

**THE 2006 CLASS II CULTURAL RESOURCE INVENTORY
OF THE TWO OCEAN - PACIFIC CREEK ASPEN
TREATMENT PROJECT AREA, GRAND TETON
NATIONAL PARK, TETON COUNTY, WYOMING**

By

Paul H. Sanders

With contributions by

Mack McFarland
National Park Service, Grand Teton National Park

Prepared for

National Park Service,
Grand Teton National Park

Submitted by

Office of the Wyoming State Archaeologist
Wyoming Department of State Parks and Cultural Resources
Dept 3431, 1000 E. University Avenue
Laramie, Wyoming 82071

OWSA Project Number: WY-27-2006

January 2006

ABSTRACT

A Class II cultural resource inventory of the Two Ocean-Pacific Creek Aspen treatment project area was conducted by the Office of the Wyoming State Archaeologist for the National Park Service, Grand Teton National Park. A 31 percent sample (232 acres) of the overall 749 acre project area was inventoried. The purpose of the aspen treatment is for habitat improvement.

One previously recorded site (48TE470) was investigated and one prehistoric isolated find was recorded. It is believed the prescribed fire treatment project will not affect any known cultural resources within the inventory area. Based on the limited number of cultural resources identified within the survey area, additional cultural resources are not likely to occur within the remaining portions of the Two Ocean-Pacific Creek project area. However, given the dense vegetative cover, if possible, a post-fire inventory of the burned areas is recommended to assess the effectiveness of the Class II inventory and to provide baseline data for future prescribed fires within Grand Teton National Park. As a result, cultural clearance is recommended with the standard stipulations that should archaeological remains be uncovered during the implementation of the prescribed fire project, the appropriate state and federal regulatory agencies be contacted immediately.

ACKNOWLEDGMENTS

The completion of this project has benefitted from the contributions of a number of individuals. Jacquelin St. Clair, Grand Teton National Park (GTNP) archaeologist, provided valuable assistance with the administrative aspects of this project. The aspen treatment project summary was written by Mack McFarland, Fuels Management Specialist (NPS, GTNP). OWSA staff contributing to this report included Carmen Clayton who drafted the project and site maps, and Lavonne Haskins who compiled and paginated the final report.

SURVEY REPORT COVER PAGE

Consultant Project No: WY-27-06	Agency No:
Review and Compliance No:	Cultural Records Office No: 50187

AUTHOR(S): **Paul H. Sanders**

REPORT TITLE (include client name, undertaking name, survey project type, and report number):
The 2006 Class II Cultural Resource Inventory of the Two Ocean - Pacific Creek Aspen Treatment Project Area, Grand Teton National Park, Teton County, Wyoming prepared for the National Park Service, Grand Teton National Park.

DATE OF REPORT (MO/DY/YR): **January 3, 2006**

LEAD AGENCY (e.g., BLM ADMINISTRATIVE UNIT): **National Park Service, Grand Teton National Park**

SURVEY ORGANIZATION/NAME: **Office of the Wyoming State Archaeologist (OWSA)**

FEDERAL PERMIT NO. (e.g. BLM Cultural Resource Use Permit and Expiration Date): **N.A.**

BRIEF DESCRIPTION OF UNDERTAKING: **GTNP prescribed fire treatment project is designed to increase aspen stand coverage in the area to aid in management of naturally ignited wildland fires for resource benefits.**

SURVEY METHODS:

Standard 30 Meter Transects Non-Standard (Describe in body of report)
Survey Width (All Linear Inventory): 100 feet (individual road or pipeline corridor)
 150 feet (parallel road/pipeline corridor)
 Other (indicate width: _____ feet)

COUNTY(IES):⁺ **Teton**

USGS QUAD MAPS (NAME, DATE):⁺ **Whetstone Mountain (1996)**

LANDOWNER:^{*} BLM BuREC FS NPS PRIVATE STATE USFWS OTHER (Specify)

LEGAL DESCRIPTION (T/R/Sec/up to 4 qtrs and identify template corner):⁺

Unable to share this information

ACREAGE:

FEDERAL SURFACE	BLOCK: 232 acres	LINEAR:	TOTAL: 232 acres	TOTAL ACREAGE:
NON-FED SURFACE	BLOCK:	LINEAR:	TOTAL:	232 acres

FILE SEARCH DATE(S): **August 17, 2006 (File Search No. 17864)**

FIELD WORK DATE(S) (MO/DY/YR): **September 20, 2006**

FIELD PERSONNEL:⁺ **Paul H. Sanders, John Laughlin, and Carmen Clayton**

SURVEY RESULTS: NO CULTURAL MATERIAL **1** #ISOLATED FIND(S) **1** #SITE(S)

+ attach continuation sheets for additional data * check all that pertain

SITE SUMMARY TABLE (Field Agent Use)

Smithsonian Number Isolated Find Number	48TE470	IF-WY-2706-3
Brief Site/isolate type	Prehistoric lithic scatter	Prehistoric obsidian flake
Previously recorded? (Y/N?)	Y	N
Previous Eligibility	E	
Previous SHPO Concurrence? (Y/N?)	N	N
Current Eligibility	NE	NE
NRHP Criteria (A,B,C, or D)		
Contributing Portion? (Y/N?)		
Current Project Effect?	NE	NE
Proposed Mitigation		
Land owner	NPS	NPS
Township		
Range		
Section		
¼'s		
Comments		

National Register of Historic Places Eligibility: E (Eligible); NE (Not Eligible); U (Unevaluated)

Previous Eligibility (Determination): R-Listed on NRHP Register; K-Eligible by NRHP Keeper; C-Eligible-SHPO/Agency concurrence; A-Eligible-Agency; E-Eligible-Consultant; U-Eligibility Unknown; N-Not eligible

Effect: NO for sites with no effect; NAE for site with no adverse effects; AE for sites with adverse effect; U for Unknown

Proposed mitigation: e.g., data recovery, avoidance, fencing, sign, etc.

***ATTACH CONTINUATION SHEETS AS NEEDED/EXPAND, ADD OR DELETE INDIVIDUAL SITE COLUMNS AS NECESSARY; Please list sites in alphabetical/numeric order first and isolates after the sites.**

Note: Information about the location, character, or ownership of historic properties in the report may not be disclosed to the public unless authorized by the appropriate federal agency and/or the Wyoming State Historic Preservation Office.

PROJECT DESCRIPTION AND SETTING

This report presents the results of a Class II inventory within the 749 acre Two Ocean-Pacific Creek Aspen Treatment project area conducted by the Office of the Wyoming State Archaeologist (OWSA) for the National Park Service (NPS), Grand Teton National Park (GTNP). The Class II inventory consisted of survey blocks totaling 232 acres that were designed to provide coverage of those areas deemed to have potential high archaeological site densities. The project area is between a drainage valley below Two Ocean Lake on the west and Pacific Creek to the east (Figure 1). GTNP proposes a prescribed fire to regenerate deteriorating aspen groves within the project area.

The project area consists of the western two-thirds of an isolated hill on the west side of a gravel road leading to the Pacific Creek campground and trailhead. Elevations range from 2085 m (6840 ft) to 2195 m (7200 ft) (Figure 2). The hill is generally bounded on the east by terraces and outwash plains of Pacific Creek, and on the west by a wide drainage valley originating from Two Ocean Lake. Soils over most of the project area consist of brown silts, sands, and gravels. Vegetation is comprised of an open sagebrush-grassland community on the terrace flats at the lower elevations near the drainages, while groves of conifers and aspen occupy the base, slopes and top of the hill (Figure 2). Open grasslands and meadow (with some sagebrush) also occur on some of the hill slopes and hill top. The wetter, lowlying areas along the base of the hill at its northern end contained dense stands of willow, grasses, and thick underbrush within the conifer forest. Ponds shown on the USGS topographic map within the project area were all dry, likely due to the prolonged drought. Surface visibility within much of the project area was estimated at 0-5 percent due to the grass and other vegetative cover, while some of the rockier hillslopes, as well as the terrace surface at the southern end of the project area, had 5-20 percent visibility.

Geologically, the hill is surrounded by wide bottomlands of Quaternary alluvium, while the top of the hill is mantled by Pleistocene and/or Pliocene glacial drift (Love et al. 1992). Bedrock in east half of the hill is comprised of the Eocene age, Hominy Peak formation (Absaroka Volcanic Supergroup), described as: “brown to dull-green andesitic mudflow breccia, vent breccia, conglomerate, and sandstone; light-gray tuff and thin claystone zones near top and at base; lenses of gold-bearing quartzite boulder conglomerate in lower part; fossil trees common” (Love et al. 1992:7).

The west half of the hill is composed of the Miocene age, Colter formation which is described by Love et al. (1992:7) as:

Light-gray, green, and brown waterlaid tuff, sandstone, claystone, and mafic volcanic conglomerate; light-gray tuffaceous soft to massive to irregularly bedded poorly cemented sandstone beds in the lower part. Locally, an upper conglomerate, 0-60 ft thick, consists of

Map not available

Figure 1. Map of project area.



View to the south at the northern end of the project area



View to the north at the southern end of the project area

Figure 2. Photographs of the project area.

50-percent roundstones of mafic volcanic rocks and the remainder of quartzite. Some rhyolitic welded tuff is in the upper part. A middle tuffaceous sandstone and claystone sequence contains many layers of grit and pebble conglomerate of mafic andesite and basalt clasts; some thick beds of pale-green, pink, and white bentonitic claystone. In some places basal beds are of clasts of quartzite, andesite, and basalt in a drab tuff and sandstone matrix.

Weather conditions during the inventory were warm and dry. David Eckles served as principal investigator; Paul H. Sanders was field and project director with crew members consisting of John Laughlin and Carmen Clayton.

FILE SEARCH RESULTS AND SAMPLING STRATEGY

A documents search was conducted by OWSA of the records within the Wyoming State Historic Preservation Office (SHPO), Cultural Records Office (WYCRO) on August 17, 2006 (Search# 17864). Three previous projects and five previously recorded sites were noted.

All three inventories consist of small block surveys for prescribed fires/range improvements, and as protective measures for existing structures (Accession Nos. 00-1016, 01-476, and 01-1703). The first two projects were conducted for and by the US Forest Service, Bridger-Teton National Forest, while the latter was for Grand Teton National Park, conducted by OWSA. These inventories occurred in and around a rural housing area, about 1 km southeast of the present project area.

The only site recorded by these inventories was recorded by OWSA. This consisted of a historic depression and trench (48TE1585), related to an abandoned septic system (Sanders and Holtman 2002). The ineligible site is located approximately 1 km to the southeast of the present project area (Figure 1).

Four prehistoric sites are listed in the documents search that are not associated with an accessioned project. The four sites, 48TE470-473, were recorded by Gary Wright, State University of New York, Albany in 1973 as a part of a park-wide, selected inventory of Grand Teton National Park (Wright 1975). Wright's (1975) site descriptions are quite brief, but 48TE470 was described as a thin scatter of lithic debris and fire-cracked rocks (obsidian and quartzite flakes, and a mortar collected) situated on a knoll north of and overlooking an unnamed lake. Site 48TE471 is on a bench and consisted of a thin scatter of material (flakes and drills collected), fire-cracked rock, and a hearth eroding out of the slope. Site 48TE472 consisted of a scatter of lithic debris and fire-cracked rock located on a spur. An obsidian point base and obsidian flakes were collected. Site 48TE473 consisted of a scatter of lithic debris and fire-cracked rock located on a knoll. A side and basally notched obsidian point and obsidian flakes were collected.

There are General Land Office (GLO) plats for the majority of the project area. The 1903 plat of

T45N, R113W and the 1894 plat of T45N, R114W do not show any buildings or structures for sections 6, 7, 1, or 12, respectively, which covers the southern three-fourths of the present project area (Figure 1). There is an unnamed road that shows up on the T45N, R113W plat which appears to be an existing road that forms the eastern border of the project area. No potential cultural resources are shown on these plats near the present project area. Daugherty (1999) also does not show any historic homesteads in this particular area.

The documents search indicates that there is some potential for prehistoric sites within the present project area. The four previously recorded prehistoric sites (48TE470-473) are located at the base of a hill with a south-facing orientation, overlooking the wide drainage valley extending south from Two Ocean Lake. The western boundary of the present project area is along the eastern edge of this same valley and has a similar topographic setting, and overlooks the same bottomlands, although with a west-facing orientation. It would seem likely that additional prehistoric sites may exist along the valley edge, or in other places at the base of this hill. It was upon this basis that the present sampling strategy was developed.

Sampling Strategy

OWSA proposed a Class II inventory of the Two Ocean-Pacific Creek project area. The 31 percent sample (232 acres) was designed to provide coverage of the high site probability areas. These were initially identified as the flatter areas surrounding the base of the hill, which appears to be similar to the topographic locales of previously recorded sites 48TE470-473 (Figure 1).

During the inventory it was found that dense willows thickets and heavy underbrush in the nearby timber stands occurred in the area at the base of the hill at the northern end of the project area (Figure 3). Attempts were made to survey this area, but proved too thick, with zero surface visibility. As a result, this area was excluded from the sample survey. Instead, a sample inventory of the hill top was established that included the flatter upper slopes of the southwestern edge of the hill, and the southcentral interior of the hill top. Both areas contained stands of aspens and conifers and some open meadow grasslands.

Two Ocean-Pacific Creek Aspen Treatment Project Summary (by Mack McFarland)

The 749 acre Two Ocean prescribed fire project has been designed to increase aspen stand coverage in the area to aid in management of naturally ignited wildland fires for resource benefits. Effective treatment of this area by prescribed fire will allow fire managers to utilize increased aspen coverage to aid in wildland fire use decision processes as recommended in the 2005 Fire Management Plan. The project will utilize a late summer/fall burn prescription to most closely mimic natural fire effects while maintaining acceptable levels of risk and complexity. A public information campaign will be initiated following approval of this project, primarily focused in the Pacific Creek subdivision.

Prescribed fire preparation work may include mechanical felling of trees throughout the project area



View of the willow bottoms and vegetation of the non-surveyed area

Figure 3. Photograph of the project area, non-surveyed area.

to increase fire behavior in areas where it would otherwise be difficult to achieve project objectives. Mechanical felling involves hand crews with chainsaws felling trees within pre-identified stands. Additional chainsaw work will likely occur along unit boundaries to reduce ladder fuels and better secure unit boundaries for ignition operations.

Prescribed fire operations will be conducted as a combination of ground and aerial ignition. Ground ignition would occur with hand crews potentially supported with ATV's along portions of the unit boundary. Hand crews will utilize drip torches as the primary ignition device. Aerial ignitions will be initiated following the burnout of unit boundaries by hand crews and be performed with a Helitorch or PSD (plastic sphere dispenser). Following ignition of the unit some mop-up of ground fuels and falling of hazard snags may occur depending on smoke production and current and forecasted weather.

INVENTORY METHODS

The present inventory followed standard archaeological inventory procedures accepted by the SHPO. Personnel were spaced at no more than 30 m intervals. In areas with lower surface visibility, special attention was paid to areas of subsurface disturbance (e.g., rodent burrows, animal trails, cutbanks, etc.).

At this time, GTNP has not signed off on the new SHPO site definitions. As a result, for this inventory, a site was defined as consisting of two or more artifacts within 30 m of each other or one artifact and one or more features. An isolated find was defined as a single artifact, more than 30 m from any other artifact. Road trash and objects less than 50 years old were not recorded. Wyoming Cultural Properties Forms were filled out for each site, with each locale plotted on the appropriate USGS 7.5 minute topographic quadrangle using coordinates derived from a handheld GPS unit with UTM coordinates based on the WGS 84 Datum. A Wyoming Isolated Resource Form was filled out for isolated finds. A site map was created showing location of cultural items, site datum, and local topography. The site datum consists of a metal spike with an attached aluminum tag inscribed with the temporary field site number, date, and initials of OWSA and the field director. Shovel tests were excavated to reveal the subsurface soils and the potential for intact buried cultural deposits. The depth and diameter of each shovel test, its soil characteristics and description of any cultural materials were recorded. Excavated fill was screened through ¼" hardware cloth. Appropriate photographs were taken of the project area and any sites or features that might be present. All field notes, maps, photographs, etc. will be eventually curated with the National Park Service, Grand Teton National Park, but in the meantime, these records will be held at OWSA. No cultural materials were collected during this project.

SURVEY RESULTS

A 31 percent Class II cultural resource inventory of the 749 acre Two Ocean-Pacific Creek Aspen Treatment Project Area was conducted. The sampled survey areas totaled 232 acres. One new isolated find was recorded during the inventory and one previously recorded site was reinvestigated. These cultural resources are described below.

SITE NUMBER: 48TE470

DESCRIPTION: This site consists of a small prehistoric lithic scatter located on top of a small knoll at the end of a ridge just outside of the present project area (Figures 1 and 4). The site overlooks a dried up pond to the south and southeast and the wide drainage valley that leads up toward Two Ocean Lake to the west. Although the original site's placement indicated the site was just within the northern project boundary, GPS readings have now indicated the site is just outside the project boundary.

Much of the site area is barren ground, which is unusual for the area. Sparse grasses and some low sagebrush cover the site area (Figure 5). However, aspens and conifers occur at the edges of the site. A large isolated limber pine is present at the site. A large spruce/fir occurs about 5 m to the east of the limber pine, both of which serve as markers for the site locality. Soils are a rocky brown silt. Surface visibility was estimated at about 50-75 percent. Elevation is at 2121 m (6960 ft).

The site was originally recorded by Gary Wright, State University of New York-Albany during a parkwide inventory of Grand Teton National Park (Wright 1975). Wright describes the site as a thin scatter of obsidian and quartzite flakes with fire-cracked rocks that were located on the Pacific Creek-Two Ocean Lake migration trail. According to Wright (1975:5), sites 48TE471-473 are also located on this same trail. The prehistoric trails described by Wright as entering Jackson Hole appear to be derived from travel routes originally described by early trappers and explorers, but physical evidence of these old trails have since vanished.

This site was rerecorded in 1985 by Ann Johnson (1985) with the NPS, who found four quartzite flakes, five obsidian flakes, a white chert biface midsection, a quartzite chopper, a mano, and some fire-cracked rock. These materials were found to the northeast of a limber pine, in an area measuring 35 m north-south by 12 m east-west. This limber pine described by Johnson is believed to be the same limber pine noted during the present investigation. Johnson (1985) evaluated the site as eligible, based on the probability that the site represented a single component, it was relatively undisturbed, and that the obsidian could be sourced to fit into the study of lithic resources.

Map not available

Figure 4. Map of site 48TE470.



View to the east at the site and limber pine



View to the east at site area, limber pine to the right, spruce/fir in center

Figure 5. Photographs of site 48TE470.

The present investigation found the site to contain small number of flakes, three choppers, a utilized flake, a core, and a few fire-cracked rocks. These items are listed in Table 1. Most of the debitage consists of tertiary flakes, with some secondary flakes and shatter. A variety of lithic raw material types are represent, including quartzites, cherts and obsidian. The raw materials are similar to that described by the previous investigators, especially Johnson (1985). Three of the tools consist of quartzite choppers (FS-1, 2, and 3), while the other tool is a utilized flake (FS-4) (Figure 6). The choppers and mano (noted by Johnson) would suggest that the processing of plant resources may have been one of the activities performed at the site.

TESTING: Two 40 cm diameter shovel tests were excavated at the site. Both units immediately encountered dense rock layers directly below the surface. No cultural materials were recovered and there is no potential for intact buried cultural deposits.

IMPACTS: The site has been impacted by erosion and deflation. The presence of a hiking trail through the site suggests the possibility that unauthorized artifact collection has also impacted the site.

Table 1. Summary of lithic materials recorded at site 48TE470.

Material Type	Primary	Secondary	Tertiary	Shatter	Debitage Total	Other Items
Gray quartzite			1		1	
Maroon quartzite			1	2	3	
Brown quartzite						FS-3, chopper
White quartzite						FS-2, chopper
Tan quartzite		1			1	FS-1, chopper, 1 core
Mottled gray chert			1		1	
Dark brown chert			1		1	
Phosphoria? chert						FS-4, utilized flake
Obsidian			3		3	
Total		1	7	2	10	3 choppers, 1 core, 1 utilized flake

NATIONAL REGISTER STATUS: The site consists of a dispersed lithic scatter that lacks cultural or temporal diagnostics, datable features, diversity of tool types and has very limited potential for buried cultural materials that could yield information important to the prehistory of the area (Criterion D). As a result, the site is recommended as not eligible for nomination to the National Register of Historic Places.

RECOMMENDATIONS: The site is outside of the present aspen treatment project boundary, and it is very unlikely that the site will be impacted by prescribed fire activities.



FS-1, large quartzite chopper



FS-2, quartzite chopper



FS-3, quartzite chopper



FS-4, Phosphoria chert? utilized flake

Figure 6. Photographs of site 48TE470 artifacts.

ISOLATED FIND: IF-WY-2706-3

DESCRIPTION: This isolated find is a charred obsidian secondary flake located on a 1-2 degree slope of a flat outwash plain at the northern end of the project area (Figures 1 and 7). The artifact was found in a foot trail that passes through the area. Vegetation is a conifer and grassland community with a surface visibility estimated at 0-5 percent (Figure 7). Soil is a brown silty sand. The lack of any other cultural materials on the surface or in other areas along the foot trail suggest it is unlikely that any additional intact buried cultural deposits are present at this locale.

NATIONAL REGISTER STATUS: This isolated find is recommended as not eligible to the NRHP. It has no integrity, there are no indications of any associated buried cultural materials, it contains no significant data, and no further work is recommended.

DISCUSSION OF RESULTS

The Class II inventory of the Two Ocean-Pacific Creek Aspen Treatment Project Area resulted in the recording of one prehistoric site, and an isolated find. Contrary to expectations, no additional archaeological sites were found at the base of the hill, like that seen with previously recorded sites 48TE470-473. Minimally, it was thought that the sagebrush covered terraces at the southern end of the project area, south of the base of the hill, would be a likely location for additional prehistoric materials, due to its proximity to a drainage valley and for its view of this valley. Overall, it may be worthwhile to conduct a post-fire inventory to assess the site density and effectiveness of the Class II inventory in order to establish some baseline data on the relationship between archaeological site numbers and vegetative cover for future prescribed fire projects within Grand Teton National Park.

MANAGEMENT RECOMMENDATIONS

A Class II cultural resource inventory of the Two Ocean-Pacific Creek Aspen Treatment project area was conducted by the Office of the Wyoming State Archaeologist for the National Park Service, Grand Teton National Park. A 31 percent sample (232 acres) of the overall 749 acre project area was inventoried. The purpose of the aspen treatment is for habitat improvement.

One previously recorded site (48TE470) was investigated and one prehistoric isolated find was recorded. It is believed the prescribed fire treatment project will not affect any known cultural resources within the inventory area. Based on the limited number of cultural resources identified within the survey



View to the south at the isolated find area

Figure 7. Photograph of isolated find IF-WY-2706-3 locality.

area, additional cultural resources are not likely to occur within the remaining portions of the Two Ocean-Pacific Creek project area. However, given the dense vegetative cover, if possible, a post-fire inventory of the burned areas is recommended to assess the effectiveness of the Class II inventory and to provide baseline data for future prescribed fires within Grand Teton National Park. As a result, cultural clearance is recommended with the standard stipulations that should archaeological remains be uncovered during the implementation of the prescribed fire project, the appropriate state and federal regulatory agencies be contacted immediately.

REFERENCES CITED

Daugherty, John

- 1999 *A Place Called Jackson Hole: The Historic Resource Study of Grand Teton National Park*. National Park Service, Grand Teton National Park. Moose, Wyoming.

Johnson, Ann

- 1985 48TE470 site form. On file, Wyoming State Historic Preservation Office, Cultural Records Office, Laramie.

Love, J.D., John C. Reed, Jr., and Ann Coe Christiansen

- 1992 *Geologic Map of Grand Teton National Park, Teton County, Wyoming*. Pamphlet accompanying Miscellaneous Investigation Series Map I-2031, U.S. Geological Survey, Denver.

Sanders, Paul H., and Pam Holtman

- 2002 *A Class III Cultural Resource Inventory of the Pacific Creek Mechanical Fuels Treatment Project Area, Grand Teton National Park, Teton County, Wyoming*. Office of the Wyoming State Archaeologist. Prepared for the National Park Service, Grand Teton National Park. On file, Wyoming State Historic Preservation Office, Cultural Records Office, Laramie.

Wright, Gary

- 1975 *A Preliminary Report on the Archaeology of the Jackson Hole Country, Wyoming*. State University of New York - Albany. Prepared for the National Park Service, Grand Teton National Park. On file, Wyoming State Historic Preservation Office, Cultural Records Office, Laramie.