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Appendix C

Technical Report: A Cultural Resources Study of the Proposed CARES Columbia Wind Farm #1 Klickatat County, Washington

by Ken Boreson, Fred Crisson and Craig Holstine

Principal Investigator: Jerry R. Galm

Submitted to Jones & Stokes Associates
Bellevue, Washington

Short Report 444
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1.0 Executive Summary

On August 30-31 and September 1-3, 1994, fieldwork was conducted for the Conservation and Renewable Energy Systems (CARES) Columbia Wind Farm #1 (CWF) project by two archaeologists from Archaeological and Historical Services and two archaeological technicians from the Yakama Indian Nation (YIN). The two AHS archaeologists and one technician completed fieldwork on September 4.

The investigation resulted in the identification of 75 isolated finds (mostly debitage) (see section 7.0 Glossary and Acronyms) and nine recorded sites. In addition, two prehistoric sites had been recorded in the project area previous to the present study. The sites consist of six lithic scatter/procurement areas (45KL565, 45KL566, 45KL567, 45KL569, 45KL570, 45KL571), a prehistoric quarry (45KL466), a projectile point fragment (45KL468), a cabin (20-22), rock clusters (45KL568), and rock cairns (45KL564). The abundance of isolated flakes and lithic scatters suggests this was an historically important area utilized by local Indians for procurement of lithic material.

A map showing the proposed locations of facilities in the Columbia Wind Farm #1 project area indicates that seven of the eleven recorded sites could be affected by construction-related activities (see Table 2 and Figure 4). The boundaries of those properties should be established by means of subsurface testing to determine the precise extent of cultural materials, allowing for the sites to be flagged and avoided during construction. Sites that cannot be avoided should be evaluated for National Register of Historic Places (NRHP) eligibility and Determination of Eligibility forms (DOEs) should be completed. Juniper Point, a locale identified by the Yakama Indian Nation (Meninick et al. 1995) as being a traditional cultural property (TCP), may be affected by the proposed project. It is unknown if the rock clusters (45KL568) and rock cairns (45KL564) are historic or Native American features. These sites, as well as the potential traditional cultural property, require additional background research and consultation with the Yakama Indian Nation to determine NRHP eligibility, effect, and appropriate mitigation measures.

2.0 Purpose of Study, Characteristics of the Project, Site Location

Under subcontract with Jones & Stokes Associates, Archaeological and Historical Services (AHS) conducted a Class III Inventory of the Columbia Wind Farm #1 project area. Sponsored by CARES, the proposal is a wind energy demonstration project which the Bonneville Power Administration (BPA) is considering for purchase of 25 megawatts of electrical output. CARES was formed in 1992 and is a joint operating agency (JOA) comprised of public utility districts in the state of Washington. The proposed project would construct 91 wind turbines, underground and overhead power collection lines, a substation, and power control and staging buildings. The Columbia Wind Farm #1 would be built and operated by FloWind Corporation (CARES and FloWind Corporation 1993; U.S. Windpower Inc. and Columbia Hills East Wind Farm Development 1993).

The purpose of this study is to conduct a cultural resources inventory to provide information for the environmental impact statement being jointly prepared by BPA and Klickitat County. Components of the study included a site file and records search, brief consultation with a representative from the Yakama Indian Nation (Mr. Johnson Meninick), field survey, coordination with the Washington State Historic Preservation Officer (SHPO), and a technical report of findings including recommendations to mitigate potential adverse impacts.

The project area is located approximately 10.5 kilometers (6.5 miles) southeast of Goldendale, Washington, and approximately 3.0 kilometers (2.0 miles) northeast of John Day Dam on the Columbia River (Figure 1). Surveyed areas were on the north and south slopes of the ridge north of the Columbia River in an area called the Columbia Hills. It is in T3N, R16E, S1/2 of Section 13 and T3N, R17E, Section 18 (USGS Quadrangles Biggs Junction, Oreg.-Wash., 1977; Luna Butte, Wash., provisional edition 1983; and Rufus, Oreg.-Wash., 1971). The Columbia Aluminum Corporation owns the property and portions are currently leased for grazing cattle.

3.0 Study Methods - Introduction

According to Verne Ray (1936), the project area is within the ethnographic territory of the Wayampam Indians who had villages at Wishram and just west of Wishram, ca. 19.0 kilometers (12.0 miles) southwest of the project area. Bands of the Yakama, Klickitat, and Umatilla tribes were close neighbors, both geographically and socially (Ray 1936:103, 107, 119, 150). The Dalles and Celilo Falls, about 14.5 kilometers (9.0 miles) west of the project, "were critical areas for trade and commerce between coastal and interior tribes" (Schuster 1975:96). In addition to the Yakama, others who came to trade included Columbia, Spokane, Klickitat, Wayam, Tenino, Tygh, Walla Walla, Umatilla, Palus, Nez Perce, Cayuse, Klamath, Molala, and Kalapuya bands.

The first Euroamerican explorers to the region, Meriwether Lewis and William Clark, passed The Dalles in the fall of 1805 on their way to the mouth of the Columbia River and on their return eastward the following year. A subsequent expedition led by David Thompson occurred in 1811 (Lavender 1956:72, 86). Early Euroamerican exploration was driven primarily by economic interests with an emphasis on establishing trade and acquiring furs.

Wascopam Mission was established at The Dalles in 1838 by Methodist missionaries and subsequently sold to Dr. Marcus Whitman, a Presbyterian missionary, in 1847. After the Whitman Massacre near Walla Walla, the mission became a military quarters and was named Fort Lee. Fort Dalles was built at the same location in 1850 (Corning 1956:88, 258). Klickitat County was established by the Washington Territorial Legislature as "Clickitat County" in 1859. Goldendale, the county seat, was established in 1872, but was initially the site of a homestead patented by John J. Golden in 1863 (Phillips 1980:55, 73).

Stockmen from around The Dalles were among the first settlers in the Klickitat country, moving into the area during the 1860s to take advantage of the abundant bunchgrass. The best ranch sites along the Columbia River and in the interior valleys were no longer available by the late 1870s, leaving marginally productive land for later homesteading attempts. The open range

cattle industry reached its peak and faltered in the late 1870s and was supplanted by sheep and smaller cattle operations.

Early settlers were attracted to a thin strip of pine growing on the ridge north of the Columbia River, which they cut and hauled to the river to fuel steamboats. Dryland wheat farming became a dominant industry in the county in the late 1800s. When the Columbia River and Northern Railroad constructed a line from Lyle to Goldendale in 1903, farmers could ship wheat from Goldendale to the Columbia River (Meinig 1968:284, 290, 344).

3.1 Consultation and Preliminary Data Review

Townships 3N/16E and 3N/17E, where the project area is located, were initially surveyed in the 1860s. A road is depicted in the SW 1/4 of Section 13 in an area surveyed by the General Land Office in 1860 (U.S. General Land Office Surveyor General 1861; 1868). The road appears to be in the same location as the jeep trail depicted on the Biggs Junction USGS quadrangle.

Within the project area, a homestead patent for 160 acres was obtained for the NW 1/4 of the NW 1/4 of Section 17 and the N 1/2 of the NE 1/4 of Section 18, by John Atkinson on November 15, 1895 (Bureau of Land Management, no date). A cabin (20-22) recorded in the NW 1/4 of Section 18 could be a feature from this homestead, although this has not been verified.

Cultural resources investigations adjacent to and within the CARES project area were conducted for a natural gas pipeline for Columbia Aluminum in 1990. A prehistoric lithic quarry (site 45KL466) was recorded and subsequent auger testing revealed a buried cultural deposit. It was recommended that the site be evaluated for National Register status prior to construction activities and the proposed pipeline was realigned to avoid the site (Cox 1991; Pastor 1990). Two prehistoric isolates were recorded during the 1990 survey, a unifacially-modified flaked stone artifact (CA-IF1) and the midsection of a corner-notched or eared projectile point (CA-IF2, given the site number 45KL468). Three loci of lithic debris, none of which appeared to be culturally derived, were also identified (Pastor 1990).

Two sites recorded during the present survey (45KL570 and 45KL571) are near previously recorded site 45KL466. Isolate 34 (a possible core) is within the boundary defined for site 45KL466 in an area identified as a "low concentration of ccs" (Cox 1991). Isolates 46 (2 flakes) and 47 (a flake) are near Locus 3 (several chunks of cryptocrystalline silicate) identified by Pastor (1990).

According to Mr. Johnson Meninick, Yakama Indian Nation Cultural Resource Program Director, the project area was (and continues to be) used for hunting and gathering activities. Mr. Meninick expressed concern about adverse impacts to birds, wildlife, and plants. He indicated that the project area contains "legendary" plants which are currently used by Tribal members, although infrequently because the historic techniques of preparation have been lost.

Mr. Meninick mentioned two specific places in or near the project area that have particular importance to the Yakama Indian Nation: Juniper Point (within the project area) and Maryhill (a village near the Columbia River outside the project area). He did not provide specific reasons for the significance attached to either place.

Two traditional food plants harvested by the Yakama were observed by fieldworkers during the survey: bitterroot (*pyaxi*), and plants from the *Lomatium* family (*luks*). Acorns, another potential food source, were observed in the oak groves in the drainages in Section 13.

> Its acorns are esteemed . . . . leaching is required to eliminate the tannins before they can be eaten. This was traditionally accomplished by burying the acorns in a certain kind of odoriferous mud found along the Columbia at certain spots. They were then baked underground in the manner of camas (Hunn 1990:183).

Oral histories with the Yakama Indian Nation are proposed to be conducted by Historical Research Associates, Inc., as part of the Cumulative Impact Study for the Windpower Washington Windplant (WWP) and CWF projects.

3.2 Fieldwork Methodology

The project area consists of 390 hectares (975 acres), of which approximately 320 (800 acres) were surveyed for cultural resources by on-the-ground reconnaissance. The pedestrian survey was conducted in 30-meter-wide (100-foot-wide) transects in all areas of the project except for the steep slopes on the south side of the ridge above the Columbia River that were identified as being unsuitable for development. The south-facing slope in the south half of Section 13, from about the 850 meter (2800 foot) contour line to the fence marking the southern boundary of the section, was surveyed in transects that varied from about 30 to 70 meters (100 to 230 feet) to accommodate the terrain. The south-facing slope of Section 18, from about 880 meters (2900 feet) in elevation to the southern boundary of the section, was not surveyed due to the steep terrain (Figure 2).

Team members maintained 30 meter (100 foot) intervals by pacing along a north-south baseline (generally a fenced section line). Transects were oriented east-west and compasses declinated to true north were used to maintain accurate bearing. Each east-west pass by the four-person archaeological team had previously been plotted on enlarged USGS maps using a metric scale. Landforms and transects depicted on the maps were used to pinpoint sites and isolated finds and to insure project area boundaries were accurately located.

Sites were defined as areas with more than ten artifacts per ten square meters (108 square feet). Isolated finds (i.e., isolates) generally consisted of isolated items not in association with other remains or, in a few cases, fewer than ten artifacts per ten square meters. Areas surrounding isolates were carefully inspected for the occurrence of additional specimens. Shovel probes in the areas around isolates to expose the ground surface were not necessary because of the sparse vegetation cover and relatively good ground surface visibility (20 percent or greater). All

specimens identified as debitage had attributes indicative of human modification such as a platform, bulb of percussion, and/or percussion rings.

Because of the potential for subsurface buried remains, seven shovel probes were excavated parallel to a runoff channel on two gently sloping benches in the vicinity of four isolated flakes (isolates 32, 38, 39, and 41). Three were dug on the east side and four on the west side of the drainage. The probes were excavated into very compact sediment to depths ranging from 27 to 35 centimeters (11-14 inches) below the ground surface. No cultural material was observed in the shovel test holes or collected from the surface during the project.

3.3 Fieldwork Implementation

Fieldwork was conducted from August 30 through September 4, 1994. No problems were encountered during fieldwork, which proceeded according to previously established plans.

4.0 Affected Environment

The project area is in the Columbia Basin Province and is characterized as a shrub-steppe region with *Artemisia tridentata* (Franklin and Dyrness 1973:44). Vegetation noted during the survey was primarily bunchgrass, cheatgrass, sagebrush, unidentified plants specific to lithosol soils, scattered juniper, and oak in the drainages in Section 13. Balsamroot, lupine, bitterroot, and a few pine trees were also observed.

Topography varied from level to gently sloping terrain on top of the ridge, about 5 to 18 percent slopes on the north side, to greater than 28 percent slopes on the south side. Drainages created by seasonal runoff, generally oriented north-south, dissect the terrain on both sides of the ridge. There may be a few permanent springs on the south side of the ridge, as indicated by lush vegetation and water dripping out of pipes into stock tanks situated in draws in two locations.

Lithosol soils are common in the project area although accumulated sediment (1.0 or more meters [3.3 or more feet] deep) is apparent in cutbank exposures in some draws. Eroding natural occurrences of cryptocrystalline silicate is abundant throughout the project, as observed on lithosols and in drainages. The lithic debris occurs in a variety of forms, from partially buried weathered boulders and cobbles to eroded chunks and flakes that could be natural or tested material but without attributes indicative of cultural modification. A range of colors and crystallinity is present, including good-quality stone that was exploited for manufacturing tools.

Surface and limited subsurface disturbance from roads, fences, cattle trampling, borrow pits, and radio tower construction were observed in the project area. Ground surface visibility ranged from 0 percent in areas with thick grass to 100 percent on some lithosols and on roads. An average ground surface visibility for the project area was 65 percent.

Seventy-five isolates were recorded (Table 1 and Figure 3) during fieldwork. Most were flakes located near or within scatters of naturally-occurring, eroding cryptocrystalline material. Items found within large scatters of cryptocrystalline material include isolates 1, 5, 6, 10, 11, 51, 53,

54, 56, 61, and 68. Nine sites were recorded during the survey (Table 2 and Figure 4) consisting of six lithic scatters/procurement areas (45KL566, 45KL567, 45KL569, 45KL570, 45KL571, and 45KL565), a historic cabin (20-22), rock clusters (45KL568), and rock cairns (45KL564). In addition, two prehistoric sites, a prehistoric quarry (45KL466) and a projectile point fragment (45KL468), had been recorded in the project area previous to the present study.

One additional area in the vicinity of Isolate 74 may prove to be a site if further investigations reveal cultural materials not observed during the survey. This potential site is about 100 meters (300 feet) north of 45KL565 in a grove of oak trees where two river-rounded cobbles (manuports) and four flakes were observed. Eroded runoff channels provided surface visibility for a portion of this area. Adjacent vegetated flat benches in and near the trees could have been areas used for processing acorns and campsites.

The project area possesses elements that may, depending upon YIN consultation, qualify it as a traditional cultural property (TCP, as defined by NRHP *Bulletin 38*). The presence of plants used traditionally by native peoples, rock cairns possibly indicating vision quest or other religious activities, and Tribal significance attached to Juniper Point may prove to be contributing elements in a TCP whose NRHP eligibility and boundaries have not yet been determined.

5.0 Environmental Consequences and Mitigation Measures

5.1 Environmental Consequences

Results of the cultural resources survey show a relatively high occurrence of prehistoric cultural materials. In addition, consultation with Yakama Indian Nation representatives indicates traditional cultural use of the project area for plant-gathering and other purposes. Proposed project-related actions that could destroy or otherwise impact cultural and ethnobotanical resources in the project area include: widening and grading existing roads; building new roads; clearing and leveling mobilization areas for equipment: excavating and leveling tower sites; constructing building sites; and excavating and constructing sites for underground and overhead transmission lines. Project development could also increase access and use of the area, potentially resulting in vandalism of sites, and would introduce visual and auditory impacts affecting the settings (or surroundings) of the sites.

While all or most of the sites could be visually and audibly affected by construction and operation of the proposed project, the rock cairns/clusters (45KL564 and 45KL568) and any traditional cultural property (e.g., Juniper Point and/or a larger surrounding area) are most sensitive to those types of effects. Other contributing elements of a TCP, such as plants, could be directly affected by proposed project-related activities.

Based on a map of proposed construction dated December 1994 (FloWind Corporation 1994), the sites could be directly (i.e., physically) affected by the following project-related activities:

45KL566 - turbine string G and lateral access road construction
45KL567 - main access road (MAR) 2 construction

45KL569 - MAR 2 construction
45KL570 - MAR 2 construction
45KL571 - MAR 3 construction
20-22 - no physical impact
45KL568 - no physical impact
45KL564 - turbine string C and lateral access road construction
45KL565 - no physical impact
45KL466 - MAR 3 and south extension of Miller Road construction
45KL468 - no physical impact
Juniper Point - turbine strings I and J and MAR 1

Proposed improvements to the south extension of Miller Road may affect prehistoric site 45KL466, recorded prior to the present study. Like the sites recorded during the survey for the present study, boundaries for site 45KL466 have been defined based upon surface visibility of artifacts. Until subsurface testing can be conducted, effects to the identified sites from proposed project-related activities cannot be precisely determined. In addition, the right-of-way for the 115-kV transmission line proposed to serve the project facilities should be surveyed prior to beginning ground-disturbing activities.

5.2 Mitigation Measures

Mitigation measures for potentially National Register-eligible cultural properties (i.e., all eleven sites in the project area) include avoidance of impacts and minimization of impacts. Avoidance is generally the preferred option due to the resources' fragile and irreplaceable nature.

Procedures to accomplish mitigation measures include:

Avoidance of Impacts

1. Shovel testing should be conducted to more precisely define site boundaries for sites 45KL466, located along MARs 2 and 3 and the south extension of Miller Road; 45KL566, located along turbine string G; 45KL567, located in the vicinity of MAR 2; 45KL569, located in the vicinity of MAR 2; 45KL570, located in the vicinity of MAR 2; and 45KL571, located in the vicinity of MAR 3. Once those boundaries have been established, they can be flagged and avoided during final design and construction.

2. Consultation with the Yakama Indian Nation should proceed regarding the traditional significance of rock cairns 45KL564, located along turbine string C, rock clusters 45KL568, located east of turbine string K, and Juniper Point, located in the vicinities of turbine strings I and J and MAR 1. Site 45KL564 could be both directly and visually affected by construction; 45KL564 would be visually affected; Juniper Point could be both directly and visually affected. Appropriate mitigation measures should be determined in consultation with SHPO and YIN.

Minimize Impacts

1. Once boundaries of sites have been established (as per shovel testing as outlined above), proposed locations of turbine strings and access roads can be redesigned so as to minimize direct and visual effects on cultural resources.

2. Archaeological monitoring can be done during construction to minimize impacts to previously unidentified cultural resources. If such resources are encountered, work would be halted in the immediate area and SHPO would be consulted to determine appropriate treatment of the resources, pursuant to 36 CFR 800.11(b).

3. Subsurface testing of archaeological sites that cannot be avoided will determine NRHP-eligibility under Criterion D and define appropriate data recovery strategies.

4. Data recovery will be implemented to reduce "adverse effect" to "no adverse effect" to properties eligible under Criterion D, pursuant to 36 CFR 800.4(c).

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7.0 Glossary and Acronyms

Biface - Stone tool bearing flake scars on both surfaces (Crabtree 1972:38).

Bulb of percussion - The characteristically bulbar area on the plane of fracture of a flake caused by the force applied to the stone to detach the flake (Crabtree 1972:48, 89).

Cairn - A pile of stones.

Camas - *Camassia quamash*, the root of this plant was an important food resource for Native Americans. It is still harvested today by people from numerous tribes east of the Cascades.

Cobble - A rock fragment between 64 and 256 mm (2.56 and 10.24 inches) in diameter.

Core - A mass of raw material often preshaped by the tool maker to allow the removal of a specific type of flake or blade (Crabtree 1972:54).

Debitage - Residual lithic material resulting from tool manufacture (Crabtree 1972:58).

Flake - Any fragment of stone removed from a larger mass by the application of force, intentionally, accidentally, or through natural processes. Flakes are characterized by a platform and a bulb of percussion (Crabtree 1972:64).

Graver - A stone tool designed and flaked so as to produce a functional point used to incise bone or softer stone (Crabtree 1972:68).

Lithic - From the Greek, pertaining to stone (Crabtree 1972:74).

Manuport - Natural object transported by a person or persons.

Percussion rings - Characteristic waves or compression rings around the bulb of percussion on the plane of fracture of a flake (Crabtree 1972:89).

Platform - The surface area on a piece of stone receiving the force necessary to detach a flake or blade, a portion of the platform is evident on the detached flake (Crabtree 1972:84).

Tested material - Stone broken in order to ascertain whether it is suitable for tool manufacture.

Uniface - Stone tool bearing flake scars on one surface only (Crabtree 1972:97).

AHS - Archaeological and Historical Services
BPA - Bonneville Power Administration
CARES - Conservation and Renewable Energy Systems
DOE - Determination of Eligibility
JOA - Joint Operating Agency
NRHP - National Register of Historic Places
OAHP - Office of Archaeology and Historic Preservation
SHPO - State Historic Preservation Officer
USGS - United States Geological Survey

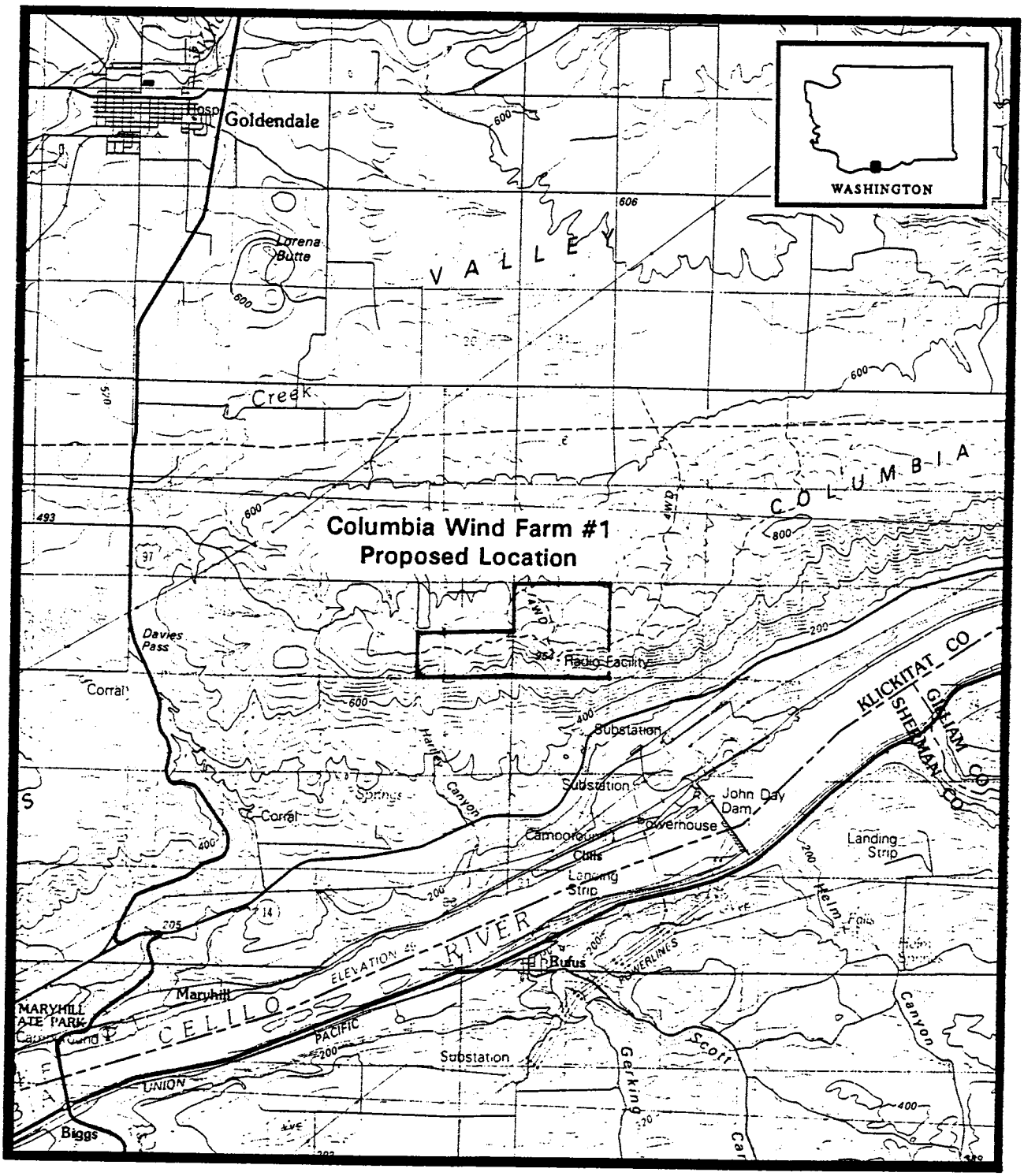

Figure 1. Map of project area.

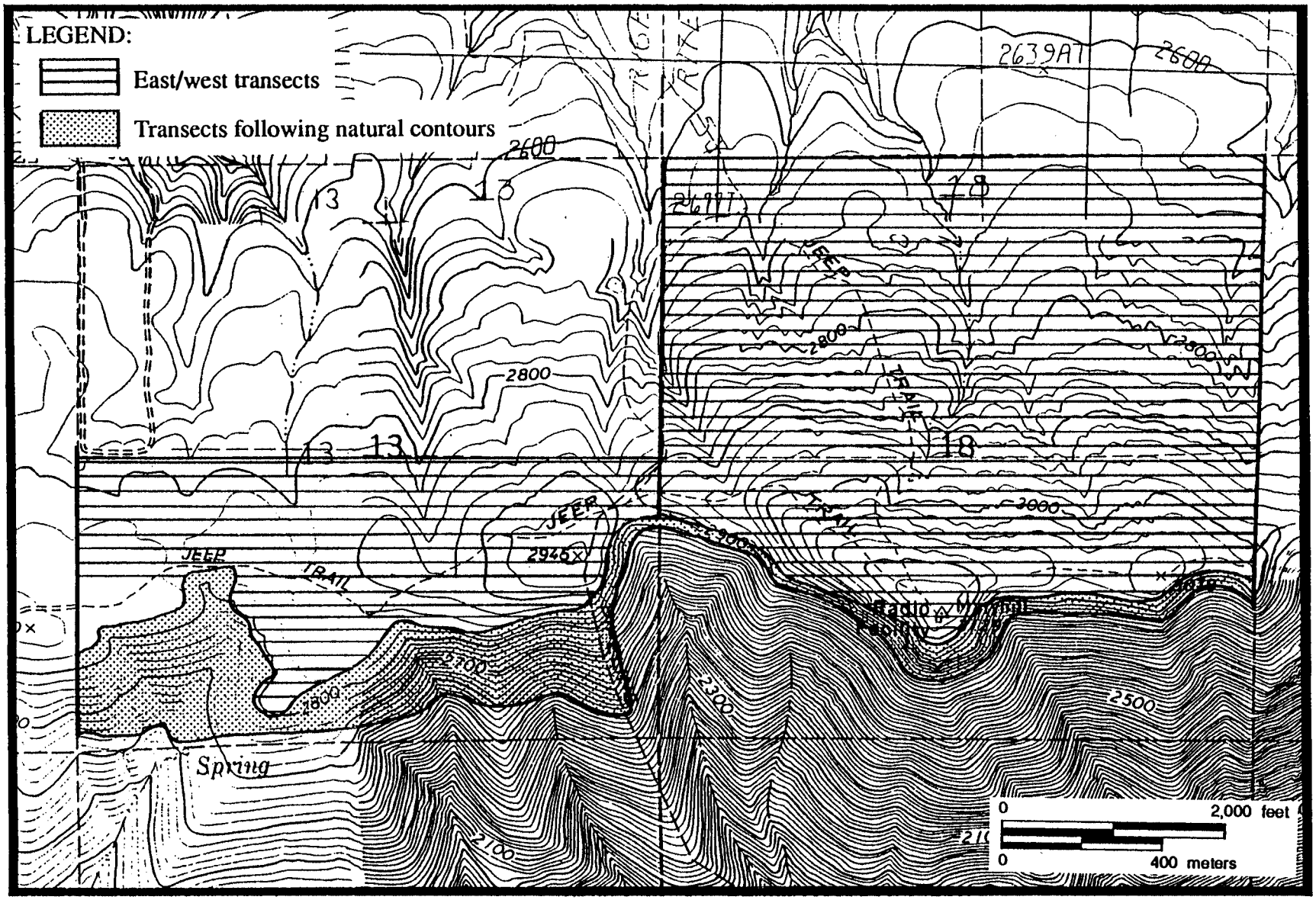

Figure 2. Cultural resource survey transects.

Table 1. List of Isolated Finds.

Isolate Number	Northing	Easting	Elevation (ft)	Description
1	5067140	674540	2420	6 flakes, core
2	5067700	677370	3030	flake
3	5067590	677240	3060	6 flakes, modified flake/graver
4	5067610	677150	3060	5 flakes
5	5067570	677070	3020	2 flakes
6	5067600	676900	3070	flake
7	5067590	676260	2950	flake
8	5067780	675930	2920	flake
9	5067590	676190	2910	modified flake
10	5067540	676900	3000	modified flake
11	5067520	676940	2970	2 modified flakes
12	5067780	675850	2910	flake
13	5067870	676010	2920	4 flakes, core*
14	5067880	676100	2940	flake
15	5067890	677400	2950	flake
16	5067880	676870	2960	core*
17	5067660	676620	3090	flake
18	5067710	677420	3020	flake
19	5067870	676560	2960	earthen dam
20	5067770	677050	2990	earthen dam
21	5067860	675790	2880	flake
22	5067990	676030	2880	flake
23	5068200	676610	2820	core
24	5068080	676090	2860	flake
25	5068290	676130	2760	quartzite hammerstone
26	5068240	676210	2790	flake
27	5068370	676700	2740	flake

Table 1, continued.

Isolate Number	Northing	Easting	Elevation (ft)	Description
28	5068330	676620	2790	2 flakes
29	5068520	676510	2710	earthen dam and pond
30	5068520	676360	2730	flake
31	5068630	677150	2700	flake
32	5068650	676560	2660	2 flakes
33	5068600	676120	2660	3 flakes
34	5068650	675860	2610	core*
35	5068720	676000	2660	flake
36	5068710	676180	2620	flake
37	5068690	677230	2660	flake
38	5068690	676550	2640	flake
39	5068650	676600	2660	flake
40	5068610	676590	2670	2 oil cans, 2 sanitary cans (rusted, no date)
41	5068610	676570	2680	flake
42	5067870	675310	2850	flake, core
43	5067760	675250	2840	flake
44	5067710	675210	2860	flake
45	5067740	675750	2910	flake
46	5067720	675660	2930	2 flakes
47	5067700	675710	2930	flake
48	5067420	675240	2820	flake
49	5067190	675000	2760	flake
50	5067270	674840	2820	flake
51	5067390	674790	2800	flake
52	5067430	674720	2780	3 flakes
53	5067390	674710	2720	flake
54	5067460	674770	2820	uniface

Table 1, continued.

Isolate Number	Northing	Easting	Elevation (ft)	Description
55	5067240	674730	2740	flake
56	5067340	674740	2740	flake
57	5067140	674850	2760	flake
58	5067310	674310	2820	flake
59	5067380	674360	2820	flake
60	5067370	674570	2760	flake
61	5067460	674660	2760	10 flakes (10 x 50 m area)
62	5067510	674300	2860	flake
63	5067480	674910	2860	flake, chunk
64	5067450	674980	2860	5 flakes
65	5067590	675450	2910	flake
66	5067610	674740	2860	2 flakes
67	5067360	674910	2860	flake
68	5067500	674690	2820	flake
69	5067340	674980	2860	flake
70	5067360	675060	2850	flake
71	5067270	675270	2590	water trough
72	5067260	675510	2570	water trough
73	5067960	676100	2920	quartzite hammerstone, 3 flakes
74	5067870	674840	2780	2 river-rounded cobbles (manuports), 4 flakes
75	5067270	675450	2650	20 flakes (10 x 40 m area)

* this item may be a crude core, but cannot be determined with certainty

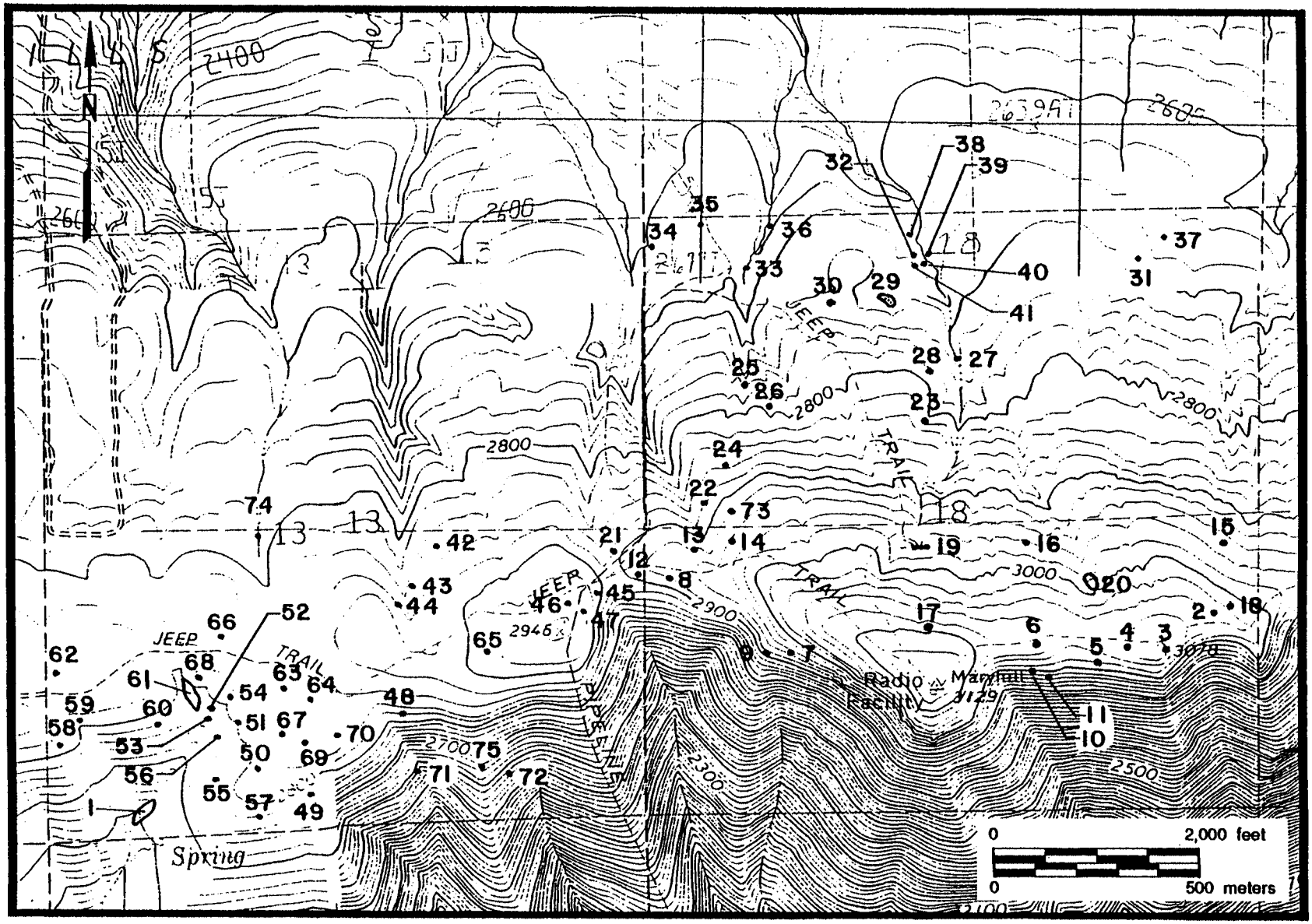

Figure 3. Map depicting locations of isolated finds (map based on Biggs Junction, Luna Butte, and Rufus USGS quadrangles).

Table 2. List of Sites.

Site Number	Description	Recommendations
45KL566	Lithic scatter/procurement area with 100+ flakes (mostly tertiary) and 2 cores.	Shovel test to determine site boundaries; realign turbine string and access road to avoid site.
45KL567	Lithic scatter/procurement area with 100+ flakes (mostly tertiary), and a few cores.	Shovel test to determine site boundaries; flag and avoid site during construction.
45KL569	Lithic scatter/procurement area with 50+ flakes (mostly tertiary), 2 thinning flakes, and a uniface.	Shovel test to determine site boundaries; flag and avoid site during construction.
45KL570	Lithic scatter/procurement area with 50+ primary, secondary, and tertiary flakes and chunks (cores?), and a biface fragment (edge of a projectile point?).	Shovel test to determine site boundaries; flag and avoid site during construction.
45KL571	Lithic scatter/procurement area with mostly tertiary flakes and a few primary and secondary flakes.	Shovel test to determine site boundaries; flag and avoid site during construction.
20-22	Historic cabin with associated earthen dam and can dump with cans dating post-1935.	Avoid during construction.
45KL568	Three rock clusters made of local basalt cobbles and boulders about 15 cm tall. Cluster #1 is 1.4 x 1.4 m; #2 is 1.5 x 2.0 m, #3 is 1.1 x 1.2 m. A 2 x 4 inch board, 2 small wooden frames and 3 tertiary flakes are nearby.	Avoid during construction.
45KL564	Three rock cairns made of basalt cobbles and boulders. Cairn #1 is 2.0 x 2.3 x 0.6 m tall; #2 is 2.2 x 2.5 x 0.7 m tall; #3 is 1.6 x 1.8 x 0.6 m tall. A ccs flake was found in the vicinity.	Redesign turbine string and access road to avoid the site.
45KL565	Lithic scatter/procurement area consisting of 50+ flakes (mostly tertiary and thinning flakes), 2 cores, 2 hammerstones. Cutbank exposure shows 1.0+ m sediment.	Avoid during construction.

45KL466	Lithic quarry estimated to be 715 m N/S, 150 m E/W; extends beyond project area north on both sides of south extension of Miller Road.	Shovel test to determine site boundaries; flag and avoid during construction.
45KL468	Isolated projectile point fragment.	Avoid during construction.

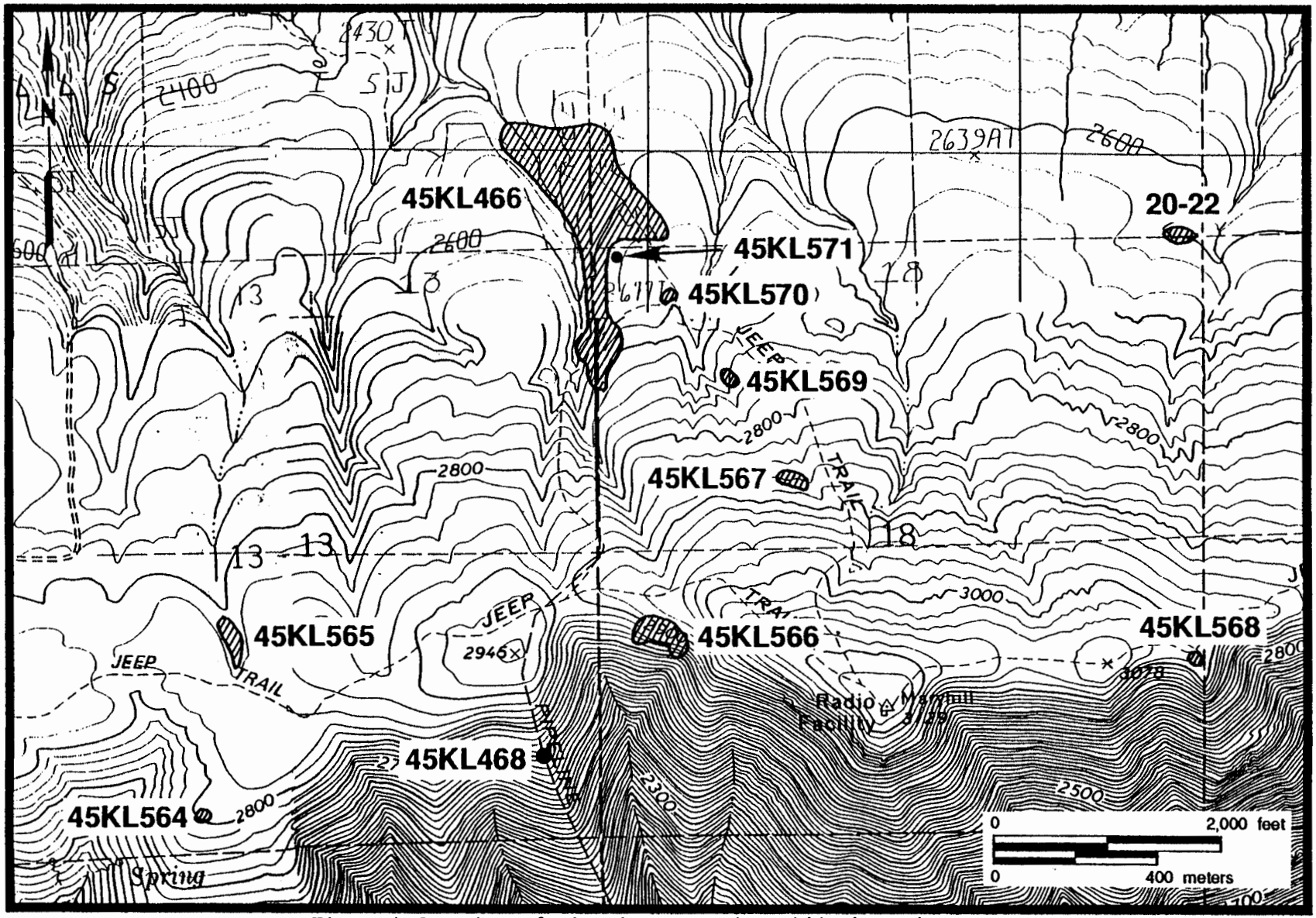

Figure 4. Locations of cultural resource sites within the project area.