9470001.1
ent.

FURTHER INVESTIGATION OF KANATAK VILLAGE

ALASKA PENINSULA/BECHAROF NATIONAL WILDLIFE REFUGE

AK-1994-7N07

ANCHORAGE FIELD OFFICE

Anchorage, Alaska

May 1999

FURTHER INVESTIGATION OF KANATAK VILLAGE
ALASKA PENINSULA/BECHAROF NATIONAL WILDLIFE REFUGE

The Alaska Peninsula has attracted prospectors for oil and gas since the early 1900's when exploration was first prompted by oil and gas seeps in the vicinity of Puale Bay, formerly known as Cold Bay. These efforts were not fruitful, and interest waned. The Mineral Leasing Act of 1920 brought renewed vigor to the search for oil and Associated Oil Company and Standard Oil Company of California drilled wells in the early to mid-1920's. No commercial quantitities of oil or gas were found and both companies had abandoned drilling on the Peninsula by early 1926.

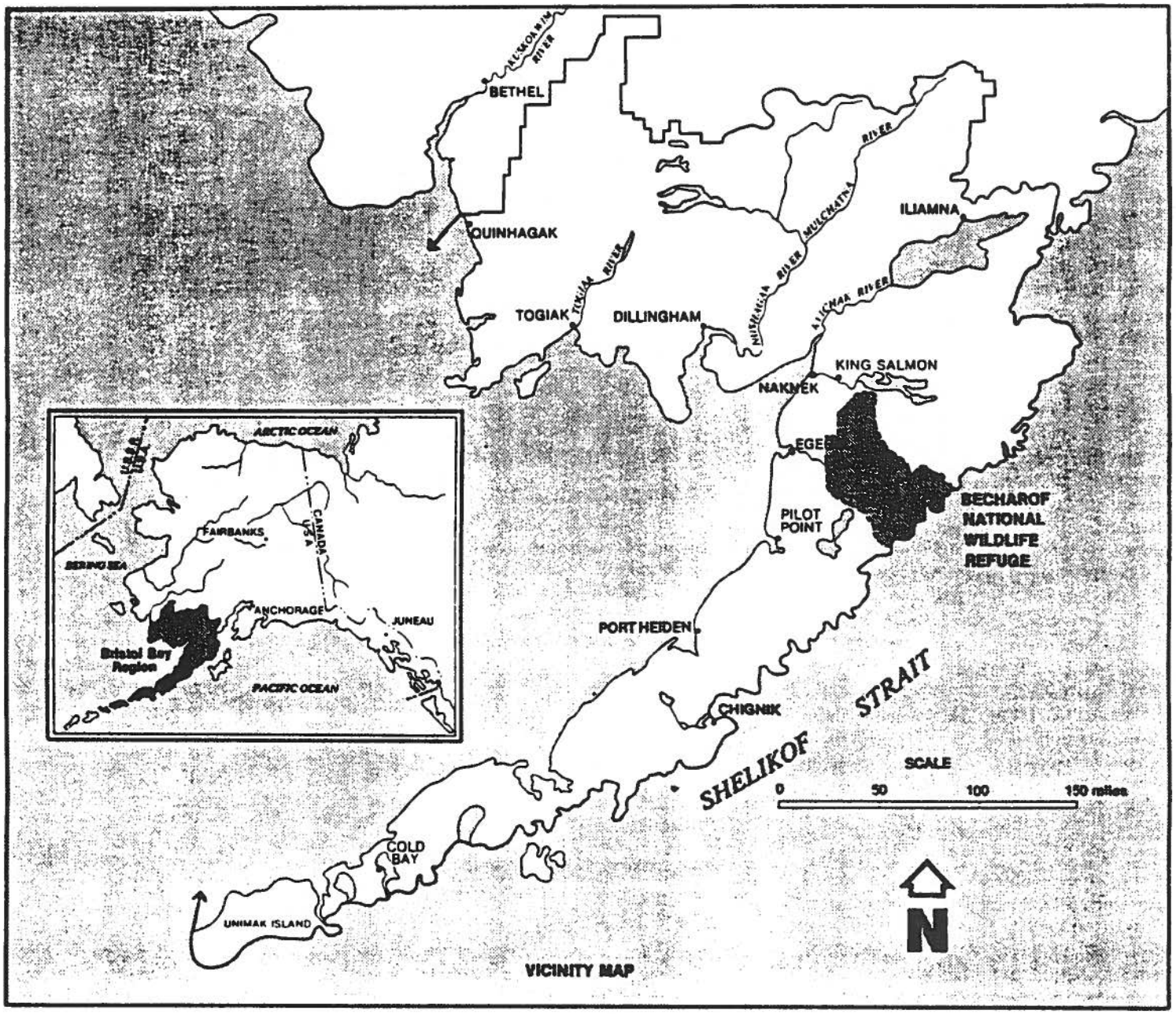
Interest in the Puale Bay area revived in the mid-1930's when geologists from Standard Oil Company, and the Union Oil Company performed critical field examinations and extensive reconnaissance surveys of much of the prospective areas of the south-central part of the Alaska Peninsula. A joint venture, which included Standard Oil Company of California, Tide Water Associated Oil Company, and Union Oil Company of California, drilled the Salmon Creek area, near Jute Bay, in 1939. No producing formations were found.

Oil exploration of the Alaska Peninsula again lay dormant throughout the 1940's and into the mid-1950's. In 1957 through 1959, the Humble Oil and Refining Company drilled the Bear Creek Unit No. 1 above Jute Creek and other wells without success and the last well was drilled and abandoned in 1985.

Large quantities of equipment and supplies were needed to support the exploration. They could most easily be brought from Anchorage, 300 miles to the northeast, by ship but few suitable anchorages exist on the Peninsula. One of the few available is Portage Bay where the Native village of Kanatak, now abandoned, was situated. The anchorage was enhanced by the availability of an access point where it was possible to build an road which had a gentle enough slope that horses and wagons could haul equipment into the interior of the Peninsula. As a consequence, the village became a major jumpoff point for the Peninsula and large quantities of goods were off loaded and stockpiled for later reshipment. The village reverted to a small Native encampment during the periods when exploration ceased. In the 1950s it was finally abandoned completely. Only deteriorating buildings and scattered debris now remain.

The lands of the former townsite are now within the Alaska Peninsula/Becharof National Wildlife Refuge, established in 1980 with the passage of the Alaska National Interest Lands Conservation Act, and managed by the U.S. Fish and Wildlife Service (Figure 1). However, there is one private inholding and a number of pending selections by the State of Alaska and by the Koniag Native Corporation (Figure 2). The State has a land selection for the entire township containing the village but this selection will likely be determined

Figure 1. Vicinity map.



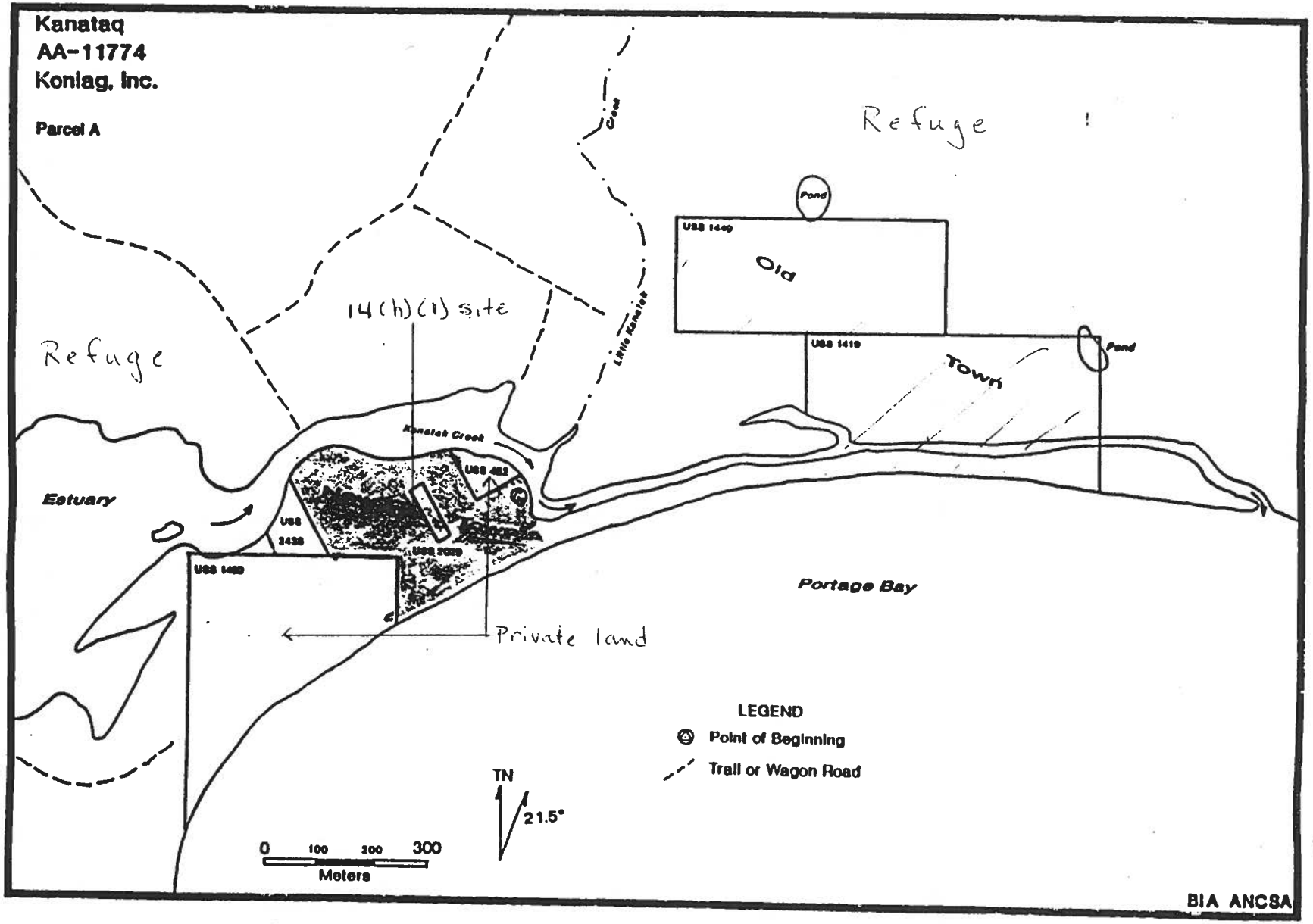


Figure 2. Patents at Portage Bay

invalid by the Bureau of Land Management because the selection was made without the required land withdrawal in effect.The Koniag Regional Corporation has a Historical Place/Cemetery Site selected under the provisions of Sec.14(h) (1) of the Alaska Native Claims Settlement Act for the majority of the lands within Kanatak. One parcel of private land falls within the boundary of this application, which will require a revision to the boundary description to avoid the private land.

The refuge became aware in the late 1980s that oil exploration debris such as drill pipe, drill muds, and spilled barrels of petroleum were present on the land proposed for selection by the Koniag Corporation. The Anchorage Field Office contaminants specialists performed a preliminary survey (Jackson, 1991) in 1990 which identified the potential for contamination remaining from the oil and gas exploration periods. The land would have to be investigated for contaminants before land could be conveyed should the selection be approved. The refuge manager proposed to the Environmental Contaminants staff at the Anchorage Field Office that a further investigation of the site be performed to determine if the land could be conveyed.

A proposal to the Division of Environmental Contaminants to fund the work was written and the work was performed in June, 1993.

Methods and Materials:

The abandoned Village of Kanatak is located at the head of Portage Bay in Becharof National Wildlife Refuge [Township 30 South, Range 42 West, Sections 24 and 25 (Ugashik (C-1) Quadrangle)]. The oil exploration staging area is just southwest of the village in Section 25.

The area of investigation is classified as a historic site selection by the Koniag Inc. (BLM Case File #AA-11774) and as a historic site (Alaska Heritage Resources Survey No. UGA-031). Thus compliance with Section 106 of the National Historic Preservation Act (NHPA) is required prior to initiating the investigation. In addition, there are six private inholding parcels totaling about 87 acres in and near the area. Permission from and coordination with land owners and Koniag was required prior to initiating investigation of the site.

A landing craft was contracted to transport a tracked backhoe and a work crew to the site. Two contaminants specialists from the Anchorage Field Office and an archeologist from the Regional Office performed the investigation.

The primary suspected contaminants of concern were organochlorines and heavy metals. Investigation was focused on the visibly disturbed areas throughout the village site. Pits were also dug in areas outside the village that appeared undisturbed to establish background. Much of the area is under water or is in very heavy brush. These areas were not surveyed.

Pits were dug with a backhoe due to the very cobbly and stony subsurface. Soil samples were taken using a clean glass sample jar as a scoop. A duplicate was taken every 20 samples.

The samples were collected and refrigerated until they arrived in Anchorage, where they were frozen and transported to Hazelton Environmental Services, Inc. who provided the analytical services. Thirty four samples were analyzed for organochlorines (HCB, alpha BHC, alpha chlordane, beta BHC, dieldrin, endrin, gamma BHC, gamma chlordane, heptachlor epoxide, mirex, o,p'DDD, o,p'DDE, o,p'DDT, oxychlordane, p,p'DDD, p,p'DDE, p,p'DDT toxaphene, trans-nonachlor), polychlorinated biphenyls (1242, 1248, 1254, 1260), and metals (Al, As, B, Ba, Be, Cd, Cr, Fe, Hg, Mg, Mn, Mo, Ni, Pb, Se, Sr, V, Zn).

The samples for organochlorines were prepared using anhydrous sodium sulfate, extracted with methylene chloride:acetone, concentrated, brought to volume with methylene chloride, and analysed on a gas chromatograph. If additional cleanup was required, the extract was eluted through a Florisil column and reconcentrated prior to injection.

Metals, with the exception of mercury and arsenic, were analyzed using inductively coupled plasma spectroscopy. Mercury was analyzed using cold vapor atomic absorption. Arsenic and selenium were analyzed using a graphite furnace.

Results:

The organochlorines were all below the detection limit. The metals were quantified at levels well within the range of normal metal background for Alaska (Gough, et al, 1988). The raw data is on file and available for inspection in the Anchorage Field Office.

Discussion and Conclusions:

Since the investigation at Kantak Village focused on the most disturbed areas that could be found and no trace of organochlorines or high levels of metals materialized, we conclude that although the disturbance was extensive at the village site, no lingering effects can be detected. That does not eliminate the need to remove the debris remaining from the storage of exploration supplies which includes stockpiled drill pipe, stacks of deteriorated and hardened bentonite, and several 55 gallon drums which have spilled petroleum products.

If the land is selected for conveyance to the Koniag Corporation, it may be transferred without predjudice due to contaminants.

References:

Gough, L.P., R.C. Severson, H.T. Shacklette. Element Concentrations in Soils and Other Surficial Materials of Alaska. U.S. Geological Survey Professional Paper 1458. 53 pp.

Jackson, R. Report of Findings: Becharof National Wildlife Refuge Contaminants Study. January 1991.