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REPORT OF THE
CULTURAL RESOURCE SURVEY:
SPARTA DITCH AND SHANGHAI GULCH
AREAS OF THE
WALLOWA-WHITMAN NATIONAL FOREST
VOLUME I

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STANDARD REPORT ABSTRACT

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| <p>TITLE: Report of the Cultural Resource Survey: SPARTA DITCH and SHANGHAI GULCH, Areas of the Wallowa-Whitman National Forest VOLUME: I</p> | <p>AUTHOR(S): Tim Riordan Roger Walke Ricky Hoff DATE: May 1979</p> |
| <p>ABSTRACT: In November 1978, Professional Analysts conducted a cultural resources survey along the Sparta Ditch (T6,7 & 8S, R43 & 44E) and in the Shanghai Gulch area (section 3, T8S, R44E) of the Wallowa Whitman National Forest in northeast Oregon. We located seven historic sites associated with the mining theme established for the Forest. Several of the sites may be representative of the livestock/settlement theme as well.</p> <p>We provide a brief historic overview of the study area and describe the identified historic sites. We evaluate cultural/historic significance in the light of legal requirements for historic preservation, and outline management options for the sites.</p> | |
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REPORT OF THE
CULTURAL RESOURCES SURVEY:
SPARTA DITCH AND SHANGHAI GULCH
AREAS OF THE
WALLOWA-WHITMAN NATIONAL FOREST
VOLUME I

BY

Tim Riordan
Roger Walke
Ricky Hoff

May 1979

Final report of a cultural resources survey conducted under contract No. 53-04H1-8-7063N for the United States Department of Agriculture, United States Forest Service, Region 6, Portland, Oregon. Submitted in fulfillment of agreement by John R. Nelson, President, Professional Analysts, University Station, Box 3761, Eugene, Oregon 97403.

TABLE OF CONTENTS

| | <u>Page No.</u> |
|---|-----------------|
| PART I - INTRODUCTION | 1 |
| PART II - METHODS AND TECHNIQUES | 3 |
| PART III - SUMMARY OF WORK COMPLETED | 5 |
| PART IV - ENVIRONMENT AND SETTLEMENT CONSTRAINTS | 6 |
| 4.1 Environment | 6 |
| 4.2 Land Use | 7 |
| PART V - ETHNOGRAPHIC BACKGROUND | 8 |
| PART VI - HISTORIC BACKGROUND | 9 |
| PART VII - SITE DESCRIPTIONS | 14 |
| 7.1 Sparta Ditch Survey | 14 |
| 7.2 Survey of Section 3, T8S, R44E, WM. | 29 |
| PART VIII - NATIONAL REGISTER OF HISTORIC PLACES EVALUATIONS | 42 |
| 8.1 Sparta Ditch | 42 |
| 8.2 Shanghai Gulch Mining District | 45 |
| PART IX - MANAGEMENT RECOMMENDATIONS | 48 |
| 9.1 Introduction | 48 |
| 9.2 Impacts on Sites | 49 |
| 9.3 Mitigation Measures | 50 |
| PART X - REFERENCES | 54 |

LIST OF FIGURES

Page No.

| | | |
|-----------|--|----|
| FIGURE 1 | Study Area | 2 |
| FIGURE 2 | The Sparta Ditch Feature Locations | 15 |
| FIGURE 3 | The Sparta Ditch | 17 |
| FIGURE 4 | Remains of North Sparta Ditch Flume | 19 |
| FIGURE 5 | North Sparta Ditch Flume | 20 |
| FIGURE 6 | Remains of Footbridge Over Sparta Ditch | 21 |
| FIGURE 7 | Beginning of the Old Sparta Ditch Road | 23 |
| FIGURE 8 | South Sparta Ditch Flume | 25 |
| FIGURE 9 | Ditch Leading to Placer Mining Area | 27 |
| FIGURE 10 | Placer Mine Area | 28 |
| FIGURE 11 | Shanghai Gulch Mining District Mine Tailings | 30 |
| FIGURE 12 | Site Number 2 1870's Log Cabin Site | 32 |
| FIGURE 13 | Site Number 2 1870's Log Cabin | 33 |
| FIGURE 14 | Site Number 3 Homestead Site/Remains of Log Cabin | 35 |
| FIGURE 15 | Site Number 3 Homestead Site/Stone Foundation | 36 |
| FIGURE 16 | Site Number 3 Homestead | 37 |
| FIGURE 17 | Site Number 6 | 41 |

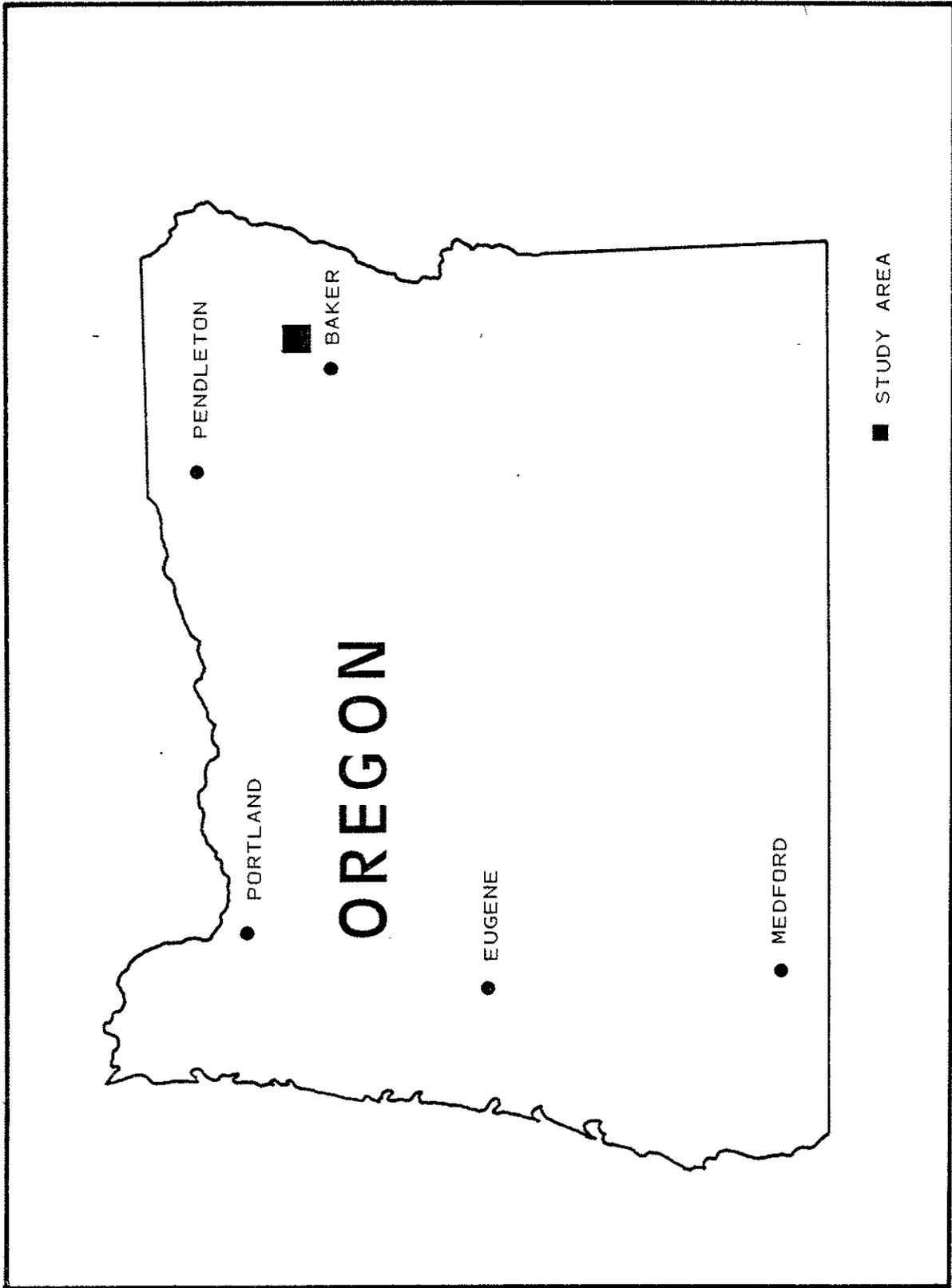
PART I - INTRODUCTION

Timothy Riordan and Ricky A. Hoff, of Professional Analysts, conducted survey field work on the Sparta Ditch between November 1, 1978 and November 5, 1978. Roger Walke, a company staff member, joined the crew for the "Shanghai Gulch" portion of the survey between November 6, 1978 and November 10, 1978.

The survey area is located in the Union Ranger District of the Wallowa-Whitman National Forest in Baker County, Oregon (see figure 1). The survey of Sparta Ditch began in Section 15, T6S, R43E, WM, and proceeded southward along the ditch through Sections 20, 21, 28, 29, 33-35, T6S, R44E, WM, Section 1 and 2, T7S, R43E, WM, Sections 6, 7, 18-20, 30-32, T7S, R44E, WM and Sections 4, 5, and 9, T8S, R44E, WM. (The "Shanghai Gulch survey" was not limited to the Gulch itself, but covered all of Section 3, T8S, R44E, WM.)

The major factor affecting the results of this survey was logging activity. Logging has had a serious, disturbing effect on the area. The debris left from logging made survey difficult and, at times, hazardous. A secondary factor was the cover of pine needles which blanketed the ground almost everywhere to a depth of 2 to 3 cm (.7 to 1.2 in.). It is possible that these factors caused us to pass over some low-visibility sites. The logging activity undoubtedly destroyed some sites. Locating these disturbed or low-visibility sites (if they exist) will be very difficult.

FIGURE 1
STUDY AREA



PART II - METHODS AND TECHNIQUES

We conducted the survey using methodology to ensure as complete an inventory of sites as possible through field inspection and historical documentation. The specific field methods used to achieve this goal varied with the terrain and the nature of the resource being surveyed. The ditch was surveyed by walking both sides of its entire length. The location of these transects varied from the edge of the ditch to 10 m (33 ft) away, depending on the steepness of the terrain.

We had planned the survey of the Shanghaie section to be done in 30 m (99 ft) transects but topographic limitations forced the modification of this approach. Where possible, we surveyed along drainages, with one surveyor on each side of the drainage and one in the bottom. The middle and southern areas of the section were surveyed in this manner. The northwestern quarter of the section was surveyed in 30 m (99 ft) transects. It was the only area with suitable topography to make transects practicable (it was also the only part of the section where we did not find evidence of historical activity). The butte in the northeastern part of the section was surveyed by "transecting" along the contour lines. The mouth of Shanghai Creek is inaccessible and the northern part of the section, along Eagle Creek, has a fifty percent slope and was judged to be too steep to survey.

The field procedures we used were a practical compromise

between the original survey plan and the factors of topography. Because of the rough and broken topography, maintaining 30 m (99 ft) transects is virtually impossible in some areas and extremely dangerous in other areas. Most of the historic remains are high profile and we could locate them by observing the terrain from vantage points on hill tops, ridgelines and overlooks. We feel that the results of the survey justify our approach, and provide the Forest Service with an accurate and cost efficient survey of the area.

PART III - SUMMARY OF WORK COMPLETED

We surveyed 661.5 acres during the course of field work. Six-hundred and forty acres are in the Shanghai section and 21.5 along the Sparta ditch. We spent a total of 22 person/days surveying the area or 30.06 acres/person/day. During that time, salaries and per diem amounted to \$1506, or \$2.27 per acre.

We spent an average of .5 hrs. recording each site. Extensive sites, like the mining camps, took longer.

PART IV - ENVIRONMENT AND SETTLEMENT CONSTRAINTS

4.1 Environment

The survey tract is located within the Blue Mountains physiographic province and, more specifically, in the heavily glaciated Wallowa mountains. Elevation in the area varies between 2900 m (8840 ft) at Eagle Cap to 1240 m (3390 ft) at Sparta. Numerous creeks and gulches dissect the landscape but the main drainage in the area is Eagle Creek.

Altered volcanic flows and sedimentary rocks formed the Wallowa mountains. A detailed description of the geology of the survey area has been published and is readily available (Franklin and Dyress, 1973). Soils in the region developed from volcanic ash and loess or from basic igneous rock materials.

The major vegetation in the area is pine forest with some spruce, grand fir and Douglas fir. Wildlife was abundant in the past and included: elk, mule deer, black bear, antelope, beaver, and bobcats. Most of these animals still exist in the area today.

4.2 Land Use

In general, the study area is rugged, yet rich, landscape. The area would have had many attractions for its prehistoric human inhabitants but their stays in the locality were probably brief. Harsh winters and the lack of large, flat camping spots near good water sources would preclude any permanent settlements in the region. The forest was probably utilized in the summer and fall by small scattered groups living in temporary camps.

The primary factor affecting settlement in and about Sparta during the early historic period was the presence of gold and the ease with which it could be mined. During later times, people took up logging, livestock raising and farming. In some parts of the survey area, steep or rough terrain was a major factor affecting the distribution of settlements and resource use.

PART V - ETHNOGRAPHIC BACKGROUND

The ethnic affiliation of the prehistoric inhabitants of the Sparta region is not clear. Some ethnographers believe that the area was controlled by the Nez Perce, while others contend that it was occupied by the Northern Paiute. Both groups probably utilized its resources on a seasonal basis. Because the terrain and climate precluded any large scale settlements, any evidence of prehistoric utilization of the region would be slight and hard to find.

Ayers, Hudson and Gauzza (1978) present a summary of the available ethnographic data in a Forest overview. Because we found no evidence of prehistoric occupation during the course of this survey, we refer interested readers to that source.

PART VI - HISTORIC BACKGROUND

The early history of the Oregon country begins with explorers and fur traders, but we have found no material evidence of these early travelers.

The recorded history of the area begins with the gold miners. In 1863, Squire Morris and Neales Donnelly discovered gold in Shanghai Gulch. They had to carry the dirt some 275 m (902 ft) to a water source to wash it. Thus, from the very beginning of its mining history, this locality was plagued by a lack of water. Nonetheless, soon after the discovery of gold in Shanghai, miners began pouring into the area.

Miners set up a small mining camp near the present site of Sparta and named it Kooster after a Dutchman who was mining in the area. The exact location of Kooster is unknown, but it is thought to have been located just east of Sparta. Another small camp called Gemtown was established about a mile west of Kooster near the Gem mine. Both camps were established in 1862-63. Merchants opened several stores (and presumably saloons) and did a thriving business.

Placer mining occurred in all of the gulches around Kooster. The most important were Shanghai, Moultrie, Maiden, Thorn, Blue, Murry, Rattlesnake, Sawmill, Iron and Horn Gulches. Most of the mining took place in the mid-1860's. The earliest and richest of the old placers was located in Shanghai Gulch and was owned by the Lieken brothers who surface mined the claim and hauled the ore to water by ox team. In two years, the claim yielded more than \$30,000

worth of gold (Baker Morning Democrat 1898:46).

By the late 1860's, the scarcity of water caused placer mining to become unprofitable and the population began to decrease. By 1870, when William H. Packwood sent out a survey team, all of the placer mines were abandoned (Morrison n.d.:53). The abandonment of the area was not caused by the lack of gold but because of the lack of water necessary to recover it.

Packwood, who had already built the Auburn ditch and the 103-mile long El Dorado ditch, decided to construct a ditch to bring water down to the mines. The survey group stayed out until late November, 1870. During the winter, twenty-six thousand dollars were raised for the construction of the ditch, and in January of 1871, Packwood and his associates surveyed a townsite to accommodate the influx of miners they expected. This town was named Sparta after Packwood's home town in Illinois.

By May of 1871 the surveys were complete and contracts were let to various China companies (a term used to describe gangs of Chinese laborers working under a labor contractor.) Several of these groups came from Baker City, while some came from as far away as Auburn, Oregon. Packwood set up the contracts in such a way that the Chinese would not get paid until water flowed in the ditch (but did not tell them of this condition). This clause was inserted to guarantee that Packwood and his associates would not suffer all the loss if the ditch were not completed.

Packwood added three new partners in June 1871, bringing an additional thirty thousand dollars into the building fund. At

this time the Sparta Ditch Company was formed and Packwood was named Secretary and Engineer.

Work began with three hundred Chinese working on the line. The Chinese were responsible for digging the ditch and non-Chinese were hired to build the flumes and tunnel through the rocks. Railroad workers from California hand-dug the tunnels near Eagle Creek (Morrison n.d.:57). The ditch carried water for the first time on October 14, 1871 — only five months after work began. The ditch ultimately cost ninety thousand dollars to build, and was 32 mi long.

The building of a ditch through such rough country is amazing in itself, but this ditch has some unique features. Several falls had to be built into the grade in order to give the water enough head to reach Sparta, with the biggest drop near the Lilly White area where the line drops over one hundred feet. The ditch had several flumes and tunnels bored through solid rock on rocky points above Eagle Creek.

As might be expected, the completion of the ditch had a great effect on settlement of the area. Miners began taking up claims even before the ditch was finished. In the 1870's the town of Sparta had a population of over three thousand people served by a butcher shop, saloon, hotel, assay office, two blacksmith shops, two stage lines, a wash house and several general stores. One of these stores, built of stone in 1872, is still standing. The post office, which opened in Gemtown in 1871, was moved to Sparta in

1872 when William W. Ross was made postmaster. A schoolhouse just west of Sparta was built in 1876.

In the 1870's, Sparta was a bustling town full of gold miners. At the height of this period, fifteen thousand dollars a week were sent through the mail to Baker and even more went into private hands. Gambling houses did a large business. As in other boom towns, prices were high. Flour was \$1.25 for 50 lbs. and bacon was 10¢/lb. Room-and-board at the hotel was ten dollars a week. While this does not seem like much now, it represented a great deal in 1870.

While some mining continued until World War I, the majority of the miners had left by the late 1880's when the gold played out. One indication of the extent of this depopulation was that the saloon, so popular in mining days, collapsed in 1883 from the weight of snow and was never rebuilt. The people who remained after the mining ended turned to farming and ranching. After 1885, the Sparta ditch was used for irrigation. The last reported use of the ditch was to carry water for farming in 1916.

The stone store in Sparta stayed open until about 1920 when improved transportation, which allowed people to travel to larger population centers, and declining local population made it unprofitable. The store was later converted into a hall and was used by the Sparta Grange in the 1930's.

This brief overview of the history of this region establishes the broad pattern but the details are still not clear. The first

mining claim and cabin was established in the Shanghai Gulch in 1862. The population of that section fluctuated during the 1870's and, except for some sporadic mining activities, the use of the ditch for mining was essentially abandoned after 1880.

PART VII - SITE DESCRIPTIONS

7.1 Sparta Ditch Survey

Our description of the features we encountered will begin at the north end of the ditch and proceed to the south. The description of the Shanghai section follows. This volume includes the general site location; a description of the site and associated features; its present appearance; and finally, a statement of its eligibility for inclusion on the National Register of Historic Places. We inventoried six features associated with the ditch itself and five separate sites in the Shanghai section. Detailed site locations and maps are included in Volume II.

Site 1: Sparta Ditch

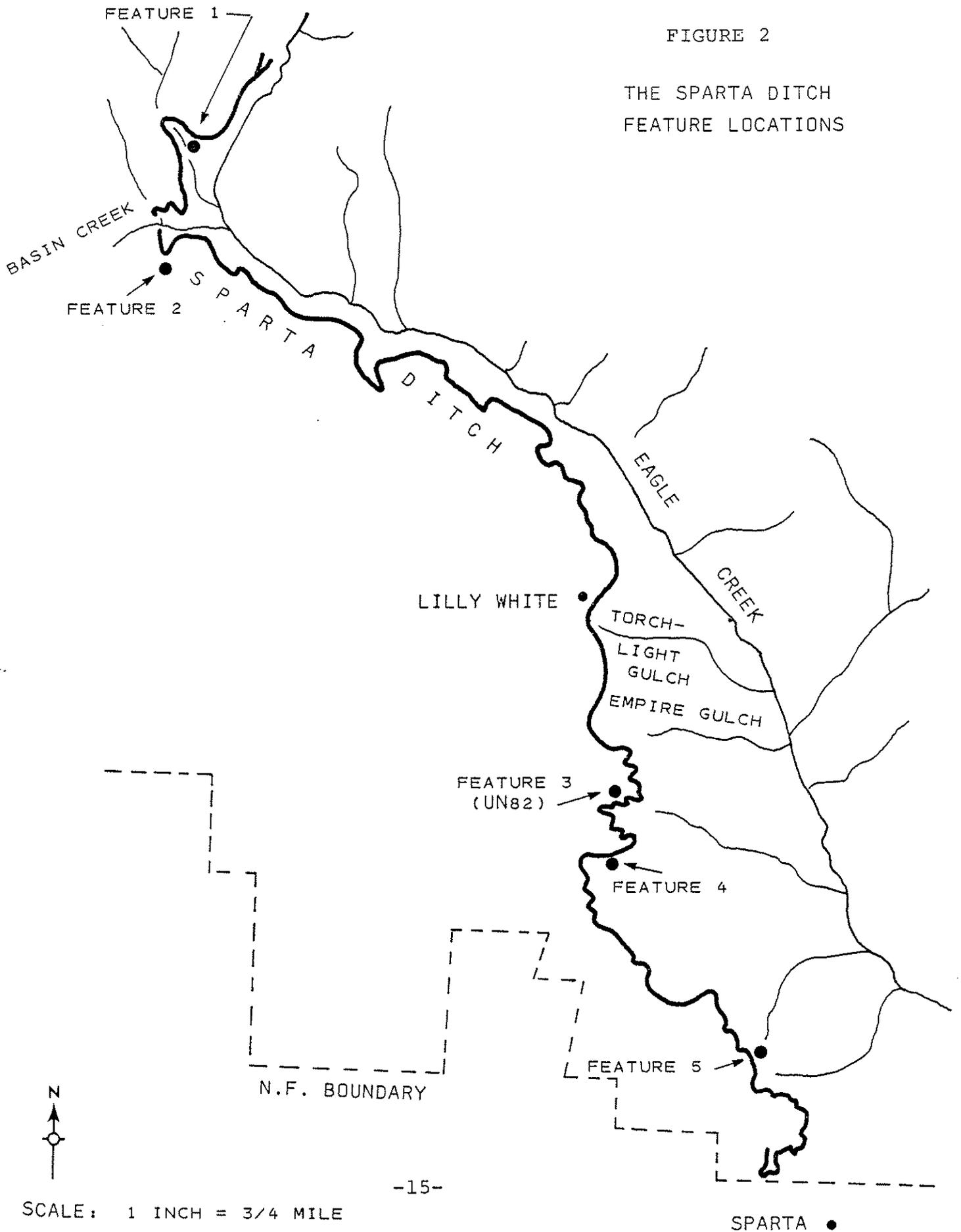
This ditch, which runs from the main fork of Eagle Creek south past Sparta, ranges in elevation from 1278 m (4193 ft) near Sparta to 1455 m (4774 ft) at its head on Eagle Creek (Figure 2). In general, it is U-shaped in cross section, and averages about one meter wide by one meter deep. Some sections are broader or deeper, however. There is a distinct berm on the downhill side.

The site is listed in the Wallowa-Whitman National Forest Overview (Ayers, Hudson, Gauzza 1978) as site L-39. There is also the possibility that sites UN-51 and UN-85, both listed in the same inventory, are actually parts of the Sparta Ditch. Both of these sites are in the same area and the local topography makes it unlikely that any other ditches exist there.

Between 1871 and 1916 the ditch was used to carry water down

FIGURE 2

THE SPARTA DITCH
FEATURE LOCATIONS



to Sparta for use in both mining and irrigation. The site is thirty-two miles long but has been disturbed or destroyed in many places. The chief factors affecting site preservation are:

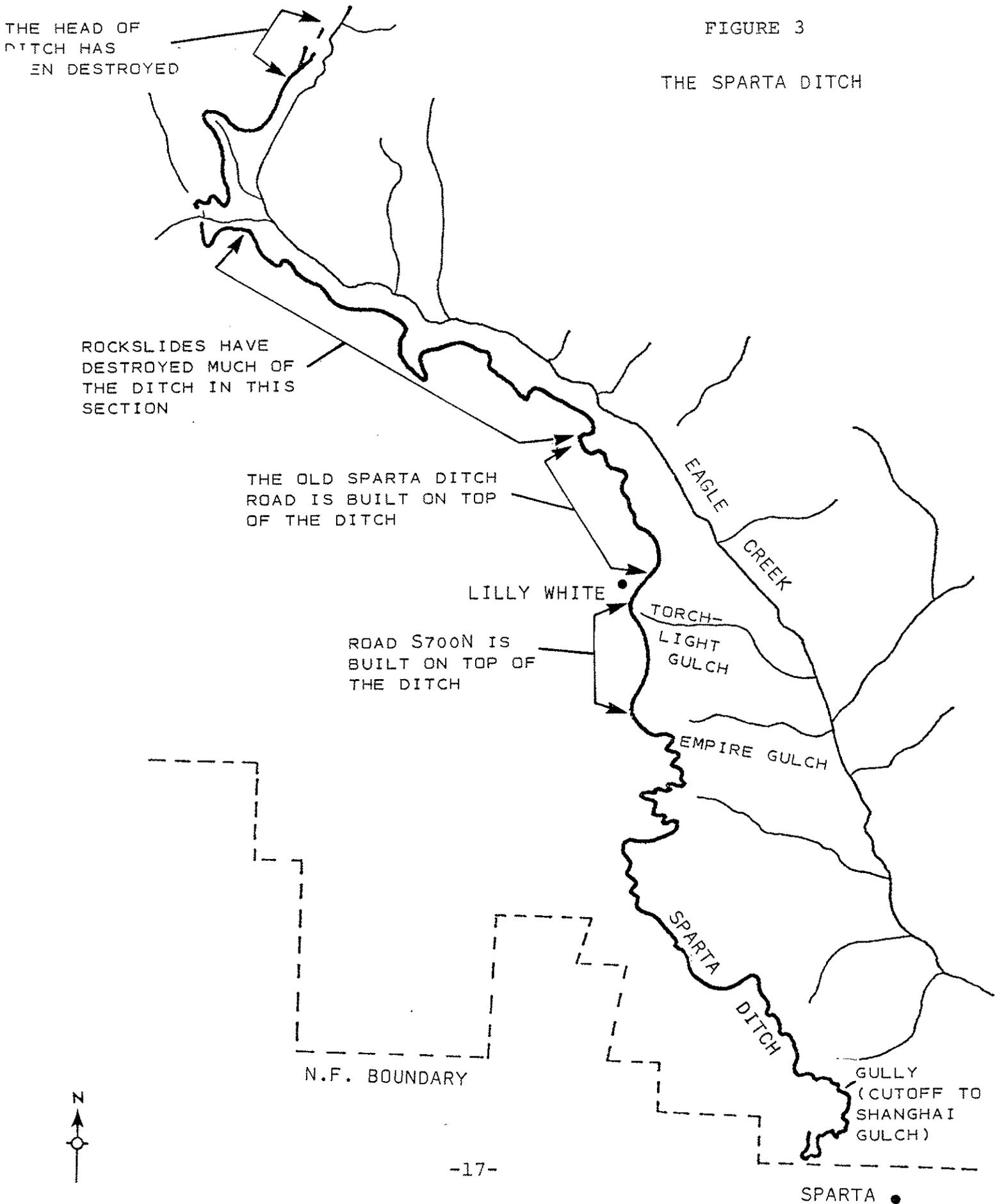
- 1) Road Construction
 - a. Built on top of the ditch
 - b. Cutting across the ditch
- 2) Logging
 - a. Skids cut across the ditch
 - b. Slash filling the ditch
- 3) Natural
 - a. Rock slides
 - b. Colluvium filling ditch
 - c. Burrowing animals

By far the most destructive of these have been the building of roads and the creation of skid trails for logging. National Forest Road S700N and the Old Sparta Ditch Road are both built on top of the ditch (Figure 3), destroying about four miles of it. The creation of skid trails for logging and logging roads has resulted in many breaches in the berm. These are slowly eroding from both edges of the breach. The effects of logging skids can be seen regularly along the ditch. Logging roads generally cross the ditch at curves in the contour lines. Both of these factors are too numerous to detail on the map. They occur all along the ditch with an average of about 20-30 per mile.

Starting at the northern end of the ditch, we shall describe the preservation of the ditch. The northern end of the ditch has been destroyed. Southward, the ditch appears well preserved until it crosses Basin Creek. Rockslides have destroyed much of the ditch from Basin Creek to the head of the Old

FIGURE 3

THE SPARTA DITCH



Sparta Ditch Road, and made much of the central part of this section inaccessible. The Old Sparta Ditch Road was built on top of the ditch and has destroyed this section. About a quarter of a mile north of Lilly White, the road and ditch diverge. The ditch is well-preserved from this point to the head of Torchlight Gulch. The ditch has been destroyed by road S700N from the head of Torchlight Gulch to near the head of Empire Gulch. The ditch is well-preserved from this point to the forest boundary.

Feature 1: North Sparta Ditch Flume

This feature is located 4 km (2.5 mi) south of the head of the ditch. Although this flume is actually part of the ditch, it has been listed as a separate feature because it represents a special activity in ditch building and is more likely to have other site materials associated with it.

The flume was built with log uprights and a log base with 4x4 timbers laid on top, then capped by heavy planking. One of the 4x4's has "NO 2 88 11" scratched on it. The feature has deteriorated considerably (see Figures 4 and 5).

Feature 2: Footbridge

Continuing southward 3.5 km (2 mi) we encountered this feature (Figure 6). It was once a footbridge across the ditch and was probably associated with the Basin mine, which is just west of it. All that remains of the site today are some planks lying in the ditch.

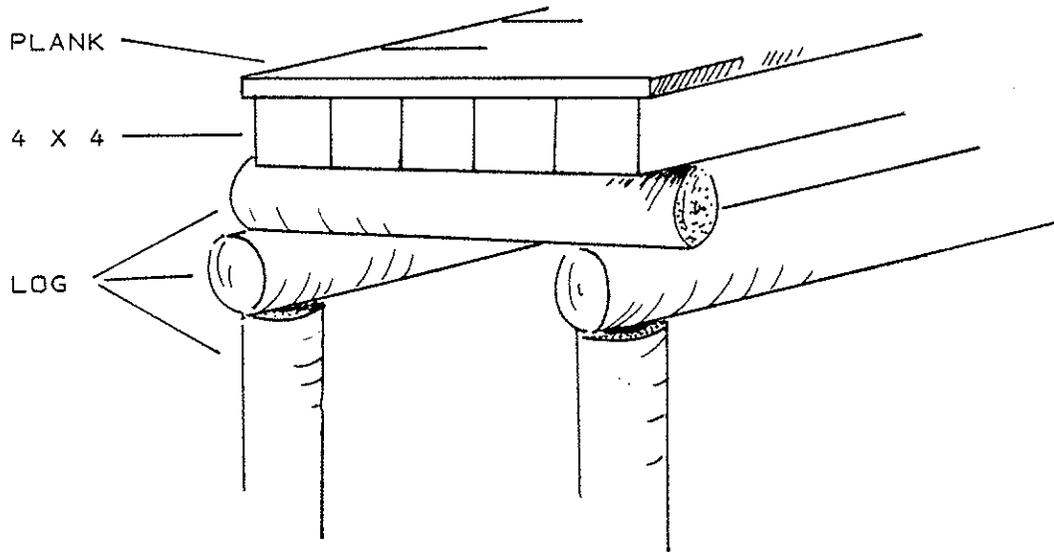
The ditch continues southward about 2 km (1 mi), crosses National Forest Road S679.1, and is contiguous with the steep slopes along the south side of Eagle Creek. We were only able to survey 2.5 km (1.5 mi).

FIGURE 4



FEATURE 1

REMAINS OF NORTH SPARTA DITCH FLUME



RECONSTRUCTION DRAWING

FIGURE 5

FEATURE 1
NORTH SPARTA DITCH FLUME



FIGURE 6



Feature 2

Remains of footbridge over Sparta Ditch

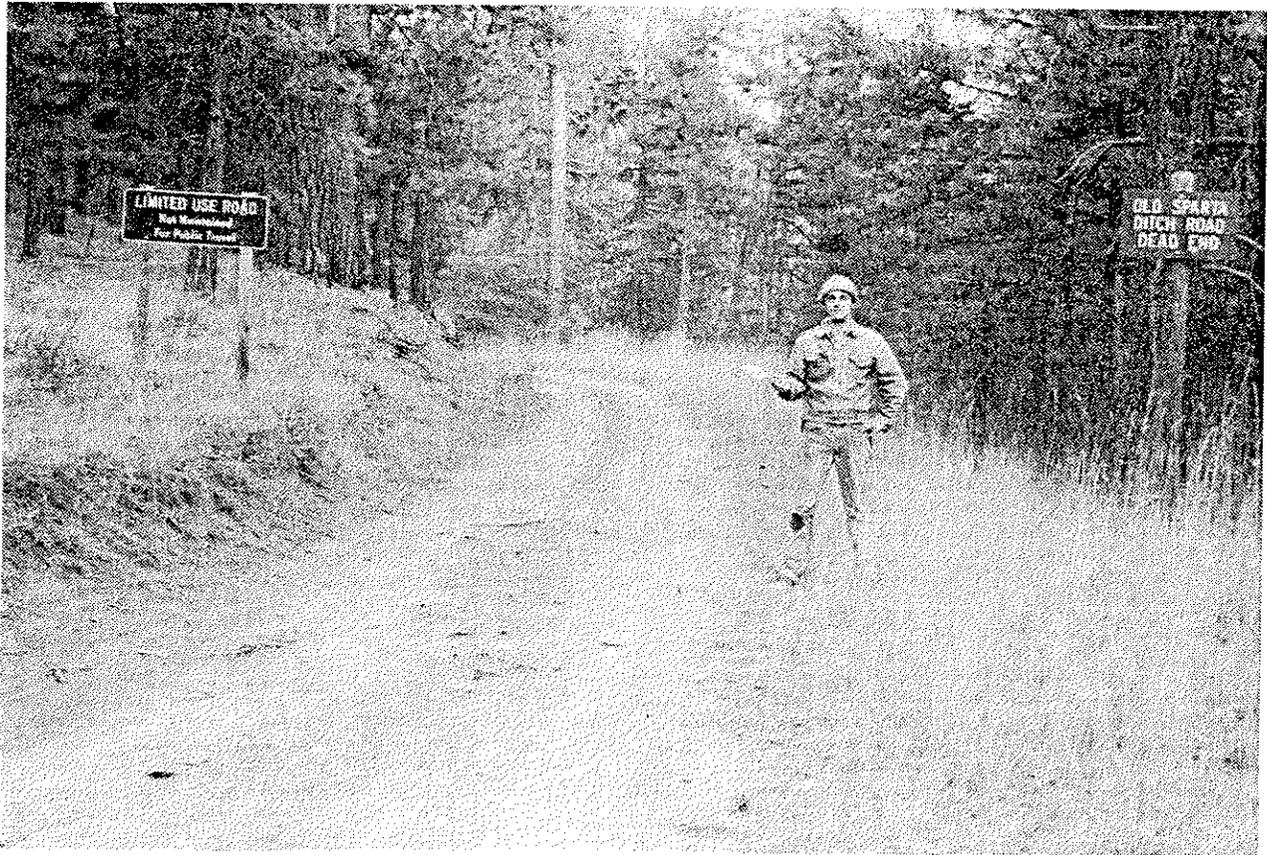
into this area before our progress was blocked by rockslides. The same problem was encountered when trying to reach the area from the south where we managed to get in about 3.3 km (2 mi) from the end of the Old Sparta Ditch Road before being blocked by more rockslides. Because of the rockslides and the terrain, about 8.3 km (5 mi) of the ditch were not surveyed. Two or more features are believed to be located along this stretch of the ditch. One is reported to be a "high flume" across Excelsior Gulch (Morrison, n.d.). The other (or others) are the tunnels that were cut through the rocky points above Eagle Creek.

The Old Sparta Ditch Road (Figure 7) was built on top of the ditch and any sites which may have existed along its length have been destroyed. About one-half km (.3 mi) from the beginning of the road, the ditch turns southwestward, drops nearly 25 m (82 ft) in elevation, and passes close to the Lilly White Work Station. This area is listed as UN-79 in the Forest overview, but since this site is outside of our survey area and is already recorded, we have not included it here.

From the Lilly White Work Station, the ditch runs southward following the 1388 m (4554 ft) contour line. About one km (.6 mi) south of the work station the ditch has been destroyed by road S700N. For about 3.5 km (2 mi) the road runs on top of the ditch. Any sites which may have been here are destroyed.

At the intersection of roads S792A and S700, the ditch drops approximately fifty m (164 ft) and then continues, following the 7333 m (24058.5 ft) contour line.

FIGURE 7



Beginning of the old Sparta Ditch Road

Feature 3: Mining Camp

Two km (1.2 mi) south of the S792A/S700 intersection, we observed a secondary ditch, running uphill from the Sparta ditch, which led to a hard-rock mine with at least two shafts. Further up the hill we found the remains of three cabins with associated trash dating from the 1870's to the present. It appears that there were more cabins at one time.

This site is identified in the Forest overview as UN-82. Although it is outside of our survey area it is mentioned here because obviously it is associated closely with the Sparta Ditch.

Feature 4: South Sparta Ditch Flume

South of the mining camp, the ditch follows a valley or notch in the ridge for approximately 2 km (1.2 mi). During our first survey of the area, we found no evidence of mining features. After talking to Mr. Dennis Butterfield and Mr. Paul Buckmaster, both residents of Sparta, we returned to the area and found the remains of a flume beneath the accumulated logging slash (Figure 8). Once we knew what to look for, we found many pieces of the flume mixed in with the slash. This is a good example of the limits logging activities can place on archaeological surveys. Enough of the flume remains that it might be possible to reconstruct its original appearance. This flume represents a special focus of activity and is likely to have other activity areas associated with it.

Feature 5: Placer Mining Site

We observed no signs of human activity, other than the ditch itself, in the next 9.5 km (6 mi) until we discovered this feature

FIGURE 8

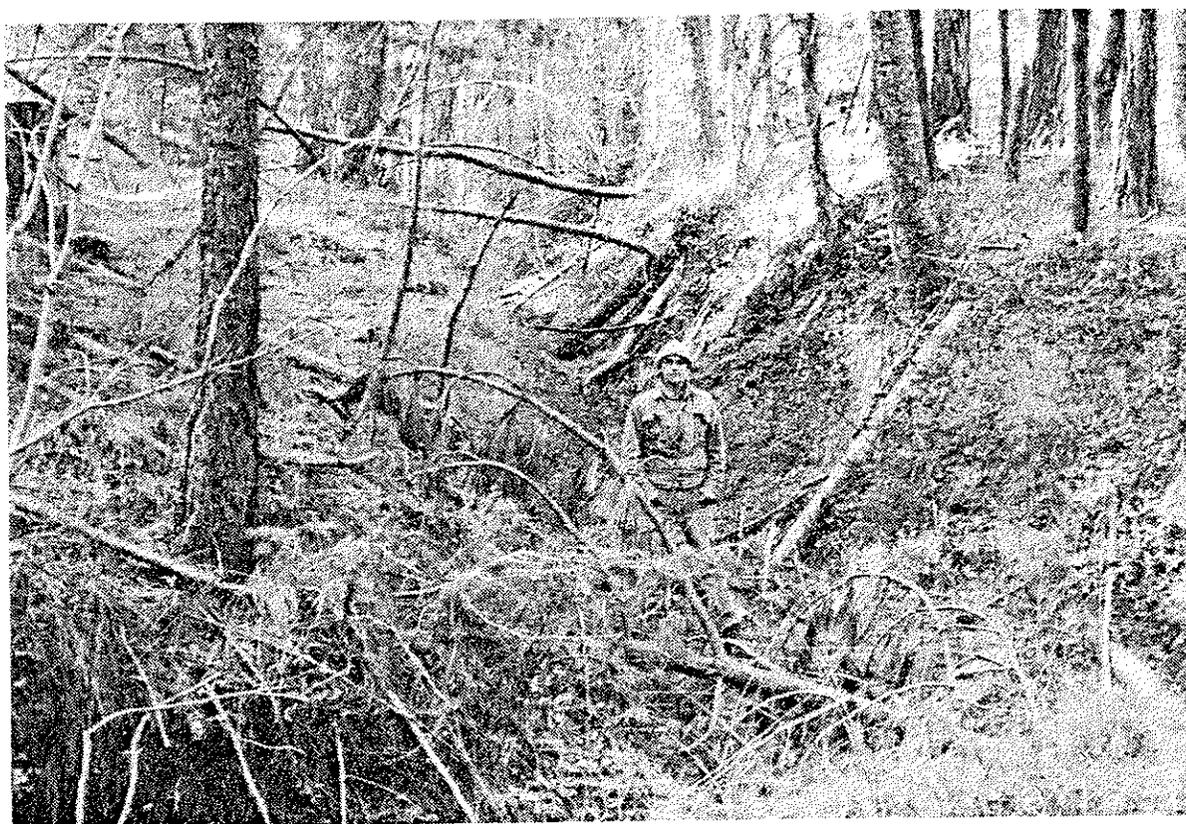


Feature 4
South Sparta Ditch flume

(Figures 9 and 10). From the Sparta Ditch this feature appears to be another ditch, but if followed, it opens up to an area of large pits and trenches which were most likely placer mines. Mining activity in this locality appears to be extensive and it is probable that there is a habitation site nearby.

We followed the ditch around Sparta Butte to the National Forest boundary but observed no other features. A curious gully was seen on the north side of Sparta Butte. Above the ditch there is no erosion while below it there is a very deep gully. We believe that this gully location, indicated on the study area map (Figure 3) may have supplied water to Shanghai Gulch.

FIGURE 9

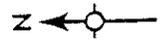
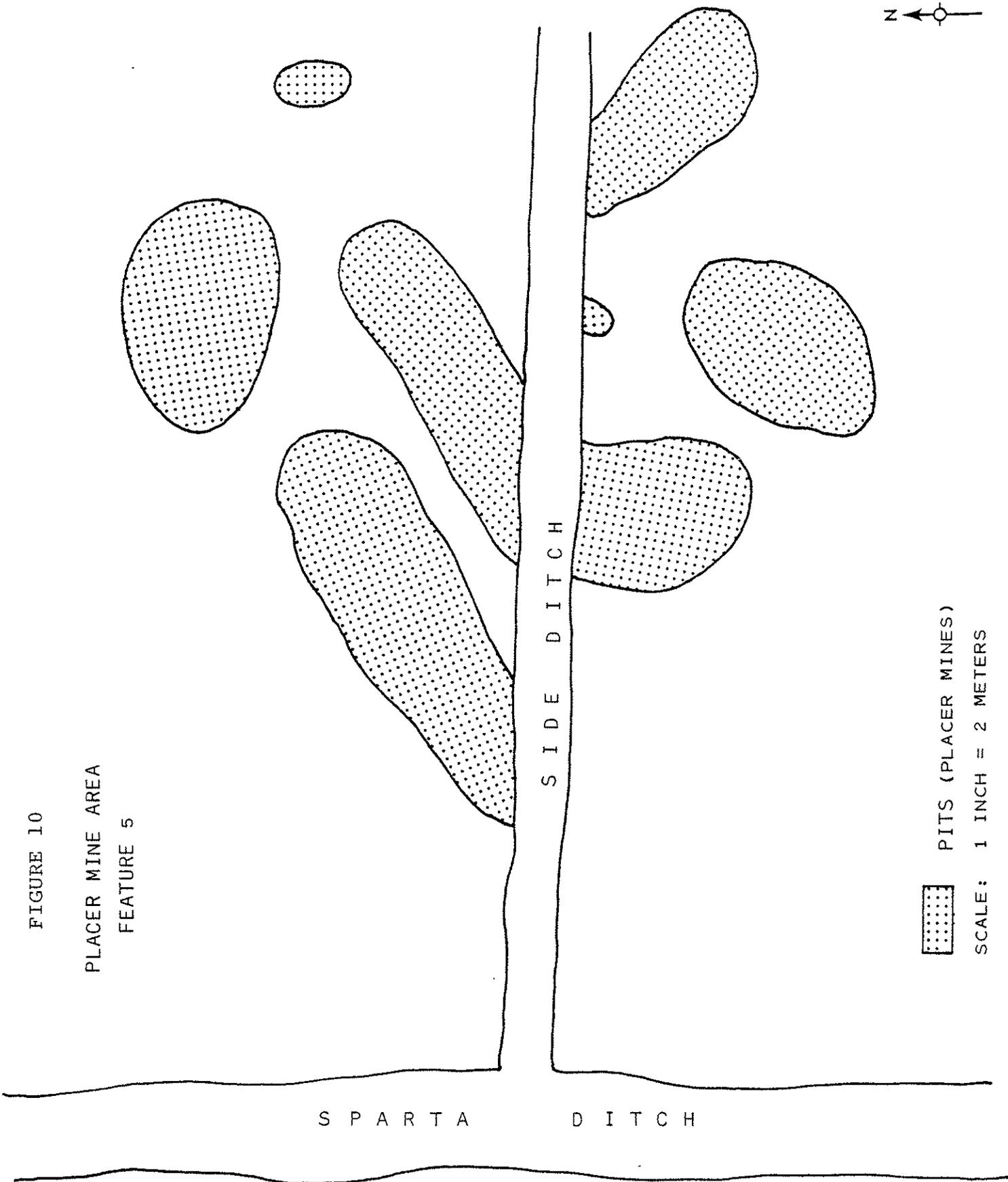


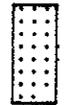
Feature 5

Ditch leading to Placer mining area

FIGURE 10

PLACER MINE AREA
FEATURE 5



 PITS (PLACER MINES)
SCALE: 1 INCH = 2 METERS

7.2 Survey of Section 3, T8S, R44E, WM.

The terrain of this section is extremely broken with elevational changes of as much as 457 m (1500 ft) in less than .8 km (.5 mi). It is characterized by numerous deeply cut stream channels which are heavily overgrown with vegetation. Because of the topography it was necessary to devise a survey strategy in the field. We decided to adapt the survey procedures to the topography. Since stream drainages are the major topographic feature, we surveyed these first. There were mine tailings in the bottoms of all the drainages in the section (Figure 11). The slopes of nearly all the drainages showed signs of placer activity. It must be emphasized that mine tailings and placer mining pits occur throughout the area and cannot be detailed on a map. We located four sites, described below, while surveying the area.

We surveyed a high butte, located in the northeast part of the section, along contour lines. Starting on the western side, we surveyed around the butte northward, eastward, southward, and finally westward, cutting across a ridge. We encountered no features on the western, northern, or eastern sides of the butte. Along the lower slopes of the southern ridge, we encountered numerous mining ditches, but none are well preserved. The one site located in this area is described below.

The western half of the section is relatively flatter than the eastern half and was surveyed, as accurately as possible, in 30 m (98 ft) transects. There was apparently nothing to induce settlement

FIGURE 11



Shanghai Gulch Mining District

Mine tailings

in this area as we found no evidence of human occupation.

Site 2: 1870's Log Cabin (Figure 12)

The site consists of the remains of a large rectangular log cabin, with associated cultural debris, mining ditch, and placer tailings. The cabin is located about 40 m (131 ft) southwest of the junction of Shanghai Creek and a similar-sized unnamed creek. The cabin is located amid trees on the north side of Shanghai Creek atop a steep (approximately 3 m [10 ft] high) bank. The cabin site lies at the bottom of a south-sloping hill, on a "pedestal" formed by the bank and a short, mined-out gully filled with placer tailings. The gully runs past the cabin (about 2 m [6.5 ft] north) and joins Shanghai Gulch about 5 m (16.5 ft) east of the cabin. About 10 m (33 ft) west of the cabin, a mining ditch ends (or begins), running along the north bank of Shanghai Gulch for roughly another 60 m (197 ft).

The cabin has three to four courses of logs left on all four sides, with all bottom logs deeply buried in humus. The cabin measures 7.49 m (24.6 ft) east-west and 5.62 m (18.4 ft) north-south. The logs are large and saddle notched. At the center of the east side of the cabin are the remains of a large cobble-and-earth hearth.

Substantial cultural debris is associated with the cabin, chiefly inside the remains. The debris, partially buried in the humus, consist chiefly of broken pieces of glass bottles and remains of metal cans. The only diagnostic artifacts seen were a bottle base with a mark dating to the period 1860 to 1875 (Toulouse 1971:

FIGURE 12



Site Number 2
1870's Log Cabin site

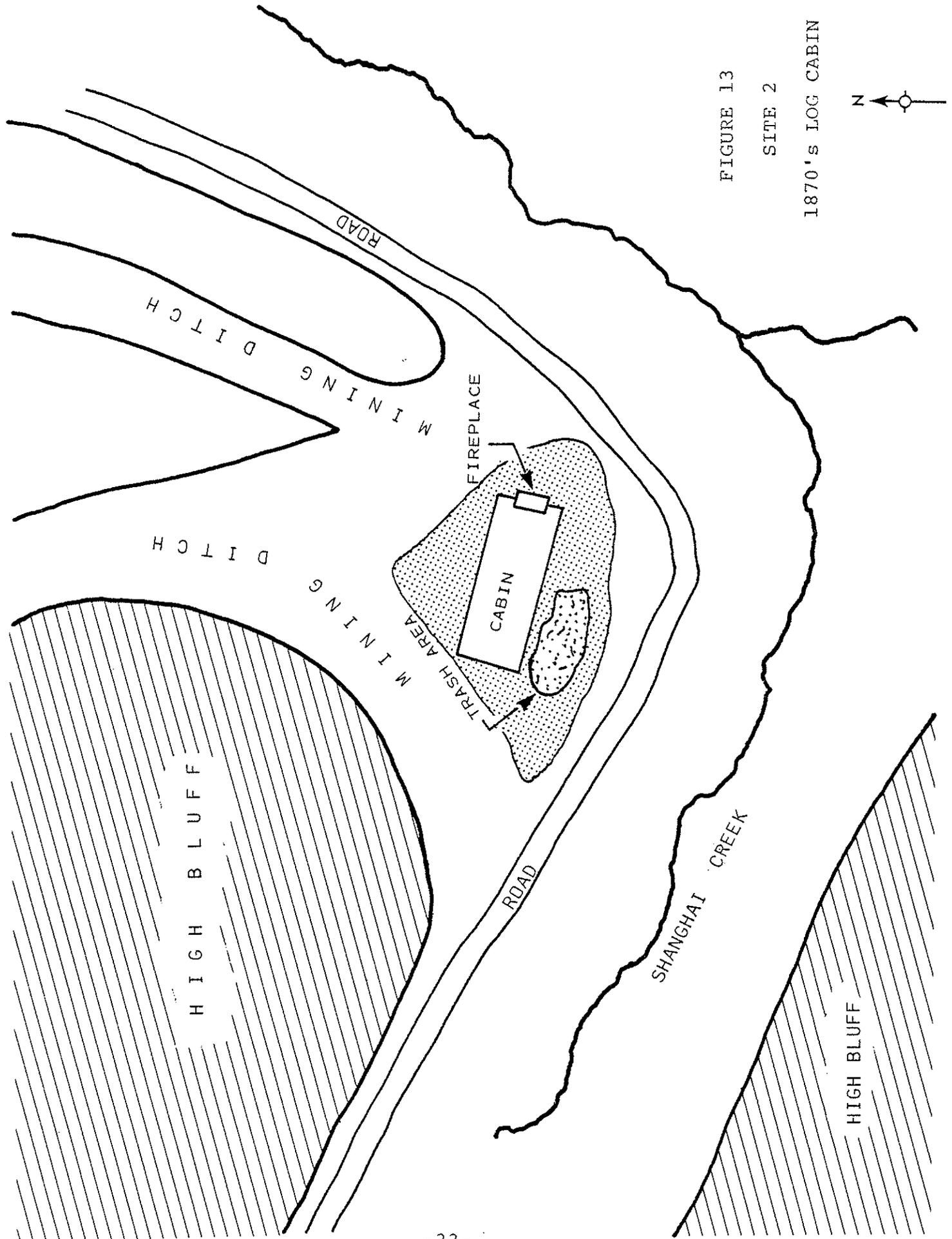
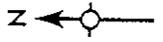


FIGURE 13

SITE 2

1870's LOG CABIN



338), and a tin can with roughly soldered seams and heavy construction was of early manufacture.

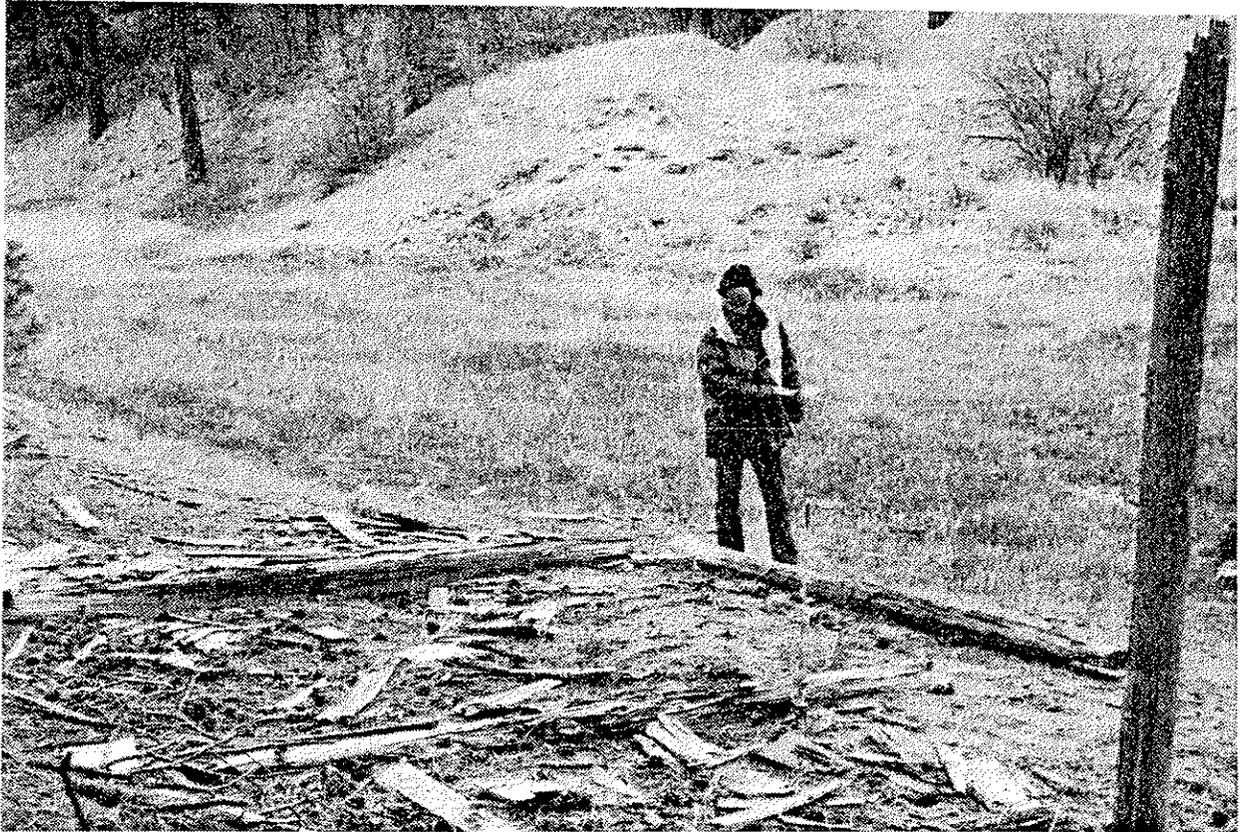
The cultural debris associated with this cabin appears older than any other observed on this survey. This, and the fact that the cabin is located on the main Shanghai Creek drainage, raises the possibility that this is the site of the first gold discovery in the area.

Site 3: Homestead Site

This site consists of the remains of two log cabins, a stone foundation, a spring, a possible mine shaft, and associated cultural debris. The site is located in and around the south-eastern end of a grassy marsh (formerly a large reservoir, probably for livestock) on an unnamed creek, about 100 m (328 ft) southeast of the creek's confluence with Shanghai Creek. Forested banks 2-3 m (6.5-10 ft) high surround the marsh and site. Mining ditches run along both north and south sides of the creek, below the marsh.

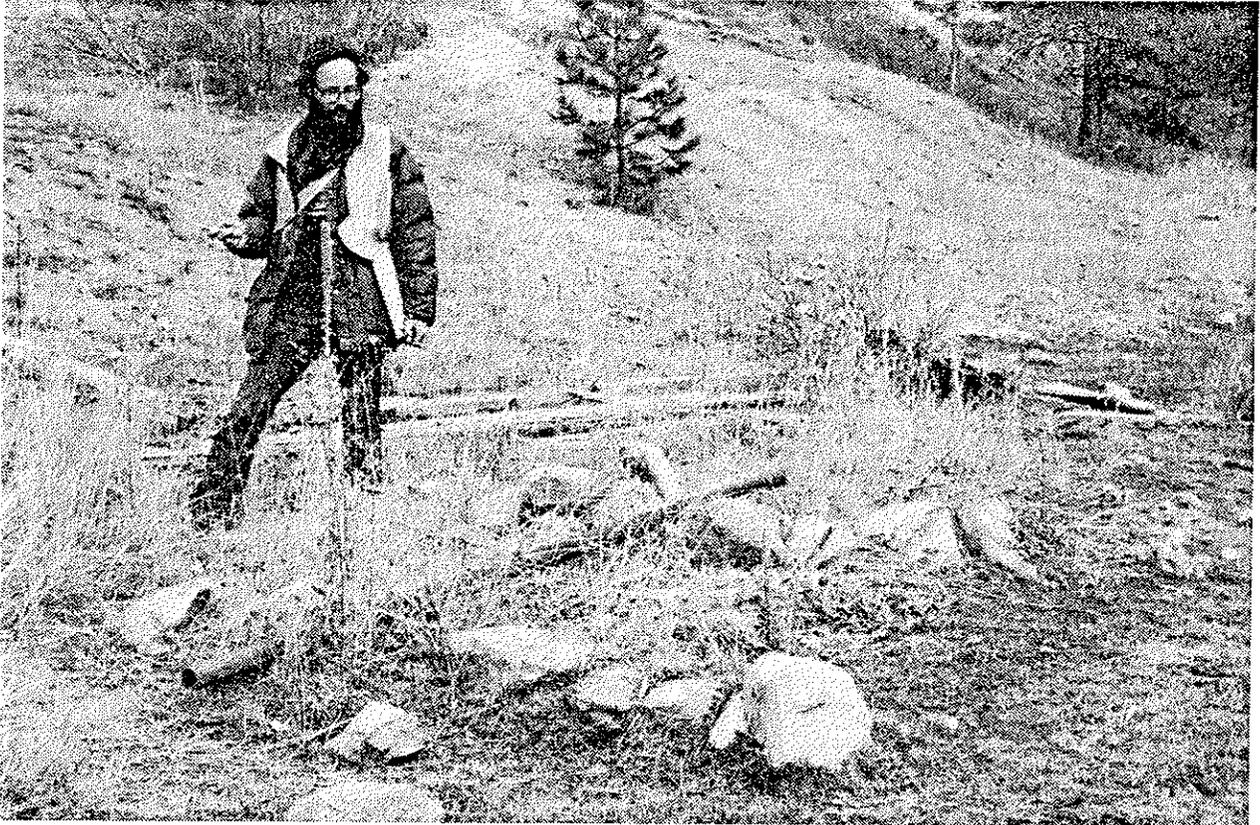
We refer to the site as a homestead, although it could have been a mining camp at an earlier date. The remains of one cabin, scattered and burned boards and small logs (figure 14), are located on the southwest edge of the marsh. Associated with this cabin are a burned trash pile 2 m (6.5 ft) to the south (including remains of a metal stove) and the remains of a set of springs (for either a bed or a sifting machine) about 4 m (13 ft) east, in the marsh. Remains of the second cabin (figure 15) are on the northeast side of the marsh, and consist of partially buried logs, boards, and a stone foundation.

FIGURE 14



Site Number 3
Homestead Site
Remains of Log Cabin

FIGURE 15



Site Number 3
Homestead Site
Stone Foundation

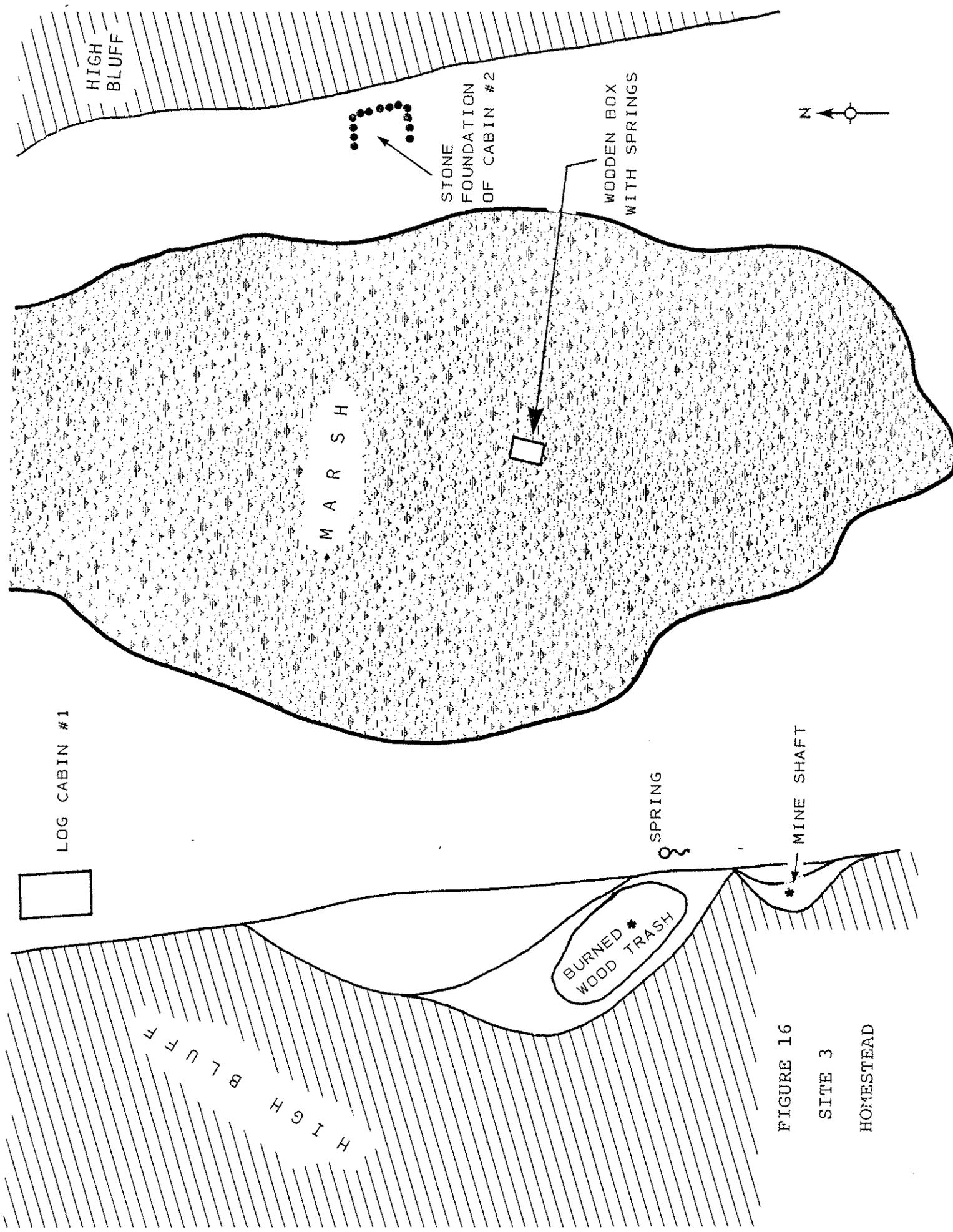


FIGURE 16
 SITE 3
 HOMESTEAD

The possible mine shaft consists of large timbers at the bottom of a deep cut in the bank at the southeast end of the marsh. The spring is located up the southernmost of the two creekbeds running into the southeast end of the marsh.

Cultural debris consists of glass bottle shards, metal cans and other metal objects, and pieces of leather and rubber. Much of the debris is located in two trash piles, one near the first cabin and one on the bank at the marsh's southeast end, but much debris (including some modern beer cans) is scattered over all the site.

Manufacturers' marks on the glass bottles, and the style of manufacture of the metal cans, suggest a date of around 1900 to 1920. We did not see anything definitely datable to an earlier period, but it is likely such material does exist here.

Despite the burning of one cabin and its trash pile, the site appears relatively well preserved. Because the site seems associated with mining activities of the early twentieth century--which is a period wherein there is relatively little known about mining activities in the area--it is likely to yield data important for reconstruction of the later history of the area.

Site 4: Reservoir 1

This site is a deep, well-made reservoir located on the west slope of the ridge running south from the butte in Section 3. This forested slope forms the hillside above Site 3.

The reservoir is a depression about 2 m (6.5 ft) deep, 4 m (13 ft) wide, and 7 m (23 ft) long. The dam is located on the west

side of the reservoir, and has several trees and much brush growing out of it. The berm around the reservoir shows some care in construction. There were no breaches observed in the berm although one probably existed. A ditch leads into the reservoir and one leads out of it.

Two longer ditches run along the slope, contouring it, above and below the reservoir. These ditches continue both north, around the southeast side of the butte, and south, along the west slope of the ridge (for several hundred meters).

No artifacts were found around or in the reservoir or the ditches, so it is not possible to date the site. We assume it was part of the placer mining complex of ditches, gullies, and tailings in the area. It is also possible that it was a livestock reservoir.

Site 5: Reservoir 2

This site is a depression with a well-constructed berm, located amid trees on a forested drainage running into Shanghai Gulch from the south-southwest, at a point where two other drainages (from the south and southeast) join Shanghai. This confluence forms an open, grassy space about 30 m (99 ft) in diameter next to Shanghai Creek. The site is about 90 m (295 ft) upstream from Site 2.

The reservoir is about 2 m (6.5 ft) deep and 3 m (10 ft) across at its dammed-up end. A mining ditch runs into the reservoir and one runs out of it, roughly paralleling Shanghai Creek. Water was led into the reservoir through a conduit on its uphill side. Other mining ditches run along Shanghai Gulch on both its north and south sides, above, below, and across from this site.

No artifacts were observed at this site, so it cannot be dated. We assume it was part of the placer mining complex in the area, although there is some chance it may have been a livestock reservoir.

Site 6: Burned Buildings

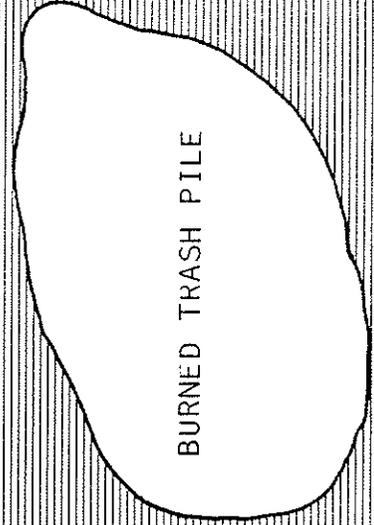
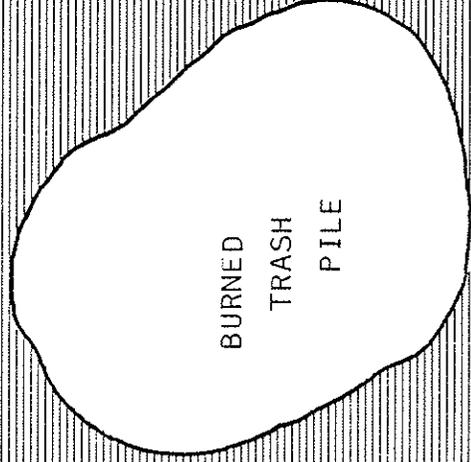
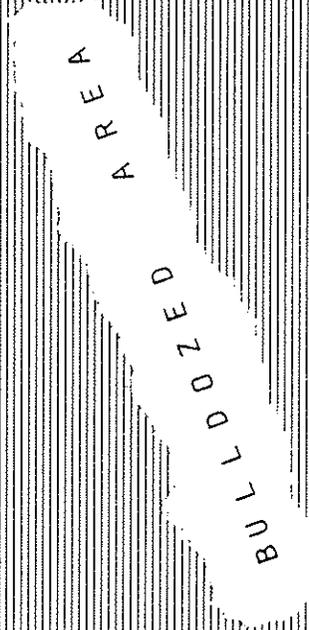
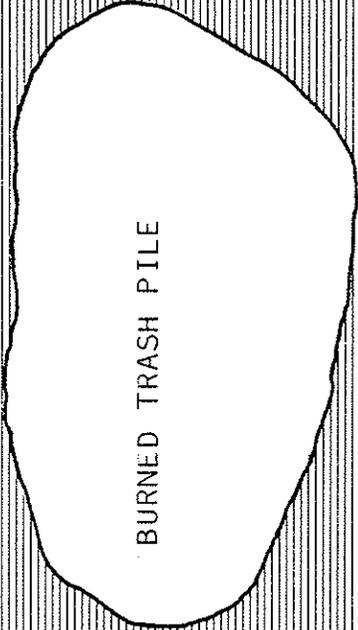
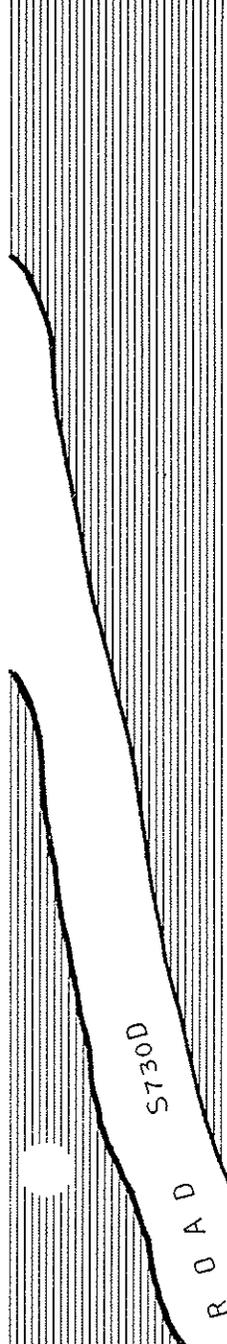
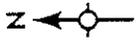
The site consists of burned buildings and piles of burned wood along the southeast end of a large, long meadow stretching east-west along a northeast-running tributary of Shanghai Creek. The site is north of this tributary and south of Shanghai Gulch. In the tributary's drainage and around the meadow are Ponderosa pine and Douglas fir.

The burned wood includes both logs and boards, grouped in several large piles. The area has been disturbed greatly. Some modern debris (metal cans) is scattered in and around the piles. We found no early, datable artifacts (Figure 17).

FIGU 17

SITE 6

SCALE: 1 INCH = 10 METERS



PART VIII - NATIONAL REGISTER
OF HISTORIC PLACES EVALUATIONS

8.1 Sparta Ditch

The Sparta Ditch and its associated features represent a significant cultural resource in the Wallowa-Whitman National Forest. The Criteria of Significance, set forth in 36 CFR 60.6 are:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling and association and:

- (1) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (2) that are associated with the lives of persons significant in our past; or
- (3) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (4) that have yielded, or may be likely to yield, information important in prehistory or history.

Our evaluation of the Sparta Ditch shows that the identified cultural values of the ditch qualify it for eligibility to the NRHP under subsections a) c) and d).

- a) Gold mining was a major factor in the original settlement of the northeastern portion of Oregon because the rugged country and lack of water made most of the land unsuitable for farming or ranching; the desire for gold and sudden wealth was the major factor which brought Euro-Americans to the area. The Sparta Ditch was a major engineering feat which allowed the large-scale mining of gold in the area. The Sparta area played a role in the "Gold Fever" which resulted in the great westward

migrations of the late 19th century.

- c) The Sparta Ditch, seen in the perspective of 19th century frontier engineering capabilities, is a major and unique accomplishment. Dug entirely by hand, the 32 mi long ditch, constructed in a remote and barely accessible area of rugged and mountainous Eastern Oregon, represents an unparalleled engineering achievement in the area.

There are two features that make this ditch unique in engineering. The first is that it was constructed with several abrupt drops in gradient, which was unique in the area at that time. The second unique feature of the ditch is the presence of rock tunnels along Eagle Creek. There are no records of tunnels elsewhere in early Oregon in connection with mining ditches.

Even though much of the present remains of the ditch are in poor repair or ruins, the ditch and its bridges, flumes, side ditches, associated mines and placer areas, and mining camps represent a long gone way of life.

- d) The ditch preserves, in "raw" form, a wealth of information which may reveal insights into past lifeways and economic pursuits. Even though the ditch itself may be only "a hole in the ground," the associated features, taken as a whole, undoubtedly possess a wealth of information in the form of buried artifacts, engineering and construction methods, mining practices, settlement practices and domestic pursuits.

Professional Analysts believes that the Sparta Ditch is eligible for nomination to the National Register of Historic Places because:

- 1) "It is associated with events which have made a significant contribution to the broad patterns of our history . . . ;"
- 2) It embodies ". . . the distinctive characteristics of a . . . period or method of construction . . . and represents . . . a significant and distinguishable entity whose components may lack individual distinction . . . ;" and
- 3) ". . . may be likely to yield information important in . . . history."

At first look it is hard to imagine that a feature such as the

Footbridge or the scattered remnants of the flames have any significance. The Footbridge consists solely of a few broken and rotted boards lying in the ditch. By and of themselves, these boards have no apparent significance. It is only when viewed in the context of the entire ditch that these features become important. While it is true that parts of the ditch have been destroyed, enough remains that one wonders at the engineering skill that built it and the magnitude of the task. Because of the vital significance and scientific potential of the site, we recommend that the entire ditch be nominated to the National Register.

8.2 Shanghai Gulch Mining District

The district includes all of Section 3 except for the steep areas in the N $\frac{1}{2}$ NE $\frac{1}{4}$, and the N $\frac{1}{2}$ NW $\frac{1}{4}$. There are extensive ditch-works, placer tailings, dams, reservoirs, cultural debris, and several habitation sites within the district. Almost every drainage in the district, large and small, contains substantial placer tailings, and all the large drainages are lined with ditches. Often a single drainage has two or three ditches in sequence, on higher and higher contours as one goes up the drainage. The ridge running south from the butte in the district, as well as that butte's southeast and southwest sides, also are lined with ditches, often paralleling one another on different contours. Many of these ditches are associated with reservoirs, dams, and other hydraulic engineering works.

Two significant habitation sites and two large reservoirs were identified. There is a strong possibility that more sites exist in the district. Test excavations on the flat areas on the east slopes of the butte may yield more historic habitation sites.

The area is mostly forested, with Ponderosa pine and Douglas and White firs, with scattered meadows. It is hilly, and dominated topographically by its two major drainages (Shanghai Creek and its unnamed confluent) and by the butte in the middle of the east half of the section. The district is watered by a number of springs, as well as the two creeks.

The first gold strike in the Sparta area was on Shanghai Gulch, according to printed sources. Dennis Butterfield (personal

communications) reports that there was a Chinese settlement on Shanghai Gulch; it might have been in Section 3 (although we found no signs of any large settlement), or it might have been at the mouth of Shanghai Creek, north of Section 3.

The presence of such a complex network of mines, mining sites, ditches, reservoirs, and habitation sites in this district, together with its significance as the site of the first gold discovery in the Sparta area, make the district very important to the study of Pacific Northwest mining history and social history. Thus we consider the district eligible for nomination to the National Register of Historic Places. We also recommend that the district be protected from further undue disturbance; that the entire complex of mining sites, ditches, and other hydraulic works be carefully mapped; and that significant habitation sites (Sites 2 and 3, and any others found) be excavated. If Site 2, or any other site in the district, turns out to be the site of the Chinese settlement, it should be located with a historical marker, and considered for restoration as a significant landmark of Asian-American history in the Northwest.

Because of the complexity of the hydraulic engineering in this area, the mapping and analysis of mining features will be a difficult and time-consuming job. We recommend that a professional survey crew, working with an historical archaeologist, be hired to do the mapping. A series of low level air photos would be a helpful adjunct to this work.

Sites 2 and 3, with their log cabins and associated placer

tailings, mining ditches and historic artifacts represent a specific focus of mining activity in the Shanghai Gulch area. The sites are a good example of the type of small placer mining camps once common in the Sparta Ditch and Shanghai Gulch portions of the Wallowa-Whitman National Forest. This alone would qualify the district for nomination to the National Register of Historic Places under 36CFR60.6 section a.

The district also possesses scientific value because of its potential for historic archaeological remains. Much historic debris is scattered over the surface of the area. A systematic excavation or surface collection of the area should yield information on the daily life and domestic habits of the former inhabitants. The data recovery value of the area qualifies it for nomination to the National Register of Historic Places under 36CFR60.6 section d.

The nomination of the area as a district is imperative. Taken together, the sites and areas in between represent a total system. If only the sites are preserved, we will have lost an important part of the system. We will have no way of relating the sites to each other - their context will have been destroyed. In this case, the whole is greater than the sum of the parts and without the intervening areas, we will never fully understand the sites. Because of this, we recommend that all the noted sites and the gulch areas be nominated as an historical district.

PART IX - MANAGEMENT RECOMMENDATIONS

9.1 Introduction

Legal mandates require the Forest Service to manage and preserve the cultural resources within their boundaries or on lands under their control. This section of the report provides information regarding probable impacts upon the cultural resources which we have identified in this study, and suggests means to minimize or eliminate the negative effects of these impacts.

The Forest Service, as a land management agency, licenses and administers a wide range of activities which may disturb or destroy archaeological sites in the project land Professional Analysts investigated. We provide this discussion to alert Forest Service managers and land-use planners to possible adverse effects on the inventoried cultural resources which may result from these activities. All sites now demonstrate the impacts of adverse effects of previous and current land-use activities (including neglect). Such activities should be altered or eliminated in order to prevent further damage to the cultural resource base which is present in the study area.

9.2 Impacts on Sites

Timber harvesting is the major cause of damage to historic sites. Cutting and skidding logs, and the use of bulldozers to scrape up slash, have severely disturbed the ground surface and damaged many portions of the Sparta Ditch.

Roads, whether built for access to timber sale areas, or for recreation development, are a major destroyer of cultural resource sites. Roads generally follow drainages or ridgelines, both of which are areas of high cultural resource potential. Not only does the road itself destroy many sites, but since they allow easy access to an area, the potential for vandalism increases.

Neglect of cultural resource sites results in deterioration by weathering and vandalism by forest visitors. An historic building or structure which is obviously 'abandoned' is an invitation for souvenir collectors and destructive vandals.

9.3 Mitigation Measures

Mitigation efforts to avoid negative impacts on historic sites are predicated upon one of three measures: 1) avoidance; 2) preservation; or, 3) data recovery. Various alternatives are available with each mitigation measure, and more than one measure may be utilized.

Avoidance, as its name implies, means that a proposed project could be redesigned to bypass any sites which may be affected. For example, a "buffer zone" may be established around identified sites to prevent direct impacts from logging operations. Perhaps a road right-of-way can be resurveyed to avoid a site. Avoidance generally prevents only direct impacts to sites. Secondary impacts, such as erosion, or increased visitor usage, still may have detrimental effects on nearby sites. Such effects may be mitigated by preservation techniques.

Preservation of sites involves a number of alternative techniques. These techniques must be determined by applying site-specific criteria. Varying techniques include: erosion control measures; burying the site under a layer of culturally "sterile" material (such as gravel or sand); or, fencing-off (to limit access) the site area. Site areas may be posted with signs which indicate the importance of cultural resources and explain that legal penalties are provided for either vandalism or artifact collecting.

Federal land management agencies have available to them signs which read:

NOTICE

Ancient ruins, artifacts, fossils, and historical remnants in the vicinity of this notice are fragile and irreplaceable. The Antiquities Act of 1906 protects them for the benefit of all Americans.

Enjoy but do not destroy,
your American Heritage

Any person who, without official permission, injures, destroys, excavates or appropriates any historic or prehistoric ruin, artifact, or object of antiquity on the lands of the United States is subject to arrest and penalty of law.

Permits to excavate or remove artifacts can be issued only to recognized educational and scientific institutions.

Some cultural resource managers maintain that such signs are only an invitation to pot hunters, not a deterrent. Professional Analysts submits that confirmed "pot hunters" will collect artifacts regardless, but that the majority of citizens, who might unknowingly pick up an occasional artifact, would not collect them if they were aware of their protected status. Although antiquities protection laws have been in effect for over seventy years, few private citi-

zens are aware of their existence and few land management agencies have made an attempt to enforce these laws or alert land-users to their provisions.

Data Recovery. If neither avoidance nor preservation of archaeological sites can be accomplished (because of land-use requirements or special situations), a third alternative, data recovery, may be implemented. Data recovery should be considered an avenue of last resort for several reasons: 1) It is time consuming, often requiring from several months to several years for complete excavation and analysis of the materials; 2) It is expensive. Not only are excavation and analysis costly, but delays in the proposed project may result in penalty and inflationary costs; and 3) Perhaps most important from a cultural resource management view, is that excavation of a site destroys that site in the process. Archaeologists realize that our current excavation and analytic techniques are limited. We anticipate that new methods and new research questions will be developed in the future. Cultural resources, however, are finite. Once excavated, they are not available to future researchers who possess improved methods and different research orientations. For these reasons, avoidance and preservation should be first priority mitigation measures. Excavation and data collection should be considered only as the alternative of last resort.

Education, of the general public, Forest Service personnel, and contractors would be a reasonable fourth mitigation measure. As we noted previously, many cultural resource protection laws and regu-

lations have been legislated, but their existence is not widely known, and enforcement of them generally is either ineffective or non-existent. We recommend that the Forest Service make a determined effort to inform the users of lands under their jurisdiction that cultural heritage sites and artifacts are a protected national resource. Furthermore, each agency should enforce the laws which protect these resources.

As cultural resource investigations in this study area continue, an interpretive program, designed to educate the public of the area's historic importance, could be implemented. This program could include: an explanatory sign at designated sites; a display of local artifacts; or, an interpretive center with displays, films and exhibits.

A major, but potentially significant interpretive project, could be the reconstruction of one of the major sites. By combining archaeological excavations and archival research, a program of restoration at one of these significant sites would offer a unique opportunity to provide an educational-recreational experience to the American public. This program of reconstructed structures, mining equipment, exhibits, and interpretive films would be a "showcase" of the area's cultural heritage. It would interpret the region's natural history and ecology, and is in keeping with the Forest Service's multiple-use concept of land management.

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