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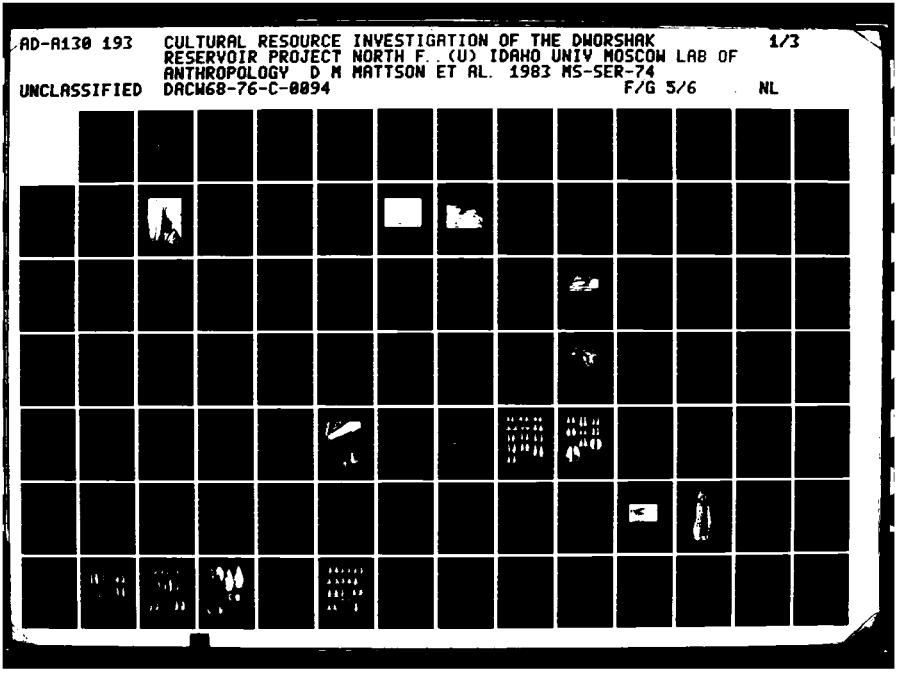

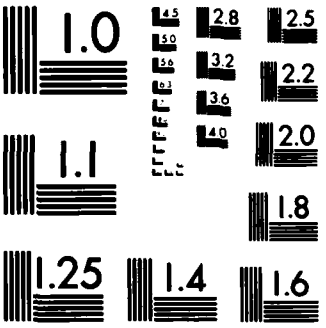

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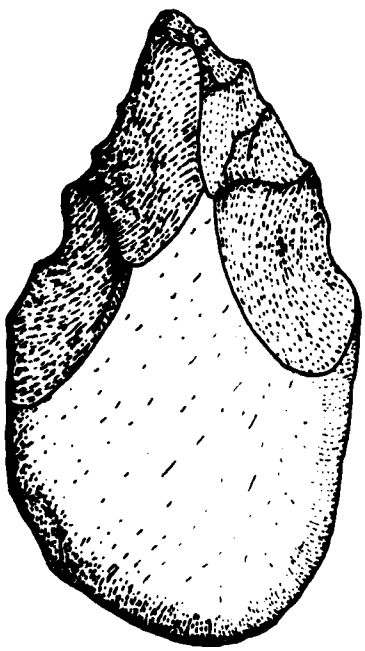
CULTURAL RESOURCE INVESTIGATION OF THE DWORSHAK RESERVOIR PROJECT, NORTH FORK CLEARWATER RIVER, NORTHERN IDAHO

by

Daniel M. Mattson



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A cultural resource survey of the Dworshak Reservoir Project area. The current work is a summary to date of the information that cultural investigations have revealed about human occupation of the North Fork canyon, an occupation spanning 5000 years (by C14 dating) and conceivably 10,000 years (by artifact association). The majority of sites discussed are now inundated.

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by

Daniel M. Mattson

with contributions by Ruthann Knudson, Robert Lee Sappington, and Michael A. Pfeiffer

Appendices by Darby Stapp; Ralph Space; and Ruthann Knudson, Dan Mattson, Connie Bollinger, and Julia Longenecker

A report in partial fulfillment of contract No. DACW68-76-C-0094 with the U.S. Army Corps of Engineers, Walla Walla District (Ruthann Knudson Principal Investigator); in additional response to Idaho State University contracts No. 4970P20037 and No. 4970P10202 with the U.S. Department of Interior, National Park Service, Northwest Region (Earl H. Swanson, Jr., Principal Investigator)

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Laboratory of Anthropology

University of Idaho

Moscow

1983

ABSTRACT

This report is the consequence of a contract between the U.S. Army Corps of Engineers (Walla Walla District) and the University of Idaho, Laboratory of Anthropology, to conduct a field investigation of cultural properties within the Dworshak Reservoir Project area and provide a summary of all previous archaeological investigations within the area. In the summer of 1976, University of Idaho personnel conducted a cultural survey of the area above the maximum pool level within the project boundaries. At the end of that season, all artifact collections and written records of excavations conducted by Idaho State University personnel (under contract with the Corps) prior to inundation of the North Fork Clearwater River, were moved from Pocatello to Moscow. Late in 1979 (and continuing through 1980) these materials were examined, along with cultural materials gained from the 1976 investigations; a series of Idaho State University reports on the earlier excavations were compiled and condensed, and a number of additional carbon samples were dated. The current work is a summary to date of the information that cultural investigations have revealed about human occupation of the North Fork canyon, an occupation spanning 5000 years (by ^{14}C dating) and conceivably 10,000 years (by artifact typological association). The majority of sites discussed are now inundated, although a number of these are exposed part of the year during lower pool levels; the state of preservation of these (and undoubtedly many uninvestigated sites) is unknown at present. There is, however, great interpretive potential with the materials and knowledge which has been gathered.

Appended to this work are reports by Ralph Space of Orofino, Idaho, and Darby Stapp, a University of Idaho researcher. Mr. Space's manuscript records an archaeological investigation he undertook in 1968 with permission from local Corps personnel. Mr Space's information and collections on the prehistory of the Clearwater River Valley have been of great benefit to many interested in that vicinity. Darby Stapp provides an analysis of copper trade artifacts found associated with a burial unearthed in the vicinity of the Dworshak Dam site.

ACKNOWLEDGEMENTS

Numerous people worked toward the completion of this report. LeRoy Allen (U.S. Army Corps of Engineers, Walla Walla District) was instrumental in the conception and continued support of the project. Ruthann Knudson was the backbone of the project and gave tirelessly of her energies throughout its course; without her efforts there would be no report. Roderick Sprague, as chairman of the Department of Sociology/Anthropology and as director of the Laboratory of Anthropology, University of Idaho, provided much needed support at crucial points during research and writing. Robert Lee Sappington and Michael A. Pfeiffer were instrumental in the project by conducting the 1976 cultural resource reconnaissance of the Dworshak Reservoir area (under adverse field conditions), packing and transporting the Dworshak archaeological materials (excavated during previous excavations) from the Idaho State University Museum in Pocatello, and the reporting of their research; they provided continuous support and advise during the course of the project. Ralph Space (Orofino) provided much generous support by sharing his knowledge of the North Fork Clearwater River area and allowing his excavation report to be included in the present work. Diana Rigg, and later Chris Fuhrman expended much energy toward the curation of the acquired Dworshak archaeological materials. During 1979-1980, accessioning and cataloguing of these materials was accomplished through the dedicated support of Connie Bollinger and Julie Longenecker, along with Melissa Lee. Drafting was accomplished through the efforts of Julie Copeland and Pam Erickson. Cover illustration by Mark Arnold. Darby ("Copper") Stapp provided much moral support and many interesting and unique observations of the artifacts. David Chance and Frank Leonhardy were always willing to share their expertise and provide sound advice. The photograph of the Dent Homestead was provided through the courtesy and generosity of the Clearwater County Historical Society. Jemima and Hannah Mattson expended much energy in the Lab, and provided the motivation for completion of the manuscript.

The manuscript became a coherent report through the tireless and dedicated efforts of Cathy Lubben along with Mary Condon and Melissa Lee. Claire Worth handled difficult logistical problems.

The organization of scattered bits of information and filling in missing gaps in order to form a cohesive report proved to be a great frustration; the author takes responsibility for the contents of this report.

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1. INTRODUCTION

The Problem

Dworshak Dam is located 3 km (2 mi.) upriver from the mouth of the North Fork Clearwater River, Clearwater County, northern Idaho (Figs. 1 and 2). The dam, designed for flood control and hydroelectric power production, was constructed by the U.S. Army Corps of Engineers from 1963 to 1972. The resultant reservoir consists of a long, narrow lake stretching 87 km (54 mi.) up the North Fork Canyon (Fig. 3). The maximum normal pool elevation is 488 m (1600 ft.) above mean sea level (a.m.s.l.), or about 193 m (632 ft.) above the former riverbed at the dam site, with an annual variance of 47 m (155 ft.) (U.S. Army Corps of Engineers 1975:1-3).

This report presents a summation of all cultural resource investigations on the North Fork, which were stimulated by the construction of the dam and reservoir. Legislation authorizing these investigations included the Antiquities Act of 1906 (16 USC 431-433), the Reservoir Salvage Act of 1960, as amended (16 USC 470), the National Environmental Policy Act of 1969 (42 USC 4321), and relevant executive orders and regulations. Prior to construction of the dam, Idaho State University personnel conducted a cultural resource reconnaissance of the proposed reservoir area (then named Bruces Eddy Reservoir, after the location of the dam site), which concentrated on ethnographic information concerning the area (Osmundson and Hulse 1962). Consequent to this survey, Idaho State University conducted test excavations in the vicinity of the proposed dam site in an area considered by local Nez Perce informants to be historically the major fishery on the river (Lynch, Wilkinson, and Warren 1965). These investigations were conducted under contract with the U.S. Department of the Interior, National Park Service, Northwest Region (contract No. 14-10-0434-888). Construction of the dam commenced shortly afterwards.

Earl H. Swanson, Jr., principal investigator for these investigations, obtained in 1970 a second National Park Service contract (No. 4970P20037), to enable Idaho State University personnel to conduct a more extensive archaeological examination of the North Fork in hopes of establishing areal cultural sequences (Swanson and Corliss 1971:1). This survey resulted in an extensive testing program at certain cultural sites, under an additional Park Service contract (No. 4970P10202) (Corliss and Gallagher 1971:1). The results of this program were reported to the National Park Service (Corliss and Gallagher 1972), but were apparently not forwarded on to the Corps of Engineers.

In 1976, and subsequent change orders, the University of Idaho entered into contract with the Corps of Engineers to conduct a post-inundation archaeological examination of the reservoir project area (contract No. DACW68-76-C-0094). This study, with Ruthann Knudson as principal

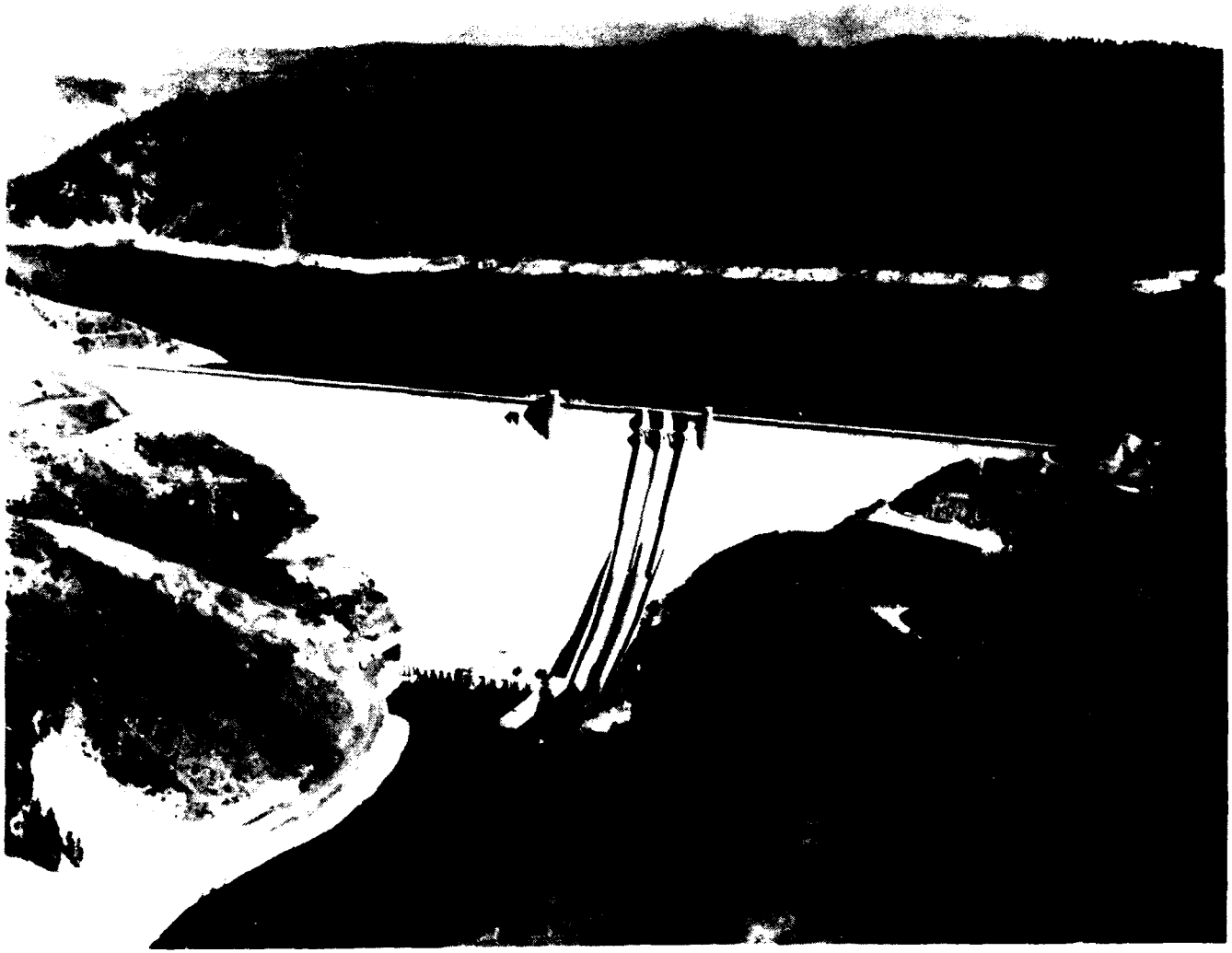


Fig. 1. View of Dworshak Dam and Reservoir, looking east.

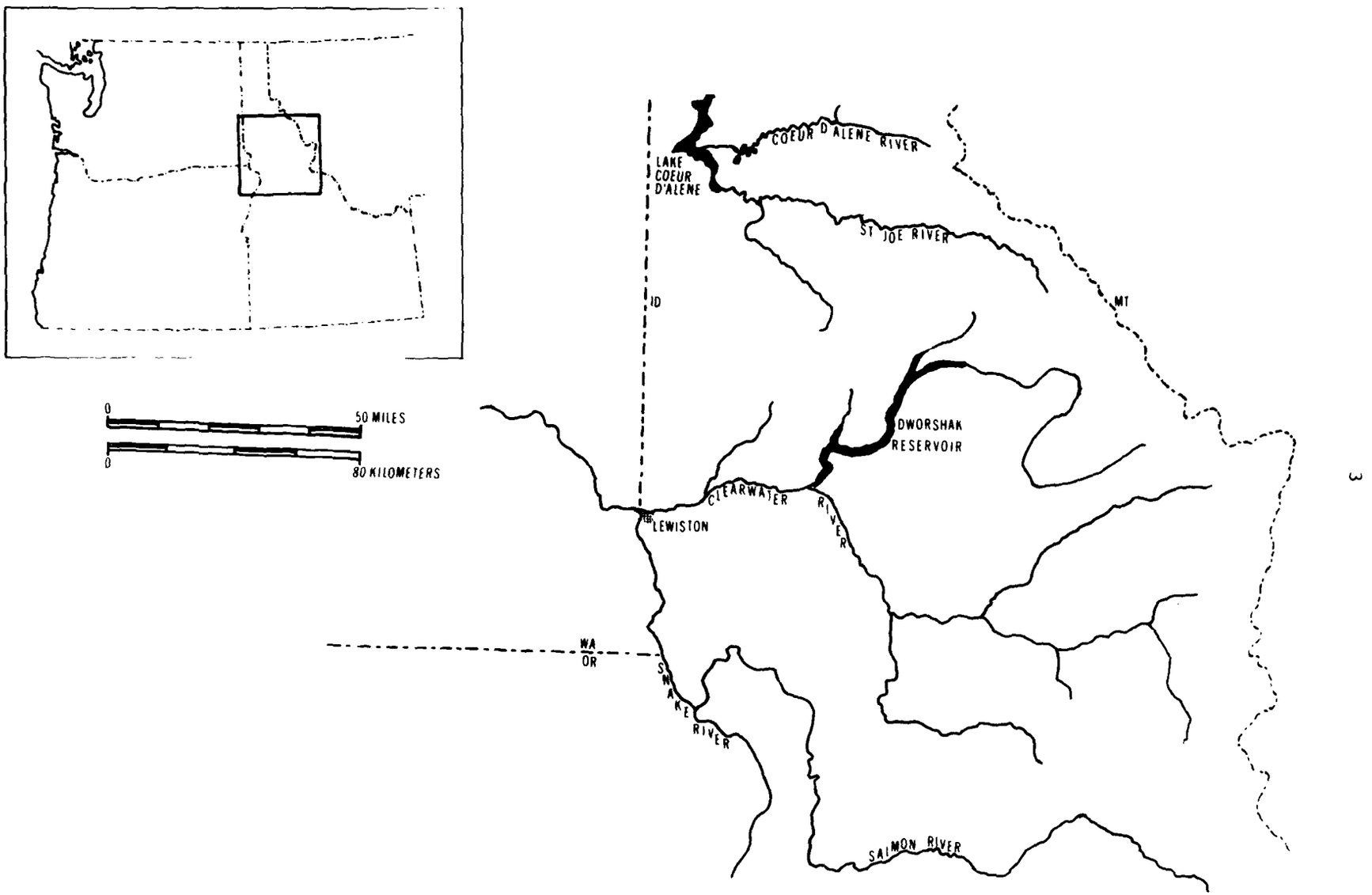


Fig. 2. Map of project area within the surrounding region.

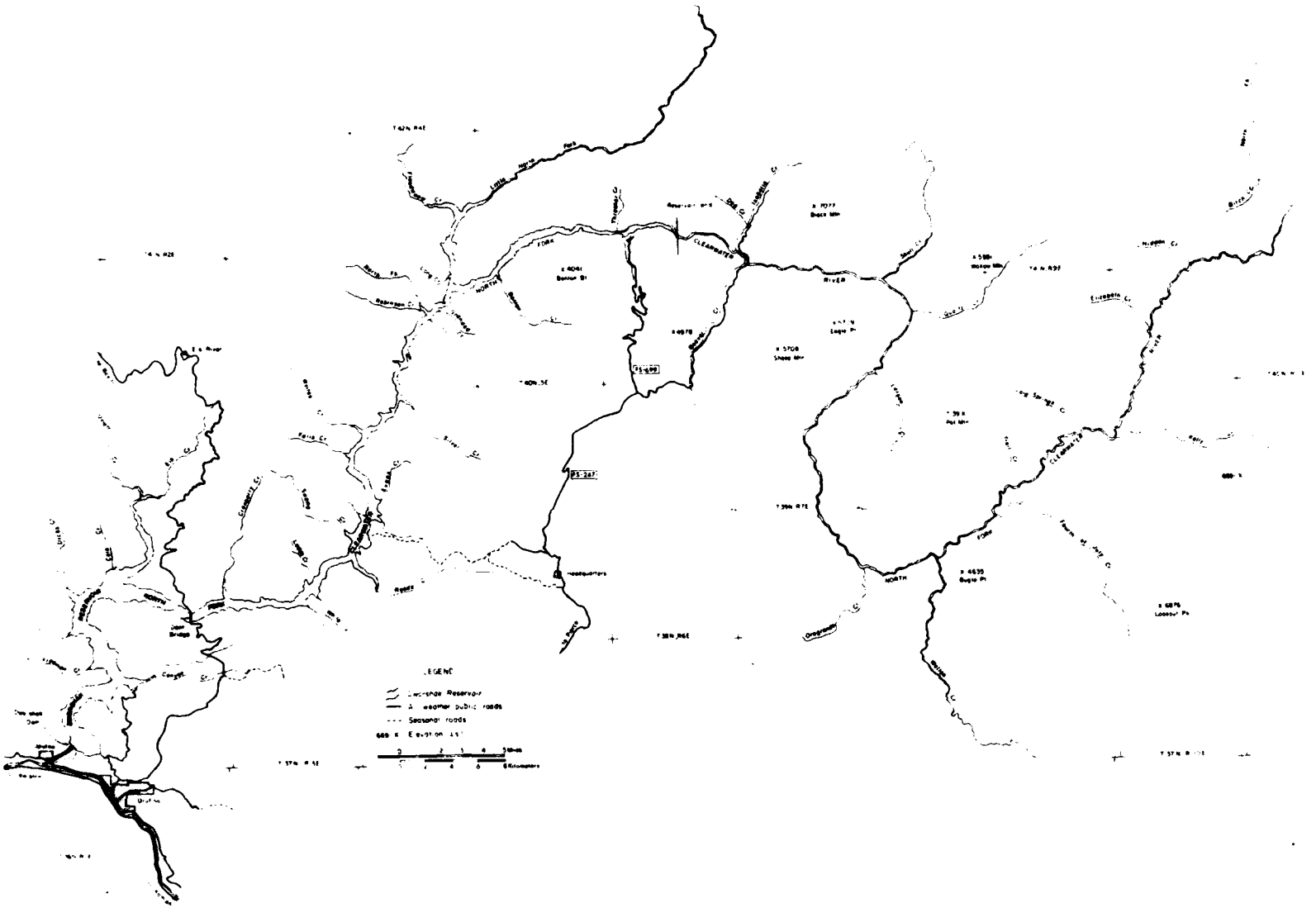


Fig. 3. Map of Dworshak Reservoir and North Fork Clearwater River drainage.

investigator, was to examine the area between the reservoir shoreline and the project boundaries. Also under this contract, all North Fork archaeological collections from previous investigations were transferred from Idaho State University to the University of Idaho for additional study and analysis. The present work is the result of that study, and provides a report of the 1976 University of Idaho investigation, all previous Reservoir cultural resource projects, and includes recommendations for the future management of all located cultural properties.

The Physical Environment, Past and Present

Geology

The watershed of the North Fork of the Clearwater River is a mountainous and heavily-forested area that drains 6319 km (2440 mi.) Its topography is steep, with slopes of 40%-50% common. The North Fork rises in the Bitterroot Mountains to the east and flows for about 218 km (135 mi.) before joining the main Clearwater River near Ahsahka, Idaho. From here, the Clearwater River flows another 65 km (40 mi.) before it joins the Snake River near Lewiston, Idaho. The North Fork is fed by numerous tributary streams (Fig. 3). The largest of these are the Little North Fork, which is about 65 km (40 mi.) long; and Elk Creek, about 29 km (18 mi.) in length. Prior to inundation, the stream gradient was about 250 km (800 ft.) in the first 100 km (60 mi.) of the North Fork.

The North Fork is peripherally located in two physiographic provinces. The upper drainage (Fig. 4) is within the Northern Rocky Mountain Province, characterized by Fenneman (1931) as having ridges and peaks of nearly uniform height. The Clearwater Mountains fit this description, with elevations of ridges ranging from 915 km (3000 ft.) to 2135 km (7000 ft.) a.m.s.l. (Fenneman 1931:188). The lower drainage (Fig. 5) is included in the eastern limits of Anderson's (1941) Craig Mountain section of the Columbia Plateau. The area is termed the Tristate Uplands by Freeman, Forrester, and Lupher (1945) who disagree with it being considered an extension of the Plateau. They described the area as:

> ...a gently warped upland surface of Columbia River basalt which has been deeply incised by the Clearwater, Salmon, Snake and Grande Ronde rivers, and their tributaries.... The canyons are the result of Pleistocene diastrophism; between them are large remnants of a mature erosional surface of low rolling hills [Freeman, Forrester, and Lupher 1945:69].

The major geographic units within the North Fork area are (in chronological order) the Belt Supergroup (Precambrian), rocks of the Idaho batholith (Cretaceous), and the Columbia River basalt (Miocene and Pliocene) (Hietanen 1963:2).

The Belt Supergroup underlies the area. This stratified series of rocks consists generally of argillites, shales, quartzites, and limestones. Intrusive to the series are the granitic rocks of the Idaho batholith. The

Fig. 4. Aerial view looking south across the North Fork Clearwater River at Wietas Creek (a) and surrounding upland area (b).

Fig. 5. View looking southeast across the North Fork Clearwater River at Reeds Creek and surrounding upland area.

batholith is generally composed of older intrusions of granodiorite and related rocks, younger intrusions of light colored quartz monzonites, and still younger intrusions of pink quartz monzonites (Ross and Savage 1967:10). The zones of contact of the intrusions have metamorphosed the surrounding sedimentary rocks into garnet-mica schists, mica quartzites, gneisses, and silicated dolomites (Hietanen 1963:41). Younger Tertiary age intrusions are also present in the area.

The Tertiary landscape was one of late mature uplands trenched by canyons of a new cycle (Bond 1963:1). Mid-Tertiary basalt flows, originating from the Columbia River Group in northeastern Oregon, covered the valleys and foothills of the Clearwater Mountains to a probable minimum of 850 m (2880 ft.) a.m.s.l. and in places to a depth of 1125 m (3700 ft.) (Bond 1963). The basalt flows consist of an upper and lower formation, termed collectively the Clearwater Embayment. The lower formation extends up the North Fork 24 km (15 mi.), while the upper flow reaches 56 km (35 mi.) up the drainage (Bond 1963:1-2).

The area remained relatively undeformed through most of the Pliocene. In late Pliocene or early Pleistocene time, a major cycle of folding and faulting, accompanied by local lava flows, created structural relief of over 1200 m (4000 ft.). The resultant new erosional cycle is still in a youthful stage. The North Fork canyon exposes the basalt, the clastic sedimentary layers, and the basement rocks underneath (Bond 1963:1).

The Clearwater area was not covered by the Wisconsin age ice sheets (their southernmost limits being the northern end of Lake Coeur d'Alene, about 162 km [100 mi.] to the north [Dort 1965:33]). However, most of the higher peaks of the Clearwater and Bitterroot mountains have been sculptured by montane glaciers. Glaciers have descended into the valleys to elevations of 900 m (3000 ft.) a.m.s.l., but usually not below 1500 m (5000 ft.) a.m.s.l. (Anderson 1930:5). The western side of the Bitterroot range is characteristically marked by deep, strongly glaciated, U-shaped valleys that merge into the V-shaped canyons of the lower Clearwater Mountains. The glaciers withdrew approximately 12,000 years ago (Fenneman 1931:198). Bretz (1929:505) believed that the valley deposits from the reverse-flow waters of the scabland glacial floods should have reached elevation 400 m (1300 ft.) a.m.s.l. Recently, Bruce Cochrane (personal communication 1980) has found probable Late Pleistocene Missoula floodwater deposition at 384 m (1260 ft.) a.m.s.l. in the Clearwater area, although previous researchers have postulated floodwaters having reached greater heights (Lupher 1944). Thus the lower 39 km (24 mi.) of the North Fork Valley could have been flooded by these glacial melt waters during the late Wisconsin period, up to perhaps 13,000 years ago.

The modern North Fork River has downgraded itself through at least two levels of terrace deposits (Swanson and Corliss 1971:3; Corliss and Gallagher 1971:6). These truncated terrace levels stand at 3-4 m (10-12 ft.) and 10-13 m (33-34 ft.), respectively, above the river channel. Terrace deposition consists of alluvial and colluvial materials, with generally little soil development. Within the project area, the North Fork flowed through two stretches of narrow, steep canyon, where terrace

formations are few and small in size. One of these areas is located from just upriver of the mouth of the North Fork, to the area just upstream of the dam site. The other consists of a 22 km (14 mi.) stretch of canyon from above Bishops Creek, upriver to the mouth of the Little North Fork.

Climate

The recent climate in the North Fork basin is characterized by mild summers and long cold winters. Snow is common from early fall through late spring. The area is dominated by the most maritime air masses from the Pacific Ocean, moved over the area by prevailing westerly winds. Although the air masses have lost much of their rainfall before reaching the area, they still contain enough moisture to cause considerable precipitation in the area. The mean annual precipitation for the North Fork basin is 130 cm (51 in.), and ranges from 62 cm (24 in.) at the mouth of the North Fork to nearly 205 cm (80 in.) in the upper drainages. Precipitation is highest in January and lowest in July and August. Temperatures on record indicate a fairly uniform pattern of subfreezing temperatures (occurring from October through May) when cold polar air displaces the Pacific maritime air masses. The mean January temperature at the river's mouth is 31°F (0°C), with lows in excess of -20°F, (-7°C) having been recorded. The mean July temperature in the same locality is 74°F (23°C), with 188°F (87°C) the highest recorded temperature for that month. These figures vary little for the entire length of the protected North Fork canyon within the project area (Carter 1941; Pacific Northwest River Basin Commission 1969; U.S. Corps of Engineers 1975). Winds in the basin are generally moderate in velocity, and exhibit a local pattern characteristic of mountainous regions, being upslope during the day and downslope at night (U.S. Corps of Engineers 1975:2-3).

The post-glacial climatic sequence for the region has been the subject of much study. Bog pollen analyses in northern Idaho (Hansen 1939; Mack and others 1978) and in the Bitterroot range in central Idaho (Mehringer Arno, and Peterson 1977) agree fairly well with the post-glacial neothermal sequence outlined by Antevs (1955). This sequence consists of an initial stage of cooler temperatures than those of today, from glacial withdrawal at 12,000 years ago to 8000 years before present; an interval of warmer temperatures that lasted about 4000 years; and a return to slightly cooler temperature lasting for the last 3000 years. The moisture sequences that go with these thermal periods are uncertain.

The mean annual streamflow of the North Fork prior to inundation was 5727 cfs, measured at the mouth of the river (U.S. Corps of Engineers 1975:1-7). The peak flow of mid-May averaged 15,000-20,000 cfs and the minimum flow on record is 250 cfs. Floods on the North Fork with peak discharges of more than 40,000 cfs have occurred in 12 out of 40 years on record (from 1926 to 1965). The peak flood on record resulted from a prolonged rainstorm in December 1933, with an estimated discharge of 100,000 cfs occurring at the river's mouth. The maximum probable discharge from the North Fork flood waters has been estimated to be 411,000 cfs.

Biota

The soils within the North Fork drainage are Brown Podsolic soils consisting of dark to light brown subhumid and humid soils (Ross and Savage 1967:219). These soils support a coniferous forest of Daubenmire's (1952) Douglas fir (*Pseudotsuga taxifolia*), giant arborvitae or western red cedar (*Thuja plicata*), western white pine (*Pinus monticola*), grand fir (*Abies grandis*), western larch (*Larix occidentalis*), western hemlock (*Tsuga heterophylla*), and ponderosa pine (*Pinus ponderosa*). Less common are western yew (*Taxus brevifolia*), lodgepole pine (*Pinus contorta*), alder (*Alnus rhombifolia*), and birch (*Betula papyrifera*). Open ponderosa-pine-dominated forest is characteristic of the drier south-facing slopes of the lower elevations. In the moister and more protected situations, dense stands of white pine are common; the largest white pine stand in the western United States is within the Clearwater drainage. In many areas of recent burning, a temporary lodgepole-pine-dominated forest is common (Daubenmire 1952; U.S. Fish and Wildlife Service 1960).

Bracken fern (*Pteris spectabilis*) and various grasses and ferns are common understory vegetation. Dense brush is common in many areas, following fires. Common plants in these areas include mountain maple (*Acer glabrum*), wild cherry (*Prunus emarginata*), serviceberry (*Amelanchier* spp.), buckthorn (*Rhamlus purshiana*), ninebark (*Physocarpus malvaceus*), ocean spray (*Holodiscus discolor*), elderberry (*Sambucus canadensis*), huckleberry (*Vaccinium membranaceum*), blackberry (*Rubus macropetalus*), wild rose (*Rosa* spp.), snowberry (*Symphoricarpos albus*), red-stemmed ceonothus (*Ceonothus sanguineus*), willow (*Salix scouleriana*), and salmonberry (*Rubus spectabilis*) (U.S. Army Corps of Engineers 1975). Since glaciation, it appears that there has been little change in regional vegetation, other than a general shifting of forest biotic zones to relatively high elevations (Daubenmire 1952:14).

Historically, big game animals found in the North Fork basin have been elk (*Cervus canadensis*), white-tailed deer (*Odocoileus virginianus*), mule deer (*Odocoileus hemionus*), black bear (*Ursus americanus*), grizzly bear (*Ursus idahoensis*), mountain sheep (*Ovis canadensis*), moose (*Alces americanus*), and mountain goat (*Oreamnos americanus*) (U.S. Army Corps of Engineers 1975). White-tailed deer were very numerous in the lower elevations of the North Fork prior to inundation. Black bears were reported to be especially numerous in the vicinity of Big Island (river mile 37) (U.S. Fish and Wildlife Service 1960:21-25). The Clearwater elk herd is one of the largest in the United States and was estimated in 1960 to number 35,000 to 40,000 animals (U.S. Fish and Wildlife Service 1960). A large portion of this herd was reported to have been in the North Fork drainage. Most of the winter food for the elk and deer occurs in brushlands and open coniferous forests where fires have allowed the growth of browse vegetation; historically, open areas of this description were plentiful in the lower drainages. During winter, most elk in the basin stay below 760 m (2500 ft.) a.m.s.l. During prolonged cold weather and deep snows, the animals tend to concentrate along the lower portion of the river, the most snow-free area within the North Fork basin (U.S. Fish and Wildlife Service 1960).

Fur-bearing animals in the North Fork drainage area include mink (*Mustela vison*), river otter (*Lutra canadensis*), beaver (*Castor canadensis*), raccoon (*Procyon lotor*), weasel (*Mustela cicognanii*), marten (*Martes caurina*), mountain lion (*Felix concolor*), wolverine (*Gulo luscus*), coyote (*Canis latrans*), lynx (*Lynx canadensis*), bobcat (*Lynx rufus*), wolf (*Canis lupus*), and badger (*Taxidea taxus*). The latter are reported as being especially numerous on Big Island (Osmundson and Hulse 1962:9). Ruffed grouse (*Bonasa umbellus*) are the principal upland-game birds in the basin, and are again reported to be most numerous in the Big Island area (U.S. Fish and Wildlife Service 1960:26). Blue grouse (*Dendragapus obscurus*) and Franklin's grouse (*Canachites canadensis*) are also common in the area. The North Fork is not located on a major waterfowl flyway, but small numbers of ducks and geese of various species are found on the river. Raptors historically common to the area include golden eagles (*Aquila chrysaetos*), bald eagles (*Haliaeetus leucocephalus*), osprey (*Pandion haliaetus*), and various species of hawks and owls (U.S. Fish and Wildlife Service 1960; U.S. Corps of Engineers 1975).

The North Fork historically supported large runs of chinook salmon (*Oncorhynchus tshawytscha*), silver salmon (*Oncorhynchus kisutch*), and steelhead trout (*Salmo gairdneri*); lamprey eels (*Entosphenus tridentatus*) also migrated here from the Pacific Ocean (Parkhurst 1950:17; U.S. Fish and Wildlife Service 1960:9). The North Fork formerly supported an exceptionally large race of steelhead trout. Steelhead reaching the spawning grounds had an average weight of about 12 lbs. (5.5 kg); many of the larger fish were reported as weighing over 20 lbs. (9 kg) (U.S. Fish and Wildlife Service 1960:11). Anadromous fish spawning potential in the North Fork drainage system was reported by Parkhurst (1950:23-26) as being best on the Little North Fork; large runs of anadromous fish were formerly reported here (Parkhurst 1950:24). Parkhurst stated that Swamp Creek appeared to be too muddy for much utilization, and Weitas Creek seemed to be of little value to migratory fish due to its turbulent nature, heavy run-offs from melting snows, and the great amount of rubble in the streambed (Parkhurst 1950:23); this description applies to many of the North Fork tributaries. Another study (U.S. Fish and Wildlife Service 1960:71) reported anadromous fish spawning potential good on Elk, Breakfast, Kelly, and Orogrande creeks, and on the Little North Fork and upper North Fork. Indian, Dicks, Swamp, and Ladds creeks appeared to be of particularly low utility due to gradient steepness, low flows, and migration barriers. The large amount of bedrock in the upper North Fork drainage and the large amount of sand in the lower drainage are listed by Parkhurst (1950:22) as general factors that tended to limit the potential value of the North Fork drainage for fish spawning.

The North Fork also supported well established populations of cutthroat trout (*Salmo clarkii*), resident rainbow trout (*Salmo gairdneri*), Dolly Varden trout (*Salvelinus malma*), and mountain whitefish (*Prosopium williamsoni*). Northern squawfish (*Ptychocheilus oregonsis*), and mountain suckers (*Catostomus platyrhynchus*) also were native. Molluscs (*Margaritifera* spp.) were also found on the North Fork.

The Cultural Sequences

Regional

There is evidence of continual human occupation of the Clearwater River basin for the last 10,000 years (Ames and Green 1979:73). Although the climatic fluctuations of this period no doubt affected the range of availability of certain resources, a human economy based on seasonal migration of subsistence activities was most likely in existence throughout the Holocene period. There is every reason to believe that people have always exploited the resources available to them. If this is true, then hunting, fishing, and gathering have always been the economic base of the area, although the emphasis of each of these may have varied with environmental changes. The level of use of any one of the resource categories should be reflected in the material culture of that group of people. The specific influences that cause this change of use are usually unascertained.

For the Lower Snake River region, five temporal and technological sequences have been distinguished on the basis of slight changes in artifact assemblages and stratigraphic information (Leonhardy and Rice 1970; Yent 1976). These assemblages correlate fairly well with those found in the Clearwater drainage, and are used here for convenience in the general description of the materials dealt with in the present paper. These phases are Windust, Cascade, Tucannon, Harder, and Numipu. The earliest of these, the Windust phase, dates from approximately 10,000-8000 BP, and is characterized by artifact assemblages that include:

> ...a variety of closely related short blades, shoulders of varying prominence, principally straight or contracting stems, and straight or slightly concave bases... Both uniface and biface lanceolate points occur, but are exceedingly rare. Most knives are large lanceolate or oval forms and are relatively crudely made. End scrapers are large and usually of poorly defined form. They are rare in all the assemblages. Single and multiple faceted burins occur in small numbers. Utilized flakes are the most numerous and most varied lithic artifacts. Cobble tools include large scraping planes, uniface and biface choppers, large scraper-like implements, and utilized spalls. Bone artifacts are few, but include needles, atlatl spurs, tips of bone awl-like implements, and fragments of small round shafts [Leonhardy and Rice 1970:4].

Lithic technology seems well developed during this time. Crypto-crystallines are the predominant lithic material from these assemblages.

The Cascade Phase material corresponds approximately in age with the mid-postglacial Altithermal period, and is bracketed at 8000-5000 BP in the Lower Snake River area (Bense 1972). The material contained in components of this phase consists of six categories of tools: knives, scrapers,

projectile points, pounding tools, chopping tools, and bone tools (Bense 1972:50). The Cascade has been divided into an early and later subphase, the temporal division begin approximately coincident with the Mazama ashfall (6700 BP). In the early Cascade assemblage, the predominant projectile point type is lanceolate while the later subphase contains lanceolate and large side-notched points in almost equal amounts.

The Tucannon Phase (5000-2500 BP) assemblages of the Lower Snake River region have been found associated with the first evidence for large village sites (Ames and Green 1979:63, 83). The lithic technology of this phase seems not as well developed as those of the preceding and following phases. The Tucannon assemblage consists of:

> Two kinds of projectile points...the first has a short blade, shoulders of varying prominence, and a contracting stem. The second variety is notched low on the side or at the corner to produce an expanding stem and short barbs... In addition to the projectile points, there are small side scrapers and end scrapers, numerous scraper-like cobble implements, utilized cobble spalls, and pounding stones. Sinkers, hopper mortar bases, and pestles occur. Interestingly enough, well-formed knives are virtually absent in all components. Utilized flakes are neither as numerous nor as large as those in components of earlier phases. Bone and antler implements include splinter and plit metapodial awls, fragments of awl-like implements, and an antler wedge. A bone shuttle found at the Tucannon site indicates net making [Leonhardy and Rice 1970:11].

The Harder Phase that follows is dated in the Lower Snake River region from 500 BC up to the ethnographic period (Yent 1976; Frank Leonhardy 1980:personal communication). The assemblage is divided into an early and late subphase on the basis of projectile point size, but the division is unclear. In general, the Harder projectile points become smaller and more delicate with the passing of time. Other artifacts characteristic of the assemblage include a variety of scrapers, lanceolate and pentagonal knives, an abundance of cobble spalls and sharp-angle cobble tools, pestles, hopper mortar bases, sinkers, bone awls, needles, circular and pendant beads, perforated elk teeth, and gaming pieces.

The final Numipu Phase assemblage is differentiated from the preceding assemblage by the added presence of horse bone and/or artifacts of Euroamerican manufacture (Leonhardy and Rice 1970:20).

Archaeological Investigation

Archaeological investigation on the Clearwater River was begun in 1961 by Idaho State University with a survey of the Dworshak Reservoir area, under contract with the National Park Service. As previously mentioned this investigation concentrated on gathering ethnographic information for the North Fork area. From interviews with local informants and examination of the ethnographic record, numerous potential cultural sites were ascertained. An examination of local artifact collections and a

reconnaissance of the river terraces resulted in 23 cultural sites being recorded, 18 of which were located within the reservoir area (Osmundson and Hulse 1962). Among the sites recorded were the ethnographic village site of Ahsahka (10-CW-4) at the mouth of the North Fork, and the fishery site of Bruces Eddy (10-CW-1).

As a result of this survey, further archaeological testing of the Bruces Eddy vicinity was conducted by Idaho State University personnel in 1963 (Lynch, Wilkinson, and Warren 1965). The artifact assemblage resulting from excavations at this low terrace site has components that seem to indicate continual occupation of the site since the Tucannon Phase. Three burials were excavated from the slope flanking the site. Historic trade goods were associated with two of the burials, that of a woman at least 40 years old, and an infant under one year (Thomas Mulinski 1980: personal communication). Appendix A consists of an analysis of copper artifacts associated with the burials.

No artifacts were associated with the third burial, that of an adolescent. The 1963 study concluded that Bruces Eddy was probably the most important site on the North Fork (Lynch, Wilkinson, and Warren 1965:33).

In the late 1960s, Idaho State University conducted excavations at two terrace sites on the lower Clearwater River: Lenore (10-NP-105) and Arrow Beach (10-NP-102). The early assemblages at Lenore established Windust occupation in the lower Clearwater (Toups 1969).

In 1967 an archaeological test was conducted at 10-CW-5, at the mouth of the North Fork, during construction of the Dworshak National Fish Hatchery. Test units were placed only in the peripheral areas of the site, due to ongoing construction of the hatchery. The assemblage from this investigation was comparable to that from Bruces Eddy (Gaarder 1968:61).

In 1970, two surveys were begun by Idaho State University. One was a reconnaissance of the middle and lower portions of the Clearwater, between Spalding and Kamiah, and the other was the study conducted on the North Fork, discussed in the present work (Swanson and Corliss 1971; Corliss and Gallagher 1971, 1972).

Extensive testing at the mouth of Weitas Creek (10-CW-30), on the upper North Fork, was carried out by Idaho State University personnel in 1972 (Keeler 1973). This study concluded that the site represents the upland hunting aspect of a regional subsistence system and recognizes the existence of the full range of lower Snake River region artifact assemblages in the upper Clearwater drainage (Keeler 1973:87).

Following inundation of Dworshak Reservoir, University of Idaho personnel conducted a survey of the upper slopes of the North Fork canyon. This survey is reported in the present work.

In 1977, University of Idaho archaeologists tested a low terrace site on Kelly Creek, in the upper North Fork drainage (Knudson and Sappington 1977a). This investigation concludes:

> The Kelly Creek site (10-CW-92) is only minimally identified on the basis of these excavations, but appears to be a fishing camp or village area where stone tools were made and/or refurbished. The projectile points from the site are generally comparable to those of the...lower Snake River region where they appear between AD 1300-1700 [Knudson and Sappington 1977a:iii]

Excavations on the lower Clearwater River were conducted at Hatwai (10-NP-143) and Spalding (10-NP-108). The Spalding excavations in 1978-1979 (Chance 1978, 1979) produced evidence of occupation of the site from late Cascade Phase to recent times. The Hatwai excavations (Ames and Green 1979; Ames 1980) revealed major Windust and Tucannon components, and minor Cascade and Harder phase material. The Cascade material was associated with a pre-Mazama ash layer. The Tucannon material was associated with subrectangular pithouse floors (Ames 1980:64).

During 1977-78, University of Idaho personnel conducted extensive tests at a low terrace site on the Lochsa River, upper Clearwater drainage (Knudson and Sappington 1977b; Benson and others 1979). Occupation of the site for the whole Lower Snake River Region sequence was found. Intensity of occupation was indicated as being greatest during the Late Cascade Phase. Also during 1978, University of Idaho personnel conducted an archaeological survey along the Main Fork Clearwater River (Stapp 1980a, 1980b).

A survey of the Lower Granite Dam Reservoir by University of Idaho personnel (Gurcke and others 1979) recorded several sites on the lower Clearwater River. Archaeological survey in the upland Clearwater drainage area by U.S. Forest Service personnel has been ongoing for the last decade and various test excavations have been conducted by Forest Service archaeologists (Stapp 1980a, 1980b). Results of these researchers have not been published, although manuscript reports are on file at various federal and state repositories. A study in 1966 (Schwede 1966) examined the ecological relationship between Nez Perce settlement patterns and available resources. This investigation dealt with the period immediately prior to historic contact. A study of Nez Perce trail systems was done in 1977 (Shawley 1977). An excellent archaeological reconnaissance of historic Elk City was conducted under U.S. Bureau of Land Management contract (Gallagher 1976). Likewise, an archaeological assessment of historic Moose City, in the upper North Fork drainage, was done under U.S. Forest Service contract (Rice 1977). An overview of the prehistory of the Clearwater River and adjacent plateau areas has been written by Kenneth Ames (1980). Test excavations on the Clearwater River near Kamiah were conducted by University of Idaho researchers (Waldbauer, Knudson, and Dechert 1981). Most recently, archaeological monitoring of excavations at Ahsahka and adjoining areas has been conducted (Mattson n.d.).

Ethnographic Record

Historically, the Clearwater River basin formed the population nucleus of the Nez Perce Indians, a loosely associated group of separate bands, each with its own territory and chief. The bands shared similar customs, language, some subsistence activity sites, and associated for mutual defense, but remained fairly distinct otherwise (Curtis 1911:4). The territory of the Nez Perce was bounded on the north by the Upper North Fork of the Clearwater River and by the Palouse River, on the east by the Bitterroot mountains, on the south by the divide between the Snake and the Salmon rivers, and extended into the lower Snake River region to the west (Curtis 1911:3). Nez Perce is a Sahaptian language, as are the languages of the groups to the west, with whom the Nez Perce traditionally shared their closest ties in mutual defense and in trade (Chalfant 1974:31).

On the basis of shared subsistence activities, the Clearwater River groups of the Nez Perce could be sub-divided into the group from the mouth of the Clearwater up to Lapwai, the Lapwai group, the Potlatch and Cottonwood creeks group, and the bands from Ahsahka upstream, including the groups at Kamiah and Kooskia (Chalfant 1974:124). The permanent villages of the individual groups or bands were usually situated at the mouths of the tributaries of the larger rivers (Curtis 1911:4). The upper Clearwater drainage lies in the contact area with Salishan language groups of peoples to the north and east. The Coeur d'Alenes to the north of the area would occasionally use the upper North Fork drainage for fishing and hunting. The Flathead Indians from east of the mountains used the headwaters of the Clearwater for fishing and trade with the Nez Perce (Chalfant 1974:115).

Ethnographically, the economy of the peoples inhabiting the area was based on fishing, hunting, and gathering, in that order. Although the present work will not reiterate the numerous studies which have been written on the Nez Perce, a synopsis of the annual subsistence rounds involved in this economy is necessary in any attempt to interpret the activities associated with the cultural sites found in the area. Chalfant (1974:105-106) described the winter activities of the Nez Perce:

> During the winter months the Nez Perce were localized in their traditional winter villages on the Snake, Salmon, and Clearwater rivers. Families generally wintered in the same locations each year, although this was not a rule. The winter villages were often large, comprising the peoples of quite a few smaller village bands... Greater economic security was enjoyed by doing so; winter deer drives could be better organized, and the sharing of food equally among all the families of the group was facilitated. Further, the tedium of winter months was better endured in larger group social events and winter ceremonies were held. Winter economic activity was limited to localized deer drives in organized groups, and individual hunting. Most of the winter food had been stored in summer and fall, but hunting was necessary to augment this supply, which sometimes failed before spring. The end of winter and early spring sometimes proved to be lean months, and they resorted to emergency foods... Winter deer hunting in organized groups was employed locally on

> the hills near the winter villages. Long ago organized deer drives were conducted along the rivers. The parties, which included women, would travel on the ice... These drives rarely left the rivers for the deer and elk wintered along the river bottoms.

Winter lodges consisted of circular and oblong-based conical structures built of a pole framework overlaid with skins, grass, and bark mats and sometimes a layer of earth for insulation. The lodges were built over foundations excavated to a depth of from one to several feet (30-90 cm) for additional warmth. Ahsahka (10-CW-4) was the historic winter site for the peoples in the North Fork locality (Osmundson and Hulse 1962:2).

When the weather warmed in the spring, the bands and families composing the winter villages dispersed to their favorite fishing stations along the rivers. In many instances, the winter village site was also the base camp for fishing (Schwede 1966; Chalfant 1974:135). Whitefish, eels, trout, and squawfish were considered supplementary foods, rather than staples, and were caught for immediate consumption (Chalfant 1974:80). In late spring and early summer, salmon and steelhead fishing was the major activity. Fishing continued all during the summer and the early fall, providing the mainstay of the winter food supply. Bruces Eddy (10-CW-1) was historically the major fishery on the North Fork (Osmundson and Hulse 1962:3). A large fish weir (a low dam of rocks supporting a pole fence, which extended part way across the river) was constructed here. Platforms made of lashed poles were built out over the water downstream of the trap, to facilitate in the spearing of fish. Several bands of people would utilize the site during the fishing season, each band having had its own campsite along the river. Each band would erect pole sheds for drying fish and for minimal shelter during the fishing season (Osmundson and Hulse 1962:4; Curtis 1911:43). Osmundson and Hulse (1962:7) mention that Elk Creek was also the site of a large fish wier. Ethnographic reports on the significance of fish in the Nez Perce diet vary, with some estimates running as high as 80% to 90% of the yearly food supply being fish.

Summer was the time of most intense subsistence activities and intergroup contact, involving much coming and going from the fishing camps to root and berry gathering grounds, usually along traditional routes and through familiar areas (Chalfant 1974:106). Roots and other vegetal products provided a major source of food in the subsistence economy of the Nez Perce. Root gathering was a major product in which large groups, and sometimes bands from several tribes, participated. Principal among these root crops were camas (*Camassia quamash*), kouse (*Lomatium kaus*), bitterroot (*Lewisia rediviva*), and wild carrots (*Dancus pusillus*) (Chalfant 1974:98-100). Kouse, or biscuitroot, was dug in May at Camas Prairie, Idaho. Historically, camas grew in the upland meadows west of the North Fork area; however, the principal camas area was located at Weippe Prairie, across from Lapwai, and was dug in July. Bitterroot was found in the mountains to the east (Chalfant 1974:39). The root harvest was traditionally a time of horse-racing, gambling, and dancing among the groups (Chalfant 1974:39). Fruits, such as serviceberries, chokecherries,

and gooseberries were found along the lower drainages. Huckleberries were found in the upland areas, with Craig Mountain to the southwest a traditional spot for many bands to pick fruit (Chalfant 1974:103).

Fall was a time for both fishing, especially during the fall salmon runs, and hunting. Deer were considered the most important food animal. Elk was reported to be more numerous long ago than at later times (Chalfant 1974:83). Black bears, considered the best meat, were also hunted extensively, as were grizzly bears, mountain sheep, and beaver. Mountain goats and moose were also hunted, but were not frequently encountered. Chalfant reports that long ago wild game birds and waterfowl were taken in considerable numbers, but were not plentiful or much sought after in later historic times; these included grouse, ducks, and geese. Although hunting continued year-around, more deer were taken in the fall, when the animals migrated from the high upland meadows to the lower river canyons (Chalfant 1974:83). Individual hunting was important in the continual search for food. Group hunting also played an important role, as described by Chalfant (1974:84):

> Hunting was done in organized groups as well as by individuals. Family groups from the same village and band often hunted together... The group hunted cooperatively; individuals were not assigned their own areas, once the base camp was established. Group hunting proved most effective for killing deer.

The Nez Perce had obtained horses by the mid-1700s. Horses allowed the Nez Perce to increase their range of trade and subsistence rounds. The most important result was the ready access horses provided to the bison-hunting rounds on the Plains. Although occasional hunting parties probably made treks east of the mountains before this time, horses allowed the trip to be made more quickly, and provided a much more successful method of hunting buffalo once the plains were reached. Alliances and trade with the groups east of the mountains may have resulted in new ideas and material goods being introduced in the groups west of the Bitterroots. Before the extermination of the large herds in the 1870s, bison hunting among the Nez Perce bands had grown into an annual activity, with women and children sometimes making the trip to the plains. These trips sometimes lasted as long as two years, but usually were limited to several months during the late summer. Bison meat was rarely brought back from the plains, meaning that the group had to put in their winter supply of food before they left and after they returned, or that part of the group stayed behind and prepared a good deal of the food stores for the winter village group.

The ethnographic land use pattern for the Clearwater River basin involved the use of the lower canyons for winter settlement, fishing, and fall and winter hunting. The upland areas were utilized in vegetal gathering, travel, some hunting, and the temporary camps associated with these activities.

Historical Record

The Lewis and Clark expedition crossed over the Bitterroot Mountains by way of the Lolo Trail and travelled down into the Clearwater drainage. The explorers reached the mouth of the North Fork in August 1805, and camped at a small Nez Perce settlement across the main Clearwater River from the mouth of the North Fork. Here they rested long enough to build dugout canoes to continue their journey downriver. Clark recorded the use of rafts and canoes among the people here, and commented on the great number of horses they had (Chalfant 1974:8). The expedition left their horses with this group, reclaiming them the following spring on their return journey. Although the Nez Perce had previously possessed some Euroamerican trade goods, this was probably their first direct contact with that culture.

Within a few short years following the Lewis and Clark exploration, fur companies' representatives had reached the area. In 1812, a fur-trading post was established on the lower Clearwater River by Donald MacKenzie of the American-owned Pacific Fur Company (Haines 1938:333). The Nez Perce in the area showed no great interest in trapping beaver, resulting in the post being abandoned the following year. In 1818, Fort Nez Perce (later to be known as Fort Walla Walla) was established by the Northwest Company at the confluence of the Snake and Columbia rivers. Although this was 240 km (150 mi.) west of the Clearwater area, trade relations were established as the demand for Euroamerican products increased.

The Nez Perce heard about Christianity from the fur companies' personnel. The Indians, wanting to know more about this powerful religion which could bring such wealth as that of the whites, sent a delegation to St. Louis during the 1830s seeking further information about the white man's beliefs. In 1835, in response to this request, the Rev. Samuel Parker met the Nez Perce at the Rocky Mountain Rendezvous, and travelled through the Clearwater country several times during that year preaching to the Indians (Josephy 1965:125-138). Subsequently, Henry Spalding and his wife Eliza were commissioned by the American Board of Commissioners for Foreign Missions to preach to the Nez Perce. The Spaldings established a mission on the lower Clearwater River in November 1836. Two years later the mission was moved to the mouth of Lapwai Creek, where a school, sawmill, gristmill, and printshop were constructed. The Indians were encouraged to farm and raise livestock. A spur mission was established on the upper Clearwater at Kamiah (Josephy 1965:139-199). The Clearwater missions were abandoned during the Cayuse War in 1847.

The Nez Perce, as well as other southern Plateau groups, signed a treaty with the U.S. government in 1855. By this treaty, encouraged by Gov. Isaac Stevens of the newly created Washington Territory, the Indians agreed to live within limited territories, in exchange for economic compensation. The treaty was not ratified by Congress until 1859, and actions to fulfill the government's end of the treaty terms not taken until 1861 (Chalfant 1974:26). Dissatisfaction over this course of events was a factor which led to skirmishes with the whites by many Plateau groups, excepting the Nez Perce, from 1855-1858.

In 1861, a mining expedition led by Edward Pierce discovered placer gold deposits in the North Fork Clearwater drainage. Pierce, who had previously travelled among the Nez Perce of the area as a horse buyer, disregarded the warnings of the military, the missionaries, and the Indians themselves, in trespassing across the Nez Perce Territory. Pierce's party did have a Nez Perce guide who led them on trails through the area. The party descended into the North Fork canyon near Indian Creek, and travelled up the river for 14 days before climbing out of the valley near Big Island. From here, an established trail led southeast toward Reeds Creek (Ralph Space:personal communication). At Canal Gulch on Orofino Creek they found the abundance of gold which changed the course of areal events. By the following spring the rush of miners into the area began. This onslaught of prospectors, mainly from the California mining fields, was followed by a secondary population influx of commodity and entertainment suppliers. The town of Lewiston, at the confluence of the Clearwater and Snake rivers, sprang up as the gateway into the Clearwater drainage. Here supplies and horses could be purchased to make the difficult trek upriver to the mining camps. The influx of newcomers resulted in a drastic shift in white population distribution in the Northwest. Most of the population of Washington Territory, which had previously been concentrated west of the Cascade Mountains, now was centered in the new mining district (Beal and Wells 1959:289).

In the spring of 1861, an Indian agent was sent to Lapwai in anticipation of a conflict developing between the Indians and the expected onslaught of miners. The Indians, seeing it was useless to stop the invasion, made an agreement with the Superintendent of Indian Affairs that mining would be allowed north of the Snake and Clearwater rivers, but the Euroamericans must stay out of the reservation area south of that point (Bancroft 1890:236). The Nez Perce tried to make the best of the situation by supplying beef, potatoes, onions, and bread to the miners.

The mining camps of Oro Fino City and Pierce City, both established on Oro Fino Creek early in 1861, grew from tent encampments to towns in a matter of a few weeks. In August of 1861, Oro Fino City had about 400 houses and tents (Beal and Wells 1959:291). In that same month, a group of miners left Oro Fino City in search of richer gold grounds. Ignoring the warnings of the Nez Perce that they were in violation of the agreed-upon treaty arrangement, the area along the South Fork was prospected. The camp of Elk City was established on the South Fork on 6 August 1861, and within three weeks had a population of over a thousand, with 25 completed buildings (Beal and Wells 1959:291). That summer, the steamer "Colonel Wright" sailed up the Snake River and into the Clearwater River in an attempt to establish a supply route to the mining camps. The ship reached 64 km (40 mi.) upriver before being stopped by repairs.

Within two years of the discovery of gold in the Clearwater area, practically every drainage from the North Fork to the Salmon River had been explored. Gold values were found on the lower North Fork, but as richer diggings were to be had on the upper drainages, this area was ignored during the early placer period. In 1862, the site of Oro Fino City itself was dredged in the search for gold (Geidl 1972). Also during that year,

the camp of Moose City was founded in the rich area of the upper North Fork drainage (Rice 1977:1). In the late 1860s Moose City had a saloon, a restaurant, a hotel, a jail, a butcher shop, and three general stores (Space 1964:25). In 1869, Pierce City had a population of 100 whites and 300 Chinese (Anonymous 1903:1039). As a rule, the Chinese were resented in the mining camps, but as the rich deposits of placer gold gave out, many worked claims were sold or leased to the Chinese miners. In 1888, the population of Elk City consisted of 400 Chinese and 12 whites (Elsensohn 1971:164).

In 1863, Idaho Territory had been established with Lewiston as its short-lived capitol. In that year a new treaty was forced upon the Nez Perces, further reducing the size of their reservation. This treaty was signed only by the Clearwater River groups of Indians who had been closely associated with the whites, and was totally rejected by the remainder of the bands, resulting in a permanent rift between the two groups. The treaty was not ratified by Congress until 1867, at which time a military post was established at Lapwai to prevent any violence by the Indians and to enforce the terms of the treaty. The troops were withdrawn after a short time, as many of them were deserting to the gold camps. In 1877, the government ordered all the Nez Perce bands to move onto the Clearwater reservation. This policy culiminated in the war of 1877 with the "non-treaty" Indians under the leadership of Joseph, chief of the Wallowa band of Nez Perce. The subsequent surrender of Joseph was the effective end of the Nez Perce resistance to the takeover of their territory. Missionary and government schools were established on the reservation. In 1875, Jesuit missionaries founded the St. Joseph's Mission, the second in north Idaho to bear that name, on the Clearwater River above Lapwai (Thompson 1963).

Mining in the area never really ceased. Some exploratory "sniping" was done on the lower North Fork between Dent and Moscow Bar, especially in the Big Island area on into the middle of this century. Lode and vein mining operations began in the late 1880s. At the turn of the century, gold veins were discovered on the upper Elk Creek drainage led to the establishment of a stamp mill and several large mines in the area. The community of Elk River was founded to support these operations. As the old placer gold areas gave out, many miners stayed in the area and became trappers to supplement their subsistence. A few trapper cabins dating from this period were located in the North Fork drainage (Space 1964:58).

By the 1880s and 1890s, most of the area southwest of the Nez Perce reservation had been settled. Public demand for more land resulted in the reservation being opened for homesteading in 1895. A deluge of settlers descended upon the area. By the turn of the century, most of the flat areas along the lower North Fork were filed upon. Access to these areas was by the old Nez Perce trails or by raft. At this time Ahsahka was principally still a Nez Perce village, with most of the adjoining land being settled upon by Indian farmers (Clearwater Historical Society 1966). The second community to bear the name of Oro Fino was established with a small trading post, operated out of a homesteader's cabin, at the mouth of Oro Fino Creek (Clearwater Historical Society 1966:1-6). In 1897, a post

office at Ahsahka was moved to Oro Fino. This resulted in the changing of the spelling of the town's name to Orofino, as the U.S. Postal Service did not allow the use of two words in a post office name (Clearwater Historical Society 1966:1-6). The demand for lumber by the settlers in the area led to the building of a mill in Ahsahka in 1897. Homesteaders on the North Fork supplemented their subsistence by bringing down the river both rafts of logs for the mill and poles for use as fenceposts further downstream (Clearwater Historical Society 1966:1-6).

In 1898, the Idaho and Washington Transportation Company established Orofino as the location of a trade depot for a steamship service which was to connect the railhead of the Clearwater River at Potlatch Creek, with points on the upper portions of the river. The steamer "Hannaford" was being built for this purpose, but before it could be completed the company was bought out by the Northern Pacific Railroad. The rail company began construction up the Clearwater River, establishing its division headquarters at Orofino. The Hannaford was completed, but made only four trips up the river before being moved to the Snake River (Anonymous 1903:1038). Several small rail tie operations sprang up on the North Fork to supply the railroad construction. One of these operations, "Jim Jump's Camp" on Freeman Creek, set up a saw mill with two flumes operating to transport the logs to the river, where they were rafted downstream to Ahsahka (Clearwater Historical Society 1966:4). During the construction of the line, Orofino's population swelled to over a thousand. By 1901, after completion of the line, the population dropped to 375 (Anonymous 1903:1039).

The extent of homesteading along the North Fork can be generally delineated by a survey of the locations of drainages bearing proper noun names; these usually can be traced to the name of the person who homesteaded the immediate locality (Geidl 1972). In 1896, a post office was established on the North Fork, in the home of Charles Dent. Dent, who homesteaded a large meadow above the river, built a large house which became a customary stopping point for folks travelling the North Fork (Fig. 6). A community bearing his name grew up in the area near his home.

A national shortage of white pine lumber led to a rush to file timber claims in the large white pine stands of the North Fork drainage. The U.S. government had granted much land to the rail companies to encourage western development. These grants were in the form of every other section in a 64 km (40 mi.) right-of-way zone along the path of the railroad. When this land could not be granted, due to it being set aside for other purposes, the government gave the rail companies authority to choose any public land they wished from certain specified areas. These documents, or "scrips" as they became known, could be purchased from the rail companies for a nominal price (Space 1972:15). Armed with scrip, timber investors poured into the area filing on the best timbered lands.

When available prime white pine lands became in short supply, homestead properties were bought up. Many homesteaders, who considered the timber a hindrance to development of their property, were glad to sell out to the timber speculators (Space 1972:15). The Clearwater Timber Company, formed in 1900, and the Potlatch Timber Company soon controlled much of the

Fig. 6. View of Dent homestead, ca. 1905, compass direction not known (Clearwater Historical Society).

North Fork timber lands. The company's first camps were located at the mouth of Washington Creek (Space 1972:29). In 1905, the Clearwater Timber Protection Association was formed by North Fork timber owners, in an agreement with the state for mutual pooling of resources in fighting wildfires in the area (Space 1972:48). The first headquarters for the C.T.P.A. was at the present townsite of Headquarters on Reeds Creek. The Potlatch Timber Company took over the site in 1926, making it the rail terminus and mail headquarters for the company's logging operations. A small community was also established at the mouth of Elk Creek in 1909 to supply loggers and homesteaders in the area (Geidl 1972).

Early logging on the North Fork was restricted to the river bottom area where logs could be easily skidded to the river and floated downstream. In the late 1920s and early 1930s, many flume systems were constructed on the streams along the North Fork. The principal of these were on Beaver, Reeds, Elmberry, and Falls creeks. Flumes were also located on Evans, Swamp, Elkberry, Cranberry, Meadow, Gold, and Silver creeks (Ralph Space 1980:personal communication; Knudson, Sappington, and Pfeiffer 1977). As a result, logging operations climbed higher up into the drainages and numerous camps were established along the flumes to handle the increase in production. Logs were decked at the mouth of the streams, awaiting the spring high water flow to float them down the river. The log "drive" down the river, which began in 1928, was an annual event that ended at the company's mill in Lewiston and took up to two months to complete. Following behind the logs were the cookhouse and bunkhouses, termed "wannigans." These were built atop rafts constructed of logs lashed together with wild cherry vines (Potlatch Corporation 1977). The last log drive in the western United States took place on the North Fork in 1966.

The increased demand for wood during World War II made the flume system obsolete. The lag in production time from the time the logs were requested until they reached the mill the following spring was considered inefficient by government contractors. Rail lines were put into the upper North Fork drainage from Headquarters to transport the logs out. Railroad logging was phased out of the area by 1960, to be completely replaced by truck transport. Many of the old railroad beds were converted over for use by trucks (Potlatch Corporation 1977). The Clearwater Timber Comapany merged with the Potlatch Timber Company in 1931 to form Potlatch Forests, Inc., which became Potlatch Corporation in 1974.

During the 1930s Civilian Conservation Corps (CCC) camps were operated in the North Fork drainage. One of these camps, which could house 200 men seasonally, was located at the mouth of Elk Creek. The CCC in the Clearwater area fought forest fires, worked at blister rust control (a white pine blight), and built roads and trails in the area (Space 1964:105). During this period a road was constructed in the steep canyon between Ahsahka and Bruces Eddy, continued upriver to where the valley again narrowed above Elk Creek, and then climbed northward out of the valley.

The upper North Fork drainage was included in the Bitterroot Forest Reserve set aside by President McKinley in 1897. Portions of the area were included in the Shoshone National Forest created in 1905, and the Coeur

d'Alene National Forest created in 1906. The Clearwater National Forest was created in 1907, and still holds jurisdiction over the area (Space 1964:39). The role of the Forest Service was mainly in controlling wildfires, but their use of only hand tools proved fairly ineffectual. The large fires of 1910, which swept over much of eastern Washington, northern Idaho, and western Montana, killing 87 men, resulted in a vigorous program of early fire detection for the Forest Service. A series of guard stations, some using old trapper and homestead cabins, and lookout structures, in the North Fork drainage, were constructed as part of this program.

By 1955, a county map indicated 28 occupied and abandoned dwellings were located in the area inundated by the reservoir. All structures located below 488 m (1600 ft.) elevation, the maximum reservoir pool level, were destroyed during clearing operations prior to inundation.

2. PROJECT METHODS AND TECHNIQUES

Idaho State University Investigations

During August and September of 1970, Idaho State University personnel conducted field investigations along the North Fork area to be inundated. According to Earl H. Swanson, Jr., this reconnaissance "was devoted primarily to stratigraphic survey of new and known sites to determine their size and value" (Swanson and Corliss 1971:1). The field project was conducted by David Corliss and seven crew members. During the one month period they spent in the area, most of the sites previously recorded by John Osmundson and Christopher Hulse were revisited, and 14 new sites were recorded (12 of which were test excavated). Many terraces along the river were given pedestrian coverage, with access provided by vehicle and by boat. Historic sites were ignored for the most part. Ralph Space of Orofino pointed out the locations of many aboriginal sites in the area. Test units were dug at terraces where surface artifacts were found. Most of these excavations were isolated 1 x 1 m and 1 x 2 m units placed at random into the cutbank of the terraces. Excavation was usually in arbitrary 20 cm levels, and continued until underlying river cobbles were reached (on the low terraces) or until sterile deposits were found (on the upper terraces). Matrix from these excavations was not screened. Some soil samples were collected from each arbitrary level. The result of this short field season was a report to the National Park Service recommending more extensive excavation of several sites during the following year.

The 1971 field investigations were undertaken by Corliss and a crew of 10 to 14 members. During the months of June and July, excavations were conducted at Elk Creek, Indian Creek, Big Springs, and in the Big Island vicinity. During the month of August, testing was done in the upper reservoir area at Little North Fork and Larkins Bar. These excavations usually consisted of a series of 2 x 2 m units dug in arbitrary 10 and 20 cm levels. Matrix was screened (mesh size unknown) and some soil samples were taken. Maps were made of the excavations and stratigraphic drawings made of excavation walls. In addition to the hand dug units, backhoe excavations were conducted at Elk Creek and Swamp Creek. The surface of many of the sites tested had been disturbed during vegetation clearing operations for the reservoir. Both seasons combined, approximately 72 hand dug test units were put in, totalling nearly 250 m^3 of excavated material. Approximately 26 m^3 of this was excavated during 1970 (Corliss and Gallagher 1971).

Laboratory work and final report preparations were done by Gallagher during the autumn and winter of 1971-1972. Artifacts were washed, accessioned, and photographed. Soil samples collected in the field were given preliminary examination. Six carbon samples were submitted to

Washington State University for analysis. A literature search was also undertaken. The final report of the investigations was submitted to the National Park Service in 1972. A shortage of time and money resulted in this report being less complete than would have been possible.

The 1976 reconnaissance by University of Idaho personnel was initiated to examine the newly created shoreline and immediately adjacent areas, of the newly created reservoir area. To this end, Robert Lee Sappington and Michael A. Pfeiffer spent a seven week field season surveying the some 200 mi. of reservoir shoreline and doing background research into the area. Prior to field survey a literature search was done and all maps and aerial photographs of the area were studied. Roads within the reservoir are extremely limited, consequently, a boat was used to provide access to areas where pedestrian survey was considered feasible. One week of the project was spent interviewing local informants in Elk River and Orofino concerning historic structures in the project area. The reconnaissance recorded a total of ten sites, nine of which were historic structure remnants. The sites were mapped, features sketched and photographed, and a sample of surface artifacts collected. Laboratory work included the washing, accessioning, and photographing of artifacts. A draft report of the reconnaissance was written and put on file at the Laboratory of Anthropology. The project included a trip to Pocatello to transfer all the archaeological materials from the Idaho State University investigations of the Clearwater drainage, to the University of Idaho, where they are presently curated under the regional center system of the Idaho State Historical Preservation Office.

Current Work

In the autumn of 1979, research and analysis of the 1970-1971 Idaho State University Dworshak materials and 1976 University of Idaho survey results were initiated. After a preliminary inventory, it was discovered that much information from the Idaho State University investigations had been lost through the years. Working under this handicap, much of the site information not included in the previous reports were sorted through and prepared for publication. Three new permanent site numbers were designated from the Idaho State University investigations in order to clarify the locations of site materials. Morphological description, artifact analysis and cataloging was done, based on a standard format (Knudson 1979), with additions and modifications made to incorporate the North Fork materials (Appendix C). Natural glass was analysed through x-ray fluorescence for source tracing. Debitage was processed and analysed. Fourteen additional carbon samples were radiometrically determined by Washington State University, in order to check dates obtained in 1971, and for age analysis of cultural levels and sites not previously dated. Information and material from the 1976 reconnaissance was incorporated into the 1970-1971 research. Due to lack of good provenience information, soil samples were not analysed, but were accessioned. An extensive literature search was done, as well as additional interviewing of local informants. A report of an amateur excavation done on the North Fork by Ralph Space of Orofino, Idaho, is included in the current work (Appendix B). Information from the 1961 and 1963 archaeological investigation were then incorporated into the research. The present work is an attempt to tie together all known cultural resource information for the Dworshak Reservoir (i.e., lower North Fork Clearwater Valley) area.

3. THE CULTURAL SITES

Cultural Sites Location

The following site descriptions summarize all known information concerning cultural properties recorded within the Dworshak project boundaries. For clarity in understanding their locational relationships, the site summaries are presented in order of distance from the mouth of the North Fork Clearwater River. Table 1 presents locational information for the sites in numerical order, according to the permanent site numbers designated to the properties. Cultural sites recorded under contract by Idaho State University, but located outside the project boundaries, are also included in the text. Project maps, indexed in Fig. 7, are included for all portions of the river area discussed in the text. As mentioned earlier, some artifacts, and much in-site provenience information are missing from the present collections obtained from the Idaho State University Dworshak investigations. Field notes and previous reports of these investigations refer to some of the missing data, and these references are included in the present summaries. Consequently, the following discussions of the artifacts from the sites do not always match up with the artifact inventories in the corresponding site tables.

10-CW-1 Bruces Eddy

Bruces Eddy is a large low terrace situated within a steep-sided basin. The terrace, located about 3 km (2 mi.) upriver of the mouth of the North Fork (Fig. 8), was first recorded as a cultural site by Osmundson and Hulse in 1961 (1962:13-14). They reported several dwellings, with associated outbuildings, occupying a portion of the terrace at that time, with much of the area under cultivation. Harry Wheeler, a local Nez Perce Indian, reported to Osmundson and Hulse (1962) that the area had ethnographically been a large salmon fishery. Nez Perce groups from several surrounding areas were said to have seasonally occupied the terrace while catching and processing fish. An examination of local private collections by Osmundson and Hulse, revealed numerous flaked lithic tools reported to have been collected from the eroding terrace cutbank. These artifacts included many small and large side-notched and corner-notched projectile points, a number of large ovoid unifacially flaked implements, a shaped stone pestle, and a stone mortar with incised exterior. Numerous historic artifacts were also reported.

A survey of the terrace revealed many "hearths" eroding from the cutbank. Osmundson and Hulse excavated two test units near a stream channel at the downriver end of the terrace. These excavations exposed a 15 cm (6 in.) layer of fine, white micaceous sand overlaying a 30-40 cm (12-18 in.) stratum of dark brown sediments containing ash, charcoal, fire-cracked rock, and cultural materials. Underlying these layers was 25

TABLE 1

Locational information of cultural sites recorded within the Dworshak Reservoir Project Area

DESIGNATION			LOCATION								ELEVATION[g]		Investigations[i]	References[j]
Permanent site no.[a]	Site name	Previous[b] designation	U.S.G.S.[c] map	River mile[d]	Legal description[e]	Section	Township	Range	UTM[f] Easting	UTM[f] Northing	A.M.S.L.	Below pool level[h]		
CW-1	Bruces Eddy	AD F-26	Ah	2.5	SW¼ SE¼	26	37N	1E	552500	5151750	293 (960)	172 (563)	E	C,D,E
CW-6	Beaver Dam	AD F-23	Ah	3.5	SE¼ SW¼ SW¼	23	37N	1E	553730	5153090	305 (1000)	159 (523)	S	D
CW-7	Una Mill	AD F-13	Ah	6	SE¼ NW¼	13	37N	3E	555660	5155450	320 (1050)	144 (473)	S	D
CW-8	Bob Allen Bar	AD G-18	Ah	6.5	NW¼ NE¼ NW¼	18	37N	2E	556950	5155960	320 (1050)	144 (473)	S	D
CW-9	Bob Allen Bar SE	AD G-7	Ah	7	SE¼ SW¼	7	37N	2E	557355	5156150	320 (1050)	144 (473)	S	D
CW-10	Bob Allen Bar NE	AD G-7	Ah	7	SE¼ SW¼	7	37N	2E	557355	5156150	320 (1050)	144 (473)	S	D
CW-11	Browns Bar	AC F-35	Ah	9.5	NE¼ SE¼ NE¼	35	38N	1E	554590	5160270	335 (1100)	129 (423)	S	D
*CW-12	Dicks Creek		Ah	11	SE¼ SW¼ SW¼	24	38N	1E	554850	5162350	341 (1120)	123 (403)	S	D
CW-13	Twelve Mile Site	AC F-24	Ah	12	N½ SE¼	24	38N	1E	555850	5163000	341 (1120)	123 (403)	S	D
CW-14	Elk Creek	AC G-19	Ah	12.5	NW¼ NE¼ SW¼	19	38N	2E	556700	5163280	350 (1140)	114 (373)	S	D,B,13
CW-15	Lathrop Bar	AC G-19	Ah	12.5	SW¼ NW¼ SE¼	19	38N	2E	556980	5163110	341 (1120)	123 (403)	S	D
CW-16	Arrowhead Bar	AC H-28	Gm	21.5	SW¼ NE¼	28	38N	3E	570310	5162070	366 (1200)	98 (323)	S	D
CW-17	Ladd Creek	AC H-22	Gm	23	NW¼ NW¼ SE¼	22	38N	3E	571980	5163280	396 (1300)	68 (223)	S	D
*CW-18	Masterfield Site	AC H-14	LG	24	NW¼ NE¼ SW¼	14	38N	3E	573120	5165000	372 (1220)	92 (303)	E	D,13,14
*CW-19	Airstrip Terrace	CW-47(E)	LG	27	NW¼ SE¼ SW¼	6	38N	4E	576300	5167850	421 (1380)	44 (143)	E	A,D,E,13
*CW-20	Little North Fork		BB	41.5	N½ SE¼ NE¼	11	40N	4E	582950	5186400	436 (1430)	28 (93)	E	A,B,D,2,4,9,10,13,17
CW-23	Upper Bruces Eddy	CW-1	Ah	3	SW¼ SW¼ NE¼	26	37N	1E	554400	5151200				C,D
*CW-38	Indian Creek		Ah	6	SW¼ SE¼ NE¼	13	37N	1E	556150	5155350	317 (1040)	147 (483)	E	A,B,E,3,4
*CW-39	Ash Site		Ah	9	S½ SE¼ NW¼	36	38N	1E	555300	5159950	341 (1120)	123 (403)	E	A,B,E
*CW-40	Drift Creek		Ah	9.5	SW¼ NE¼ NW¼	36	38N	1E	555150	5160300	341 (1120)	123 (403)	E	D
*CW-41	Elk Creek	CW-42(A)	Ah	13.5	S½ SE¼ NW¼	19	38N	2E	556750	5163300	366 (1200)	98 (323)	E	A,B,E,6,8,10,13,15,16

TABLE 1 *continued*

DESIGNATION				LOCATION							ELEVATION[g]			
					Legal description[e]				UTM[f]					
Permanent site no.[a]	Site Name	Previous[b] designation	U.S.G.S.[c] map	River mile[d]		Section	Township	Range	Easting	Northing	A.M.S.L.	Below pool level[h]	Investigations[i]	References[j]
*CW-42	Elk Creek	Site B	Ah	13.5	N½ NE¼ SW¼	19	38N	2E	556850	5163250	347 (1140)	117 (383)	E	B,E,13,14
*CW-43	Big Springs		Dn	15	SW¼ SW¼ SE¼	21	38N	2E	560720	5162650	396 (1300)	68 (223)	E	A,B,2,4,5,7,12
*CW-44	Space Rockshelter		Dn	17	NE¼ SE¼ NE¼	21	38N	2E	563470	5161500	402 (1320)	62 (203)	F	A
*CW-45	Big Island	CW-47(A)	LG	27	NW¼ SE¼ SW¼	6	38N	4E	576160	5167720	421 (1380)	44 (143)	E	B,F,13,16
*CW-46	Bishop Creek	CW 47(C)	LG	27.5	SW¼ SE¼ NW¼	6	38N	4E	576150	5168350	421 (1380)	44 (143)	E	F,13
*CW-48	Mile 29 Site	C-4	Hq	29	SW¼ SE¼ SE¼	30	39N	4E	576550	5170950	384 (1260)	80 (263)	S	0
*CW-49	Mile 30 Site	C-3	LG	30	NE¼ SW¼ NW¼	30	39N	4E	575980	5171938	384 (1260)	80 (263)	S	0
*CW-50	Larkins Bar	CW-51,52 C-2	BB	46.5	NW¼ NW¼ NW¼	34	41N	5E	589550	5190250	442 (1450)	22 (73)	E	A,B,5,8,9,10,14,16
*CW-51	Long Bar	C-1	BB	48	SE¼ SW¼ SW¼	26	41N	5E	591170	5190570	457 (1500)	7 (23)	S	0
CW-66	Upper Rockshelter		Dn	20	NE¼ NW¼ NE¼	30	38N	3W	567290	5162550	488 (1600)		S	0
CW-67	Lost Rockshelter		Dn	17	NW¼ SE¼ NW¼	27	38N	2E	562110	5162910	427 (1400)	37 (121)	S	0
*CW-225	Swamp Creek	CW-47(D)	LG	26.5	SE¼ NE¼ NE¼	12	38N	3E	575650	5167220	421 (1380)	44 (143)	E	A,B,E,2,11,13,18
*CW-226	Upper Terrace	CW-47(B)	LG	27	NE¼ NE¼ NE¼	12	38N	3E	575600	5167400	433 (1420)	31 (103)	E	A,B,E,6,8,10,11,13,14,15,18
CW-231	Butte Creek	(Temp?)	TP	51	SE¼ SW¼	29	41N	6E	596400	5190520	472 (1550)		S	0
CW-241	Smoked Rock		Gm	21	NE¼ NE¼	29	38N	3E	569040	5162270	(1200)		E	0
*CW-242	Low Flat Site	CW-12(B)	Ah	11	SW¼ SE¼ SW¼	24	38N	1E	555100	5162400	341 (1120)	123 (403)	S	0
†CW-287	Magnus Bay	DW1	Dn	26	E½	8	37N	2E	559060	5156860	(1600)		S	0
†CW-288	Freeman Park	DW2	Ah	8	E½ SE¼ NW¼	1	37N	2E	555325	5158450	(1900)		S	0
†CW-289	Helgeson Site	DW3	Ah	8	NW¼ SE¼	6	37N	2E	557040	5158260	(1750)		S	0

TABLE 1 *continued*

DESIGNATION			LOCATION								ELEVATION[g]		Investigations[i]	References[j]
Permanent site no.[a]	Site name	Previous[b] designation	U.S.G.S. map[c]	River mile[d]	Legal description[e]	Section	Township	Range	UTM[f] Easting	UTM[f] Northing	A.M.S.L.	Below pool level[h]		
†CW-290	Group Camp Ore	DW4	Ah	11	NW¼ NW¼ NE¼	26	38N	1E	553850	5162040	(1620)		S	0
†CW-291	McCullough Site	DW6	LG	7.5	NW¼ SW¼ SE¼	15	38N	3E	571945	5164450	(1800)		S	0
†CW-292	Anderson Site	DW7	BB	46.5	SW¼	34	41N	5E	590000	5189000	(2750)		S	0
†CW-293	High Flat Site	DW10	LG	27.5	NE¼	1	38N	3E	575660	5168480	(1740)		S	0
†CW-294	Cabin Site	DW9	LG	23.4	SW¼	7	38N	4E	575920	5166780	(2040)		S	0
†CW-295	Dent	DW5	Dn	15	SE¼ NE¼	21	38N	2E	561100	5163520	(2180)		S	0

[a] Permanent site numbers as assigned by the Idaho Archaeological Survey, Idaho State Historical Society, Boise, each of these numbers is preceded by the designation "10-" to identify them as being within the state of Idaho, according to the Smithsonian Institution survey system. * = sites recorded or revisited diring the 1970-1971 field seasons by Idaho State University under SPS contract; † - sites recorded during the 1976 field season by University of Idaho, under CE contract.

[b] Previous designation beginning with AS or AC assigned by Osmundson and Hulse, 1961; all others assigned by Corliss and Gallagher, 1971 and Swanson and Corliss, 1971.

[c] U.S.G.S. maps abbreviated: Ah = Ahsahka 15' 1961; BB = Boehls 15' 1936; Dn = Dent 7.5' 1969; Gm = Grangemont 7.5' 1969; Hq = Headquarters 15' 1938; LG = Little Green Mtn. 7.5' 1969.

[d] River miles refer to distance above the mouth of the North Fork (sources: U.S.G.S. map series and Corps of Engineers Reservoir map series).

[e] Legal descriptions are from the Boise Meridian.

[f] Universal Transverse Meridian, UTM, are for zone 11.

[g] Elevations are given in meters and, in parenthesis, feet. Less than 1445 ft. elevation = permanently inundated; between 1445-1600 ft. elevation = seasonally inundated; above 1600 ft. elevation = not inundated.

[h] Based on a mean elevation of 464 m (1523 ft.).

[i] Investigation level of effort taken at the site: E = test excavated; S = surface collected only.

[j] Letter refers to published and unpublished reports; numbers refer to book numbers of field notes contained in the collection. A = Corliss and Gallagher 1971; B = Corliss and Gallagher 1972; C = Lynch, Wilkinson, and Warren 1965; D = Osmundson and Hulse 1961; E = Swanson and Corliss 1971; F = Space 1968; O = information taken from site form only.

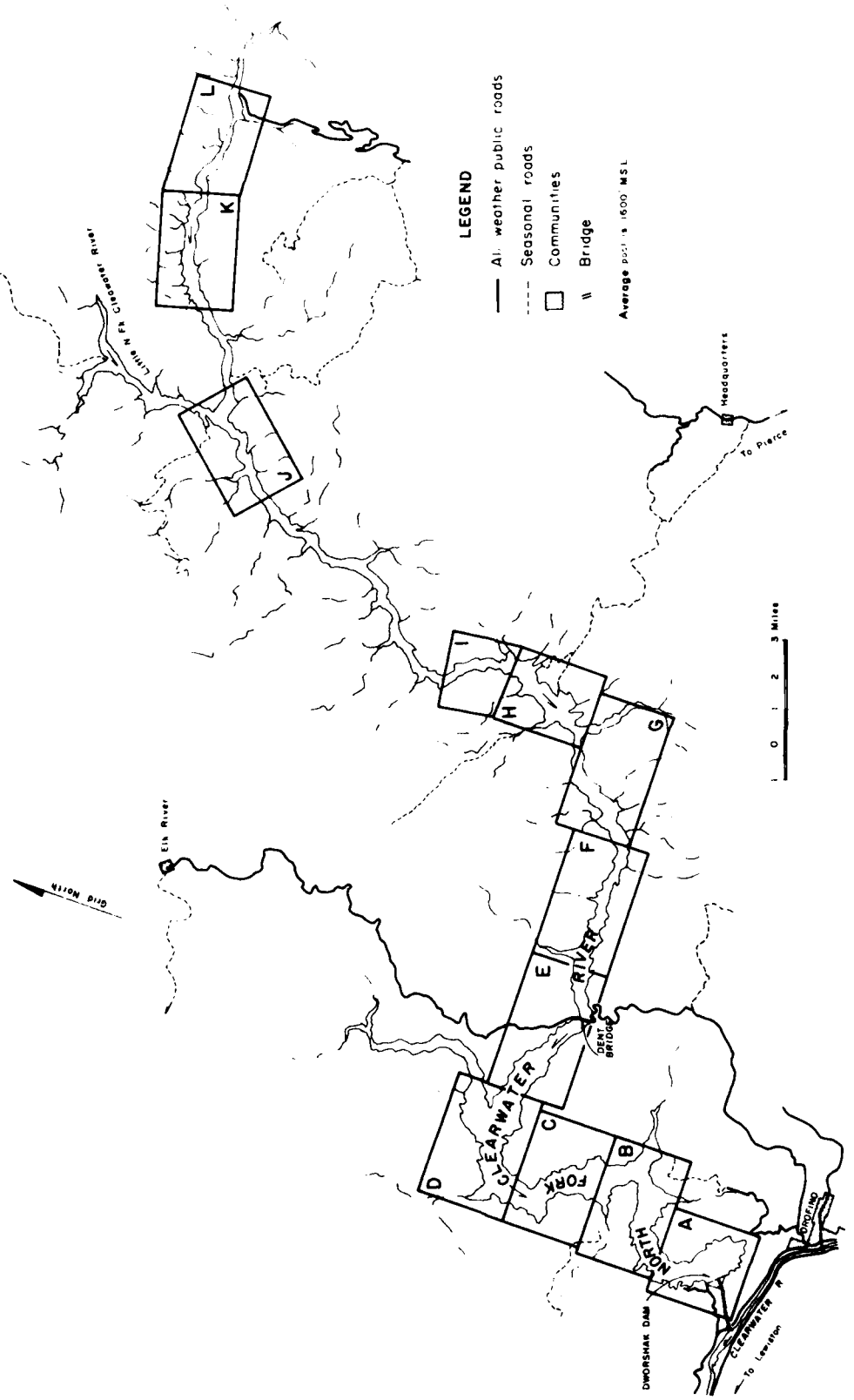


Fig. 7. Map of project area, indicating segment maps A - L.

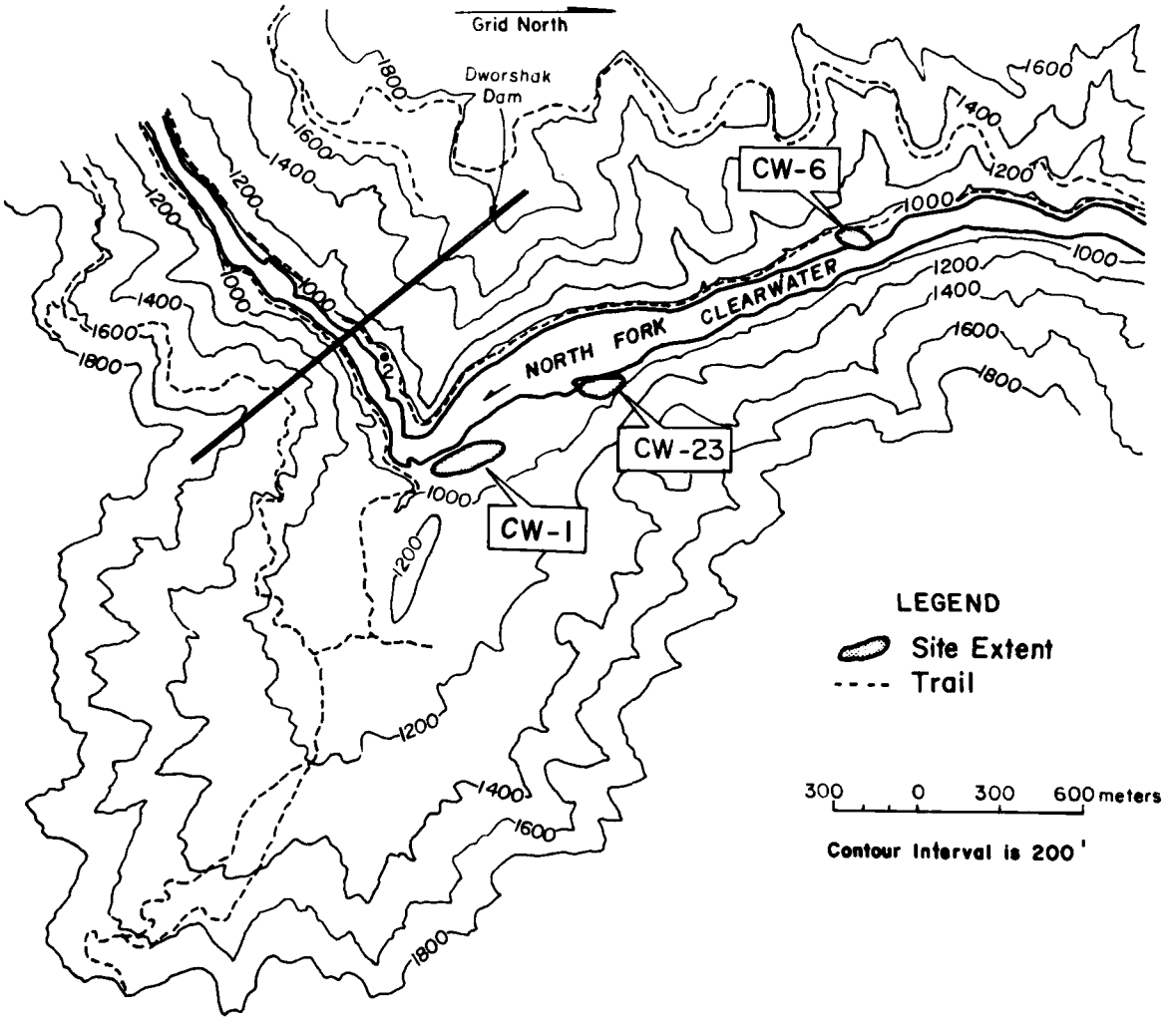


Fig. 8. Segment map A, North Fork Clearwater River. The dam is located just downstream of river mile 2.

cm (10 in.) of culturally-sterile coarse sand, atop river gravels. Two additional units were begun at the site, but were abandoned at 40 cm (16 in.) depth when no cultural materials were encountered.

The site was revisited by Idaho State University archaeologists in 1963 (Lynch, Wilkinson, and Warren 1965). During this investigation, two series of excavations, each consisting of four 2 x 2 m units were placed on the upriver end of the terrace (Lynch, Wilkinson, and Warren 1965:34, 46). A third series of excavations were positioned on the downriver portion of the terrace. The sediments from all three excavations were reported as being similar to those reported by Osmundson and Hulse, although the upriver sediments were shallower than the downriver deposits. Cultural materials recovered from the excavations include numerous small and large side-notched and corner-notched projectile points, along with many pestles and flaked cobble implements (Lynch, Wilkinson, and Warren 1965:35-40).

Also during the 1963 investigation, three burials were excavated from the slope flanking the upriver end of the terrace (Lynch, Wilkinson and Warren 1965:34). The skeletal materials from these burials have recently undergone extensive analysis by a University of Idaho physical anthropologist. Results from this study reveal that Burial 1 contained the flexed remains of a woman over 40 years of age (Thomas Mulinski 1980:personal communication). The remains were accompanied by numerous rolled copper beads, pendants and a breast plate of copper, shell beads, and an antler digging stick. Burial 2 contained the remains of an infant of less than one year, who had been buried along with copper and glass beads, a pestle, red ochre, and the probable remains of a skin robe. Burial 3 contained the remains of an adolescent (sex indeterminate); no grave goods were found associated. The copper artifacts from these burials have recently been analysed as to metal content, as part of a larger study concerning protohistoric routes of commerce for copper trade goods in the Pacific Northwest. The results of the analysis of this study of the Bruces Eddy artifacts by Darby Stapp, University of Idaho, are included in the present work (Appendix A).

The Bruces Eddy site was again visited by Idaho State University personnel in 1970 (Swanson and Corliss 1971:Fig. 3). Several flaked cobble implements and two unifacially-flaked artifacts of micro-crystalline materials were found, along with much fire-cracked rock and lithic debitage. The site is located in the vicinity of the current dam, in the deepest portion of the reservoir.

10-CW-23, Upper Bruces Eddy

This site is situated on a low terrace about 250 m (800 ft.) upriver and across from the large terrace at 10-CW-1, Bruces Eddy (Fig. 8). The site was recorded in 1963 by Idaho State University personnel (Lynch, Wilkinson, and Warren 1965:34). No other information is available concerning the site.

10-CW-6, Beaver Dam

This low terrace site is located 5 km (3 mi.) upriver of the mouth of the North Fork (Fig. 8). The terrace measures about 150 m (500 ft.) in length and approximately 60 m (200 ft.) in width at the center, from where it tapers into the surrounding canyon walls at either. A small intermittent stream dissects the terrace (Lynch, Wilkinson, and Warren 1965:33). The site was first recorded in 1961 by Osmundson and Hulse, who reported a dwelling, several outbuildings, and a small orchard occupying the upriver end of the terrace. The downriver end of the terrace was being used at that time as a picnic area (Osmundson and Hulse 1962:15). Osmundson and Hulses' Nez Perce informant, Harry Wheeler, reported that the stream at the site was known as "Service Berry Creek" to the local Nez Perce Indians, and was used for winter hunting and sometimes for fishing, when the salmon were running. Osmundson and Hulse reported a number of lithic artifacts contained in local private collections were found at the site. They also report local informants as having discovered a number of burials at the terrace during road construction. The site was revisited by Idaho State University personnel in 1970 (Swanson and Corliss 1971:Fig. 1); the results of this investigation were not reported.

10-CW-7, Una Mill

This site is located on a low terrace 6.5 km (4 mi.) upriver of the mouth of the North Fork (Fig. 9). Osmundson and Hulse (1962:15) recorded the site in 1961, and reported a small historic sawmill on the downriver end of the terrace, and a dwelling with several outbuildings occupying the other end. A number of small outbuildings were clustered along a stream channel which divided the terrace. Osmundson and Hulse reported viewing a number of flaked lithic contained in private collections, which were said to have been found at the site.

10-CW-38, Indian Creek

Indian Creek is a major drainage of the lower North Fork, located approximately 9.5 km (6 mi.) upstream from the mouth of the river (Fig. 9). A site is located on a low terrace at the mouth of Indian Creek. This terrace is approximately 70 m (215 ft.) wide, and extends upriver about 400 m (1300 ft.) from the mouth of the stream. The area was first surveyed by Idaho State University personnel during the 1970 field season. The terrace appeared to have been homesteaded at one time, as evidenced by structural remains, historic agriculture-related artifacts, and the disturbed appearance of the ground surface. A cable-car spanning the river provided access to the area from the road on the north side of the North Fork (Fig. 10). Numerous recently dug pits located near the terrace edge, assumed to be the result of illicit excavation, were reported by the Idaho State University team.

Three 1 x 2 m test units were excavated at about the midpoint of the terrace length, at 2, 4, and 12 m, respectively, back from the terrace cutbank. Swanson and Corliss (1971) describe the cultural content of

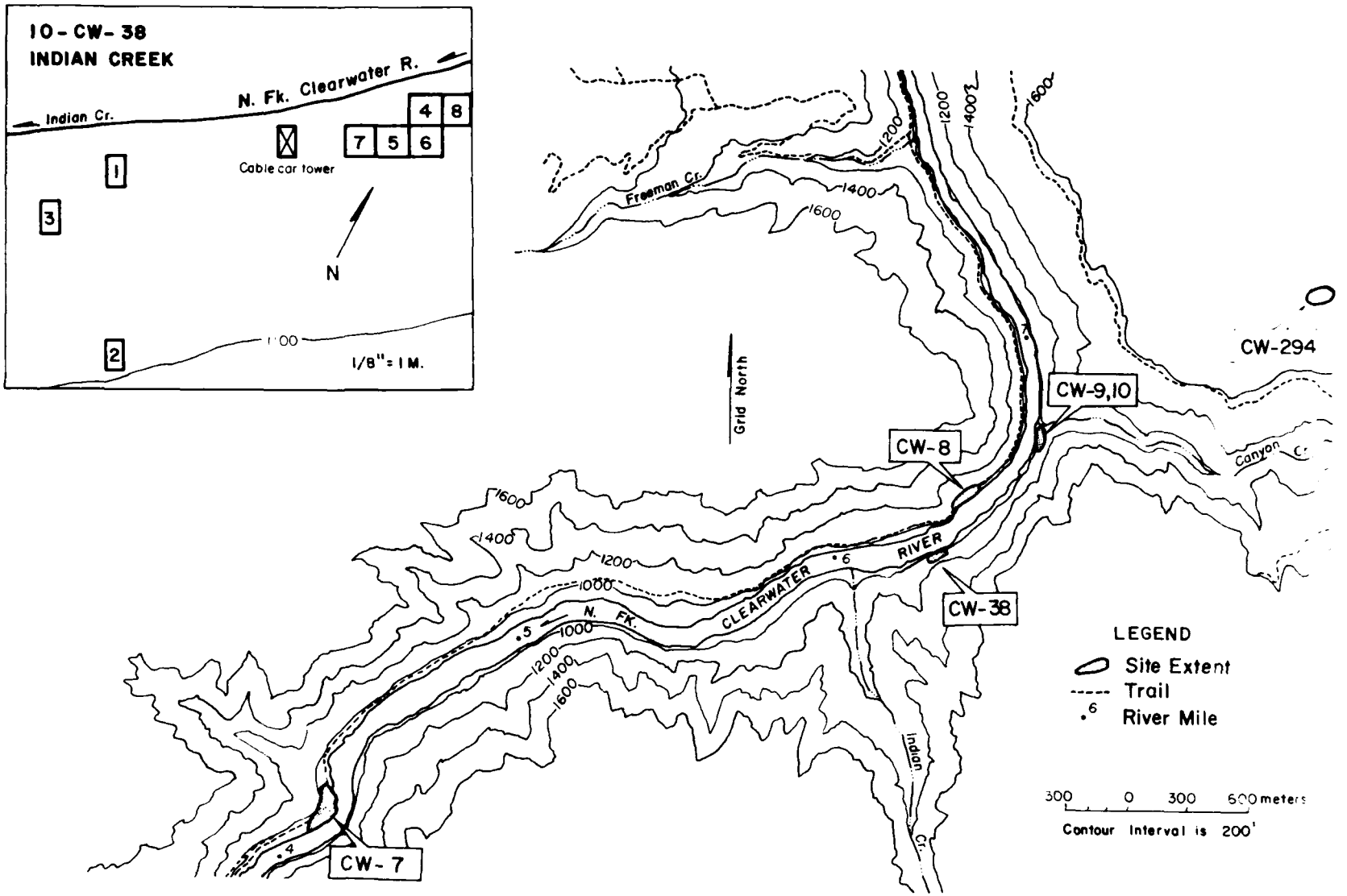


Fig. 9. Segment map B, North Fork Clearwater River; site plan, 10-CW-38, Indian Creek.

Fig. 10. View of cable-car tower, 10-CW-38, Indian Creek, looking northwest.

these units as "relatively recent in appearance." The present artifact assemblage from the site contains a thin biface, a small unifacially flaked tool, and two wire nails accredited to the 1970 excavations (Table 2).

During the 1971 field season, a 1 x 4 m area was excavated on the slope behind the terrace, approximately 40 m (130 ft.) south, and 11 m (36 ft.) above the river. This excavation exposed coarse sand for a depth of 2 m, at which point a surface of clay was encountered. Excavation ceased at this depth. A concentration of charcoal and fire-cracked rock was unearthed at 80 cm (31 in.) depth; a sample of this charcoal was dated at 1120±85 radiocarbon years BP (WSU 2400). Artifacts accredited to the excavation include a triangular-based projectile point (found in the upper 40 cm (16 in.), a thin biface, and much cryptocrystalline debitage. The present collection contains no material accredited to this excavation. No cultural material was reported from a depth greater than 130 cm (51 in.). Two other trenches were also dug on the slope, but no written record as to their location or content are in existence.

The main excavation from the 1971 season consisted of a series of five connecting 2 x 2 m units excavated from the terrace, approximately 2 m back from the river cutbank and 20 m upriver of the 1970 excavations. A disturbed area of 60 cm, was located adjacent to the excavation. Digging was done in arbitrary 20 cm levels to a depth of 120 cm. Sediments consisted of relatively undifferentiated sand underlying a thin humus zone. At a depth of 75 cm, a 20 cm layer of river cobbles was exposed.

Fire-cracked rock and river cobbles were found in various concentrations throughout the excavation. The upper 20 cm level appeared disturbed, with historic materials (glass, wire nails, and a rimfire cartridge) mingled with lithic artifacts (Table 3). A total of 22 lithic tools were recovered from this level: 4 "projectile points" (2 corner-notched and 2 stemmed), a "drill," 13 thin unifacially flaked implements, 4 thin bifacially flaked tools, and a utilized flake.

In the 20 to 40 cm level, what was described by the excavators as a "pavement" of fire-cracked rock, was exposed (Fig. 11). Thirty-four tools were recovered from this feature: 11 "projectile points" (1 lanceolate, 2 side-notched, 3 corner-notched, 3 stemmed, and 2 additional fragmentary pieces); 1 of the side-notched points is the only obsidian tool found at the site. Other tools recovered included 8 thin bifaces, 3 thick bifaces, 4 unifaces, 1 "drill," 1 utilized flake, and a flat pebble netweight (the only one recovered from the site).

The next 20 cm layer contained a concentration of fire-cracked rock below a portion of the "feature" described above (Figs. 12, 13). This feature contained many crystalline debitage flakes. A part of this feature appeared to have been destroyed during excavation of the existing hole adjacent to the Idaho State University units. Fourteen tools were also recovered from this level: 3 "projectile points" (1 stemmed and 1 corner-notched), 4 thin bifaces, 3 thick bifaces, and 4 unifacially flaked tools.

TABLE 2

Distribution of artifacts from 10-CW-38, Indian Creek

Provenience		Artifact class[c]	Catalogue number[d]	Morpho-use form[e]	Petrology	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Thinning Evaluation[h]		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
Surface		Flk	0249	Thick uniface, min-edged	Quartz	61	28	12	18	5	3	3
		Flk	0644	Used flake	Chert	55	39	18	23	5	3	2
		Flk	0645	Thin uniface, min-edged	Chert	0	0	6	3	5	3	2
		Flk	2162	Thin uniface, min-edged	Argillite	0	0	6	3	5	5	2
		Flk	0250	Thin biface, haft indeterminate	Chalcedony	0	0	5	1	8	8	6
		Flk	0642	Unspecified uniface	Quartz	0	0	3	2	5	3	2
		Flk	0657	Thin uniface, side and end-edged	Chert	32	19	9	6	7	3	3
		Flk	2152	Thick uniface	Basalt	100	80	40	570	0	0	2
		Flk	2153	Thick uniface	Basalt	87	80	25	184	5	5	4
0-20	1970 1	Flk	0270	Thin biface, haft indeterminate	Argillite	30	25	4	3	7	7	7
		Flk	0271	Unspecified Uniface	Chalcedony	0	0	9	5	5	3	3
		Hist	2167	Wire nail	Metal	62	4	3	4			
	1971 1	Flk	0268	Thin uniface, side-edged	Chalcedony	32	16	5	1	8	5	2
	1971 4	Hist	2163	Staple	Metal	43	3	4	6			
	1971 5	Flk	0732	Thin uniface, min-edged	Quartz	0	26	6	4	5	3	2
		Flk	0735	Unspecified uniface	Quartz	0	0	5	1	5	3	2
	1971 6	Flk	0739	Stemmed point w/o basal notch	Chert	0	0	4	1	8	8	7
		Flk	0741	Thin uniface, min-edged	Argillite	0	19	3	2	6	3	6
		Flk	2156	Unspecified biface	Silicified wood	0	0	6	1	8	8	6
	1971 7	Flk	0829	Thin biface, haft indeterminate	Chert	34	14	5	2	7	7	7
		Flk	0817	Unspecified uniface	Chert	0	0	2	1	6	5	2
		Hist	2160	Wire nail	Metal	68	3	3	5			
		Hist	2161	Wire nail	Metal	68	3	3	5			
	1971 8	Flk	0917	Drill	Argillite	0	15	6	3	7	7	7
		Flk	0920	Stemmed potin w/o basal notch	Chert	18	10	3	1	8	8	7
		Flk	2173	Corner notch w/basal notch	Opal	23	0	3	1	8	8	7
		Flk	0918	Corner notch w/o basal notch	Chert	0	23	7	4	8	8	7
		Flk	0923	Thin biface, haft indeterminate	Artillite	0	30	7	7	7	7	6
		Hist	2174	Rivet	Metal	6	17	7	2			
	TR 3	Hist	2168	Rimfire cartridge	Metal	11	6	6	1			
		Hist	2169	Window fragment	Glass	17	7	3	1			
20-40	1970 1	Hist	2158	Wire nail	Metal	24	4	7	2			
	1971 1	Flk	0273	Thick uniface	Basalt	105	80	17	171	3	5	2
	1971 3	Flk	2166	Unspecified biface	Chert	0	0	12	1	8	8	7
	1971 4	Flk	0714	Thin biface, haft indeterminate	Chert	20	14	3	1	8	8	7
		Flk	0716	Stemmed point	Chert	0	20	4	2	8	8	7
		Flk	0718	Unspecified biface	Chert	0	0	3	1	6	5	2
		Flk	0719	Thin biface, haft indeterminate	Quartz	0	0	3	1	8	8	6
		Flk	0721	Unspecified biface	Chert	0	13	6	1	7	7	6
		Flk	0723	Point fragment	Chert	25	12	3	1	8	8	7

TABLE 2 *continued*

Provenience		Artifact class[c]	Catalogue number[d]	Morpho-use form[e]	Petrology	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Thinning Evaluation[h]		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
		Flk	0724	Corner notch w/o basal notch	Chert	17	14	3	1	8	8	7
		Flk	0726	Unspecified uniface	Chert	21	10	3	1	5	3	2
		Flk	0729	Thick uniface, min-edged	Chert	34	24	12	11	4	3	2
		Flk	0730	Thin biface, haft indeterminate	Opal	0	9	3	1	8	8	6
		Flk	0731	Unspecified biface	Chert	0	0	10	9	7	7	6
	1971 5	Flk	0700	Drill	Cert	0	9	4	1	8	8	6
		Flk	0705	Thin biface, haft indeterminate	Opal	0	14	7	2	8	8	6
		Flk	0707	Point fragment	Chert	0	11	3	1	8	8	7
		Flk	0711	Stemmed point w/o basal notch	Chert	36	20	4	2	8	8	7
		Flk	0712	Unspecified uniface	Chert	0	0	2	1	5	3	2
		Flk	0713	Thin biface, haft indeterminate	Chalcedony	0	26	8	5	8	8	6
		Flk	0745	Thin uniface, side and end-edged	Chalcedony	26	11	2	1	6	5	3
	1971 6	Flk	0748	Used flake	Chert	0	14	2	1	5	3	2
		Flk	0749	Unspecified uniface	Chalcedony	0	0	11	15	5	5	2
		NFlk	2155	Net weight	Igneous	51	42	21	68			
	1971 1	Flk	0815	Unspecified uniface	Chalcedony	0	9	2	1	7	7	2
		Flk	0836	Lance point w/o basal notch	Chert	22	18	4	1	8	8	7
		Flk	0838	Side notch point w/o basal notch	Obsidian	20	19	2	1	8	8	7
		Flk	0839	Side notch point w/o basal notch	Opal	23	12	4	1	8	8	7
		Flk	0853	Unspecified biface	Chert	0	19	8	5	7	7	6
		Flk	0855	Thin biface, haft indeterminate	Chert	0	16	6	4	8	8	
40-60	1971 1	Flk	0272	Thin biface, haft indeterminate	Chert	35	19	5	3	7	7	6
	1971 5	Flk	0699	Thin biface, haft indeterminate	Chalcedony	0	0	10	10	7	7	6
		Flk	0709	Corner notch point w/o basal notch	Chert	32	15	4	2	8	8	7
	1971 6	Flk	0925	Thick biface	Argillite	0	28	10	7	6	6	6
		Flk	0926	Unspecified biface	Chert	0	11	5	1	5	5	6
		Flk	2154	Unspecified biface	Chert	0	0	5	2	5	5	6
	1971 7	Flk	0796	Stemmed point w/o basal notch	Chert	0	13	5	2	8	8	7
		Flk	0798	Unspecified uniface	Chalcedony	0	0	6	1	5	3	2
		Flk	0807	Unspecified uniface	Chert	0	0	6	2	7	3	2
		Flk	0810	Corner notch point w/o basal notch	Argillite	23	0	3	1	7	7	7
		Flk	0811	Thin biface, haft indeterminate	Opal	0	12	5	1	7	8	6
		Flk	0812	Thin uniface, side and end-edged	Chert	35	25	10	8	8	6	5
		Flk	0813	Thin biface, haft indeterminate	Chert	41	21	9	8	7	7	7
		Flk	0859	Thin uniface, min-edged	Chert	25	14	3	1	5	3	2
60-80	1971 4	Flk	0862	Stemmed point w/o basal notch	Chalcedony	16	15	4	1	8	8	7
		Flk	0863	Side notch point w/o basal notch	Chert	24	13	5	1	8	8	7
	1971 5	Flk	0852	Thin biface, haft indeterminate	Chalcedony	0	0	0	5	7	7	6
	1971 7	Flk	0819	Unspecified uniface	Chert	28	19	5	2	5	3	2
		Flk	0823	Unspecified biface	Chert	0	0	5	1	8	8	6
		Flk	0825	Unspecified uniface	Chalcedony	32	15	6	2	5	3	2

TABLE 2 *continued*

Provenience Level[a]	Unit[b]	Artifact class	Catalogue number[c]	Morpho-use form[e]	Petrology	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Thinning Evaluation[h] Dorsal	Ventral	Edge shaping stage[i]
		Flk	0826	Corner notch point w/o basal notch	Chert	15	13	2	1	8	8	7
		Flk	0841	Unspecified uniface	Chalcedony	0	0	4	1	5	5	2
80-100	1971 3	Flk	0259	Thin biface, haft indeterminate	Chalcedony	0	0	5	1	8	8	6
	1971 5	Hist	2157	Wire nail	Metal	23	3	3	2			
Indeterminate		Flk	0127	Edge plate	Igneous	0	68	14	138	4	2	2
		Flk	0130	Thick biface, min-shaped	Quartz	70	44	20	72	4	3	6
		Flk	0638	Thick biface, min-shaped	Basalt	53	68	32	106	5	4	6
		Flk	0639	Thick uniface, min-edged	Basalt	73	48	25	103	4	5	2
		Flk	0651	Thick uniface	Igneous	130	110	50	807	0	4	2
		Flk	0652	Thick uniface	Basalt	140	120	65	1295	4	4	4
		Flk	0662	Beaked cobble tool	Igneous	150	90	55	750	0	4	2
		Flk	0664	Thick uniface	Argillite	40	24	8	12	5	3	2
		Flk	0690	Thick uniface	Metamorphic	81	70	42	368	5	5	2
		Flk	0701	Thin uniface, side and end-edged	Chert	0	0	5	2	5	5	4
		Flk	0715	Triangular point	Chert	16	10	3	1	8	8	7
		Flk	0754	Thick uniface	Basalt	110	110	40	905	5	0	2
		Flk	0797	Thick uniface	Basalt	110	110	48	879	4	4	2
		Flk	0799	Used flake	Chert	0	15	2	1	5	3	2
		Flk	0809	Point fragment	Chert	0	0	3	1	8	8	6
		Flk	0820	Unspecified uniface	Chalcedony	0	0	2	1	8	8	2
		Flk	0832	Unspecified uniface	Chert	0	0	9	1	5	3	2
		Flk	0833	Unspecified biface	Argillite	0	0	4	1	0	0	0
		Flk	0837	Side notch point w/o basal notch	Chert	0	0	5	1	8	8	7
		Flk	0840	Thick biface	Basalt	0	0	51	899	4	2	4
		Flk	0847	Thin uniface	Chert	0	0	6	2	3	5	2
		Flk	0916	Unspecified biface	Opal	0	0	4	1	6	5	6
		Flk	0922	Unspecified uniface	Chalcedony	0	0	5	1	8	3	2
		Flk	0931	Thin biface, haft indeterminate	Chert	0	0	2	1	5	5	6
		Nflk	0641	Shaped mano	Granite	0	89	65	1310			
		Nflk	0649	Indeterminate	Granite	120	110	65	808			
		Nflk	0881	Indeterminate	Granite	0	68	24	240			
		Nflk	1344	Edge-ground cobble	Igneous	140	84	44	730			

TABLE 2 *continued*

[a] Depth, in centimeters, below surface.

[b] Unit of excavation (see text).

[c] Either lithic (flaked or non-flaked) or historic materials.

[d] Based on the original Idaho State University accessioning system, all numbers are preceded by the project code "1609".

[e] Morpho-use form names of lithic artifacts are based more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

[f] Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g] Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h] 0 = indeterminate; 1 = unthinned core/nodule; 2 = unifacial edging on some edges' 3 = unthinned flake without cortex; 4 = preliminary thinned piece with cortex; 5 - preliminarily thinned piece without cortex; 6 = primarily thinned piece, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shaped piece with significant edge regularity but not highly stylized shaped pieces.

[i] 0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges; 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges; 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

TABLE 3

Frequencies of lithic debitage[a] materials from 10-CW-38

Provenience			Fine-grained materials[a] (silicas, basalts, argillites)						Coarse-grained materials[a] (granites and basalts)						Unit Total	
			% Total			% Total			% Total			% Total				
Level[b]	Unit[c]	No.	Unit[d] %	Level[e] %	Weight (gm)	Unit[f] %	Level[g] %	No.	Unit[d] %	Level[e] %	Weight (gm)	Unit[f] %	Level[g] %	No.	Weight (gm)
0/-20	S	136	72.5	25.2	584	64.2	53.5	8	17.8	1.5	55	30.2	5.0	144	639
	TP 1	39	7.9	7.2	54	5.9	4.9	13	28.9	2.4	35	19.2	3.2	52	89
	4	55	11.1	10.2	50	5.5	4.6	10	22.2	1.9	14	7.7	1.3	65	64
	5	65	13.1	12.0	48	5.3	4.4	8	17.8	1.5	30	16.5	2.7	73	78
	6	35	7.1	6.5	23	2.5	2.1	0	0	0	0	0	0	35	23
	7	95	19.2	17.6	81	8.9	7.4	3	6.7	0.6	24	13.2	2.2	98	105
	8	44	8.9	8.1	35	3.8	3.2	0	0	0	0	0	0	44	35
	TT 2	3	0.6	0.6	7	0.8	0.6	3	6.7	0.6	24	13.2	2.2	6	31
	TT 3	23	4.6	4.3	28	3.1	2.6	0	0	0	0	0	0	23	28
Total		495	100.0	91.7	910	100.0	83.3	45	100.1	8.5	182	100.0	16.6	540	1092
-20/-40	TP 1	15	2.8	2.4	9	1.6	1.0	10	13.0	1.6	60	16.5	6.6	25	69
	TP 2	1	0.2	0.4	4	0.7	0.4	0	0	0	0	0	0	1	4
	4	108	20.1	17.6	80	14.5	8.8	9	11.7	1.5	31	8.5	3.4	117	111
	5	108	20.1	17.6	142	25.8	15.5	30	39.0	4.9	92	25.3	10.1	138	234
	6	101	18.8	16.5	121	22.0	13.2	23	29.9	3.8	87	24.0	9.5	124	208
	7	159	29.7	25.9	160	29.0	17.5	5	6.5	0.8	93	25.6	10.2	164	253
	8	44	8.2	7.2	35	6.4	3.8	0	0	0	0	0	0	44	35
Total		536	99.9	8716	551	100.0	60.2	77	100.1	12.6	363	99.9	39.8	613	914
-40/-60	TP 1	46	10.6	9.3	43	11.7	7.7	17	26.2	3.4	14	7.2	2.5	63	57
	TP 3	11	2.5	2.2	14	3.8	2.5	1	1.5	0.2	2	1.0	0.4	12	16
	4	79	18.3	15.9	72	19.6	12.8	10	15.4	2.0	20	10.3	3.6	89	92
	5	65	15.0	13.1	55	14.9	9.8	31	47.7	6.2	96	49.5	17.1	96	151
	6	110	25.5	22.1	52	14.1	9.3	6	9.2	1.2	62	32.0	11.0	116	114
	7	121	28.0	24.3	132	35.9	23.5	0	0	0	0	0	0	121	132
Total		432	99.9	86.9	368	100.0	65.6	65	100.0	13.0	194	100.0	34.6	497	562
-60/-80	TP 1	14	5.4	5.1	19	7.9	7.0	4	21.1	1.4	8	24.2	2.9	18	27
	TP 3	0	3.9	3.6	21	8.8	7.2	3	15.8	1.1	4	12.1	1.5	13	25
	4	36	14.0	13.0	52	21.8	19.1	5	26.3	1.8	15	45.5	5.5	41	67
	5	60	23.3	21.7	56	23.4	20.6	7	36.8	2.5	6	18.2	2.2	67	62
	6	33	12.8	12.0	27	11.3	9.9	0	0	0	0	0	0	33	27
	7	104	40.5	37.7	64	26.8	23.5	0	0	0	0	0	0	104	64
Total		257	99.9	43.1	239	100.0	87.3	19	100.0	6.8	33	100.0	12.1	276	272
-80/-100	TP 3	5	22.7	21.7	10	45.5	41.7	0	0	0	0	0	0	5	10
	4	0	0	0	0	0	0	1	100.0	4.3	2	100.0	8.3	1	2
	7	17	77.3	73.9	12	54.5	50.0	0	0	0	0	0	0	17	12
Total		22	100.0	95.6	22	100.0	91.7	1	100.0	4.3	2	100.0	8.3	23	24
-100/-120	TP 1	2	6.1	5.7	5	17.9	13.3	0	0	0	0	0	0	2	5
	7	30	90.0	85.7	22	79.6	57.9	0	0	0	0	0	0	30	22
	TT 3	1	3.0	2.9	1	3.6	2.6	2	100.0	5.7	10	100.0	26.3	3	11
Total		33	100.0	94.3	28	101.1	73.7	2	100.0	5.7	10	100.0	26.3	35	38
-120/-140	TT 3	0	0	0	0	0	0	4	100.0	100.0	48	100.0	100.0	4	48
Total		0	0	0	0	0	0	4	100.0	100.0	48	100.0	100.0	4	48

TABLE 3 *continued*

*Residual lithic material resulting from tool manufacture.

[a] These are broad categories based loosely on Crabtree (1967), and separated mainly by grain-size. Essentially, the coarse-grain debitage falls into the same material category as that of all cobble tools contained in the North Fork Clearwater River assemblages.

[b] Level in relation to surface datum: "+" refers to elevation above surface datum, "0" refers to surface datum, "-" refers to elevation below surface datum.

[c] Unit of excavation (see text): S = surface collection (unit indeterminate); TP = 1970 test excavation; TT = test trench.

[d] Percentage of total number of flakes from that level of the particular excavation unit.

[e] Percentage of total number of flakes found throughout the excavated portions of the site, at that particular level.

[f] Percentage of total weight of flakes from that level of the particular excavation unit.

[g] Percentages of total weight of flakes found throughout the excavated portions of the site, at that particular level.

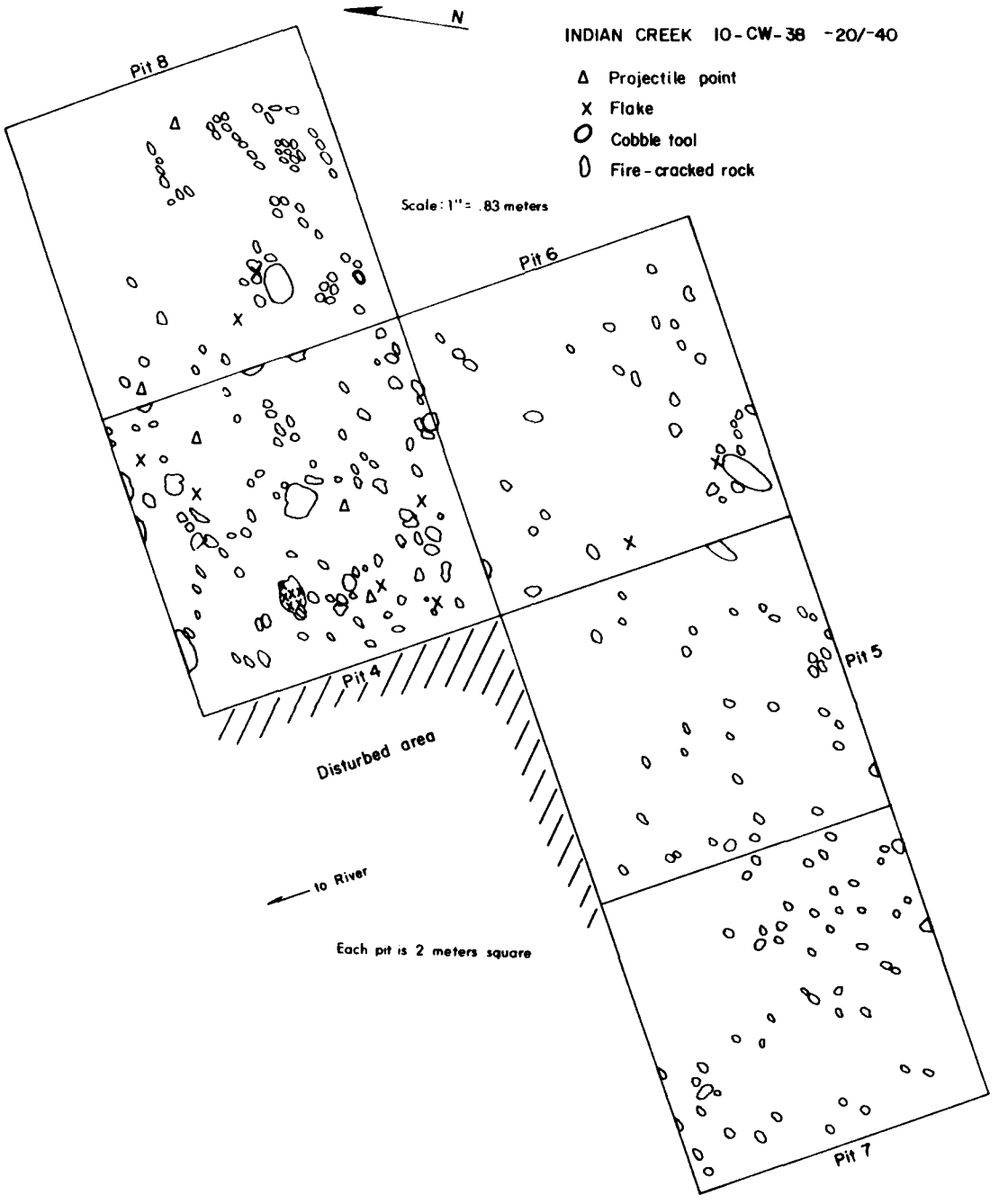


Fig. 11. Excavation plan, main excavation level 20-40 cm, 10-CW-38, Indian Creek.

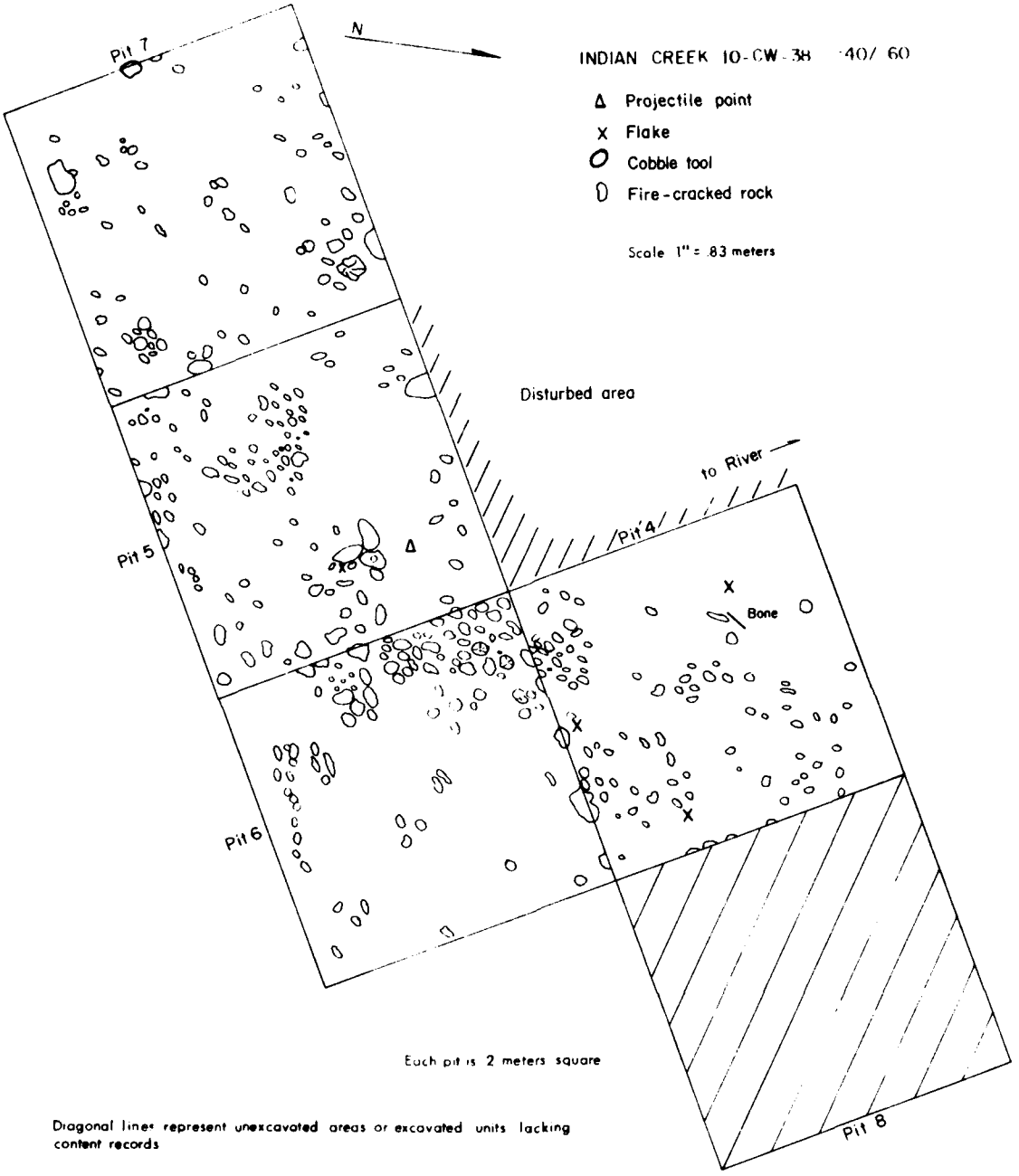


Fig. 12. Excavation plan, main excavation level 40-60 cm, 10-CW-38, Indian Creek.

Fig. 13. View of main excavation, 10-CW-38, Indian Creek, looking northeast.

The 60 to 80 cm level exposed the previously mentioned river cobble layer. Nine lithic tools, including a pointed peripherally-flaked cobble implement, and scattered micro-crystalline debitage.

The next underlying layer contained scattered fire-cracked rock and a thin biface, found in a coarse, brown sand underlying the cobble layer (Fig. 14). No information exists for the 100 to 130 cm excavation level.

Twenty-five artifacts lacking provenience information, are present within the existing site assemblage (Figs. 15 and 16). Included among these, in addition to previously mentioned tool types, are an edge-smoothed cobble, two pock-marked cobbles, and an edge-flaked quartzite "plate."

10-CW-8, Bob Allen Bar

The site is located on a large low terrace, 10.4 km (6.5 mi.) upriver from the mouth of the North Fork (Fig. 9). In 1961, when the site was first recorded, two small farms occupied the terrace (Osmundson and Hulse 1962:15). A number of lithic artifacts were reportedly found on the downriver end of the terrace. The site was revisited by Idaho State University personnel in 1970; no additional site information was reported at that time (Swanson and Corliss 1971:Fig. 1). The site was inundated by the reservoir.

10-CW-9, Bob Allen Bar Southeast

This area is located approximately 11 km (7 mi.) upriver of the mouth of the North Fork, on the upriver end of a small low terrace (Fig. 9). Osmundson and Hulse, who recorded the site during the 1961 survey, reported finding many flaked cobble implements, an oblong battered lithic artifact, fire-cracked rock, and much lithic debitage on the beach area below the terrace (Osmundson and Hulse 1962:15). The site was revisited by an Idaho State University crew during the 1970 investigations, with no new information provided (Swanson and Corliss 1971:Fig. 1). The site is inundated year-round by the reservoir.

10-CW-10, Bob Allen Bar Northeast

The site is located on the upriver point of a low terrace, about 11 km (7 mi.) upriver of the mouth of the North Fork and immediately upstream of 10-CW-9 (Fig. 9). An abandoned dwelling with several associated outbuildings occupied the site in 1961, at which time the property was recorded (Osmundson and Hulse 1962:15). Flaked cobble implements were reported as being found during road construction on the terrace. No additional site information was disclosed during an investigation of the area during the 1970 survey (Swanson and Corliss 1971:Fig. 1). The site is inundated year-round by the reservoir.

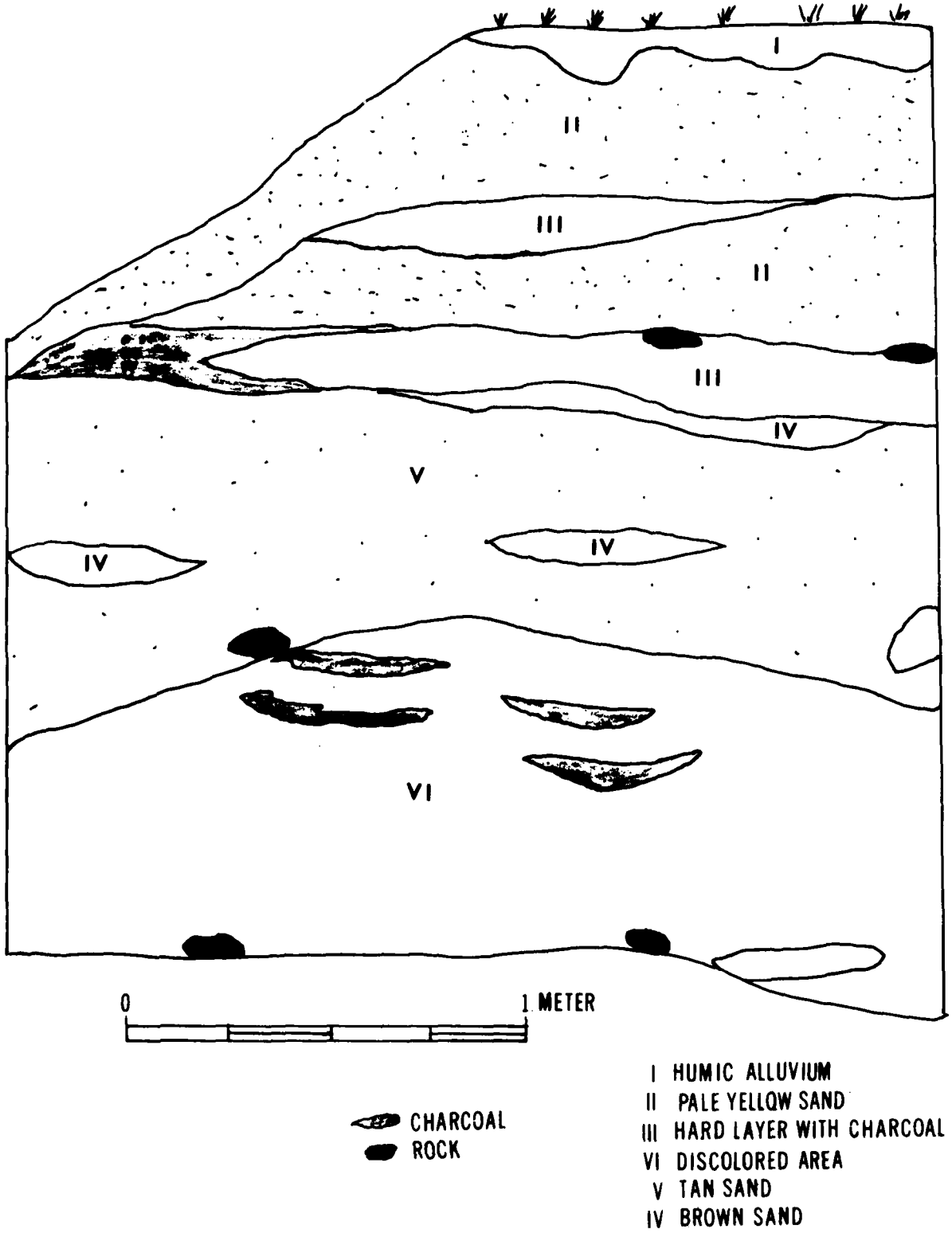


Fig. 14. Stratigraphic profile, main excavation, 10-CW-38, Indian Creek.

[illegible]. Artifacts from 40-CW-38, Indian Creek. *a*, 1609-[illegible]; *b*, [illegible]; *c*, 1609-826; *d*, 1609-716; *e*, 1609-739; *f*, 1609-862; *g*, 1609-[illegible]; *h*, [illegible]; *i*, 1609-711; *j*, 1609-873; *k*, 1609-839; *l*, 1609-852, *m*, [illegible].

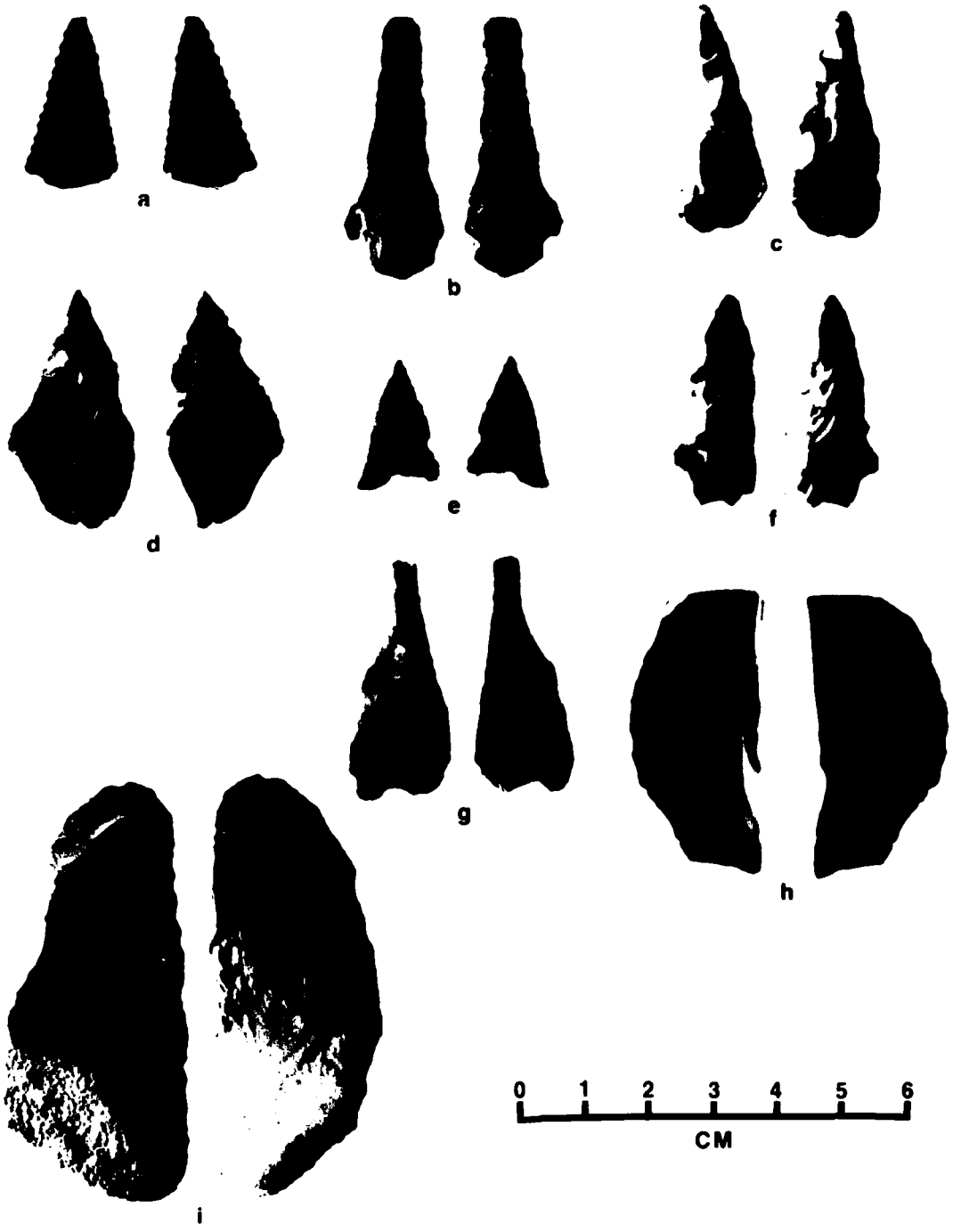


Fig. 16. Artifacts from 10-CW-38, Indian Creek. *a*, 1609-107; *b*, 1609-917; *c*, 1609-829; *d*, 1609-807; *e*, 1609-715; *f*, 1609-811; *g*, 1609-824; *h*, 1609-731; *i*, 1609-249.

10-CW-294, Cabin Site

A log building, located 37.6 km (23.5 mi) above the mouth of the North Fork (Fig. 9), was recorded in 1976 (Knudson, Sappington, and Pfeiffer 1977). The structure, situated on a south-facing slope about 200 m (650 ft.) above Canyon Creek, measures 11.5 m (37 ft.) square. The walls are constructed of logs 17-34 cm (7-13 in.) in diameter, saddle-notched at the corners. No evidence of flooring was seen. An opening in the east wall is 75 cm (29 in.) above the ground surface, and measures 70 cm (27 in.) in height by 1.76 m (69 in.) in width. The only other opening in the structure is located in the west wall and measures 44 cm (17 in.) in height, 1.53 m (60 in.) in width and is 1.21 m (47 in.) above the ground surface. The roof is reported as being partially collapsed and is constructed of east and west end gables, supporting pole purlins covered with cedar shakes. The site is above the maximum pool elevation of the reservoir.

10-CW-289, Helgeson Site

This homestead site is located on the present reservoir shoreline, 14.5 km (9 mi.) upriver of the mouth of the North Fork (Fig. 17). Sappington and Pfeiffer, who recorded the site during the 1976 survey, reported finding the remains of a log building, a framed wood shed, and several small log bridges in the vicinity (Knudson, Sappington, and Pfeiffer 1977). The area is adjacent to an intermittent drainage and directly across the reservoir from Freeman Creek State Park. Local informants described the property as the Helgeson family homestead. Artifacts found at the site consist of household items and construction materials (Table 4). The site is situated adjacent to the maximum pool elevation of the reservoir.

10-CW-288, Freeman Park

This site is located within the present boundaries of Freeman Creek State Park, approximately 15 km (9.5 mi.) upriver of the mouth of the North Fork (Fig. 17). During the 1976 survey, Sappington and Pfeiffer reported finding two corrals and a number of fencelines in the area (Knudson, Sappington, and Pfeiffer 1977). One corral is set off from the main public camp area at the park, and encircles a 10 m (33 ft.) area with split-rail fencing. The other corral, located in an open meadow closer to the campground area, is constructed of cedar posts strung with barbed wire; all the posts from this structure have been sawed off at ground level and left on the ground with the wire still attached. Remaining evidence of a dwelling having once existed in the area consist of a concentration of ceramic and glass sherds found in the general vicinity of the corrals.

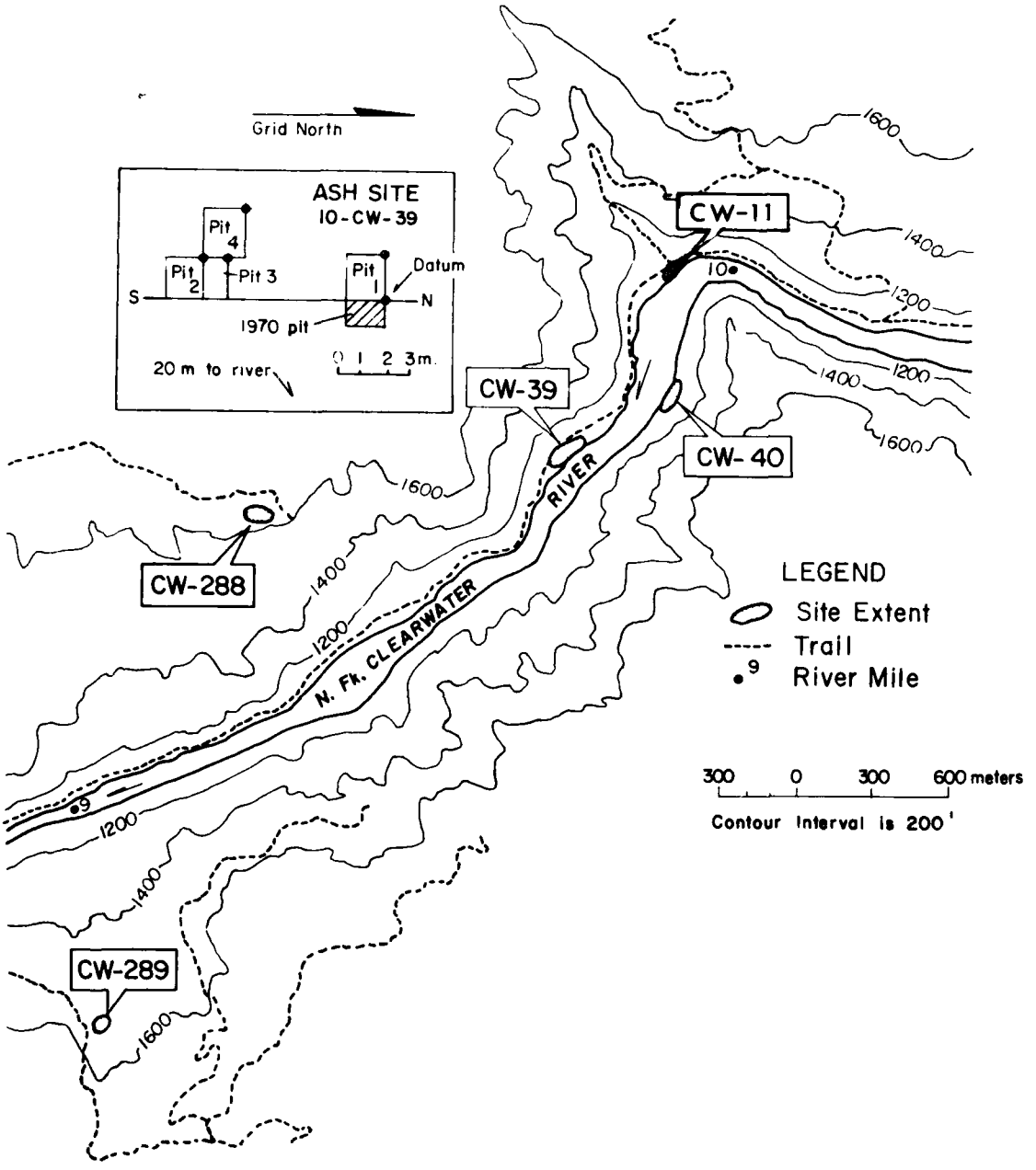


Fig. 17. Segment map C, North Fork Clearwater River.

TABLE 4

Distribution of cultural materials from 10-CW-289[a]

Registration No.	Material	Description
2.1.1.1	Ceramic	White body sherd
2.1.2.1	Ceramic	White rim sherd
2.1.3.1	Ceramic	White rim sherd
2.1.4.1	Ceramic	White rim sherd
2.1.5.1	Ceramic	White rim sherd
2.1.6.1	Ceramic	White rim sherd
2.1.7.1	Ceramic	White rim sherd
2.1.8.1	Ceramic	Rim sherd w/flower design
2.1.9.1	Ceramic	Rim sherd w/flower design
2.1.10.1	Ceramic	Rim sherd w/flower design
2.1.11.1	Ceramic	Rim sherd w/flower design
2.1.12.1	Ceramic	Rim sherd
2.1.13.1	Ceramic	Body sherd
2.1.14.1	Ceramic	Body sherd
2.1.15.1	Ceramic	Body sherd
2.1.16.1	Ceramic	Body sherd w/lettering
2.1.17.1	Ceramic	Body sherd w/lettering
2.1.18.1	Ceramic	Body sherd
2.1.19.1	Glass	Blue body fragment
2.1.20.1	Glass	Brown body fragment
2.1.21.1	Ceramic	Body sherd
2.1.22.1	Glass	Brown sherd
2.1.23.1	Ceramic	Basal sherd
2.1.24.1	Glass	"Vick's" jar base
2.1.25.1	Glass	Clear fragment
2.1.26.1	Glass	Clear fragment
2.1.27.1	Glass	Clear fragment
2.1.28.1	Glass	Milk-glass fragment
2.1.29.1	Ceramic	Rim sherd
2.1.30.1	Ceramic	Basal sherd w/design
2.1.31.1	Glass	Slag
2.1.32.1	Brick	Fragment
2.1.33.1	Metal	Yellow container lid
2.1.34.1	Metal	Wire nail
2.1.35.1	Plastic	White button
2.1.36.1	Plastic	Red button
4.1.1.1	Glass	Brown fragment
4.1.2.1	Glass	Blue fragment
4.1.3.1	Ceramic	Rim sherd

[a]Taken from Knudson, Sappington, and Pfeiffer (1977).

10-CW-39, Ash Site

This terrace site is located approximately 13 km (8.5 mi.) upriver from the mouth of the North Fork. The terrace is located at the mouth of an intermittent drainage, on the north side of the river (Fig. 17). The area is approximately 100 m (330 ft.) in length and 20 m (65 ft.) wide. The area was homesteaded at one time, as evidence by plum trees growing on the terrace. In 1970, Idaho State University personnel surveyed the area. They recorded a flaked cobble artifact and several flakes of micro-crystalline material found on the terrace surface. A 1 x 2 m unit was excavated approximately 20 m (65 ft.) back (north) from the terrace edge, near a roadcut which exposed ash sediments (Fig. 18). The excavation unit revealed ash layers, changing from gray to yellow to white with depth (Fig. 18). The ash extended the entire depth of the excavation: approximately 1 m. A cobble tool, an edge-smoothed cobble, and a cobble anvil were recovered from the unit.

During the 1971 season, the area was again test excavated. Four 2 x 2 m units were excavated in the vicinity of the 1970 testpit (No. 1). These units exposed mixed and mottled ash layers to a depth of about 1 m, the extent of the excavation. Ash samples preliminarily studied from the site indicate the terrace material to be redeposited Mazama ash (Bruce Cochrane: personal communication). Two charcoal samples from the ash layers were radiometrically dated at 3410±130 and 4350±100 years BP (WSU 2401 and 2402, respectively)(Table 5). The artifact assemblage contains two utilized flakes, one thin biface, one thin uniface, two edge-smoothed cobbles, a cobble uniface tool, and three flat-pebble, notched netweights (no longer in collection). Historic material includes wire nails, a railroad spike, and flat glass (Table 6) (Swanson and Corliss 1971:7; Corliss and Gallagher 1971:1; Corliss and Gallagher 1972:10-11). The lithic tools from the site suggest Harder Phase association.

10-CW-40, Drift Creek

This site is located on a low terrace across the river from Drift Creek. The area is approximately 15 km (10 mi.) upriver from the mouth of the North Fork (Fig. 17). The terrace is about 30 m (100 ft.) in width and 200 m (656 ft.) in length. The site was recorded by Idaho State University crews in 1970, who reported many cobble tools found on the beach area below the terrace cutbank. A 1 x 2 m unit was excavated into the cutbank to a depth of 1 m (Fig. 19). Cultural materials were found to a depth of 60 cm (24 in.) Artifacts recovered include three thin unifaces (micro-crystalline), a hammerstone, and a grinding stone (Table 7). The exact location of the test excavation was not recorded.

10-CW-11, Browns Bar

This is a small low terrace area located 16 km (10 mi.) upriver of the mouth of the North Fork (Fig. 17). During the 1961 survey, Osmundson and Hulse (1962:16) reported finding a number of lithic artifacts eroding from the terrace cutbank. These included a number of side-notched and corner-notched projectile points, two large basal-notched projectile

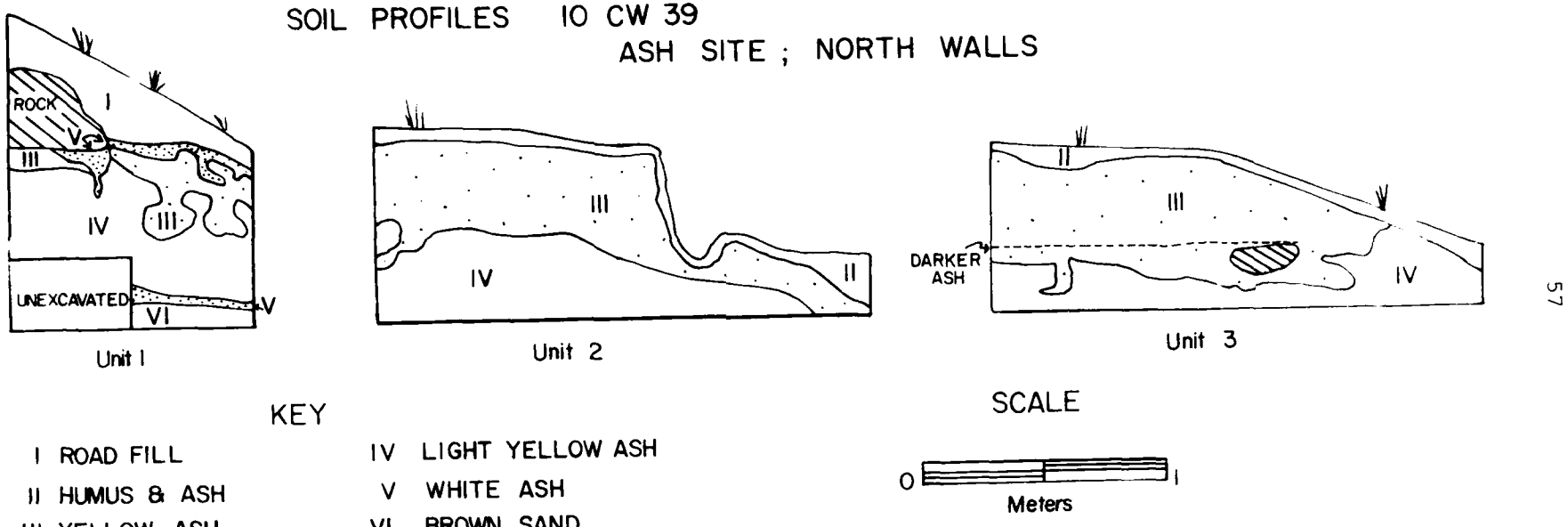


Fig. 18. Stratigraphic profile, 10-CW-39, Ash Site.

TABLE 5

Radiocarbon assays from Dworshak

Laboratory No.[a]	^{14}C Assay[b] (years BP)	Calibration[c] (years BP)	Calendar Age[d]	Site No.	Provenience	Previous references[e]
WSU 1244	830±160	816±165	AD 999-1329	10-CW-43	Main excavation, Unit 1, 60-80 cm below surface	C&G 1971:2 C&G 1972:16
WSU 1247	5300±165	6106±191	4317-3935 BC	10-CW-225	Level -140/-150 cm below surface	C&G 1971:2, C&G 1972:25
WSU 1277	3765±165	804±170	AD 1006-1346	10-CW-45	Atop river gravels in cutbank	C&G 1972:27, Sheppard 1976:142
WSU 1278	2120±165	2174±172	366-22 BC	10-CW-226	Trench 5, 40 cm below surface	C&G 1972:23, Sheppard 1976:142
WSU 1305	1250±120	1221±184	AD 575-943	10-CW-226	Unit 2, 40-50 cm below surface	C&G 1972:23 Sheppard 1974:142
WSU 2400	1120±85	1093±91	AD 798-980	10-CW-38	Unit 5, 83 cm below surface	C&G 1972:23 Sheppard 1974:142
WSU 2401	3410±100	3793±144	1957-1669 BC	10-CW-39	Unit 1, 105-115 cm below surface	C&G 1972:23 Sheppard 1974:142
WSU 2402	4350±100	4997±188	3205-2829 BC	10-CW-39	Unit 3, 50-60 cm below surface	C&G 1972:23 Sheppard 1974:142
WSU 2403	2970±90	3234±154	1408-1100 BC	10-CW-41	Unit 3, 50-60 cm below surface	C&G 1972:23 Sheppard 1974:142
WSU 2404	1910±90	1930±96	48 BC-AD 146	10-CW-41	Unit 5, 110 cm below surface	C&G 1972:23 Sheppard 1974:142
WSU 2406	Modern			10-CW-225	Unit 2, 20-40 cm below surface	C&G 1972:23 Sheppard 1974:142
WSU 2407	185±100	244±108	AD 1628-1844	10-CW-43	Main excavation post sample	C&G 1972:23 Sheppard 1974:142
WSU 2408	690±80	689±85	AD 1206-1376	10-CW-43	Main excavation post samples	C&G 1972:23 Sheppard 1974:142
WSU 2409	230±130	283±137	AD 1560-1834	10-CW-43	Main excavation post sample	C&G 1972:23 Sheppard 1974:142
WSU 2410	1660±80	165±90	AD 239-409	10-CW-20	Unit 14, 25 cm below surface	C&G 1972:23 Sheppard 1974:142
WSU 2411	580±80	591±85	AD 1304-1474	10-CW-43	Main excavation post sample	C&G 1972:23 Sheppard 1974:142
WSU 2412	340±123	377±134	AD 1469-1737	10-CW-43	Main excavation, Unit 9, 33 cm below surface	C&G 1972:23 Sheppard 1974:142
WSU 2413	580±70	591±75	AD 1304-1474	10-CW-226	Unit 2, 45-52 cm below surface	C&G 1972:23 Sheppard 1974:142
WSU-2450	1324±22	1350±60	AD 636-676	10-CW-226	Units 1&2, 40-50 cm below surface	C&G 1972:23 Sheppard 1974:142

[a] Assigned by the Washington State University Radiocarbon Laboratory.

[b] Calculated using a ^{14}C half-life of 5568 years.

[c] Calibration is figured by following Table 12.1 in Sheppard (1975), which is similar to that of Damon, Ferguson, Long, and Wallick (1974).

[d] Calibrated calender age.

[e] C&G = Corliss and Gallagher (see References Cited).

TABLE 6

Distribution of artifacts from 10-CW-39

Provenience		Artifact class[c]	Catalogue number[d]	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning[h] Evaluation		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
0-20	2	Hist	0681	Undeterminate fragment	Metal	-	-	-	-	-	-	-
	4	Hist	2178	Cut nail	Metal	52	-	4	-	-	-	-
		Hist	2179	Wire nail	Metal	87	-	4	-	-	-	-
		Hist	2180	Plate fragment	Ceramic	53	25	5	-	-	-	-
20-40	2	Flk	2176	Used flake	Basalt	40	23	7	5	5	3	2
	4	Flk	2177	Used flake	Basalt	0	24	11	10	5	5	2
60-80	1	Hist	0671	Spike	Metal	163	15	15	-	-	-	-
	4	Hist	0695	Container body	Metal	108	76	25	-	-	-	-
80-100	1	Hist	0665	Container fragment	Metal	-	70	-	-	-	-	-
		Hist	2175	Bowl fragment	Glass	38	27	3	-	-	-	-

[a] Depth, in centimeters, below surface.

[b] Unit of excavation (see text).

[c] Either lithic (flaked or non-flaked) or historic materials.

[d] Based on the original Idaho State University accessioning system, all numbers are preceded by the project code "1609".

[e] Morpho-use form names of lithic artifacts are based more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

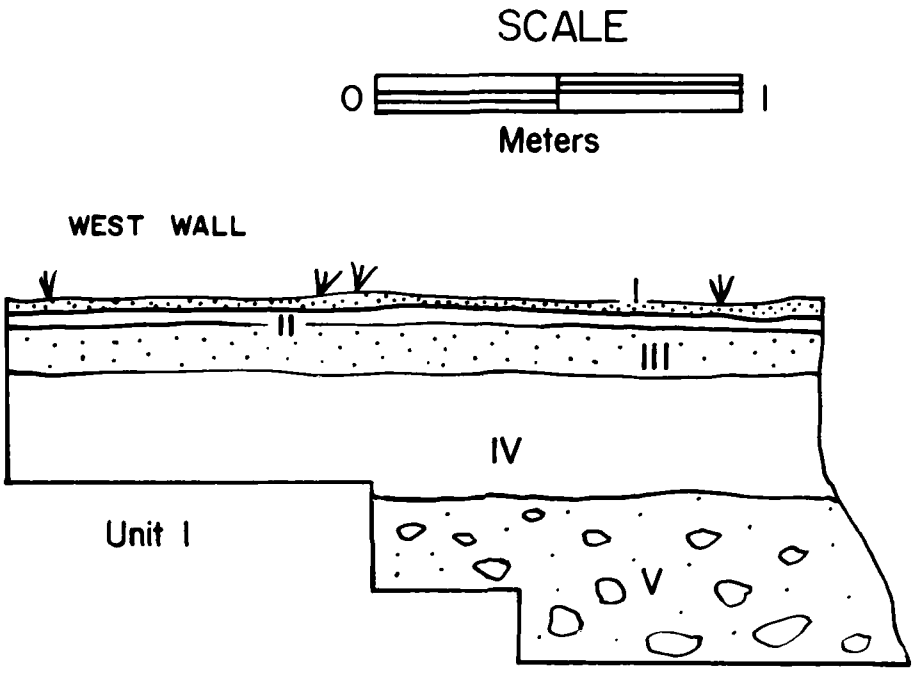
[f] Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g] Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h] 0 = indeterminate; 1 = unthinned core/nodule; 2 = unthinned flake with cortex; 3 = unthinned flake without cortex; 4 = preliminarily thinned piece with cortex; 5 = preliminarily thinned piece without cortex; 6 = primarily thinned piece, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shaped piece with significant edge regularity but not highly stylized shaped piece.

[i] 0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges; 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges; 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

10 CW 40
DRIFT CREEK



KEY

I DUFF

II BUFF ASHY SILTY SAND

III FINE SAND & SILT WITH SOME ORGANICS

IV LOOSE YELLOW BROWN SAND WITH SOME GRAVELS

V HARD PACKED YELLOW SAND; COARSENING WITH DEPTH.

Fig. 19. Stratigraphic profile, 10-CW-40, Drift Creek.

TABLE 7

Distribution of artifacts from 10-CW-40

Provenience		Artifact Class[c]	Catalogue Number[d]	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning Evaluation[h]		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
0-20	1	Flk	0284	Thin end-edged uniface	Chert	23	19	7	2	6	3	2
20-40	1	Flk	0285	Thin uniface, minimum edging	Chert	0	10	2	1	5	3	2
		Flk	0286	Thin uniface w/ access form	Chert	15	12	2	1	4	3	2
		Nflk	2187	Shaped mano	Quartzite	0	0	42	283	-	-	0
40-60	1	Flk	2188	Graver on thin uniface	Chert	20	19	3	1	5	3	2
		Flk	2189	Beaked cobble tool	Basalt	89	104	57	210	2	4	2
		Nflk	2190	Hammerstone	Metamorphic	160	70	70	1067	-	-	1

[a]Depth, in centimeters, below surface.

[b]Unit of excavation (see text).

[c]Either lithic (flaked or non-flaked) or historic materials.

[d]Based on the original Idaho State University accessioning system, all numbers are preceded by the project code "1609".

[e]Morpho-use form names of lithic artifacts are based more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

[f]Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g]Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h]0 = indeterminate; 1 = unthinned core/nodule; 2 = unthinned flake with cortex; 3 = unthinned flake without cortex; 4 = preliminarily thinned piece with cortex; 5 = preliminarily thinned piece without cortex; 6 = primarily thinned piece, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shaped piece with significant edge regularity but not highly stylized shaped piece.

[i]0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges; 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges; 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

points, several unifacially flaked tools, and much debitage. A small dwelling occupied the terrace at the time of the survey. In 1970, the site was reexamined by Idaho State University personnel; results of this investigation are not recorded (Swanson and Corliss 1971:Fig. 1). The site is inundated year-around by the reservoir.

10-CW-290, Group Camp One

The site is situated on the edge of a large meadow located above the shoreline of the reservoir, approximately 18 km (11 mi.) upriver of the mouth of the North Fork (Fig. 20). The area, located adjacent to a developed campground, was recorded by Sappington and Pfeiffer during the 1976 investigations (Knudson, Sappington, and Pfeiffer 1977). The meadow appeared to have been under cultivation at one time and a number of agriculture-related artifacts (such as harrow-teeth and machinery parts) were found in the vicinity. Several lithic debitage flakes were also found at the site.

10-CW-12, Dicks Creek

This site is located at the mouth of Dicks Creek, about 18 km (11 mi.) upriver of the mouth of the North Fork (Fig. 20). The area consists of a low terrace immediately downriver from the confluence of Dicks Creek with the North Fork. Osmundson and Hulse (1962:16) found a number of flaked cobble implements on the beach gravels below the terrace cutbank. The site was revisited in 1970, at which time Idaho State University personnel found cultural material eroding from the bank of the terrace (Table 8). This included two thin unifacially-flaked artifacts, three thin bifacially-flaked tools, three unifacially-flaked cobble implements, a stemmed projectile point, and a utilized flake. The area is inundated by the reservoir year-around.

10-CW-242, Low Flat Site

This low terrace site is located about 200 m (650 ft.) across and upriver from the mouth of Dicks Creek, approximately 18 km (11 mi.) above the mouth of the North Fork (Fig. 20). The area was recorded during the 1970 survey by Idaho State University archaeologists who reported flaked cobble implements and lithic debitage material eroding from the terrace cutbank. The site is permanently inundated by the reservoir.

10-CW-13, Twelve Mile Site

The area is a low terrace located 19 km (12 mi.) upriver from the mouth of the North Fork (Fig. 20). Osmundson and Hulse (1962:16), who recorded the site in 1961, reported that local artifact collections contained a number of lithic tools attributed as coming from this area. At

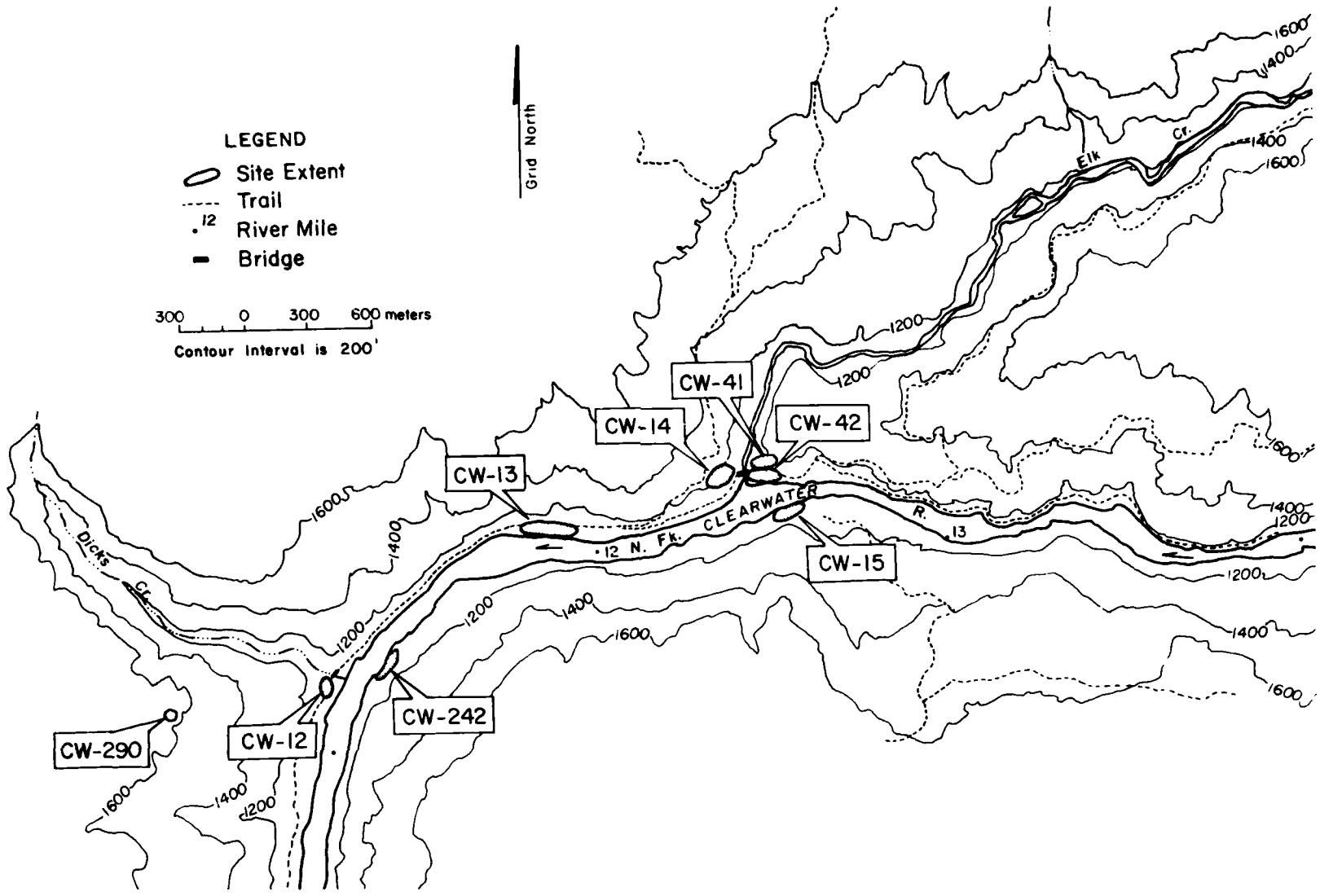


Fig. 20. Segment map D, North Fork Clearwater River.

TABLE 8

Distribution of artifacts from 10-CW-12

Provenience		Artifact Class[c]	Catalogue Number[d]	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (g)	Thinning Evaluation[h]		Edge shaping[i] stage
Level[a]	Unit[b]											
Surface	Indeter	Flk	0221	Stemmed point w/o basal notch	Chert	28	13	6	2	8	8	7
		Flk	0222	Thin biface, haft indeterminate	Chert	0	29	8	11	8	8	6
		Flk	0223	Uniface, form indeterminate	Chert	35	12	10	4	5	3	2
		Flk	2185	Used flake	Obsidian	0	20	4	2	5	3	2
		Flk	2186	Uniface, form indeterminate	Chert	0	23	12	4	5	3	2
		Flk	1395	Thin biface, haft indeterminate	Chert	37	31	6	7	8	7	8
		Flk	1394	Thin biface, haft indeterminate	Chert	48	32	8	1	7	7	7

[a] Depth, in centimeters, below surface.

[b] Unit of excavation (see text).

[c] Either lithic (flaked or non-flaked) or historic materials.

[d] Based on the original Idaho State University accessioning system, all numbers are preceded by the project [illegible] "1009".

[e] Morpho-use form names of lithic artifacts are based more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

[f] Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g] Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h] 0 = indeterminate; 1 = unthinned core/nodule; 2 = unthinned flake with cortex; 3 = unthinned flake without cortex; 4 = preliminarily thinned piece with cortex; 5 = preliminarily thinned piece without cortex; 6 = primarily thinned piece, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shaped piece with significant edge regularity but not highly stylized shaped pieces.

[i] 0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges; 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges; 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

the time of the survey, the terrace had recently been bulldozed and covered with a layer of river gravel for use as a decking area for logging operations. The site is inundated by the reservoir year around.

10-CW-14, Elk Creek

This site is located on a low terrace immediately downriver from the mouth of Elk Creek, 20 km (12.5 mi.) upriver of the mouth of the North Fork (Fig. 20). Osmundson and Hulses' Nez Perce informant, Harry Wheeler, reported that historically this area was a fishing station for Indians in the vicinity (Osmundson and Hulse 1962:16). Several lithic artifacts were found at the site during the 1961 survey. The area was re-examined by Idaho State University surveyors in 1970, who reported the site found by Osmundson and Hulse as being located about 100 m (300 ft.) upstream on Elk Creek from its confluence with the North Fork (Corliss and Gallagher 1971:13). The area is inundated by the reservoir.

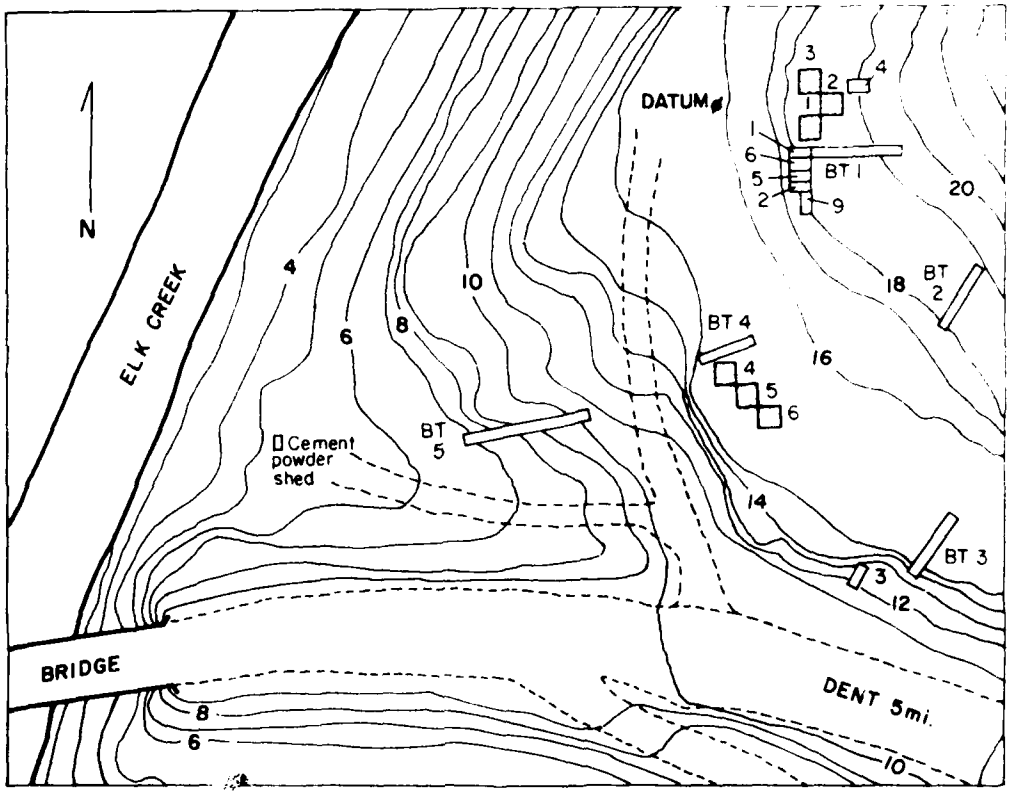
10-CW-41, Elk Creek

This site is located on a high terraced slope across and west of Elk Creek from 10-CW-14, and north of the North Fork Road about 20 km (12 mi.) upriver of the mouth of the North Fork (Figs. 20, 21). The area was recorded by Idaho State University personnel in 1970. They reported that much of the area had been disturbed by building activities, possibly dating to a CCC camp which is reported as existing in the area near the bridge which spanned Elk Creek (Swanson and Corliss 1971:9) (Figs. 22, 23). Several flat building areas were a concrete and stone "powder shed" which was reported as being at the site (Swanson and Corliss 1971:Fig. 2). A sandstone "shaft smoother" and much debitage was found on the surface of the site. A 1 x 2 m unit was excavated alongside of a road going through the site about 21 m (70 ft.) above the river (Fig. 24). This unit, exact location not known, was dug in arbitrary 20 cm levels. At 30 cm (12 in.) below the surface, a basalt knife, two cryptocrystalline thin bifaces, and a cobble chopper were found. Associated with these were several round stones and bits of charcoal. In the 40 to 60 cm level a lanceolate projectile point was found in association with another projectile point (form not recorded). This excavation was expanded to the south by a 4 m long unit, 1 m in width (depth unknown) (Swanson and Corliss 1971:Fig. 26).

As much of the site appeared to be disturbed, it was decided that a backhoe would be used to facilitate the location of cultural materials. Five trenches were excavated using this method (Swanson and Corliss 1971:Fig. 2). Lithic tools and debitage were found throughout the 140 cm of excavation depth, but seemed to be concentrated between 40-60 cm below the surface.

In 1971, six 2 x 2 m units were excavated at the site in the hope of finding previously undisturbed areas (Corliss and Gallagher 1972:13, Map 3). The lithic material recovered from the site corresponds with Cascade and Tucannon assemblages (Table 9; Figs. 9, 25, 26, 27). In general, the Tucannon component was concentrated in the upper slopes of the site,

ELK CREEK
10-CW-41



2 0 5 meters

Contour interval is 1 meter

LEGEND

BT Backhoe Trench
1970 Unit
Road
1971 Unit
Elevation 1115'asl

Fig. 21. Site plan, 10-CW-41, Elk Creek.

Fig. 22. View of 10-CW-41, 10-CW-42, and 10-CW-14, Elk Creek.

Fig. 23. View of 10-CW-41 and 10-CW-42, Elk Creek.

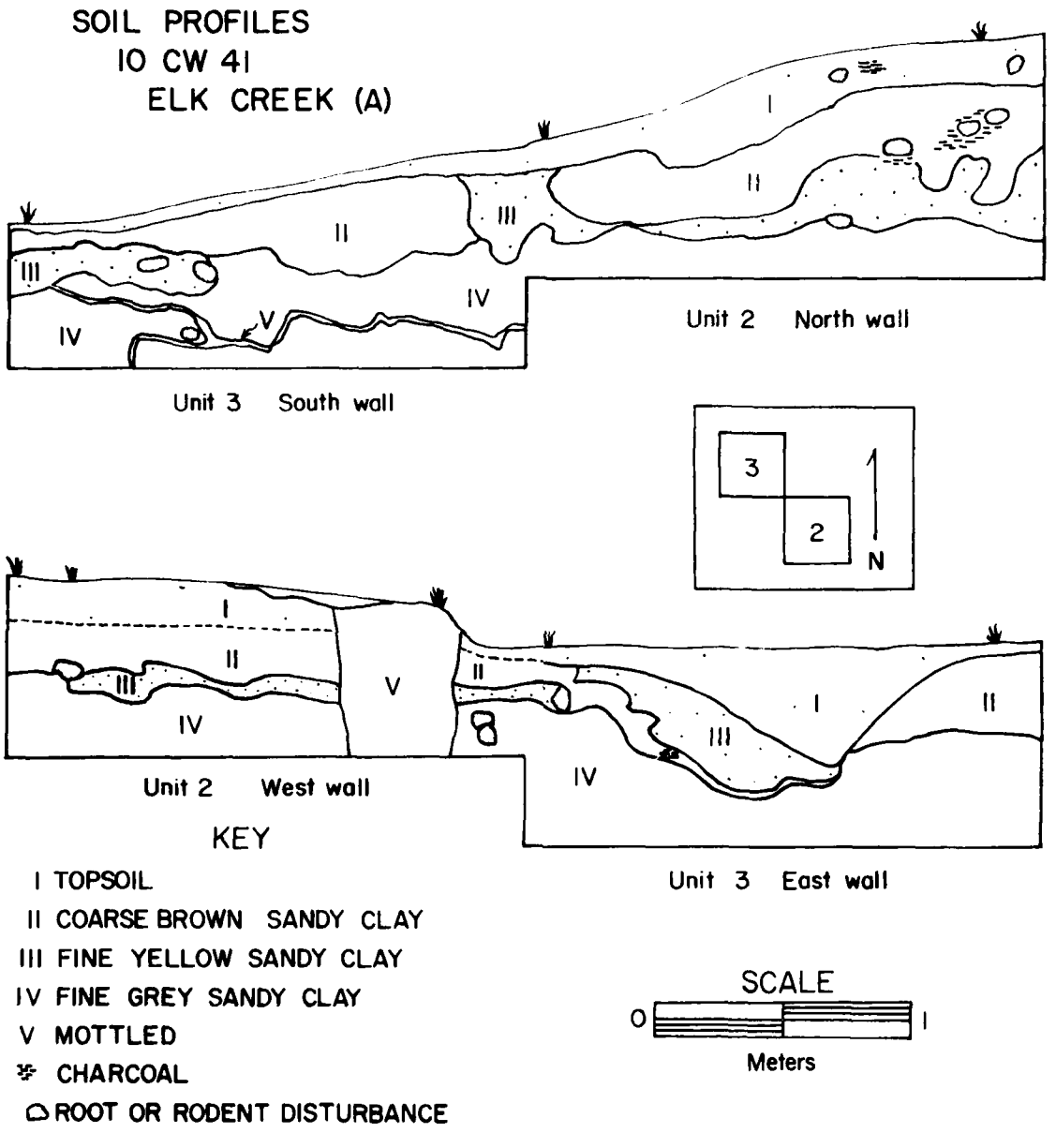


Fig. 24. Stratigraphic profile; 10-CW-41, Elk Creek.

TABLE 9

Frequencies of lithic debitage* materials from 11-JW-41

Provenience			Fine-grained materials[a] (silicas, basalts, argillites)						Coarse-grained materials[a] (granites and basalts)						Unit Total	
			% Total			% Total			% Total			% Total				
Level[b]	Unit[c]	No.	Unit[d] %	Level[e] %	Weight (gm)	Unit[f] %	Level[g] %	No.	Unit[d] %	Level[e] %	Weight (gm)	Unit[f] %	Level[g] %	No.	Weight (gm)
+40/+2-	1	16	80.0	72.7	35	72.9	52.2	0	0	0	0	0	0	16	35
	2	3	15.0	13.6	12	25.0	17.9	1	50.0	4.5	17	89.5	25.4	4	29
	3	1	5.0	4.5	1	2.1	1.5	1	50.0	4.5	2	11.5	3.0	2	3
Total		20	100.0	90.8	48	100.0	71.6	2	100.0	9.0	19	101.0	28.4	22	67
+20/0	1	6	12.5	11.1	28	19.4	14.3	1	16.7	1.9	2	3.8	1.0	7	30
	2	21	43.8	38.9	101	70.1	51.5	2	33.3	3.7	6	11.5	3.1	23	107
	3	21	43.8	38.9	15	10.4	7.7	3	50.0	5.6	44	84.6	22.4	24	59
Total		48	100.1	88.9	144	99.9	73.5	6	100.0	11.2	52	99.9	26.5	54	196
0/-20	1	50	27.8	24.0	73	16.9	9.0	10	35.7	4.8	210	55.9	25.8	60	283
	2	23	12.8	11.1	32	7.4	3.9	2	7.1	1.0	3	7.8	3.4	24	39
	3	45	25.0	21.6	213	49.2	26.2	1	3.6	0.5	1	2.3	0.1	46	214
	4	6	3.3	2.9	4	0.9	0.5	1	3.6	0.5	4	1.1	0.5	7	8
	5	17	9.4	8.2	17	3.9	2.1	1	3.6	0.5	6	1.6	0.7	18	23
	6	18	10.0	8.7	54	12.5	6.6	1	3.6	0.5	1	0.3	0.1	19	55
	TT 1	21	11.7	10.1	40	9.2	4.9	12	42.9	5.8	151	40.2	18.6	33	191
Total		180	100.0	86.6	433	100.0	53.2	28	100.1	13.6	376	100.2	46.2	208	813
-20/-40	1	28	16.0	13.5	72	18.8	12.9	6	18.2	2.9	67	37.9	12.0	34	139
	2	29	16.6	13.9	26	6.8	4.6	4	12.1	1.9	9	5.1	1.6	33	35
	3	10	5.7	4.8	36	9.4	6.2	0	0	0	0	0	0	10	36
	4	36	20.6	17.3	37	9.7	6.6	0	0	0	0	0	0	36	37
	5	21	12.0	10.1	67	17.5	12.0	0	0	0	0	0	0	21	67
	6	34	19.4	16.3	86	22.5	15.4	15	45.5	7.2	63	35.6	11.3	49	149
	TT 1	17	9.7	8.2	59	15.4	10.5	8	24.2	3.8	38	21.5	6.8	25	97
Total		175	100.0	84.1	383	100.1	68.2	33	100.0	15.8	177	100.1	31.7	205	560
-40/-60	1	7	3.6	3.0	11	3.1	1.4	0	0	0	0	0	0	7	11
	2	17	8.7	7.3	19	5.4	2.4	2	5.1	0.9	6	1.4	0.8	19	25
	3	4	2.1	1.7	5	1.4	0.6	1	2.6	0.4	5	1.2	0.6	5	10
	4	36	18.5	15.4	31	8.8	4.0	3	7.7	1.2	132	31.1	17.0	39	163
	5	32	16.4	13.7	30	8.5	3.9	0	0	0	0	0	0	32	30
	6	30	15.4	13.8	33	6.2	2.8	3	7.7	1.3	85	20.0	11.0	33	107
	TT 1	59	30.3	25.2	221	62.6	28.4	23	59.0	9.8	164	38.6	21.1	82	385
	Pit 5-6N 4-6E	10	5.1	4.3	14	4.0	1.8	7	17.9	3.0	33	7.7	4.4	17	47
Total		195	100.1	83.4	353	100.0	45.3	39	100.3	16.7	425	100.0	54.7	234	778
-60/-40	1	23	16.4	13.6	30	7.8	4.1	4	13.8	2.4	7	4.7	4.1	27	37
	4	20	14.3	11.8	28	7.2	3.8	4	13.8	2.4	16	4.4	2.1	24	44
	5	41	29.3	24.3	79	20.4	10.8	1	3.4	0.6	156	39.6	17.2	42	235
	6	21	15.0	12.4	213	55.0	29.1	8	27.6	4.7	35	10.2	4.8	29	248
	TT 1	31	22.1	18.3	35	9.0	4.8	11	37.9	6.5	134	39.7	18.3	42	169
	TT 3	4	2.9	2.4	2	0.5	0.3	1	3.4	0.6	4	1.2	0.5	5	6
Total		140	100.0	82.8	387	99.9	52.9	29	99.9	17.2	344	100.1	47.1	169	731

TABLE 9 *continued*

Provenience			Fine-grained materials[a] (silicas, basalts, argillites)					Coarse-grained materials[a] (granites and basalts)					Unit Total	
			% Total			% Total			% Total			% Total		
Level[b]	Unit[c]	No.	Unit[f] %	Level[g] %	Weight (gm)	Unit[h] %	Level[i] %	No.	Unit[j] %	Level[k] %	Weight (gm)	Unit[l] %	Level[m] %	No.	Weight (gm)
-10-[illegible]	1	14	21.2	18.7	19	6.7	3.1	3	33.3	4.0	9	2.7	1.5	17	28
	[illegible]	25	37.9	33.3	209	73.9	34.1	1	11.1	1.3	139	42.0	22.6	26	348
	TT 1	[illegible]	[illegible].0	[illegible].7	2	0.7	0.3	2	22.2	2.7	103	31.1	16.8	7	105
	TT [illegible]	12	33.3	29.3	53	18.7	8.6	3	33.3	4.0	80	24.2	13.0	24	133
Total		66	100.0	88.7	283	100.0	46.0	9	99.9	12.0	331	100.0	53.9	75	614
-[illegible] -12[illegible]	1	3	12.5	11.5	5	9.1	7.4	0	0	0	0	0	0	3	5
	2	1	4.2	[illegible].[illegible]	1	1.8	1.5	0	0	0	0	0	0	1	1
	[illegible]	10	41.7	[illegible]8.5	[illegible]	14.5	11.8	1	50.0	3.8	10	76.9	14.7	11	18
	TT 1	4	16.7	15.4	13	18.1	14.7	1	50.0	3.8	3	23.1	4.4	5	13
	TT [illegible]	6	25.0	23.1	31	56.4	45.6	0	0	0	0	0	0	6	31
Total		24	100.1	92.3	55	99.9	81.0	2	100.0	7.6	13	100.0	19.1	26	68
-12[illegible] -14	TT 1	1	16.7	16.7	22	81.5	81.5	0	0	0	0	0	0	1	22
	TT [illegible]	5	83.3	83.3	5	18.5	18.5	0	0	0	0	0	0	5	5
Total		6	100.0	100.0	27	100.0	100.0	0	0	0	0	0	0	6	27
-14 -[illegible]	TT 3	7	100.0	100.0	11	100.0	100.0	0	0	0	0	0	0	7	11
Total		7	100.0	100.0	11	100.0	100.0	0	0	0	0	0	0	7	11

[illegible]idual lithic material resulting from tool manufacture.

[illegible]ses are broad categories based loosely on Crabtree (1967), and separated mainly by grain-size. Essentially, the coarse-grain debitage falls into the same material category as that of all cobble tools contained in the North Fork Clearwater River assemblages.

[illegible]vels in relation to surface datum: "+" refers to elevation above surface datum, "0" refers to surface datum, "-" refers to elevation below surface datum.

[illegible]t of excavation (see text): S - surface collection (unit indeterminate); TT - 1970 test excavation; TT = test trench.

[illegible] total number of flakes from that level of the particular excavation unit.

[illegible] total number of flakes found throughout the excavated portions of the site, at that particular level.

[illegible] total weight of flakes from that level of the particular excavation unit.

[illegible] total weight of flakes found throughout the excavated portions of the site, at that particular [illegible].

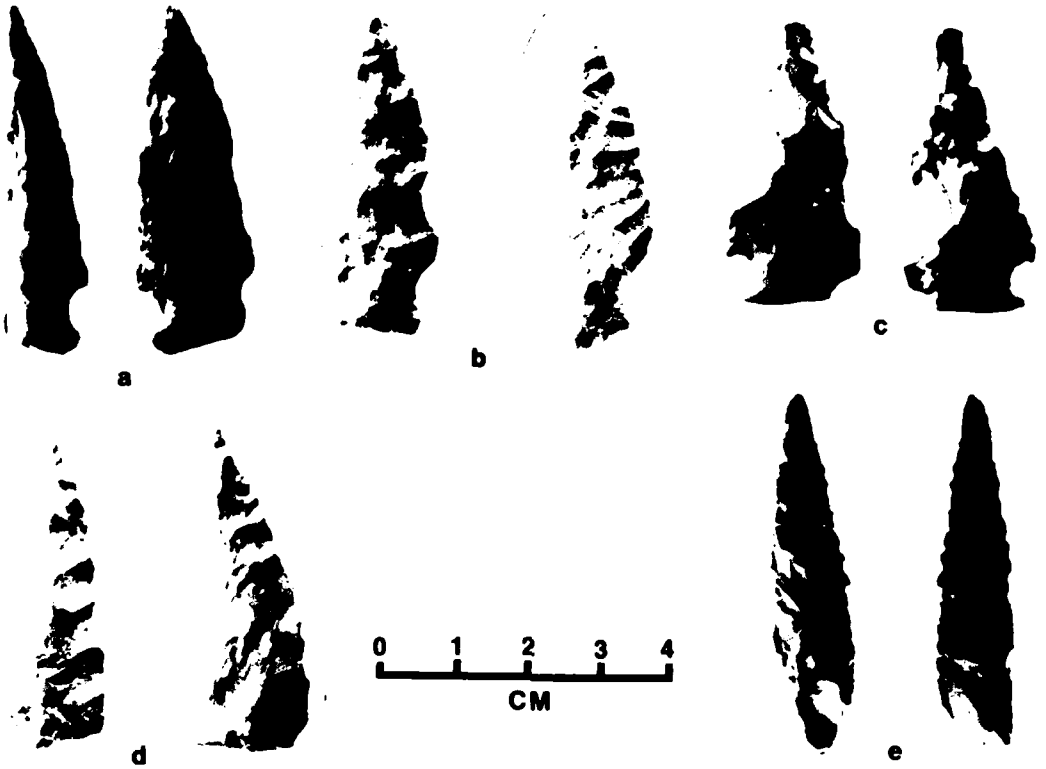


Fig. 25. Artifacts from 10-CW-41, Elk Creek. *a*, 1609-418; *b*, 1609-467; *c*, 1609-1384; *d*, 1609-41; *e*, 1609-79.

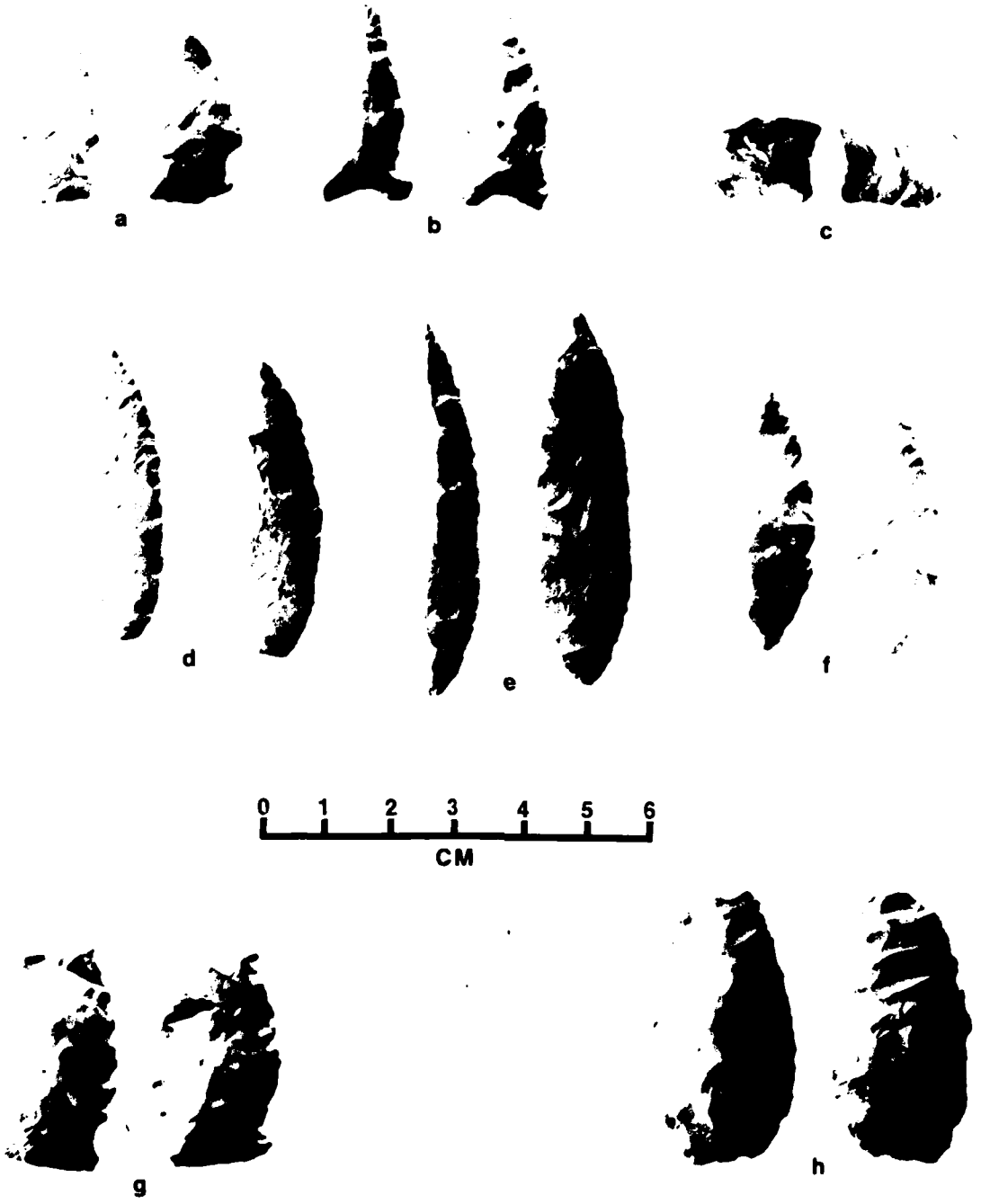


Fig. 26. Artifacts from 10-CW-41, Elk Creek. *a*, 1609-436; *b*, 1609-41; *c*, 1609-48; *d*, 1609-18; *e*, 1609-426; *f*, 1609-95; *g*, 1609-80; *h*, 1609-1368.

Fig. 27. Artifacts from 10-CW-41, Lick Creek. *a*, 1609-41; *b*, 1609-469; *c*, 1609-472; *d*, 1609-454.

while the Cascade material was most abundant in the lower and more level area. In this upper area, corner-notched and side-notched points were found associated with a charcoal sample radiometrically dated at 2970±90 years BP (WSU 2403) (Table 5; Fig. 28). In the lower portions of the site, a charcoal sample dated at 1910±90 years BP (WSU 2404) (Table 5) was associated with several cobble "choppers," an edge-ground cobble, and several large utilized flakes. A total of 168 lithic artifacts are represented in the site assemblage, including 52 projectile points (26 of which are reportedly from the 1970 excavations) and 47 cobble implements, four of which are beaked cobble tools (Table 10). Field notes mention several more edge-ground cobbles found in the course of excavation.

10-CW-42, Elk Creek

Immediately below 10-CW-41 is a low terrace at the mouth of Elk Creek (Figs. 20, 22, 23). The area was reportedly used as a CCC camp (Swanson and Corliss 1971:9). Osmundson and Hulse (1962:8) report a mill having once existed on the site as mentioned previously. A small community existed in the immediate area in the early part of this century (Geidl 1972). A 1961 map of the area indicates a school once existing on the site (Ahsahka, Idaho, USGS Quadrangle map 1961, 15 min.). The site was recorded in 1970 by Idaho State University personnel who initially excavated two 1 x 2 m units into the eastern end of the site at the cutbank (Fig. 29) (Corliss and Gallagher 1972:Map 3). The first unit was put in at the edge of a circular depression approximately 3 m (10 ft.) in diameter, located about 2 m (7 ft.) back from the edge of the terrace (Corliss and Gallagher 1972:Map 3) (Fig. 30). This unit was dug in arbitrary 15 cm levels. Much cryptocrystalline and basalt debitage was found throughout the 100 cm of excavation depth (Table 11). A small side-notched projectile point, of fine basalt with an indented base, was found in the upper 30 cm of the unit. A corner-notched projectile point, mentioned only in the field notes of the excavation, was found in the 45-60 cm level. The second unit was placed in the terrace edge 3-4 m west of the first unit. This excavation was dug in 10 cm levels, and reportedly produced much cryptocrystalline and basalt debitage, and few lithic tools (Table 12). The upper 36 cm of soil appeared disturbed. From 36-50 cm below the surface much debitage, bone, charcoal, fire-cracked rock, and an edge-ground cobble were found. Somewhere below 60 cm, a basal-notched projectile point was found. Two backhoe trenches were also excavated at the site, details of these operations unknown (Corliss and Gallagher 1972:Map 3).

10-CW-15 Lathrop Bar

Across and approximately 100 m (330 ft.) upstream from Elk Creek, Osmundson and Hulse recorded a cultural site eroding from the cutbank of a long, low terrace (Fig. 20). A number of unifacially flaked tools were reported from the area, along with two small side-notched and six corner-notched projectile points. Six other tools examined are described as being narrow and tapering projectile points with basal notches. Two houses and several outbuildings existed on the terrace at the time of the

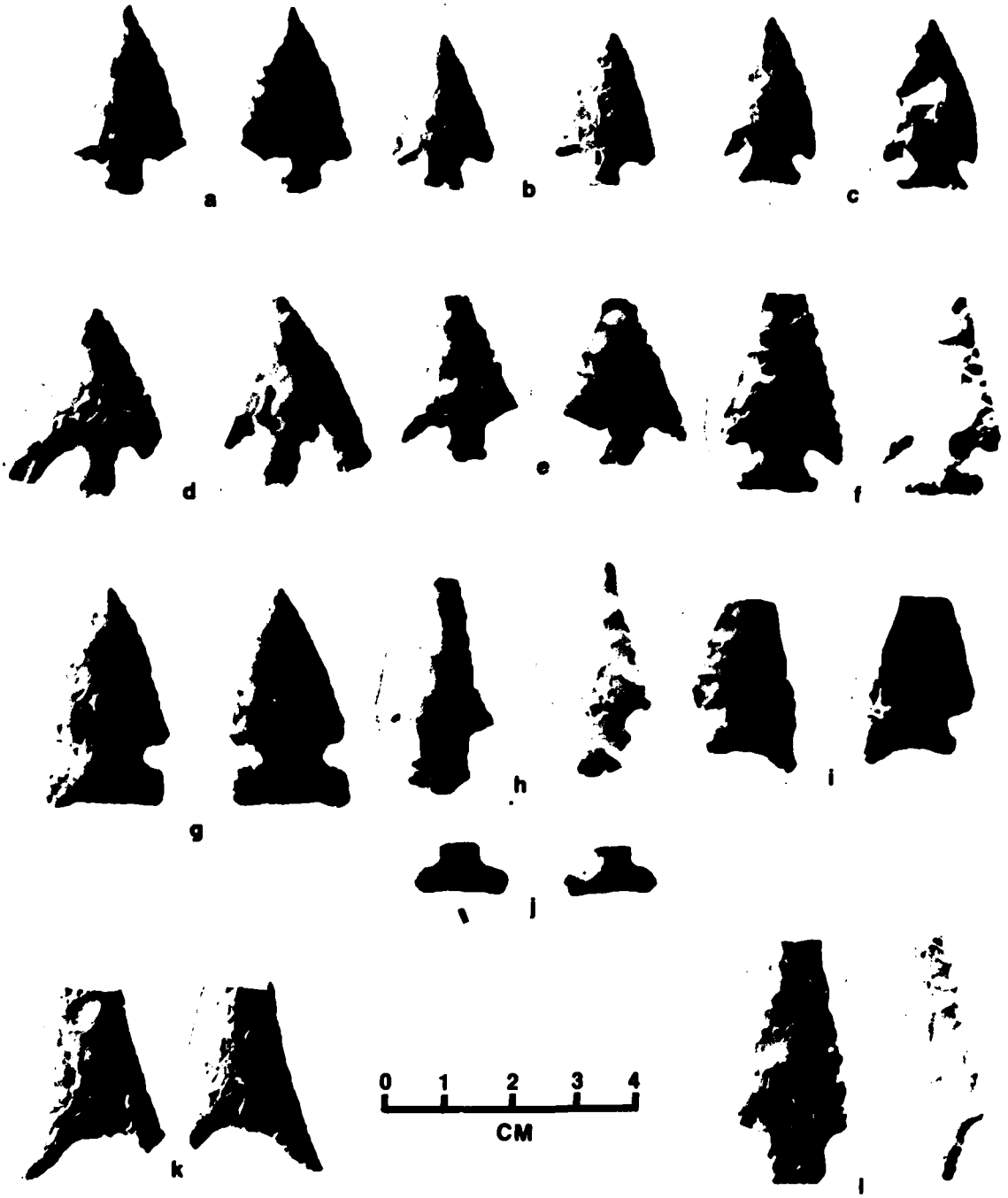


Fig. 28. Artifacts from 10-CW-41, Elk Creek. *a*, 1609-274; *b*, 1609-1372; *c*, 1609-1376; *d*, 1609-136; *e*, 1609-239; *f*, 1609-40; *g*, 1609-114; *h*, 1609-1375; *i*, 1609-77; *j*, 1609-100; *k*,1609-41, *l*, 1609-413.

TABLE 10

Distribution of artifacts from 10-CW-41

Provenience		Artifact class[c]	Catalogue number[d]	Morpho-use form[e]	Petrology	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Thinning Evaluation[h]		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
Surface	Indeterm	Flk	0106	Graver on biface	Quartzite	36	20	2	3	8	8	7
		Flk	0114	Side notch w/o basal notch	Chert	31	17	3	3	8	8	7
		Flk	0239	Stemmed point w/o basal notch	Chert	24	18	5	3	8	8	7
		Flk	0358	Lanceolate point w/basal notch	Basalt	32	18	5	5	8	8	7
		Flk	0247	Lanceolate point w/o basal notch	Opalite	25	12	5	2	8	8	7
		Flk	2374	Used flake	Chert	36	17	6	5	2	3	1
		Flk	0111	Graver on biface	Opalite	38	18	5	4	8	8	7
		Flk	0360	Point fragment	Quartzite	25	18	11	4	8	8	7
		Flk	2401	Thick uniface	Chalcedony	48	27	8	10	4	3	7
		Flk	2403	Thin biface, haft indeterminate	Argillite	11	17	5	2	8	8	7
+50-+20	1	Flk	0421	Thin biface, haft indeterminate	Chert	21	27	6	5	8	8	7
	2	Flk	0408	Used flake	Quartzite	33	21	6	6	3	3	7
		Flk	0413	Stem point w/o basal notch	Argillite	35	15	5	4	8	8	7
	3	Flk	0451	Thin biface, haft indeterminate	Quartzite	54	32	11	20	7	7	6
		Flk	0454	Used flake	Agate	33	20	6	5	3	3	1
+20-0	1	Flk	0425	Thin biface, haft indeterminate	Argillite	47	30	6	11	6	6	7
	2	Flk	0409	Thin biface, haft indeterminate	Quartzite	61	43	18	46	5	5	7
		Flk	0418	Side notch point w/o basal notch	Argillite	46	17	8	6	8	8	7
		Flk	0419		Quartzite	28	20	4	3	8	8	5
	3	Flk	0452	Thin uniface, side and end-edged	Quartzite	55	31	10	21	8	3	2
		Flk	0459	Thin biface, haft indeterminate	Quartzite	44	18	10	10	8	8	7
		Flk	0460	Thin biface, haft indeterminate	Quartzite	23	27	8	6	8	8	7
		Flk	0462	Unspecified biface	Quartzite	53	36	13	25	4	4	6
	6	Flk	1370	Point fragment	Chert	19	17	5	3	8	8	7
		Hist	2385	Wire nail	Metal	50	2	3	2			
		Hist	2385	Wire nail	Metal	50	2	3	2			
		Hist	2385	Wire nail	Metal	50	2	3	2			
		Hist	2385	Wire nail	Metal	50	2	3	2			
		Hist	2386	Wire nail	Metal	62	2	4	3			
		Hist	2386	Wire nail	Metal	62	2	4	3			
		Hist	2386	Wire nail	Metal	62	2	4	3			
		Hist	2386	Wire nail	Metal	62	2	4	3			
		Hist	2386	Wire nail	Metal	62	2	4	3			
		Hist	2387	Pipe stem	Plastic	78	14	10	7			
		Hist	2392	Wire nail	Metal	50	2	3	2			
		Hist	2392	Wire nail	Metal	50	2	3	2			
		Hist	2393	Wire nail	Metal	74	3	4	5			
		Hist	2394	Wire nail	Metal	23	3	3	2			

TABLE 10 *continued*

Provenience		Artifact class[c]	Catalogue number[d]	Morpho-use form[e]	Petrology	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Thinning Evaluation[h]		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
+20-0		Hist	2394	Wire nail	Metal	23	3	3	2			
		Hist	2394	Wire nail	Metal	23	3	3	2			
	TR 1	Hist	2407	Spring fragment	Metal	96	19	3	39			
		Nflk	0012	Grooved abrading stone	Granite	125	55	20	278			
0-20	TR 1	Flk	0073	Point fragment	Quartzite	32	20	7	5	B	B	7
	1	Flk	0430	Used flake	Chert	27	24	3	3	6	3	1
	2	Flk	0426	Lanceolate point w/o basal notch	Quartzite	56	15	5	6	B	B	7
		Flk	0427	Thin uniface	Quartzite	25	32	7	6	B	3	2
		Flk	0428	Thin uniface, side and end-edged	Agate	25	27	7	B	7	3	2
	3	Flk	0450	Notch point	Chalcedony	15	22	3	3	6	5	2
		Flk	0463	Thin biface, haft indeterminate	Quartzite	30	23	B	B	B	B	7
		Flk	0468	Lanceolate point w/o basal notch	Chert	34	21	6	5	B	B	7
	6	Hist	2381	Wire nail	Metal	50	2	3	2			
		Hist	2381	Wire nail	Metal	50	2	3	2			
		Hist	2381	Wire nail	Metal	50	2	3	2			
		Hist	2382	Wire nail	Metal	23	3	4	2			
		Hist	2382	Wire nail	Metal	23	3	4	2			
		Hist	2382	Wire nail	Metal	23	3	4	2			
20-40	Tr 1	Flk	0008	Lanceolate point	Opalite	40		B	6	B	B	7
		Flk	0039	Used flake	Basalt	100	45	40	153	2	3	1
		Flk	0040	Corner notched point w/basal notch	Argillite	28	17	5	4	B	B	7
		Flk	0077	Side notched point w/basal notch	Chert	25	15	4	3	B	B	7
		Flk	0079	Drill	Opalite	48	11	7	4	B	B	7
	1	Flk	0436	Corner notched point w/o basal notch	Opalite	24	14	6	1	B	B	7
		Flk	0434	Thin uniface, side and end-edged	Agate	32	24	B	B	B	B	5
	3	Flk	0274	Stemmed point w/p basal notch	Chert	26	16	3	3	B	B	7
	5	Flk	1365	Thin biface, haft indeterminate	Granite	38	38	10	15	B	B	7
		Hist	2414	Wire nail	Metal	62	3	4	4			
		Flk	1372	Stemmed point w/o basal notch	Chert	22	14	4	2	B	B	7
	6	Flk	1387	Lanceolate point w/o basal notch	Agate	25	21	7	5	B	B	7
		Flk	1368	Lanceolate point w/basal notch	Chert	41	21	6	7	B	B	7
		Hist	2410	Wire nail	Metal	22	4	4	2			
		Hist	2411	Wire fragment	Metal	85	3	3	7			
		Nflk	2399		Basalt	60	55	55	332			
40-60	Tr 1	Flk	0019	Lanceolate point w/o basal notch	Argillite	40	17	3	6	B	B	7
		Flk	0023	Utilized flake	Chalcedony	25	13	6	4	3	3	1
		Flk	0024	Utilized flake	Chert	25	20	6	3	3	3	1
		Flk	0080	Stemmed point w/o basal notch	Quartzite	31	18	7	6	B	B	7
	1	Flk	0472	Thin biface w/haft	Quartzite	107	38	6	31	B	B	7

TABLE 10 *continued*

Provenience		Artifact class[c]	Catalogue number[d]	Morpho-use form[e]	Petrology	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Thinning Evaluation[h]		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
40-60	3	Flk	0467	Stemmed point w/o basal notch	Chert	41	17	6	5	8	8	7
	4	Flk	0544	Lanceolate point w/o basal notch	Argillite	26	16	5	3	8	8	7
	5	Flk	1384	Side notched point w/o basal notch	Agate	35	16	7	5	8	8	7
		Flk	1366	Side notched point w/basal notch	Chert	26	25	6	6	8	8	7
60-80	5	Flk	1375	Stemmed point w/o basal notch	Opalite	30	15	6	3	8	8	7
	5	Flk	1376	Side notched point w/o basal notch	Opalite	25	13	5	3	8	8	7
80-100	TR 1	Flk	0053	Used flake	Chert	27	20	11	5	3	3	1
		Flk	0051	Thin biface w/haft	Basalt	72	43	10	38	8	8	7
		Flk	0135	Stemmed point w/basal notch	Chert	27	22	5	4	8	8	7
		Flk	0442	Lanceolate point w/basal notch	Chert	24	24	10	6	8	8	7
100-120	TR 3	Hist	2412	Container fragment	Metal	40	10	2	4			
	3	Flk	0101	Graver on biface	Quartzite	26	14	7	4	8	8	7
Indeterminate		Flk	0007	Thin biface, haft indeterminate	Basalt	80	35	13	29	8	8	7
		Flk	0009	Point fragment	Quartzite	19	16	5	2	8	8	7
		Flk	0011	Thick uniface, end-edged	Granite	115	70	40	579	2	4	2
		Flk	0014	Thin biface, haft indeterminate	Quartzite	49	23	8	9	8	8	7
		Flk	0016	Thick uniface, end-edged	Basalt	115	100	55	236	4	4	2
		Flk	0018	Lanceolate point w/o basal notch	Quartzite	44	16	5	5	8	8	7
		Flk	0020	Point fragment	Chert	16	10	4	2	81	8	7
		Flk	0025	Lanceolate point w/basal notch	Quartzite	8	14	3	2	8	8	7
		Flk	0026	Thin uniface, side and end-edged	Quartzite	20	18	5	3	8	8	3
		Flk	0037	Thin biface, haft indeterminate	Chert	10	10	6	3	8	8	7
		Flk	0043	Used flake	Basalt	41	30	8	16	5	3	1
		Flk	0044	Thick biface, minimum-shaped	Chalcedony	46	30	10	11	6	6	6
		Flk	0045	Thin biface, haft indeterminate	Chert	17	21	5	3	8	7	5
		Flk	0046	Lanceolate point w/o basal notch	Chert	9	16	5	2	8	8	7
		Flk	0047	Thin biface, haft indeterminate	Chert	30	21	10	6	8	8	7
		Flk	0048	Stemmed point w/o basal notch	Chert	13	15	4	3	8	8	7
		Flk	0050	Stemmed point w/o basal notch	Chert	23	20	6	5	8	8	7
		Flk	0061	Side notched point w/basal notch	Basalt	27	13	5	3	8	8	7
		Flk	0062	Edged plate	Quartzite	80	45	10	52	4	5	2
		Flk	0063	Used flake	Basalt	100	70	50	344	2	3	1
		Flk	0064	Corner notched point w/o basal notch	Chert	31	18	5	4	8	8	7
		Flk	0065	Thin biface, haft indeterminate	Quartzite	22	32	8	12	8	8	7
		Flk	0066	Thick uniface, end-edged	Basalt	80	90	35	337	4	2	2
		Flk	0067	Thin uniface	Chalcedony	15	8	3	2	8	8	2
		Flk	0068	Thin uniface	Argillite	29	15	3	3	5	3	2
		Flk	0076	Thin biface, haft indeterminate	Chert	32	22	9	6	7	7	6

TABLE 10 *continued*

Provenience Level[a]	Unit[b]	Artifact class[c]	Catalouge number	Morpho-use form[e]	Petrology	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Thinning Evaluation[h] Dorsal	Ventral	Edge shaping stage[i]
		Flk	0078	Thin uniface, side and end-edged	Argillite	28	25	3	4	8	3	3
		Flk	0081	Lanceolate point w/o basal notch	Chalcedony	29	8	5	3	8	8	5
		Flk	0094	Thick uniface, end-edged	Basalt	110	110	30	424	2	4	2
		Flk	0096	Point fragment	Chert	13	16	4	3	8	8	7
		Flk	0097	Thin uniface	Quartzite	21	17	4	3	5	5	2
		Flk	0099	Thin uniface, end-edged	Argillite	36	22	9	9	8	3	2
		Flk	0100	Triangular point w/basal notch	Chert	29	15	5	3	8	8	1
		Flk	0102	Drill	Chert	17	8	3	2	8	8	7
		Flk	0104	Thick biface, minumum-shaped	Granite	140	185	30	1934	4	4	6
		Flk	0105	Thick biface, minimum-shaped	Granite	140	160	30	1405	4	4	6
		Flk	0109	Thick biface, minimum-shaped	Quartzite	140	90	80	924	4	6	6
		Flk	0110	Thick uniface, end-edged	Basalt	100	100	50	693	4	2	3
		Flk	0115	Thick biface, minimum-shaped	Quartzite	47	45	25	45	6	6	6
		Flk	0117	Point fragment	Chert	29	27	5	4	8	8	7
		Flk	0129	Burin on biface	Chalcedony	30	22	5	4	8	8	6
		Flk	0136	Corner notched point w/o basal notch	Chert	26	20	4	3	8	8	7
		Flk	0137	Thin biface, haft indeterminate	Chert	13	13	1	1	8	8	7
		Flk	0150	Thin biface, haft indeterminate	Chert	15	13	3	2	8	8	7
		Flk	0361	Thin biface, haft indeterminate	Quartzite	35	39	5	9	8	8	7
		Flk	0362	Lanceolate point w/o basal notch	Quartzite	40	15	5	4	8	8	7
		Flk	0385	Point fragment	Chert	26	16	5	3	8	8	7
		Flk	0405	Thin uniface, side and end-edged	Quartzite	38	24	8	9	8	5	3
		Flk	0406	Thick uniface, end-edged	Basalt	80	75	30	242	4	4	2
		Flk	0407	Thick uniface, end-edged	Basalt	80	70	40	219	4	2	2
		Flk	0410	Thick uniface, side and end-edged	Basalt	130	110	50	345	4	4	2
		Flk	0418	Thick uniface, end-edged	Basalt	120	90	65	916	2	4	2
		Flk	0412	Graver	Quartzite	28	26	7	6	3	3	1
		Flk	0413	Thin biface, haft indeterminate	Quartzite	38	28	9	11	6	5	5
		Flk	0414	Thick uniface, end-edged	Basalt	80	60	45	271	2	4	2
		Flk	0417	Drill	Quartzite	31	30	7	6	8	8	7
		Flk	0422	Used flake	Quartzite	27	23	2	3	3	3	1
		Flk	0423	Used flake	Quartzite	23	17	4	2	3	3	1
		Flk	0429	Notch point	Quartzite	41	30	4	5	8	3	2
		Flk	0431	Thick uniface, end-edged	Granite	90	80	40	480	2	4	2
		Flk	0432	Used flake	Quartzite	32	20	5	4	6	3	1
		Flk	0433	Thin biface, haft indeterminate	Metamorphic	30	37	9	11	8	8	7
		Flk	0435	Used flake	Quartzite	42	23	8	8	6	3	1
		Flk	0437	Thick uniface, end-edged	Granite	170	135	80	2430	4	4	2
		Flk	0441	Used flake	Opalite	105	30	25	52	2	3	1
		Flk	0444	Used flake	Quartzite	25	20	2	3	7	3	1
		Flk	0445	Drill	Basalt	115	65	45	568	1	1	7

TABLE 10 *continued*

Provenience		Artifact class[c]	Catalouge number[d]	Morpho-use form[e]	Petrology	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Thinning Evaluation[h]		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
Indeterminate		Flk	0446	Thick uniface, end-edged	Basalt	80	90	50	426	4	4	2
		Flk	0447	Thick biface, minimum-shaped	Basalt	80	65	30	197	4	4	6
		Flk	0449	Uniface, form indeterminate	Opalite	12	13	7	2	8	3	2
		Flk	0453	Thick biface, minimum-shaped	Basalt	80	50	25	133	4	4	6
		Flk	0455	Thick biface, minimum-shaped	Basalt	150	120	30	706	4	5	6
		Flk	0456	Thin uniface, minimum-shaped	Quartzite	44	31	8	17	5	3	2
		Flk	0457	Thin biface, haft indeterminate	Quartzite	27	32	12	11	8	8	7
		Flk	0460	Lanceolate point w/o basal notch	Opalite	30	15	6	3	8	8	7
		Flk	0461	Lanceolate point w/basal notch	Quartzite	25	27	8	6	8	8	7
		Flk	0465	Thin biface, heft indeterminate	Metamorphic	33	45	9	19	7	7	7
		Flk	0469	Thick biface, well-shaped	Basalt	85	37	20	64	8	8	7
		Flk	0470	Stemmed point w/o basal notch	Chert	24	18	7	4	8	8	7
		Flk	0473	Used flake	Opalite	100	70	30	107	3	3	1
		Flk	0550	Beaked cobble tool	Granite	150	160	50	1372	5	5	5
		Flk	1328	Beaked cobble tool	Basalt	125	115	35	642	2	4	2
		Flk	1364	Lanceolate point w/o basal notch	Basalt	27	15	5	5	8	8	7
		Flk	1374	Thick uniface, side-edged	Granite	95	70	30	290	1	3	2
		Flk	1377	Thick uniface, end-edged	Basalt	120	70	40	500	2	4	2
		Flk	1379	Beaked cobble tool	Basalt	160	105	85	410	2	4	2
		Flk	2346	Used flake	Quartzite	38	25	11	11	2	3	1
		Flk	2370	Point fragment	Chert	20	11	5	3	8	8	7
		Flk	2371	Thin uniface, side and end-edged	Chert	25	23	5	5	8	8	5
		Nflk	0017	Polishing stone	Basalt	65	75	30	233			
		Nflk	0028	Polishing stone	Basalt	110	60	60	589			
		Nflk	0052	Indeterminate	Basalt	70	65	50	370			
		Nflk	0100	Polishing stone	Basalt	130	90	40	872			
		Nflk	0366	Indeterminate	Quartzite	230	70	30	792			
		Nflk	0400	Polishing stone	Basalt	70	40	20	107			
		Nflk	0401	Indeterminate	Basalt	40	35	20	51			
		Nflk	0402	Indeterminate	Granite	35	30	20	33			
		Nflk	0403	Indeterminate	Basalt	60	40	35	136			
		Nflk	0415	Indeterminate	Granite	80	95	55	416			
		Nflk	0438	Indeterminate	Basalt	60	50	40	251			
		Nflk	0443	Indeterminate	Granite	190	150	45	2582			
		Nflk	0553	Hammerstone	Basalt	180	83	44	871			
		Nflk	0556	Indeterminate	Granite	65	60	50	252			
		Nflk	1327	Indeterminate	Quartzite	45	25	10	15			
		Nflk	1352	Indeterminate	Basalt	145	140	70	1528			
		Nflk	1371	Pounding stone	Basalt	45	45	45	133			
		Nflk	1378	Netherstone fragment	Basalt	100	70	65	839			
		Nflk	1383	Indeterminate	Granite	55	45	40	154			
		Nflk	2346	Indeterminate	Basalt	40	35	30	90			
		Nflk	2372	Ungrooved abrading stone	Granite	50	50	40	162			

TABLE 10 *continued*

[a] Depth, in centimeters, below surface.

[b] Unit of excavation (see text).

[c] Either lithic (flaked or non-flaked) or historic materials.

[d] Based on the original Idaho State University accessioning system, all numbers are preceded by the project code "[illegible]".

[e] Morpho-use form names of lithic artifacts are based more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

[f] Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g] Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h] 0 = indeterminate; 1 = unthinned core/nodule; 2 = unifacial edging on some edges' 3 = unthinned flake without cortex; 4 = preliminary thinned piece with cortex; 5 = preliminarily thinned piece without cortex; 6 = primarily thinned piece, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shaped piece with significant edge regularity but not highly stylized shaped pieces.

[i] 0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges; 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges; 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

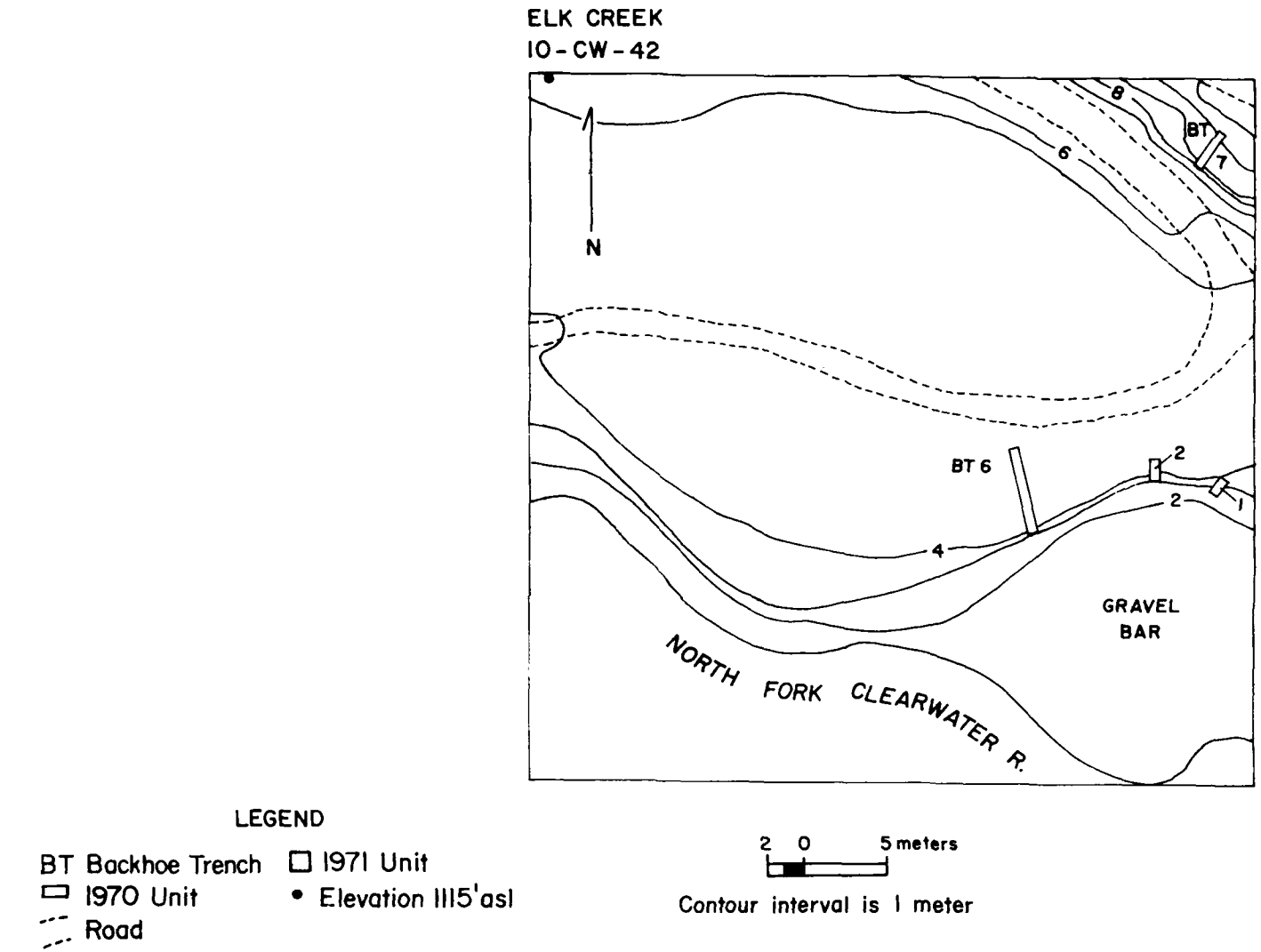


Fig. 29. Site plan, 10-CW-42, Elk Creek.

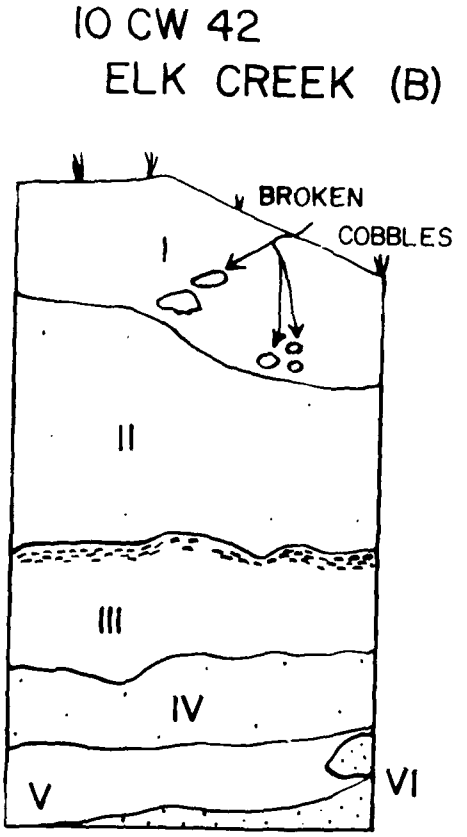


Fig. 30. Stratigraphic profile, 10-CW-42, Elk Creek.

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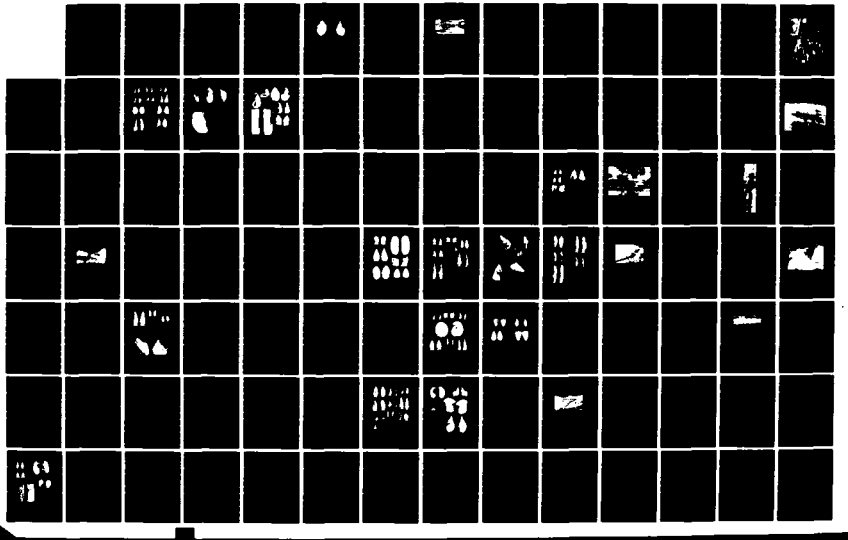

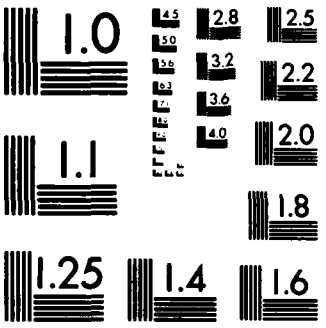

MICROCOPY RESOLUTION TEST CHART
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TABLE 11

Frequencis of lithic debitage* materials from 10-CW-42, Elk Creek

Provenience		Fine-grained materials[a] (silicas, basalts, argillites)						Coarse-grained materials[a] (granites and basalts)						Unit Total	
			% Total			% Total			% Total			% Total			
Level[b]	Unit[c]	No.	Unit[d] %	Level[e] %	Weight (gms)	Unit[f] %	Level[g] %	No.	Unit[d] %	Level[e] %	Weight (gms)	Unit[f] %	Level[g] %	No.	Weight
-40/-60	1	8	100.0	66.7	5	100.0	38.5	4	100.0	33.3	8	100.0	61.5	12	13
Total		8	100.0	66.7	5	100.0	38.5	4	100.0	33.3	8	100.0	61.5	12	13
-150/-170	1	3	100.0	100.0	2	100.0	100.0	0	0	0	0	0	0	3	2
Total		3	100.0	100.0	2	100.0	100.0	0	0	0	0	0	0	3	2

*Residual lithic material resulting from tool manufacture

[a]These are broad categories based loosely on Crabtree (1967), and separated mainly by grain-size. Essentially, the coarse-grain debitage falls into the same material category as that of all cobble tools contained in the North Fork Clearwater River assemblages.

[b]Level in relation to surface datum: "T" refers to elevation above surface datum, "0" refers to surface datum, "-" refers to elevation below surface datum.

[c]Unit of excavation (see text): S = surface collection (unit indeterminate); TP = 1970 test excavation; TT = test trench.

[d]Percentage of total number of flakes from that level of the particular excavation unit.

[e]Percentage of total number of flakes found throughout the excavated portions of the site, at that particular level.

[f]Percentage of total weight of flakes from that level of the particular excavation unit.

[g]Percentages of total weight of flakes found throughout the excavated portions of the site, at that particular level.

TABLE 12

Distribution of artifacts from 10-CW-42, Elk Creek

Provenience		Artifact Class[c]	Catalogue Number[d]	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning[h] Evaluation		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
0-20	1	Hist	0143	Cut nail	Metal	24	5	5	-	-	-	-
		Hist	0143	Cut nail	Metal	24	5	5	-	-	-	-
	4	Hist	2373	Spike	Metal	142	14	14	-	-	-	-
		Hist	2374	Spike	Metal	68	8	8	-	-	-	-
Indeterminate		Flk	0159	Thick uniface, end-edged	Basalt	100	67	40	322	2	4	2
		Nflk	0131	Unspecified pounding stone	Granite	160	85	70	1353	-	-	1

[a]Depth, in centimeters, below surface.

[b]Unit of excavation (see text).

[c]Either lithic (flaked or non-flaked) or historic materials.

[d]Based on the original Idaho State University accessioning system, all numbers are preceded by the project code "1609".

[e]Morpho-use form names of lithic artifacts are based more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

[f]Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g]Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h]0 = indeterminate; 1 = unthinned core/nodule; 2 = unthinned flake with cortex; 3 = unthinned flake without cortex; 4 = preliminarily thinned piece with cortex; 5 = preliminarily thinned piece without cortex; 6 = primarily thinned piece, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shaped piece with significant edge regularity but not highly stylized shaped piece.

[i]0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges; 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges; 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

1961 survey. Four pestles were reportedly found in a garden on the terrace (Osmundson and Hulse 1962:8). The area was revisited in 1970 by Idaho State University personnel (Swanson and Corliss 1971:Fig. 1). The present collection contains only two beak-shaped, flaked cobble implements from that investigation (Fig. 31).

10-CW-43, Big Springs

This site is located on the north side of the river, 24 km (15 mi.) upriver from the mouth of the North Fork (Fig. 32). The area consists of a large, grassy terrace approximately 13 m (45 ft.) above the river level on the southern portion of the terrace with a reservoir along a spring channel (date of excavation unknown); local collectors reported finding many lithic artifacts during the construction of this reservoir. An orchard, located west of the spring channel, is all that remained of the old Dent homestead which was located in the area (Corliss and Gallagher 1972:15) (Figs. 33, 34).

The site was recorded by Idaho State University crews in 1970. A survey revealed scattered historic materials in the vicinity of the spring. The site appeared extensively disturbed. Two 1 x 2 testpits were excavated in the area: one approximately 15 m (50 ft.) west of the spring, the other east of the spring and about 30 m (100 ft.) southeast of the first unit (Swanson and Corliss 1971:2). Both these excavations exposed historic materials to approximately 20 cm (8 in.) depth (Table 13).

During the 1971 season, three areas were extensively test excavated: the 1970 testpit and area where the posts were found (termed the "main excavation"), a circular "housepit" depression approximately 35 m (115 ft.) east of the spring channel, and thirdly, a rockshelter located off the edge of the terrace, about 20 m (65 ft.) south of the main excavation (Corliss and Gallagher 1972:14-18). A double row of 2 x 2 m units were excavated in the main excavation area in hope of exposing more of the posts discovered during the 1970 season (Fig. 35). The excavation expanded with two additional units to the east and three to the west, as more posts were exposed. Levels were arbitrary and varied greatly from unit to unit. All posts were pedestalled and digging continued until the bottom of a post was exposed or until clear evidence of cultural material faded out. A total of 144 posts were exposed, although many of these were later determined to be roots. The larger vertical members ranged from 6 to 25 cm in diameter and a few appeared to have been sharpened at their base. Some bases appeared to excavators as having been purposely charred. The lengths of the pieces ranged from 10 to 20 cm (4-8 in.), with the average depth of the tops of the posts being 40 cm below the ground surface. A sample from one of these posts was radiometrically dated at 830±160 years BP (WSU 1244). Three samples recently analysed from the feature date two posts reported as having sharpened ends, at 185±100 BP (WSU 2407) and 230±130 BP (WSU 2409). A third date of 495±130 years BP was received from a horizontal laying length of wood 68 cm (27 in.) below the ground surface (Table 5). The majority of the upper portions of the posts appeared to have been burned.

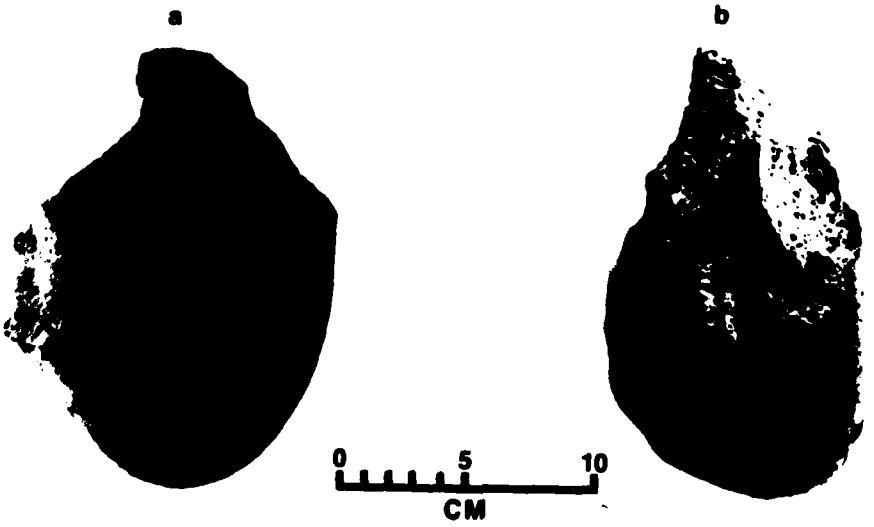


Fig. 31. Artifacts from 10-CW-15, Lathrop Bar. *a*, 1609-242; *b*, 1609-241.

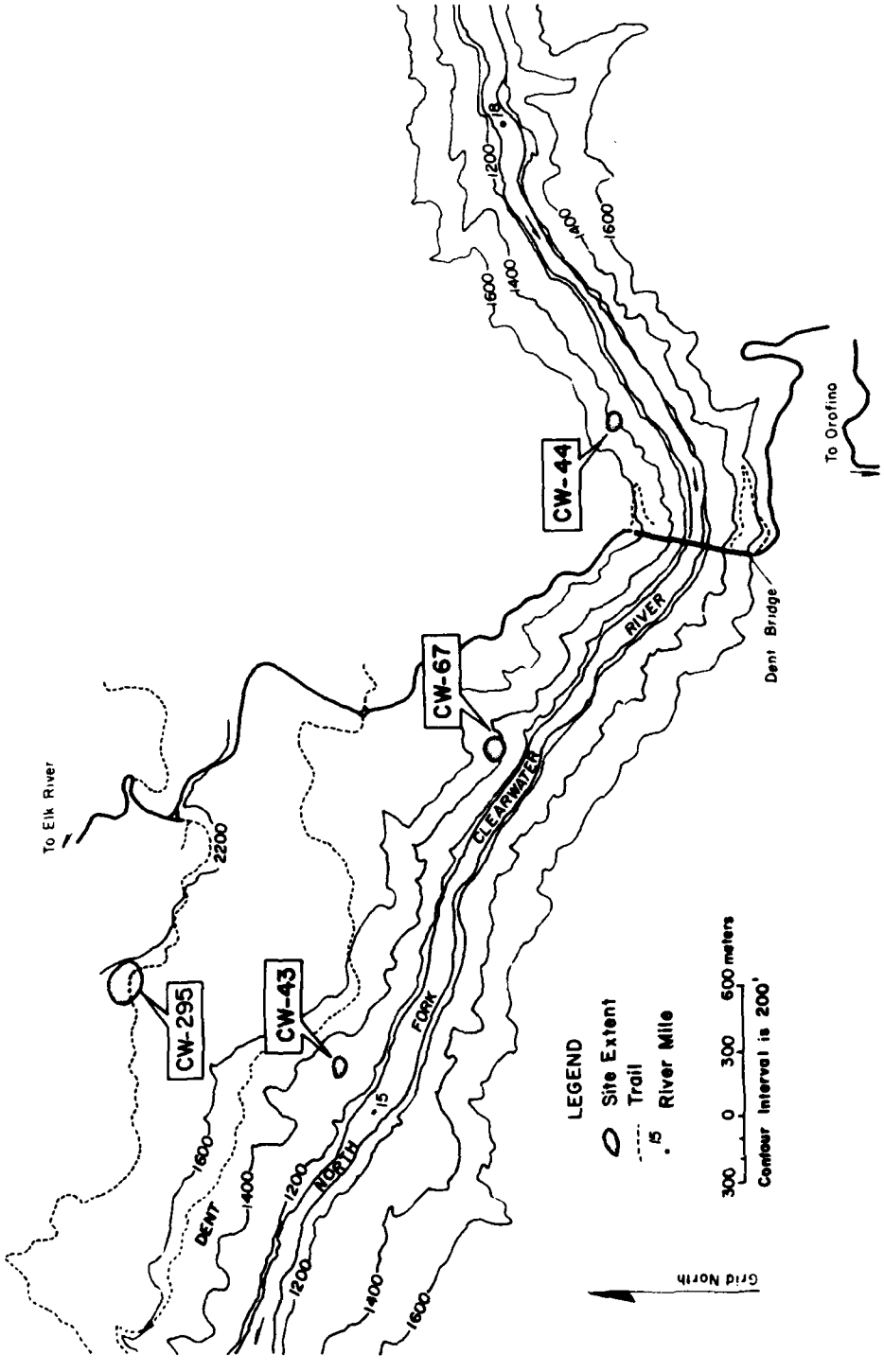


Fig. 32. Segment map E, North Fork Clearwater River.

Fig. 33. View of 10-CW-43, Big Springs, looking southwest.

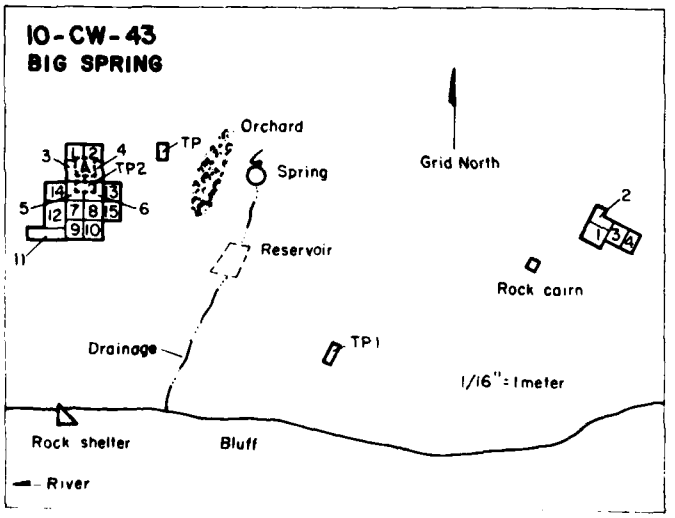


Fig. 34. Site plan, 10-CW-43, Big Springs.

TABLE 13

Distribution of artifacts from 10-CW-43

Provenience		Artifact class[c]	Catalogue number[d]	Morpho-use form[e]	Petrology	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Thinning Evaluation[h]		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
0-20	ME 1	Flk	0166	Thin uniface, minimum edging	Quartzite	32	21	3	3	2	5	2
		Flk	0788	Corner notched point w/o basal notch	Chert	30	15	4	1	8	8	7
		Flk	0789	Drill	Chalcedony			5	1	8	8	
		Hist	2018	Flat glasss fragment	Glass	38	25	4				
		Hist	2019	Wire nail	Metal	69		3				
		Hist	2020	Wire nail	Metal	69		3				
		Mflk	2014	Shaped mano	Basalt			21	140			
	ME 2	Flk	0762	Indeterminate	Quartzite	52	18	5	5	3	3	4
		Flk	0783	Triangular point w/o basal notch	Chalcedony		16	4	1	8	8	7
		Hist	2133	Rivet	Metal	67		5				
		Hist	2122	Strap fragment	Metal			2				
		Hist	2123	Strap fragment	Metal	52	23	2				
		Hist	2124	Strap fragment	Metal		28	2				
		Hist	2125	Strap fragment	Metal		29	2				
		Hist	2126	Wire nail	Metal	111		5				
		Hist	2127	Wire nail	Metal	61		3				
		Hist	2128	Wire nail	Metal	65		3				
		Hist	2130	Wire nail	Metal	80		4				
		Hist	2131	Wire fragment	Metal			2				
		Hist	2136	Flat glass fragment	Glass	28	32	2				
		Hist	2137	Flat glass fragment	Glass	25	45	2				
		Hist	2138	Plate fragment	Ceramic	22	14	4				
		Hist	2034	.45-70 government cartridge	Metal			13				
		Hist	2035	Plate fragment	Ceramic	57	38	5				
		Hist	2036	Rivet	Metal	67		5				
		Hist	2037	Wire nail	Metal	56		3				
		Hist	2039	Rivet	Metal	4		4				
		Hist	2132	Wire fragment	Metal			2				
		Hist	2134	Staple	Metal	41		4				
		Hist	2135	Staple	Metal	25		2				
	ME 3	Hist	2041	Flat glass fragment	Glass	23	12	4				
		Hist	2042	Wire fragment	Metal			3				
		Hist	2043	Strap fragment	Metal		24	2				
	ME 4	Flk	0772	Side notched point w/o basal notch	Chert		17	4	1	8	8	7
		Hist	2050	Wire nail	Metal	78		5				
		Hist	2051	Plastic fragment	Plastic		19					
		Hist	2052	Bowl fragement	Glass	37	16	7				
		Hist	2053	Wire nail	Metal	63		3				
		Hist	2054	File fragment	Metal	105	16	3				
	ME 5	Hist	2059	Wire nail	Metal	32		2				
		Hist	2060	Wire nail	Metal	56		3				
		Hist	2061	Wire nail	Metal	49		3				
		Hist	2062	Wire nail	Metal	123		5				

TABLE 13 *continued*

Provenience		Artifact class[c]	Catalogue number[d]	Morpho-use form[e]	Petrology	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Thinning Evaluation[h]		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
		Hist	2063	Wire nail	Metal	97		4				
		Hist	2064	Rivet	Metal	67		5				
		Hist	2065	Rimfire cartridge	Metal	16		6				
		Hist	2067	Bowl fragment	Glass	24	16	6				
		Hist	2068	Bottle fragment	Glass	23	11	5				
		Hist	2069	Wire fragment	Metal			2				
		Hist	2070	Sheet fragment	Metal	12	13	1				
	ME 6	Hist	2073	Staple	Metal	48		5				
		Hist	2074	Staple	Metal	41		4				
		Hist	2075	Wire nail	Metal	68		3				
		Hist	2076	Wire nail	Metal	68		3				
		Hist	2077	Undetermined metal fragment	Metal			12				
		Hist	2078	Container lid	Plastic	20		22				
		Hist	2079	Cut nail	Metal	33	4	4				
		Hist	2080	Cut nail	Metal	51	4	4				
		Hist	2081	Cut nail	Metal	13	2	2				
		Hist	2082	Flat glass fragment	Glass	18	16	12				
		Hist	2083	Flat glass fragment	Glass	32	20	2				
		Hist	2085	Flat glass fragment	Glass	19	16	4				
		Hist	2086	Flat glass fragment	Glass	19	19	5				
		Hist	2151	Flat glass fragment	Glass	35	6	3				
	ME 7	Hist	2090	Wire nail	Metal	111		5				
	ME 9	Flk	0868	Point fragment, indeterminate form	Chert		7	5	2	8	8	7
		Hist	2093	Undetermined glass fragment	Glass	13	10					
		Hist	2094	Container fragment	Glass	16	18	4				
		Hist	2095	Wire nail	Metal	49		3				
		Hist	2096	Wire nail	Metal	49		3				
	ME 10	Hist	2004	Cut nail	Metal	51	4	4				
		Hist	2005	Cut nail	Metal	52	4	4				
		Hist	2006	Wire nail	Metal	57		3				
		Hist	2007	.12 gauge shot cartridge	Metal		21					
		Hist	2008	Wire fragment	Metal			3				
		Hist	2009	Rivet	Metal	16	5	5				
		Hist	2010	Rivet	Metal	16	5	5				
		Hist	2011	4011	Plastic		15					
		Hist	2012	Bottle body fragment	Glass	12	15	3				
	ME 12	Flk	2029	Uniface, form indeterminate	Basalt		38	11	20	5	2	2
		Hist	2129	Wire nail	Metal	61		3				
	ME 13	Flk	0778	Thin uniface, minimum edging	Quartzite		22	5	2	6	3	2
	ME 15	HP-2	2146	Wire nail	Metal	97		5				

TABLE 13 *continued*

Provenience		Artifact class[c]	Catalogue number[d]	Morpho-use form[e]	Petrology	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Thinning Evaluation[h]		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
20-40	ME 2	Flk	2113	Corner notched point w/o basal notch	Chert	23	15	5	1	8	8	7
		Hist	2115	Bowl fragment	Glass	19	4	7				
		Hist	2116	Button	Glass		6					
	ME 15	Hist	2022	Indeterminate fragment	Glass		13	5				
		Hist	2023	Flat glass fragment	Glass	16	11	2				
		Hist	2025	Metal Strap fragment	Metal		33	2				
		Hist	2026	Metal strap fragment	Metal		33	2				
		Hist	2027	Metal strap fragment	Metal		33	2				
		Flk	0886	Unnotched triangular point	Chert	38	25	5	4	8	8	7
		Flk	2028	Uniface, form indeterminate	Quartzite			7	7	3	5	2
40-60	ME 1	Flk	2117	Thin biface, haft indeterminate	Quartzite	60	23	8	11	8	8	7
	ME 5	Hist	2066	Container body fragment	Metal	18	7	2				
Indeterminate		Flk	0167	Thin biface, haft indeterminate	Chert			6	1	8	8	
		Flk	0763	Thin biface, haft indeterminate	Chert			3	1	8	8	6
		Flk	0765	Indeterminate	Basalt			48	331			
		Flk	0766	Corner point w/o basal notch	Chert	28	26	5	2	8	8	7
		Flk	0768	Edged plate	Metamorphic		42	10	54	2	2	
		Flk	0770	Indeterminante	Basalt			30	101			
		Flk	0771	Beaked cobble tool	Metamorphic	140	90	40	869	1	1	2
		Flk	0775	Indeterminate	Basalt	140	110	53	1072	1	1	
		Flk	0776	Beaked cobble tool	Basalt	203	102	61	1007	1	1	2
		Flk	0781	Thin uniface, minimum edging	Quartzite	36	31	5	5	4	2	2
		Flk	0785	Side notched point w/o basal notch	Chert		22	k6	2	8	8	7
		Flk	0790	Thick biface, minimum edged	Quartzite	52	35	11	22	6	6	6
		Flk	0795	Thick biface, minimum edged	Basalt	267	66	66	1754	1	1	6
		Flk	0867	Side notched point w/o basal notch	Chert	48	17	6	5	8	8	7
		Flk	0870	Thick uniface, minimum edged	Basalt	120	50	50	557	1	1	2
		Flk	0871	Beaked cobble tool	Basalt	93	80	55	466	1	1	2
		Flk	0883	Thick biface, minimum edged	Basalt	153	96	42	831	1	1	5
		Flk	0884	Beaked cobble tool	Metamorphic	203	114	42	1144	1	1	2
		Flk	0885	Thick uniface, minimum edged	Basalt		89	46	739	1	1	2
		Flk	0887	Thick uniface, minimum edged	Basalt	179	102	60	1000	1	1	2
		Flk	1139	Thick biface, minimum shaped	Chert	54	35	14	29	6	6	7
		Flk	1140	Thin uniface, side and end edged	Chert	35	16	8	5	8	3	2
		Flk	1142	Corner notched point w/o basal notch	Chert			5	2	8	8	7
		Flk	1146	Thin biface, haft indeterminte	Chert		18	6	2	8	8	7
		Flk	1146	Uniface, form indeterminate	Chert			5	1	5	3	7
		Flk	1150	Thick uniface, side and end edged	Basalt	88	100	35	407	1	1	2
		Flk	1152	Thick uniface, side and end edged	Chalcedony	23	23	7	4	8	5	4
		Flk	1152	Thin biface, haft indeterminate	Chalcedony		23	5	2	8	8	4

TABLE 13 *continued*

Provenience		Artifact class[c]	Catalouge number[d]	Morpho-use form[e]	Petrology	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Thinning Evaluation[h]		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
Indeter[illegible]e		Flk	1153	Thin uniface	Quartzite	26		8	5	6	6	5
		Flk	1154	Thin uniface	Chalcedony			4	2	3	5	2
		Flk	1155	Beaked cobble tool	Basalt	305	153	68	4881	1	1	2
		Flk	1157	Thin uniface, minimum edged	Chert	26	18	5	2	6	3	2
		Flk	1158	Thin biface, haft indeterminate	Chert			4	1			
		Flk	1159	Uniface, form indeterminate	Chert	21	19	5	3	5	3	2
		Flk	1165	Thick uniface, minimum edged	Silicified wood	37	21	11	5	5	3	2
		Flk	1166	Thin biface, haft indeterminate	Chert			4	2	6	5	6
		Flk	1168	Indeterminate	Basalt			65	716	1	1	
		Flk	1169	Beaked cobble tool	Basalt	103	90	32	333	1	1	2
		Flk	1170	Thick biface, minimum shaped	Basalt	71	79	28	204	4	5	6
		Flk	1171	Thick uniface	Basalt	95	95	34	615	1	1	2
		Flk	1171	Thick uniface, end-edged	Basalt	74	72	44	384	1	1	2
		Flk	1173	Thin biface, haft indeterminate	Chert			7	4	8	8	
		Flk	1174	Thin biface, haft indeterminate	Chert			6	1	8	8	6
		Flk	1176	Thin uniface	Chert	58	37	8	4	8	3	2
		Flk	1177	Thin biface, haft indeterminate	Chert			4	2	6	5	6
		Flk	1178	Thin biface, haft indeterminate	Chert	43	26	1	9	8	8	7
		Flk	1180	Uniface, form indeterminate	Chert	25	9	5	1	6	3	2
		Flk	1181	Thin biface, haft indeterminate	Chert	18	20	2	3	7	7	6
		Flk	1182	Thick uniface, minimum edged	Basalt	105	37	28	110	4	3	2
		Flk	1183	Uniface, form indeterminate	Chert		24	6	4	4	2	2
		Flk	1184	Thick uniface, end-edged	Basalt	104	115	53	484	1	1	2
		Flk	1185	Thin biface w/o haft	Silicified wood	29	22	10	5	6	6	7
		Flk	1186	Thick uniface, end-edged	Basalt	120	110	34	579	1	1	2
		Flk	1187	Beaked cobble took	Basalt	178	80	62	1073	1	1	2
		Flk	1188	Beaked cobble tool	Basalt	140	90	60	1242	1	1	2
		Flk	1189	Thick biface, minimum edged	Basalt	110	69	61	741	1	1	6
		Nflk	773	Hammerstone	Sedimentary	120	45	45	372			1
		Nflk	787	Unshaped mano	Granite	140	125	24	735			1
		Nflk	1141	Hammerstone	Basalt		45	28	157			1

TABLE 13 continued

[a] Depth, in centimeters, below surface.

[b] Unit of excavation (see text).

[c] Either lithic (flaked or non-flaked) or historic materials.

[d] Based on the original Idaho State University accessioning system, all numbers are preceded by the project code "1609".

[e] Morpho-use form names of lithic artifacts are based more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

[f] Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g] Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h] 0 = indeterminate; 1 = unthinned core/nodule; 2 = unifacial edging on some edges' 3 = unthinned flake without cortex; 4 = preliminary thinned piece with cortex; 5 - preliminarily thinned p'ece without cortex; 6 = primarily thinned piece, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shaped piece with significant edge regularity but not highly stylized shaped pieces.

[i] 0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges; 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges; 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

Fig. 35. View of main excavation, 10-CW-43, Big Springs, looking northwest.

The feature is generally rectangular in shape and concentrated in a 4 x 6 m area (Corliss and Gallagher 1971:Map 4). No living surface was identified as being associated with the posts, although at about 40 cm (10 in.) depth a yellowish clay layer was reported.

Most of cultural materials from the excavation are no longer provenienced and are not discussed in the excavation notes from the site. The present artifact assemblage attributed to the excavation contains 14 projectile points (4 side-notched, 4 corner-notched, 2 stemmed, 2 triangular-based, and 2 with indeterminable base forms), 30 thick unifaces, cobble tools including 2 cobble beak implements, 2 edged quartzite plates, 2 hammerstones, and 2 pestles. In general, the lithic material correlates with Tucannon and Harder assemblages.

Excavations also occured at a 1 x 2 m test excavation, located 5 m (15 ft.) east of the main excavation was dug to a depth of 50 cm (20 in.). No cultural material was found.

Historical material consisted of many wire and cut nails, rivets, staples, metal straps, a .303 casing, a .45-70 government cartridge, a file, a button, flat glass fragments, plate fragments, and a metal can (Table 13).

The second feature excavated at the site consisted of a circular depression approximately 3 m in diameter located 50 m (165 ft.) east of the previous excavation area. A series of 2 x 2 m units were excavated across the feature (Fig. 36). The sediments of these units consisted of silty clay for the entire 60 cm (24 in.) of the excavation. At a depth of 29 cm (11 in.), a thin ash surface was revealed which extended over the entire excavation. Most of the tools and debitage recovered from the excavation were found in or directly above this layer. The artifacts from the upper 30 cm (12 in.) of the units consisted of 6 thin bifaces, 5 thin unifaces, 2 utilized flakes, 6 cobble implements including 2 pointed cobble artifacts, 1 grinding slab, and 5 corner-notched and side-notched projectile points (Figs. 37, 38, 39). Historical material (wire nail, metal can, and a metal jar lid) found in the upper 30 cm (12 in.). The 30 cm (12 in.) level extending below the ash layer contained a thin uniface tool and an edge-ground cobble tool (Table 13).

A 1 x 1 m unit was begun in the vicinity "to the east" of the housepit excavation. The area was chosen because of the concentration of rock in the area. Excavation revealed solidly packed "fist sized" rock to a depth of 50 cm (20 in.), at which time excavation ceased because of "lack of time."

The area beneath a rock overhang, located approximately 3 m below the terrace edge and 10 cm above the river was also test excavated. Two 1 x 1 m units were dug in the sediments immediately in front of the south-facing overhang. The area was excavated to bedrock approximately 30 cm (12 in.). The only cultural material found consisted of wire nails and a few cryptocrystalline flakes (Table 13). Lithic tools recovered from the Big Springs site seems to parallel Tucannon and Harder Phase assemblages (Table 13).

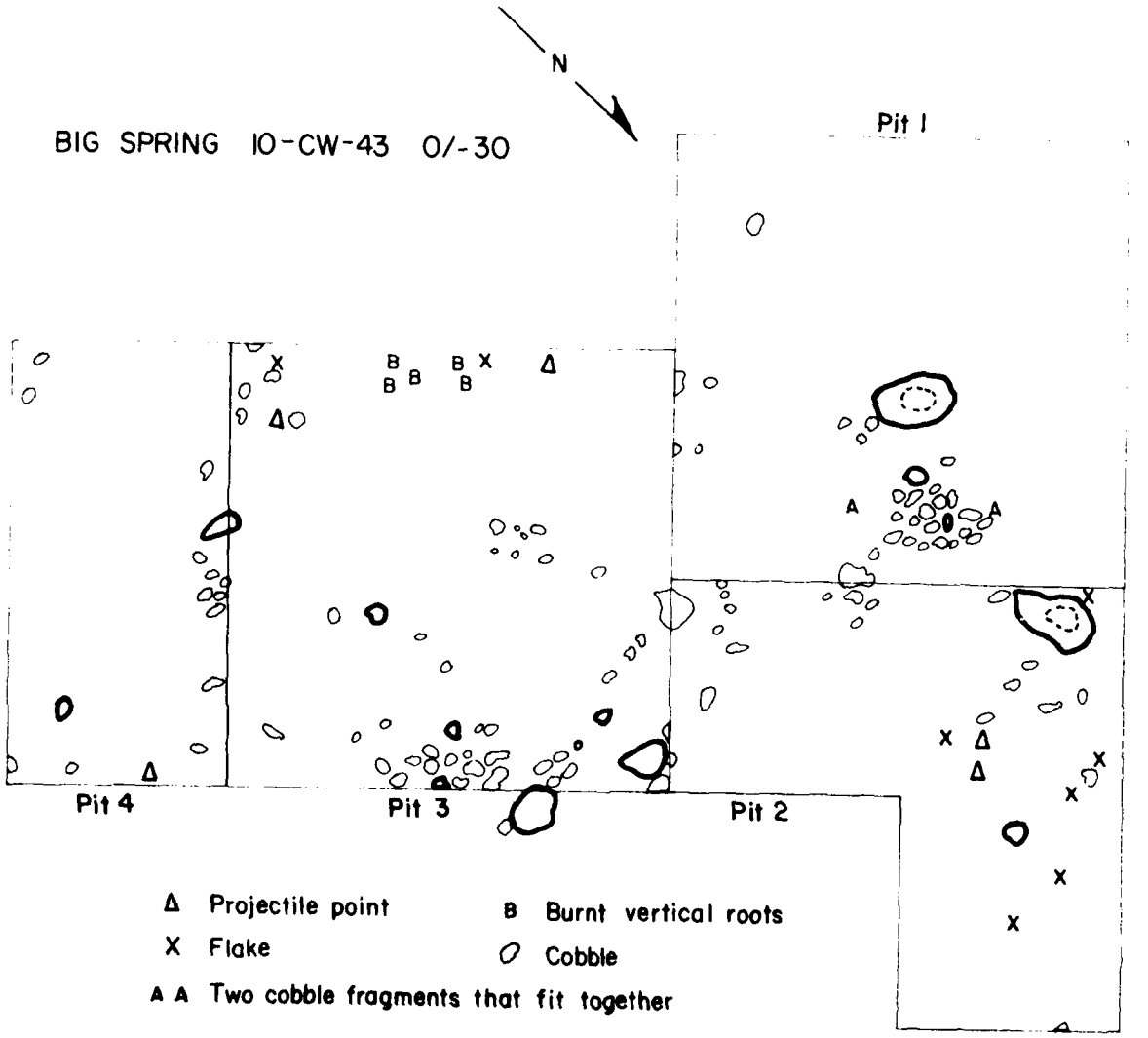


Fig. 36. Excavation plan, housepit, 10-CW-43, Big Springs.

Fig. 37. Artifacts from 10-CW-43, Big Spring. *a*, 1609-2113; *b*, 1609-788; *c*, 1609-766; *d*, 1609-1142; *e*, 1609-1142; *f*, 1609-783; *g*, 1609-1185; *h*, 1609-886; *i*, 1609-762; *j*, 1609-1165.

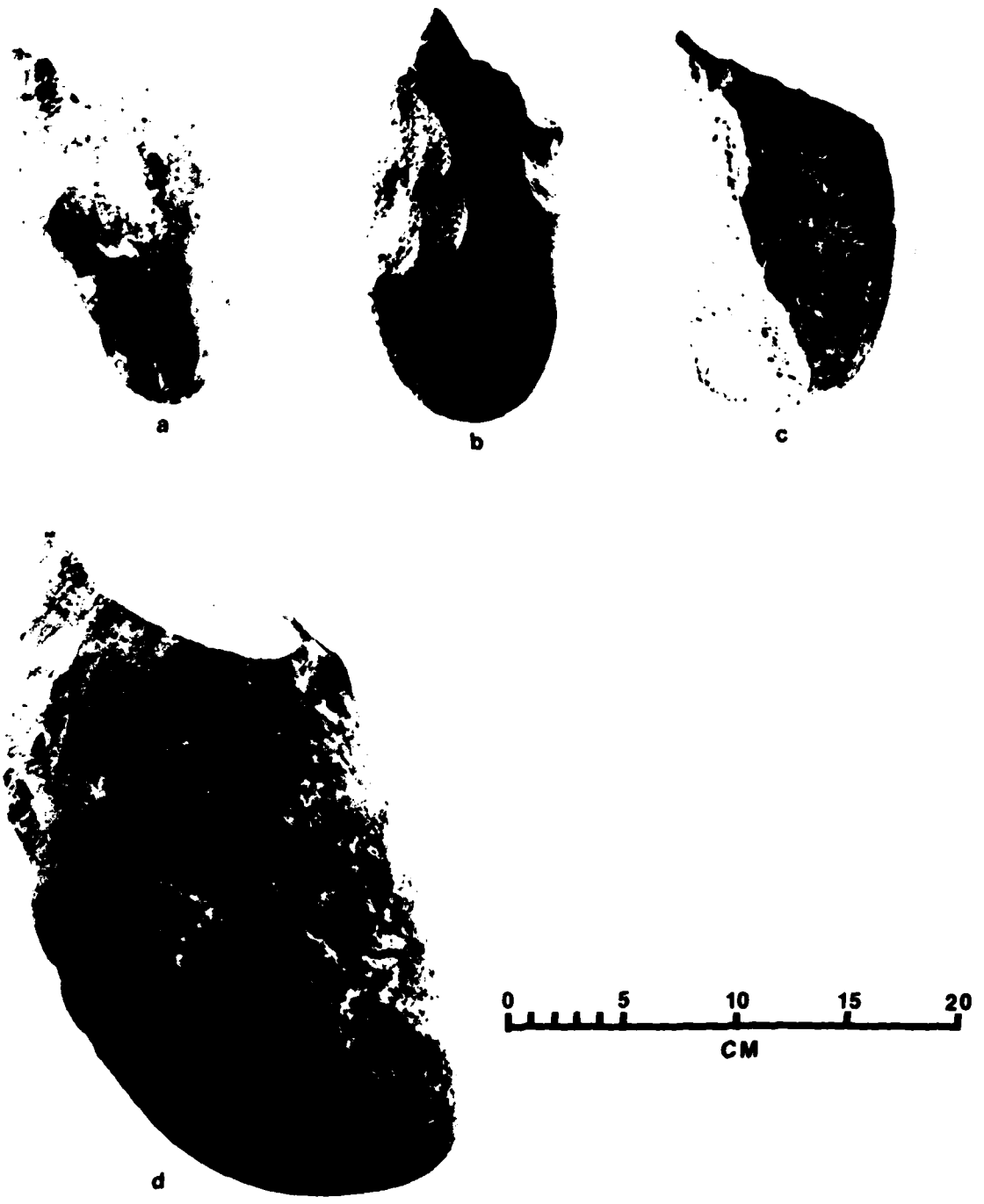


Fig. 38. Unifaced peripherally flaked cobble artifacts from 10-CW-43, Big Springs. *a*, 1609-884; *b*, 1609-776; *c*, 1609-1188; *d*, 1609-1155.

Fig. 39. Artifacts from 10-CW-43, Big Springs. *a*, 1609-1176; *b*, 1609-790; *c*, 1609-1178; *d*, 1609-768; *e*, 1609-1145.

10-CW-295, Dent

This is the site of the former community of Dent, mentioned previously. Dent, located approximately 24 km (15 mi.) above the mouth of the North Fork (Fig. 20), was bulldozed during clearing operations prior to inundation of the reservoir. In 1976, the site was visited by Sappington and Pfeiffer. They recorded finding scattered household materials, including enamel cookware, an axe head, wire nails, and ceramic and glass fragments. A fruit orchard was also reported in the vicinity.

10-CW-67, Lost Rockshelter

This is another rock overhang site containing some historic and lithic materials, reportedly located along an intermittent drainage about 26 km (16 mi.) above the mouth of the North Fork (Fig. 20). As in the case of 10-CW-66, this site was recorded after inundation, on information given to University of Idaho personnel by Mr. Ralph Space.

10-CW-44, Space Rockshelter

This rock overhang site is located at the back of a low terrace, about 33.6 km (21 mi.) above the mouth of the North Fork (Fig. 20). The site was recorded by Idaho State University personnel in 1970, who reported the area below the rock overhand as being much disturbed by supposedly illicit excavations. A 1 x 2 m test unit was excavated to a depth of 40 cm in a relatively undisturbed portion of the shelter. Cultural material recovered from this excavation included a metal fork and a wire nail, along with the stemmed base of what appears to have been a projectile point (Table 14). The investigators were informed of the existence of the site by Mr. Ralph Space, of Orofino, Idaho, who reported local collectors finding many lithic tools in the vicinity.

10-CW-66, Upper Rockshelter

This is a rock overhang area reported as being located 31 km (20 mi.) upriver of the mouth of the North Fork (Fig. 40). The site was recorded after inundation of the area, on the basis of interviews by University of Idaho personnel, with Mr. Ralph Space of Orofino.

10-CW-241, Smoked Rock

This rock overhang site is located 34 km (21 mi.) above the mouth of the North Fork (Fig. 40). The site was recorded and excavated by Mr. Ralph Space of Orofino, after receiving permission from U. S. Army Corps of Engineers personnel. Mr. Space's report of his investigation is found in Appendix B.

TABLE 14

Distribution of artifacts from 10-CW-44

Provenience		Artifact Class[c]	Catalogue Number[d]	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning[h] Evaluation		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
0-10	Indeter	Flk	0226	Unnotched stem point	Opalite	0	15	5	1	8	8	7
		Flk	0234	Uniface, form indeterminate	Chert	0	0	8	5	5	5	2
		Hist	0231	Fork	Metal	165	15	2	-	-	-	-
		Hist	0232	Wire nail	Metal	56	-	3	-	-	-	-

[a] Depth, in centimeters, below surface.

[b] Unit of excavation (see text).

[c] Either lithic (flaked or non-flaked) or historic materials.

[d] Based on the original Idaho State University accessioning system, all numbers are preceded by the project code "1609".

[e] Morpho-use form names of lithic artifacts are based more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

[f] Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g] Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h] 0 = indeterminate; 1 = unthinned core/nodule; 2 = unthinned flake with cortex; 3 = unthinned flake without cortex ; 4 = preliminarily thinned piece with cortex; 5 = preliminarily thinned piece without cortex; 6 = primarily thinned piece, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shaped piece with significant edge regularity but not highly stylized shaped piece.

[i] 0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges; 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges; 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

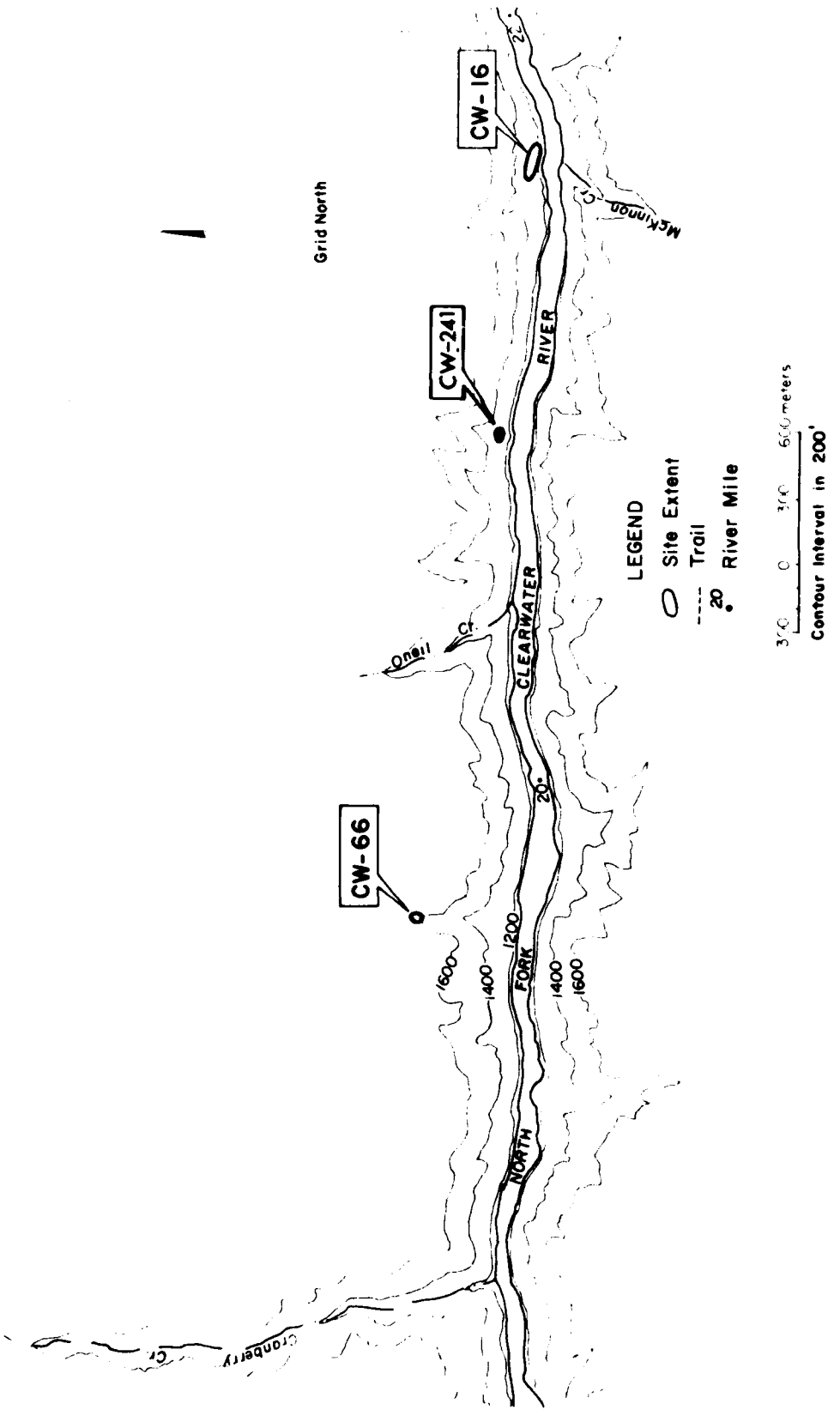


Fig. 40. Segment map F, North Fork Clearwater River.

10-CW-16, Arrowhead Bar

Osmundson and Hulse recorded this site on a large, low terrace, approximately 34 km (21.5 mi.) upriver of the mouth of the North Fork (Fig. 40). They reported a large amount of charcoal and fire-cracked rock, along with a number of debitage flakes, eroding from the terrace cutbank. An examination of local collections revealed a number of lithic artifacts reportedly found at the site, including "...a stone slab 49.5 cm long, with battered ends and edge grinding all along its length" (Osmundson and Hulse 1962:8).

10-CW-17, Ladd Creek

The site is located on a small, low terrace located 38 km (24 mi.) above the mouth of the North Fork (Fig. 41). Osmundson and Hulse found the surface of the terrace had been bulldozed for use as a deck in logging operations. Their informants reported that during the bulldozing operations, many hearths were uncovered, with associated artifacts including pestles, a mortar and milling slab, and two long blades (Osmundson and Hulse 1962:8).

10-CW-291, McCullough Site

This homestead site is located along Ladd Creek and above the reservoir, approximately 37 km (24 mi.) upriver of the mouth of the North Fork (Fig. 41). Sappington and Pfeiffer visited the area in 1978 and recorded the site as consisting of a two-room log cabin, a log barn, a log outhouse, the foundation remains of a building, the remains of a corral, and a log bridge. The cabin measures 9 m (30 ft.) north-south by 4 m (13 ft.) east-west, and has a milled board floor. Both rooms have an exterior door opening facing east; an interior door opening joins the rooms. Window openings are located on the east and south walls of one room, and the east and west walls of the other. The window and door openings are framed with milled boards and secured to the walls with wooden dowels. The walls are formed of 12 courses of logs, squared at their ends and butted together to form the corners. Exterior wall chinking is mud plaster, and the inside joints are covered with hand-split cedar boards secured with wire nails. The roof consists of cedar shakes overlaying pole purlins, spanning north and south log gables.

The log barn, located east of the cabin, measures approximately 5 m (16 ft.) square. The entrance to the building faces toward the cabin. The single window opening is located on the east wall. The walls are chinked in the same method as that described for the cabin. Log gables are located on the east and west walls, and support pole purlins overlaid with cedar shakes. Along the east wall a pole runs parallel to the ground, 70 cm (27 in.) distance from the wall and 50 cm (20 in.) above the dirt floor. Artifacts associated with the structure include a variety of wire nails, a leather strap nailed to the exterior of the east wall, and a large cross-cut saw blade. Pencilled to the outside of the east wall is the following: "here don Feb 22nd/45 seen 37 deer in this field."

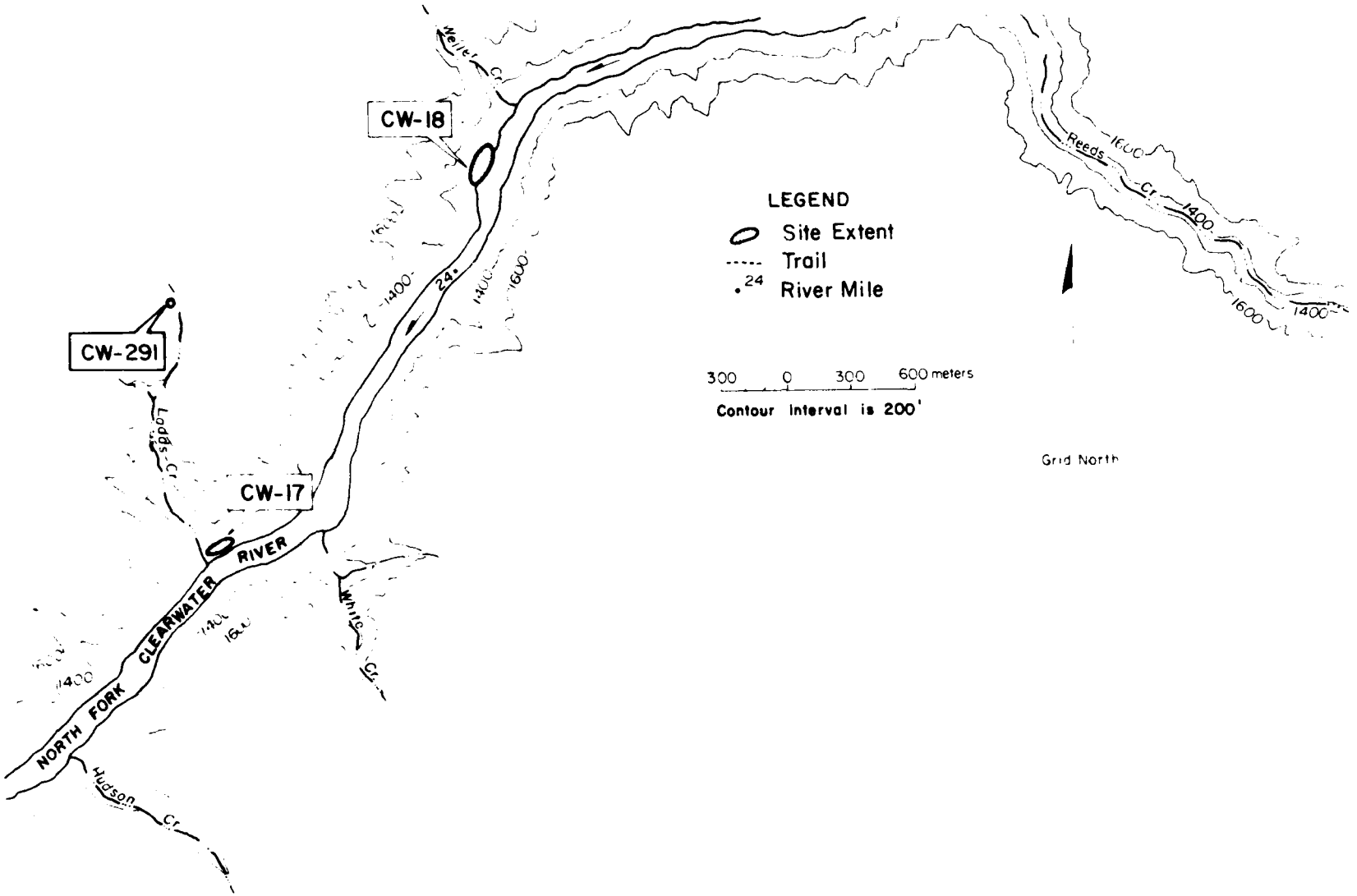


Fig. 41. Segment map G, North Fork Clearwater River.

A rock foundation, supporting squared-timber sill members, is located north of the barn. North of this is a small drainage spanned by a corduroy log bridge, consisting of several logs laid across the creek with short sections of logs laid perpendicular atop them. Immediately north of this, in a small cedar grove, is the remains of a corral, consisting of a few upright cedar posts strung with barbed wire. To the east of the barn is a 1.6 m (5.2 ft.) square, overturned, log outhouse. A number of notched logs are piled in the area immediately south of the barn. Local informants interviewed by Sappington and Pfeiffer reported the site as the Bill McCullough homestead, established in 1905. The site straddles the boundary between Corps of Engineers and Potlatch Corporation land.

10-CW-18, Weller Creek

This site is located about 38 km (24 mi.) from the mouth of the North Fork on the west side of the river. The site location is a low terrace, approximately 200 m (650 ft.) downstream of Weller Creek (Fig. 41). The area was first recorded in 1961 by Osmundson and Hulse (1962:7), who reported much debitage, many pestles and projectile points, and fire-fractured rock on the beach area below the terrace. They also reported a house and a number of outbuildings on the site.

In 1970 Idaho State University personnel examined the area and reported the terrace surface bulldozed. The burnt remains of a wood structure were found. Also, cobble and basalt flakes from the terrace surface were found. A 1 x 2 m pit was excavated from the cutbank, on the south end of the terrace. This unit was excavated in 20 cm levels to a depth of 1 m. One thin uniface was recovered from the site; no other information exists on the excavation.

10-CW-287, Magnus Bay

This site is located above the reservoir, and approximately 42 km (26 mi.) upriver of the mouth of the North Fork (Fig. 42). Sappington and Pfeiffer surveyed the area in 1976 and found lithic tools and debitage flakes on the disturbed surface of the area (Table 15). The disturbance was caused by bulldozing during pre-inundation clearing operations.

10-CW-225, Swamp Creek

This low terrace area is located 42 km (26.5 mi.) above the mouth of the North Fork (Fig. 42). The site is situated on a large sand deposit at the foot of an alluvial fan, immediately downstream from the mouth of Swamp Creek (Corliss and Gallagher 1972:50) (Fig. 43). The site was first recorded in 1970 by Idaho State University personnel (Swanson and Corliss 1971:Fig. 7). The material collection from the site contains debitage and charcoal samples from a 1970 test unit excavated at the site, although no written records mention this.

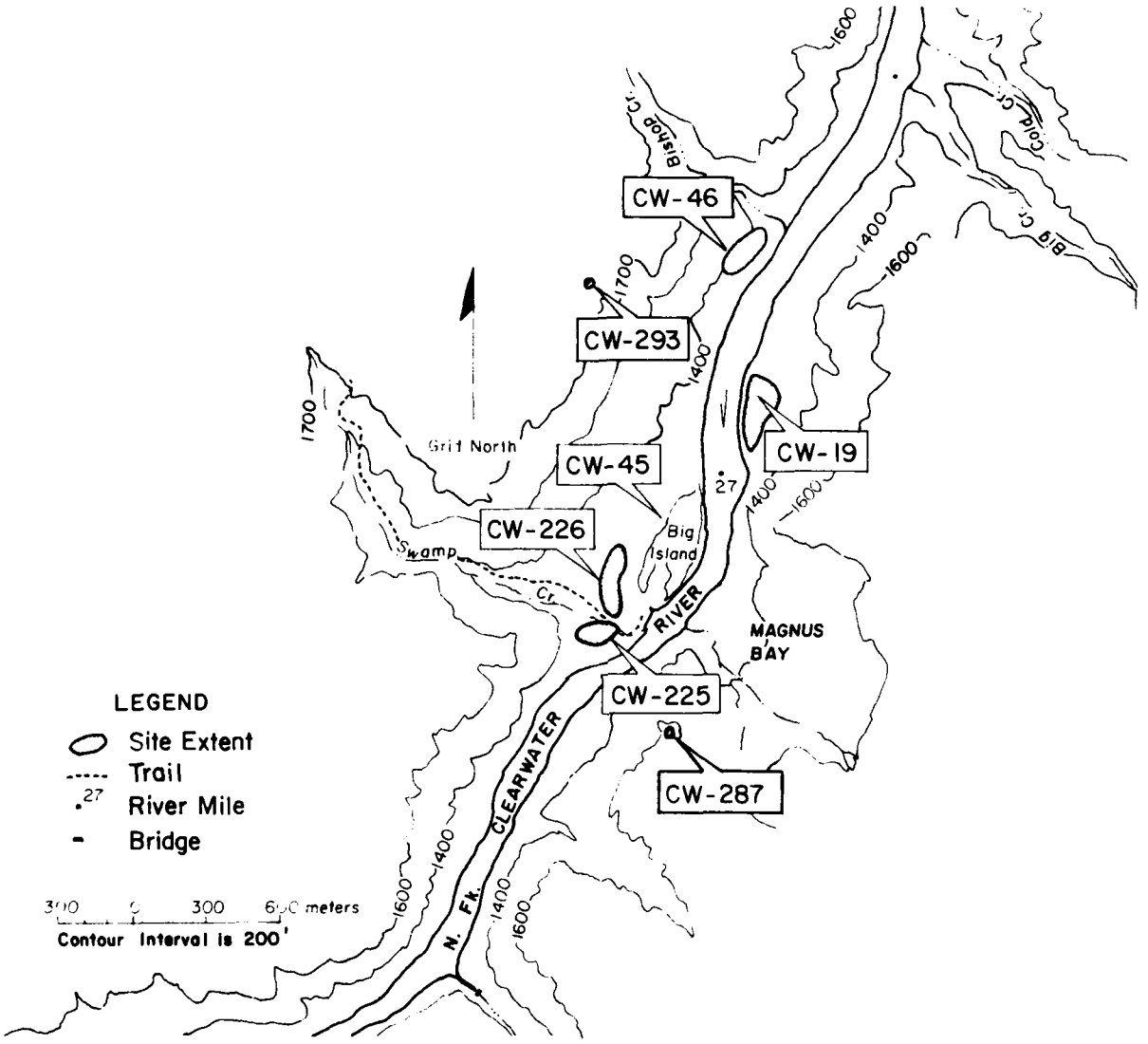


Fig. 42. Segment map H, North Fork Clearwater River.

TABLE 15

Distribution of cultural materials from 10-CW-287

Registration No.	Material	Description
6.1.1.1	Lithic	Side-notched projectile point
6.1.2.1	Lithic	Thin uniface fragment
6.1.3.1	Lithic	Corner-notched fragment
6.1.4.1	Lithic	Core
6.1.6.1	Lithic	Blade
6.1.5.1	Lithic	Debitage flake
6.1.7.1	Lithic	Used flake
6.1.8.1	Lithic	Used flake
6.1.9.1	Lithic	Used flake
6.1.10.1	Lithic	Debitage flake
6.1.11.1	Lithic	Used flake
6.1.12.1	Lithic	Used flake
6.1.13.1	Lithic	Used flake
6.1.14.1	Lithic	Used flake
6.1.15.1	Lithic	Used flake
6.1.16.1	Lithic	Used flake
6.1.17.1	Lithic	Used flake
6.1.18.1	Lithic	Used flake
6.1.19.1	Lithic	Used flake
6.1.20.1	Lithic	Used flake
6.1.21.1	Lithic	Debitage flake
6.1.22.1	Lithic	Debitage flake
6.1.22.1	Lithic	Debitage flake
6.1.23.1	Lithic	Debitage flake
6.1.24.1	Lithic	Debitage flake
6.1.25.1	Lithic	Debitage flake
6.1.26.1	Lithic	Debitage flake
6.1.27.1	Lithic	Debitage flake
6.1.28.1	Lithic	Debitage flake
6.1.29.1	Lithic	Debitage flake
6.1.30.1	Lithic	Debitage flake
6.1.31.1	Lithic	Debitage flake
6.1.32.1	Lithic	Debitage flake
6.1.33.1	Lithic	Debitage flake
6.1.34.1	Lithic	Debitage flake

Fig. 43. View of 10-CW-225, Swamp Creek (a) and 10-CW-226, Upper Terrace (b); looking north.

In 1971, five connecting 1 x 2 m units were excavated along an arbitrary baseline running perpendicular to the river channel (Corliss and Gallagher 1972:50). A 2 x 2 m unit was later dug on each end of the trench and an additional 1 x 2 m unit attached to the north end of the excavation. The entire connecting system was excavated to a depth of nearly 2 m (7 ft.). The site was excavated in arbitrary 20 cm. levels. Provenience information for the excavation is very scant. The soil in the upper 40 cm (16 in.) appeared much disturbed. Historic material was found, along with much cryptocrystalline and basalt debitage, charcoal, a few flaked cobble tools, and both large and small side-notched projectile points (Tables 16, 17) (Corliss and Gallagher 1972:50). A depression in the northeastern portion of the excavation appeared to be fairly recent, with historic material found in excess of 50 cm (24 in.) below the surface (ISU Notebook No. 2). The 40-60 cm level produced at least one flaked cobble tool, a few large worked cobble flakes, and several projectile points, one of which was a stemmed lanceolate (Fig. 44).

The next 80 cm consisted of a sterile level of unstratified yellowish-brown sand. At 140 cm below the surface, a layer of reddish-brown clay and river gravel was encountered (Fig. 45). Associated with this layer were two lanceolate projectile points, several flaked cobble tools, number cobble spalls, a hammerstone, a edge-ground cobble, a thin cryptocrystalline uniface, a cryptocrystalline knife, and a large amount of cryptocrystalline and basalt debitage (Corliss and Gallagher 1972:51). A charcoal sample from this was radiometrically dated at 5300±165 years BP (WSU 1247). This layer, approximately 15 cm (5 in.) thick, overlaid a deep deposit of sterile sand (Corliss and Gallagher 1972:51) (Figs. 46, 47).

A large area, at least 4 x 6 m was excavated by bulldozer near the terrace edge in order to expose the lower occupation level (Corliss and Gallagher 1972:50). No other information is available from this operation. In an examination of the terrace cutbank at the site, a beaked cobble was found in the upper cultural layer, along with a large corner-notched projectile point. Below a hearth feature in the lower cultural layer, an edge-ground cobble and an anvil were found.

It appears that the upper layers of cultural material would fit into Harder and possibly Tucannon assemblages, while the lower occupation surface closely matches Cascade materials.

10-CW-226, Upper Terrace

This high terrace site is located 43 km (27 mi.) upriver from the mouth of the North Fork (Fig. 42). The terrace is located directly east of Big Island and north of Swamp Creek (Fig. 48). The area was first recorded in 1970 by Idaho State University personnel, who reported the surface much disturbed from logging operations. Two 1 x 2 m test units were excavated into the terrace. The first unit, located approximately 6 m (20 ft.) east of the terrace edge, produced no cultural materials in the 200 cm of excavation depth. The second unit was placed about 22 m (72 ft.) east of

TABLE 16

Distribution of artifacts from 10-CW-225

Provenience: Level[a]	Provenience: Unit[b]	Artifact class[c]	Catalogue number[d]	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning[h] Evaluation: Dorsal	Thinning[h] Evaluation: Ventral	Edge shaping stage[i]	Illustration number
0-20	1	Hist	2263	Staple	Metal	16	5	2	-	-	-	-	
	3	Hist	2254	Wire fragment	Metal	100	-	3	-	-	-	-	
		Hist	2298	Wire nail	Metal	50	-	3	-	-	-	-	
	4	Hist	2242	Wire nail	Metal	43	-	3	-	-	-	-	
		Hist	2243	.12-gauge shot cartridge	Metal	22	-	22	-	-	-	-	
		Hist	2244	Bottle body fragment	Glass	13	10	1	-	-	-	-	
		Hist	2245	Rimfire cartridge	Metal	11	-	7	-	-	-	-	
		Hist	2246	Bottle closure	Metal	-	17	1	-	-	-	-	
	7	Hist	2301	Bottle body fragment	Glass	39	18	3	-	-	-	-	
		Hist	2301	Bottle body fragment	Glass	36	22	3	-	-	-	-	
		Hist	2301	Bottle body fragment	Glass	21	17	3	-	-	-	-	
		Hist	2302	Wire nail	Metal	68	-	3	-	-	-	-	
		Hist	2303	Wire nail	Metal	59	4	3	-	-	-	-	
	Indeter	Hist	2280	Munition cartridge, indeterminate	Metal	61	-	15	-	-	-	-	
		Hist	2281	Munition cartridge, indeterminate	Metal	12	-	4	-	-	-	-	
20-40	1	Hist	2249	Indeterminate fragment	Metal	25	16	2	-	-	-	-	
		Nflk	2250	Anvil	Granite	66	54	11	71	-	-	-	
		Flk	0216	Indeterminate	Argillite	101	40	31	173	6	3	2	
	3	Flk	2305	Thin biface, haft indeterminate	Opallite	24	20	7	1	6	6	6	
	5	Hist	2273	Rimfire, cartridge	Metal	17	-	8	-	-	-	-	
		Flk	2300	Indeterminate	Argillite	105	47	44	296	1	1	2	
	6	Flk	2304	Thin uniface, edged	Chert	27	15	2	1	4	5	?	47b
		Hist	2295	Cut nail	Metal	61	4	4	-	-	-	-	
40-60	2	Flk	2293	Unspecified biface	Chert	29	26	9	5	6	6	6	47c
		Flk	0218	Thin uniface, minimum edging	Chert	26	23	6	2	6	5	2	
		Hist	2285	Wire nail	Metal	87	-	4	-	-	-	-	
		Hist	2285	Wire nail	Metal	87	-	4	-	-	-	-	
		Hist	2285	Wire nail	Metal	87	-	4	-	-	-	-	
		Hist	2285	Wire nail	Metal	87	-	4	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	

TABLE 16 *continued*

Provenience		Artifact class[c]	Catalogue[d] number	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[f] (gm)	Thinning Evaluation[h]		Edge shaping stage[i]	Illustration number
Level[a]	Unit[b]									Dorsal	Ventral		
40-60	2	Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2286	Wire nail	Metal	50	-	3	-	-	-	-	
		Hist	2287	Wire nail	Metal	80	-	4	-	-	-	-	
		Hist	2287	Wire nail	Metal	80	-	4	-	-	-	-	
		Hist	2287	Wire nail	Metal	80	-	4	-	-	-	-	
		Hist	2287	Wire nail	Metal	80	-	4	-	-	-	-	
		Hist	2287	Wire nail	Metal	80	-	4	-	-	-	-	
		Hist	2287	Wire nail	Metal	80	-	4	-	-	-	-	
		Hist	2287	Wire nail	Metal	80	-	4	-	-	-	-	
		Hist	2287	Wire nail	Metal	80	-	4	-	-	-	-	
		Hist	2287	Wire nail	Metal	80	-	4	-	-	-	-	
		Hist	2287	Wire nail	Metal	80	-	4	-	-	-	-	
		Hist	2288	Wire nail	Metal	62	-	4	-	-	-	-	
		Hist	2288	Wire nail	Metal	62	-	4	-	-	-	-	
		Hist	2289	Wire nail	Metal	74	-	4	-	-	-	-	
		Hist	2290	Wire nail	Metal	37	-	3	-	-	-	-	
		Hist	2291	Wire nail	Metal	37	-	3	-	-	-	-	
		Hist	2291	Wire nail	Metal	37	-	3	-	-	-	-	
		Hist	2291	Wire nail	Metal	37	-	3	-	-	-	-	
		Hist	2292	Wire fragment	Metal	124	-	2	-	-	-	-	
Indeterminate		Flk	1380	Indeterminate	Granite	158	111	48	1139	1	1	0	
		Flk	2283	Thin uniface, minimum edging	Chert	20	14	4	1	3	6	2	47a
		Flk	2294	Thick uniface, edged	Granite	83	74	58	535	4	1	2	
		Hist	1311	Indeterminate fragment	Metal	121	71	7	-	-	-	-	

[a] Depth, in centimeters, below surface

[b] Unit of excavation (see text).

[c] Either lithic (flaked or non-flaked) or historic materials.

[d] Based on the original Idaho State University accessioning system, all numbers are preceded by the project code "1609."

TABLE 16 *continued*

[e] Morpho-used form names of lithic artifacts are based more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

[f] Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g] Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h] 0 = indeterminate; 1 = unthinned core/nodule; 2 = unthinned flake with cortex; 3 = unthinned flake without cortex; 4 = preliminarily thinned piece with cortex; 5 = preliminarily thinned piece without cortex; 6 = primarily thinned pieces, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shaped piece with significant edge regularity but not highly stylized shaped piece.

[i] 0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges; 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges; 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

TABLE 17

Frequencies of lithic debitage* materials from 10-CW-225

Provenience			Fine-grained materials[a] (silicas, basalts, argillites)						Coarse-grained materials[a] (granites and basalts)						Unit Total	
			% Total			% Total			% Total			% Total				
Level[b]	Unit[c]	No.	Unit[d] %	Level[e] %	Weight (gm)	Unit[f] %	Level[g] %	No.	Unit[d] %	Level[e] %	Weight (gm)	Unit[f] %	Level[g] %	No.	Weight (gm)
0/-20	S.	34	56.7	44.7	190	84.8	33.1	1	7.1	1.3	2	3.6	0.3	35	192
	3	13	21.7	17.1	9	4.3	1.6	7	50.0	9.2	33	9.4	5.7	20	42
	4	7	11.7	9.2	5	2.2	0.8	0	0	0	0	0	0	7	5
	6	1	1.7	1.3	7	3.1	1.2	4	28.6	5.3	180	51.4	31.4	5	187
	TP 1	7	11.6	9.2	13	5.8	2.2	2	14.3	2.6	135	38.6	28.5	9	148
Total		60	103.4	81.5	224	99.9	38.9	14	100.0	18.4	350	100.0	60.9	76	574
-20/-40	1	3	15.0	9.1	3	6.8	1.0	1	7.7	3.0	50	19.2	16.4	4	53
	3	16	80.0	48.5	35	79.5	11.5	11	84.6	33.3	186	71.3	61.0	27	221
	5	1	5.0	3.0	6	13.6	2.0	1	7.7	3.0	25	9.6	8.2	2	31
Total		20	100.0	60.6	44	99.9	14.5	13	100.0	39.3	261	100.1	85.6	33	305
-30/-40	3	3	75.0	23.1	2	6.5	1.4	8	88.9	61.5	94	83.2	65.3	11	96
	5	1	25.0	7.7	29	93.5	20.1	1	11.1	7.7	19	16.8	13.2	2	48
Total		4	100.0	30.8	31	100.0	21.5	9	100.0	69.4	113	100.0	78.2	12	144
-40/-50	1	2	66.7	25.0	4	66.7	1.5	4	80.0	50.0	22	8.6	8.4	6	26
	3	1	33.3	12.5	2	33.3	0.8	1	20.0	12.5	233	91.4	89.3	2	235
Total		3	100.0	37.5	6	100.0	2.3	5	100.0	62.5	255	100.0	97.7	8	261
-50/-60	1	2	9.5	6.9	4	10.5	3.1	0	0	0	0	0	0	2	4
	3	19	90.5	65.5	34	89.5	26.4	7	77.8	24.1	62	68.1	48.1	26	96
	6	0	0	0	0	0	01	11.1	3.4	29	31.9	22.5	1	29	
Total		21	100.0	72.4	38	100.0	29.5	9	99.9	27.5	91	100.1	70.6	29	129
-60/-70	1	2	13.3	11.8	10	66.7	45.5	0	0	0	0	0	0	2	10
	3	13	86.7	76.5	5	33.3	29.4	2	100.0	11.8	7	100.0	31.8	15	12
Total		15	100.0	88.3	15	100.0	74.9	2	100.0	11.8	7	100.0	31.8	17	22
-70/-80	3	8	100.0	100.0	9	100.0	100.0	6	100.0	100.0	68	100.0	100.0	14	77
Total		8	100.0	100.0	9	100.0	100.0	6	100.0	100.0	68	100.0	100.0	14	77
-130/-140	3	2	13.3	11.8	10	66.7	45.5	0	0	0	0	0	0	2	10
	4	13	86.7	76.5	5	33.3	29.4	2	100.0	11.8	7	100.0	31.8	15	12
Total		15	100.0	88.3	15	100.0	74.9	2	100.0	11.8	7	100.0	31.8	17	22
-140/-150	3	38	33.6	28.6	24	22.9	4.0	8	40.0	6.0	42	16.6	13.7	46	106
	4	34	30.1	25.6	43	41.0	7.2	11	55.0	8.3	410	83.0	68.4	45	453
	5	23	20.4	17.3	12	11.4	2.0	1	5.0	0.8	2	0.4	0.0	24	14
	7	18	15.9	13.5	26	24.8	4.3	0	0	0	0	0	0	18	26
Total		113	100.0	85.0	105	100.1	17.5	20	100.0	15.1	494	100.0	82.1	133	599

TABLE 17 (continued)

Provenience			Fine-grained materials[a] (silicas, basalts, argillites)					Coarse-grained materials[a] (granites and basal*s)					Unit Total	
			% Total			% Total			% Total			% Total		
Level[b]	Unit[c]	No.	Unit[d] %	Level[e] %	Weight (gm)	Unit[f] %	Level[g] %	No.	Unit[d] %	Level[e] %	Weight (gm)	Unit[f] %	Level[g] %	No.	Weight (gm)
-150/-160	3	10	27.8	20.8	14	24.1	3.5	1	8.3	2.1	13	3.8	3.2	11	27
	4	4	11.1	8.3	7	16.9	2.2	9	75.0	18.8	311	89.9	77.1	13	320
	5	8	22.2	16.7	20	34.5	5.0	0	0	0	0	0	0	8	20
	6	2	5.6	4.2	3	5.2	0.7	1	8.3	2.1	13	3.8	3.2	3	16
	7	12	33.3	25.0	12	20.7	3.0	1	8.8	2.1	9	2.6	2.2	13	21
Total		36	100.	75.0	56	100.0	14.9	12	99.9	25.1	346	100.1	85.6	48	404
-160/-170	3	8	25.0	22.9	10	25.6	12.5	0	0	0	0	0	0	8	10
	4	2	6.3	5.7	8	20.5	10.0	1	33.3	2.9	27	65.9	33.8	3	35
	5	1	3.1	2.9	5	12.8	6.3	0	0	0	0	0	0	1	5
	6	20	62.5	57.1	14	36.0	17.5	1	33.3	2.9	11	26.8	13.8	21	25
	7	1	3.1	2.9	2	5.1	2.5	1	33.3	2.9	3	7.3	3.8	2	5
Total		32	100.0	91.5	39	100.0	48.8	3	99.9	8.7	41	100.0	51.4	35	80
-170/-180	2	1	20.0	20.0	5	50.0	50.0	0	0	0	0	0	0	1	5
	6	1	80.0	80.0	5	50.0	50.0	0	0	0	0	0	0	4	5
Total		5	100.0	100.0	10	100.0	100.0	0	0	0	0	0	0	5	10
-180/-190	6	1	100.0	50.0	2	100.0	16.7	1	100.0	50.0	10	100.0	83.3	2	12
Total		1	100.0	50.0	2	100.0	16.7	1	100.0	50.0	10	100.0	83.3	2	12

*Residual lithic material resulting from tool manufacture.

[a] These are broad categories based loosely on Crabtree (1967), and separated mainly by grain-size. Essentially, the coarse-grain debitage falls into the same material category as that of all cobble tools contained in the North Fork Clearwater River assemblages.

[b] Level in relation to surface datum: "+" refers to elevation above surface datum, "0" refers to surface datum, "-" refers to elevation below surface datum.

[c] Unit of excavation (see text): S = surface collection (unit indeterminate); TP = (?) test excavation; TT = test trench.

[d] Percentage of total number of flakes from that level of the particular excavation unit.

[e] Percentage of total number of flakes found throughout the excavated portions of the site, at that particular level.

[f] Percentage of total weight of flakes from that level of the particular excavation unit.

[g] Percentages of total weight of flakes found throughout the excavated portions of the site, at that particular level.

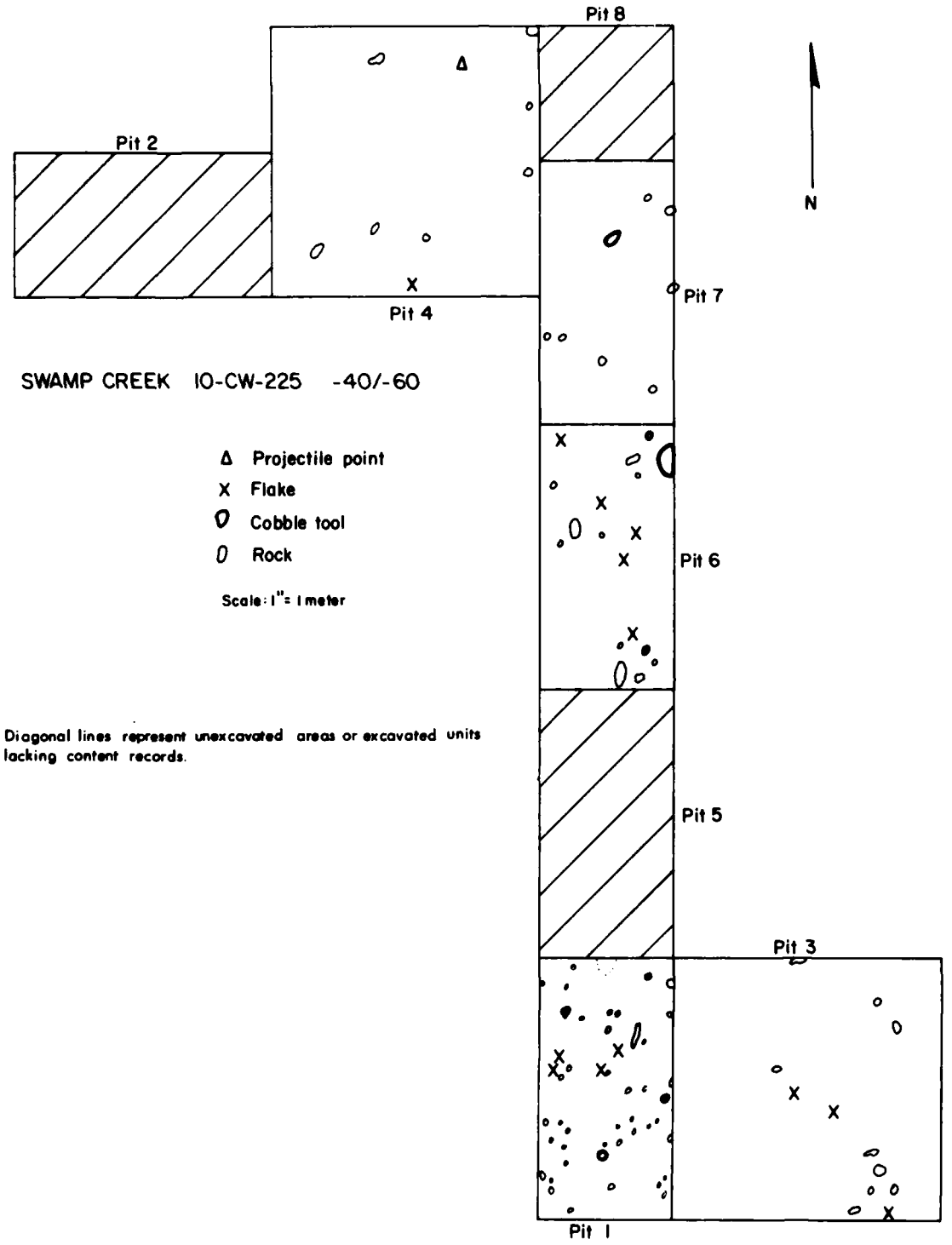


Fig. 44. Excavation plan, level 40-60 cm, 10-CW-225, Swamp Creek.

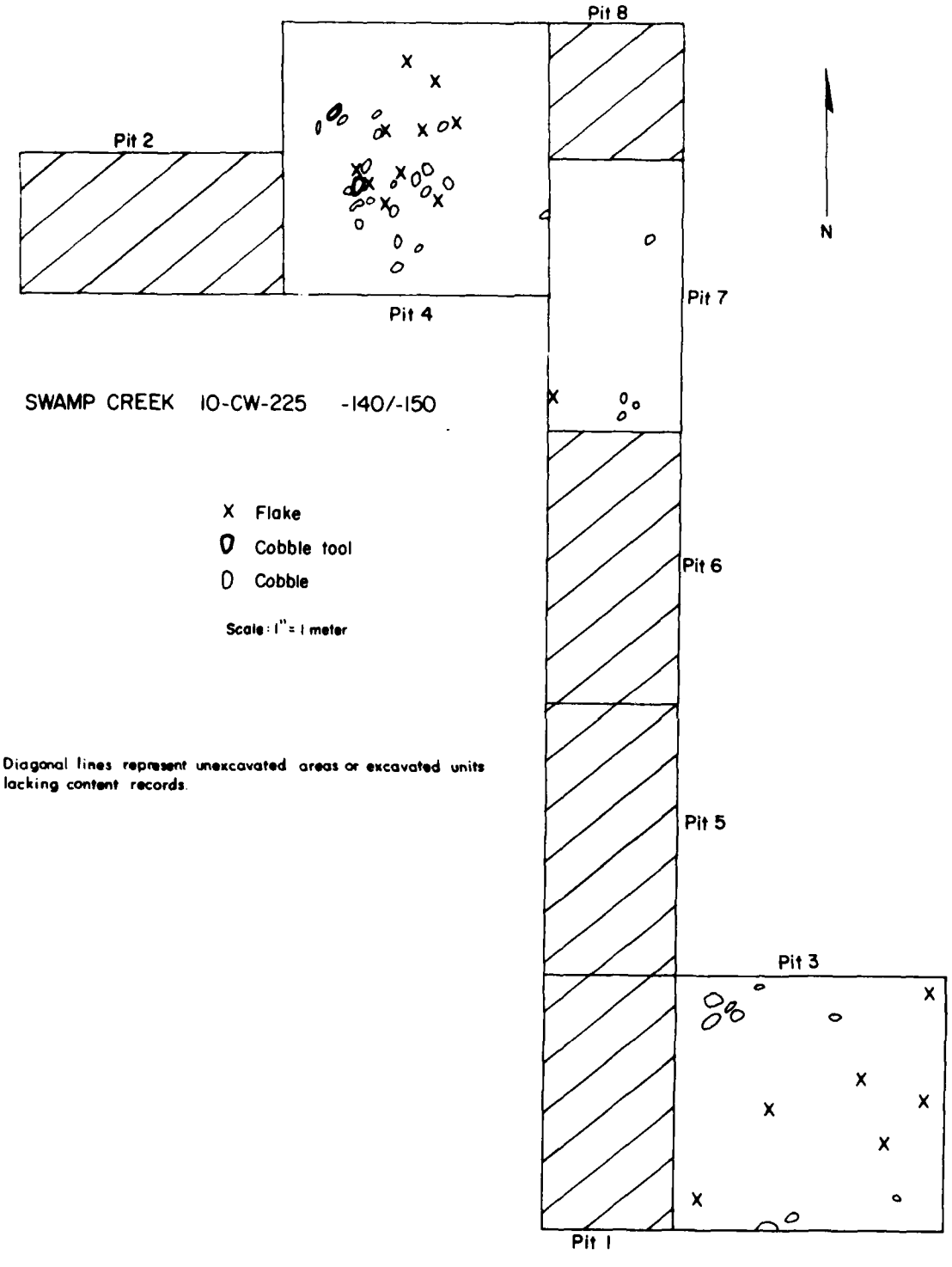
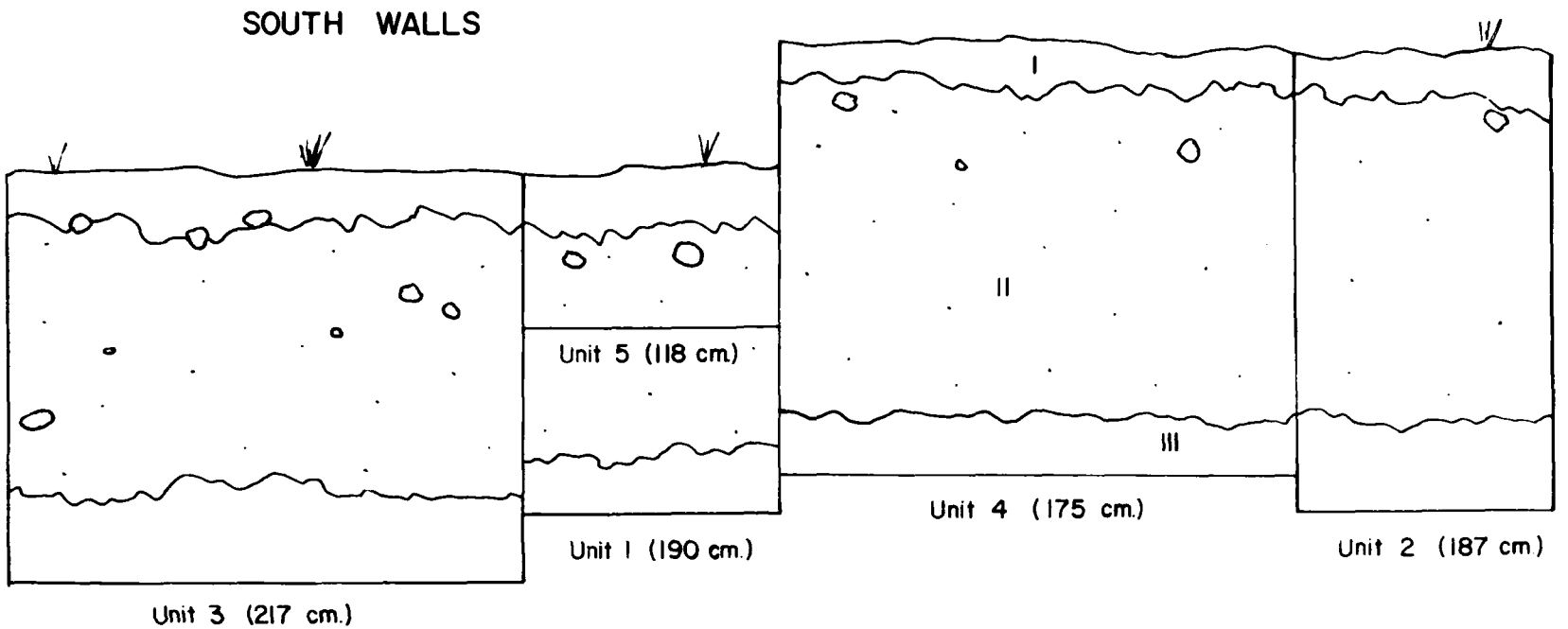


Fig. 45. Excavation plan, level 140-160 cm, 10-CW-225, Swamp Creek.



SOIL PROFILES
10 CW 225 SWAMP CREEK

KEY
I HUMIC SAND
II SAND
III CLAY
KROTOVENA

SCALE
0 1
Meters

*CENTIMETERS NEXT TO UNIT NUMBERS INDICATE DEPTH AT FLOOR SURFACE FROM DATUM ELEVATION

Fig. 46. Stratigraphic profile, 10-CW-225, Swamp Creek.

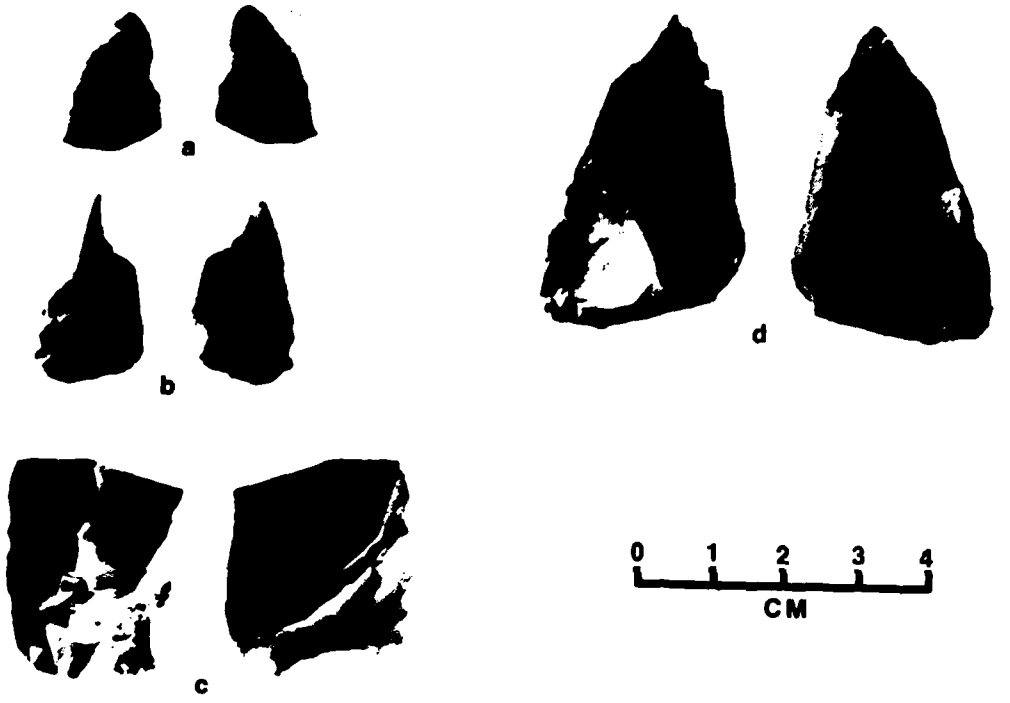


Fig. 47. Artifacts from 10-CW-225, Swamp Creek. *a*, 1609-2283; *b*, 1609-2304; *c*, 1609-2293; *d*, 1609-2282.

Fig. 48. View of 10-CW-225, Swamp Creek, and 10-CW-226, Upper Terrace; looking northwest.

the terrace edge, and slightly south of the first unit. The excavation was placed across an oblong circle of rocks, about 1.5 m (5 ft.) long. No other information exists from the excavation beyond the fact that the feature did not extend below the surface.

The site was revisited during the 1971 Idaho State University field season. At that time a surface survey located 15 beaked cobble tools in the vicinity of a dry spring channel on the terrace (Figs. 49, 50) (Corliss and Gallagher 1972:Fig. 156). Three 1 x 2 m units, oriented along a north-south line, were excavated on the terrace approximately 25 m (80 ft.) east of the terrace edge. A surface collection of the area located at least three projectile points: one lanceolate in shape, one large stemmed lanceolate point, and one large corner-notched point. These units were excavated in arbitrary 10 cm levels to a depth of 180 cm. Two beaked cobble tools were also found on the surface (Corliss and Gallagher 1972:48). A 20 cm dark brown soil overlaid unstratified yellowish brown fine sediments (Fig. 51) (Corliss and Gallagher 1972:48). The upper 30 cm levels appeared disturbed. A lanceolate projectile point of clear quartz was found at 10 cm below the surface. At 45 cm a fragment was found in association with a circular, smooth, flat cobble. Many cobble fragments were found in association with basalt debitage, at 50-60 cm below the surface. The present collection contains a few soil samples from this site. Another series of excavation units previously termed "10-CW-47: Campsite" were situated 40 m south and approximately 3 m (10 ft.) above the previous excavation (Fig. 52) (Corliss and Gallagher 1972:Map 6).

Four 2 x 2 m units were dug in arbitrary 20 cm levels to a depth of about 180 cm (71 in.). Sediments were similar to the previous excavation. The upper level produced much charcoal, cryptocrystalline and basalt debitage, and one flaked cobble tool.

At the 30-40 cm depth, many large basalt cobble flakes were found in association with charcoal, burnt wood, and fire-cracked rock. A charcoal sample from 40-50 cm (16 in.) level was dated at 1250±120 years BP (WSU 1305). A second sample from the same level 580±70 years BP (WSU 2413). The layer below this contained a large, stemmed lanceolate projectile point with an indented base (Table 18). Records from the 60-70 cm level report finding a sandstone shaft-abrader and a large finely worked uniface of black basalt (strat drawings). A large lanceolate projectile point with indented base was found in the next layer, associated with large cryptocrystalline and basalt debitage. The 80-100 cm level contained a few small cryptocrystalline and basalt flakes. Few written notes exist for the remainder of the excavation. At about 150 cm (60 in.), an edge-ground cobble was found along with a flaked cobble tool. Associated with these were many cobble flakes, all of black basalt (strat drawings). An adjoining 6 x 6 m area was excavated by bulldozer (Corliss and Gallagher 1972:Map 6). The collection contains an edge-ground cobble and a utilized flake from this operation. Several soil samples from these units are from the collection (Table 5).

Fig. 49. View of 10-CW-226, Upper Terrace.

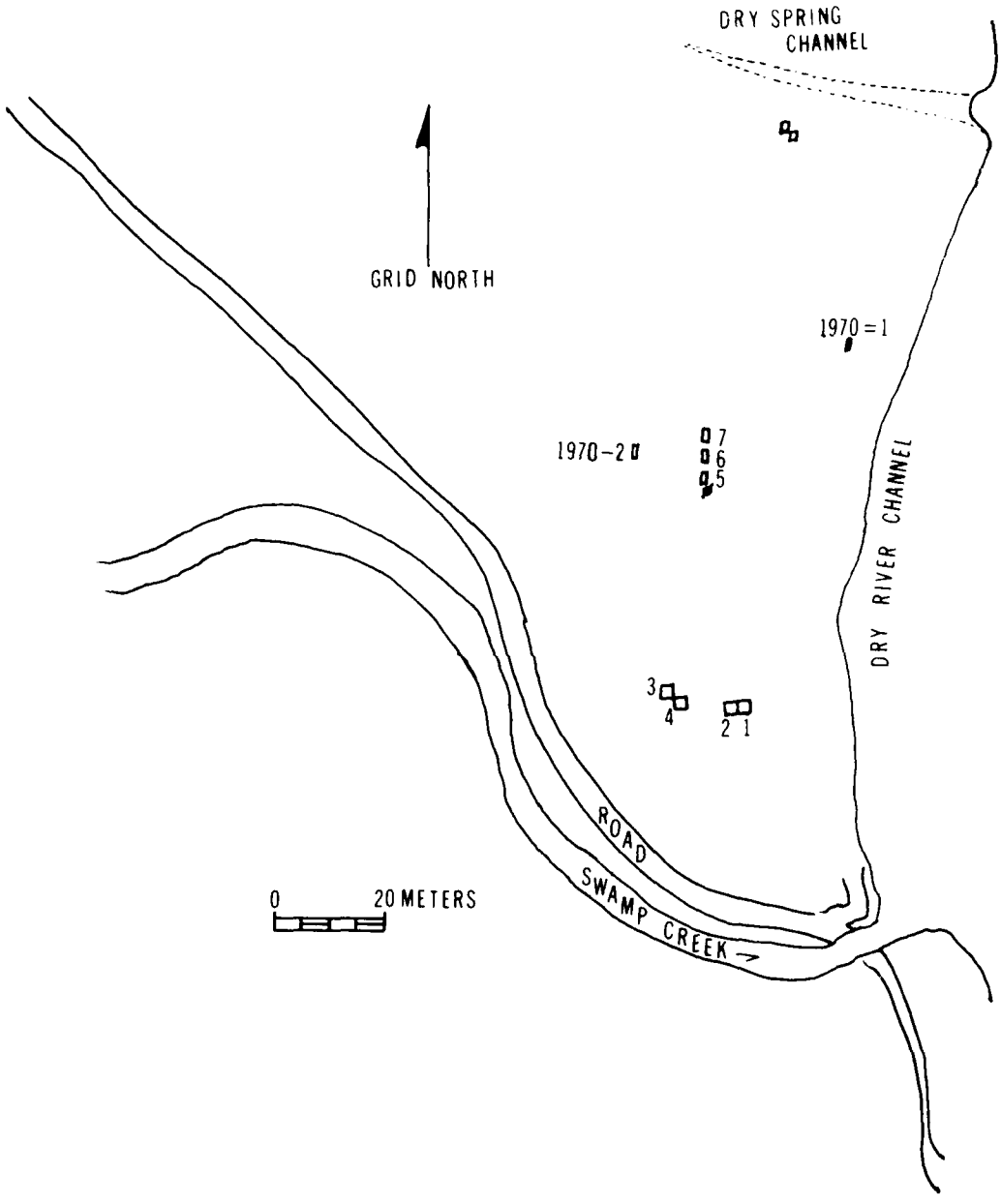


Fig. 50. Site plan, 10-CW-226, Upper Terrace.

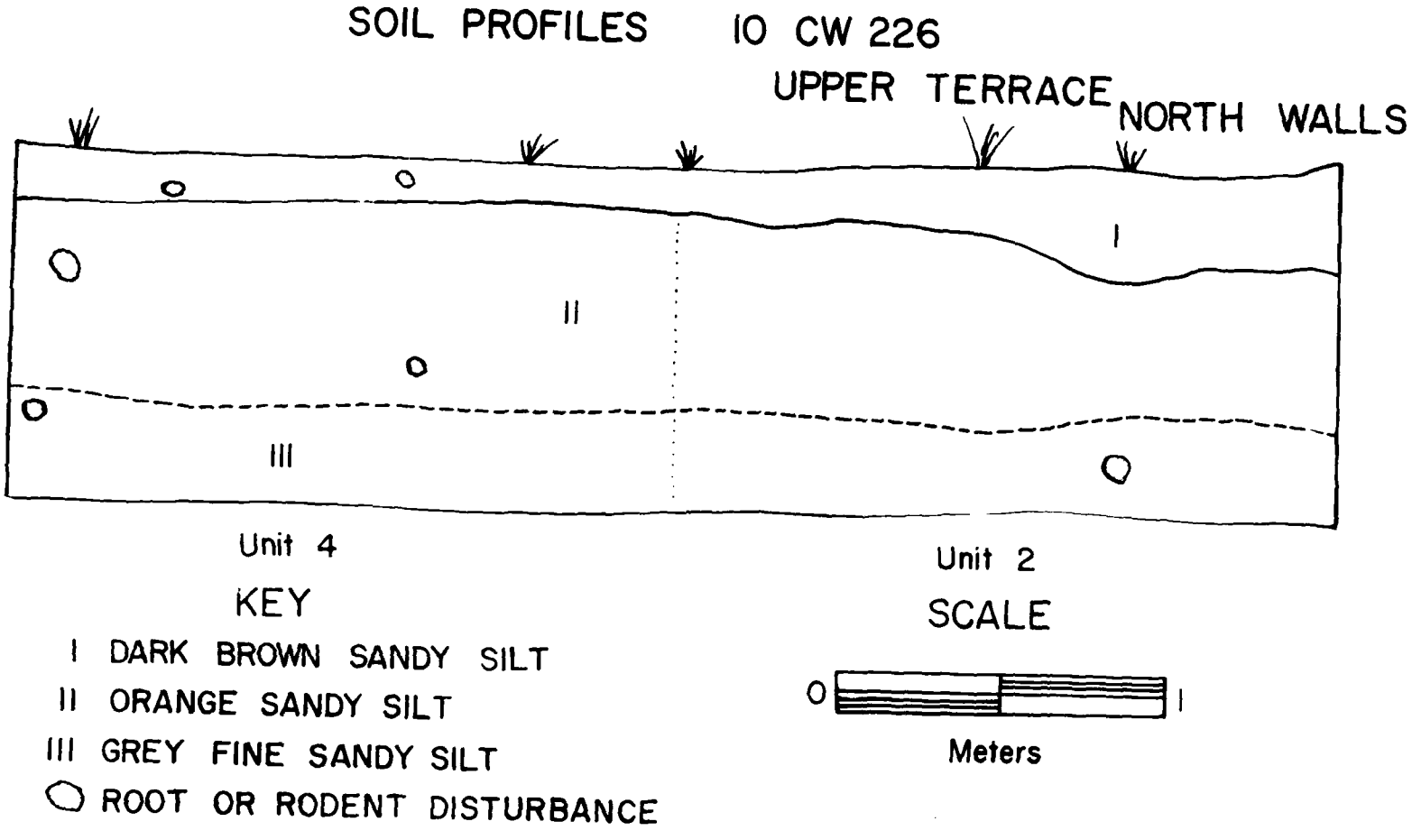


Fig. 51. Stratigraphic profile, 10-CW-2, Upper Terrace.

Fig. 52. View looking upriver from 10-CW-226, Upper Terrace toward sites 10-CW-45, Big Island (a), and 10-CW-19, Airstrip Terrace (b).

TABLE 18

Distribution of artifacts from 10-CW-266, Upper Terrace

Provenience		Artifact Class[c]	Catalogue[d] Number	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning[g] Evaluation		Edge shaping stage[g]	Illustration Number
Level[a]	Unit[b]									Dorsal	Ventral		
0- 20	1	Hist	2234	Rimfire cartridge	Metal	15	-	7	-	-	-	-	
	Indeter	Flk	0620	Unnotched triangular point	Chalcedony	26	22	4	4	8	8	7	54b
		Flk	0621	Lanceolate point w/basal notch	Chert	46	18	7	8	7	7	7	56b
		Flk	1038	Thick uniface, side and end-edged	Argillite	51	43	21	60	4	3	2	
		Flk	1388	Thin uniface, side-edged	Chert	12	7	3	2	6	6	6	
		Flk	1406	Side notched point w/o basal notch	Chert	29	16	4	3	8	8	7	54a
		Flk	1407	Side notched point w/o basal notch	Chert	18	19	5	3	8	8	7	54d
		Flk	1408	Thin biface, haft indeterminate	Basalt	54	30	10	20	7	3	2	53c
		Flk	1409	Unnotched stemmed point	Quartzite	74	20	8	15	7	7	7	56c
		Flk	1411	Corner notched point w/o basal notch	Quartzite	22	20	7	5	8	8	7	54h
		Flk	1412	Lanceolate point w/basal notch	Opalite	43	18	9	7	7	7	7	56e
20- 40	1	Nflk	2228	Grooved abrading stone	Granite	119	107	25	587	-	-	1	
		Flk	1381	Uniface, form indeterminate	Argillite	33	31	11	16	6	5	5	
	2	Flk	1386	Thick uniface, side and end-edged	Argillite	36	22	11	9	6	5	1	53a
		Flk	2232	Thin uniface, side-edged	Quartzite	22	16	7	4	6	3	2	
		Flk	2279	Used flake	Argillite	116	80	16	208	3	3	1	
	3	Flk	0519	Thin biface, haft indeterminate	Quartzite	14	14	4	2	8	8	7	
40- 60	1	Flk	1305	Basal notch stemmed point	Opalite	69	23	8	14	8	8	7	56d
	4	Flk	1304	Basal notch lanceolate point	Opalite	49	20	6	7	8	8	7	56a
60- 80	1	Flk	0180	Thick biface, minimum shaped	Basalt	87	48	39	240	4	4	4	
		Flk	0182	Thick biface, minimum shaped	Quartzite	78	73	40	298	4	4	6	
	2	Flk	0531	Lanceolate point w/o basal notch	Opalite	70	18	8	11	8	8	7	54g
		Flk	0533	Thin uniface, side-edged	Quartzite	33	19	4	4	6	3	2	
80-100	2	Flk	2235	Edged plate	Quartzite	57	85	16	83	3	3	1	
100-120	1	Flk	0201	Used flake	Basalt	135	112	18	312	5	3	2	
140-160	1	Flk	0181	Thick uniface, end-edged	Granite	127	126	43	837	2	4	2	
	6	Flk	1402	Thin biface, haft indeterminate	Quartzite	38	26	6	8	7	5	7	
		Flk	0177	Used flake	Opalite	27	18	4	3	6	3	1	
		Flk	0202	Thick uniface, side and end-edged	Basalt	103	72	27	289	2	5	2	
		Flk	0211	Beaked cobble tool	Granite	129	115	37	705	2	4	2	
		Flk	0295	Burin on biface	Chert	40	30	9	11	8	8	2	53e
		Flk	0522	Thick uniface	Argillite	123	70	23	306	2	4	2	
		Flk	0522	Used flake	Argillite	83	68	8	49	3	3	2	
		Flk	0528	Thin surface, side and end-edged	Quartzite	28	27	3	4	5	3	1	

TABLE 18 *continued*

Provenience		Artifact Class[f]	Catalogue[d] Number	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning[h] Evaulation		Edge shaping stage[i]	Illustration Number
Level[a]	Unit[b]									Dorsal	Ventral		
140-160	6	Flk	0532	Thin uniface, side-edged	Chalcedony	33	24	5	6	6	5	2	
		Flk	0537	Thick uniface, minimum edging	Argillite	70	35	13	34	5	5	2	
		Flk	0539	Thick uniface, side and end-edged	Basalt	74	35	15	49	6	3	3	53d
		Flk	0543	Thin uniface, side-edged	Quartzite	31	19	7	6	6	3	2	
		Flk	0546	Beaked cobble tool	Basalt	114	120	54	1002	2	4	2	
		Flk	0554	Thick uniface, end-edged	Granite	63	84	34	278	4	2	2	
		Flk	0558	Thick uniface, minimum edging	Basalt	124	81	30	408	4	4	2	
		Flk	0589	Unspecified biface	Granite	67	60	20	114	4	4	6	
		Flk	0592	Used core	Basalt	89	84	56	507	6	6	4	
		Flk	0594	Used flake	Basalt	117	75	20	216	3	3	1	
		Flk	0598	Thin uniface, side-edged	Opalite	24	22	3	3	6	5	2	
		Flk	0599	Thin uniface	Chert	12	8	2	2	5	3	2	
		Flk	0601	Thick uniface, side and end-edged	Basalt	111	79	38	365	2	5	2	
		Flk	0602	Thick uniface	Granite	79	69	41	300	4	2	2	
		Flk	0606	Corner notched and basal notched point	Chalcadony	7	14	4	2	8	8	7	
		Flk	0608	Thick uniface	Opalite	25	17	8	5	6	6	2	54e
		Flk	0609	Thick uniface, side-edged	Chert	40	42	17	27	4	3	2	
		Flk	0610	Thin uniface, side-edged	Chert	35	15	3	3	6	5	2	
		Flk	0614	Thick uniface, side and end-edged	Opalite	42	53	19	29	6	3	2	
		Flk	0615	Used flake	Chalcedony	11	20	2	3	6	3	1	
		Flk	0618	Thick uniface, side and end-edged	Granite	260	173	44	3175	2	4	2	
		Flk	0619	Thin biface, haft indeterminate	Chert	52	27	9	15	7	6	6	53b
		Flk	0623	Used flake	Basalt	33	31	11	8	6	3	2	
		Flk	0625	Thin uniface, side-edged	Quartzite	40	21	5	7	5	3	2	
		Flk	1085	Beaked cobble tool	Basalt	152	117	44	1257	2	4	2	
		Flk	1089	Beaked cobble tool	Granite	220	140	65	2100	2	4	2	
		Flk	1246	Beaked cobble tool	Basalt	244	127	58	2495	2	4	2	
		Flk	1292	Beaked cobble tool	Basalt	285	195	85	4824	2	4	2	
		Flk	1293	Beaked cobble tool	Basalt	205	115	78	1789	2	4	2	55d
		Flk	1294	Beaked cobble tool	Basalt	240	200	85	8970	2	4	2	55a, b
		Flk	1295	Beaked cobble tool	Basalt	135	99	58	933	2	4	2	
		Flk	1298	Beaked cobble tool	Basalt	225	115	61	3065	2	4	2	
		Flk	1299	Beaked cobble tool	Basalt	205	175	90	2724	2	4	2	
		Flk	1302	Beaked cobble tool	Basalt	240	130	63	2724	2	4	2	
		Flk	1303	Beaked cobble tool	Basalt	210	160	60	2724	2	4	2	
		Flk	1306	Lanceolate point w/o basal notch	Opalite	37	15	4	4	8	8	7	54c
		Flk	1307	Thick uniface, side and end-edged	Basalt	116	91	66	666	2	4	7	
		Flk	1312	Thick biface, minimum shaped	Opalite	54	40	18	34	6	5	6	
		Flk	1322	Used core	Basalt	110	52	34	240	4	5	1	
		Flk	1326	Thin biface, haft indeterminate	Quartzite	14	14	2	2	5	5	5	
		Flk	1335	Thick biface, haft indeterminate	Quartzite	108	71	26	192	6	6	6	

TABLE 18 *continued*

Provenience		Artifact Class[c]	Catalogue[d] Number	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning[h] Evaluation		Edge shaping stage[i]	Illustration Number
Level[a]	Unit[b]									Dorsal	Ventral		
140-160	6	Flk	1335	Thick biface	Basalt	131	130	70	1785	2	4	6	
		Flk	1382	Used flake	Basalt	59	49	18	69	2	3	0	
		Flk	1393	Used core	Basalt	185	64	45	827	1	5	0	
		Flk	1396	Thick uniface, side and end-edged	Granite	153	72	62	1372	2	4	2	
		Flk	1397	Burin on uniface	Granite	217	65	43	1124	1	1	1	
		Flk	1400	Burin on uniface	Granite	62	78	26	226	1	1	1	
		Flk	1401	Used core	Basalt	142	110	46	708	1	1	1	
		Flk	1410	Thick uniface, side and end-edged	Opalite	36	33	13	13	6	3	2	
		Flk	1413	Corner notched point w/o basal notch	Chert	56	20	7	8	9	9	2	54f
		Flk	1415	Thin uniface, minimum edging	Basalt	80	74	17	106	3	5	2	
		Flk	2368	Used flake	Basalt	126	120	26	333	2	4	2	
		Hist	1308	Munition cartridge, indeterminate	Metal	64	-	13	-	-	-	-	
		Hist	1389	Table knife	Glass	15	14	3	-	-	-	-	
		Nflk	0521	Grooved abrading stone	Sandstone	22	27	7	6	-	-	1	
		Nflk	0593	Hammerstone, unworked	Granite	148	107	52	1319	-	-	1	
		Nflk	0628	Hammerstone, unworked	Granite	73	64	42	366	-	-	1	
		Nflk	0630	Indeterminate	Granite	123	114	28	672	-	-	1	
		Nflk	0631	Polished stone	Granite	122	89	35	697	-	-	1	
		Nflk	1291	Polished stone	Granite	153	96	40	973	-	-	1	
		Nflk	1336	Notched maul	Granite	246	114	59	2307	-	-	1	
		Nflk	1336	Pallet w/o raised border	Quartzite	48	41	29	75	-	-	1	
		Nflk	1392	Unspecified pounding stone	Granite	193	95	78	2284	-	-	1	
		Nflk	1398	Grooved axe	Granite	130	59	59	798	-	-	1	
		Nflk	1399	Indeterminate	Granite	132	119	28	800	-	-	1	
		Nflk	1414	Polished stone	Granite	149	75	35	673	-	-	1	

[a] Depth, in centimeters, below surface.

[b] Unit of excavation (see text).

[c] Either lithic (flaked or non-flaked) or historic materials.

[d] Based on the original Idaho State University accessioning system, all numbers are preceded by the project code "1609."

[e] Morpho-used form names of lithic artifacts are bases more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

[f] Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g] Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h] 0 = indeterminate; 1 = unthinned core/nodule; 2 = unthinned flake with cortex; 3 = unthinned flake without cortex; 4 = preliminary thinned piece with cortex; 5 = preliminary thinned piece without cortex; 6 = primarily thinned piece, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shapped piece with significant edge regularity but not highly stylized shaped piece.

[i] 0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges; 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges; 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

A final excavation area of the site consisted of two 2 x 2 m units dug into an approximately 8 m (25 ft.) diameter circular depression. This feature was located immediately south of the dry spring channel mentioned previously. The units were excavated to about 70 cm, but were sterile for cultural material, with the exception of a charred wood plank which laid horizontally across the pit at about 20-30 cm depth.

The present site assemblage contains many more lithic artifacts with no provenience information. Included are many flaked cobble implements, edge-ground and edge-abraded cobbles, pestles, several Levallois-like cores, a shaped hammerstone, and an incised circular flat cobble (Figs. 53-56). The lithic material from the site seems to correspond with Windust and Cascade phase assemblages. The disturbance of terrace surface appears extreme, as Windust materials seem to be found on the surface as well as in the deepest levels of occupation.

The concentration of beaked cobble tools found at the surface of the dry spring channel represents the largest known concentration of the tool form in the North Fork drainage.

10-CW-45, Big Island

This approximately 18 acre (7 ha) low flat was the largest island in the river. The site is located 43 km (27 mi.) from the mouth of the North Fork (Fig. 42). Most of the island stands approximately 3 m (10 ft.) above the river level and is separated from the eastern shoreline by a dry stream channel. A road extended across the north end of the channel, connecting the island with the eastern shore. The island was divided by a narrow stream channel (Fig. 57) (Corliss and Gallagher 1972:27). Osmundson and Hulse (1962:9) reported that the Nez Perce called the area "Badger Island" due to the large number of those animals inhabitating the place. In 1970, Idaho State University personnel reported the site had been the location of Potlatch logging camps. They also reported that the surface of the island had been greatly disturbed. Two parallel rows of cobbles, spaced about 6 m (20 ft.) apart, dissected the dry stream channel. Numerous cobble tools were eroding from various cutbank locations. A 1 x 2 unit was excavated into the main river channel cutbank at the northern end of the island. This excavation exposed micaceous sands. A circular area of fire-cracked rock and charcoal in association with a flaked cobble tool was found at 18 cm below the surface. The circular charcoal area continued, decreasing somewhat in diameter to a depth of at least 72 cm, the extent of the excavation depth. Three flaked cobble tools were found in a group at 52 cm depth (Fig. 58). Several small, round stones at 42 cm depth, and a worked cryptocrystalline flake at 72 cm below the surface, were also found in this feature (Fig. 58).

The collection presently contains no cultural materials from the site. A few soil samples from the excavation are present (Table 5).

Fig. 53. Artifacts from 10-CW-22[illegible], Upper Terrace. *a*, 1609-1386; *b*, 1609-619; *c*, 1609-1408; *d*, 1609-539; *e*, 1609-[illegible]; *f*, 1609-1402.

Fig. 54. Artifacts from 10-CW-226, Upper Terrace. *a*, 1609-1406; *b*, 1609-620; *c*, 1609-1306; *d*, 1609-1407; *e*, 1609-608; *f*, 1609-1413; *g*, 1609-531; *h*, 1609-1411.

Fig. 55. Unifaced peripherally-flaked cobble artifacts from 10-CW-226, Upper Terrace. *a*, 1609-1294; *b*, 1609-1294; *c*, 1609-226; *d*, 1609-1293.

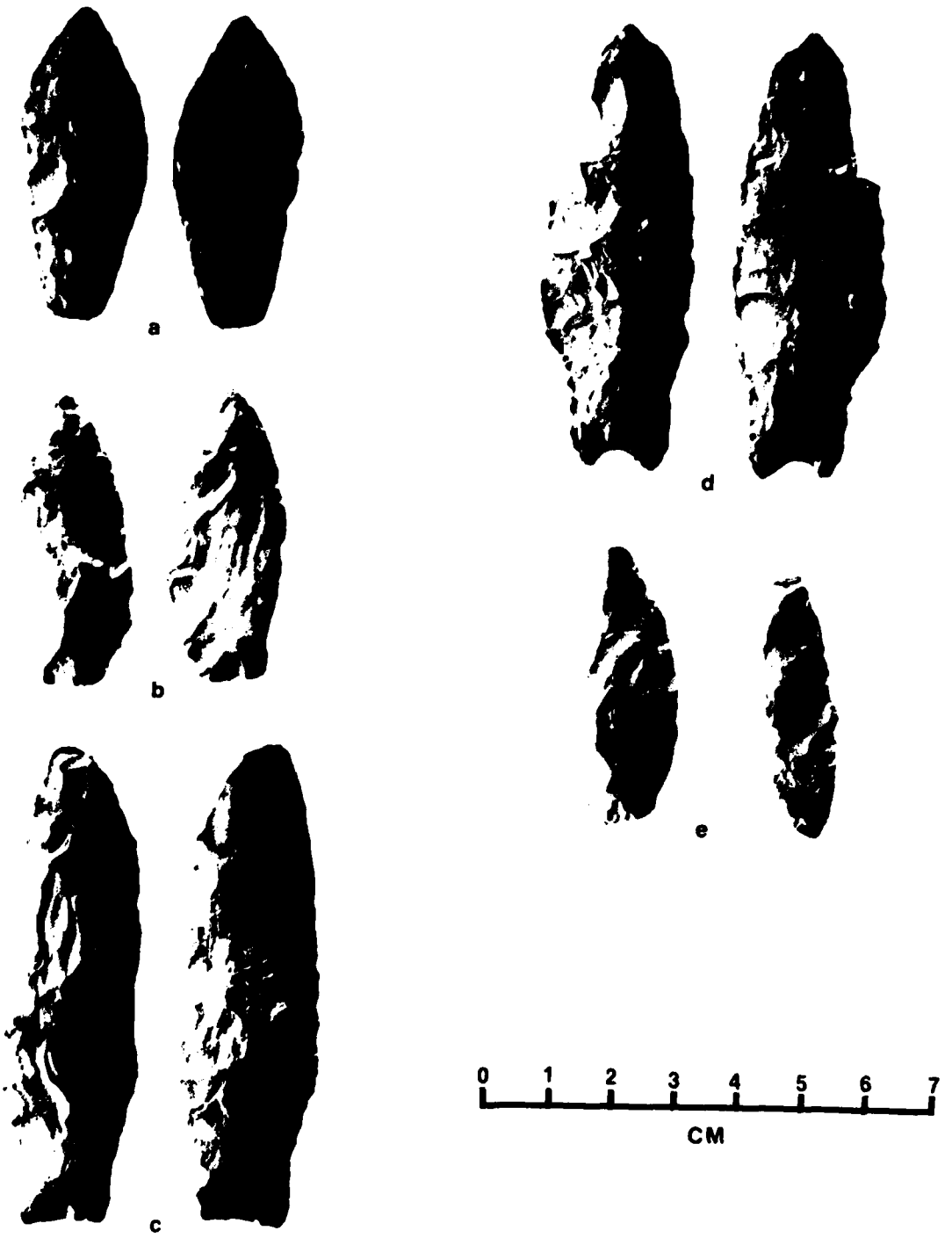


Fig. 56. Artifacts from 10-CW-226, Upper Terrace. Similar to those associated with Windust Phase materials in the Lower Snake River region. *a*, 1609-1304; *b*, 1609-621; *c*, 1609-1409; *d*, 1609-1305; *e*, 1609-1412.

Fig. 57. View of 10-CW-45, Big Island, looking north.

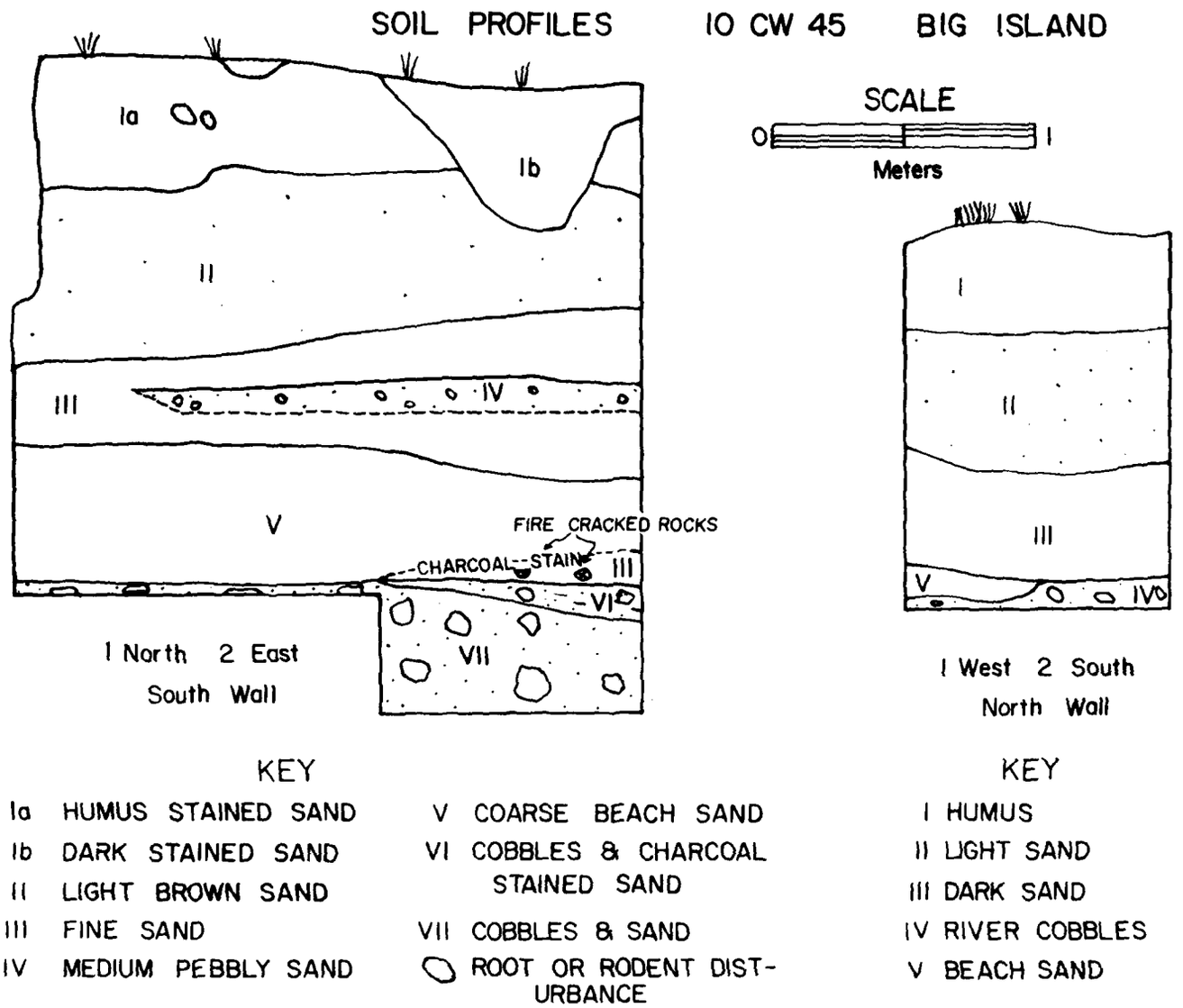


Fig. 58. Stratigraphic profile, 10-CW-45, Big Island.

10-CW-19, Airstrip Terrace

This large, low terrace is located approximately 43 km (27 mi.) upriver from the mouth of the North Fork (Fig. 42, 59). Osmundson and Hulse (1962:9) report amateur collectors finding artifacts during construction of an airstrip on the terrace. An abandoned logging camp was located on the terrace at the time Osmundson and Hulse recorded the site in 1961. In 1970, Idaho State University personnel revisited the site and found flaked cobble artifacts eroding out of the cutbank at the south end of the terrace. In 1971 Idaho State University crews again surveyed the site and reported much cryptocrystalline debitage and many cobble tools found over the entire surface of the terrace. Along the beach below the terrace a number of pestles (Table 19) flaked cobble artifacts, and grooved "netweights" were found. A test excavation was dug into the cutbank at the southern end of the terrace, exposing a "small living surface" (Corliss and Gallagher 1972:54). The present assemblage from the site includes five pestles, the largest concentration found at any location along the North Fork. (Also, five other elongated cobble "grinding" tools, several cobble "beaked" artifacts, two grooved, round "netweights", two Levallois-like basalt cores, and two corner-notched cryptocrystalline projectile points Fig. 60, 61) were found.

10-CW-46, Bishop Creek

This high terrace site is located 44 km (27.5 mi.) upstream from the mouth of the North Fork, and approximately 0.8 km (0.5 mi.) upstream of 10-CW-226 (Fig. 42). The area was surveyed in 1970 by Idaho State University personnel who reported finding lithic tools eroding from the terrace cutbank at the mouth of Bishop Creek. An oval biface tool of white quartz was found, along with a worked cryptocrystalline flake, and charcoal, fire-cracked rock, and some debitage were located downstream of Bishop Creek. Cultural material was also found eroding from the terrace cutbank, about 30 m (100 ft.) upstream of a spring channel located about 185 m (600 ft.). Alongside this spring were a house and several outbuildings.

In the beach below the cutbank, an obsidian lanceolate projectile point was found, along with the small corner-notched and side-notched points (Table 20). Other surface artifacts reported from the beach are bifacially flaked cobble tools and large side-notched projectile points (Corliss and Gallagher 1972:53). A 1 x 2 m unit was excavated into the cutbank. The fine sediments were exposed in this excavation to a depth of 140 cm (55 in.). Below this a 30 cm layer of hard-packed clay was encountered. The excavation ceased at 170 cm below the surface, at which point a layer of grey sediment was exposed (Fig. 62). The entire unit was sterile of any cultural materials.

A second 1 x 2 m unit was excavated alongside a dry spring channel, approximately 20 m back from the terrace edge. No information is available on this excavation with the exception of a charcoal sample from 40 cm below the surface which was radiocarbon dated at 2120±165 years BP (WSU 1278). The present site assemblage contains many lithic artifacts which

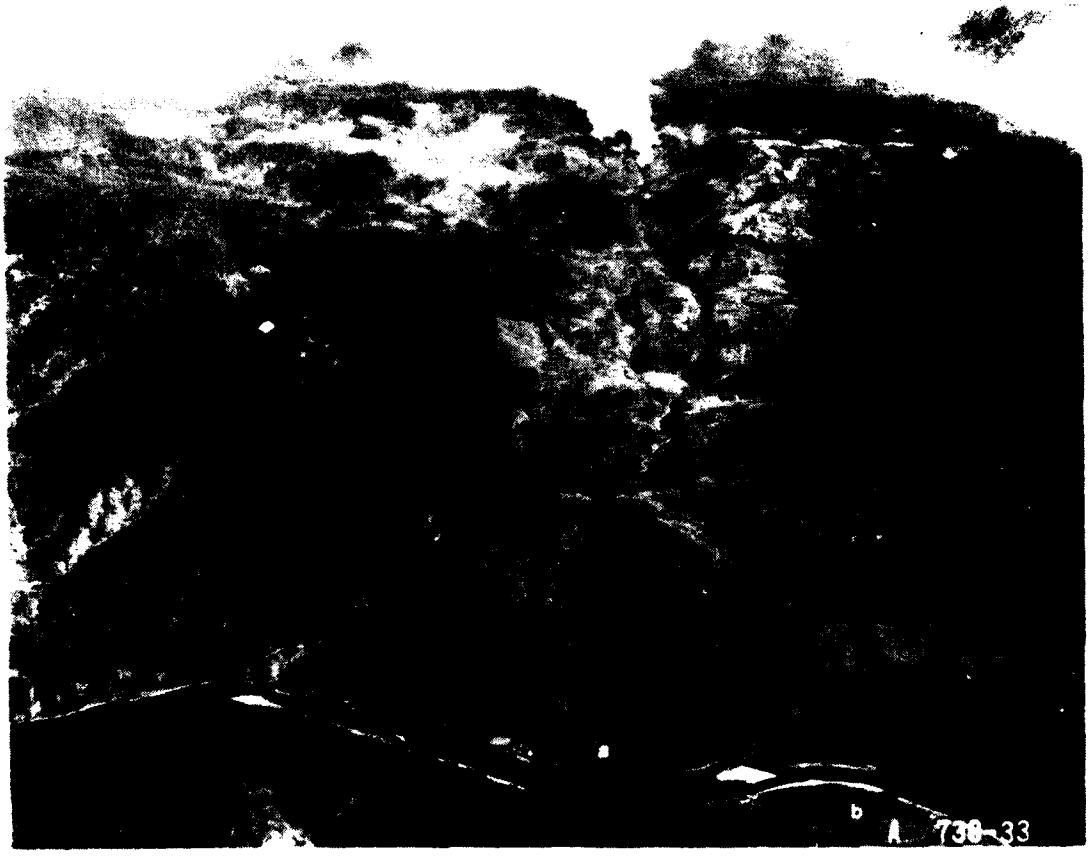


Fig. 59. View of 10-CW-19, Airstrip Terrace, *a*; Big Island, *b*, surrounding upland area, looking east.

TABLE 19

Distribution of artifacts from 10-CW-19, Airstrip Terrace

Provenience		Artifact Class[c]	Catalogue[d] Number	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning[h] Evaluation		Edge shaping stage[i]	Illustration Number
Level[a]	Unit[b]									Dorsal	Ventral		
0-20	1	Flk	0217	Thin uniface, minimum edging	Chalcedony	28	29	3	1	6	3	2	60a
	2	Hist	2224	Container closure	Metal	-	28	8	-	-	-	-	
	Indeter	Flk	2221	Thin biface, haft indeterminate	Opalite	27	12	3	1	8	8	7	60b
		Flk	1297	Beaked cobble tool	Basalt	180	194	110	4082	2	4	2	61b
		Flk	2220	*Thin uniface, side-edged*	*Opalite*	23	15	4	1	6	3	2	60c
Indeterminate		Flk	1301	Beaked cobble tool	Granite	160	110	72	1672	2	4	2	
		Flk	1323	Indeterminate	Argillite	94	54	40	221	1	1	1	
		Flk	1324	Corner notched point	Opalite	17	19	5	1	8	8	6	
		Flk	1325	Basal notched stem point	Chert	18	20	4	1	8	8	7	
		Flk	1338	Indeterminate	Basalt	111	71	43	354	1	1	1	
		Flk	1340	Beaked cobble tool	Basalt	109	78	50	379	2	4	2	
		Flk	1341	Thick, uniface, minimum edging	Basalt	117	69	40	434	2	5	2	
		Flk	1348	Thin uniface, minimum edging	Argillite	90	64	11	78	4	5	6	
		Flk	1350	Graver on thin uniface	Opalite	53	30	6	1	4	5	4	61a
		Flk	2367	Beaked cobble tool	Basalt	285	185	131	4763	2	4	2	
		Nflk	0970	Unshaped mano	Granite	128	48	28	306	-	-	1	
		Nflk	1331	Unspecified pounding stone	Granite	206	90	60	2135	-	-	1	
		Nflk	1332	Unspecified pounding stone	Granite	160	35	27	273	-	-	1	
		Nflk	1333	Hammerstone, unworked	Granite	185	54	36	565	-	-	1	
		Nflk	1334	Unspecified pounding stone	Basalt	215	69	60	1220	-	-	1	
		Nflk	1342	Hammerstone, indeterminate	Granite	199	87	84	1916	-	-	1	
		Nflk	1343	Hammerstone, indeterminate	Granite	205	120	50	2161	-	-	1	
		Nflk	1346	Netweight	Granite	179	150	140	4876	-	-	1	
		Nflk	1353	Netweight	Granite	71	58	58	304	-	-	1	
		Nflk	1354	Hammerstone, unworked	Granite	230	77	50	2008	-	-	1	
		Nflk	1355	Hammerstone, unworked	Granite	274	70	52	1874	-	-	1	
		Nflk	1361	Unspecified pounding stone	Basalt	217	102	78	1994	-	-	1	
		Nflk	1390	Unshaped mano	Granite	150	60	60	913	-	-	1	

[a] Depth, in centimeters, below surface.

[b] Unit of excavation (see text).

[c] Either lithic (flaked or non-flaked) or historic materials.

[d] Based on the original Idaho State University accessioning system, all numbers are preceded by the project code "1609".

[e] Morpho-use form names of lithic artifacts are based more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

TABLE 19 *continued*

[f] Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g] Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h] 0 = indeterminate; 1 = unthinned core/nodule; 2 = unthinned flake with cortex; 3 = unthinned flake without cortex; 4 = preliminarily thinned piece with cortex; 5 = preliminarily thinned piece without cortex; 6 = primarily thinned piece, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shaped piece with significant edge regularity but not highly stylized shaped piece.

[i] 0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges; 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges; 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

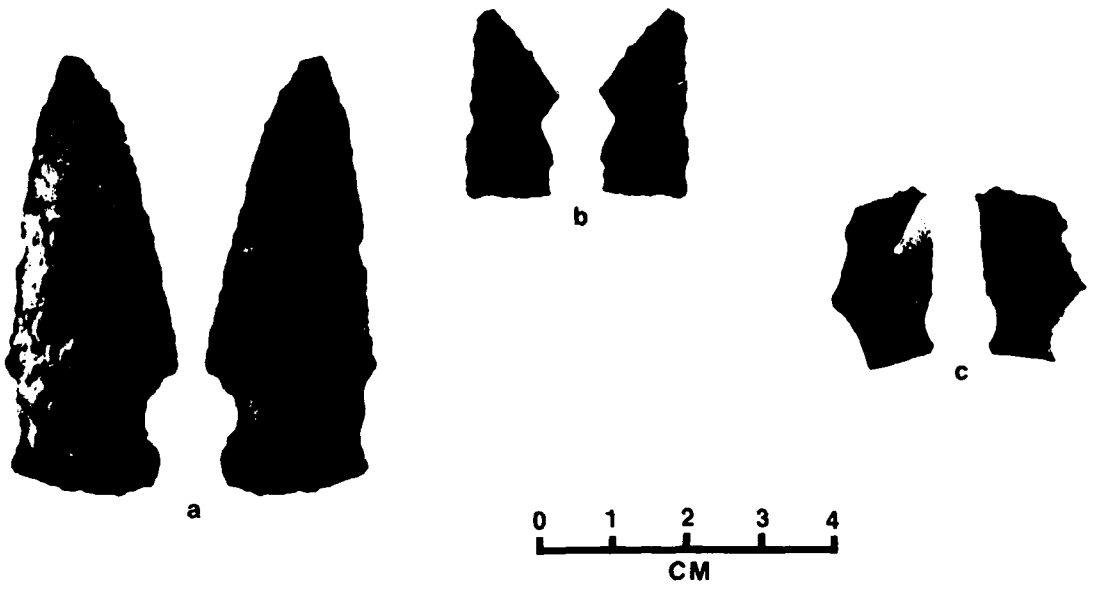


Fig. 60. Artifacts from 10-CW-19 Airstrip Terrace. *a*, 1609-217; *b*, 1609-2221; *c*, 1609-2220.

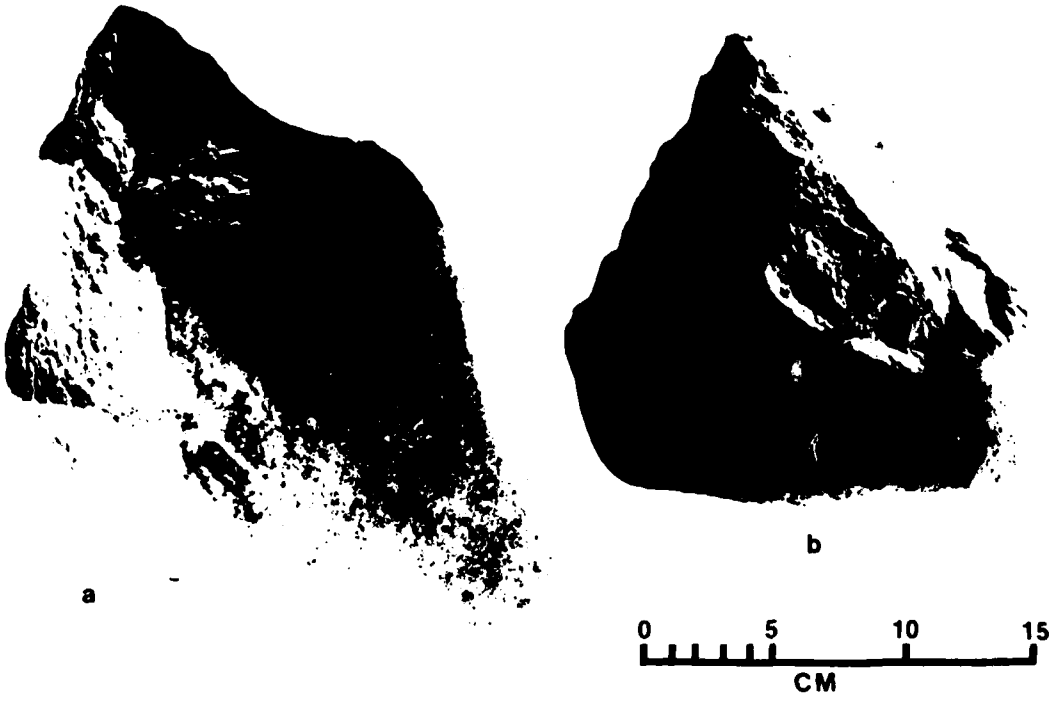


Fig. 61. Unifacially peripherally-flaked cobble artifacts from 10-CW-19, Airstrip Terrace. *a*, 1609-2307; *b*, 1609-1297.

TABLE 20

Distribution of artifacts from 10-CW-46, Bishop Creek

Provenience		Artifact Class[c]	Catalogue Number[d]	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning[h] Evaluation		Edge shaping stage[i]	Illustration Number
Level[a]	Unit[b]									Dorsal	Ventral		
Indeterminate		Flk	0191	Thin uniface, minimum-edging	Chert	47	32	11	18	5	3	2	
		Flk	0192	Thin uniface, side and end-edged	Chert	34	26	5	3	7	3	2	
		Flk	0193	Thin uniface, side and end-edged	Opalite	19	17	8	1	8	3	2	
		Flk	0194	Thin biface, haft indeterminate	Obsidian	21	18	4	1	8	8	6	63b
		Flk	0195	Side notched point w/o basal notch	Chert	22	15	4	1	8	8	7	63a
		Flk	0196	Thin biface, haft indeterminate	Basalt	22	14	4	1	8	8	6	
		Flk	0210	Beaked cobble tool	Granite	162	27	44	982	2	4	2	
		Flk	0626	Lance, point w/o basal notch	Opalite	15	16	3	1	8	8	6	
		Flk	1329	Thick uniface	Opalite	115	88	44	458	3	5	2	
		Flk	1404	Lanceolate point w/o basal notch	Opalite	29	13	6	1	8	8	7	63c
		Flk	1416	Unnotched stemmed point	Metamorphic	42	20	6	4	8	8	7	64c
		Flk	1417	Thin uniface, side-edged	Quartzite	56	27	9	14	5	5	2	
		Flk	1418	Lanceolate point w/ basal notch	Chalcedony	48	17	8	3	8	8	7	63g
		Flk	1419	Unspecified biface	Chalcedony	19	22	5	1	0	8	6	
		Flk	1420	Thin uniface, side and end-edged	Opalite	25	18	6	1	8	3	3	
		Flk	1421	Lanceolate point	Chalcedony	30	12	5	1	8	8	7	63f
		Flk	1422	Thin uniface, side and end-edged	Quartzite	32	19	7	2	8	8	3	63e
		Flk	1423	Thin biface, haft indeterminate	Chert	37	20	7	4	8	8	3	64d
		Flk	1424	Basal notch lanceolate point	Chalcedony	31	18	5	1	8	8	7	64b
		Flk	1425	Corner notched w/o basal notch	Opalite	23	15	6	1	8	8	7	
		Flk	1427	Thin uniface, side and end-edged	Chert	21	20	5	1	4	5	0	
		Flk	1428	Side notched and basal notched point	Chert	44	20	6	2	9	9	0	64a
		Flk	2218	Thin uniface	Opalite	19	21	4	1	5	3	2	
		Flk	2219	Thin uniface	Chert	25	22	8	2	6	5	2	
		Flk	0540	Thin biface, haft indeterminate	Metamorphic	31	16	9	3	4	7	6	
		Flk	0203	Unspecified biface	Quartzite	57	49	20	65	7	7	6	63d
		Flk	0204	Thin uniface, side and end-edged	Opalite	21	11	3	1	8	3	2	
		Flk	0206	Beaked cobble tool	Basalt	163	127	54	1440	2	4	2	
		Flk	1347	Thick biface, minimal-shaped	Argillite	62	43	15	61	6	6	6	
		Flk	1391	Thin biface, haft indeterminate	Obsidian	28	21	16	2	8	8	6	
		Flk	1426	Thin biface, haft indeterminate	Opalite	28	20	9	2	8	8	6	

[a] Depth, in centimeters, below surface.

[b] Unit of excavation (see text).

[c] Either lithic (flaked or non-flaked) or historic materials.

[d] Based on the original Idaho State University accessioning system, all numbers are preceded by the project code "1609".

TABLE 20 *continued*

[e] Morpho-use form names of lithic artifacts are based more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

[f] Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g] Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h] 0 = indeterminate; 1 = unthinned core/nodule; 2 = unthinned flake with cortex; 3 = unthinned flake without cortex; 4 = preliminarily thinned piece with cortex; 5 = preliminarily thinned piece without cortex; 6 = primarily thinned piece, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shaped piece with significant edge regularity but not highly stylized shaped piece.

[i] 0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges; 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges. 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

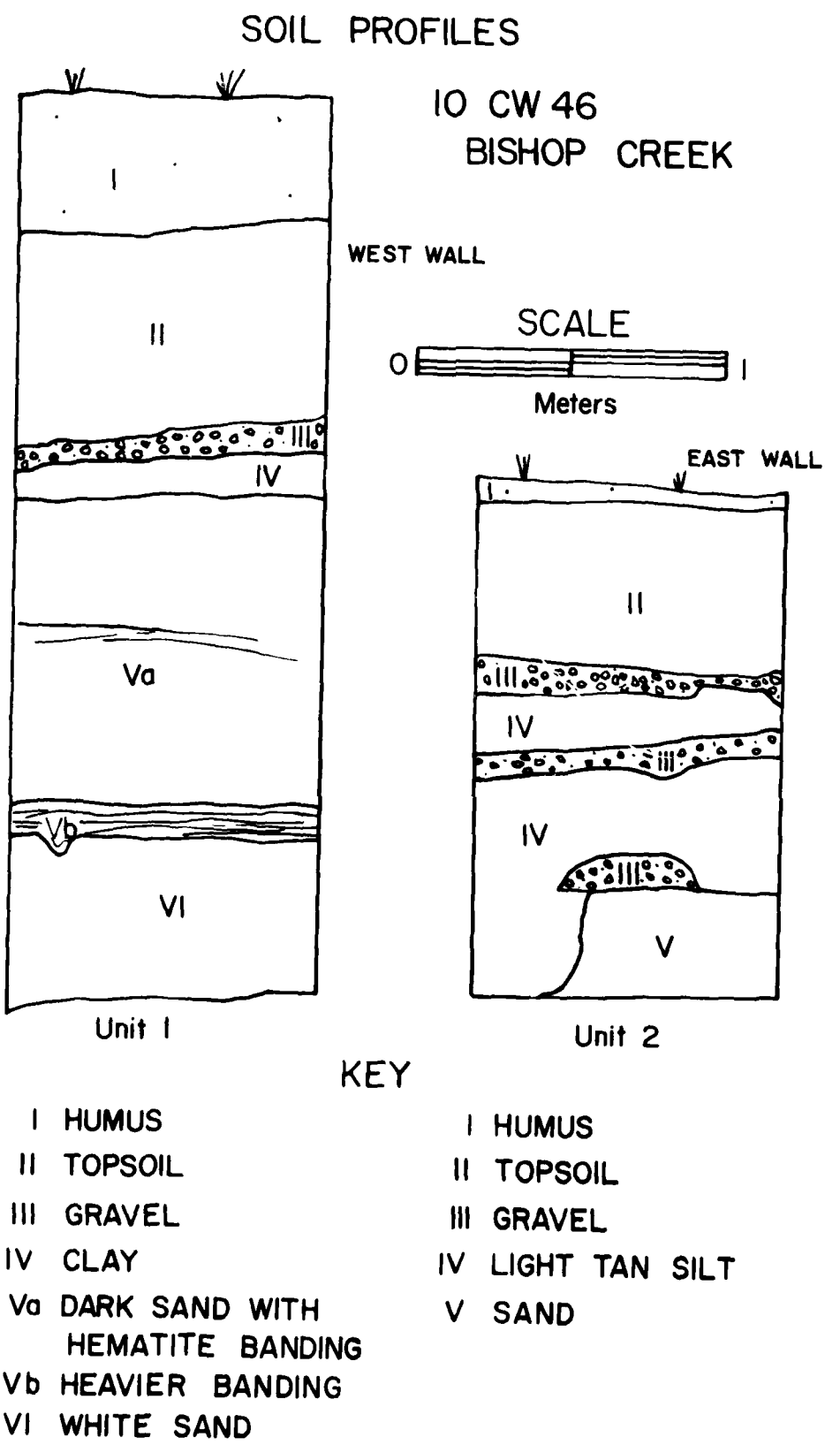


Fig. 62. Stratigraphic profile, 10-CW-46, Bishop Creek.

lack provenience information, including two beaked cobble tools, two obsidian lanceolate projectile points (one of which shows much tumble wear), a large side-notched projectile point with indented base, a large cryptocrystalline knife fragment, and many cryptocrystalline bifaces and unifaces (Table 20; Figs. 63, 64).

The artifacts from the site are similar in form to Cascade and Tucannon Phase material. No artifacts were found in situ.

10-CW-293, High Flat Site

This is another homestead site, located 44 km (27.5 mi.) upriver of the mouth of the North Fork (Fig. 42). The site is situated above a campground along an intermittent drainage. Sappington and Pfeiffer recorded the site in 1976. The site feature consisted of the remains of a building, a barn, and an outhouse. The structures are located on the northeast edge of a large meadow. The building had been burned to the ground and only its outline could be seen, along with the rock piers on which it rested. The size of the structure was estimated at 13.20 m (43.3 ft.) by 11.90 m (394 ft.). Artifacts found with the structural area included a variety of wire nails, bridge spikes, a horseshoe, a metal wheel rim, and a broken rake or harrow tooth. Associated with the feature was a pile of flat pickets sharpened at one end, the remains of a 1930s automobile, and the bed of a wagon.

The barn, located about 50 m east of the former structure, was still partially standing although it is on the verge of collapsing. The barn measured about 5.5 m (184 ft.) square. The walls are constructed of logs, and the roof is cedar shakes overlaying pole purlins. Artifacts found in and around the structure include numerous metal cans, an iron bed frame, and a cross-cut saw blade. The outhouse is a pole-framed structure covered with milled lumber, with a cedar shake roof. It is a "one seater."

Local informants interviewed by the University of Idaho referred to the site as the Bruce Lipscomb or more commonly the Viah Dodge homestead (Knudson, Sappington, and Pfeiffer 1977:6).

10-CW-48, Mile 29 Site

This site is approximately 46 km (29 mi.) upriver from the mouth of the North Fork, located on a high terrace (Fig. 65). Idaho State University personnel surveyed the area in 1970 and recorded finding cobble tools on the terrace (Swanson and Corliss 1971:11).

10-CW-49, Mile 30 Site

This area is approximately 48 km (30 mi.) upriver of the mouth of the North Fork (Fig. 65). The site is located on a low terrace. Idaho State University personnel surveyed the area in 1970 and recorded finding cobble tools on the terrace (Swanson and Corliss 1971:11).

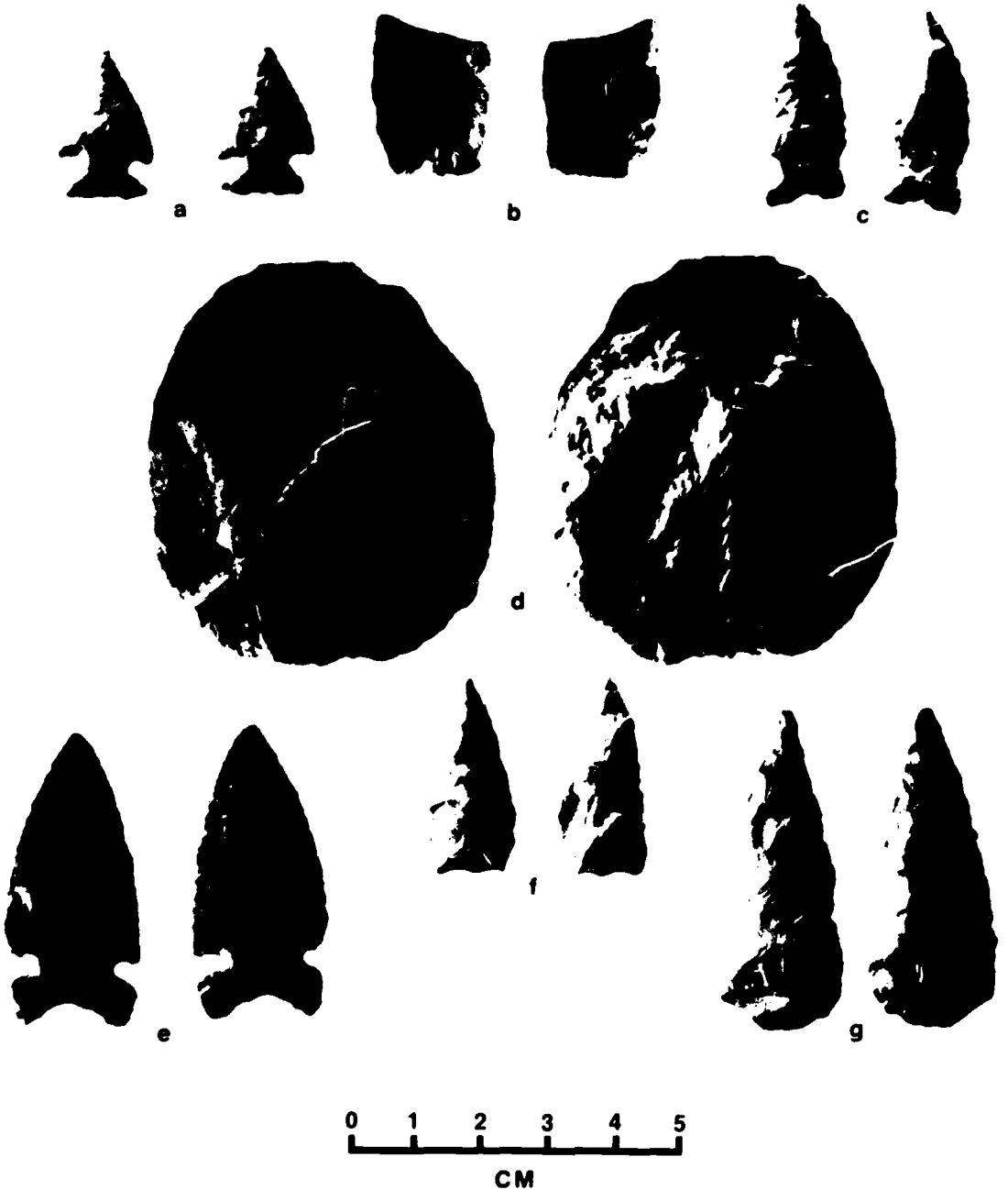


Fig. 63. Artifacts from 10-CW-46, Bishop Creek. *a*, 1609-195; *b*, 1609-194; *c*, 1609-1404; *d*, 1609-203; *e*, 1609-1422; *f*, 1609-1421; *g*, 1609-1418.

Fig. 64. Artifacts from 10-CW-46, Bishop Creek. *a*, 1609-1428; *b*, 1609-1424; *c*, 1609-1416; *d*, 1609-1423.

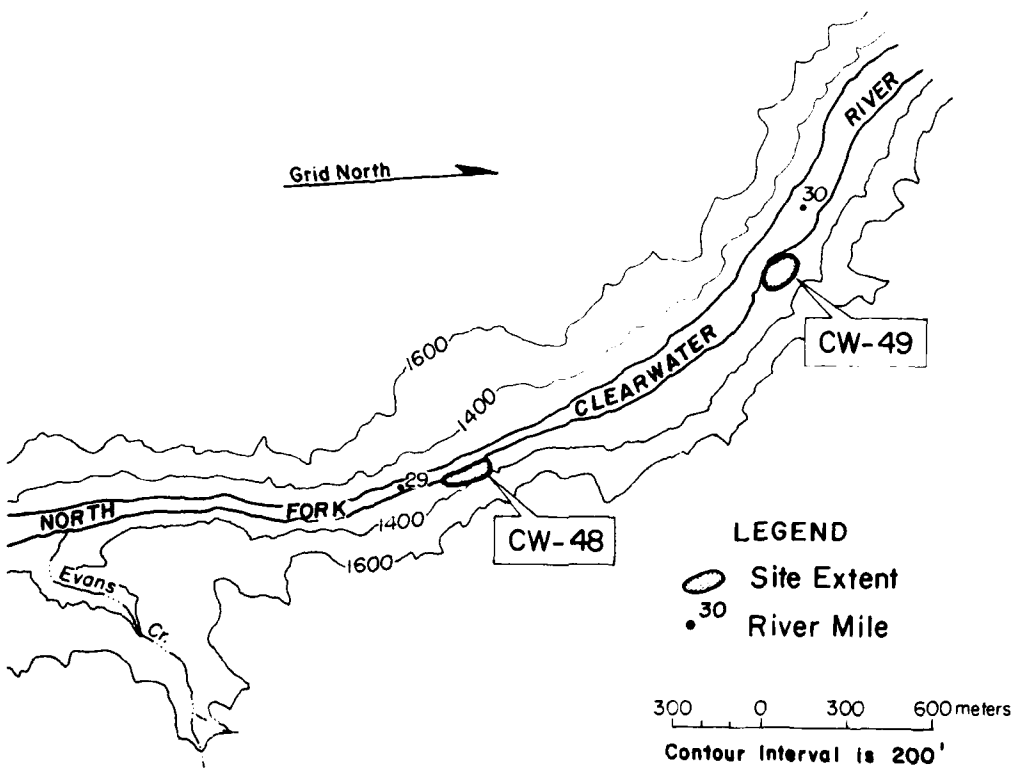


Fig. 65. Segment map I, North Fork Clearwater River.

10-CW-20, Little North Fork

This site is located at the mouth of the Little North Fork, 66 km (41.5 mi.) upriver from the mouth of the North Fork (Fig. 66). In 1961, Osmundson and Hulse (1962:9) recorded fire-fractured rock and a single cryptocrystalline flake on an island in the Little North Fork channel. Local informants reported finding many projectile points in this locality. In 1970, Idaho State University personnel surveyed the island and recorded cobble tools on the beach at its southern end. An examination of the island cutbank revealed micaceous sands to a depth of approximately 150 cm (60 in.), overlying a layer of river cobbles. Immediately above and below the cobble layer were wood and charcoal deposits.

During the 1971 season, Idaho State University crews again visited the site and excavated three series of pits on a sloping terrace at the east (upriver) side of the mouth of the Little North Fork. This area was approximately 100 m (32 ft.) southeast of the island site and 150 m (500 ft.) up the North Fork from the confluence. The major portion of this terrace had been bulldozed as part of the clearing operations for the reservoir (Corliss and Gallagher 1972:56). Three 2 x 2 m units, laid out parallel to the river, were excavated from the lower level of the terrace (Figs. 66, 67). These units were placed approximately 3 m east of the terrace cutbank in a heavily disturbed area. The excavation revealed unstratified sand to a depth of 1 m, at which point a 40 cm layer of river cobbles was encountered; it was not known how much surface material was removed during bulldozing operations. The units were excavated in arbitrary 20 cm levels, with the upper layer producing a thin uniface, a utilized flake (both cryptocrystalline), several hammerstones, two edge-abraded cobbles, and several cobble spall tools. The 20-40 cm layer contained three thin unifaces and scattered charcoal.

The next level, 40-60 cm, contained three more thin cryptocrystalline unifaces (Table 21). The 60-80 cm layer contained a thin cryptocrystalline biface, and two projectile point fragments (no description): the deepest cultural material found in the excavation. Digging ceased at 140 cm. The present collection from this site contains a few soil samples from these units (Table 22).

The next series of excavations were located on the upper terrace level 8-12 m above the beach area, approximately 75 m (250 ft.) north of the lower terrace units and 5 m (16 ft.) east of the upper terrace cutbank. Five connecting 2 x 2 m units, laid out parallel to the river, were excavated here in arbitrary 20 cm levels (Fig. 68). These units revealed unstratified sand to a depth of 330 cm (130 in.)(the deepest point of excavation). Again, this area had been much disturbed by clearing operations. Artifacts contained in the upper 20 cm include a utilized cryptocrystalline flake, a bus token, a copper button, and glass bottle fragments. Also found was a water-worn lanceolate projectile point with a basally-indented stem, and a lithic pestle (Table 21). A corner-notched cryptocrystalline projectile point was the single artifact of the 20-40 cm level. The next layer, 40-60 cm was sterile. The 60-80 cm level

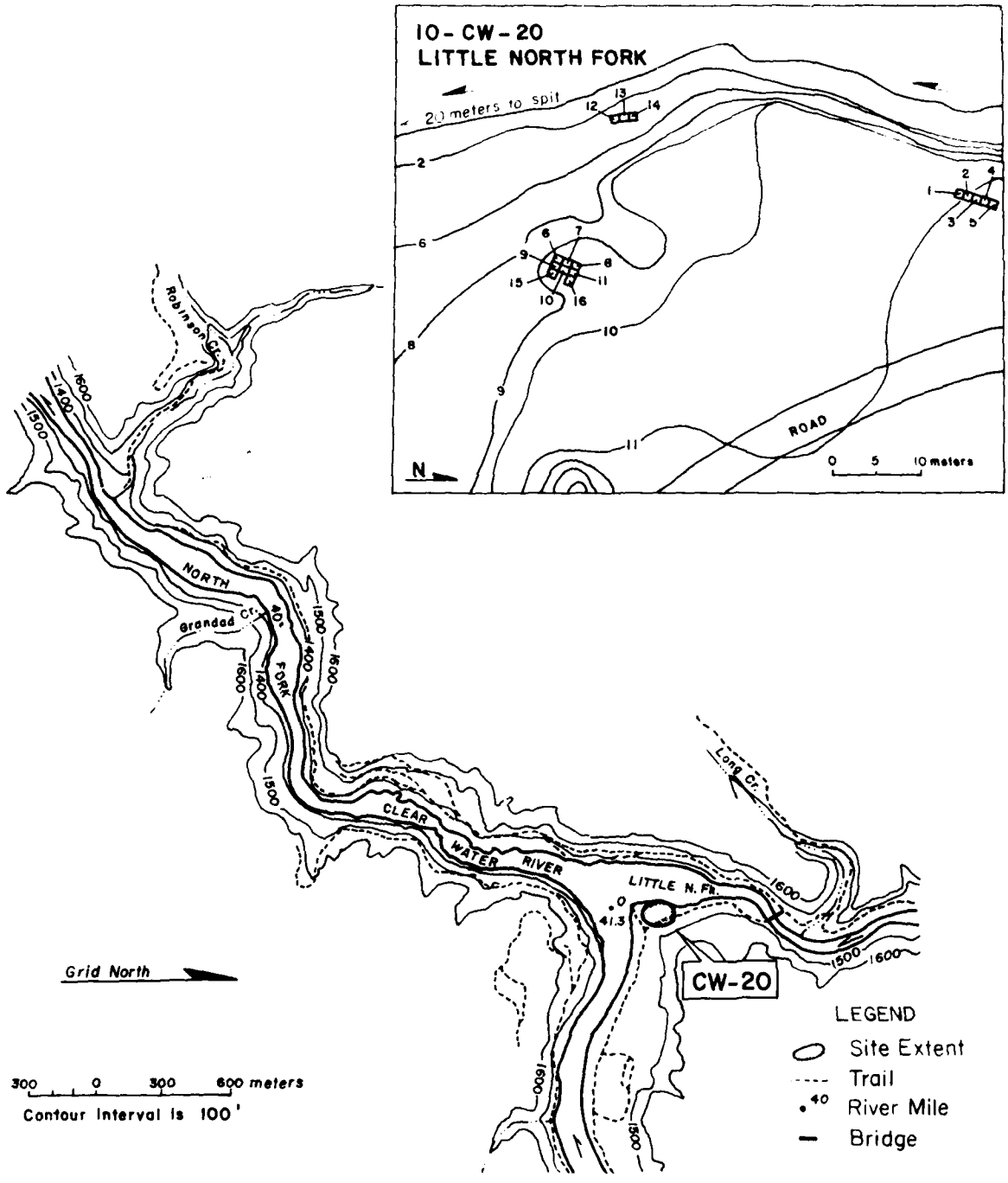


Fig. 66. Segment map J, North Fork Clearwater River.

Fig. 57. View of 10-CW-20, Little North Fork, looking south.

TABLE 21

Distribution of artifacts from 10-CW-20, Little North Fork

Provenience		Artifact Class[c]	Catalogue[d] Number	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning[h] Evaluation		Edge shaping stage[i]	Illustration Number
Level[a]	Unit[b]									Dorsal	Ventral		
Surface	Indeter	Flk	1027	Thin biface, haft indeterminate	Fine Basalt	55	27	11	15	6	7	7	
		Flk	1028	Thin biface, haft indeterminate	Chert	0	23	5	3	8	8	6	
+30- 0	6	Flk	1042	Lanceolate point w/o basal notch	Sedimentary	66	21	7	6	8	8	7	69a
		Hist	2211	Bottle fragment	Glass	29	19	3	3	-	-	-	
	8	Flk	1020	Point fragment	Chert	0	16	4	1	8	8	7	
		Flk	1021	Thin uniface, minimun edging	Chalcedony	0	20	4	1	5	3	2	
	9	Flk	1041	Corner notched point w/o basal notch	Chalcedony	43	22	6	6	8	6	5	69d
		Flk	1045	Unspecified biface	Chert	0	18	5	1	5	5	6	
0- 20	3	Flk	1005	Used flake	Chert	22	12	3	1	5	5	2	
		Hist	2207	Penny	Metal	19	19	2	4	-	-	-	
	5	Hist	2194	Toy plastic soldier	Plastic	61	22	9	5	-	-	-	
		Hist	2195	Unspecified personal item	Metal	48	13	2	8	-	-	-	
		Hist	2196	Bus token	Metal	16	16	1	2	-	-	-	
		Hist	2197	Button	Plastic	15	15	5	2	-	-	-	
		Hist	2198	Rimfire cartridge	Metal	16	5	6	1	-	-	-	
		Hist	2199	Plate fragment	Ceramic	31	15	7	3	-	-	-	
		Hist	2200	Bottle fragment	Glass	20	17	3	2	-	-	-	
		Hist	2201	Bottle fragment	Glass	26	18	5	4	-	-	-	
		Hist	2202	Bottle fragment	Glass	19	16	16	3	-	-	-	
		Hist	2203	Bottle fragment	Glass	0	0	3	0	-	-	-	
	6	Flk	0987	Thin uniface, minimum edging	Chalcedony	0	0	3	1	5	3	2	
		Flk	0989	Used flake	Chert	52	19	10	11	3	3	2	
		Flk	0991	Used flake	Chert	30	14	6	4	5	3	2	
	7	Flk	1017	Corner notched point w/o basal notch	Chert	52	19	6	5	8	8	7	
		Flk	1018	Corner notched point w/basal notch	Chert	27	17	5	1	8	8	7	69c
		Flk	1019	Thin uniface, minimum edging	Chalcedony	0	0	3	1	5	3	2	
	10	Flk	0996	Unspecified biface	Chert	0	15	7	2	7	7	6	
		Hist	2217	Wire nail	Metal	92	3	5	10	-	-	-	
	11	Flk	0965	Corner notched point w/o basal notch	Chert	0	0	5	1	8	8	7	
		Flk	0966	Unspecified biface	Chert	57	44	9	20	5	5	6	
		Hist	2191	Bottle fragment	Glass	22	12	4	1	-	-	-	
	12	Flk	1050	Thin uniface	Chert	24	0	4	1	5	3	2	
		Flk	1088	Used flake	Chert	20	7	3	1	3	5	2	
	17	Flk	1083	Thin biface, haft indeterminate	Opal	58	51	10	19	7	6	7	
		Hist	2192	Window fragment	Glass	0	0	3	0	-	-	-	
		Hist	2193	Plate fragment	Ceramic	10	6	3	1	-	-	-	
20- 40	TR 1	Flk	1003	Drill	Chert	0	14	3	1	8	8	7	
	5	Flk	1013	Point fragment	Chert	0	12	6	1	8	8	7	
	7	Flk	1033	Denticulate	Chert	66	38	10	23	6	5	6	70c

TABLE 21 *continued*

Provenience		Artifact Class[c]	Catalogue[d] Number	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning[h] Evaluation		Edge shaping stage[i]	Illustration Number
Level[a]	Unit[b]									Dorsal	Ventral		
20- 40	8	Flk	1023	Unspecified biface	Chalcedony	0	0	10	4	5	5	6	
	10	Flk	1002	Point fragment	Chert	0	20	5	3	8	8	7	69*i*
	11	Flk	0971	Unspecified biface	Chert	0	0	7	1	5	6	6	
		Flk	0974	Unnotched stemmed point	Chert	38	15	6	3	8	8	7	69*b*
	14	Flk	1060	Thin uniface, minimum edging	Chalcedony	0	21	7	3	5	3	2	
		Flk	1061	Thin uniface, side-edged	Chalcedony	16	19	3	1	6	3	2	
		Flk	1062	Thin uniface, side-edged	Chalcedony	20	19	3	1	6	3	2	
40- 60	7	Flk	1014	Unspecified biface	Chert	29	22	7	6	8	8	7	70*c*
		Flk	1015	Thin biface, haft indeterminate	Opal	32	19	8	4	8	8	7	69*g*
	14	Flk	1072	Thin uniface, side-edged	Quartzite	45	24	7	9	5	3	2	70*a*
		Flk	1073	Thin uniface, side-edged	Chert	48	19	5	5	5	3	2	
		Flk	1077	Thin uniface, minimum edging	Chert	34	18	2	2	6	3	2	
60- 80	3	Flk	1009	Point fragment	Opal	0	14	5	2	8	8	7	69*h*
	6	Flk	0992	Thin uniface, minimum edging	Quartzite	41	37	6	9	5	3	2	
	7	Flk	1031	Thin biface, haft indeterminate	Obsidian	54	27	8	13	5	6	4	
		Flk	1032	Unspecified uniface	Obsidian	62	31	-	19	5	5	2	
	11	Flk	1049	Used flake	Chert	24	19	2	1	5	5	2	
		Flk	1057	Thin biface, haft indeterminate	Chalcedony	25	15	5	1	8	7	7	69*j*
80-100	3	Flk	1010	Corner notched point w/o basal notch	Chert	26	15	6	2	8	8	7	69*c*
Indeterminate		Flk	0967	Used flake	Basalt	150	132	29	485	3	5	2	
		Flk	0975	Thick uniface, side and end-edged	Granite	176	122	41	1248	1	4	2	
		Flk	0977	Used flake	Basalt	152	200	20	625	2	3	2	
		Flk	0979	Used flake	Basalt	66	0	9	49	3	5	2	
		Flk	0983	Thick uniface, minimum edging	Quartzite	63	104	41	232	5	3	2	
		Flk	0990	Used flake	Basalt	120	72	19	235	2	5	2	
		Flk	0993	Unspecified uniface	Granite	88	86	40	339	1	4	2	
		Flk	0999	Denticulate	Chalcedony	38	26	7	8	5	3	2	70*b*
		Flk	1000	Used flake	Chert	57	27	6	18	5	5	4	
		Flk	1022	Used core	Chert	74	23	23	77	4	4	2	
		Flk	1025	Unspecified uniface	Basalt	125	114	35	172	1	4	2	
		Flk	1030	Unspecified uniface	Basalt	123	68	44	431	1	4	2	
		Flk	1040	Unspecified uniface	Granite	79	110	54	1307	1	4	2	
		Flk	1044	Unspecified uniface	Basalt	100	140	51	806	1	4	2	
		Flk	1048	Used core	Basalt	57	78	32	212	5	5	2	
		Flk	1053	Unspecified biface	Chalcedony	0	0	13	4	6	6	6	
		Flk	1058	Thin uniface, end-edged	Chert	18	17	4	1	5	3	2	
		Flk	1059	Thin uniface, end edged	Chert	20	20	4	2	5	3	2	
		Flk	1067	Thin uniface, end edged	Chert	0	9	3	1	3	5	2	
		Flk	1070	Thin uniface, end-edged	Chert	33	30	6	7	3	5	2	

TABLE 21 *continued*

Provenience		Artifact Class[c]	Catalogue[d] Number	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning[h] Evaluation		Edge shaping stage[i]	Illustration Number
Level[a]	Unit[b]									Dorsal	Ventral		
Intermediate		Flk	1078	Used flake	Chalcedony	27	19	3	1	3	5	2	
		Flk	1082	Unspecified uniface	Quartzite	101	59	28	156	4	3	2	
		Flk	1356	Thick uniface, end-edged	Basalt	212	212	36	2268	1	4	2	
		Nflk	1066	Shaped mano	Granite	0	84	66	1375	-	-	1	
		Nflk	0978	Hammerstone	Basalt	0	70	35	203	-	-	1	
		Nflk	0980	Hammerstone	Basalt	0	64	45	635	-	-	1	
		Nflk	0981	Hammerstone	Granite	126	83	88	1317	-	-	1	
		Nflk	0982	Hammerstone	Basalt	0	50	36	108	-	-	1	
		Nflk	0985	Hammerstone	Granite	113	62	48	508	-	-	1	
		Nflk	1001	Net weight	Granite	62	55	13	83	-	-	1	
		Nflk	1004	Net weight	Granite	67	53	13	92	-	-	1	
		Nflk	1026	Pounding stone	Granite	178	95	55	1689	-	-	1	
		Nflk	1034	Hammerstone	Basalt	70	110	54	553	-	-	1	
		Nflk	1043	Hammerstone	Granite	222	57	51	1197	-	-	1	
		Nflk	1047	Abrading stone	Granite	0	75	49	826	-	-	1	
		Nflk	1051	Net weight	Granite	60	52	21	114	-	-	1	
		Nflk	1068	Hammerstone	Granite	138	30	28	210	-	-	1	
		Nflk	1076	Hammerstone	Granite	142	74	60	1057	-	-	1	
		Nflk	1079	Hammerstone	Granite	184	58	47	767	-	-	1	
		Nflk	1081	Mano	Basalt	120	90	42	690	-	-	1	
		Nflk	1086	Grinding stone	Granite	265	237	70	9500	-	-	1	
		Nflk	1334	Net weight	Granite	110	89	22	364	-	-	1	

[a] Depth, in centimeters, below surface.

[b] Unit of excavation (see text)

[c] Either lithic (flaked or non-flaked) or historic materials.

[d] Based on the original Idaho State University accessioning system, all numbers are preceded by the project code "1609".

[e] Morpho-used form names of lithic artifacts are based more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

[f] Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g] Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h] 0 = indeterminate; 1 = unthinned core/nodule; 2 = unthinned flake with cortex; 3 = unthinned flake without cortex; 4 = preliminarily thinned piece with cortex; 5 = preliminarily thinned piece without cortex; 6 = primarily thinned piece, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shaped piece with significant edge regularity but not highly stylized shaped piece.

[i] 0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges' 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges; 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

TABLE 22

Frequencies of lithic debitage* materials from 10-CW-20

Provenience			Fine-grained materials[a] (silicas, basalts, argillites)						Coarse-grained materials[a] (granites and basalts)						Unit Total	
			% Total			% Total			% Total			% Total				
Level[b]	Unit[c]	No.	Unit[d] %	Level[e] %	Weight (gm)	Unit[f] %	Level[g] %	No.	Unit[d] %	Level[e] %	Weight (gm)	Unit[f] %	Level[g] %	No.	Weight (gm)
0/-20	3	10	15.2	7.4	6	3.4	0.5	8	10.7	5.9	138	14.0	0.7	18	144
	5	3	4.5	2.2	1	0.6	0.0	1	1.3	0.0	6	0.6	[illegible]	4	7
	6	5	7.6	3.5	2	1.1	0.2	2	1.1	0.2	8	10.7	0.7	13	165
	7	3	4.5	2.2	2	1.1	0.2	1	1.3	0.0	17	1.7	1.4	4	19
	8	7	10.6	5.1	19	10.9	1.6	6	8.0	4.4	69	7.0	5.9	13	88
	9	2	3.0	1.5	80	46.0	6.8	31	41.3	22.8	403	41.0	34.3	33	483
	10	10	15.2	7.4	14	8.9	1.2	8	10.7	5.9	113	11.5	9.6	18	127
	11	14	21.1	10.3	17	9.8	1.4	4	5.3	2.9	20	2.0	1.7	18	37
	12	4	6.1	2.9	12	6.9	1.0	2	2.7	1.5	28	2.9	2.4	6	40
	14	6	9.1	4.4	6	3.4	0.5	2	2.7	1.5	26	2.6	2.2	8	32
	17	2	3.0	1.5	15	8.6	1.3	4	5.3	2.9	18	1.8	1.5	6	33
Total		66	101.9	48.4	174	99.8	14.7	75	100.0	48.0	982	101.0	83.9	136	1175
-20/-40	3	7	9.7	4.9	6	3.6	1.3	4	8.7	2.8	33	3.3	6.9	39	14
	5	4	5.6	2.8	4	2.4	0.8	2	4.3	0.4	2	0.6	0.4	6	6
	6	7	9.7	4.9	18	10.7	3.8	2	4.3	0.4	25	7.5	5.3	9	43
	7	9	12.5	6.3	104	61.9	21.8	7	15.2	1.5	68	20.4	14.3	16	172
	8	3	4.2	2.1	2	1.2	0.0	2	4.3	0.4	3	0.9	0.6	5	5
	9	0	0	0	0	0	0	1	2.2	0.2	3	0.9	0.6	1	3
	10	4	5.6	2.8	4	2.4	0.8	8	17.4	1.7	72	21.6	15.1	12	76
	11	9	12.5	6.3	5	3.0	1.1	18	39.1	3.8	87	26.1	18.3	27	92
	12	11	14.7	7.6	7	4.2	1.5	0	0	0	0	0	0	11	7
	14	17	1.4	11.8	15	8.9	3.2	1	2.2	0.2	1	0.3	0.2	18	16
	17	1		0.7	3	1.8	0.6	1	2.2	0.2	39	11.7	8.2	2	42
Total		72	99.5	50.2	168	98.3	34.9	46	99.9	11.6	333	99.9	61.9	144	476
-40/-60	3	11	21.2	14.1	3	4.2	0.6	3	11.5	3.8	37	7.9	6.8	14	40
	5	7	13.5	9.0	14	19.7	2.6	5	19.4	4.1	18	3.8	3.3	11	32
	6	3	5.8	3.8	2	2.8	0.4	1	3.8	1.3	2	0.4	0.4	4	4
	7	10	19.7	20.5	14	19.7	2.6	8	30.8	10.3	184	39.1	34.0	24	198
	8	1	2.0	1.3	1	1.4	0.2	1	3.8	1.3	2	0.4	0.4	2	3
	10	3	5.9	3.8	3	4.2	0.6	6	23.1	7.7	20	4.3	3.7	9	23
	11	2	3.8	2.6	2	2.8	0.4	2	7.7	2.6	10	2.1	1.8	4	12
	14	9	17.3	11.5	32	45.0	5.9	1	3.8	1.3	197	41.9	36.4	10	229
Total		52	100.1	66.6	71	99.8	13.3	26	99.9	33.4	470	99.9	86.6	78	541
-60/-80	3	4	21.1	14.1	5	12.5	6.8	0	0	0	0	0	0	4	5
	5	2	10.5	7.0	1	2.5	1.4	2	33.3	2.7	4	12.1	9.8	4	5
	7	2	10.5	7.0	2	5.0	2.7	2	33.3	2.7	15	45.5	29.3	4	17
	8	9	47.4	12.3	24	60.0	32.9	1	16.7	1.4	9	27.3	12.3	10	33
	10	0	0	0	0	0	0	1	16.7	1.4	5	15.2	6.8	1	5
	11	1	5.3	1.4	2	5.0	2.7	0	0	0	0	0	0	1	2
	14	1	5.3	1.4	6	15.0	8.2	0	0	0	0	0	0	1	6
Total		19	100.0	47.1	40	100.0	52.7	6	100.0	8.2	33	100.1	45.1	25	73
-80/-100	3	4	23.5	14.7	7	26.7	6.6	0	0	0	0	0	0	4	19
	5	4	23.5	14.8	8	26.7	6.6	3	30.0	11.1	19	23.5	15.6	7	27
	7	7	41.2	25.9	12	40.0	9.8	6	60.0	22.2	57	70.4	46.7	13	69
	8	2	11.8	7.4	2	6.7	1.6	1	10.0	3.7	5	6.2	4.1	3	7
Total		17	100.0	62.9	30	100.0	24.6	10	100.0	37.0	81	100.1	66.4	27	122

TABLE 22, *continued*

*Residual lithic material resulting from tool manufacture.

[a]These are broad categories based loosely on Crabtree (1967), and separated mainly by grain-size. Essentially, the coarse-grain debitage falls into the same material category as that of all cobble tools contained in the North Fork Clearwater River assemblages.

[b]Level in relation to surface datum: "t" refers to elevation above surface datum, "0" refers to surface datum, "-" refers to elevation below surface datum.

[c]Unit of excavation (see text): S = surface collection (unit indeterminate); TP = 1970 test excavation; TT = test trench.

[d]Percentage of total number of flakes from that level of the particular excavation unit.

[e]Percentage of total number of flakes found throughout the excavated portions of the site, at that particular level.

[f]Percentage of total weight of flakes from that level of the particular excavation unit.

[g]Percentages of total weight of flakes found throughout the excavated portions of the site, at that particular level.

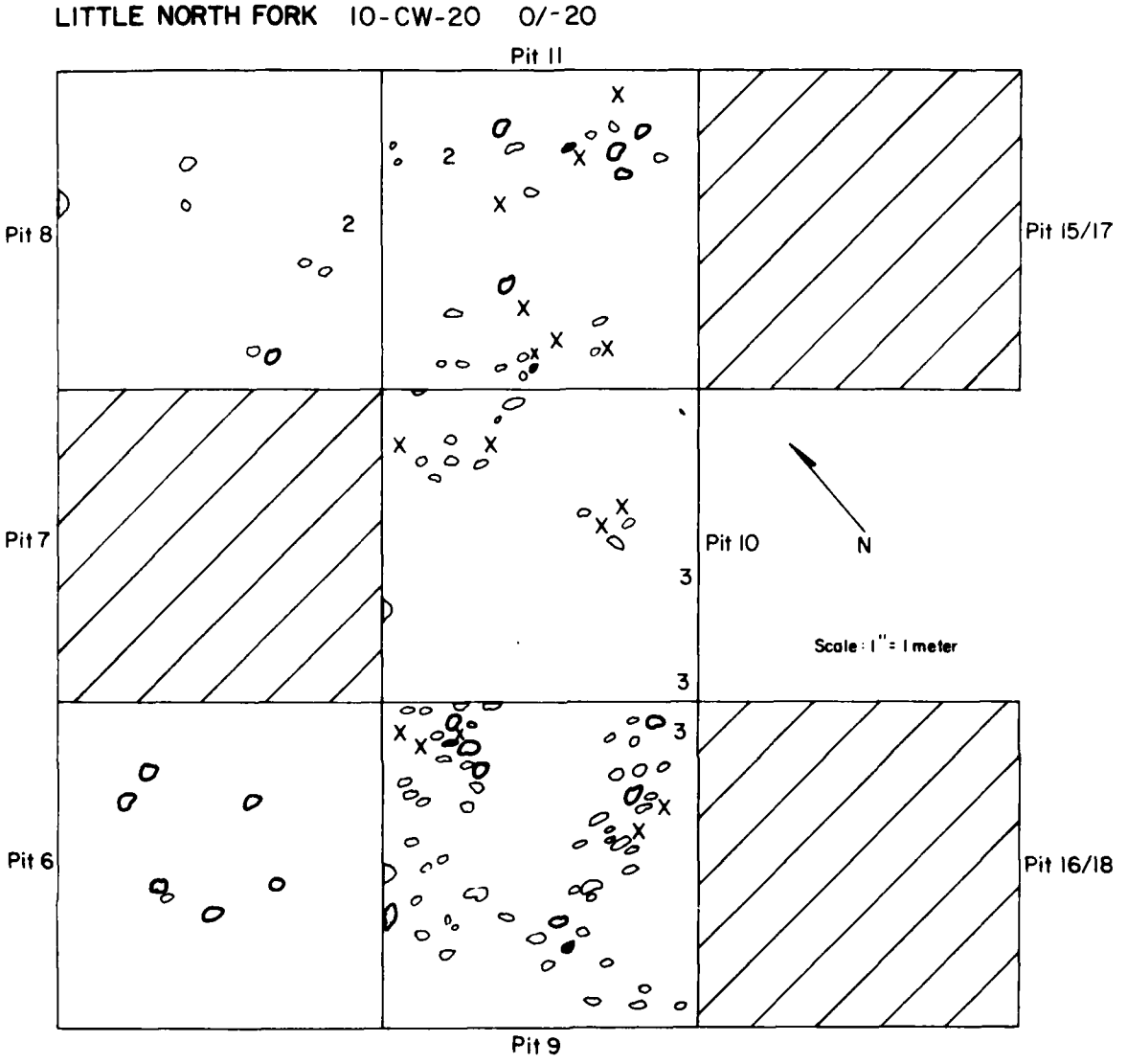


Fig. 68. Excavation plan, 10-CW-20, Little North Fork.

contained a cryptocrystalline projectile point (base indeterminable). A corner-notched cryptocrystalline projectile point in the 80-100 cm level was the deepest artifact found in the excavation.

The final excavations consisted of three connecting 2 x 2 m units, located at the edge of the upper terrace. About 90% of the cultural materials excavated from the site came from these units. It appeared that much of the surface soil had been removed during bulldozing operations. Sediments were again unstratified sand overlying a layer of river cobbles at 100 cm depth. This cobble layer was still present when excavation ceased at 140 cm. The units were dug in arbitrary 20 cm levels. The upper level contained six projectile points (three corner-notched, one corner-notched with a basal notch, one lanceolate, and one with an indeterminate base form), one thin biface, three thick biface tools, two utilized flakes, one pestle, one cobble beak tool, three flat pebble netweights, and a basalt core (Figs. 69, 70). Historic material recovered includes two wire nails, a ceramic plate fragment, and glass bottle fragments. The 20-40 cm level exposed three projectile points (one corner-notched, one stemmed, and one with indeterminable base form), two biface tools, and one denticulate tool, a charcoal sample for this level was radiometrically dated at 1660±80 years BP (WSU 2910). The next layer (40-60 cm) contained one thin biface and one thick bifacial tool. The 60-80 cm level revealed the only two obsidian tools found at the site: a thin biface and a unifacial tool. Also uncovered were a projectile point (base form indeterminate) and a utilized flake. The last level containing cultural material was 80-100 cm; a single corner-notched projectile point was covered (Table 21).

Additional artifacts recovered from surface surveys of the site area (proveniences unknown) include two thin bifaces, one thick bifacial tool, four thin unifaces, three thick unifaces, seven additional unifacial tools, eleven utilized flakes, three grinding stones, five hammerstones, two cores, one drill, and one flat pebble netweight. Numerous cryptocrystalline and basalt flakes were also recovered from the site.

10-CW-50, Larkin's Bar

This site is located on a long low terrace on the north side of the river, approximately 88 km (55 mi.) upriver from the mouth of the North Fork (Fig. 71). The terrace is about 100 m (330 ft.) across (north-south) at its widest point, and tapers east and west for an overall length of 4 km (2.5 mi.). The area is dissected by Larkin's Creek (at the approximate midpoint of the terrace) and several small intermittant drainages. The terrace is divided into two levels: the lower level near the river's edge is 3 to 4 m above the the beach area, while the upper terrace is elevated approximately 6 m above the beach (Fig. 72). The majority of the terrace area is on the upper level, with only a narrow strip of lower elevation between the shoreline and the upper terrace.

In 1970, Idaho State University teams recorded "numerous grinding stones, flaked cobble tools, and much cryptocrystalline debitage" along the beach near Larkin's Creek. At that time the terrace had been recently bulldozed as part of the reservoir vegetation-clearing project. A 1 x 1m

Fig. 69. Artifacts from 19-CW-20, Little North Fork. *a*, 1609-1042; *b*, 1609-974; *c*, 1609-1010; *d*, 1609-1041; *e*, 1609-1018; *f*, 1609-1011; *g*, 1609-1015; *h*, 1609-1009; *i*, 1609-1002; *j*, 1609-1057.

Fig. 7. Artifacts from [illegible] Little North Fork. a, [illegible]; b, [illegible]; c, [illegible]; d, [illegible]; e, [illegible].

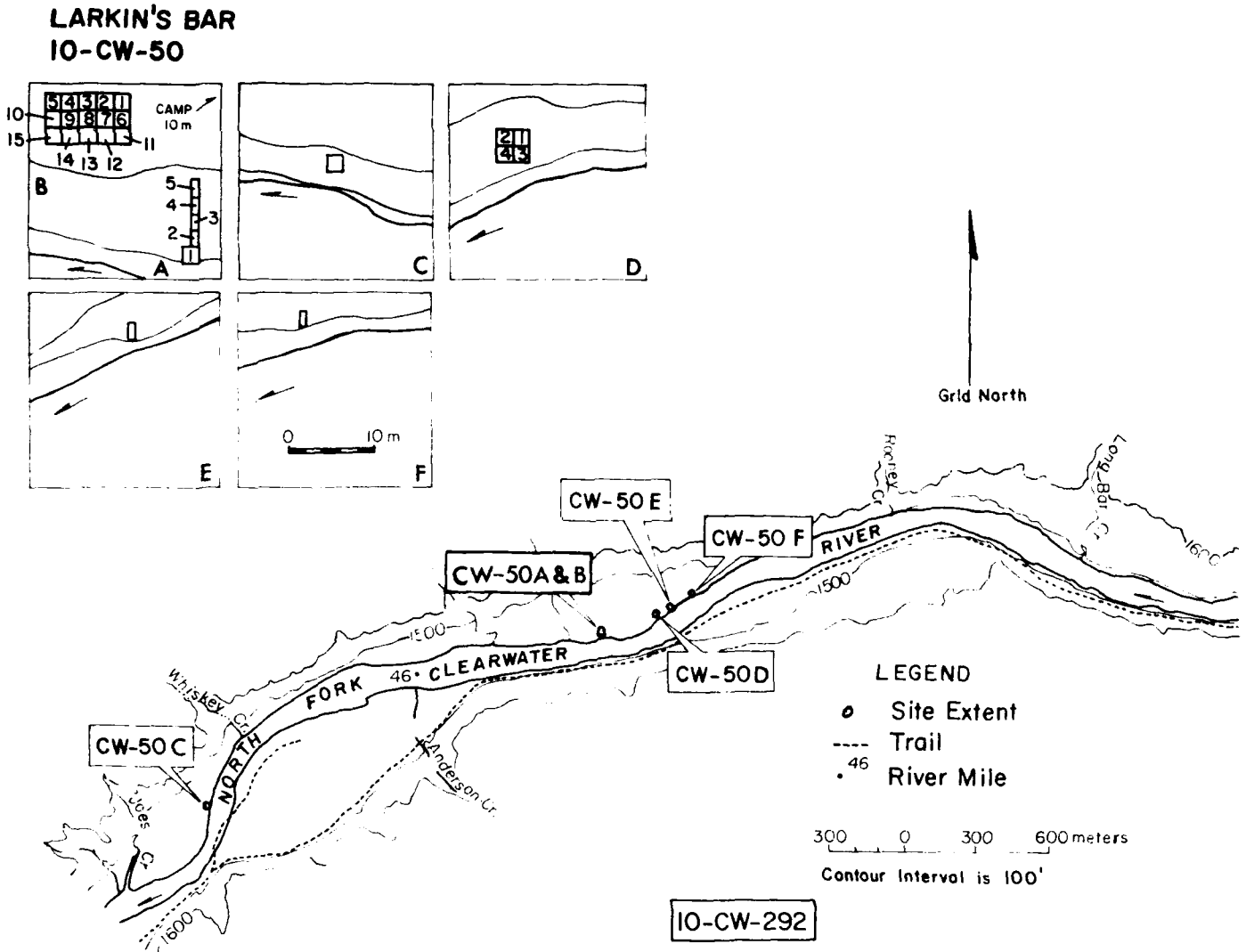


Fig. 71. Segment map K, North Fork Clearwater River.

Fig. 72. View of 10-CW-50, Larkin's Bar; looking downriver.

unit was excavated near the cutbank on the lower terrace, the site being chosen because of numerous fire-fractured rock seen eroding from the cutbank and littering the beach in the vicinity. It was not known how much soil had been removed during bulldozing operations; the excavation revealed a 15 cm layer of sandy sediments overlaying river cobbles to a depth of at least 43 cm at which point excavation ceased. The few artifacts recovered from this unit were described in excavation notes as "a few recent projectile points and a small amount of cryptocrystalline flakes."

During the 1971 field season more extensive testing was done. Somewhere near (and upriver of) Larkin's Creek, a 2 x 2 m unit was excavated on the lower terrace near the cutbank. The excavation was later extended north with four connecting 1 x 2 m units, until a trench was formed which traversed the entire width of the lower terrace, a distance of 10 m (33 ft.). This cross-section revealed a 20 cm white sand layer overlying orange sandy sediments. At a depth of 30 cm at the back of the terrace, sloping to 90 cm at the cutbank, a 20 cm layer of river cobbles was exposed. Below this layer, orange sand again continued for the remainder of the excavation of approximately 130 cm. A few basalt flakes, found just above the cobble layer, were the only artifacts recovered from the units (Table 23). Soil samples were collected from the excavation.

On the upper terrace a series of 2 x 2 m pits were laid out approximately 4 m (13 ft.) north of the terrace edge, and 10 m (33 ft.) northwest of the lower terrace units. At least three of these 2 x 2 grids were excavated, revealing sterile gray, silty sand to a depth of at least 40 cm (the extent of the excavation) This area of the upper and lower terrace excavations is "Area A" of the site (Figs. 71, 73).

Approximately 2 km west (downriver) of Area A, a 2 x 2 test excavation was put into the lower terrace about 3 m south of the cutbank. This unit contained brown clay sediments to a depth of 80 cm, at which point a sandy layer was encountered; the excavation ceased at this depth. At 40 cm below the surface, six flaked cobble "choppers" were found in association with four cobble flakes (Fig. 74). A 10 cm layer of charcoal was found above and again below the cobbles. No other testing was done in this area, termed Area B.

Approximately 150 m (440 ft.) east and upriver of Area A, at least four 2 x 2 m units were excavated near the lower terrace cutbank. No information exists on this series of excavations except that a stemmed projectile point, two thin bifaces, and a thin uniface were recovered from the area (Area C).

About 50 m (185 ft.) further east and upriver from Area C, an additional excavation of the cutbank area was conducted. A 1 x 1 m unit was dug to a depth of 35 cm, at which point a layer of river cobbles was reached. A thin uniface is the only reported cultural material from the area (Area D).

The final excavation area of the terrace was located approximately 100 m (330 ft.) east and upriver of Area D. Two 2 x 2 m units were excavated from the lower terrace cutbank. Tan, sandy sediments were found to a depth

TABLE 23

Distribution of artifacts from 10-CW-50, Larkin's Bar

Provenience		Artifact class[c]	Catalogue[d] number	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning[h] Evaluation		Edge shaping stage[i]	Illustration number
Level[a]	Unit[b]									Dorsal	Ventral		
-87	A-1	Flk	1201	Unnotched stem point	Chert	32	15	5	2	A	A	7	
Indeter	B-1	Flk	1230	Edged plate	Chalcedony	0	33	11	16	3	3	6	
	B-2	Flk	1207	Side notched point w/o basal notch	Chalcedony	27	16	5	2	A	A	7	
		Flk	1208	Thin biface, haft indeterminate	Chert	0	17	6	4	A	7	6	
	B-6	Flk	1225	Thin uniface, side and end-edged	Quartzite	39	21	7	6	5	3	3	
	B-11	Flk	1214	Thick biface	Chert	59	32	14	28	6	6	6	
	D-1	Flk	1209	Thin biface, haft indeterminate	Chert	26	19	8	3	6	7	7	
			1210	Thin biface, haft indeterminate	Chert	0	13	3	3	A	7	0	
	D-2	Flk	1233	Thin uniface, side-edged	Chert	0	16	2	1	5	3	2	
	D-4	Flk	1219	Thin biface, haft indeterminate	Chert	0	10	4	1	A	A	6	
	D-5	Flk	1217	Thin biface, haft indeterminate	Chert	0	0	3	1	5	5	6	
	E	Flk	1204	Thin uniface, side and end-edged	Chert	34	24	10	8	4	5	5	
	Indeter	Flk	1199	Indeterminate	Granite	0	0	70	1869	1	4	2	
		Flk	1211	Thick uniface, end-edged	Basalt	120	82	45	571	1	4	2	
		Flk	1218	Thin uniface, side and end-edged	Chert	20	16	3	3	5	3	2	
		Flk	1227	Thin uniface, minimal edging	Chert	0	0	4	1	5	5	2	
		Flk	1229	Thick uniface, end-edged	Basalt	135	115	24	447	1	4	2	
		Flk	1235	Thin uniface, minimal edging	Chert	0	0	4	1	3	5	2	
		Flk	1236	Used core	Basalt	132	90	57	674	1	5	3	
		Flk	1237	Beaked cobble tool	Granite	90	58	41	179	1	4	1	
		Flk	1239	Used core	Granite	77	25	17	32	0	0	1	
		Flk	1242	Thick uniface, end-edged	Basalt	120	95	55	668	1	4	2	
		Flk	1243	Thick uniface, end-edged	Granite	140	100	48	899	1	4	2	
		Flk	1244	Indeterminate	Granite	185	120	23	680	4	5	4	
		Flk	1246	Beaked cobble tool	Granite	254	130	62	2148	1	4	2	
		Nflk	1224	Unspecified pounding stone	Granite	170	125	62	1829	-	-	1	
		Nflk	1231	Shaped pestle	Granite	178	75	33	572	-	-	1	
		Nflk	1244	Unworked hammerstone	Granite	113	48	22	171	-	-	1	

[a] Depth, in centimeters, below surface.

[b] Unit of excavation (see text).

[c] Either lithic (flaked or non-flaked) or historic materials.

[d] Based on the original Idaho State University accessioning system, all numbers are preceded by the project code "1609".

TABLE 23 *continued*

[e] Morpho-use form names of lithic artifacts are based more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

[f] Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g] Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h] 0 = indeterminate; 1 = unthinned core/nodule; 2 = unthinned flake with cortex; 3 = unthinned flake without cortex; 4 = preliminarily thinned piece with cortex; 5 = preliminarily thinned piece without cortex; 6 = primarily thinned piece, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shaped piece with significant edge regularity but not highly stylized shaped piece.

[i] 0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges; 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges; 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

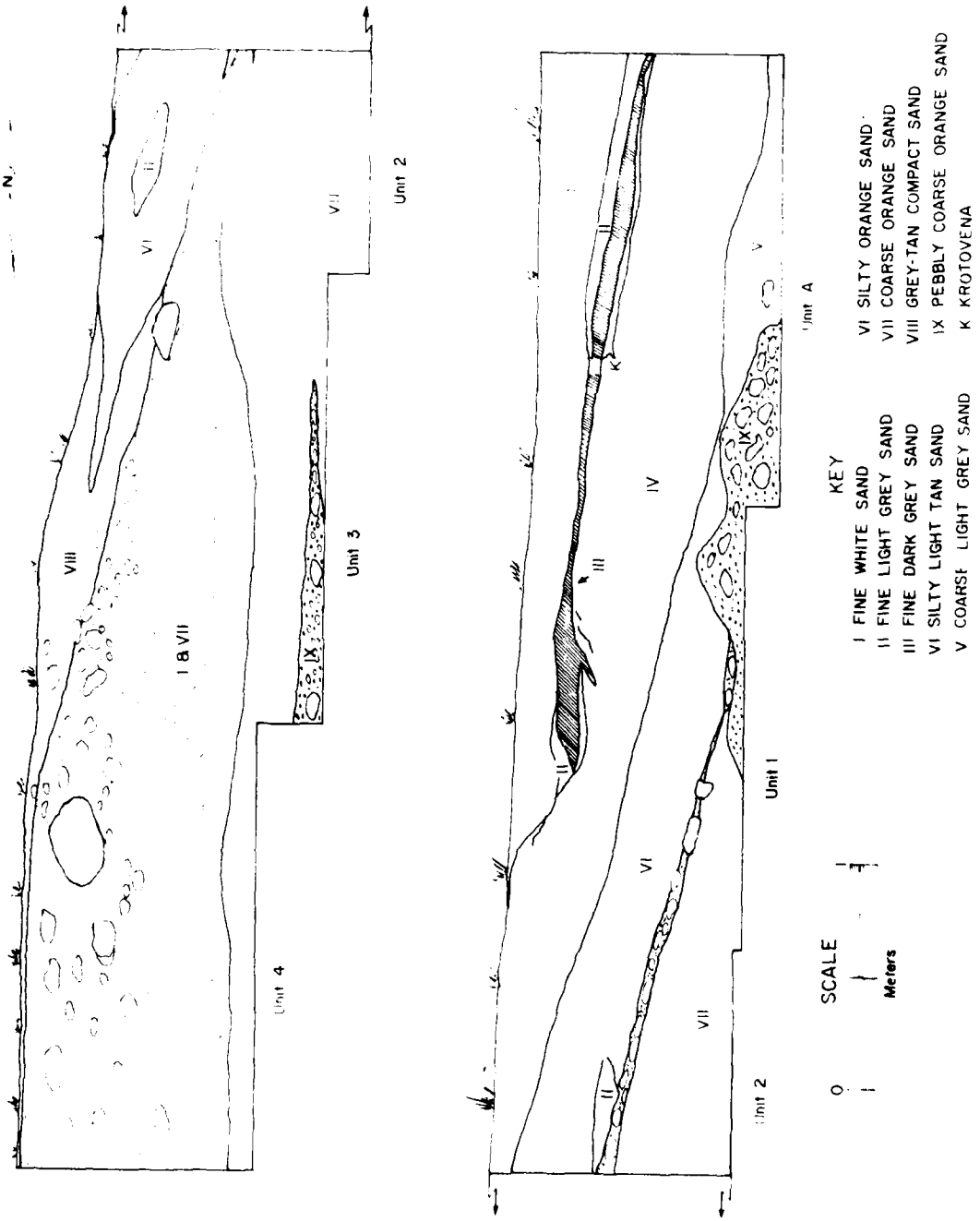
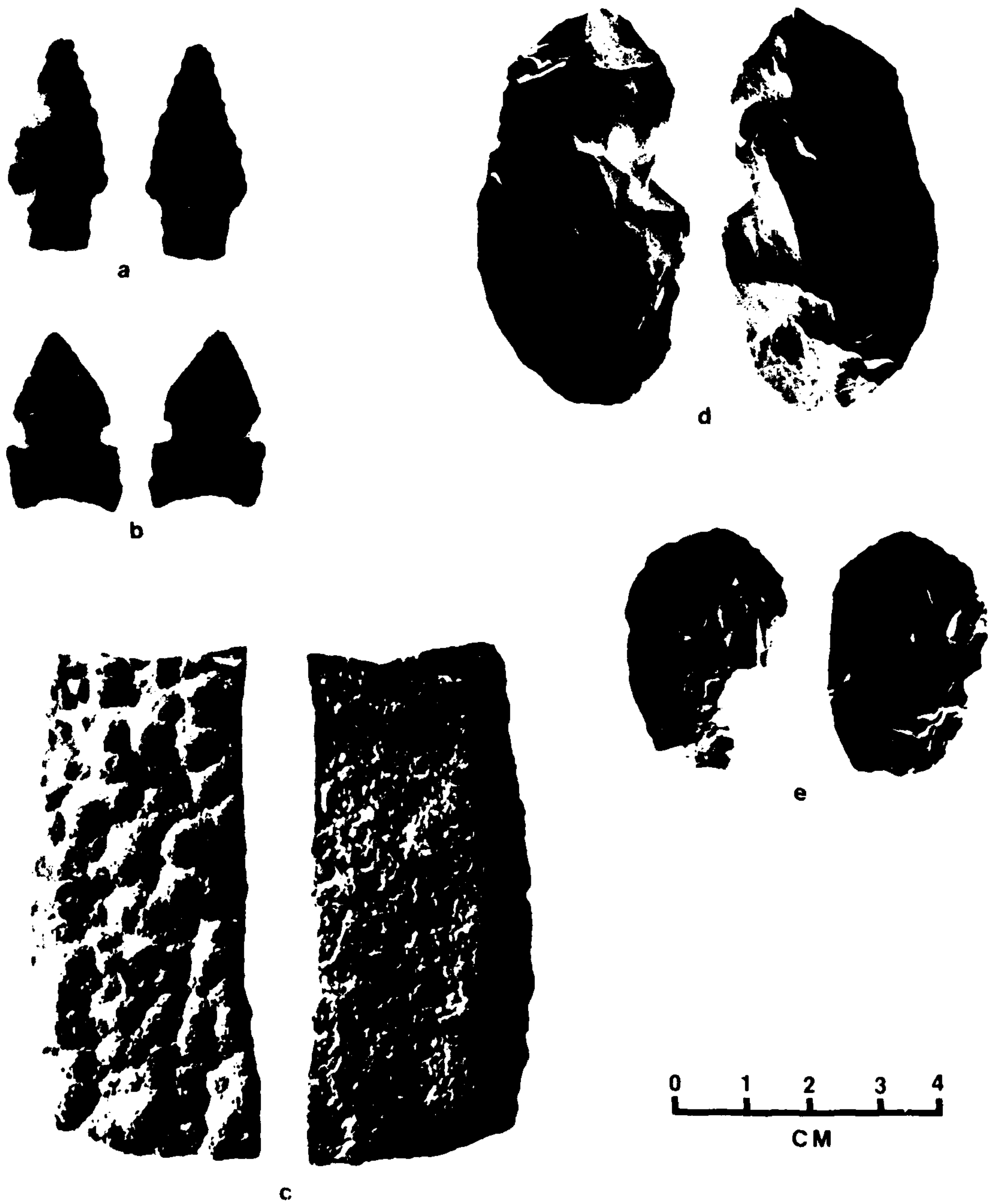


Fig. 73. Stratigraphic profile, 10-CW-50, Larkin's Bar.



[illegible] from [illegible] -W[illegible], Lark[illegible] Rar. [illegible], [illegible]-1[illegible]2; [illegible], [illegible]; [illegible], [illegible]; [illegible], [illegible]-1[illegible]4.

of 25 cm, at which point excavation ceased upon encountering a layer of river cobbles. A charcoal and ash lens was found at 12 cm depth, but no artifacts were reported from the area (Area B).

10-CW-292, Anderson Site

This area, outside of the actual reservoir boundary, is located along Anderson Creek, approximately 74 km (46 mi.) upriver of the mouth of the North Fork, (Fig. 71; Table 1). The site consists of a log cabin and associated corral/elk trap. The one-room cabin measures 6.5 m (21.33 ft.) square. A window was located in each gable and a door in one end. The window and door are framed with milled lumber. The log gables support pole purlins covered with cedar shakes. The roof originally had extended out over the front gable, forming a loft and porch, but this had since collapsed. The inside log wall over the door was chinked with newspapers from North Platte, Nebraska, dated 28 October 1957.

A corral was located adjacent to the cabin. An "elk trap" (identified to the crew by Ted Meshte, an Idaho Fish and Game biologist) was built along one part of the corral. This was constructed of tall upright posts with a door set to be tripped by a wire strung horizontally along the ground level inside the corral.

10-CW-51, Long Bar

Just upstream from the mouth of the Long Bar Creek is a low terrace site. Here, in 1970, one cobble tool was found.

10-CW-231, Butte Creek

This historic log decking site, located 82 km (51 mi.) upriver of the mouth of the North Fork (Fig. 75), was recorded by U.S. Forest Service personnel on the basis of a literature search (Hudson 1975).

10-CW-52, Washington Creek

This site is located on a low terrace immediately north of the mouth of Washington Creek. The terrace measures about 250 m (820 ft.) in length and is 100 m (330 ft.) in width at its widest point. The area was recorded in 1970, when a survey by Idaho State University personnel found 12 flaked cobble tools eroded from the terrace cutbank. Three circular depressions were noticed on the terrace, approximately 40 m (130 ft.) north of the stream.

A 1 x 2 m unit was excavated across the depression. No information is available from this unit. A second 1 x 2 m unit was dug into the terrace cutbank about 30 m (100 ft.) north of the mouth of the creek. A third 1 x 2 m area was excavated into an eroded depression on the cutbank (Table 24).

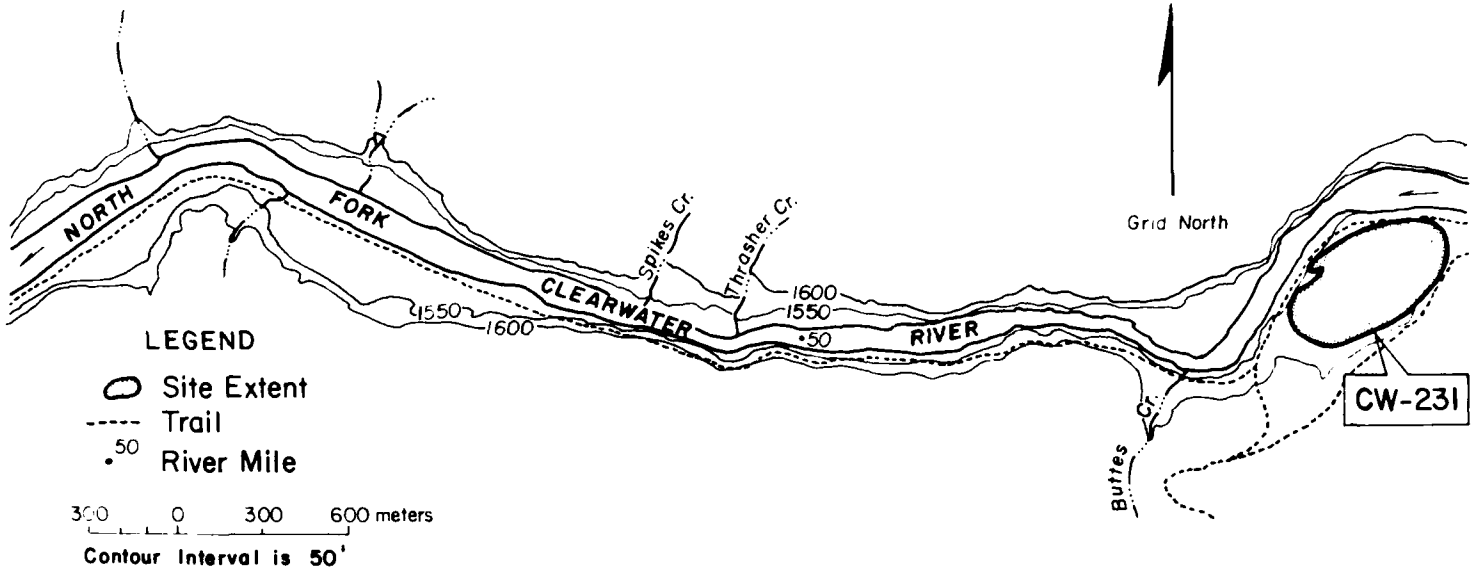


Fig. 75. Segment map L, North Fork Clearwater River.

TABLE 24

Frequencies of lithic debitage* materials from ...-W-2

Provenience		Fine-grained materials[a] (silicas, basalts, argillites)						Coarse-grained materials[a] (granites and basalts)						Unit Total	
			% Total			% Total			% Total			% Total			
Level[b]	Unit[c]	No.	Unit[d] %	Level[e] %	Weight (gm)	Unit[f] %	Level[g] %	No.	Unit[d] %	Level[e] %	Weight (gm)	Unit[f] %	Level[g] %	No.	Weight (gm)
0/-20	A	2	2.5	1.7	10	13.3	1.2	6	13.6	5.2	279	86.4	33.2	8	289
	B1	18	22.2	15.5	18	24.0	1.1	3	6.8	2.6	31	4.1	3.7	11	49
	B2	1	1.2	0.9	4	5.3	0.5	-	-	-	-	-	-	1	4
	B4	12	14.8	10.3	2	2.7	0.2	1	2.3	0.9	21	2.7	2.5	13	23
	B5	3	3.7	2.6	3	4.0	0.4	1	2.3	0.9	4	.5	0.5	4	7
	B6	-	-	-	-	-	-	2	4.5	1.7	10	1.3	1.2	2	10
	B7	2	2.5	1.7	4	5.3	0.5	-	-	-	-	-	-	2	4
	B8	14	17.3	12.1	6	10.7	1.0	3	6.8	2.6	16	2.1	1.9	17	24
	B9	14	17.3	12.1	2	2.7	0.2	6	13.6	5.2	13	2.5	2.3	20	21
	B10	5	6.2	4.3	5	6.3	0.6	3	6.8	2.6	11	1.4	1.3	8	16
	B11	1	1.2	0.9	2	2.7	0.2	2	4.5	1.7	19	2.5	2.3	3	21
	B1	1	1.2	0.9	2	2.7	0.2	6	13.6	5.2	46	6.	5.5	7	48
	F1	4	4.9	3.4	5	6.3	0.6	5	11.4	4.3	28	3.7	3.3	10	33
	B1	1	1.2	0.9	1	1.3	.1	3	6.8	2.6	139	18.1	16.5	4	140
	B3	-	-	-	-	-	-	1	2.3	0.9	15	2.0	1.8	1	15
	B6	1	1.2	0.9	6	8.0	0.7	1	2.3	0.9	126	16.4	15.0	2	132
	B7	1	1.2	0.9	1	1.3	0.1	1	2.3	0.9	2	0.3	0.2	2	3
	B11	1	1.2	0.9	2	2.7	0.2	-	-	-	-	-	-	1	2
Total		81	99.8	70.1	75	100.0	8.8	44	99.9	38.2	766	100.0	91.2	116	841
-20/-40	B3	2	33.3	15.4	2	18.2	2.6	5	71.4	38.5	33	55.0	46.5	7	35
	B6	3	50.0	23.1	7	63.6	9.9	1	14.4	7.7	16	26.7	22.5	4	23
	B7	1	16.7	7.7	2	18.2	2.6	1	14.3	7.7	11	18.3	15.5	2	13
Total		6	100.0	46.2	11	100.0	15.5	7	100.0	53.9	60	100.0	84.5	13	71
-40/-6	A1	-	-	-	-	-	-	2	100.0	40.0	10	100.0	77.0	2	10
	B3	3	100.0	60.0	3	100.0	23.1	-	-	-	-	-	-	3	3
Total		3	100.0	60.0	3	100.0	23.1	2	100.0	40.0	10	100.0	77.0	5	13
-60/-80	A3	-	-	-	-	-	-	2	100.0	100.0	44	100.	100.0	2	44
Total		-	-	-	-	-	-	2	100.0	100.0	44	100.0	100.0	2	44
-80/-100	A	-	-	-	-	-	-	1	33.3	33.3	22	3.4	3.4	1	22
	A1	-	-	-	-	-	-	1	33.3	33.3	462	78.6	78.6	1	462
		-	-	-	-	-	-	1	33.3	33.3	104	18.	18.	1	104
Total		-	-	-	-	-	-	3	99.9	99.9	588	100.	100.	3	588
-100/-12	A	-	-	-	-	-	-	5	1 00.0	1 00.	44	100.	100.	5	44
Total		-	-	-	-	-	-	5	1 00.0	1 00.	44	100.	100.	5	44

TABLE 24, *continued*

*Residual lithic material resulting from tool manufacture.

[a]These are broad categories based loosely on Crabtree (1967), and separated mainly by grain-size. Essentially, the coarse-grain debitage falls into the same material category as that of all cobble tools contained in the North Fork Clearwater River assemblages.

[b]Level in relation to surface datum: "t" refers to elevation above surface datum, "0" refers to surface datum, "-" refers to elevation below surface datum.

[c]Unit of excavation (see text): S = surface collection (unit indeterminate); TP = 1970 test excavation; TT = test trench.

[d]Percentage of total number of flakes from that level of the particulat excavation unit.

[e]Percentage of total number of flakes found throughout the excavated portions of the site, at that particular level.

[f]Percentage of total weight of flakes from that level of the particular excavation unit.

[g]Percentages of total weight of flakes found throughout the excavated portions of the site, at that particular level.

10-CW-93, W-2

This site is located on the north side of the river approximately 128 km (77 mi.) above the mouth of the North Fork. The area consists of a low terrace fan cut by a dry stream channel. A large sandy island is located immediately north (upriver) of the terrace area. The site was recorded in 1970 by Idaho State University personnel, who found cultural materials eroding from the banks of the stream channel (Table 25). Artifacts were recovered eroding from terraces. These included one thin biface, one thin uniface, a drill, four flaked cobble implements, a hafted uniface scraper, and a hammerstone (Table 26).

10-CW-94, W-3

This low terrace site is located approximately 129 km (77.5 mi.) upriver from the mouth of the North Fork. The terrace is about 120 m long and 30 m wide. The site was recorded in 1970 by Idaho State University crews who reported five circular depressions (diameter unknown) near the north edge of the area or south end of the terrace. A number of cobble tools and cryptocrystalline debitage was found on the area below the terrace cutbank. Two 1 x 2 m units were excavated at the site. One unit was placed in the terrace cutbank, across an eroding circular depression. A ring of fire-fractured rock, 45 cm in diameter, was uncovered at 80 cm depth; many basalt flakes were associated with this feature, and faded out at 85 cm. The excavation continued to a depth of at least 2 m (7 ft.), at which level a surface of river cobbles was encountered. At 115 cm depth, a bowl-shaped discoloration in the sand appeared at the south end of the unit; charcoal was found in the center of the feature.

The second unit was placed in the cutbank approximately 3.5 m east of the first unit. Sediments from this excavation consisted of unconsolidated light brown sand, topsoil overlying an unstratified deposit. At 155 cm depth, a 15 cm layer of pea-sized gravel was found overlying the cobbles. Several cobble tools were uncovered at 150 cm depth. Charcoal flecks were found throughout the excavation. About 21 m east of this excavation, a 150 cm diameter boulder was found on the beach area immediately below the cutbank. A cone-shaped depression 17 cm in diameter and 8 cm deep was discovered in the top of the boulder (Table 27).

10-CW-94, W-4

This site is located on a low terrace upriver from the mouth of the North Fork, across the river and slightly upstream from 10-CW-94, W-3. In 1970, Idaho State University personnel recorded numerous flaked cobble tools eroding from the sandy sediments of the terrace cutbank.

TABLE 25

Locational information of cultural sites recorded outside the Dworshak Reservoir Project Area*

DESIGNATION			LOCATION										
					Legal description[e]				UTM[f]				
Permanent site no.[a]	Site name	Previous designations[b]	U.S.G.S. map[c]	River mile[d]		Section	Township	Range	Easting	Northing	Elevation[g] (A.M.S.L.)	Investigation[h]	References
CW-93	W-2 site	W-2	C1	76	SE¼ NW¼ NE¼	11	39N	7E	611520	5175730	634 (2080)	S	ISU field book no. 13
CW-94	W-3 site	W-3	C1	76.5	NW¼ NE¼ SW¼	11	39N	7E	610960	5176900	634 (2080)	E	ISU field books no. 15, 16
CW-52	Washington Creek	W-1	C1	78	SW¼ NE¼ SE¼	22	39N	7E	610200	5173350	634 (2080)	E	ISU field book no. 16

*Cultural sites recorded during the 1970 ISU investigation.

[a]Permanent site numbers as assigned by the Idaho Archaeological Survey, Idaho State Historical Society, Boise; each of these numbers is preceded by the designation "10-" to identify them as being with the state of Idaho, according to the Smithsonian Institution survey system.

[b]Previous designations assigned in the field during the 1970 ISU investigation.

[c]U.S.G.S. map abbreviated: C1 - Clark Mountain, Idaho 7.5' 1963.

[d]River miles refer to distance above the mouth of the North Fork (sources: U.S.G.S. map series)

[e]Legal descriptions are from the Boise Meridian.

[f]Universal Transverse Meridian, UTM, are for zone 11.

[g]Elevations are given in meters and, in parenthesis, feet.

[h]Investigative level of effort taken at the site: E = test excavation, S = surface collected only.

TABLE 26

Distribution of artifacts from 10-CW-93, W-3

Provenience		Artifact class[c]	Catalogue number[d]	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning[h] Evaluation		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
Indeterminate		Flk	0243	Thick uniface	Quartz	38	26	13	15	5	3	2
		Flk	0244	Indeterminate	Igneous	88	94	28	341	4	4	4
		Flk	0245	Uniface	Chert	30	23	9	6	5	4	2
		Flk	0248	Corner notch point w/o basal notch	Quartz	23	13	3	1	8	8	7

[a] Depth, in centimeters, below surface.

[b] Unit of excavation (see text).

[c] Either lithic (flaked or non-flaked) or historic materials.

[d] Based on the original Idaho State University accessioning system, all numbers are preceded by the project code "1609".

[e] Morpho-use form names of lithic artifacts are based more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

[f] Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g] Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h] 0 = indeterminate; 1 = unthinned core/nodule; 2 = unthinned flake with cortex; 3 = unthinned flake without cortex; 4 = preliminarily thinned piece with cortex; 5 = preliminarily thinned piece without cortex; 6 = primarily thinned piece, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shaped piece with significant edge regularity but not highly stylized shaped piece.

[i] 0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges; 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges; 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

TABLE 27

Distribution of artifacts from 10-CW-98, W-4

Provenience		Artifact Class[c]	Catalogue Number[d]	Morpho-use form[e]	Petrology	Length[f] (mm)	Width[f] (mm)	Thickness[f] (mm)	Weight[g] (gm)	Thinning Evaluation[h]		Edge shaping stage[i]
Level[a]	Unit[b]									Dorsal	Ventral	
Surface	Indeter	-	0236	Uniface, form indeterminate	Chert	0	22	9	5	3	5	2
		-	0237	Thick biface, minimum-edging	Chert	35	27	11	8	6	6	7
		-	0238	Thin biface, haft indeterminate	Chert	60	32	9	16	8	7	7
		-	0240	Thick uniface, minimum-edging	Chert	37	30	10	10	4	2	2
		-	0278	Drill	Chalcedony	0	7	4	1	8	8	6
		-	2205	Thin uniface, minimum edging	Quartzite	40	0	7	23	5	3	2
		-	2206	Thin uniface, minimum-edging	Chalcedony	14	13	2	1	5	3	2

[a] Depth, in centimeters, below surface.

[b] Unit of excavation (see text).

[c] Either lithic (flaked or non-flaked) or historic materials.

[d] Based on the original Idaho State University accessioning system, all numbers are preceded by the project code "1609".

[e] Morpho-use form names of lithic artifacts are based more on production morphology than on inferred use, though projectile points are labelled as such since they are temporally critical artifact elements.

[f] Length, width, thickness are given for lithic artifacts, only if measurement can be assumed to be complete; measurements are omitted from historic artifacts when considered unnecessary to identification.

[g] Weight is rounded to nearest gram; weight less than one gram is given as one gram.

[h] 0 = indeterminate; 1 = unthinned core/nodule; 2 = unthinned flake with cortex; 3 = unthinned flake without cortex; 4 = preliminarily thinned piece with cortex; 5 = preliminarily thinned piece without cortex; 6 = primarily thinned piece, "blank"; 7 = secondarily thinned piece, "preform"; 8 = well shaped piece with significant edge regularity but not highly stylized shaped piece.

[i] 0 = indeterminate; 1 = no "retouch"; 2 = unifacial edging on some edges; 3 = thinned flake without cortex; 4 = both unifacial edging with discrete areas of each but not covering all edges; 5 = both unifacial and bifacial edging with discrete areas of each covering all edges; 6 = bifacial edging only but only some edges; 7 = bifacial edging on all edges.

4. CONCLUSIONS

The Artifacts

The lithic cultural materials of the Dworshak Reservoir area were recovered principally from archaeological sites within the two terrace levels flanking the river. The upper terrace contains artifacts which, at least on the basis of biface morphology, seem to correspond fairly well with the Windust, Cascade, and Tucannon phases of the Lower Snake River region. As mentioned earlier in this report, in that area these artifact forms are associated with cultural strata dated at from 10,000 to less than 5000 years old (Leonhardy and Rice 1970:4). Corresponding assemblages in the Lower Clearwater River area are accredited as conforming to these dates. These similar biface types from within the Dworshak reservoir area on the Lower North Fork-Clearwater River were found associated with various carbon materials dating from 5300 to less than 600 years ago, with the majority of dates falling within the mid-range of these figures (Table 5). This leaves one to assume that either the Dworshak radiocarbon dates reflect disturbed and contaminated strata, or that the technological sequences represented by these tool forms persisted to a much later date in the North Fork area than that in the lower river valleys; it seems most probable that both possibilities are true.

The cultural sites of the lower terraces within the North Fork valley contain many biface types similar or identical to those of the late Tucannon, Harder, and ethnographic phases of the Lower Snake River technological sequences. These projectile point and blade forms are dated in that area as being less than 3000-4000 years old; in the Lower Clearwater River area these temporal and technological sequences are fairly uniform. The North Fork lower terrace artifacts date more recently than 4000 years before present.

Beyond biface typology, it is difficult to see technological divisions in the Dworshak artifacts based on the discussed sequence. A notable exception is the existence of netweights (notched, flat pebbles; or grooved, round cobbles) in the lower terrace sites, though these tools are absent from the upper terrace. This seems congruent with the pattern from the lower Snake-Clearwater river valleys of more netweights appearing over time, the pattern reflecting either an increased emphasis in fishing as a food resource, or a change in fishing technology (again, both are most likely).

An abundance of large, flaked cobbles implements is present in the Dworshak collection. The majority of these are from the older, upper terrace sites. This conforms to the description of Windust and Cascade phases as containing many "...cobble tools including large scraping planes, uniface and biface choppers, large scraper-like implements, and utilized spalls" (Leonhardy and Rice 1970: 4). A particular form of cobble implement found within the Dworshak sites consists of a large, pointed (or

"beaked"), steep-angled, unifacially flaked tool unit formed on one end of a rather elongated and water-worn basalt cobble. This artifact form has been found in some numbers in other site assemblages in the area and throughout the Pacific Northwest region, but has been previously reported in large concentrations only in the Lower Frazer River valley, British Columbia (Bordon 1968), and in the Lake Roosevelt area on the Middle Columbia River (David Chance:personal communication). The artifacts in both of these collections do not approach the large size of those pointed cobble tools found on the North Fork Clearwater River, which range in weight from 210 grams to 5298 grams. Within the Dworshak Reservoir area, the percentage of these artifacts within the total cultural assemblages generally increases as one proceeds upriver, with the majority of the implements (30 of 40) having been recovered from the older upper terrace sites. The early dates for most of these artifacts are supported by the Lake Roosevelt collection, where similar items are believed to date between 7000-5000 years ago; dates for the Frazer River assemblage (although seriously questioned) would place the age of cobble artifacts even earlier.

Due to their large size, it is difficult to imagine the purpose these implements served, although most often suggested uses for similar objects include butchering and woodworking activities. Another possibility is that they are merely waste-cores left over from the removal of sharp-edged primary flakes. This last possibility seems unlikely as all of the pointed cobble artifacts are strikingly similar in shape and form; not one of these artifacts has flakes removed from both ends of a cobble. Also, the collection does not contain many basalt primary flakes, which would be the object of this purpose. The possibility that these were butchering tools also seems unlikely; it is difficult to imagine the need for such enormous implements at any stage of the process, although replication experiments have been conducted using smaller cobble tools for splitting bone for marrow extraction (Cleveland 1976).

The use of these implements as woodworking tools, although somewhat difficult to picture, seems to be the prevalent use attributed world-wide to large cobble tools. Whatever their function, the pointed cobble tools from Dworshak appear to be larger and found in greater concentration than anywhere else reported in the region.

Most of the micro-crystalline lithic materials represented in the Dworshak artifact collection can be found as water-smoothed pebbles along the river. A light green to tan vitrophyre material (porphyritec volcanic glass) represented in the collection is believed to have as its ource an area along the Bitterroot divide at the head of the North Fork drainage (Edgar Bryan:personal communication; Knudson and Sappington 1977b:33). A sampling of 30 obsidian items from 11 sites (Table 28) was analyzed by nondestructive energy dispersive x-ray fluorescence following methods reported earlier (Sappington 1981a, 1981b) in order to compare these items with geologic area of origin. Comparisons based on 10 trace elements were done by SPSS discriminant subprogram MAHAL stepwise method (Nie and others 1975). Using elements as variables, and sources as groups, those ungrouped artifacts were placed into most likely source groups. Items with a probability of less than one standard deviation, or less then 68.00%, are assumed to be from sources not included in the analysis and regarded as

TABLE 28

Distribution of Obsidian Items from Dworshak Reservoir

Site	Item No.	Source Group	Probability of Correlation[a] P(G/X)
10-CW-12	1609-1394	Mosquito Creek	0.8792
10-CW-18	1609-1390	Ebell Creek	0.9975
10-CW-20	1609-998	Timber Butte	0.9994
	1609-1031	Timber Butte	0.9998
	1609-1032	Timber Butte	0.9999
10-CW-38	1609-252	Timber Butte	0.9370
	1609-261	Teton Pass	0.9304
	1609-750	Timber Butte	0.9999
	1609-893	Ebell Creek	0.8151
	1609-895	Timber Butte	0.9982
	1609-899	Timber Butte	0.9990
	1609-900	Timber Butte	0.9874
	1609-909B	Ebell Creek	0.6817
	1609-911A	Timber Butte	0.9951
10-CW-42	1609-158A	Timber Butte	0.9955
	1609-158B	Timber Butte	0.9362
	1609-158C	Timber Butte	0.9957
10-CW-43	1609-(unnumbered)	Timber Butte	0.9861
	1609-(unnumbered)	Timber Butte	1.0000
10-CW-46	1609-194	Timber Butte	1.0000
	1609-1391	Timber Butte	1.0000
10-CW-52	1609-1283	Timber Butte	1.0000
	1609-1285	Timber Butte	0.9990
10-CW-225	1609-(unnumbered)	Timber Butte	0.9988
10-CW-226	1609-607	Timber Butte	0.9745

[a]Items with a probability of less than one standard deviation, 0.6800, are not accepted and are reqarded as being from an unknown source; these items are not included here.

unknown. The results indicate that the source of most of the items (20 of 25 or 80%) is Timber Butte. Other sources identified were Ebell Creek (2 items, 8%), Wallowa Mountains (1 item, 4%), Teton Pass (1 item, 4%), and Mosquito Creek (1 item, 4%). Analysis of obsidian in the collection revealed the Timber Butte area in southwestern Idaho as the source for the majority of the material with a small amount coming from eastern Oregon, the Wallowa Mountains and the Yellowstone area. This distribution conforms with Spinden's (1908:184) view of Nez Perce obsidian sources, and seems to be fairly consistent through time for the Clearwater River area.

Summary

The cultural materials revealed by the Dworshak archaeological investigations are the scant remains of the lives and struggles of many groups of peoples through many millenia. A complete picture of these various peoples' existence will never be known; what we can hope to gain through archaeological investigations is a shadowed glimpse of their subsistence activities. The cultural materials evaluated within the context of the Dworshak archaeological study reflect the riverine activities which, along with those of the surrounding upland area, made up the seasonal subsistence round of many human groups. Examination of lithic materials and artifact morphology would seem to indicate cultural ties throughout time between the North Fork area and that of the lower Snake and Clearwater river valleys, with trade networks which extended (at least) southeast and southwest.

As discussed earlier, climate studies indicate overall environmental stability for regional montane areas for the past 12,000 years. Besides a shifting of the boundaries between vegetation zones in the lower river valleys, during this time there has probably been no major change in flora, and probably related fauna, in the area. There is every reason to believe that people living in the area have always exploited the hunting-fishing-gathering resource base available to them, although the intensity of exploitation of each of these subsistence categories has no doubt varied due to shifts in their availability and the human population density of the area.

A change in the level of a resource utilization by a population should logically be reflected in the group's material culture, either as a technological change or in a general increase or decrease of previously existing tool types. Stability in resource exploitation seems to be generally reflected in the North Fork site assemblages. Changes which do occur in the technological assemblages would seem to indicate a greater dependence on fishing and vegetal-processing overall the last several millenia. Most of the cultural materials from the Dworshak sites are resource-processing tools and their debris from manufacture and use. It is not known whether these represent the processing of a single, or a combination of, resources. Another unknown is whether these materials represent the total population of a social group or merely a task-specific force for that resource.

The existence of the pointed cobble tools in many of the sites is an interesting problem for study. If these implements are woodworking tools, used in chopping and/or scraping, one wonders what would be the object of such extensive activity. One possibility could be the construction of rafts for transporting large amounts of meat, fish, and vegetal resources downstream. It is interesting to note that the several sites where these artifacts are found in large numbers are located above canyons where passage downstream along the river would have been difficult or impossible except by water. Another woodworking activity which could be postulated is the construction of dwellings. This could mean the one time existence of winter settlements for above the lower river valleys where it is presumed winter villages were always located. Since the vast majority of these cobble tools were found in the upper terrace sites, this could place an upriver settlement pattern during Tucannon and earlier technological phases (pre 3000-4000 years ago).

Although this is merely speculation, upriver settlement is made at least feasible by the fact that winter temperatures vary little within the protected river canyon from the mouth of the Northfork to upper portions of the river (well above the sites where these cobble tools were found).

Many circular depressions of various sizes were reported on the upper and lower river terraces during the Dworshak investigation. Two of these depressions (10-CW-38, Indian Creek; and 10-CW-43, Big Springs) were test excavated and recorded as containing aboriginal living surfaces. Similar features on the lower Clearwater River have been deduced as being pithouse foundations dating back 4000 years and attributed as being evidence of early villages (Ames 1980:25). No living surfaces were found during the excavation of other North Fork circular depressions; the formation of most of these features can probably be attributed to: 1) depressions caused by root-upheaval during tree blow-downs; 2) nineteenth century mining exploration; 3) homesteading and logging activites; and 4) pothunting by amateur local artifact collectors.

The formation of the upper and lower terrace levels along the North Fork Clearwater River would seem to date to their respective cultural component sequences which, as discussed, would not necessarily have the same temporal brackets as those of the lower Snake and Clearwater river areas. Whether the cultural material from the two terrace levels are in situ or redeposited is uncertain. Redeposition seems to be a strong possibility as evidenced by: 1) the action on-going today of the upper North Fork low terrace faces being eroded during spring flooding, resulting in 3000-4000 year old cultural material being redeposited downriver; 2) visualizing the resultant redepositional action of the enormous floods which (prior to construction of the dam and reservoir) periodically surged through the North Fork canyon; and 3) several of the older upper terrace artifacts appear to be well-smoothed due to water tumbling action.

Historic occupation of the North Fork valley has consisted of utilization of terrace sites occupied aboriginally. Mining, homesteading, and logging activities greatly altered the appearance of the terraces thus having a drastic effect on the integrity of the prehistoric components. The historic aspects of these sites were not seriously investigated during the

AD-A130 193 CULTURAL RESOURCE INVESTIGATION OF THE DWORSHAK RESERVOIR PROJECT NORTH F.. (U) IDAHO UNIV MOSCOW LAB OF ANTHROPOLOGY D M MATTSON ET AL. 1983 MS-SER-74 3/3

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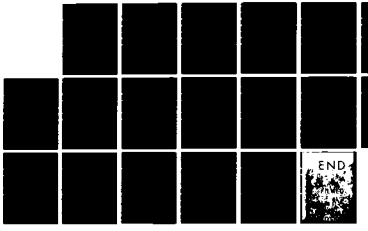

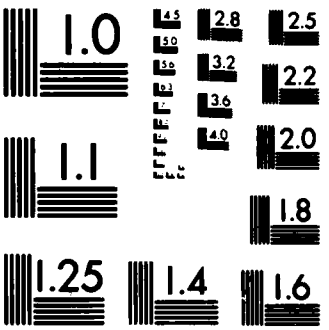

archaeological studies conducted prior to the filling of the reservoir, and consequently no discussion of these resources is presented here; the reader is referred to the historical background section and various site summaries contained within the report.

5. MANAGEMENT RECOMMENDATIONS

The cultural properties recorded within the Dworshak Reservoir project boundaries fall into three current management categories. The first of these consists of the cultural sites which have been permanently submerged since the original inundation of the reservoir. The sites in this category which are located on the lower terraces and in the lower portions of the river, now the deepest waters of the reservoir, may be subject to scouring from bottom current action. The sites in this same class which are located on the shallower portions of the reservoir probably are intact and protected by layers of sediments filtered downward from erosion of the present shoreline. Those sites located at the mouths of streams in the shallower portions of the reservoir probably have the greatest depth of sediment deposition due to stream sediment transport. A program initiated to ascertain the present condition of these sites is recommended in order to gain information needed for the management of these properties. This information would prove invaluable in planning cultural resource mitigation programs for future inundation projects.

The second category of cultural sites is located in that area of pool level fluctuation: inundated during high pool levels and exposed during drawdown levels. This area is subject to extensive wave-action erosion caused by the fluctuations in pool elevations.

This is the area of greatest managerial need. Recommended management for cultural sites in this category, which is directed toward mitigation of the adverse effects of inundation as well as inadequate previous data recovery, consist of:

1) Periodic monitoring of known cultural sites in order to establish a record of any change in site condition

2) Periodic investigation of all areas exposed during drawdown, in order to locate additional cultural sites exposed from erosion

3) Preservation of sites being eroded, consisting of "capping" of the site with asphalt or any erosion-resistant materials; failing this, test excavation of the site in order to lessen information lost

4) Limited investigation of the paleoclimate and geochronology of the valley's alluvium and soils, to provide a frame of reference for regional cultural historical studies of the Clearwater Plateau (valleys and uplands).

The third category of cultural sites are those which are located above maximum pool elevation. Besides two small areas where lithic materials were found, these sites consist of the remains of historic occupation of the

area, especially for the homesteading era. No evaluation of the historic sites recorded in the 1976-77 survey has been made. Several present campground areas are located adjacent to homestead structures. This has resulted in the severe vandalism of several of the structures. These sites would lend themselves well to public interpretation programs. Site interpretation of these particular properties could be used as a basis in representing historic settlement of the area. This visible recognition of the importance of these sites may also serve to slow vandalism.

A final area of recommended action is the initiation of an extensive program of public interpretation of areal cultural sequences at the Dworshak Dam Visitor Center. The scope of this program should be broad enough to include various aspects of human occupation of the North Fork area, perhaps using environmental resource constants as themes in presentation of areal cultural history.

REFERENCES CITED

Ames, Kenneth M.
1980 A Prehistory of the Clearwater Drainage and Adjacent Portions of the Columbia Plateau. Ms, Idaho State Historical Society, Boise.

Ames, Kenneth M. and James P. Green
1979 Lower Clearwater Prehistory: Excavations at Hatwai (10-NP-143) 1977-1978. Symposium presented at the 32rd Annual Northwest Anthropological Conference, Eugene.

Anderson, Alfred L.
1930 The Geology and Mineral Resources of the Region around Orofino, Idaho. *Idaho Bureau of Mines and Geology, Pamphlet 34.*

1941 Physiographic Subdivisions of the Columbia Plateau in Idaho. *Journal of Geomorphology,* 4:206-222.

Anonymous
1903 *An Illustrated History of North Idaho.* Chicago: Western Historical Publishing Company.

Antevs, Ernst
1955 Geologic-Climatic Dating in the West. *American Antiquity,* 20(4): 317-335.

Bancroft, Hubert H.
1890 *History of Washington, Idaho, and Montana.* San Francisco: The History Company.

Beal, Merril D. and Merle W. Wells
1959 *History of Idaho,* Vol. 1. New York: Lewiston Historical Publishing Company.

Bense, Judith
1972 *The Cascade Phase: A Study in the Effect of the Altithermal on a Cultural System.* Doctoral dissertation, Washington State University, Pullman. Ann Arbor: University Microfilms.

Benson, Michael P., and Ruthann Knudson, Thomas Dechert, and Richard C. Waldbauer
1979 A Preliminary Outline of the Cultural Resources of the Wilderness Gateway Recreation Area, Clearwater National Forest, Idaho. University of Idaho Anthropological Research Manuscript Series, No. 56. Moscow.

Bond, John G.
1963 Geology of the Clearwater Embayment. *Idaho Bureau of Mines and Geology, Pamphlet* No. 128.

Borden, Charles
1968 A Late Pleistocene Pebble Tool Industry of Southwestern British Columbia. In *Early Man in Western North America*, Symposium of the Southwestern Anthropological Association, San Diego, 1968, edited by Cynthia Irwin-Williams, pp. 55-69, Eastern New Mexico University, Paleo-Indian Institute, *Contributions in Anthropology* 1(4). Portales.

Bretz, J. Harlan
1929 Valley Deposits Immediately East of the Channelled Scablands. *Journal of Geology*, 77(5):505-543.

Carter, Harry G.
1941 Climate of Idaho. In "Climate and Man," *Yearbook of Agriculture*, 1941, pp. 829-840.

Chalfant, Stuart A.
1974 *Aboriginal Territory of the Nez Perce Indians*. New York: Garland Publishing.

Chance, David H.
1978 Interim Report of the Fall Excavations at Spalding, Idaho, in 1973. Ms., Laboratory of Anthropology, University of Idaho, Moscow.

1979 First Summary of the Archaeological Excavations at Spalding, Idaho, During the Spring of 1979. Ms., Laboratory of Anthropology, University of Idaho, Moscow.

Clearwater Historical Society.
1966 Reminiscences of Early Settlers. Ms., Clearwater Historical Society, Orofino.

Cleveland, Gregory C. and others
1976 Preliminary Archaeological Investigations at the Miller Site, Strawberry Island, 1976. *Washington Archaeological Research Center Project Report*, No. 46. Pullman.

Corliss, David and Joseph Gallagher
1971 Progress Report: Dworshak Reservoir Excavations, Summer and Autumn, 1971. Ms., Idaho State University Museum, Pocatello.

1972 Final Report: 1970-1971. Archaeological Survey of the Dworshak Reservoir. Ms., Idaho State University Museum, Pocatello.

Curtis, Edward S.
1911 *The North American Indian*, Vol. 8. Norwood: Plimpton Press.

Daubenmire, Rexford F.
1952 Plant Geography of Idaho. In *Flora of Idaho* by R. S. Davis pp.1-17. Provo: Brigham Young University Press.

Dort, Wakefield, Jr.
1965 Glaciation in Idaho - a Summary of Present Knowledge. *Tebiwa*, 8(1):29-37.

Elsensohn, Sister M. Alfreda
1971 *Idaho Chinese Lore*. Cottonwood: The Idaho Corporation of Benedictine Sisters.

Fenneman, Nevin M.
1931 *Physiography of the Western United States*. New York: McGraw-Hill.

Freeman, Otis W., J. D. Forrester, and R. L. Lupher
1945 Physiographic Divisions of the Columbia Intermontane Province. *Association of American Geographers*, Annals 35(1):53-75.

Gaarder, Lorin R.
1968 A Report on Archaeological Testing of Site 10-CW-5, Clearwater River, North-Central Idaho. *Tebiwa*, 11(1):60-70.

Gallagher, Wanda Jo
1976 Report of a Preliminary Archaeological Reconnaissance of the Elk City Planning Unit Idaho County, Idaho. *University of Idaho Anthropological Research Manuscript Series*, No. 27. Moscow.

Geidl, Mary Jo
1972 Place Names of Clearwater County. Master's thesis, University of Idaho, Moscow.

Gurcke, Karl, Robert Lee Sappington, Diana Rigg, and Ruthann Knudson
1979 Archaeological Reconnaissance of the Shoreline of Lower Granite Dam Reservoir, Washington and Idaho. *University of Idaho Anthropological Research Manuscript Series*, No. 55. Moscow.

Haines, Francis
1938 *Nez Perce Indians in Northwest History 1805 - 1895*. Berkeley: University of California Press.

Hansen, Henry P.
1939 Pollen Analysis of a Bog in Northern Idaho. *American Journal of Botany*, 26:225-228.

Hietanen, Anna
1963 Idaho Batholith Near Pierce and Bungalow, Clearwater County, Idaho. *U.S.G.S. Professional Paper* 344-D.

Hudson, Thomas J.
1975 *The Overview of Archaeological and Historical Resources on Clearwater National Forest in Northern Idaho*. Orofino: USDA, Forest Service, Northern Region.

Josephy, Alvin M., Jr.
1965 *The Nez Perce Indians and the Opening of the Northwest*. New Haven: Yale University Press.

Keeler, Robert W.
1973 An Upland Hunting Camp on the North Fork of the Clearwater River North-Central Idaho. *Occasional Paper of the Idaho State University Musuem*, No. 30. Pocatello.

Knudson, Ruthann
1973 *Organization Variability in Late Paleo-Indian Assemblages.* Doctoral dissertation, Washington State University, Pullman. Ann Arbor: University Microfilms.

1975 An Outline for the Description and Analysis of Flaked Lithic Artifacts. Ms., Laboratory of Anthropology, University of Idaho, Moscow.

1979 Basic Lithic Descriptive Outline (Flaked Tools and Cores). Appendix B to "Archaeological Test Investigations of the Riley Creek Recreation Area, Pend Oreille River Valley, North Idaho," pp. 65-72. *University of Idaho Anthropological Research Manuscript Series*, No. 52. Moscow.

Knudson, Ruthann and Robert Lee Sappington
1977a Archaeological Investigation of the Proposed Kelly Creek Gravel Source, Clearwater National Forest, Idaho. *University of Idaho Anthropological Manuscript Series*, No. 40. Moscow.

1977b Archaeological Investigation of the Wilderness Gateway Recreation Area, Clearwater National Forest, Idaho. *University of Idaho Anthropological Research Manuscript Series*, No. 44.

Knudson, Ruthann, Robert Lee Sappington, and Michael A. Pfeiffer
1977 Assessment of the Archaeological Resources Within the Dworshak Reservoir Project Boundaries, 1976. Ms., Laboratory of Anthropology, University of Idaho, Moscow.

Leonhardy, Frank C. and David G. Rice
1970 A Proposed Culture Typology for the Lower Snake River Region, Southeastern Washington. *Northwest Anthropological Research Notes*, 4(1):1-29.

Lupher, R. L.
1944 Clastic Dikes of the Columbia Basin Region, Washington and Idaho. *Geological Society of America Bulletin*, 58:1431-1462.

Lynch, Thomas F., Kent Wilkinson, and Claude Warren
1965 Archaeological Investigations at Bruces Eddy. *Tebiwa*, 8(2):33-56.

Mack, Richard N. and others
1978 Reexamination of Postglacial Vegetation History in Northern Idaho: Hager Pond, Bonner County. *Quaternary Research*, 10(2):241-255.

Mattson, Daniel M.
n.d. Archaeological Monitoring of Excavations at Ahsahka, Idaho. Ms., Laboratory of Anthropology, University of Idaho, Moscow.

Mehringer, Peter J., Jr., Stephen F. Arno, and Kenneth L. Petersen
1977 Postglacial History of Lost Trail Pass Bog, Bitterroot Mountains, Montana. *Arctic and Alpine Research*, 9(4):345-368.

Nie, Norman H. and others
1975 *Statistical Package for the Social Sciences.* New York: McGraw-Hill.

Osmundson, John and Christopher Hulse
1962 Preliminary Report on the Archaeological Survey of the Bruce's Eddy Reservoir, Idaho, 1961. *Tebiwa*, 5(1):11-29.

Pacific Northwest River Basins Commission, Meterology Committee
1969 *Climate Handbook - Columbia Basin States*, Vols. 1-3. Vancouver: Pacific Northwest Rivers Basins Committee.

Parkhurst, Zell E.
1950 Survey of the Columbia River and Its Tributaries Part 6, Area 5-Snake River System from the Mouth Through the Grande Ronde River. *U.S. Fish and Wildlife Service, Special Scientific Report - Fisheries*, No. 39.

Potlatch Corporation
1977 University of Idaho Wildland Resource Management Shortcourse, Tour of Potlatch Corporation's Clearwater Area Multiple Use Forest Management Operations, July 27-28, 1977. Potlatch Corporation, Lewiston.

Rice, David G.
1977 An Archaeological Assessment of Historic Moose City. Clearwater County, Idaho. *University of Idaho Anthropological Research Manuscript Series*, No. 30. Moscow.

Ross, Sylvia and Carl N. Savage
1967 Idaho Earth Science. *Idaho Bureau of Mines and Geology, Earth Science Series 1.*

Sappington, Lee
1981a A Progress Report on the Obsidian and Vitrophyre Sourcing Project. *Idaho Archaeologist*, 4(4):4-17.

1981b Additional Obsidian and Vitrophyre Source Description from Idaho and Adjacent Areas. *Idaho Archaeologist*, 5(1):4-8.

Schwede, Madge
1966 The Ecology of Nez Perce Settlement Patterns: a Synthesis of Ethno-Historical and Ecological Studies in the Columbia Plateau. Master's thesis, Washington State University, Pullman.

Shawley, Stephen D.
1977 Nez Perce Trails. *University of Idaho Anthropological Research Manuscript Series*, No. 44. Moscow.

Space, Ralph S.
1964 *The Clearwater Story*. Missoula: U.S. Department of Agriculture, Forest Service, Northern Region.

1972 *Pioneer Timbermen*. Lewiston: Printcraft Printing.

Spinden, Herbert Joseph
1908 The Nez Perce Indians. *American Anthropological Association Memoir*, No. 9 (Originally Vol. 2, Pt. 36, pp. 165-274). Lancanster.

Stapp, Darby
1980a Archaeological Test of the Bungalow Site, 10-CW-28. Report on file, Clearwater National Forest, Orofino.

1980b Bungalow Archaeological Test Excavation. Ms., Supervisor's Office, Clearwater National Forest, Orofino.

1980c Trace Element Analysis of Copper and Brass Trade Goods from the Pacific Northwest. In *Forgotten Places and Things*, edited by Albert Ward. Albuquerque: Center of Anthropological Studies.

n.d. Copper Artifacts from 10-CW-1. Ms in possession of the author.

Swanson, Earl H., Jr.
1971 Archaeology in the Clearwater River Valley, Idaho.

Swanson, Earl H., Jr. and David Corliss
1971 Interim Report to the National Park Service: Archaeology in the Dworshak Reservoir 1970-1971. Ms., Idaho State University Museum, Pocatello.

Thompson, Erwin N.
1963 *A Survey of the Recreational and Tourism Resources in the Nez Perce Country*. Chicago: Armour Research Foundation of Illinois Institute of Technology.

Toups, Polly A.
1969 The Early Prehistory of the Clearwater Valley, North-Central Idaho. Doctoral dissertation, Tulane University.

U. S. Army Corps of Engineers
1975 Final Environmental Impact Statement: Dworshak Dam and Reservoir, North Fork Clearwater River, Idaho. United States Army Corp of Engineers, Walla Walla District, Walla Walla.

U. S. Fish and Wildlife Service
1960 *A Report on the Fish and Wildlife Resources Affected by the Bruce's Eddy Dam and Reservoir Project North Fork Clearwater River, Idaho.* Washington: Department of the Interior.

Waldbauer, Richard C., Ruthann Knudson, and Thomas Dechert
1981 The East Kamiah Site, Clearwater River Valley, Idaho, as Known from Test Excavations. *University of Idaho Anthropological Research Manuscript Series*, No. 64. Moscow.

Weatherford, Claudine
1980 Trade Bells of the Southern Plateau: Their Use and Occurance Through Time. *Northwest Anthropological Research Notes*, 14(1):20-84.

Yent, Martha E.
1976 The Cultural Sequence at Wawawai (45-WT-39), Lower Snake River Region, Southeastern Washington. Master's thesis, Washington State University, Pullman.

APPENDIX A

10-CW-1 COPPER

by

D. Stapp

At the Bruce's Eddy Site, 10-CW-1, two burials were excavated (Figs. 76, 77) that contained large quantities of copper artifacts (Lynch, Wilkinson, and Warren 1965). The burials which included one adult female and one infant, were interred within a 12 ft. diameter stone circle. Both burials were heavily laden with copper artifacts, primarily rolled tubular beads, bracelets, and pendants. Associated artifacts included an antler digging stick handle and small dentalia shell beads with the adult, and a pestle, lithic debitage, shell beads, and numerous glass seed trade beads with the infant burial. The occurrence of an adult and an infant burial both in association with large quantities of copper artifacts has been observed at Kettle Falls, on the Upper Columbia, in northeastern Washington.

In 1979, a study began on copper trade goods from the Pacific Northwest (Stapp 1980c). Collections recovered from Indian burial sites located throughout the Plateau have been obtained for analysis. The materials from 10-CW-1 represent one of the larger collections of copper artifacts from this region: the adult burial containing over 50 tubular beads, 12 bracelets, and a rectangular pendant; the infant burial containing approximately 200 rolled tubular beads and 4 pendants. The absence of other historic trade goods suggests that the burials date to the late proto-historic period, approximately 1780-1804 AD. The presence of the glass seed beads, however, may indicate a date of post 1810 for the internment of the infant burial (Roderick Sprague 1981:personal communication). If, in fact it is established that the trade beads could not have been obtained prior to 1810, it will be difficult to account for the absence of other types of trade goods which were common in the area by this time (Weatherford 1980:68).

A major aspect of the copper artifact study is a chemical analysis of the trace-element within the metal through the use of x-ray fluorescence spectroscopy. This has been made possible by a grant from the Idaho Bureau of Mines and Geology for the use of the instrument. The purpose of the chemical analysis is to identify different copper sheet "types" and ultimately source them to the country of origin. The copper artifacts from 10-CW-1 were subjected to the trace element analysis, and although the study is still in progress, some useful statements can be made.

Over 90% of the copper artifacts were assigned to ten "types" of copper sheeting. Both burials contained approximately the same percentage of each type. These types were identified by comparing the relative proportions of trace elements, principally antimony, arsenic lead, silver, tin, and zinc,

Fig. 76. Burial One, 10-CW-1, Bruce's Eddy.

Fig. 77. Burial Two, 10-CW-1, Bruce's Eddy.

and are commonly found among copper artifacts from sites located within the Columbia River drainage. It is expected that, once all sites have been compared, the presence/absence and frequency of particular types might provide insight to the proto-historic trade network of copper sheeting. Although the country of origin has not been determined through chemical means, historical research indicates that the metal sheets were brought from various European sources and Mexico to the Northwest Coast to be traded for sea otter skins (Lynch, Wilkinson, and Warren 1965). Copper kettles were also traded, and the two large pendants, one from each burial were probably made from copper kettles, indicated by the fact that one side of each pendant is coated with tin. Copper kettles must be coated with tin to prevent a poisonous chemical reaction when acidic foods are cooked in the kettle (Stapp 1980c, n.d.).

The burials from 10-CW-1 contain one of the most interesting collections of copper artifacts known to exist in the Pacific Northwest. It is the richest collection ever recovered in the Clearwater and Snake river drainages. The fact that the infant burial contained over three times the number of copper artifacts as did the adult offers interesting insight into the value system of the inhabitants of the area and suggests that wealth may have been inherited. In addition, the richness of the burials suggests that the society was stratified to some extent (Weatherford 1980). The similarity of the burials to the burial at 45-FE-1 at Kettle Falls, Washington, both in artifact content and metal types represented, suggests some relationship between the two areas. As more collections of copper artifacts are recovered and analyzed, the significance of the 10-CW-1 collection will become clearer.

APPENDIX B

SMOKED ROCK

by

Ralph S. Space

In 1964 I became Area Forester for Dworshak Dam. In simplest terms my job was to prevent damage by fire outside the flowage area. To do this, it was necessary to keep a close check on power saws, tractors, and other equipment to see that adequate spark arresters were provided and equipment was ready to suppress a fire quickly, if one should occur. I also kept a close watch on all people working within the area to see that smoking, camping, and other fire prevention rules were obeyed. When slash burning was in progress I issued burning permits and gave advice on when and how to burn safely.

These activities required being on the job each working day. However, during the midsummer months, slash burning was not permitted and the contractors and workmen were very cooperative in following the rules. This gave me time to look for Indian artifacts in areas close to where the crews were working.

Looking for artifacts consisted of searching along the river banks between high and low water to see what was uncovered by the spring floods. I also looked where tractors turned over the dirt. These methods produced some results on river bars and flats particularly after a heavy rain. I have found artifacts on almost every flat along the river. Before 1968 I did little digging.

In 1968 the clearing crews started working about a mile above Elk Creek and worked up river to Ladd's Creek. I searched along the river, on flats and near springs, for artifacts and found about 10 arrowheads and an equal number of other artifacts.

When working in the vicinity of O'Neal Creek the country was so steep that there were few likely places to look for artifacts, although I did find a few. It then occurred to me that it might be possible that the Indians had camped under a cliff if it overhung enough to provide a shelter. I accordingly examined the cliffs along the river and finally came upon a rocky bluff that overhung an area of about 8 x 10 ft. I noticed that the face of this bluff was colored with carbon from fires. I removed a small rock which gave me a break in the sod and dug a hole about 12 in. in depth. The earth from this hole produced a small piece of stone which had been chipped but discarded. I then knew I had found an old Indian campground.

I next informed an Army Engineer of what I had found and asked him if he wished to report it to his superiors, with the thought that some archaeologist might wish to excavate the area. He looked at the site and

stated that it was too small to be of importance. Since the area was to be flooded in 1971, I asked him if I could dig there and he said I could but he doubted I would find much. The area was so small and so far from the recognized areas of Indian habitation that I also thought the area of little importance.

The name Smoked Rock, I am told by Mr. Frank Altmiller, a long time resident on the North Fork, was the name local residents applied to this bluff. Hunters, particularly poachers, at various times camped under this rock years ago. They had never built a shelter there but may have built a table (I found burned nails.) The area burned over in 1936 and roads were built to the river above so that there has been little or no use of the area as a shelter since that time. He was unaware that the Indians had ever camped there.

Smoked Rock is located about one half mile above O'Neil Creek on the north side of the river, almost directly below the open country known locally as the "One Thousand Acre Breaks." The rock overhang is almost at right angle to the river and is about 25 ft. in elevation above the highest river watermark. At normal water level it is about 200 ft. from the river. The overhang is about 8 ft. for a distance of about 10 ft. The rock bluff is about 20 ft. high, so it is not a very imposing sight. In fact, unless a person was looking for such a site, it would go unnoticed. The clearing contractor built a jeep road past this place so it is accessible in summer by four wheel drive trucks or similar vehicles, foot, or when the water is right, by boat.

I discovered Smoked Rock on 9 August 1968 and started digging and screening on 12 August which was the first day it rained in the breakup of the 1968 fire season. First I dug a trench about 3 ft. wide from the back of the overhang and at right angle to it out to the edge of the overhang. This trench went down to the lowest depth at which any signs of man could be found. Later I widened this trench to include the entire sheltered area.

I would dig about one hour per day, the noon hour, and at times was assisted by an army engineer, the contract foreman, another forester, one day; and on one week-end by my son. I finished digging on 7 October 1968, when the road became impassable. By rough calculations, about 12 yd^3 yards of material were dug and sifted. A total of 78 arrowheads were found and about 30 other artifacts. My findings follow.

Geology

The overhanging cliff called Smoked Rock was created during the high floods of the Glacial Age. The melting ice and the wet climate during and at the close of the Glacial Age made the North Fork of the Clearwater River much larger than at present. It was during this time that the river tore out the softer material below the hard granite of Smoked Rock. The gravel was deposited by the river near the end or just after the Glacial Age.

Occupancy

Following the Glacial Age the climate became warmer and man moved into the Clearwater area. The first use of Smoked Rock was as a temporary camping site. Individual camp fires were built and apparently it was occupied for a short time. The only artifacts found at this level were arrowheads. One of these came from a fire pit 5 ft. below the surface. Unfortunately, I had no means of dating the carbon from any of these camp fires or those at higher levels. Some broken bones were also found in this pit that appeared to be from deer.

After the period of temporary occupancy described above, a residence was established. This dwelling probably consisted of poles laid up against the face of the cliff and these covered with bark, hides, straw, or twigs. In the center of this dwelling was a circle about 2 ft. in diameter made of river washed stones about 8 in. in diameter and used as a fireplace.

The clay which formed the floor to this dwelling was packed so hard that a shovel could be run through it only by standing on the blade. On this floor was a six inch accumulation of black clay, ashes, carbon, and bones. From the hardness of the floor and the accumulation of debris it is apparent that this dwelling was occupied for many years. A number of arrowheads, knives, and scrapers were found here.

The bones appeared to be those of deer, elk, and birds, probably grouse. It is worthy of note that no fish bones or clam shells were found at this level. Also, no pestles or other tools for grinding roots were found. This makes me wonder if there were salmon in the Clearwater River at that time and also whether the Indians at that time had learned how to prepare camas and cous roots for food.

From the amount of charcoal found, it appears that this shelter burned.

After the shelter at level B, was discontinued, occasional camping took place at this site for a long time because individual fire pits with bones and artifacts were found. About 18 in. of soil built up under the shelter during this period.

A second dwelling very similar to that at level B, but without a fireplace, was established at level D. This level was eighteen inches higher than level B, and from the amount of bones, artifacts, dust, and carbon, it also must have been occupied for a long time.

Not as many arrowheads were found at this level D as at level B but a greater variety of artifacts were found. This leads me to believe that more tools were made from bone or wood at level B and have deteriorated to where they could not be recognized as such.

Arrowheads, knives, scrapers, cleavers, lasts, pestles, baking stones, fishing gig flints, awls, and other leather working tools were found. Bones of various animals were found, including those of deer, elk, beaver, birds (apparently grouse and geese), fish, and musselshells.

The dwelling at level D also burned. There were likely forest fires in those days as there are now.

Following the dwelling at level D, periodic camping again took place under Smoked Rock until after the coming of the white man. About 18 in. of soil and small rock accumulated during this time.

Artifacts consisting of arrowheads, knives, scrapers, and a bone crochet hook, cooking stones, and pestles were found. One knife made of stone was an obvious attempt to duplicate the steel blade of a hunting knife. The same bones were found as at level D.

The top 6 in. of black soil and grass roots contained only relics left by white hunting parties. All were blackened by fire, which Frank Altmiller told me spread over the area in 1936. About 20 wire nails (10 d), a button, a buckle, a small pail, a number of cans, and cartridges were found. The cans were of the design used before 1920. The cartridges were 30-30, a popular deer gun before 1925, a 30 caliber shell marked FA 07 (Frankfort Arsenal 1907), several 38 S & W shells (a pistol cartridge), and numerous 22 short shells. Apparently white hunters did most of their camping here before 1925, as Mr. Altmiller states.

One of the things that I learned by this dig was how arrowhead making evolved from the crude points without a base to the latest type, some of which are works of art.

APPENDIX C

1976-1980 Dworshak Project Lithic Descriptive Outline

by

Ruthann Knudson, Dan Mattson, Connie Bollinger, and Julia Longenecker

The format presented here is for a fixed-field display using an 80-column coding form, and is particularly designed for SPSS analysis. This list is based on previous descriptive outlines by Knudson (1973, 1975, 1979).

Spaces needed	Column no.	Variables and values
		VAR 01, Analytical Identifier
2	1,2	VAR 01a, Project Identifier: AJ (assigned by the Laboratory)
4	3-5	VAR 01b, Item Identifier: a number in sequence from 1...n, nested within the Project Identifier, justifed from the right with zeros in empty spaces
1	6	VAR 01c, Card Identifer: a number identifying the computer card used to describe particular variables, if needed
8	8-15	VAR 02, Site Number: assigned by the Idaho Archaeological Society with the Smithsonian Institution designation of state (2 spaces), county (2 spaces), and in-county site number (4 spaces) justified to the right with zeros in the empty spaces
		VAR 03, Within-site Provenience Identifier
2	16-17	VAR 03a, Master Unit 00: Indeterminate 01: 1970, Indeterminate 02: 1970, Surface 03: 1970, Pit 1 04: 1970, Pit 2 05: 1970, Pit 3 06: 1970, Pit 4 07: 1970, Pit 5

Spaces needed	Column no.	Variables and values
2	16-17	08: 1970, Pit 6
		09: 1970, Trench 1
		10: 1970, Trench 2
		11: 1970, Trench 3
		12: 1970, Trench 4
		13: 1970, Trench 5
		14: 1970, Housepit-pit 1
		15: 1970, Pit 1-2S/0-2W
		16: 1970, Pit 2-3S/0-2W
		17: 1970, Pit 5-6N/4-6E
		18: 1971, Indeterminate
		19: 1971, Surface
		20: 1971, Pit 1
		21: 1971, Pit 2
		22: 1971, Pit 3
		23: 1971, Pit 4
		24: 1971, Pit 5
		25: 1971, Pit 6
		26: 1971, Pit 7
		27: 1971, Pit 8
		28: 1971, Pit 9
		29: 1971, Pit 10
		30: 1971, Pit 11
		31: 1971, Pit 12
		32: 1971, Pit 13
		33: 1971, Pit 14
		34: 1971, Pit 15
		35: 1971, Pit 16
		36: 1971, Pit 17
		37: 1971, Pit 101
		38: 1971, Pit 102
		39: 1971, Pit 103
		40: 1971, Pit 104
		41: 1971, Pit 105
		42: 1971, Pit 106
		43: 1971, Pit 107
		44: 1971, Pit 108
		45: 1971, Pit 109
		46: 1971, Pit 110
		47: 1971, Pit 111
		48: 1971, Pit 200
		49: 1971, Pit 250
		50: 1971, Pit N-1
		51: 1971, West E455
		52: 1971, Block 2
		53: 1971, Trench A-pit A
		54: 1971, Trench A-pit 1

Spaces needed	Column no.	Variables and values
2	16-17	55: 1971, Trench A-pit 2
		56: 1971, Trench A-pit 3
		57: 1971, Trench A-pit 4
		58: 1971, Trench A-pit 5
		59: 1971, Trench A-block 1
		60: 1971, Trench B-pit 1
		61: 1971, Trench B-pit 2
		62: 1971, Trench B-pit 3
		63: 1971, Trench B-pit 6
		64: 1971, Trench B-pit 7
		65: 1971, Trench B-pit 11
		66: 1971, Trench B-pit 12
		67: 1971, Main excavation-testpit 1
		68: 1971, Main excavation-testpit 2
		69: 1971, Main excavation-pit A
		70: 1971, Main excavation-pit 1
		71: 1971, Main excavation-pit 2
		72: 1971, Main excavation-pit 3
		73: 1971, Main excavation-pit 4
		74: 1971, Main excavation-pit 5
		75: 1971, Main excavation-pit 6
		76: 1971, Main excavation-pit 7
		77: 1971, Main excavation-pit 8
		78: 1971, Main excavation-pit 9
		79: 1971, Main excavation-pit 10
		80: 1971, Main excavation-pit 11
		81: 1971, Main excavation-pit 12
		82: 1971, Main excavation-pit 13
		83: 1971, Main excavation-pit 14
		84: 1971, Main excavation-pit 15
		85: 1971, Housepit 2-testpit 1
		86: 1971, Housepit 2-testpit 2
		87: 1971, Housepit 2-pit 1
		88: 1971, Housepit 2-pit 2
		89: 1971, Housepit 2-pit 3
		90: 1971, Housepit 2-pit 4
		91: 1971, Housepit 2-pit 5
		92: 1971, Housepit 2-inderminate
		93: 1971, Rockshelter-pit 1
2	18-19	VAR 03b, Top of Level Elevation (cm)
		00: Indeterminate
		01: Surface
		02: +52
		03: +36
		04: +35
		05: +30

Spaces needed	Column no.	Variables and values
2	18-19	06: +14
		07: +10
		08: 0
		09: -10
		10: -15
		11: -17
		12: -20
		13: -23
		14: -25
		15: -28
		16: -30
		17: -35
		18: -36
		19: -38
		20: -40
		21: -43
		22: -46
		23: -50
		24: -58
		25: -60
		26: -70
		27: -72
		28: -80
		29: -85
		30: -87
		31: -90
		32: -92
		33: -100
		34: -106
		35: -110
		36: -118
		37: -120
		38: -130
		39: -140
		40: -150
		41: -160
		42: -170
		43: Levels 1-3
		44: Levels 1 and 2
		45: Level 2
		46: Levels 2 and 3
		47: Levels 2 and 7
		48: Lower level
2	20-21	VAR 03c, Level Thickness (cm)
		00: Undetermined
		01: No depth

Spaces needed	Column no.	Variables and values
2	20-21	02: 7 03: 9 04: 10 05: 12 06: 14 07: 15 08: 16 09: 17 11: 20 12: 21 13: 25 14: 26 15: 30 16: 35 17: 36 18: 40 19: 43 20: 45 22: 50 23: 55 24: 70 25: 80 26: 192
1	22	VAR 04, Stratigraphic Unit 00: Undetermined 01: Surface 02: 03: 04: 05: 06: (other categories 07: will be added as 08: they are classified) 09:
12	23-34	VAR 05, Laboratory Artifact Catalog Number
2	35-36	VAR 06, Material 01: Flaked lithic 02: Non-flaked lithic 03: Other
2	37-38	VAR 07, Lithic Material Class 01: Igneous materials, indeterminate as to any class specified below 02: Sedimentary materials, indeterminate as to any class specified below

Spaces needed	Column no.	Variables and values
2	37-38	03: Metamorphic material, indeterminate as to any class specified below 04: Granitic, coarse 05: Granitic, fine 06: Sandstone, coarse 07: Sandstone, fine 08: Quartzite, coarse 09: Basalt, coarse 10: Shale, not baked 11: Baked shale 12: Siltstone 13: Claystone 14: Andesite 15: Rhyolite 16: Metarhyolite 17: Slate 18: Quartzite, medium 19: Basalt, fine 20: Quartz 21: Quartzite, fine 22: Opalite 23: Siltite 24: Argillite 25: Agate 26: Chalcedony 27: Chert, clastic 28: Chert, fossiliferous 29: Chert, oolitic 30: Chert, banded 31: Chert, not otherwise specified here 32: Chert, chalcedonic 33: Silicified wood 34: Vitrophyre ("ignimbrite"), devitrified 35: Vitrophyre, vitrified 36: Obsidian 37: Indeterminate even as to major class (as specified in 01-03)

NG: Specific definitions of these materials are being compiled; until defined in greater detail, "chert" is used as a general category to include all opaque sedimentary silex materilas varously labeled as "chert," "flint," "jasper," and the like.

3	39-40	VAR 08, Lithic material color: (a key to the Munsell color designations is being completed) 01: Clear 02: Clear with yellow inclusions

Spaces needed	Column no.	Variables and values
2	39-40	03: Clear with yellow and red inclusions 04: Clear with red inclusions 05: Clear with red and black inclusions 06: Clear with black inclusions 10: White 11: White with red, yellow, and black 20: Cream 26: Light variegated 27: Light variegated with light purple 28: Light variegated with orange, red 30: Yellow 31: Light yellow 32: Light yellowish green 35: Yellow brown 40: Brown 41: Dark brown 42: Light brown 50: Orange 51: Light orange 60: Red 61: Light red (pink) 65: Purple 66: Light purple 68: Variegated red, purple, blue 70: Blue 80: Green 81: Light green 85: Olive 89: Dark blackish green 90: Gley/grey 91: Light grey 92: Smokey grey

(Other values may be added to this in the future, arranged appropriately in terms of hues)

Spaces needed	Column no.	Variables and values
2	39-40	93: Dark grey 99: Black 00: Indeterminate
2	41-42	VAR 09, Lithic material, specifically identified 01: Lochsa vitrophyre 02: Kamiah chert 03: 04: 05: (other categories will be 06: added to this in the future 07: as they are identified) 08: 09: 10: 00: Material not specifically identified; indeterminate
3	43-45	VAR 10, Item Length: in mm, justified from the right with zeros in empty spaces - maximum piece length, based on traditional morpho-use orientation; record only if the measurement is assumed complete
3	46-48	VAR 11, Item Width: in mm, justified from the right with zeros in empty spaces - perpendicular to the maximum length recorded in VAR 10, based on traditonal morpho-use orientation; record only if the measurement is assumed complete
3	49-51	VAR 12, Item Thickness: in mm, justifed from the right with zeros in the empty spaces - maximum piece thickness in plane at 90° angle to the plane of maximum width and lenght; record only if the measurement is assumed complete
4	52-55	VAR 13, Item Weight: in grams, justified from the right with zeros in empty spaces - recorded whether item complete or not
1	56	VAR 14, Item Condition: 1: Medial section, broken across midsection and/or longsection so as to include part of only one longitudinal edge

Spaces needed	Column no.	Variables and values
1	56	2: Medial section, broken acress midsection and/or longsection so as to include part of both lateral edges 3: Teminal section, unidentifiable as to distal or proximal orientation (estimate no more than 1/3 of orginal size) 4: Terminal section, distal fragment (estimate no more than 1/3 of original size) 5: Terminal section, proximal fragment (estimate no more than 1/3 of original size) 6: Medial and terminal section (estimate 1/2 or more of original size), unidentifiable as to distal or proximal orientation 7: Medial and distal section (estimate 1/2 or more of original size) 8: Medial and proximal section (estimate 1/2 or more of original size) 9: Apparently complete or nearly so tool or core (though it may have been reworked) 0: Small fragment, unidentifiable as to orientation or body part
1	57	VAR 15, Thermal Alteration Evidence 1: Burned (evidenced by potlids, crazing, "smoky" color, and/or chemical breakdown; more intense than annealing) 2: Not burned, no evidence of annealing 3: Annealed (evidenced by color change and/or luster, but not burned) 0: Indeterminiate (should rarely be used)
1	58	VAR 16, Culturally Significant Adhesions 1: No adhesions, not burned 2: Pigment only 3: Only organic material other than specified in 4 and 5 below 4: Resin or resin-like substance (dark, organic, greasy) only 5: Fibrous organic substance only 6: Pigment plus some organic material 0: Indeterminate (as if acid-bathed, burned, etc.)
1	59	VAR 17, Item Facial Designation: dorsal/ventral, for general reference 1: Arbitrary, with no traditional or technical criteria present for reference

Spaces needed	Column no.	Variables and values
1	59	2: Traditional laboratory designation, based on using the labeled face as "ventral" 3: Identifiable technical features allow orientation according to ventral face of struck face
		VAR 18, Item Thinning Stage Evaluation:
1	60	VAR 18a, Dorsal Face 1: Non-thinned core of raw material 2: Non-thinned flake of raw material, with cortex 3: Non-thinned flake of raw material, without cortex 4: Edged piece, i.e. first stage of edging as a major part of shaping the whole piece and setting up platforms for piece thinning, with cortex remnant 5: Edged piece as in (4), without cortex 6: Primarily thinned piece, "blank" 7: Secondarily tinned piece, "preform" 8: Shaped piece, where the thinning also provides significant edge regularity but is not higly stylized (e.g., point, special knife form) 9: Highly stylized shaped piece, e.g., particular projectile points 0: Indeterminate
1	61	VAR 18b, Ventral Face: same values as for VAR 18a
1	62	VAR 19, Item Employable Unit (EU; Knudson 1979:270) shaping stage, general evaluation 1: No "retouch" or special acute edge shaping 2: Unifacial edge shaping only, some edges 3: Unifacial edge shaping only, all edges 4: Both unifacial and bifacial edge shaping, though each type is in a discrete area; some edges only 5: Both unifacial and bifacial edge shaping, though each type is in a discrete area; all edges 6: Bifacial edging only, some edges 7: Bifacial edging only, all edges 0: Indeterminate
1	63	VAR 20, Core Form (item may or may not have been used as a tool) 1: Item is a core, but is so fragmentary as to make form determination impossible 2: Bipolar core, as when struck between hammer and anvil

Spaces needed	Column no.	Variables and values
1	63	3: "Sliced" core, as when flakes are taken off end like slices off a loaf 4: Prepared multiple platforms, random or irregular form 5: Prepared multiple platforms, bidirectional only 6: Prepared multiple platforms, discoidal form 7: Prepared multiple platforms, Levallois-like form 8: Prepared platform area, polyhedral form, only worked around part of the total circumference of the platform area 9: Prepared platform area, polyhedral form, worked around the total circumference of the platform area (may be more or less regular, and large or small in size; would include forms such as Mesoamerican blade core, microblade core, etc.) 0: Not applicable; not a core
4	64-67	VAR 21, Tool Morpho-Use Form 0000: Not applicable; unused debitage or fragments; tool fragments 0100: Indeterminate as to any form classified below 0200: Used but apparently unworked flake 0300: Used core, not shaped in any further form 0400: Edged plate 0500: Unifacial tool or tool fragment, other than point or more specialized form; form otherwise inderminate 0510: Uniface, thick, indeterminate as to accessory form(s) 0511: Uniface, thick, with minimal edging; scraper plane or raclette 0512: Uniface, thick, major edging orientation indeterminate 0513: Uniface, thick, major edging, side 0514: Uniface, thick, major edging, end 0515: Uniface thick, major edging, side-and-end 0520: Uniface, thick, with accessory form(s) 0521: Uniface, thick, with accessory form(s), with minimal edging 0522: Uniface, thick, with accessory form(s), major edging orientation indeterminate

Spaces needed	Column no.	Variables and values
4	64-76	0523: Uniface, thick, with accessory form(s), major edging, side
		0524: Uniface, thick, with accessory form(s), major edging, end
		0525: Uniface, thick, with accessory form(s), major edging, side-and-end
		0530: Uniface, thick, without accessory form(s)
		0531: Uniface, thick, without accessory form(s), with minimal edging
		0532: Uniface, thick, without accessory form(s), major edging orientation indeterminate
		0533: Uniface, tnick, without accessory form(s), major edging, side
		0534: Uniface, thick, without accessory form(s), major edging, end
		0535: Uniface, thick, without accessory form(s), major edging, side-and-end
		0540: Uniface, thin, indeterminate as to accessory form(s)
		0541: Uniface, thin, with minimal edging
		0542: Uniface, thin, major edging orientation indeterminate
		0543: Uniface, thin, major edging orientation, side
		0544: Uniface, thin, major edging orientation, end
		0545: Uniface, thin, major edging orientation, side-and-end
		0550: Uniface, thin, with accessory form(s),
		0551: Uniface, thin, with accessory form(s), with minimal edging
		0552: Uniface, thin, with accessory form(s), major edging orientation indeterminate
		0553: Uniface, thin, with accessory form(s), major edging orientation, side
		0554: Uniface, thin, with accessory form(s), major edging orientation, end
		0555: Uniface, thin, with accessory form(s), major edging orientation, side-and-end
		0560: Uniface, thin, without accessory form(s),
		0561: Uniface, thin, without accessory form(s), with minimal edging
		0562: Uniface, thin, without accessory form(s), major edging orientation indeterminate
		0563: Uniface, thin, without accessory form(s), major edging orientation, side
		0564: Uniface, thin, without accessory form(s), major edging orientation, end

Spaces needed	Column no.	Variables and values
4	64-67	0565: Uniface, thin, without accessory form(s), major edging orientation, side-and-end
		0600: Biface, other than point or more specialized form, otherwise indeterminate as to form
		0610: Biface, thick, otherwise indeterminate as to form
		0611: Biface, thick, minimally shaped, but with some edging
		0612: Biface, thick, well-shaped, but with minimal edging, indeterminate as to haft
		0613: Biface, thick, well-shaped, but with minimal edging, no haft; chopper, hand axe, hoe
		0614: Biface, thick, well-shaped, but with minimal edging, hafted
		0615: Biface, thick, well-shaped, well-edged (almost stylized), indeterminate as to haft
		0616: Biface, thick, well-shaped, well-edged, no haft
		0617: Biface, thick, well-shaped, well-edged, hafted
		0620: Biface, thin, haft indeterminate
		0621: Biface, thin, without obvious haft element
		0622: Biface, thin, with obvious haft element
		0700: Denticulate
		0800: Beak
		0900: Notch
		1000: Cresent
		1100: Drill
		1200: Burin
		1210: Burin, not on an otherwise worked form
		1220: Burin, on worked unifacial form
		1230: Burin, on worked bifacial form
		1300: Graver, general tool form indeterminate
		1310: Graver, not on otherwise worked form
		1320: Graver, on unifacially worked form
		1321: Graver, on thick unifacially worked form
		1322: Graver, on thin unifacially worked form
		1330: Graver, on bifacially worked form

Spaces needed	Column no.	Variables and values
4	64-67	1400: Projectile point, form indeterminate 1410: Projectile point, triangular 1411: Projectile point, triangular, without basal notch 1412: Projectile point, triangular, with basal notch 1420: Projectile point, side-notched 1421: Projectile point, side-notched, without basal notch 1422: Projectile point, side-notched, with basal notch 1430: Projectile point, corner-notched 1431: Projectile point, corner-notched, without basal notch 1432: Projectile point, corner-notched, with basal notch 1440: Projectile point, stemmed 1441: Projectile point, stemmed, without basal notch 1442: Projectile point, stemmed, with basal notch


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