Exxon Valdez Oil Spill
Restoration Project Annual Report

Archaeological Site Restoration, Index Site Monitoring, 1996

Restoration Project 96007A
Annual Report

This annual report has been prepared for peer review as part of the *Exxon Valdez* Oil Spill Trustee Council restoration program for the purpose of assessing project progress. Peer review comments have not been addressed in this annual report.

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June, 1997

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Study History: The Index Site Monitoring project was designed to allow monitoring of vandalism and other site injury through the time since the *Exxon Valdez* oil spill. A representative group of sites injured from vandalism or from oiling was identified to provide a gauge of the level of continued injury to all sites in the area. The large number of sites potentially susceptible to injury is so large not all can be reasonably monitored. The strategy of monitoring index sites began after the FY93 project. The aim of the project is to monitor the index sites for a ten year period as a minimum time to detect trends in vandal activity.

Abstract: The Index Site Monitoring project seeks to gauge levels of vandalism injury to archaeological sites in the *Exxon Valdez* oil spill area. Selected sites are visited on alternate years and a few on a yearly basis. During 1996, five of the ten sites monitored suffered vandalism or from un-intentional injury. One of the sites heavily injured, AFG-081, had been partially restored during prior year efforts. The two sites in the Prince William Sound area, SEW-077 and SEW-469, have not been recently injured. AFG-046, AFG-098, and AFG-129 continue to erode primarily from natural causes.

Key Words: Archaeology, *Exxon Valdez*, index sites, monitoring, vandalism

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INTRODUCTION

Damage occurred to archaeological sites in the Exxon Valdez Oil Spill area from un-monitored spill cleanup efforts as well as vandalism. Vandalism was identified by land managing agencies to be increased due to wider knowledge of site locations after the 1989 spill. Monitoring a series of representative or "index" sites has been a primary strategy for restoration since the restoration programs formally began. The index sites were selected from sites on public lands known to have been vandalized. Additionally, sites where oil deposited on the beach have been sampled for oil migrating into the site deposits.

The U.S. Forest Service monitored two sites in Prince William Sound, one of which was vandalized and the other oiled and cleaned. The U.S. Fish and Wildlife Service monitored two vandal damaged sites in the Kodiak area. The State of Alaska, Department of Natural Resources monitored four sites on Shuyak Island and two in Port Dick on the Kenai Peninsula. The National Park Service did not monitor the McArthur Pass Site during 1996 but will resume their alternating year schedule during the 1997 season.

State of Alaska, Department of Natural Resources Field Monitoring, 1996

Douglas R. Reger
Office of History and Archaeology
Alaska Department of Natural Resources

The 1996 index site monitoring program included visits to six sites, four in the Shuyak Island area and two in Port Dick on the Kenai Peninsula. All of the sites were visited in prior years but two sites had not been monitored for several years. As noted in the archaeological restoration plan, published in 1994, a visits to index sites during alternate years is a basic restoration monitoring strategy.

AFG-098 (Twin Creeks I) [Segment NB-001]

During 1996 the State of Alaska monitored four sites on Shuyak Island. DNR archaeologists returned to AFG-098 to check current condition of the site. Although AFG-098 was not scheduled to be monitored during 1996, weather delays for completing other portions of the Shuyak Island monitoring allowed a short site visit.

The site was first reported prior to the Exxon Valdez Oil Spill but was tested and documented during 1991 (Reger, McMahan, and Holmes, 1992: 40). During 1991 the site was well mapped and the intertidal area tested to determine any effect on radiocarbon dating from oil contamination. Exposed cultural debris on the beach places the site in danger from vandal collecting. It was identified as one of the index sites to periodically monitored.

Testing of the site during 1991 revealed two separate occupations of the site during the Koniag Phase. Organic and lithic artifacts are present in the intertidal zone. The most recent occupation, dating approximately to A.D. 1350 to A.D. 1400, is eroding from the upper intertidal zone. Remaining deposits are covered by beach sediments consisting of angular pebbles.

A brief examination of the beach surface was made and photographs taken from the site photo station to the west. Erosion of the exposed cultural deposits on the beach continues. Newly exposed fire cracked rocks and a few chips of slate were located just south of Test pit 2 excavated during 1991 (Reger, et al., 1992: 46). No tools or fragments of tools were found and no remains were collected.

AFG-081 [Segment WO-003]

AFG-081 was also not scheduled for monitoring during 1996 but was visited during time available due to weather delays. The site was identified prior to the 1989 oil spill and vandalism damage was documented during the cleanup phase of response. The site is a large midden mound into which six large, deep house depressions were excavated. AFG-081 was occupied during the Koniag period or during the first half of the second millenium A.D.

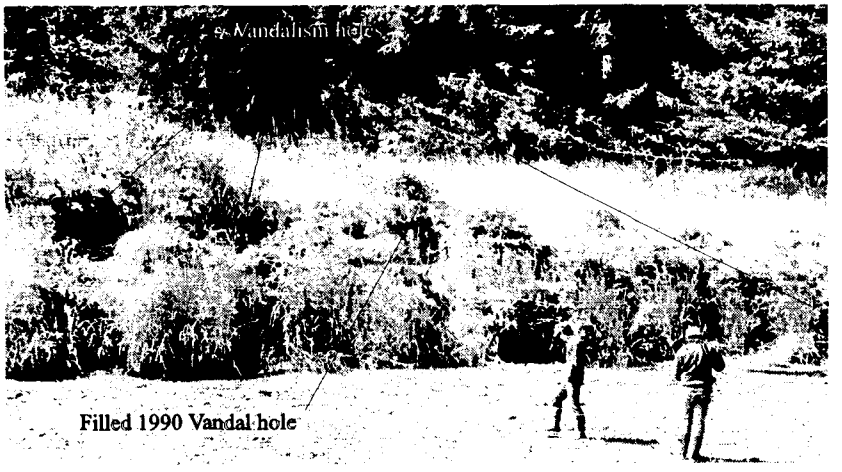


Figure 1. DNR archaeologist Dave McMahan and Park Ranger Kevin Murphy looking at vandal damage, July 14, 1996, AFG-081.

AFG-081 was visited on July 14, 1996, by Reger, McMahan and State Park Ranger Kevin Murphy. Three new areas of disturbance were found on the Big Bay side of the side. Rocky midden just to the north of the area vandalized during 1990 was dug into and pulled down slope sometime during summer of 1996 (Figure 1). The 1990 vandal hole was filled with rocks and other sediments, then covered with grass and logs during 1993. That hole appears to have re-seeded and re-vegetated with beach grass. No new evidence of vandal activity was found at the back-filled location.

The 1996 vandal holes were dug into the back side of the mound on either side of the rehabilitated hole from 1990. Rocky midden intermixed with clam shells, charcoal and other debris was dragged from the mound face partially onto the beach. Green vegetation from the 1996 growing season testified to the recency of the disturbance. Condition of the green vegetation strongly suggested disturbance at least two weeks prior to discovery. State Park Ranger Kevin Murphy visited the site during the first week of June, 1996, and noted no disturbance at that time.

The largest hole is about 10 meters south of the 1990 hole. The volume of disturbed sediments is estimated at 2 cubic meters. Another area of disturbance is located about 5 meters north of the first and is estimated to encompass 1 cubic meter of midden. The smaller hole is at the same level of the mound as the largest hole and the 1990 disturbance. A third

hole from June of 1996 is about 10 meters north of the other holes and incorporates approximately 0.5 cubic meter of midden. It is located where a deer trail descends to the beach and exposed midden. This smallest hole is located at the active beach level.

Although considerable amounts of rocky, shelly midden were displaced, no obvious artifacts were found exposed. No remains were collected during investigation of the vandalism and no attempt was made to repair the damage. The holes were left exposed to allow any further documentation thought necessary. Rehabilitation will occur during 1997.

AFG-046 (Perevalnie Passage Site) [Segment SI-005a]

The Perevalnie Passage Site continues to be the most seriously damaged site on Shuyak Island. Subject to significant erosion because of its location exposed to storms driven out of the north, the site is suffering continued erosion. Offshore islands protect the site to some degree but the most severe storms do create heavy storm wave damage. Trails are worn into the site deposits on the fragile erosional faces. The trails are made by deer traversing the slopes but also by human visitors. The location is a good anchorage during southerly weather.

The earliest deposits at the site begin prior to 4,000 years ago and culminate during the early Post-World War II era. Occupations of Kachemak Culture lay buried under deposits dating to the Koniag Phase. House pits on the bluff behind the eroding face are most likely Koniag structures. Preservation of artifacts and faunal remains in the site is excellent allowing researchers a rare chance to document aboriginal life from more than just stone artifacts

The Perevalnie Passage Site was visited again during 1996 to monitor site condition. Extensive damage occurred at the site since the visit in 1995. Trails have exposed additional human remains and more artifacts and fauna have eroded out of the midden. The trails are at least in part, deer trails. They have been deepened and widened probably by humans as well as deer.

Several large areas of midden have slumped or been pulled down onto the beach. The location of a human burial which has been exposed for several years suffered extensive erosion. Various human bones on the beach appear to originate from that burial. Only the vertebral column is still in situ. The human bones were collected and cached in a protected bedrock fissure where they are neither obvious to visitors nor liable to wash away.

Two more human burials have been exposed since 1995. One burial is an adolescent partially exposed by a trail on a grass covered slope. It is not in danger of tidal erosion yet but will continue in danger from foot traffic. The other, pre-adolescent, human burial was exposed by midden slumping from the area near the human spinal column. The deformed (flattened) skull was only slightly exposed during 1996.

One barbed bone dart head was recovered from the beach where it was being washed about. The point is 9.9cm long, 0.6cm wide and has two unilateral barbs. The barbs protrude 0.2cm out from the oval shaft. Incised lines mark the line of the barbs. The base ends in a tapering round point and the point end is slotted to receive a slate or other blade. One side of the slotted tip is missing. The dart head is fashioned from sea mammal bone.

A sample of intertidal peat was collected for petroleum hydrocarbon testing in the middle intertidal zone. The sample site is in the same area where past samples were

retrieved. The sample was highly organic from a depth of 40cm below the beach surface. Overlaying the sample were dark, angular gravels with small to medium pebbles. Processing of the sample with a HNU-Hanby field test kit using the direct extraction method yielded negative finding of hydrocarbon.

AFG-097 (Salmon Cove Site) [Segment BG-003]

The fourth site visited on Shuyak Island during 1996 was the Salmon Cove Site in Big Bay. The site was first reported by Rick Knecht, an Exxon archaeologist, during 1989 damage assessment studies. The site was reported to be multi-component and thought to contain Koniag and Kachemak age occupations (Mobley, et al., 1990: 267). The cultural occupations were identified on artifacts eroding on to the beach and surface appearance of the house depressions (Figure 2). Specifically, three depressions on a raised terrace which are single rooms with entry tunnels were thought to be Kachemak age house remains. The house depressions were documented during a damage assessment visit by the State of Alaska during 1990 (McMahan, 1993: 63). The three earliest depressions have been impacted by campers in recent years. Additionally, several holes have been excavated at the base of the terrace in the past two years.

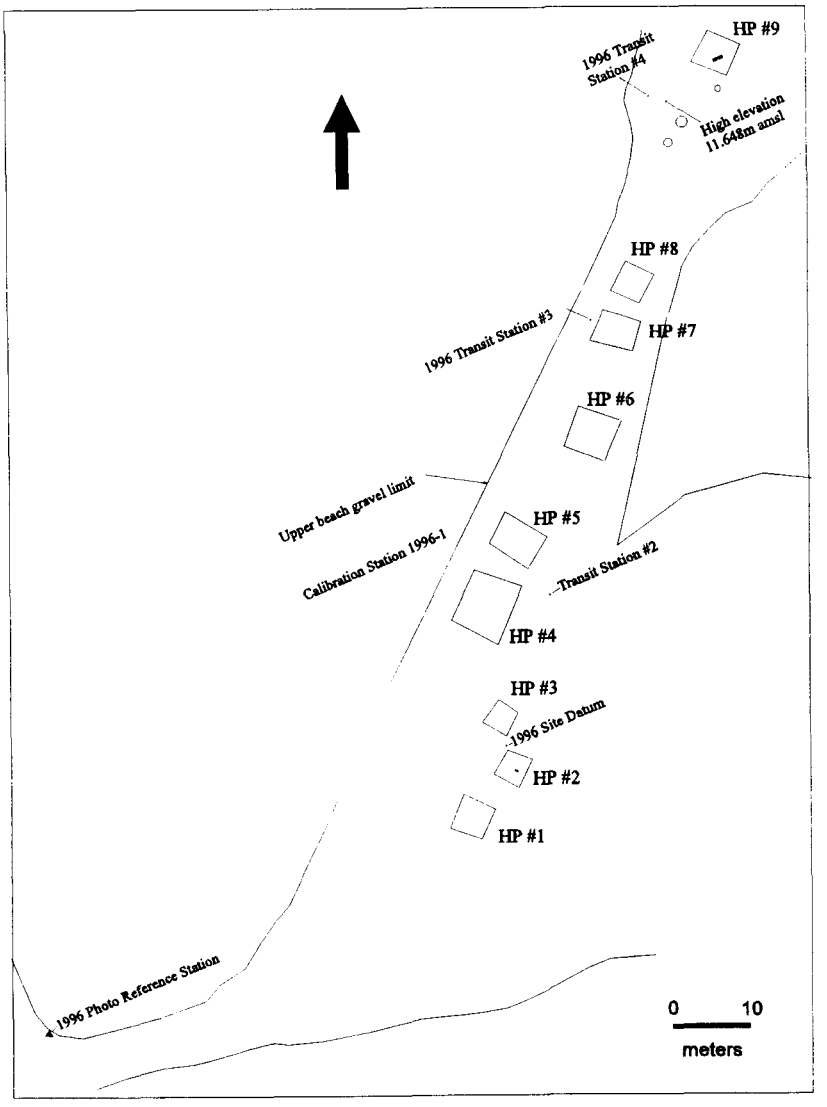


Figure 2. Map of the Salmon Cove Site.

During 1996, a map was surveyed of the site to accurately locate features and vandal holes noted earlier. A site datum was established on the raised terrace between the western most two house pits. The house depressions were numbered on the 1996 map from the west

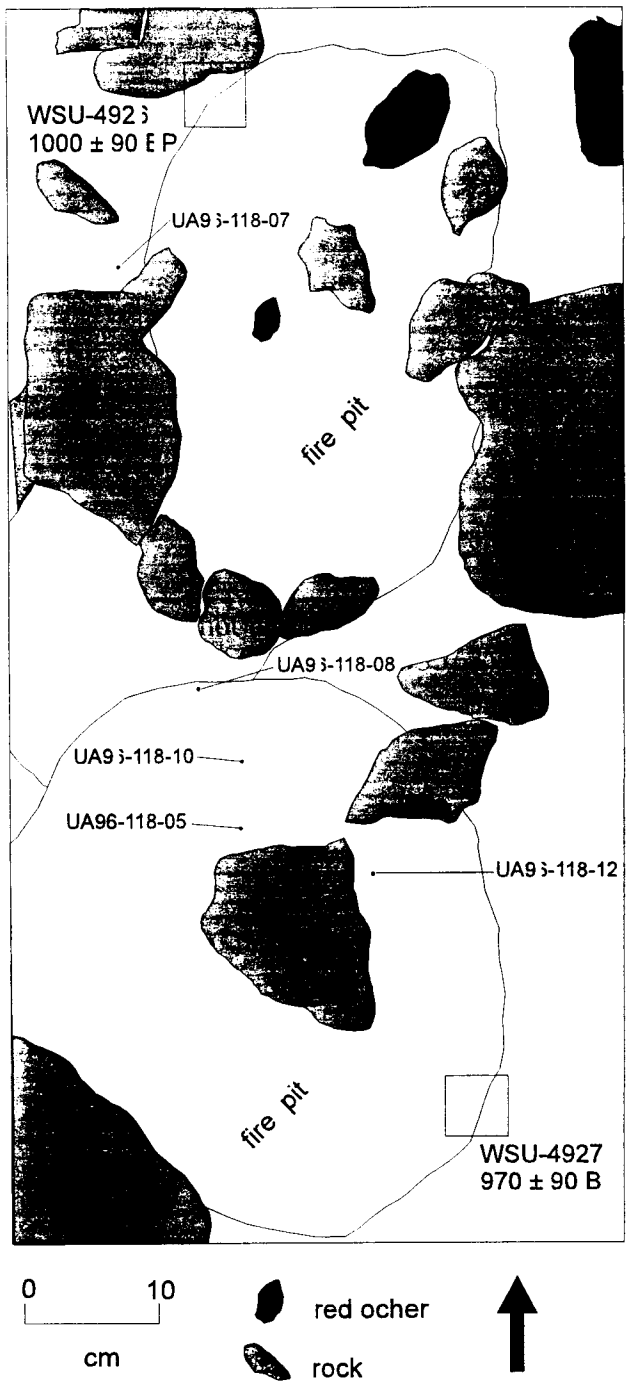
to the east end of the site. The numbering scheme does not agree with the 1990 damage assessment map which also counted an additional feature (McMahan, 1993: 63). The extra feature was recognized in the 1990 study as questionably of cultural origin. It was felt to be natural during 1996 and deleted from the current map. A total of nine house depressions are designated as such on the current map with three small depressions which may be cache pits near the northernmost house pit. The area is a high bluff overlooking Big Bay and the small depressions could simply be beds created by the ubiquitous brown bears of the area.

1996 Test Excavations

A test excavation to explore the age and content of Housepit 2 was placed near the center of the depression. Designated Housepit 2, Testpit 1, the pit measured 1.0m x 0.5m with the long axis oriented north to south. Remains of two hearths were found superimposed one on the other. Charcoal samples were collected which dated to virtually the same age (Figure 3).

Charcoal sample UA96-118-18a was recovered from a buried floor in midden 7cm below the base of the 1912 Katmai Ash which caps the site. The dry charcoal fragments were split into two subsamples. The submitted sample weighed 17.42 grams and provided a measurement of 1000 ±90 radiocarbon years before present (laboratory number WSU-4926). Calibration to a calendric date with the Calib 3.0 program provided an date of A.D. 1022. The actual date, at 95% confidence level, ranges from A.D. 883 to A.D. 1230.

The lowermost charcoal sample,



Housepit 2, Testpit 1, AFG-097

Figure 3. Testpit 1, Housepit 2, features, AFG-097.

UA96-118-20a, was collected from a position 52cm below the base of the Katmai Ash. It came from a hearth that stratigraphically clearly underlay the hearth deposit which yielded the other sample. The dried sample weighed 4.31 grams and provided a measurement of 970 ±90 radiocarbon years before present (WSU-4927). Calibration of the result gives a date of A.D. 1032 with a range of possibility from A.D. 890 to A.D. 1270 at the 95% confidence level.

The ranges of calendric dates for the two sample overlap between A.D. 890 and A.D. 1230. The seeming inconsistency of the oldest date overlying the youngest is rendered meaningless with that degree of overlap. The occupation of the house was apparently relatively continuous and occurred near the end of the first millennium of the Christian Era. That period is when the Koniag culture began in the Kodiak archipelago and is not well documented in the archaeological literature.

Artifacts of comparative value from the 1996 test are confined to two ground slate ulu fragments, a ground slate point with barbs, and a stone bead. The most useful ulu fragment (UA96-118-2) is one end of a knife with a stemmed or tanged back for hafting. The stem or tang terminology follows that used by D. W. Clark (1974: 102). The bifacial cutting edge is straight to slightly curved. The piece is 0.36cm thick and has a cutting edge to back of blade measurement of 2.49cm. The stem or tang for the handle extends an additional 1.5cm back from the blade. The other ulu fragment (UA96-118-10) has a bifacially ground cutting edge but is missing all other diagnostic traits. It is 0.38cm thick.

The ground slate point (UA96-118-3) is missing the very tip and base. The remaining portion measures 4.57cm long, 2.20cm wide and is 0.64cm thick. A barb on one side extends 0.47cm from the straight sided stem. The other edge is broken and without the expected barb. The stem measures 1.61cm wide along the entire stem length. The lateral edges of the stem are ground flat. The point has a flattened biconvex cross-section and length-section.

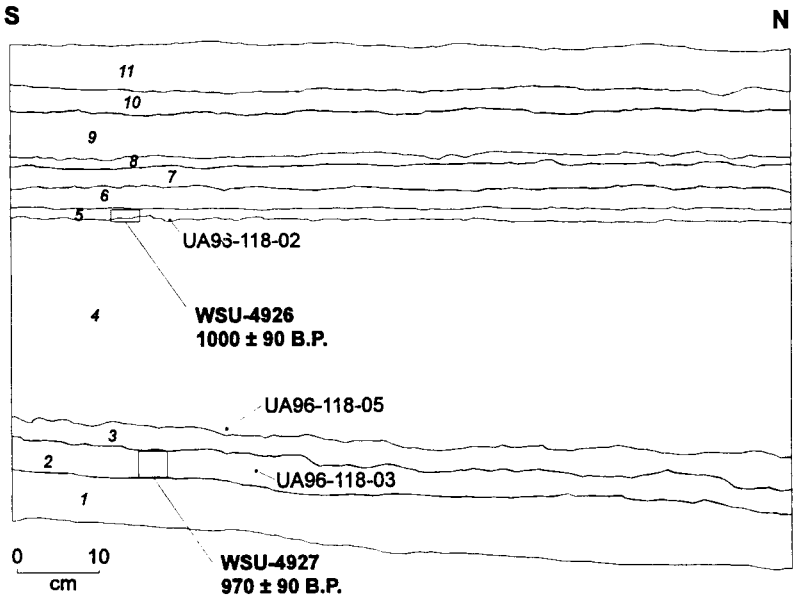
The stone bead (UA96-118-5) appears to be slate ground on all surfaces. It is 1.43cm wide and 0.65cm thick. The hole, which is slightly off-center, is drilled from both faces and measures 0.25cm in diameter.

Stratigraphy

The stratigraphy revealed in Testpit 1 of Housepit 2 represents a series of cultural layers in an aboriginal house overlain by the 1912 Katmai Ash and normally developed soils. The lowermost deposit in the profile of the west wall of Testpit 1 (Figure 4) is a homogeneous yellow soil probably of volcanic ash origin (Layer 1). The aboriginal occupants of the site dug into that deposit while constructing their house. Layer 2 is a very charcoal rich layer which is the first floor of the house. Layers 3 and 4 are organic and charcoal enriched midden containing numerous angular and rounded cobbles plus abundant fire cracked rock fragments. Layer 3 is distinguished from Layer 4 by presence of discontinuous pockets and layers of red ocher. Layer 5 appears to be a second distinct floor which is extremely rich in charcoal pieces. Layer 6 may be organic in origin or an extensive hearth deposit. It contains ash lenses and a dark gray sand and gravel matrix. Layer 7 is a buried organic soil horizon which has been buried and compacted by deposition of the Katmai Ash.

The Katmai Ash is a unit composed of two layers, Layer 8 and Layer 9. Layer 8 is distinguished as a tan colored ash deposit while Layer 9 is a cream colored ash deposit. In other areas of the Kodiak archipelago, the distinction is attributed to separate fall events of

the same volcanic eruption. Layer 10 is the organic A1 soil horizon which has developed on the Katmai Ash since deposition. Layer 11 is the root entangled forest sod which has accumulated over the site and supports the current vegetation cover.



West Wall Stratigraphic Profile, Testpit 1, House Pit 2, AFG-097

Figure 4. Stratigraphy of west wall, Testpit 1, Housepit 2, AFG-097.

Analysis

The original description of the three house depressions on the higher terrace as probable Kachemak structures needs to be re-considered. The age and the diagnostic artifacts seem to suggest that Housepit 2 represents an occupation transitional between Kachemak and Koniag. The two distinctive artifacts recovered suggest a Koniag affiliation although the barbing of the ground slate point could also derive readily from Kachemak period occupation (Clark, 1968: 251; 1974: 147; Dumond, 1981: 271). The configuration of the higher terraces houses and the large deep houses behind the current beach berm suggest that the site has sheltered occupations from the Kachemak-Koniag transition through a fully Koniag occupation. Earlier reports of isolated artifacts suggest earlier yet occupations as well (Mobley, et al., 1990: 267). Further excavation would be needed to confirm these speculations.

SEL-178 (Port Dick Cabin Site)[Segment PD-003]

The Late Prehistoric Port Dick Cabin Site was first well documented during the damage assessment and cleanup phases of the Exxon Valdez Oil Spill. The spit on which site is located was used during cleanup as a helicopter fuel cache and for storage of oil booms deployed across the mouth of the adjacent stream. Various spill workers used the modern cabin located on a raised terrace above the base of the spit. A trail was established ascending the terrace face to the cabin and passes through an area of buried cultural deposits. Cultural remains recovered from the beach on the west side of the spit include a grooved splitting adze and a fragment of a ground slate ulu. Fire cracked rock fragments are eroding from the active intertidal zone.

The visit to the Port Dick Cabin Site during 1996 revealed that while intentional vandalism did not occur in the period since the last visit, damage from users of the cabin did occur. Alaska Department of Fish and Game personnel staying in the cabin established a trail to the beach through one of the house depressions at the site. The well worn trail did not appear to break through the sod cover but probably further compacted the cultural layers in the house floor. No testing was attempted to document damages.

Another area of disturbance to the site was on the trail to the cabin immediately in front of the structure. Trail use has exposed fire cracked rocks in an area of the site which was poorly investigated and documented although noted in earlier site visits. Although the 1996 visit came at the end of the ADF & G project, the personnel were briefed and asked to vary their travel routes to avoid the areas being impacted. State Park rangers were also familiarized with the problem so that they can monitor the damages in the future.

SEL-025 [Segment PD-001]

The SEL-025 Site is associated with exploratory mining in the valley just to the north of the cabin. The mining occurred at the beginning of the 20th Century and lasted through the following decade (McMahan, 1993: 19). The remains of the site are located at the edge of the active beach. Wave deposited gravel is encroaching on the historic remains.

Figure 5. Vandal hole in south wall of cabin foundation, SEL-025.

Exxon and State archaeologists visited the site during 1989 through 1991 to document damage and make response recommendations. Response efforts included bioremediation treatment of the beach gravels to remove oil.

The historic site, SEL-025, was also visited during 1996 to check for vandal activities. The site consists of the foundation remains of a cabin associated with mining during the first decades of the 20th Century (McMahan 1993: 20). Additionally, historic artifacts lay scattered around the cabin area and along the trail leading north from the beach.

Bear hunters frequently camp in the area and the remains of a modern camp were found at the location during 1996. Plastic sheeting, a table constructed from modern materials and a hole dug into the cabin remains were found (Figure 5). The hole was dug into a corner of the cabin depression and disturbed an area approximately 1m x 1.5m along the south wall. The damage was done probably during the 1996 spring bear season. The damage was photographed but no testing was attempted. Roger McCampbell, Alaska State Parks Ranger, was present and will try to monitor more closely use of the remote location.

Little can be done to restore the damage other than allow natural re-vegetation and monitor the site periodically to discourage further damage.

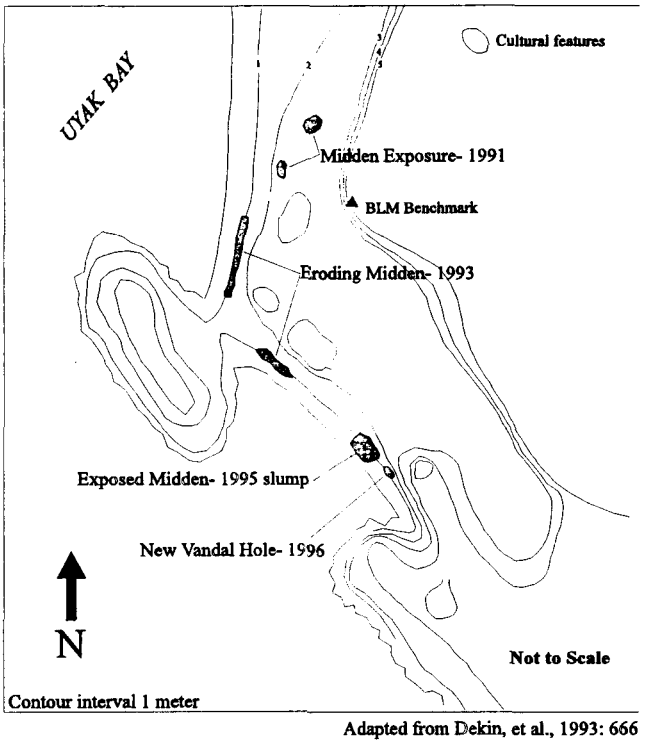
U.S. Fish and Wildlife Service Field Monitoring, 1996

Debra Corbett
Charles Diters
Alaska Regional Office

Two sites were examined during 1996, KOD-171, Chief Cove Site, on Kodiak Island, and AFG-129, Ban Island Site, off Afognak Island. Monitoring involved a pedestrian reconnaissance of the sites to compare reported damage to current site condition. Since reported damage to both sites consisted of illegal digging no sampling of sediments was necessary.

KOD-171(Chief Cove Site) [Segment CK-005a]

Chief Cove Site, KOD-171, is located on the north shore of Spiridon Bay, the northern arm of Uyak Bay, on the west coast of Kodiak Island. The upland portion of the site is managed by the Kodiak National Wildlife Refuge. The site is L-shaped; a beach ridge with house pits extends 200m north of the main midden area which clinbs a bluff and extends east 70m. Features cluster within 25m of the shoreline. Midden, consisting primarily of charcoal and ashy soil, with lineses of sand, shell, and bone, ranges from 0.5m to over 2.0m in depth. All reported features are pits, presumably house depressions. The site is reported to have both Paleo-Koniag (Kachemak) and Koniag components as well as historic Russian materials (Hrdlicka 1944).



Adapted from Dekin, et al., 1993: 666

Figure 6. Map of KOD-171 showing 1996 vandal hole location.

In 1989 Exxon archaeologists reported two excavations in the eroding southern face of the midden, on the bluff face. A 1990 visit confirmed the damage but found no new holes (Haggerty et al., 1991). The site was re-

visited in 1991 (Dekin et al. 1993) and two additional exposures on the bluff near the east end of the site showed clear signs of illegal excavation. Two further excavations inside features at the western end of the bluff were of apparent human origin and recent, probably from that summer. A monitoring visit by U.S. Fish and Wildlife Service archaeologists in 1993 discovered three additional potholes in the bluffs. Erosion continues, primarily at the southwestern end of the site. Investigation by Service archaeologists in 1995 found the old excavations re-vegetating and no new sign of new digging. Natural erosion was problem with a large slump near a series of old potholes, and smaller erosional areas at the southwest edge of the site.

On July 22, 1996, U.S. Fish and Wildlife Service archaeologist debra Corbett and Biologist Danielle Jerry examine the site. The 1995 erosion slump has gotten larger, and now approximately 4 meters wide, and 2.5m - 3.0m deep. Midden thickness, along the top of the exposure is 0.3m The vast majority of the exposure is in sterile fill under the cultural deposits. There is no evidence to suggest anything but natural erosion has caused the change.

To the east, a second exposure near the top of the bluff measures 2.8m x 2.0m (Figure 6). Midden here is 1m deep. This is believed to be a fresh vandal hole due to the location well above the beach, and within the midden deposits, and because there is no sign of erosion on the slope below the hole.

AFG-129 (Ban Island House Pits) [Segment BI-010]

Ban Island House Pit Site, AFG-129, is located on Ban Island off the southern coast of Foul Bay on the west coast of Afognak Island. Ban Island is managed by the Kodiak National Wildlife Refuge. First reported in 1989 by Exxon archaeologists and revisited during 1990, the site occupies a barrier beach enclosing a lagoon on the north side of the island. The southern end of the site, on a low rise, contains at least 5 large housepits. The barrier beach to north has dense clusters of fire cracked rock which are certainly the eroded remains of in situ features. The northern end of the spit is an un-eroded, drowned forest. At least one housepit is reported in this northern area. Fire-cracked rock, shell and bone midden was exposed on the beaches at both ends of the site, in upended tree roots in the drowned forest, and in the eroded intertidal area. Artifacts were found in the intertidal zone, especially on the lagoon side of the site of the southern midden.

During the initial survey in mid-July, 1989, recorders noted four vandal holes in the seaward edge of the southern midden and holes inside two housepits. Most of the excavations were old but one was recently disturbed. Two weeks later a cleanup vessel crew in Foul Bay was briefed on archaeological procedures. The next day a freshly excavated vandal hole was discovered on the site. Investigation failed to produce a suspect and no further damage was noted in the next several months (Mobley et al. 1990). The site was not monitored by U.S. Fish and Wildlife Service archaeologists during the first year of monitoring in 1993.

During 1995 Service archaeologists Charles Diters and Debra Corbett thoroughly examined the site to locate all reported previous disturbance. Additional concentrations of fire cracked rock and a possible second hearth were noted in the intertidal zone. All reported vandal holes were relocated and were re-vegetating. Erosion was continuing on the edges of

both the north and south upland areas, and in the intertidal zone.

Investigation during 1996, by archaeologist Debra Corbett and biologist Danielle Jerry, found no new disturbances. All reported potholes are re-vegetating. Erosion continues to be a problem along the west facing bluff, overlooking the bay, where much of the face is slumping onto the beach (Figure 7). No artifacts were noted in the intertidal zone but shell and bone are common on the beach. Continued erosion in the intertidal zone of the spit has caused movement within the concentrations of fire cracked rock, mixing cultural with unmodified boulders and diffusing the clusters.

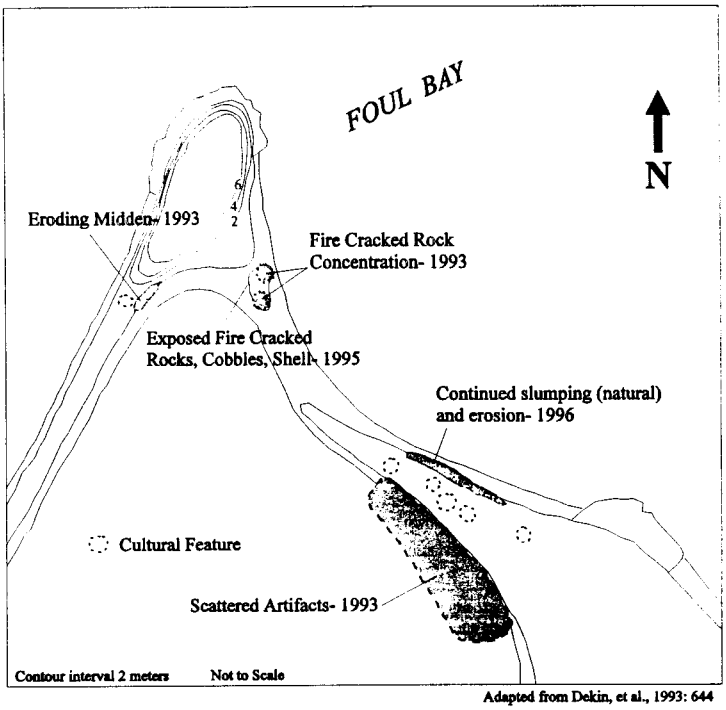


Figure 7. Map of AFG-129 showing 1996 erosion location.

U.S. Forest Service Field Monitoring, 1996

Linda Finn Yarborough
Chugach National Forest

The U.S.D.A. Forest Service, Chugach National Forest, monitored two archaeological sites during 1996 as part of EVOS restoration project 96007A, Archaeological Site Monitoring. One of these, SEW-469 has been included in the program since 1994 as a result of vandalism and removal of human remains from the site during the oil spill cleanup program in 1989. It is viewed as a "most vulnerable" index site, and is monitored annually to assess the level of looting activities in the area.

The other, site SEW-077 in oil spill segment EV-057, was inspected and field mapped in July and August 1989 during the cleanup effort. It was reported to be on land owned by Chenega Corporation, as well as land administered by the U.S.D.A. Forest Service and the State of Alaska. There was concern that artifacts may have been removed from the oiled site. In addition, uunmonitored cleanup actions and un-backfilled excavations were reported. In 1995, the Forest Service proposed to assess the site's condition and determine which portion of the site might be on land managed by the Forest. Chenega Corporation president Charles Totemoff, and the State Office of History and Archaeology were consulted prior to

monitoring. They agreed that the site would be visually monitored by a Forest Service archaeologist, Forest Service surveyors would determine the boundaries of the site in relation to BLM monuments placed during earlier surveys, and that no archaeological tests would take place outside Forest administered lands.

Figure 8. Chenega students enroute to SEW-077.

Because site is close to Chenega Bay village, this was seen as an opportunity to coordinate with the local school about Alaskan Native cultural resources and care of archaeological sites. Principal Don Kinsey was contacted, and it was arranged for most of the students to visit the site on at least one day. Prior to going out to the site, the crew talked and showed site and artifact slides to the classes. Most of the students at the school came out to visit the site on the second day of the survey with the principal and several teachers (Figure 8). Site preservation was discussed, and the students looked for both historic and prehistoric artifacts on the beach, leaving them in place when located. Each student made a sketch map of the site.

SEW-469 (Passage Point Rock Shelter) [Segment KN-110]

This site was originally discovered by a cleanup worker in 1989 and became known to archaeologists and others because of the human remains looted from, and eventually re-buried in, the site. This cave, actually a very deep basalt rock shelter, contains a series of contiguous, sloping terraces protected by an expansive overhanging cliff face.The looted human remains were taken from a crevice in the upper part of the main cave, which has been labeled area or level C. The major part of the cave (level B) contains large blocks of roof-fall and a small portion of the cave between level B and the shoreline is labeled level A. In 1989, human remains, fragments of woven matting (up to 5 cm by 15 cm in size) and what appeared to be the coracoid from a large bird, were noted in area C. Several wooden planks set level with the floor were noted on the north side of area B, next to the rock wall. One plank appears to have a piece of gut fabric beneath it. Mammal, fish and bird bones, and shells were strewn over the surface of the site. Some, such as small fish and shells, may have been left by land otters who have used the cave in the past. However others, such as porpoise, seal, large cod, and halibut, are likely to have been brought into the cave by human visitors or inhabitants. A fairly recent sea gull kill was present in area A, with feathers spread over about a two meter vicinity. With the exception of the modern wooden Russian Orthodox cross marking the recent burial of the looted human remains, no additional cultural materials were noted during subsequent forest Service monitoring visits to the cave in 1992, 1994 and 1995. It seemed that land otters might be using the site again, as the surface

appeared scuffed and rearranged, although the cultural materials were still present as previously observed. No human footprints were observed to indicate human visits to the cave. A second smaller cave, south and uphill from the main cave, was also looted in 1989. Human vertebrae, along with fish and small mammal vertebrae, remained in that location along with split wooden planks.

Forest archaeologists Dale Vinson and Myra Gilliam arrived at the site in early October 1996 via floatplane and conducted a systematic examination. They photographed the site from the large roof-fall rock pile in level B which serves as a datum, and also took close-up photographs of individual features (Figure 9). The terrace surfaces, and rough rings and piles of stone blocks appeared much as described by past investigators, and area C, the small upper crevice, still contained human bones. Within the fine sediment between the large blocks of roof-fall in area B were several small, shallow irregular holes that appear to have been dug by animals. These are likely to be the same holes noticed during the 1995 monitoring visit.

Figure 9. Woven material and bone, SEW-469.

The boards and bones in the second smaller cave also appeared much as previously described. There were no signs of recent activity and fine sediment was scattered on the rocks in the overhang in an uneven fashion.

Examination of the lower portion of the shelter revealed evidence of a possible child's burial encased in rock detritus and finer cave deposits, previously unnoticed by other archaeologists. The cultural materials consist of a bone, and what appeared to be decomposing bark, associated with a coarsely woven matting or fabric protruding from the cave floor about 20 cm above the edge of the wave cut at the lowest part of the shelter. Only the edge of the coarse fabric was exposed, but the material appears to be "non-western" in origin. At the latest, it is likely to represent the early historic period, and may well be older. Only the very upper tip of the small bone was visible, however it has an apparently unfused epiphysis or growth region. The bone was tentatively identified as a pelvis, however very little of the specimen was exposed, and the investigators did not disturb it in any way. It appeared to be in a stable position and not likely to be noticed by casual visitors.

SEW-077 [Segment EV-057]

Site SEW-077 was first recorded by de Laguna (1956:31) in the 1930s. She noted

both historic remains associated with a cannery, and Alaskan Native cultural resources. The oil spill Shoreline Cleanup Assessment Team (SCAT) also identified both historic and prehistoric remains "in the tree fringe and on beach" on July 3, 1989. Subsequent visits by CAC and Exxon archaeologists were in response to concerns that artifacts might have been removed by unmonitored clean-up workers between August 1 and 5, 1989.

Artifacts identified in the intertidal zone (ITZ) during 1989 and 1990 included hammerstones, grinding slabs, a red chert or jasper battered nodule, tool "blanks", and a cluster of porthole fittings and scattered metal fittings and components from a wrecked approximately 40 foot boat (Figure 10). Features included two boulder alignments, fire-cracked rocks, old dock pilings in the ITZ, a stack of pilings and skid trail leading to them, and the remains of at least three historic buildings plus docks and machinery beddings. Artifacts noticed in 1990 which had not been previously recorded included at least eight greenstone adze blanks with associated hammerstones and greenstone flakes, a bead, and a possible "toy" splitting adze.

Figure 10. Western boulder concentration, SEW-077.

Forest Service surveyors Randy Schrank and Dave Hale, and archaeologist Linda Yarborough arrived in Chenega on the morning of May 13, 1996, and went out to the site on the *Kukak*, chartered for this work, and captained by Peter Selanoff. Work continued through May 15, 1996, when the crew returned to Anchorage.

Fire-cracked rock was immediately obvious on the beach. The boulder alignments, which actually appeared to be concentrations rather than lines of boulders, were quickly relocated, as were the skid road, piling stack, ITZ pilings, and metal ship remains (Figure 11). Hammerstones, pieces of ground stone, tool blanks were noted in the ITZ. No beads or adzes were noted. The mineral soil exposed in the skid trail was examined, but no prehistoric midden or cultural remains appeared to be eroding there. At the western edge of the eastern boulder concentration is a rock outcrop composed of two kinds of material. The western portion is a southwest trending slate or slaty schist deposit, while the eastern portion of the outcrop is an igneous or metamorphic material, possibly a type of diorite. The beach is generally made up of the former material, while much of the fire cracked rock is the latter.

Numerous large logs and pieces of dimensional lumber are present in the grassy vegetation zone above the ITZ, as well as among the alders and small, young spruce trees above the grass. The land appears to have been uplifted in the 1964 earthquake. The edge of the pre-1964 shoreline is apparent as a ridge up to several feet high behind the alders and young spruce trees, from which slaty shingle and fire cracked rock are eroding. A round hammerstone-sized rock, fire cracked rock, and beach shingle were also visible in an erosion

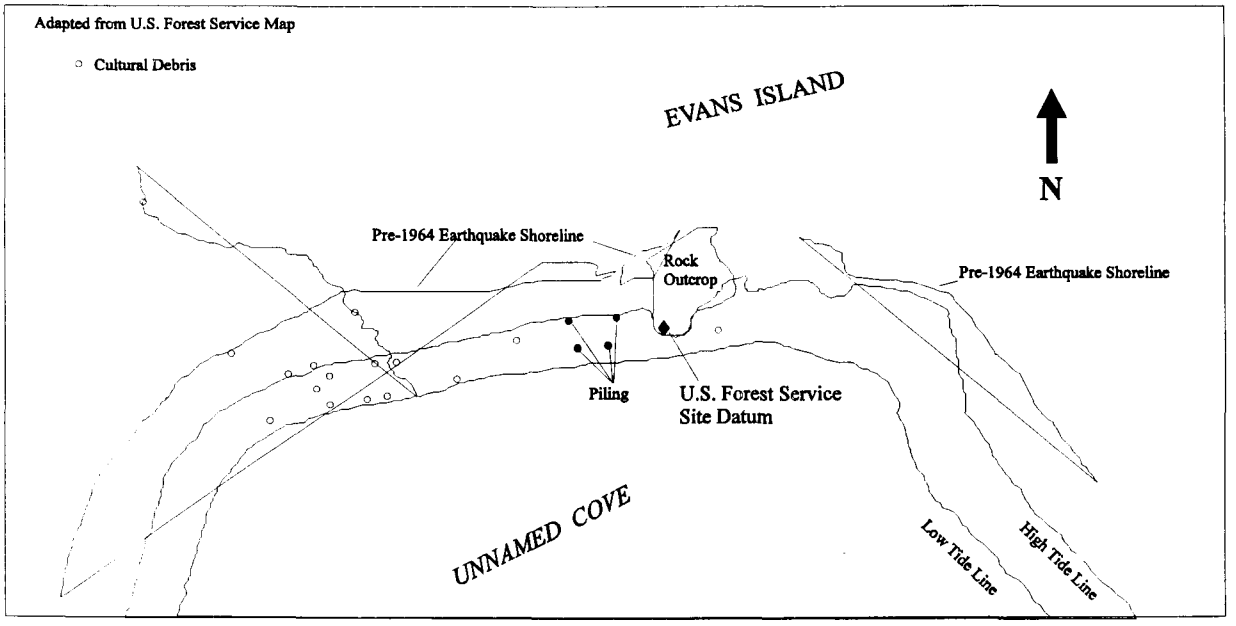


Figure 11. Site map, SEW-077.

channel between the pre-1964 shoreline and the beach, northeast of the southwest boulder concentration. Large trees are present on and to the north of the pre-1964 shoreline. The erosion channel is the southernmost portion of a small stream draining a wet meadow north of the large trees. Fire cracked rock and beach shingle are also visible along the stream channel. The sawed stumps of some very large trees are present between the pre-1964 shoreline and the meadow. What appears to be a boardwalk, 2.96 m wide, built atop three supporting planks, runs east-west along the pre-1964 shoreline. To the east, it is increasingly covered with shingle and dirt, with salmonberries and alders growing on it, such that it's eastern limit could not easily be determined. However it is apparent as a flatter surface than the surrounding area. The shingle and dirt may have been deposited by the 1964 tidal wave. Northwest of the western-most boulder alignment by the pre-1964 shoreline are several moss-covered creosoted planks with a cable sticking out of them, as well as part of a rusted 55 gallon drum and the sawed and moss covered stump of a 77 cm diameter hemlock.

From surface indications, the prehistoric site appears to extend from the lower ITZ, on the south, north to the wet meadow, with east and west boundaries at approximately the outer edges of the boulder concentrations. The historic remains associated with the San Juan cannery appear to extend from the dock pilings in the ITZ on the east side of the cove west to just beyond the westernmost boulder concentration on the shore, and north to the shore of Sawmill Bay. No archaeological tests were excavated, and assessments of prehistoric site presence or absence were based on presence or absence of cultural material in tree throws, naturally eroded stream channels, the skid trail, and holes excavated by BLM in the course of setting township monuments

Two hydrocarbon tests were made in the ITZ, one near the western edge of the western boulder concentration,the other near a temporary survey monument to the northeast.

Results of processing the two samples using the direct extraction method with the HNU-Hanby field test kit suggest very small amounts of petroleum hydrocarbon may be present in the beach sediments. The tests do not identify the source of the contamination or accurately measure the amounts present One sample measured less than 10mg per kilogram of soil. The second sample measured less than 50mg/kg of soil.

Schrank and Hale determined that none of SEW-077 is on land administered by the Forest Service, but is entirely on land owned by Chenega Corporation or administered by the State of Alaska. They surveyed the shoreline and plotted visible artifacts and apparent site features with reference to existing BLM monuments, and prepared a map of the area (Figure 11).

Summary

Neither SEW-469 nor SEW-077 appear to have been vandalized or disturbed by humans during the period since they were last examined. As has been noticed in previous years, SEW-469 is probably being used as a den by one or more small animals, perhaps land otters, however they are not visibly disturbing much of the site. The newly noticed cultural remains will be added to the list of details to be monitored when the site is next visited. The general assessment of SEW-077 is that this site remains basically undisturbed as well, despite its proximity to a growing village. Some of the artifacts previously noted at SEW-077 did not seem to be present in the ITZ, however, it should be noted that in 1990 a few artifacts were observed which were not apparent in 1989. It is likely that wave action, particularly during high tides and severe storms, may rearrange materials in the ITZ from one year, or even one month, to the next. Continuing education in site preservation, and the development of a sense of community ownership and pride in prehistoric and historic cultural remains in the area are expected to help protect this site in the future.

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