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**CULTURAL RESOURCE INVENTORY OF CYPRUS PLATEAU
MINING COMPANY GENTRY MOUNTAIN COAL PROPERTIES,
EMERY AND CARBON COUNTIES, UTAH**

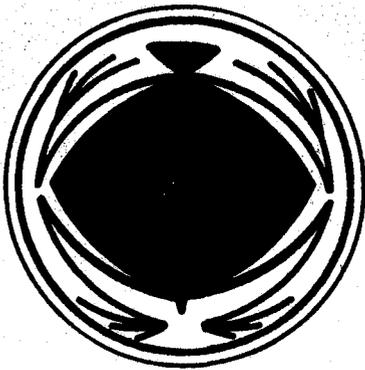
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**DIVISION OF OIL
GAS & MINING**

**Jacki A. Montgomery
and
Keith R. Montgomery**

July 1987



ABAJO ARCHÆOLOGY

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CULTURAL RESOURCE INVENTORY OF CYPRUS PLATEAU
MINING COMPANY GENTRY MOUNTAIN COAL PROPERTIES
EMERY AND CARBON COUNTIES, UTAH

Prepared For:

Manti-La Sal National Forest
Price District

Prepared Under Contract With:

Cyprus Plateau Mining Company
P.O. Drawer PMC
Price, Utah 84501

Prepared By:

Jacki A. Montgomery
and
Keith R. Montgomery
Archaeological Consultants

Submitted By:

William E. Davis, Director
Abajo Archaeology
P.O. Box 100
Bluff, Utah 84512

July 1987

U.S. Department of the Interior Antiquities Permit
No. (FLPMA) 87-UT-56323

State of Utah Antiquities Project Permit (Survey)
No. U-87-AS-408p,f

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ABSTRACT

Abajo Archaeology conducted cultural resource inventories at two localities for Cyprus Plateau Mining Company's Gentry Mountain Coal Program. The localities were designated Areas 1 and 2, situated in Carbon and Emery Counties, Utah. Area 1 consists of 160 acres on public lands administered by the Manti-La Sal National Forest, Price District, and Area 2 encompasses approximately 480 acres on private land owned by the Cyprus Plateau Mining Company.

The cultural resource inventories documented one prehistoric site (42Em2118) in Area 1 and two isolated finds, one in each area. 42Em2118 was not evaluated as to eligibility to the National Register of Historic Places due to the heavy vegetation cover which prevented an adequate inspection and assessment of the site attributes. Site 42Em2118 is outside of the potential impact zone and will not be adversely affected by the Cyprus Plateau Mining Company operations.

Cultural resource clearance was recommended for Cyprus Plateau Mining Company's Areas 1 and 2.

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INTRODUCTION

Cultural resource inventories were conducted for Cyprus Plateau Mining Company by Abajo Archaeology on July 1, 2 and 3 1987. The archaeological survey was conducted on Gentry Mountain in both Carbon and Emery Counties, central Utah. The inventories were performed by Keith and Jacki Montgomery, Consulting Archaeologists, at the request of Mr. Ben Grimes of Cyprus Plateau Mining Company.

The project area consists of two separate localities herein designated as Area 1 and Area 2 (Figures 1 and 2). Area 1 is situated in Sections 11 and 14, Township 15 South, Range 7 East and is coal lease properties on public lands administered by the Manti-La Sal National Forest (Price District Office). Area 2 is located to the east in Section 18, Township 15 South, Range 8 East and is land secured by the Cyprus Plateau Mining Company.

The objectives of the cultural inventories were to adequately identify and evaluate all cultural resources which may be affected by the proposed mining project. The implementation of these objectives fulfills requirements for compliance with Federal and State laws and mandates set forth in the Antiquities Act of 1906, the Historic Preservation Act of 1966, The National Environmental and Historic Preservation Act of 1969, Executive Order 11593 of 1971, the Archaeological Resources Protection Act of 1979, and the Utah State Antiquities Act of 1973.

In compliance with the Manti-La Sal National Forestry regulations, Abajo Archaeology obtained a Special Use Permit for Area 1 on July 2, 1987 from Mr. Ira Hatch, District Ranger, Price District Office. The cultural resource inventory was also conducted under authority of U.S.D.I Federal Antiquities Permit No. (FLPMA) 87-UT-56323 and Utah State Antiquities Project Permit (Survey) No. U-87-AS-408p,f issued to Abajo Archaeology of Bluff, Utah.

DESCRIPTION OF PROJECT AREA

General Project Area

The overall project area is situated along the eastern edge of the Wasatch Plateau within the boundaries of the Manti-La Sal National Forest. This area is within the Basin and Range Colorado Plateau Physiographic Subdivision (Stokes 1977). Structurally, this mountain zone is made up of a series of high plateau ridges separated by north-south trending faults. The most prominent geologic feature is Gentry Mountain and areas of local relief include Star Point, Hoag Ridge and Gentry Ridge.

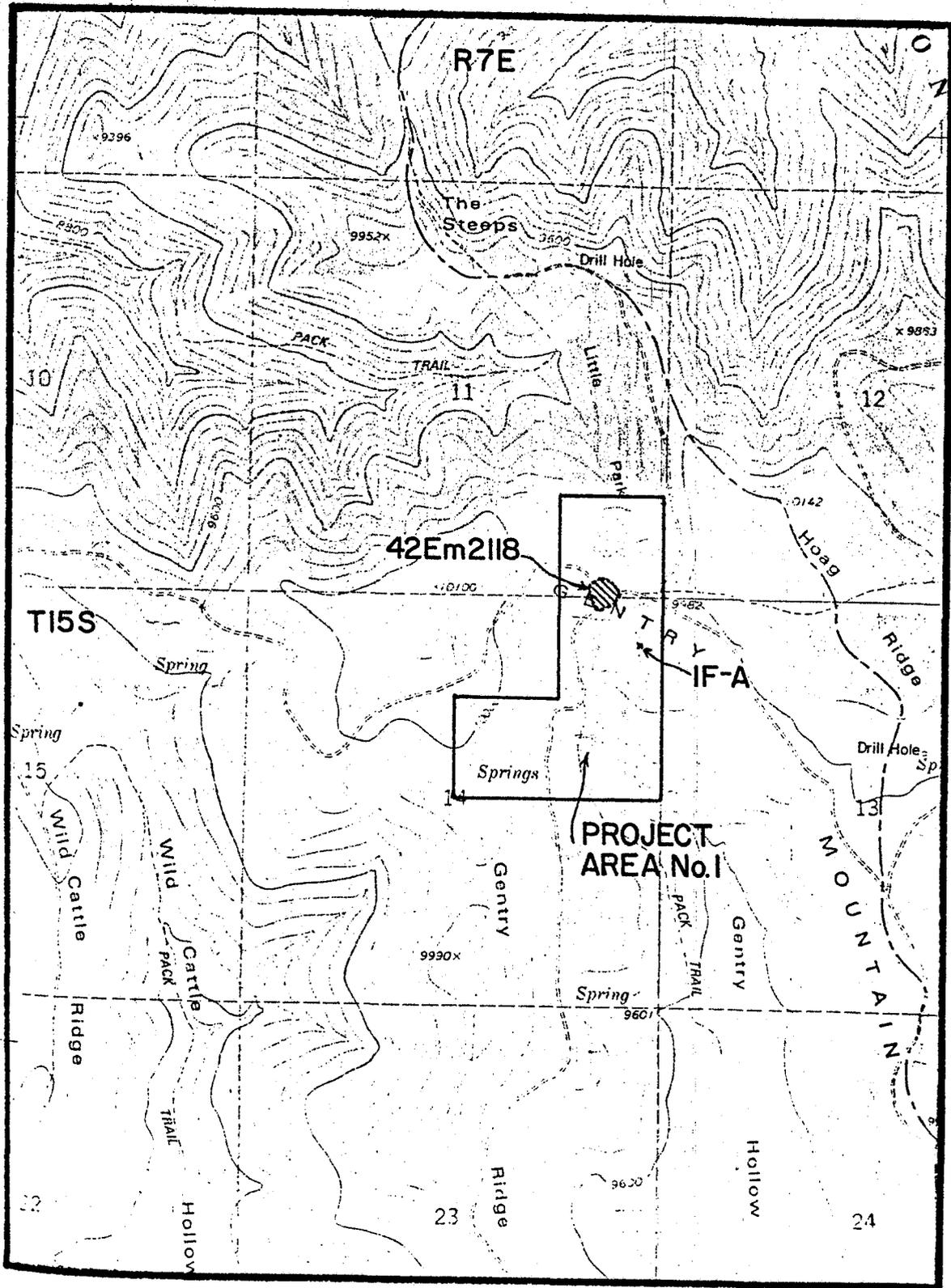


Figure 1: Area 1 Project Area and Cultural Resources.
USGS Wattis, UT 7.5' 1979 Scale 1:24000

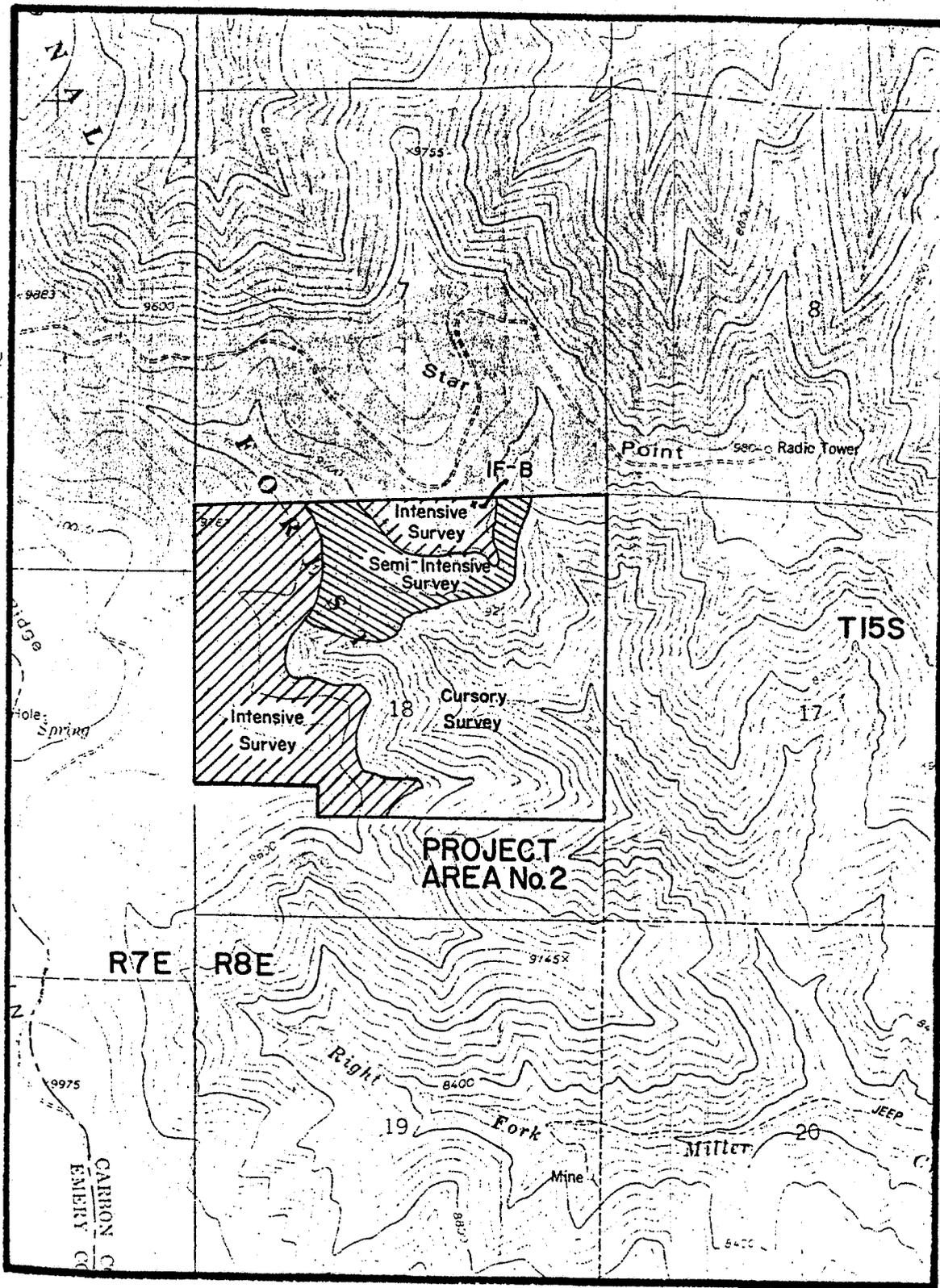


Figure 2: Area 2 Project Area and Cultural Resources.
USGS Watis, UT 7.4', 1979. Scale 1:24000

The surface geology is comprised mainly of the Cretaceous Mesa Verde Group which includes Star Point Sandstone, Blackhawk Formation, and Castle Gate Sandstone. The latter sedimentary rock is the most prevalent, forming the steep cliffs in the project area. The elevation within the inventoried areas ranges from 8,300 to 10,050 feet. This high Canadian Life Zone is dominated by a Douglas fir-aspen belt. The surface vegetation is very dense and lush consisting of forbs, herbaceous plants, low shrubs and grasses. Interspersed throughout the project area are springs, many of which have been historically developed for livestock and mining interests.

Specific Project Area

Area 1 is located in Emery County in Township 15 South, Range 7 East, Section 11 (SE 1/4, SE 1/4) and Section 14 (NE 1/4, NE 1/4 and S 1/2, NE 1/4), USGS Quadrangle Wattis 7.5', 1979 (Figure 1). The inventory block encompasses 160 acres of public lands administered by the Manti-La Sal National Forest. This inventory area is situated between Little Park and Gentle Ridge on the western flanks of Hoag Ridge. The topography is characterized by a prominent saddle/pass, narrow low ridge extensions, gentle slopes and drainages. Groves of fir, spruce and aspen dot the landscape over-towering a lush understory of herbaceous plants, sagebrush, chokecherry, and grasses. Almost exclusively the ground visibility was extremely poor, providing only glimpses of the surface by way of dirt roads and animal tracks.

Area 2 is located in Carbon County in Township 15 South, Range 8 East, Section 18, USGS Quadrangle Wattis 7.5', 1979 (Figure 2). This inventory parcel is comparably more rugged and embodies the southern edge and steep slopes of Gentry Mountain. Rimrock Castle Gate Sandstone borders the ridge crests featured with crevices and low alcoves. This area is more densely forested with Douglas fir, spruce, and aspen with a similar understory as the other inventory parcel. Ground visibility was extremely poor throughout the parcel except for a few burnt forest areas on top of the ridges.

Cultural History

The cultural history of central Utah has been presented in a number of overviews and will only be briefly addressed in this project report (Black and Metcalf 1986; Hauck 1979; Jennings 1978). The earliest cultural period identified in the study area is the PaleoIndian Tradition (11,000-8,000 B.P.). These prehistoric big game hunters (e.g., Llano, Clovis and Folsom complexes) are known mainly from various fluted projectile points collected in both Emery and Carbon Counties (Tripp 1966; Gunnerson 1956). In southeastern Utah, several base camps with a variety of tools have been investigated (Davis 1985) delineating more intense early occupation of Utah. The end of this tradition is represented by the Plano Complex in which a wide variety of large lanceolate-shaped projectile points have been documented in the general area including points of the Agate Basin, Hell Gap, Cody and Lake Mohave complexes.

The Archaic stage (8,000-1,500 B.P.) is well documented on the Colorado Plateau and is commonly divided into the Black Knoll Phase, Castle Valley Phase, Green River Phase and Dirty Devil Phase (Schroedl 1976). The excavation of stratified rockshelters on the northern Colorado Plateau (e.g., Sudden Shelter and Cowboy Cave) indicate that the Archaic populations in the area exploited a wide spectrum of fauna and wild vegetal resources. In addition, a large number of open camps have been investigated in the Castle Valley area representing early to late Archaic occupations (Black and Metcalf 1986).

The Formative stage (A.D. 400-1200) is characterized on the northern Colorado Plateau by the introduction of the bow and arrow, ceramics, horticulture and architecture. Along the eastern Wasatch Plateau, Fremont groups are known to have occupied the valleys and canyons, exploiting wild as well as domestic resources. The largest habitation sites in the area occur on low rises next to perennial streams in the valleys, with smaller habitations and base camps found at higher elevations. Excavated Fremont occupations in the area include Crescent Ridge, Windy Ridge, Old Woman, Poplar Knob, and Snake Rock Village (Jennings 1978).

According to linguistic and archaeological data, migrations of Numic-speaking groups from the southwestern Great Basin began in the Late Prehistoric period with these groups (Ute and Paiute) arriving in central Utah by A.D. 1150-1250 (Black and Metcalf 1986:17). Both Utes and Paiutes followed an Archaic stage lifestyle

based on hunting and gathering with a wide range of plants and animals being exploited.

The history of the area has been adequately compiled by various authors (Jorgensen 1955; Mauerman 1967; Hauck 1977). Basically the economic industries that started in the 1870s, coal mining and ranching, and later farming, continue to be important to the economy of the area today. Although coal was first discovered in the 1850s, it was not until the 1870s that coal mining became productive in the Castle Valley-Price area. The arrival of the Denver and Rio Grande Railroad in the 1880s provided additional stimuli for coal mining production and population increase throughout Emery and Carbon Counties. In 1908, F.A. Sweet, one of Utah's most prominent coal authorities, opened a mine on the middle fork of Miller Creek and named the mine Hiawatha (Hauck 1977:86). This locality at the foot of Gentry Mountain was the scene of further coal mining development in 1911, when Black Hawk Mine was started by Brown and Eccles. Further to the south in Emery County, a small wagon mine was purchased by the Castle Valley Fuel Company and the town, Mohrland, was established (Hauck 1977:87). Further coal exploration in Carbon County revealed a high quality seam 7500 feet in elevation up on the flank of Castle Valley Mountain and a new mine was opened by two Wattis brothers in 1917 (Carr 1972:83). In 1919, the Lion Coal Company purchased the Wattis' interests and built the company town named after the mine discoverers (Carr 1972:83). Today many of the mines established during the turn of the century have terminated production leaving caved-in mine entrances and dilapidated buildings.

Relatively few archaeological inventories have been conducted in the vicinity of the project area. A selected number of inventories were performed within the Manti-La Sal National Forest during the Central Coal Project (Hauck 1979). These inventories documented a low density of prehistoric and historic sites at elevations higher than 8,000 feet. This low occurrence of cultural resources was attributed by the investigator to environmental factors such as vegetation, altitude and slope degree. Present investigations, south of the project area at high altitude sites, have indicated that many of the prehistoric base camps have multicomponents since the prehistoric groups reoccupied certain optimal locations (Kevin Black, personnel communication).

SURVEY LOGISTICS

The overall adverse impact to the project area by the proposed Cyprus Plateau Mining operations will consist of subsidence of the topography in the Gentry Mountain locality. Potential impacts could involve the collapse of sedimentary rimrock which borders the northern part of Area 2.

The inventory coverage for the inspection of the Gentry Mountain project area was stipulated to Cyprus Plateau Mining Company by the Utah State Historical and Preservation Office (SHPO) prior to the fieldwork. These stipulations stated that 10 percent of the project area should be surveyed plus obvious areas where cultural and historic habitations or artifacts might be found (referenced in the Casual Services Contract between Abajo Archaeology and Cyprus Plateau Mining Company, June 23, 1987).

Inventory coverage and survey procedures of the project area were further formulated during an in-field meeting with Abajo Archaeology personnel and Mr. Ben Grimes of Cyprus Plateau Mining Company. In view of the topographic and vegetation diversity between Areas 1 and 2, different survey methods and acreage coverage were employed.

Area 1

An intensive cultural resource survey was conducted in this parcel of approximately 160 acres. The pedestrian survey was performed by the two archaeologist walking parallel (mainly north-south axis) transects varying from 10 to 15 meters apart. The transects of minimal distance were employed on the flatter ridge and saddle tops and areas of greater surface visibility. The wider intervals were used on the steeper slopes and areas of lesser ground visibility. It should be reiterated that ground visibility was extremely poor with the exception of on the roads and animal trails.

Area 2

Approximately 480 acres were inventoried by three survey procedures in this privately-owned parcel (Figure 2). A) Intensive inventory of about 180 acres along the ridges in the northern and western portions of the area. This was performed by archaeologists walking transects spaced from 10 to 15 meters apart. Special care was taken in the burnt forest areas where surface visibility was fair and along the edge of the exposed

rimrock localities. B) A semi-intensive inventory of approximately 75 acres located along the upper slopes of the parcel and in the areas designated by Cyprus Plateau Mining Company as potentially sensitive to adverse mining operations. The archaeologists followed the contours of the steep terrain with transect intervals ranging from 15 to 30 meters. The areas along the base of the cliffs were given special attention for alcoves and rock art sites. The majority of these areas were heavily forested with a dense understory of various plants, resulting in low surface visibility. C) A cursory inspection was given to most of the southern parcel boundary (ca. 225 acres) where slopes were greater than 50 percent and very minimal surface visibility existed. Most of the area was visually inspected from various vantage points along the mountain edge and one complete transect was performed east-west across this rugged portion of the inventory area.

Cultural resources located during the survey were recorded either as isolated finds of cultural manifestations or as sites. Cultural resource documentation procedures included recording a detailed description of artifacts, features, and the environmental setting, photographing, documentation, and preparation of a detailed site map. The location of the site or isolated finds were plotted onto the appropriate topographic map.

CULTURAL RESOURCE INVENTORY RESULTS

The cultural resource inventory of Cyprus Plateau Company's Gentry Mountain project area (Areas 1 and 2) resulted in the documentation of one newly identified prehistoric site (42Em2118) and two isolated finds. These are briefly described below and a more detailed documentation will be submitted (IMACS Inventory Site Forms) to the appropriate agencies.

Site Description

Smithsonian Number: 42Em2118

Temporary Number: CPM-1

Legal Location: T15S, R7E, Sec. 11, SW/SE/SE and
Sec. 14, NW/NE/NE
USGS Wattis, 7.5', 1979

Description: This is a prehistoric lithic scatter situated on a relatively flat saddle/pass along the west side of Hoag Ridge in Area 1 (Figure 1 and 3). The boundary of the site could only be approximated and is estimated as measuring 120 by 80 meters. The vegetation on the site consists of a thick cover of

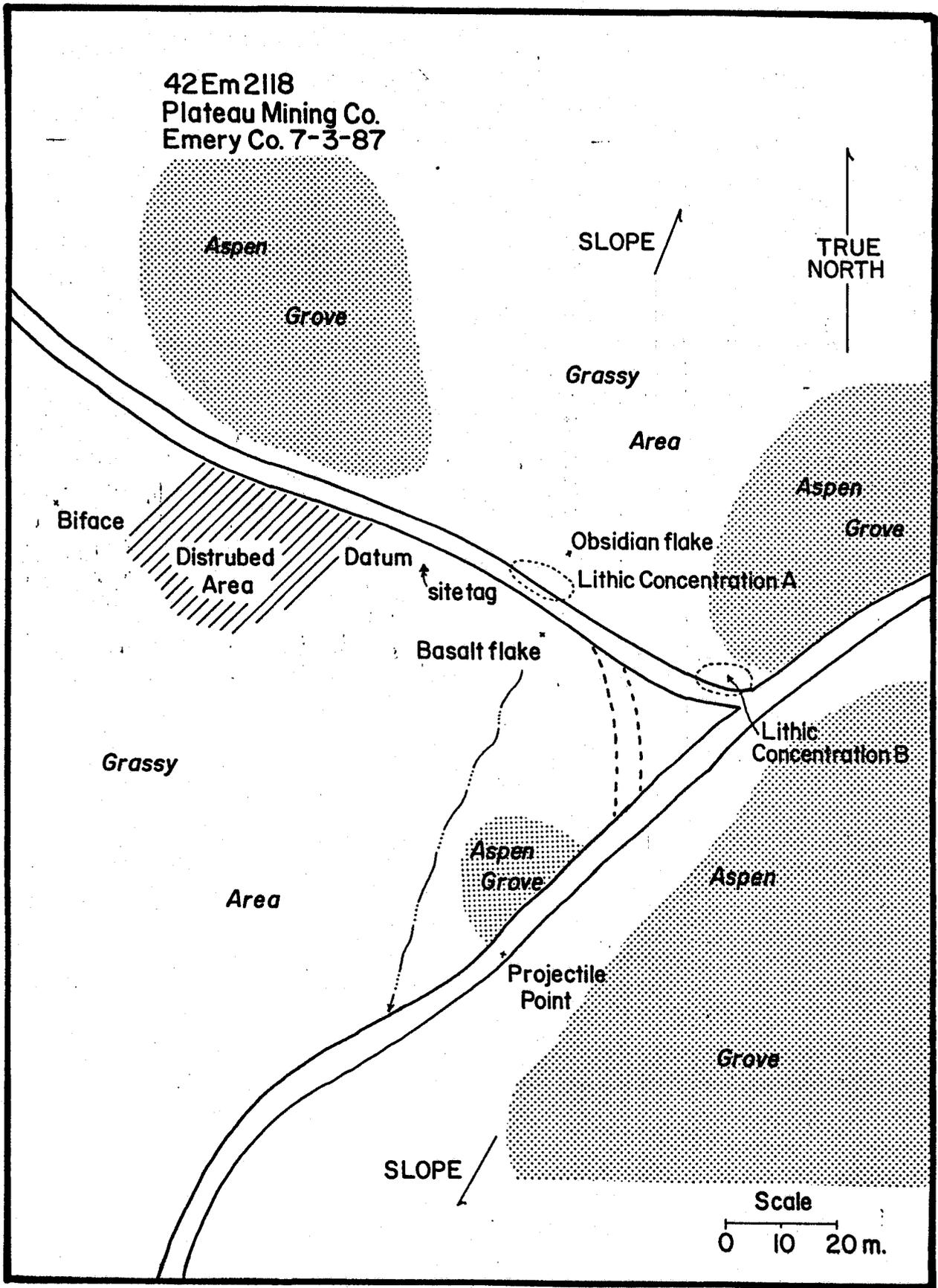


FIGURE 3. Site Sketch of Site 42Em2118.

herbaceous plants, forbs and grasses as well as several groves of Douglas fir, spruce, and aspen. Inspection of the site was extremely hampered, limited to the impacted and eroded surfaces where the vegetation was lacking.

The artifacts were found primarily in two concentrations within the east-west roadbed. The cultural material documented consists of approximately 15 lithic flakes, a projectile point base, and a biface fragment. The lithic waste flakes are of secondary and tertiary reduction represented by chert, basalt, quartzite and obsidian materials. The stages of lithic reduction and diagnostic lithic implements implies that the site probably functioned as a multiple activity base camp. The variety of lithic materials and broken tools suggests that the locality not only served for the manufacturing and maintenance of lithic implements, but also for subsistence-related activities. The cultural affiliation and temporal placement for the site could only be ascertained from the lithic tools. The projectile point is an Elko Series dart point associated with a broad time range from Archaic to the Fremont periods; the biface displays an even collateral flaking pattern indicative of Archaic lithic technology.

Several areas of the site, outside of the roadbed, were trowel tested to about 10 cm below ground surface. These tests indicated good depth potential for the site since no bedrock was encountered. No artifacts were encountered in the shallow test holes; however, cultural material could be more than 10 cm below modern ground surface in this type of environment.

The significance evaluation of this site remains undetermined and additional investigations at 42Em2118 are recommended. The cultural resource was classified as unevaluated because the vegetation cover hindered the observation of site data pertinent to the determination of NRHP status. The retrieval of information such as site perimeters, subsurface deposits, cultural features, and artifact inventory would facilitate the evaluation processes of 42Em2118.

Isolated Artifacts

Isolated Find A (IF-A) is located in Area 1 in T15S, R7E, Sec. 14, SE/NE/NE (Figure 1). It consists of a tan opaque mottled chert secondary flake and was found in an animal trail on the slope of a ridge.

Isolated Find B (IF-B) is located in Area 2 in T15S, R8E, Sec. 18, NE/NW/NE (Figure 2). It consists of several historical inscriptions in two adjoining aspen trees associated with a hunters' camp. The initials are E.J 11-33 (i.e., circa 1933) and D. Frane June 11 1929. Numerous other initials were carved on the trees in the aspen grove; however, these were the oldest.

EVALUATION OF SITE SIGNIFICANCE

The National Register Criteria for Evaluation of Significance and Procedures for determining the eligibility of cultural resources for the National Register of Historic Places (NRHP) are as follows (36 CFR 60.6):

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 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.

The newly documented prehistoric site, 42Em2118, located on public lands administered by the Manti-La Sal National Forest was not evaluated as to significance and eligibility to the NRHP. In view of the environmental deterrents (i.e., ground cover), additional information is necessary to determine the research potential of this prehistoric lithic scatter/base camp. The site has good depth potential for buried artifacts and cultural features.

MANAGEMENT RECOMMENDATIONS

The purpose of the cultural resource inventory of the Gentry Mountain Cyprus Plateau Mining Company project areas was to identify any cultural resources and to evaluate the significance of these cultural resources. One prehistoric lithic scatter/base camp and two isolated finds were documented during the inventories of the project area. As described above, Site 42Em2118, was classified as unevaluated as to eligibility to the National Register of Historic Places (NRHP). The unevaluation of archaeological sites on Forest Service lands is not uncommon due to the environmental deterrents which prevent a thorough inspection of the cultural resources.

Additional testing would be necessary at 42Em2118 in order to evaluate the National Register quality of the site. Aspects such as site size, artifact inventory, cultural affiliation, and potential subsurface components need to be investigated in order to determine the significance of this site to the regional prehistory and current research domains. As stated previously, very few sites have been documented in the vicinity, and excavations in progress are showing that prehistoric sites situated in favorable high altitude localities often have multiple components (Forest Highway 10 Project).

Consultation with Cyprus Plateau Mining Company (Mr. Ben Grimes, personnel communication) has confirmed that the unevaluated archaeological site, 42Em2118, is outside of the potential impact zone in Area 1 and will not be adversely affected by the Cyprus Plateau Mining Company operations. If in the future this site is in jeopardy of being adversely affected by impacts, then an evaluation of its NRHP status is recommended. The isolated finds documented in both Areas 1 and 2 are considered as nonsignificant cultural resources and do not warrant further investigation or avoidance.

Based on the above stipulations, archaeological clearance is hereby recommended for Cyprus Plateau Mining Company's Gentry Mountain Project Areas 1 and 2.

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APPENDIX

Intermountain Antiquities Computer System (IMACS)
Site Inventory Form (42Em2118) on file at:

State of Utah - Division of State History, Salt Lake City
U.S. Forest Service - Price District, Price