely flaked to a serrated edge and were probably used as cutting tools. One small uniface was chipped to a tiny sharp point (Figure 11 b) and has a concave underside like that of a steepend scraper. Other utilized flake tools have a coarser flaked worked edge like that of the edge of a larger steepend scraper. Tools like these are not always described in archaeological reports because they are subtle, small and often lumped into a generic category of chipped stone. These micro tools are special. They represent a distinct specilized tool kit category. All of the chipped stone tools at the Indian Creek alluvial fan site were small in size and scale. The largest flaked stone tool from this site is the above described drill that is only 33.0 mm in length. The small size of the tool kit at this site may represent a lack of available stone for making new and larger tools.
Material: Basalt (4), Cryptocrystaline silicates (3)
Length :33.0 mm - 7.4 mm
Width :23.8 mm - 9.5 mm
Thickness:10.5 mm - 2.8 mm

Debitage

Debitage is the residual lithic material resulting from prehistoric stone tool manufacture and tool maintenance. Debitage is also referred to as wasteflakes and/or chips. Debitage is useful in determining stone tool manufacturing techniques and revealing the lithic technology used during the flintknapping activity. Debitage represents the intentional and unintentional breakage of stone and obsidian. Debitage wasteflakes usually represent the various stages of progress while reducing the raw material from the natural form to the finishing stages of making sharp pointed tools.

In total 984 wasteflakes were recovered from the excavation during water screening and dry shaker screening. All soil matrix was processed through 1/8 inch hardware screen for greater recovery of the smallest tertiary wasteflakes. Wasteflakes were sorted into three categories. Primary wasteflakes have cortex somewhere on the flake. Secondary wasteflakes have no cortex, are large and were produced during percussion flintknapping. Tertiary are the smallest wasteflakes that were produced during pressure flaking.

Tertiary wasteflakes were by far the most abundant artifacts recovered from the excavation. Tertiary wasteflakes were produced during the final stages of tool manufacture and during tool sharpening and/or maintenance. Pressure flakes are detached from the stone tool edge by using a pressure flaker. Prehistoric people used antler tines for pressure flakers. The removed tiny wasteflakes are the tertiary wasteflakes.

Lithic Material

All of the primary, secondary and tertiary wasteflakes were sorted and quantified. There were 415 wasteflakes of black semitranslucent obsidian, 331 wasteflakes of black basalt, 196 wasteflakes of multi-colored cryptocrystaline silicates and 42 wasteflakes of quartzite for a total of 984 wasteflakes. By far, the most abundant category of wasteflakes were of the tertiary category.

A total of 28 tools were recovered from the excavation. Ten tools were made from obsidian, 7 tools were made from basalt, 3 tools were made of cryptocrystaline silicates, 4 tools of quartz, and 4 tools were made from bone.

VI. VERTEBRATE REMAINS AND TOOLS

Unmodified and modified burnt and unburnt vertebrate faunal remains were recovered from the 2 by 5 meter trench excavation within levels one, two and three, between soil depths from -5 to -30 cm below surface. The sample was considered large compared to other prehistoric sites on the PNF. The total weight of the recovered bones amounted to 437.36 grams/15.4 ounces. Some of the recovered bone elements are illustrated within this report. (see figures 13-19, pages 35-41).

All of the recovered bone elements and fragments appeared to be from mammals, with the exception of two tooled long bone elements which may have been from large birds (avis). The bone samples have been fragmented through cultural and natural processes particularly marrow extraction, butchering, food processing and decay. Mammal long bone fragments exhibit surfaces that were burnt and unburnt. All of the recovered bone fragments and elements were adjacent to the three hearth features. This suggests that food processing was the prehistoric activity taking place in the area of the hearth features.

The mammal bones appear to be Artiodactlya, mule deer and/or big horn sheep and are probably Odocoileus sp. (deer). However, this has yet to be verified by an expert with a comparative collection. All of the mammal bone elements are post-cranial.

Modified Bone Elements

Four long bone elements have been intentionally culturally modified. Two mammal long bone fragments were made into awls. Two other (avis?) long bones had tooled ends. Each of these culturally modified bone tools are described below.

Long Bone Awls (Test Unit 6, Level 1 and 2)

Two long bone splintered fragments exhibit polished, faint striations on their tips. These items appear to have been purposefully modified and were likely used in an expedient way in order to do a perforation. See figure 13, page 35. The bone awls measure as follows:

The Longest Bone Awl		The Shortest Bone Awl	
Length:	93.9 mm	Length:	45.5 mm
Width :	16.2 mm	Width:	7.0 mm
Thickness:	8.6 mm	Thickness:	4.5 mm

Bone awls were recovered from the Shoup Rockshelters and were manufactured from split long bones (Swanson and Sneed 1966:32, 42).

Hollow Long Bones

Two hollow long bone fragments were culturally modified on one end on each fragment. Because these bones are hollow, it is assumed that they are from a large bird. (see figure 14, page 36). The short long bone segment appears to be that of an incomplete tubular bone bead. The longer hollow bone appears to be the material source for making tubular bone beads. These artifacts measured as follows:

Shortest Hollow Bone		Longest Hollow Bone	
Length:	22.7 mm	Length:	78.4 mm
Width :	6.8 mm	Width :	13.7 mm
Thickness:	5.5 mm	Thickness:	6.5 mm

Tubular bone beads were found at rockshelters PY-60/10IH1580 on the South Fork of the Salmon River (Winfrey 1993) and at PY-147/10VY67 Big Creek Cave in the Frank Church-River of No Return Wilderness (Wylie, Scott, and Gallagher 1981:Figure 15). At rockshelter PY-60, the tubular bone bead was recovered from a 1 by 2 meter test unit excavated to a maximum depth of 60 cm below surface. This site was occupied during the late prehistoric period based on diagnostic arrowpoints and a corrected radiometric date of 840 +- 70 years, or AD 1110 (WSU-4480). The radiocarbon sample was removed from test unit 1, level 5, at 50 to 60 cm below surface. The tubular bone bead was recovered from above the radiocarbon sample from test unit 1, level 2. Based on where the tubular bone bead was found within its stratigraphic placement, the tubular bone bead was younger in age than the radiometric date.

At the Indian Creek site, the above mentioned modified long bone that appears to be a tubular bone bead was recovered within the trench, level 2, where three radiometric dates that ranged from AD 1520 to 1680. It is probable that the prehistoric people within the South Fork of the Salmon River were making tubular bone beads between AD 1110 and AD 1680. According to Madsen, various decorations were used by both sexes among the Bannock Indians. Women wore necklaces of elk teeth and bone tubes (Madsen 1983:32).

VII. OBSIDIAN SOURCE ANALYSIS

X-ray Fluorescence Analysis of Obsidian and Artifact-to-source Results

Obsidian was not a common artifact recovered from the Indian Creek prehistoric site. Most of the recovered obsidian consisted of tertiary wasteflakes. Tertiary wasteflakes were likely produced during prehistoric obsidian tool sharpening and maintenance. Four tertiary wasteflakes were selected, documented and packaged for artifact to source determination. The four specimen were sent to Richard E. Hughes, Ph.D., Director of Geochemical Research Laboratory for x-ray fluorescence (xrf) analysis. (see Table 3, page 22). The results are as follows:

> "Geochemical data for three flakes match the distinctive trace element (signature) of obsidian from Timber Butte, Idaho while the fourth conforms to the fingerprint of Dooley Mountain, Oregon, obsidian." (Hughes 1994)

The laboratory analysis conditions and artifact-to-source (geochemical type) attribution procedures applicable to this group of samples were similar to those reported for obsidian artifacts recovered from PY-60/10IH1580, on the Payette National Forest (Hughes 1994). PY-60/10IH1580 is a complex site consisting of four housepits, a large pictograph panel and rockshelter containing pictographs on granitic rock faces and stratified cultural deposits within a rockshelter. This site was tested by USDA Payette National Forest personnel in August of 1993. Eight samples of obsidian from PY-60/10IH1580 were packaged and sent to Richard E. Hughes, Ph.D. for artifact-to-source determination.

All of the obsidian specimen analyzed originated from the Timber Butte, Idaho source. The distance from Timber Butte obsidian source to PY-60/10IH1580 is approximately 90 linear miles. Indian Creek site and PY-60/10IH1580 are within the South Fork of the Salmon River and are separated by a distance of 20 river miles. The distance from the Indian Creek site to Timber Butte is approximately 70 linear miles. The distance from Indian Creek to Dooley Mountain in eastern Oregon is approximately 112 linear miles. The presence of obsidian from Timber Butte, Idaho and Dooley Mountain, Oregon suggests prehistoric transhumance.

The linear distance as measured from artifact-to-source is actually greater when considering that there are natural barriers and obstacles preventing linear travel. For example, the area between Dooley Mountain, Oregon includes such physiographic features as the Hells Canyon, Snake River, and two major mountain ranges prior to reaching the valley of the South Fork of the Salmon River. The 112 linear miles distance for the walking prehistoric people was probably more like a distance of 160 to 180 miles from artifact-to-source. Another archaeological observation about recovering small obsidian tools and tertiary wasteflakes is that by the time the prehistoric people reached the Indian Creek site, their supply of obsidian was nearly used up. The small tool kit and debitage at the site suggests that their obsidian was curated and thoroughly used to exhaustion.

VIII. ARCHAEOLOGICAL INTERPRETATION AND MANAGEMENT RECOMMENDATIONS

The Salmon River Mountains are considered part of the summer range for the Northern Shoshone speaking peoples, identified as the Tukudika (Sheepeaters). The Nez Perce Indians were also known to have collected resources within the South Fork of the Salmon River (Mann 1918).

In the records of the USDA Idaho National Forest, written by Forest Ranger Walter G. Man, dated January 28, 1918, he clearly states where the Nez Perce Indians camped at the confluence of Cougar Creek and the South Fork of the Salmon River. Walter Mann's report was for evaluating a homestead application where the Nez Perce seasonally camped and fished for salmon. Mann reported the following:

> This flat is known as the old Indian camp. Every summer the Indians come in from the Nez Perce country, camp and fish for salmon. They usually stay about four weeks, and have used this flat during the salmon run for years. In 1917 about 30 Indians were camped here at one time. The Indians buy up old deer hides whenever they can get them and take them to this camp to tan them. When I was there on October 17, 1917, the camp grounds had been left in good condition. Hair from the hides was piled against a tree and not scattered. The wigwam sticks were all standing against trees waiting ready to be used next season...A big objection to listing the land is, in my opinion, the old Indion camp along the river. It seems that the Indians should have some kind of an equity in the area, by reason of their long continued use of it as a camp ground, and I would not like to see them driven away (Mann 1918:1-7).

This 1918 account of the Nez Perce Indians camping and fishing along the South Fork of the Salmon River clearly confirms their presence. Vonda Kirk of McCall, Idaho, a Nez Perce Tribal member interviewed tribal elders in July of 1994. In an interview with Archie Lawyer of Grangeville, Idaho, he stated that his family camped along the South fork of the Salmon River during the late summer. He confirmed that the area around the Krassel Guard Station has always been a traditional site for the tribe as well as various other sites up this river, along the East Fork of the South Fork and over to Big Creek and the Middle Fork of the Salmon River.

It is important to remember that the above mentioned drainages are areas also used by the Northern Shoshone and Bannock Tribes in contemporary times. The Northern Shoshone and Bannock visited the upper reaches of the South Fork of the Salmon River annually to take Chinook salmon in demonstrating that they retain a treaty right to hunt, fish and camp on National Forest system lands. The Northern Shoshone and Bannock seasonally visit and access the South Fork of the Salmon River in several places extending north from Warm Lakes into the area of the Payette National Forest and the Poverty Flat campground.

The archaeological record at the Indian Creek alluvial fan site suggests an even greater antiquity for Great Basin peoples such as the Shoshone - Bannock people camping on the South Fork of the Salmon River ranging in time from AD 1520 to AD 1680. These dates suggest occupations prior to the introduction of the horse.

The earliest dated Plateau archaeological component within the South Fork of the Salmon River is that of rockshelter PY-60/10IH1580 which was radiocarbon dated 840 +- 40 years before present, AD 1110 (Winfrey 1993). Archaeologists can expect to find older archaeological components.

The resources of the South Fork of the Salmon River included an abundance of animal and plant items. In prehistoric and early historic times there were as many as five runs of anadromous fish in the South Fork. Today, elk, deer, bighorn sheep and mountain goats still live within the area. Grizzly were in the area of the South Fork until circa 1916 when the last grizzly bear was killed, (Rowland 1992).

The faunal remains found at the Indian Creek site suggests that hunting was just one of the subsistance activities taking place at that site. Hunting and fishing are components of the Nez Perce, Shoshone and Bannock Tribes. Although no archaeological evidence was found in the Indian Creek site to suggest fishing activity, the multiple hearth features does demonstrate repeated camping and cooking activities, the procurement of large and small mammals, the processing of red meat. Red meat, especially deer probably continued to comprise a major portion of the diet of these people.

Although there was no ethnobotantical analysis performed, that does not mean that such information is not contained within the prehistoric hearth features. The reason why this analysis was not performed was for a lack of funding in order to mail it to a specialist to do the analysis. Other botantical information was observed at this site in what has been identified as a cambium peeled pine tree. (see figure 20, page 42).

Cambium peeled pine trees are what archaeologists have identified as being culturally modified. Some trees were culturally modified hundreds of years ago and had to have been done by Native Americans. These trees can be visually identified by their distinctively shaped scars placed in the trunk of the tree where the bark and inner cambium were removed. Native Americans were known in historical times to use cambium as a resource. Sometimes the cambium was used as a food when it contained a simple sugar and collected in the springtime when the sap was flowing, when it tasted sweet. The cambium was removed and chewed in order to extract the sweet sap (Reddy 1993). Also, years later when the scar had healed, pitch would have accumulated in the scar. This pitch can be easily removed. Many cambium peeled trees on the Payette National Forest reveal shallow axe marks on the scar face of the tree. Pitch can be used for igniting fires, used as a resin for attaching stone tools to a handle (Aikens 1970:59-61), and as a food and medicine (Stoddard 1996 b).

In August of 1996, Steven E. Stoddard accompanied 9 members of the Shoshone-Bannock Tribe, 4 fisheries and biological consultants, and 5 USDA Forest Service personnel on a raft trip down the Middle Fork of the Salmon River. This trip started from Indian Creek Guard Station and continued to the confluence of the Main Salmon River. During the course of this trip, Steve witnessed Claudeo Broncho of the Shoshone-Bannock Tribes, pick up a river cobble spall tool to scrape pine pitch from a previously peeled cambium peeled ponderosa pine tree. Claudeo Broncho related to Stoddard that the use of the inner bark of the ponderosa pine was for chewing and covering cuts to the skin of the body (Stoddard 1996 b).

The above presented evidence clearly indicates that there was not only a distinct set of resources used but also a distinctive cultural type or a whole tradition was using the riverine - forest ecozone for more than 900 years up to the present.

Management Recommendations

Archaeological site testing at the Indian Creek prehistoric site has demonstrated that this cultural property was worthy of listing onto the National Register of Historic Places in 1994. Radiometric dating, obsidian sourcing, lithic artifacts, faunal remains, hearth features and a cambium peeled ponderosa pine tree clearly show that this site contains scientific information. There is potential to obtain ethnobotantical information from the hearths and from the cambium peeled ponderosa pine tree. Faunal elements have survived in buried context within a depth of 10 to 20 centimeters of soil for the past 250 years. The Indian Creek alluvial fan archaeological deposits may continue to be impacted from contemporary human activities and continued site monitoring is encouraged.

The proposed Centennial Trailhead construction has been cancelled for lack of funding for archaeological site mitigation. This site area has experienced surface disturbance in the past with earth moving machinery running over the site, exposing prehistoric and historic debris. If site impacts continue, compliance with Section 106 of the National Historic Preservation Act, as amended is strongly encouraged.

This portion of the Indian Creek site deserves a systematic and contemplative treatment, not so much with urgency as with well planned thoroughness and a research design that encompasses more tha one page of objectives. These generalized conclusions define and describe the archaeological context of this portion of the Indian Creek site, rather than define content. More archaeological work is required before we can effectuate a comprehensive analysis of this prehistoric occupation. This archaeological site is a scientifically valuable and a non-renewable American heritage resource.

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Table 1

USDA - FOREST SERVICE

SOIL DESCRIPTION

1. SOIL SERI	TYPE, PHASE	MAP SYMBOL	CLASSIFICATION	MOD.	OR INTERGRADE TO	DATE	BY	PHO NO.	STOP NO.
		Landtype 105				6/30/94	D.A.M.	—	1

2. AREA	FOREST	RANGER DISTRICT	STATE	COUNTY	LOCATION	
Krassel Station	Payette N.F.	Krassel	Idaho	Valley	SEC. 21	T. 19N R. 6E

3. PARENT ROCK	FORMATION NAME	MINERALS	TEXTURE	FAULTING	WEATHERING	SURFACE STONE AND ROCK
Granite	Idaho Batholith					<5 %

4. LANDFORM	SLOPE	SINGLE	COMPLEX	ASPECT	ELEVATION	EROSION	GULLIES	ALKALI	SALINES
Alluvial Fan	<5%	X		S	3800 feet	Very Low	—	—	—

5. CLIMATIC ZONE (veg.)	PRECIP.	AV. TEMP.	LITTER TYPE	INFILTRATION	PERCOLATION	STORAGE	DRAINAGE CLASS	WATER TABLE (Ft.)
Ponderosa Pine	± 20 inches	°F	grass/needles	Rapid			Well Drained	>6 feet

6. HORIZON	DEPTH (inches)	COLOR Dry, Moist, Crushed	Mottling	TEXTURE	STRUCTURE	CONSISTENCE Dry, Moist Wet, Com.	SPECIAL FEATURES: Clay Films	Stone Rock % Vol.	Roots	Pores		REACTION (pH)	BOUNDARY	PERCOLATION CLASS
O	½-0	(grass, Needles, Twigs)	—											
A	0-4	10YR 4/1 (D) 10YR 2/1 M	—	sandy loam	1fsbk	sp ss	—	<5%	v.fine many	fine few		6.5	CS	
C	4-12	10YR 7/2 (D) 10YR 5/3 (M)	—	coarse sand	sg	ns np	—	70%+ (mechanical coarse)	v.fine common	fine few		6.3	CW	
Ab	12-26	10YR 3/1 (M)	—	sandy loam	1msbk	sp ss	—	<5%	coarse few	medium common		6.2	gi	
Bb	26-38	10YR 4/3 (M)	—	sandy loam	1msbk	sp ss	—	10-15%	medium few	fine few		6.0	gs	
Cb	38-45+	10YR 6/3 (M)	—	loamy sand	sg	sp ss	—	<10%	none	fine few		6.5		

Table 2. Radiometric Dating Results.

WSU#	Sample ID#	14-C Age, Years BP	C13/C12	C13 adjusted age
4534	10VY492 #1	350 +- 80 1950 - 430 years = AD 1520 1950 - 270 years = AD 1680	- 24.940	Age does not change
4536	10VY492 #2	270 +- 60 1950 - 330 years = AD 1620 1950 - 210 years = AD 1740	- 23,668	290 +- 60 1950 - 350 = years AD 1600 1950 - 230 = years AD 1720
4537	10VY492 #3	340 +- 60 1950 - 400 years = AD 1550 1950 - 280 years = AD 1670	- 25,052	Age does not change

Table 3

Geochemical Research Laboratory, Letter Report 94-26

May 18, 1994

Mr. Lawrence A. Kingsbury
Forest Archaeologist
Payette National Forest
106 Park Street, P.O. Box 1026
McCall, Idaho 83638

Dear Mr. Kingsbury:

The table below presents x-ray fluorescence (xrf) data generated from the analysis of four obsidian flakes from site 10VY492 on the Payette National Forest, Idaho. This research was conducted pursuant to Payette National Forest procurement request "1994-23 OBSIDIAN SOU" and your letter request of April 18, 1994. Laboratory analysis conditions and artifact-to-source (geochemical type) attribution procedures applicable to this group of samples were identical to those reported for other artifacts from Payette National Forest sites (Hughes 1994).

Trace and Selected Minor Element Concentrations

Cat. Number	Zn	Ga	Rb	Sr	Y	Zr	Nb	Ba*	Ti	Mn	$Fe_2O_3^T$	Source (Chemical Type)
1	71 ±6	25 ±3	195 ±4	18 ±3	45 ±2	58 ±4	32 ±2	nm	nm	nm	nm	Timber Butte
2	70 ±7	23 ±4	185 ±4	22 ±3	46 ±2	52 ±4	33 ±2	nm	nm	nm	nm	Timber Butte
3	65 ±6	19 ±4	153 ±4	10 ±3	35 ±2	50 ±4	29 ±2	nm	nm	nm	nm	Timber Butte
4	148 ±6	21 ±3	96 ±5	109 ±3	55 ±2	243 ±5	13 ±3	1549 ±20	nm	nm	nm	Dooley Mtn., Oregon

All trace element values in parts per million (ppm); ± = pooled expression (in ppm) of x-ray counting uncertainty and regression fitting error at 400 and 600 (*) seconds livetime.

Geochemical data for three flakes match the distinctive trace element "signature" of obsidian from Timber Butte, Idaho while the fourth conforms to the fingerprint of Dooley Mountain, Oregon, obsidian. I hope this information will help in your analysis of these site materials. Please contact me at my laboratory (Phone: [916] 364-1074) if I can provide further information or assistance.

Sincerely,

Richard E. Hughes, Ph.D.
Director, Geochemical Research Laboratory

Reference

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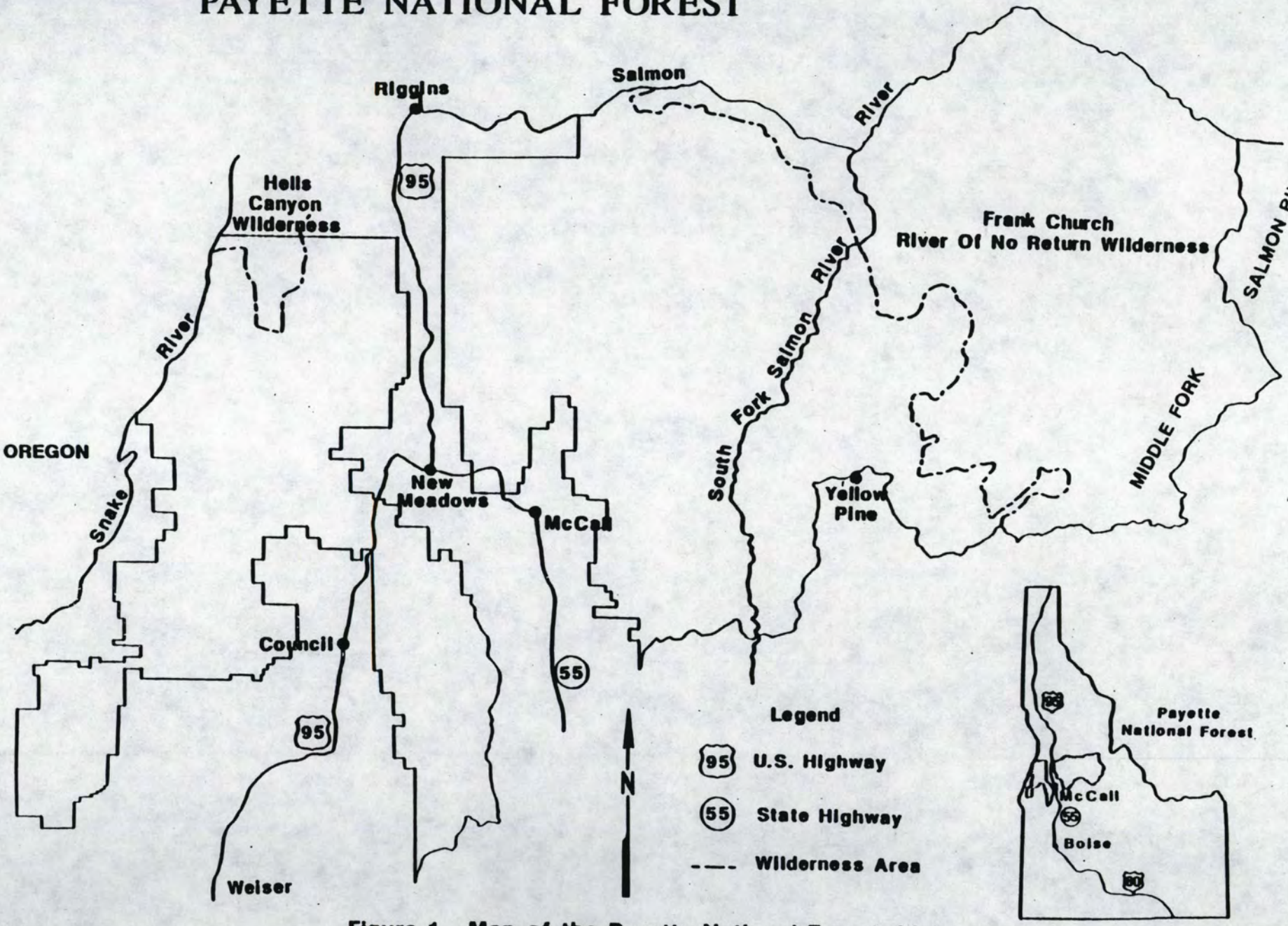
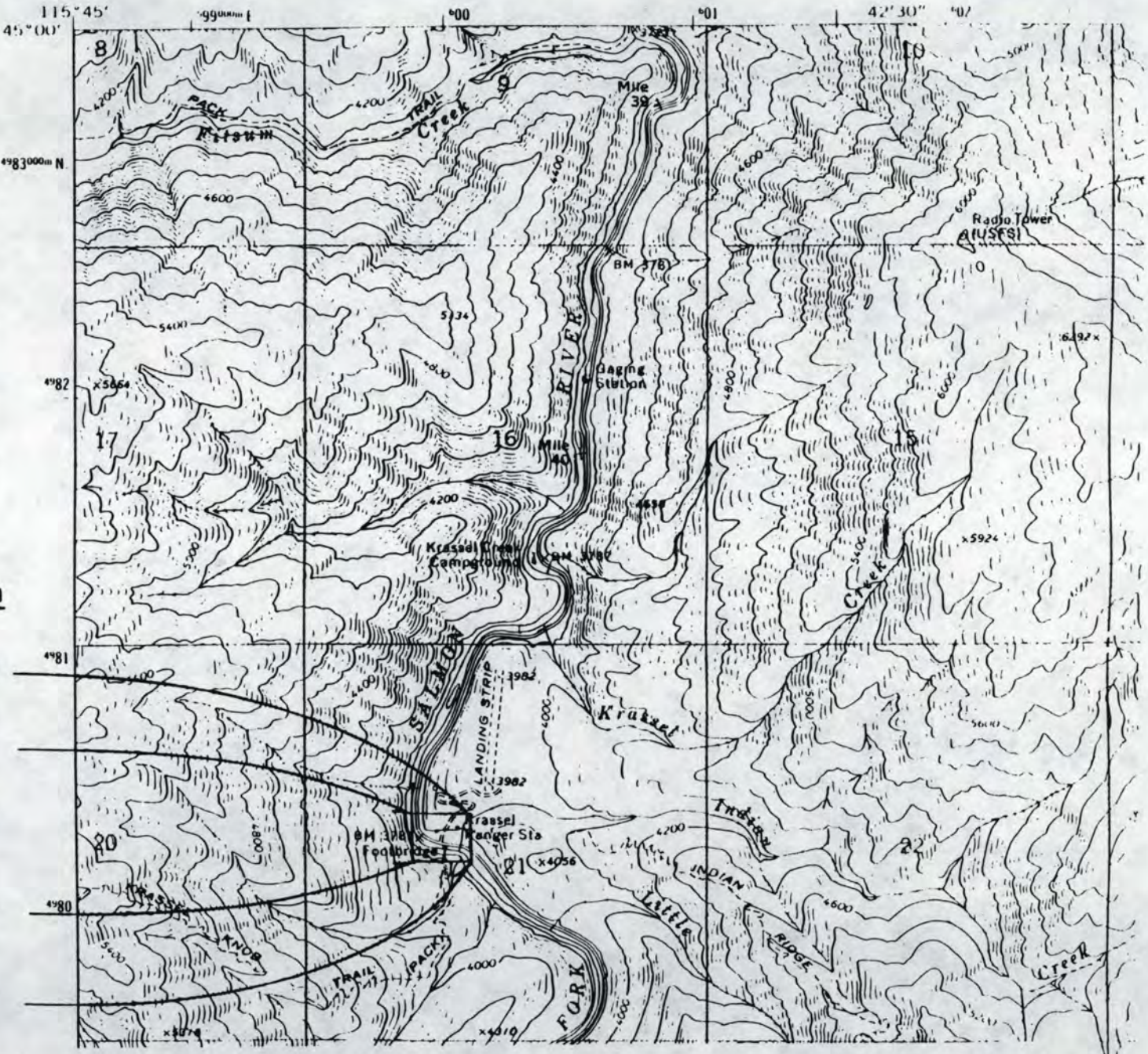


Figure 1. Map of the Payette National Forest, Idaho.



Krassel Ranger Station
10-VY-492

Point A UTM 4980340m.N. 600160m.E.

Point B UTM 4980340m.N. 599920m.E.

Point C UTM 4980150m.N. 599920m.E.

Point D UTM 4980150m.N. 600160m.E.

Figure 2. USGS topographic map showing location of the Krassel Ranger Station

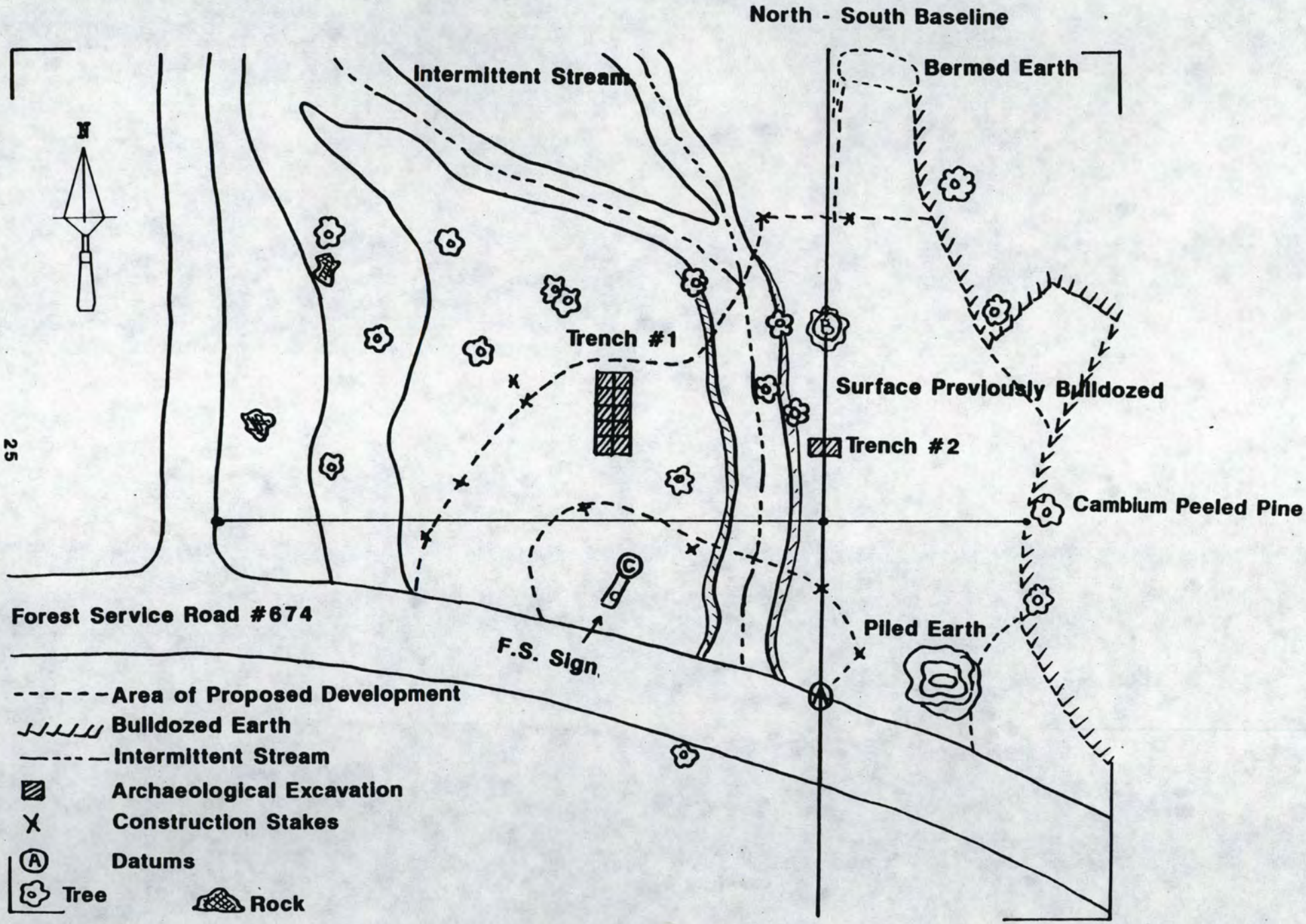


Figure 3. Map of the east side of the Indian Creek Archaeological Site.

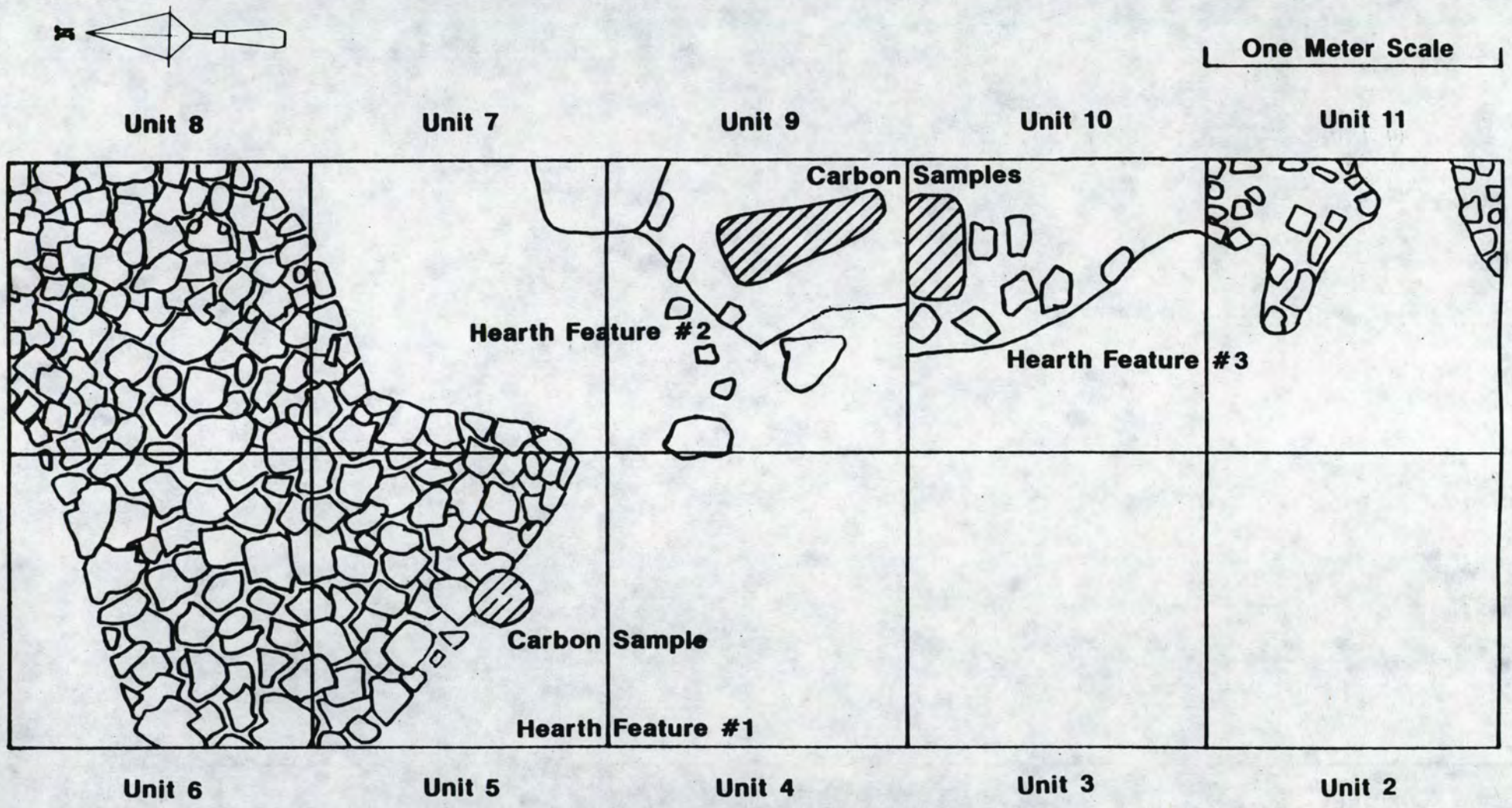


Figure 4. Showing placement of the three prehistoric hearth features within Trench #1.

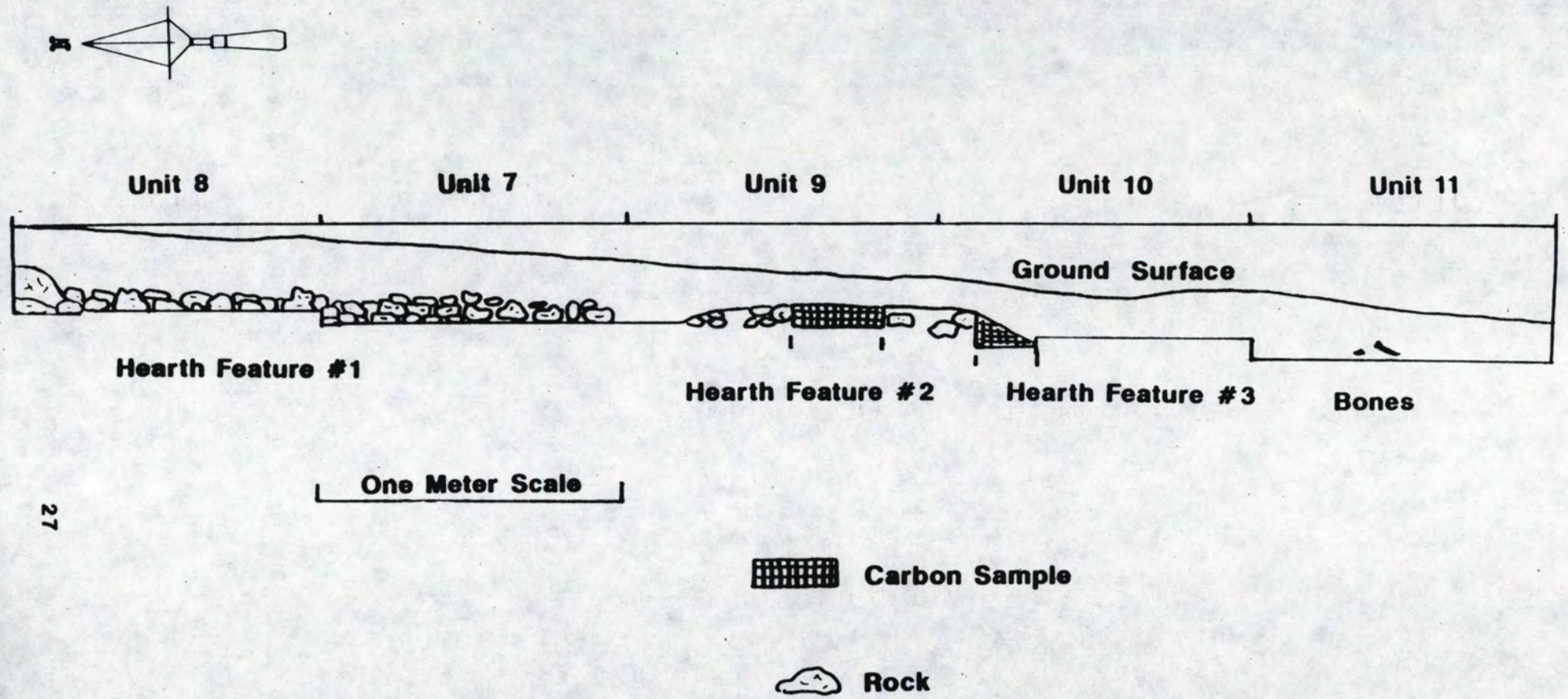


Figure 5. East profile of the east half of excavated Trench #1.

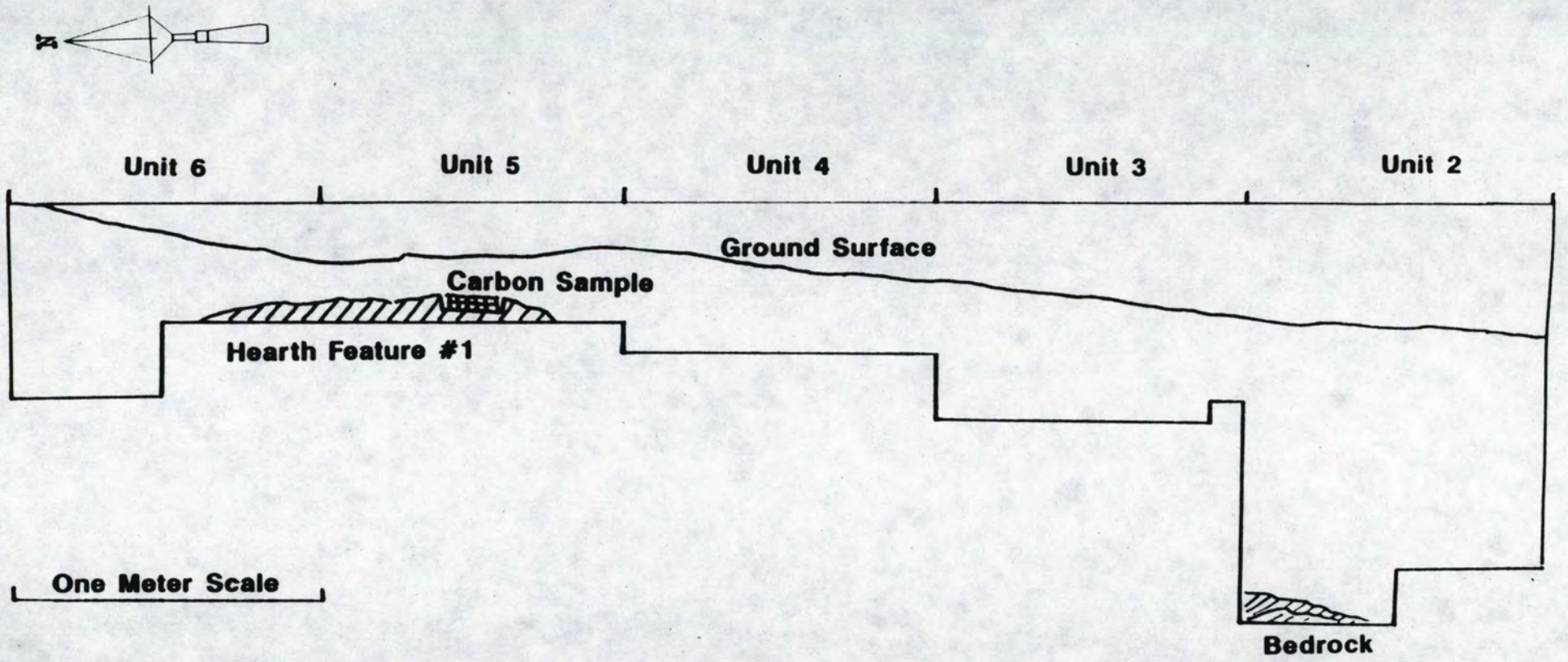


Figure 6. East profile of the west half of excavated Trench #1.

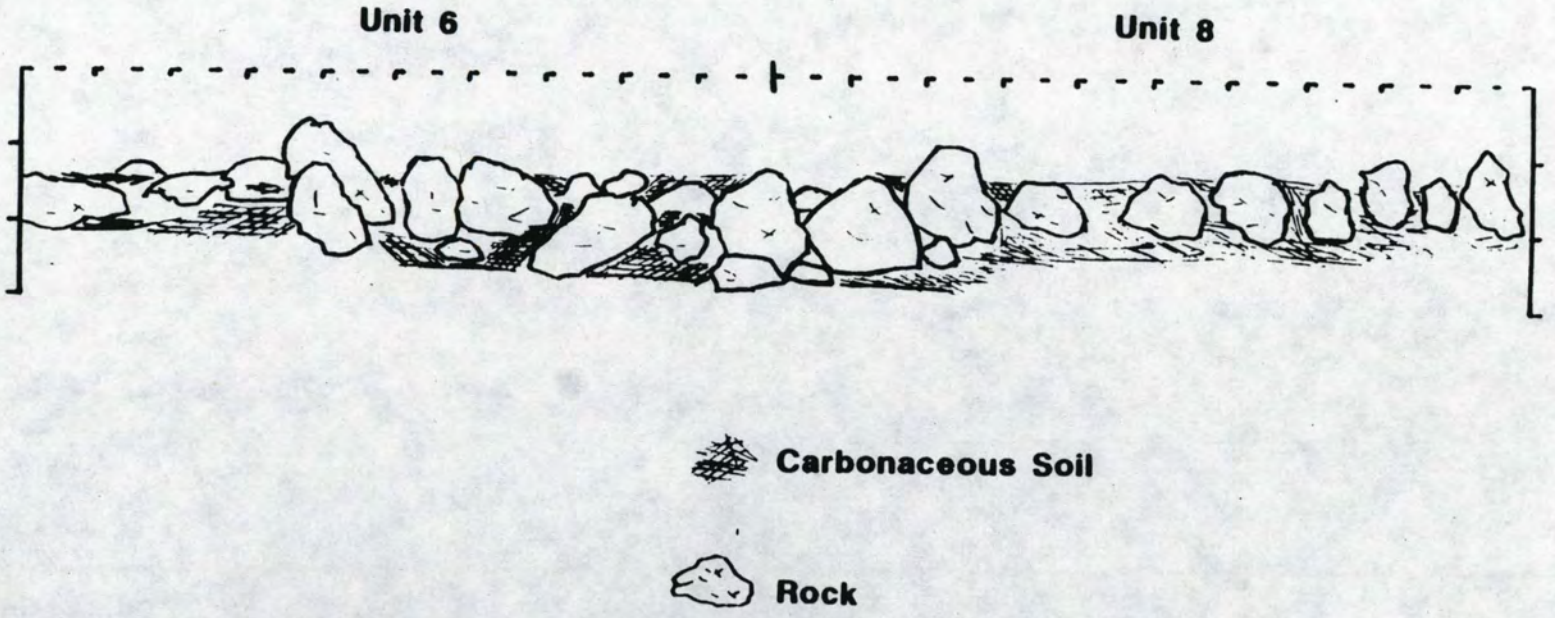


Figure 7. North cross-section profile of hearth feature #1.

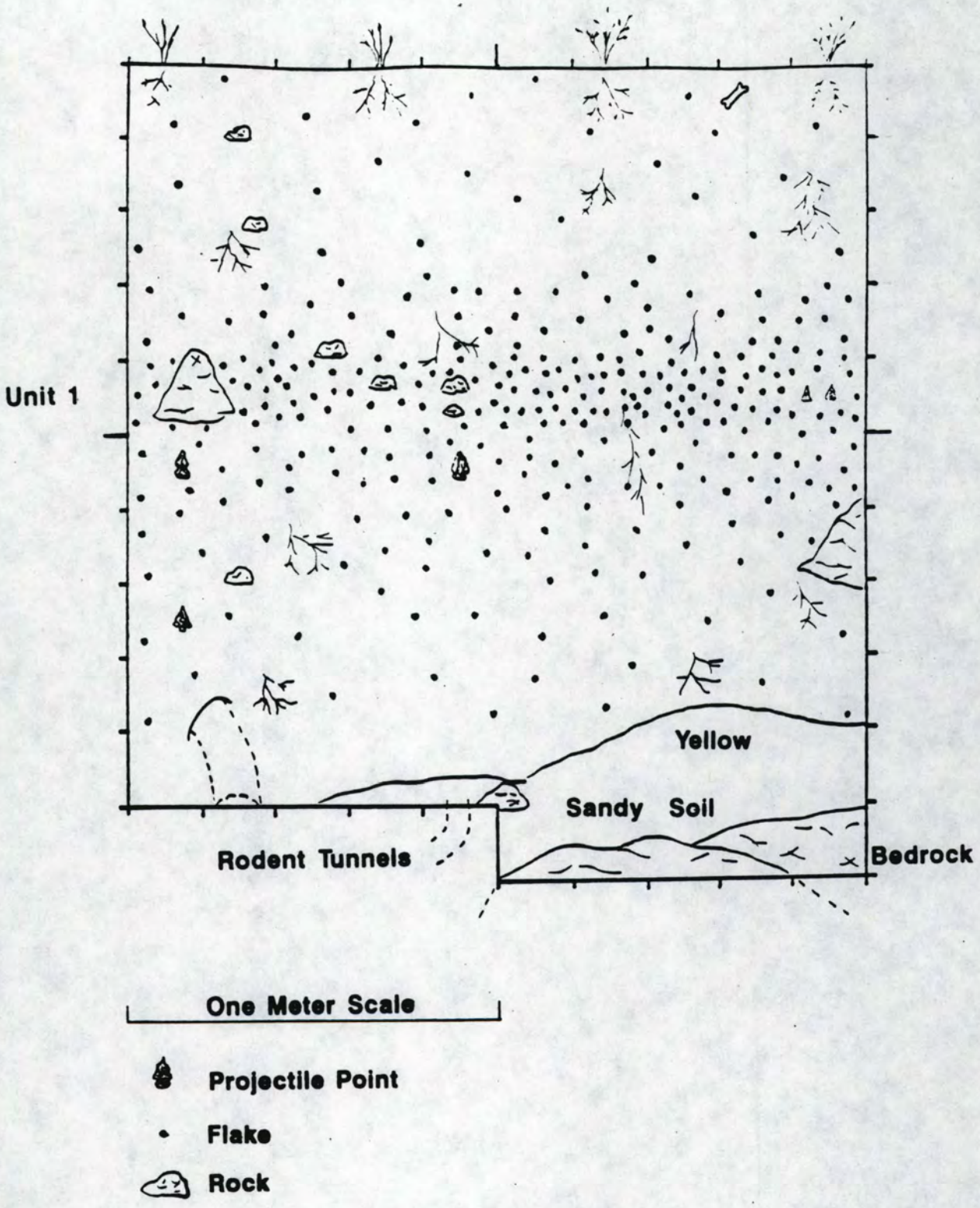


Figure 8. North profile and artifact frequency distribution in Trench #2.

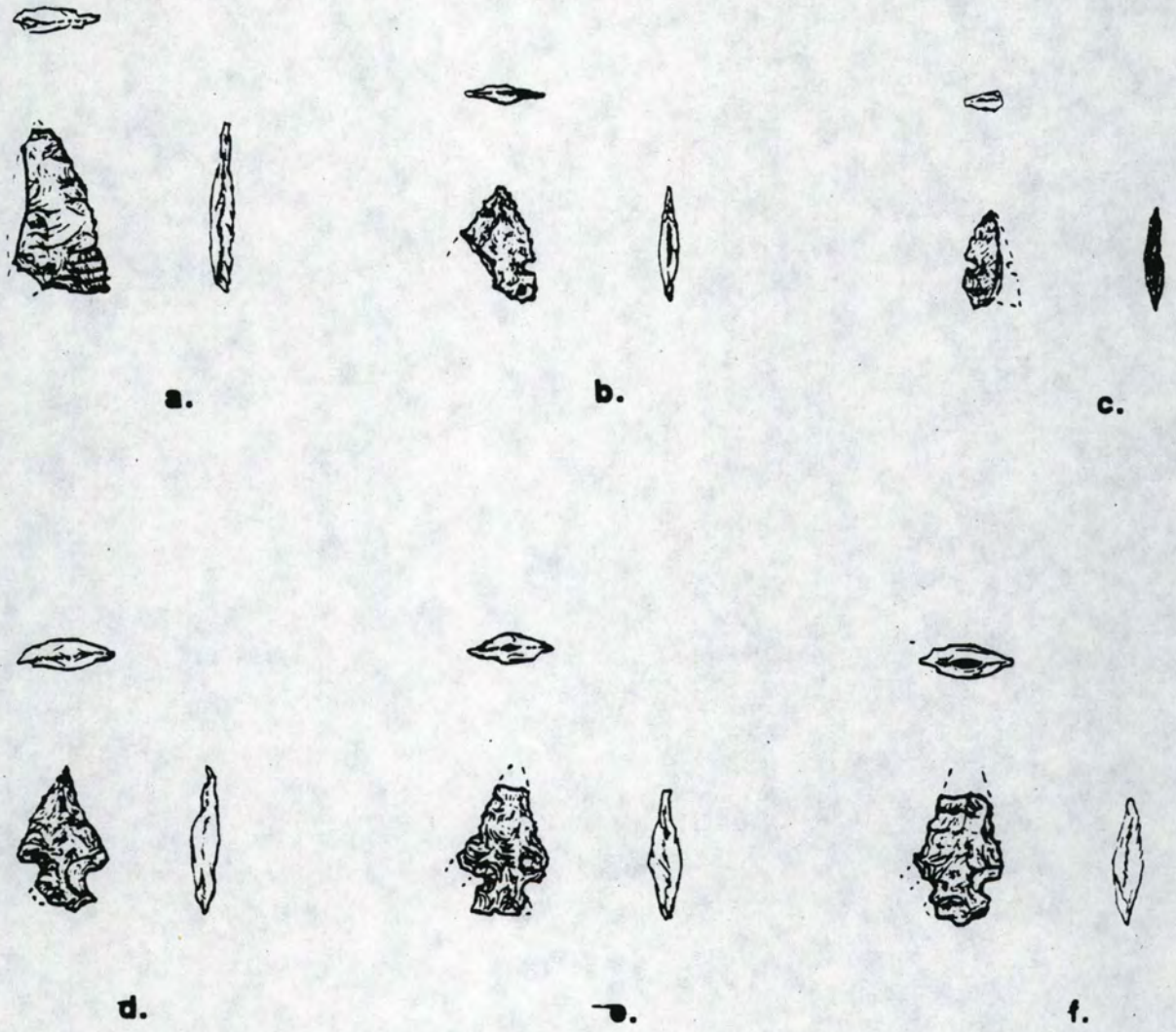


Figure 9. Desert Side-notch arrowpoints a, b, and c. Rose Spring Corner-notch arrowpoints d, e, and f.

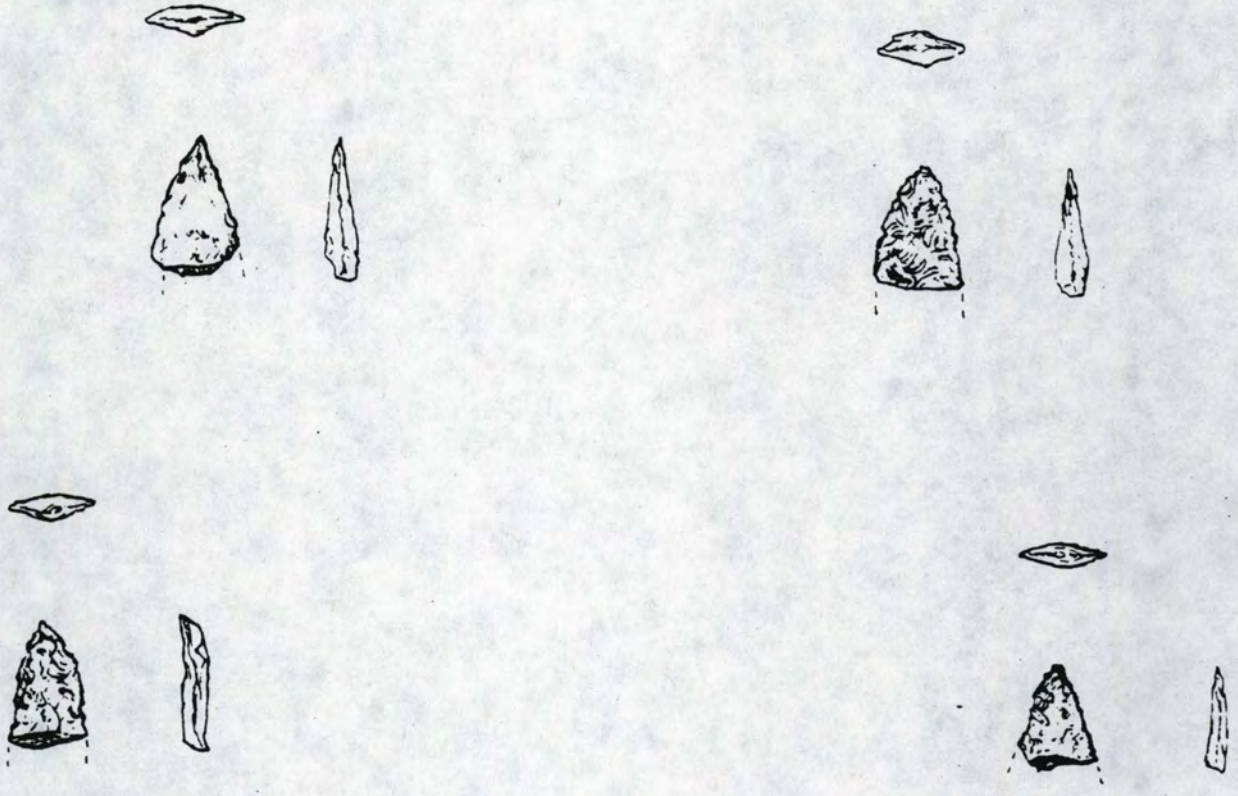


Figure 10. Obsidian projectile point tips.

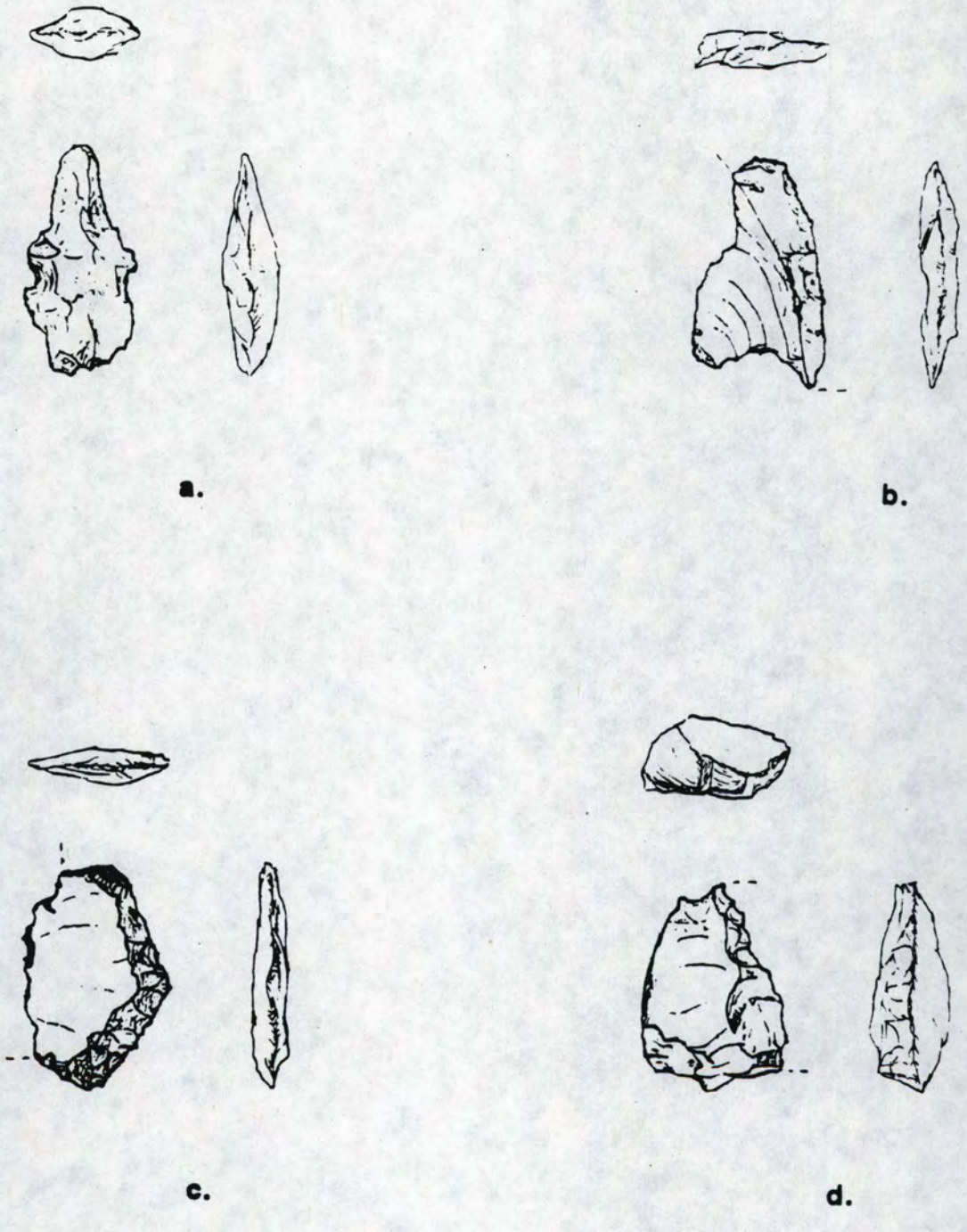


Figure 11. Drill of basalt a. Biface of obsidian b. Utilized flake tools c, d.

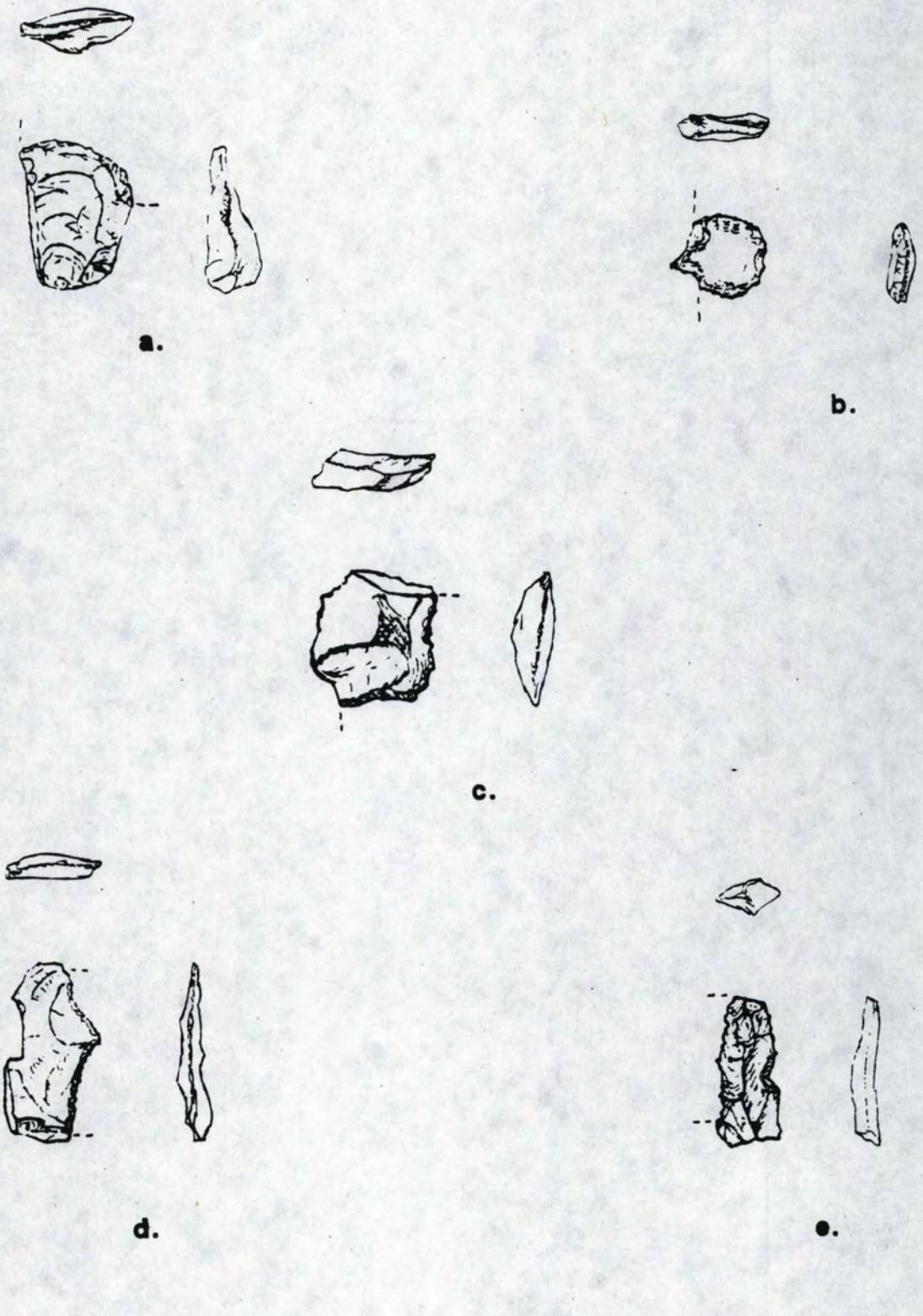


Figure 12. Utilized flake tools a - e.

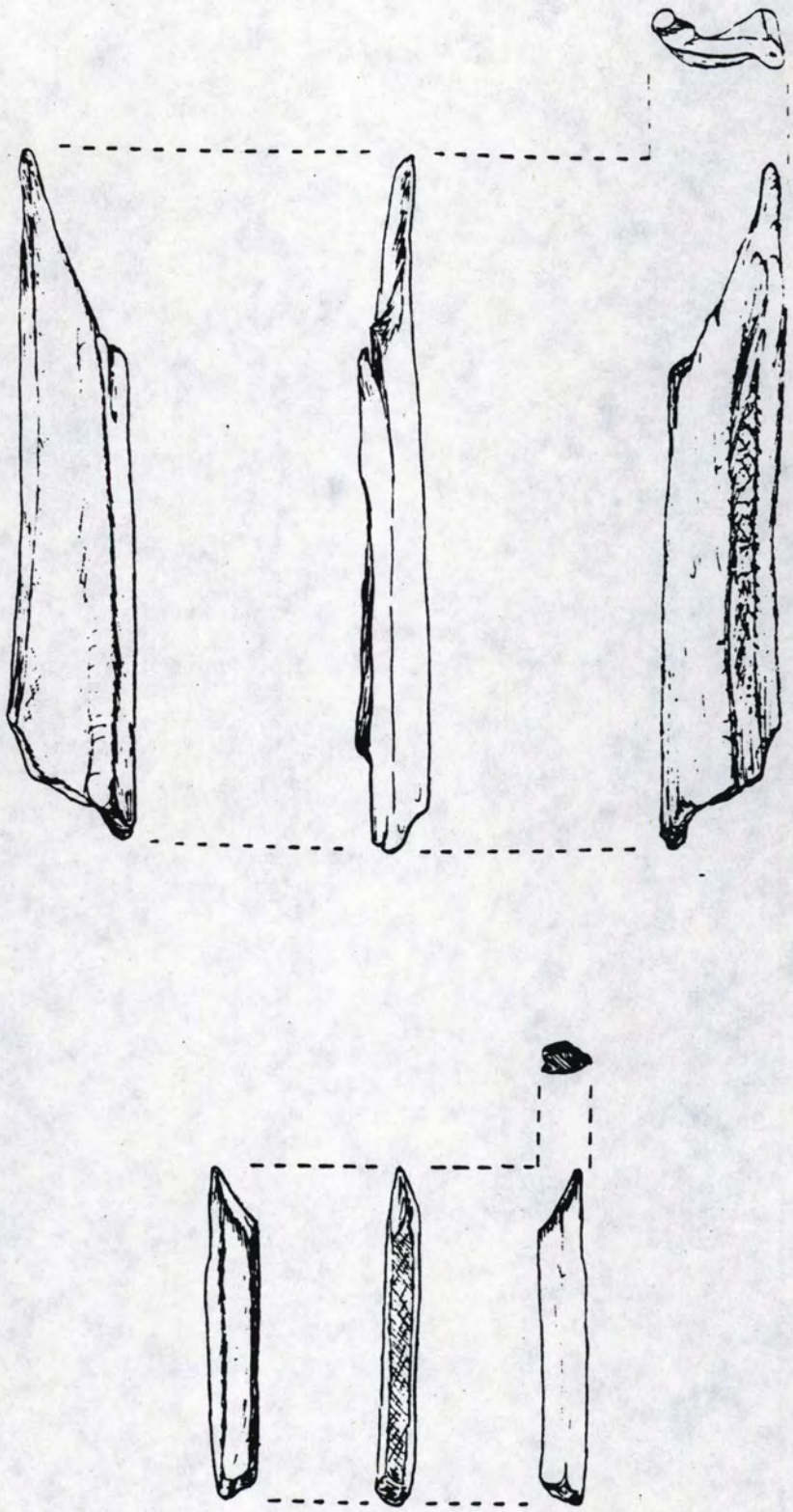


Figure 13. Two long bone awls.

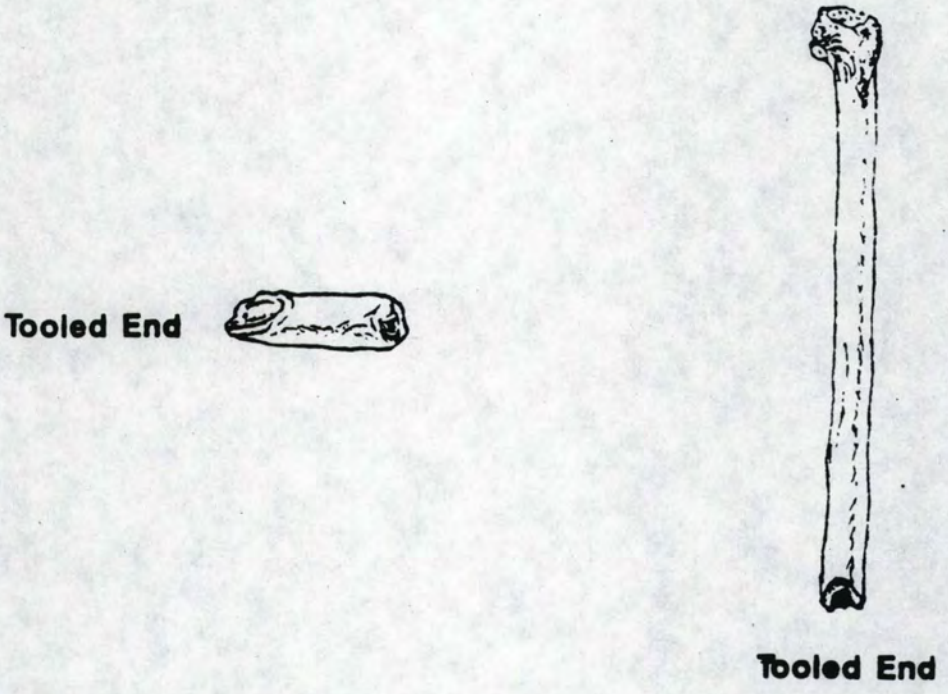


Figure 14. Two culturally modified hollow long bones.

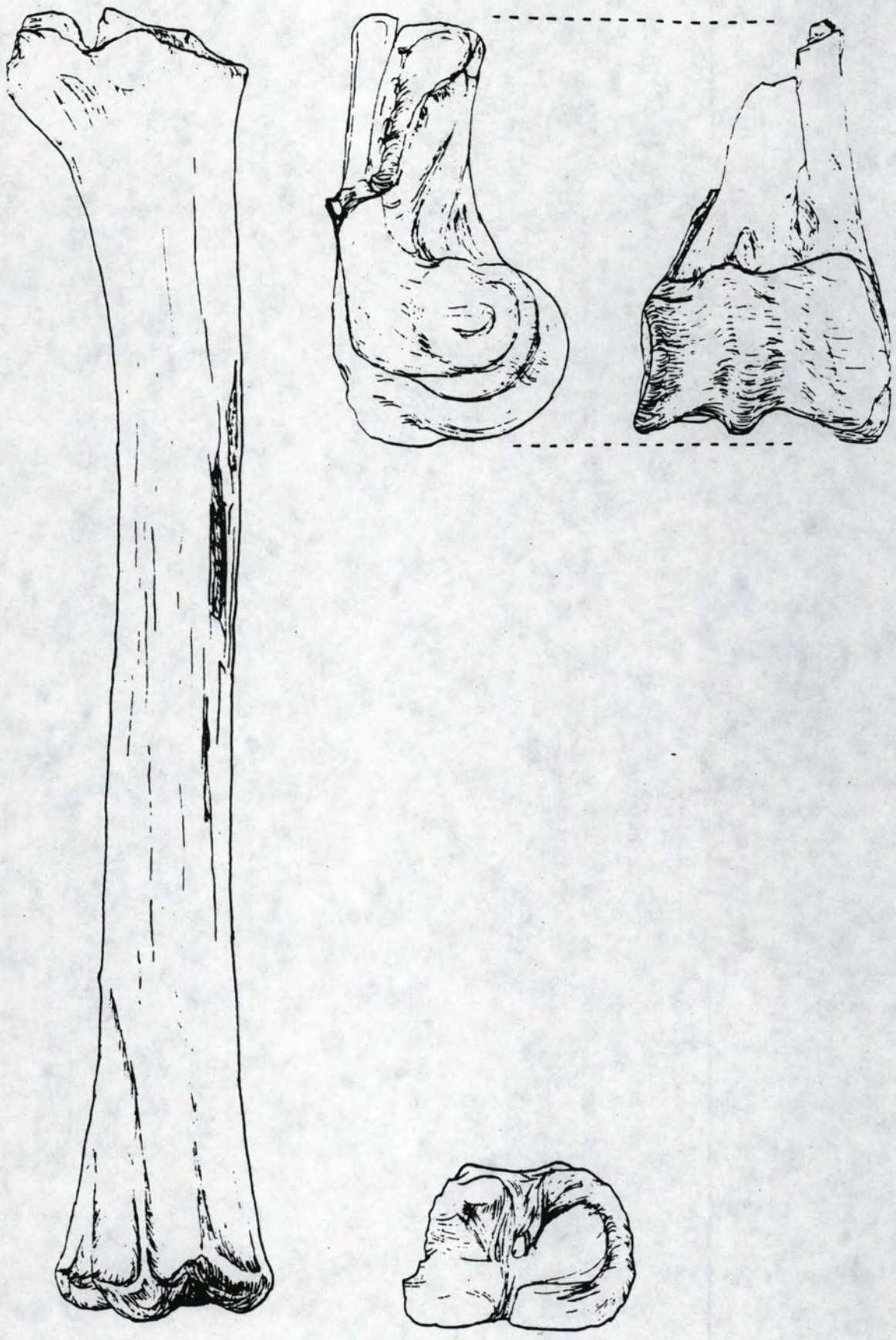


Figure 15. Long bone radius.

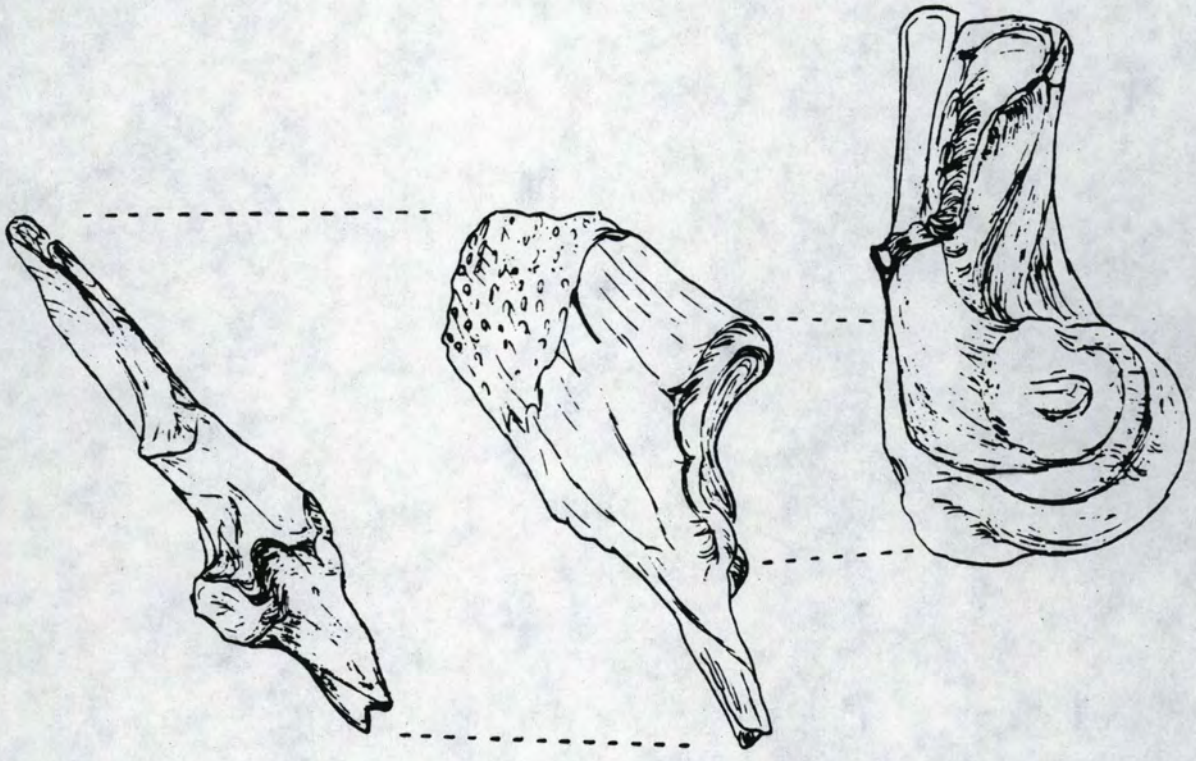


Figure 16. Proximal ulna and distal radius.

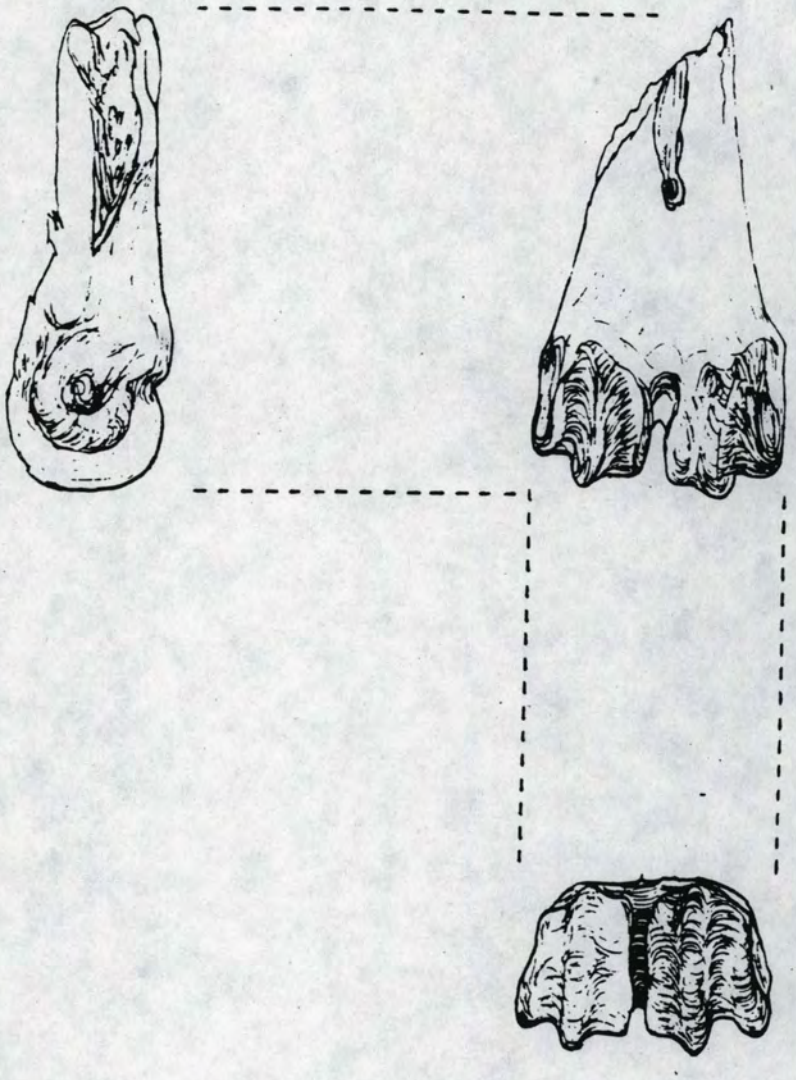


Figure 17. Distal metacarpal.

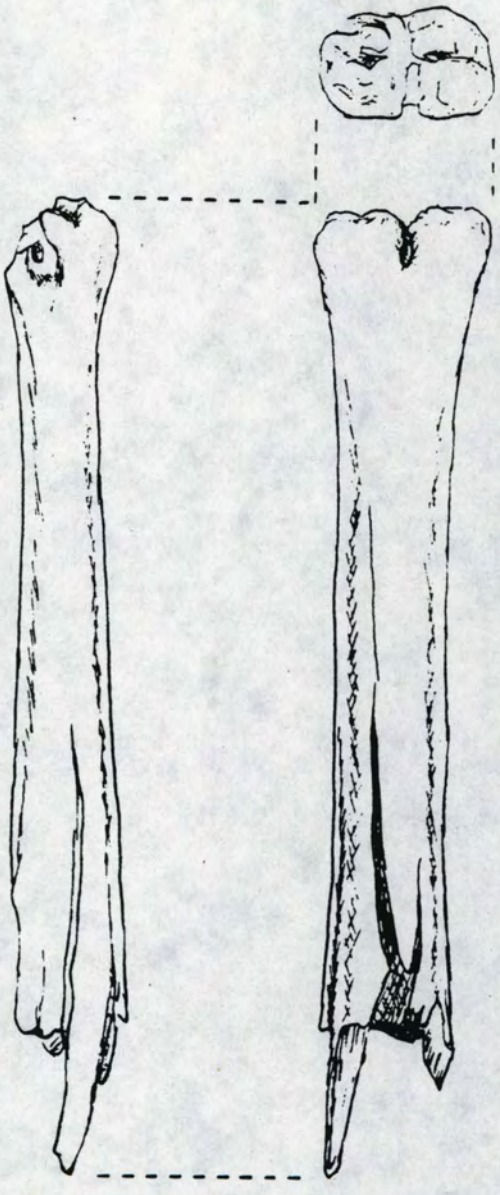


Figure 18. Proximal metacarpal.

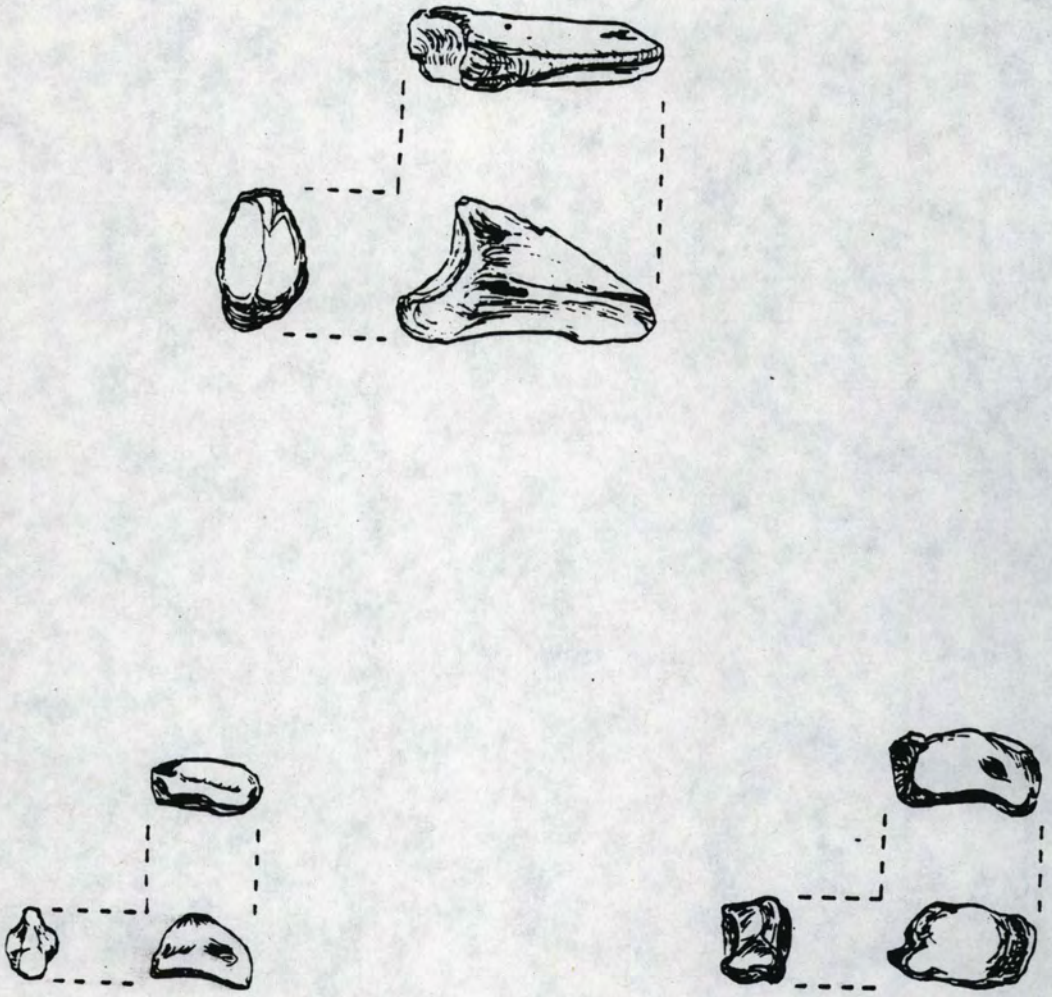


Figure 19. Phalanges.

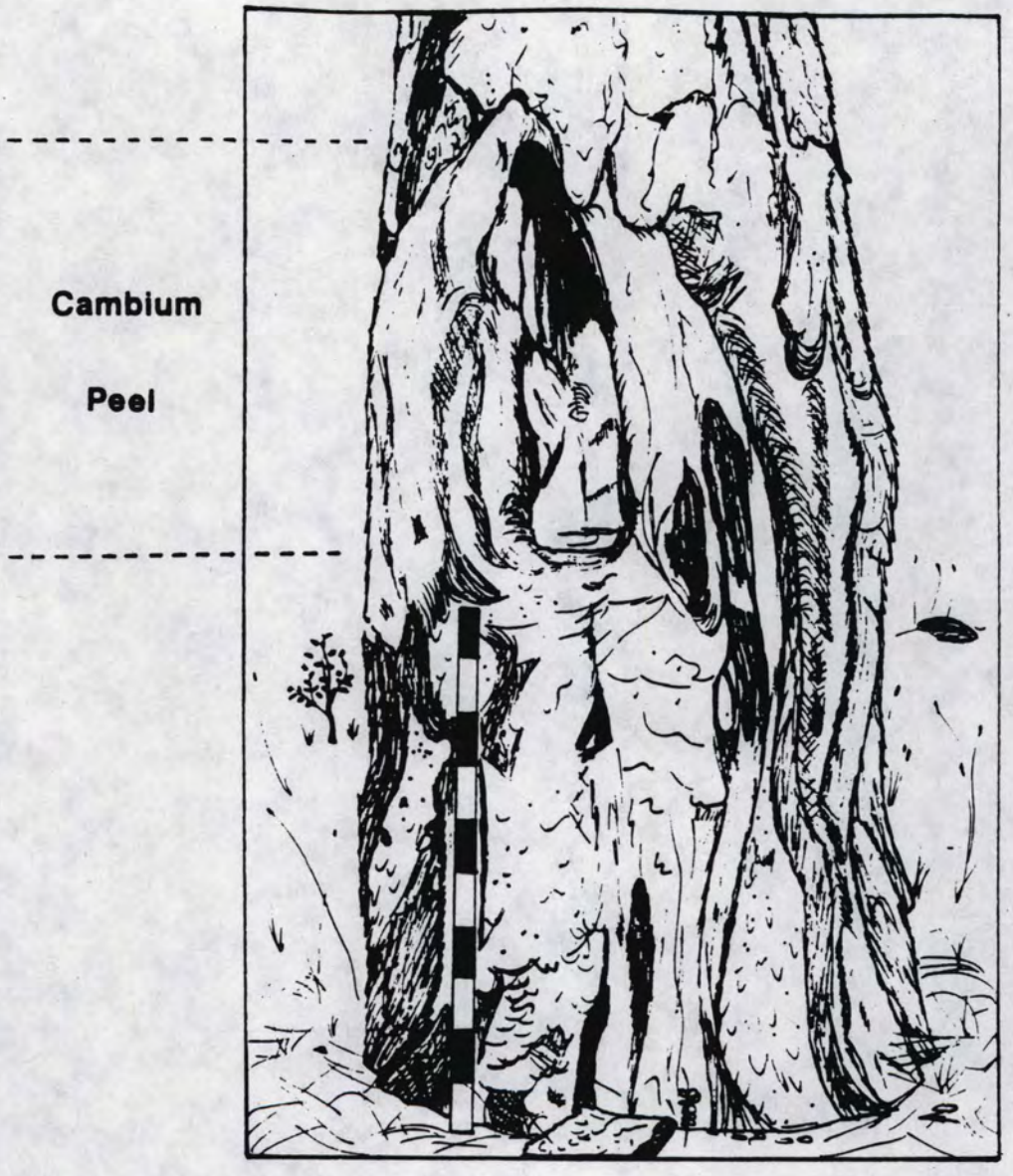


Figure 20. Culturally modified cambium peeled ponderosa pine adjacent and east of archaeological Trench #2.