AN ARCHAEOLOGICAL SURVEY OF THE PORTIONS OF THE NORTHWESTERN KENAI PENINSULA

by

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INTRODUCTION

The University of Alaska Department of Anthropology was granted two contracts for archaeological salvage work on the Kenai Peninsula during the summer of 1960. The Delta Engineering Company (acting for Alaska Natural Gas Company) and the Kenai Pipeline Company both planned to construct pipelines across the Kenai National Moose Range. In recognition of the possibility of inadvertent destruction of archaeological remains in the area concerned, both companies contracted with the University of Alaska to carry out archaeological surveys along the routes of the proposed pipelines.

Frederick J. Kent and Carl Peterson, anthropology students from the University under the direction of Frederick Hadleigh-West, of the Anthropology faculty at the University, carried out the fieldwork.

Due to the narrowness of the sixty-five foot right-of-way, not many sites were located within the path of possible destruction. Only eight sites were located within the rights-of-way of both pipelines and none of these sites contained house depressions. All of the sites described in this report are located on the coastal plain although the major portions of the rights-of-way lie in the hills beyond this plain.

The Delta Engineering Company, under contract to the Alaska Natural Gas Pipeline Company, supported the greatest part of the expense for the survey. This pipeline route covers approximately ninety miles and runs between Kalifonski Beach on the Kenai Peninsula and Anchorage (see Map 1). The entire distance was walked from the wells on Kalifonski Beach to Burnt Island.

1 We wish to record our gratitude to the two private companies who generously provided funds for this work. These were the Alaska Natural Gas Company of Anchorage through their agents, Delta Engineering Company of Houston, Texas and the Kenai Pipeline Company of Kenai acting for Standard Oil Company of California.

Those officials of these companies with whom we dealt were uniformly cordial and helpful.

We are grateful too to the many people of the Kenai-Soldotna area who interested themselves in the success of the survey. Of these we should like to single out Mr. David L. Spencer, Refuge Superintendent, Kenai National Moose Range, Mr. John B. Hakala, Refuge Manager, Kenai National Moose Range, Mr. John B. Nelson, Kenai Pipeline Company and residents of the area, Mr. Theodore Meining, Mr. Walter Peterson, Mr. Carl Seaman, Mr. Rex Stubblefield, Mr. Charles Dozer, Mr. Waldo Coyle and Mr. Frank Mullins.
on the north end of the Kenai Peninsula. From Burnt Island, the pipeline was to run underwater to Potter on the Anchorage side of Cook Inlet. The segment of line between Potter and the pipeline terminus in Anchorage was also investigated. Only five sites were encountered over the entire distance of the line within the right-of-way (Fig. 1).

The Kenai Pipeline Company route covered twenty-two miles from the Swanson River and Soldotna Creek Units to tidewater at Nikishka Beach. The terminal site at Nikishka #1 Beach was investigated in May by a group from the University of Alaska and again later in the summer by the above-mentioned survey crew. Nothing of archaeological interest was found either time. DeLaguna, refers to a village located at Nikishka #1 in her work *Archaeology of Cook Inlet* (DeLaguna, 1934). DeLaguna numbers the three Nikishka beaches from north to south while the present maps of the area label them from south to north (DeLaguna, 1934: Plate 1). The village DeLaguna refers to lies just south of the mouth of Swanson River and is labeled Nikishka Number Three on all present maps. A native resident of Kenai informed us that the people lived in small groups of from one to three houses at the mouths of creeks all along the North Kenai Beach, and that a village as is commonly conceived probably never existed.

Along the twenty-two mile right-of-way of the oil line, only three sites were located and only one of those was within the sixty-five foot limit. Nothing of archaeological interest was discovered and the terminal site and right-of-way were cleared.

There was a heavy population in the Kenai during the precontact era and there are many known remains. By drawing a sixty-five foot wide path across any area, however, regardless how rich it might be in archaeological remains, the chances are slim of encountering a large number of sites. Since the greater part of our time was spent making sure that there were not any sites within the path of possible destruction on the rights-of-way, we are deeply indebted to the residents of the area for their willing cooperation in informing us of known sites.

Whenever possible, and as time allowed, all reports of sites in the area were investigated. Since the primary mission was that of "clearing" the pipeline routes, we cannot claim this as an exhaustive report of sites on the northern Kenai Peninsula. We do, however, believe that the result is a more realistic picture of prehistoric settlement than would otherwise have been achieved. This report contains descriptions of all the sites that were visited both on and off the pipeline routes.

**HISTORIC NATIVE OCCUPATION**

Tanaina* is the term by which the Athabaskan-speaking Indians of the Cook Inlet area call themselves. The Tanaina are made up of several related

* A complete discussion of the ethnography of the Tanaina may be found in Osgood, 1937, from which the present material is abstracted.
subdivisions or bands. There are actually seven subdivisions of the Tanaina but this report covers only those of the Kenai area. This area comprises the greater part of the west coast of the Kenai Peninsula north of the Kachemak Bay area and includes the country of the Tustumena, Skilak, and Kenai lakes as far north as Turnagain Arm. The principal native settlement was Kenai. Other known villages, from south to north were: Kasнатchin (Anchor Point), Ninilchik, Kasiloñ, Skittols (near Kenai), Chinila (near Kenai), Skilak (south side of Skilak Lake), Tilukiks (near Nikishka), Nikishka (near East Foreland), and Kultuk (near Nikishka) (Osgood, 1937:13).

In describing the physical features of the Tanaina, Osgood quotes Petroff as follows:

The height of the male of the Kenai tribe is greater than that of the Eskimo, and a fullgrown man of less than 5'8" is rarely encountered. They are slim, lithe, and sinewy: the eyes are set straight in the head; the nose is prominent, frequently aquiline; the mouth is large, with full lips, and chin frequently receding; the skin is very perceptibly darker than that of the Eskimo. (Osgood, 1937:17).

Most of the Northern Athabaskan people depend primarily on fish and secondarily on land mammals. The Tanaina area, however, had sea mammals as well as an abundance of fish and land mammals. The distribution is not equal throughout the area, however, which results in groups of villages differing in this and dependent aspects of culture. The outstanding factor affecting the range of the food supply is correlated with salt water. In the Kachemak Bay area there is a regular salt water fauna, but in the narrower upper regions the Inlet is apparently not suitable for many forms of sea life. One thus finds the rich food area in the lower Inlet, and areas gradually becoming poorer as one moves up the Inlet and inland until there was the familiar Athabaskan situation of a people who intermittently starve.

Land animals and vegetable foods are more evenly distributed than sea mammals and played an important role in solving the food problem. In terms of the economy as a whole, however, one can easily say that fish, and especially salmon, were the most important article of diet for the Tanaina.

The Tanaina year, on the basis of residence, was divided into two periods, during each of which the people occupied a different shelter. During the long winter season, they lived in rectangular, gabled, semisubterranean houses commonly called, since the Russians came, "barabara." During the summer, when intensive salmon fishing dominated all activity, the people shared the convenient, lightly constructed, smokehouse with their drying catch.

The Tanaina constructed the *barabara* by first excavating to a depth of around two feet the area over which the structure was to be raised. The builders smoothed over the excavation and at each corner raised four upright posts so distanced that the wall logs could be wedged between them. They then laid ground logs horizontally across around the structure. The walls of horizontal
logs were built up to the height of about five feet above the ground level. The roof was supported by a double row of poles extending from front to back of the house. A large smoke hole was left in the center of the roof. The roof was covered with split poles which were in turn covered with two layers of spruce bark which was lashed down. Dirt was thrown up on the outside of the house after it was thatched. The fireplace was placed in the center of the room and was made by filling a framework with sand thus raising it above the floor level. Extra rooms for sleeping and bathing were usually floored with planks while the main room was covered with grass. From the door of the house, extended a shed-like entryway about eight feet long which was closed at each end with grass mats.

During the year 1786 the Russians settled at St. George, now known as Kasilof, and five years later they erected a redoubt at St. Nicholas, the modern village of Kenai. In 1793, Baranof brought thirty convicts to teach the people agriculture. The next year missionaries began to convert the Tanaina. The Russian-Indian relations were not good and almost constant hostility existed. The bitterness of the natives towards the intruders certainly limited Russian expansion and probably a number of the Tanaina escaped exploitation by keeping out of reach. About 1838, smallpox greatly reduced their numbers, and broke down the group morale, for from that date on the native culture appears to have declined.

The Tanaina population during the historic period can only be estimated, but the following table excerpted from Osgood (1937:20) should serve as a reasonable guide.

<table>
<thead>
<tr>
<th>Date</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1805</td>
<td>Lisiansky (estimated) 3,000</td>
</tr>
<tr>
<td>1818</td>
<td>Kostivtzof (in Petroff) 1,471</td>
</tr>
<tr>
<td>1880</td>
<td>Petroff in 10th census 739</td>
</tr>
<tr>
<td>1899</td>
<td>Elliot 1,030</td>
</tr>
<tr>
<td>1910</td>
<td>11th census 697</td>
</tr>
<tr>
<td>1932</td>
<td>Osgood 650</td>
</tr>
</tbody>
</table>

**SITE DESCRIPTIONS**

**Kei**

*Location: N. W. ¼ of S. E. ¼ of Sec. 31, T. 5 N., R11W. (Kenai B-4)*

Just five hundred feet north of Well Number Two* there are two ten-foot man-made holes that are from two to three feet deep. These pits were

*These designations refer to natural gas wells of the Alaska Natural Gas Company.*
Map 2
the first of a large number of similar depressions we encountered during the summer. We excavated one of the pits completely finding no hearth, postholes, or other evidence of human activity. The floor was saucer-shaped with a low spot in the center. There were mounds of dirt on two sides of the depression where it had been thrown up during the original excavation. The floor layer was just under the moss and below a coarse layer of ash. This ash is found all over the area and was presumably deposited during the 1912 eruption of Mount Katmai which lies on the opposite side of Cook Inlet.

These excavations were probably storage pits or underground meat caches, although in all the pits encountered during the summer not even so much as a bone was found. Some bark was found on the floor surface indicating that the pits may have been bark lined. The only mention DeLaguna makes of similar pits is a reference to a house pit with no entry or extra room that was ten by twelve feet and four feet deep (DeLaguna, 1934:133).

Osgood, in his work, The Ethnography of the Tanaina, states that the North Kenai Indians dug large pitfalls for trapping bears. Sharpened knives made of caribou antler are placed upright in the bottom of the pit, and the bear-hunters of Kenai, were said to use wooden shovels (1937:33). This could be another explanation. Both the storage pit and pitfall ideas are possibilities for there are pits located along good salmon streams that were undoubtedly fish storage pits, and there are pits located great distances from water. This report, for convenience's sake, will refer to all such depressions simply as storage pits (see Fig. 2).

Ke2

Location: N. W., ¼ of S. E., ¾ of Sec. 31, T. 5 N., R11 W. (Kenai B-4)

Two hundred feet north of Ke1 there is one storage pit ten by eight feet and three feet deep. A trench dug diagonally across the pit revealed nothing of interest. There was no indication that the pit had been bark lined.

Ke3

Location: N. W., ¼ of N. W., ¾ of Sec. 26, T. 5 N., R11 W. (Kenai C-4)

South and east of Kalifonski road, three-quarters of a mile along the Delta Engineering Company right-of-way, there are two house depressions. The largest (House 1) is twenty feet by twenty-six feet with a six by eight foot extra room. The outside entryway is opposite the entry to the extra room. There were five spruce trees growing in the house—the largest of which had twenty-five growth rings. The walls are from one and one-half to two feet high and about the same in thickness. There are a number of decaying stumps and logs lying inside the house.

House 2 is nineteen by twenty feet with a funnel-shaped extra room that is six feet across at its widest point with the walls narrowing to the point where they connect with the entryway from the main room. The walls of this house are not as well preserved as those of House 1.
The Delta Engineering Company Pipeline originally ran right through House 1, but due to the company's inability to gain right-of-way permission, the line was rerouted ninety feet north of the original line. We were not granted permission by the owner to excavate so we were forced to abandon the site (Fig. 3). When the equipment cleared the swath for the right-of-way, House 1 was buried under twelve feet of debris. This was an unfortunate, and from our standpoint at least, unavoidable situation. House 2 escaped destruction, but we were not allowed to excavate.

Ke4

Location: S. E. ¼ of S. E. ¼ of Sec. 24, T. 5 N., R11W. (Kenai C-3)

On the south bank of the Kenai River, the Delta pipeline crosses two former floodplains. On the face of each of these floodplains there are a number of small holes that are from twelve to fifteen inches square and twelve inches deep. DeLaguna mentions similar pits in her report and calls them cooking baskets (1934:134). The pits DeLaguna describes are birch bark lined and were used for stone boiling. We excavated two of the pits that were on the right-of-way and found no indication of bark. The area is extremely damp, however, which would tend to limit preservation (see Fig. 4).

Ke5

Location: W. ½ of Sec. 7, T. 5 N., R8W. (Kenai C-3)

On the west side of the Moose River where it drains into the Kenai River, there are a number of storage pits. There are twenty-one between the Sterling Highway and the Delta pipeline route in a distance of one-half mile. The three pits that were on the right-of-way were excavated but nothing of interest was found (see Fig. 7). Mr. Peterson, the owner of the property, said that the location would have been ideal for spearing or trapping salmon as they entered the shallow Moose River lagoon from the Kenai River. Mr. Peterson also suggested that the area would have been excellent for duck hunting in the spring and fall.

While bulldozing an area for a tourist trailer park, Mr. Peterson found a ground slate knife blade and a projectile point. The area was probably a summer camping place as we found no house depressions or middens (Fig. 5).

Ke6

Location: Sec. 7, T. 5 N., R8W. (Kenai C-3)

Just across the Moose River bridge from Ke5, were found twenty human bone fragments. Mr. Charles Doser, the owner of the property, was told by the crew that built the Sterling Highway that they had found a number of human bones on his property. In the previous spring Mr. Doser found a few bones that had washed down the cutbank during the thaw. We examined the
spot and located a few more bones and one large bead. Only a four-foot strip of land, lying between the top of the cutbank of the road and the area Mr. Doser had worked with his tractor remained undisturbed. The site was undoubtedly a graveyard, but the area has been disturbed to so great an extent as to be of dubious value.

Ke7

Location: Sec. 10, T. 5 N., R11W. (Kenai G-4)

There are three house depressions in a field and two more in the woods on the property of Mr. Coyle located just off of the Beaver Loop Road approximately seven miles east of Kenai. We excavated House 1 because it had suffered the least damage during the field clearing. It was twenty-four by twenty feet with an eight-by-ten-foot extra room. The walls were two feet high. The floor layer was just under the sod indicating that the house was not very old. Also, the floor layer itself was not very deep indicating that the house was probably not lived in for very long. The fireplace was located in the center of the room between the outside entrance and the entrance to the extra room. The northeast one-fourth of the main room appeared to be lined with folded birch bark while the rest of the floor was earthen. The extra room was floored with logs which were in a late stage of decay. There were a number of large rocks along the north wall of the extra room leading us to believe that the room was used for steam baths as well as sleeping.

In all, we found forty-three black, red, and white beads, assorted pieces of white china with blue markings, a six-inch piece of wrought iron, two small pieces of sheet copper, some beaver teeth, and assorted small animal bones. Some of these artifacts are shown in Figure 7.

Mr. Coyle has found two stone adzes and other worked items while clearing land. Mr. Coyle also told us that burning green birch would cause the area around the fire to become cemented. After we had removed the floor layer the fireplace stood like a pillar. The fireplaces were raised above the floor layer and consisted of sand held in by log cribbing (Fig. 6).
Table 3. Location of houses in relation to each other, Site Ke9

<table>
<thead>
<tr>
<th>House #</th>
<th>Size of main room</th>
<th>Extra rooms</th>
<th>Size</th>
<th>Distance from preceding house in paces</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20' × 11'</td>
<td>1</td>
<td>8' × 10'</td>
<td>23</td>
</tr>
<tr>
<td>2</td>
<td>29' × 25'</td>
<td>0</td>
<td>8' × 8'</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>18' × 22'</td>
<td>1</td>
<td>10' × 10'</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>28' × 22'</td>
<td>1</td>
<td>8' × 10'</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>28' × 23'</td>
<td>2</td>
<td>15' × 12'</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>23' × 26'</td>
<td>1</td>
<td>10' × 10'</td>
<td>55</td>
</tr>
</tbody>
</table>

There is a small creek about fifty feet from House 1, and the field that contains the three houses is on a small rise that overlooks a spruce flat which leads to the Kenai River three-fourths of a mile away. None of the other houses was excavated.

Ke8

Location: Sec. 10, T. 5 N., R 11 W. (Kenai C-4)

There are five house depressions ninety feet south of Beaver Loop Road which are either on the highway right-of-way or on Mr. Coyle's property. They average twenty-four by twenty-three feet and two of them have two extra rooms. Four are in excellent condition and are probably not very old. The walls protrude a good two and one-half feet above the surrounding ground level making them easy to spot from the road. One of the houses is in poor condition and difficult to locate. There were no obvious middens visible. We did not excavate at this site.

Ke9

Location: Sec. 10, T. 5 N., R 11 W. (Kenai C-4)

There are seven house pits one-fourth mile south of Beaver Loop Road about fifty yards from the Kenai River. One of the pits was extremely well preserved with the walls being almost three feet high. The house pit closest to the river was used as a chicken yard and was only a few paces from an old chicken house. The people who owned the property were away for the summer so we did not excavate in the houses. We did dig into one midden finding a number of fire-broken rocks and clamshells.

Ke10

Location: 60° 43' 5" N. Lat., 151° 07' W. Long. (Kenai C-3)

One-eighth of a mile south of the Kenai Pipeline Company right-of-way crossing on Bishop Creek, there are four storage pits. These pits are located on...
a knoll about fifty feet above the creek and command a view of the creek on two sides giving the knoll the appearance of a peninsula. Three of the pits are rectangular and the fourth is circular. The largest pit is eight feet by ten feet and three feet deep. Due to the distance from the right-of-way and the negative results obtained from digging in similar pits, no excavation was attempted. While we were examining the site, we observed a fairly heavy run of red salmon in the little creek, which leads us to believe that the pits were probably for fish storage.

**Ke11**

*Location: S. W. ¾ of Sec. 15, T. 7 N., R12W. (Kenai C-4)*

There are two house depressions at a point one-fourth mile south of the Kenai Pipeline Company right-of-way and just 200 feet east of Bernice Lake Road. The site is only one-half mile east of the terminal site for the oil pipeline. The houses are well defined and do not appear to be very old despite the fact that several large trees are growing in them; the largest of which is in the center of House 1 and is twenty inches in diameter.

House 1 was only partially excavated due to the tangle of roots we were forced to fight. The floor layer was quite thin, lying almost immediately beneath the moss. The fire pit was located midway between the outside entry and the entrance to the extra room. Bird bones and one-half of a stone adz blade were all that was found. The depressions are on private land belonging to Mr. Carl Seaman and are situated in a position that overlooks a small lake. House 1 is thirty-two feet by twenty-four feet with an extra room nine feet by thirteen feet, while House 2 is thirty-five feet by twenty-four feet with an extra room ten feet by eight feet. The entryway on both houses is on the long side opposite the extra room and facing the lake.

**Ke12**

*Location: 60°44' N. Lat., 151°07' W. Long.*

One hundred yards west of Bishop Creek the Kenai Pipeline right-of-way runs between two large storage pits. Pit 1 is ten feet by eight feet and Pit 2 is ten feet by twelve feet. Both are four feet deep. These pits were trenching diagonally but nothing was found. The creek at this point would be ideal for spearing or trapping salmon. These two pits, more than any others located during the summer, however, suggested that they may have been used as pitfalls. They are four feet deep and distinctly rectangular.

**Ke13**

*Location: Sec. 19, T. 5 N., R11W. (Kenai B-4)*

This is a house depression facing Cook Inlet on Kalifonski Beach between Well Number One and Well Number Two of the Alaska Natural Gas Pipe-
line Company. The house pit overlooks the beach and the southwest corner has been eroded away. There are several large spruce from fifteen inches to twenty inches in diameter growing inside the house. A test pit was dug from the back of the extra room to the middle of the main room without uncovering anything of interest.

There are also a number of conical pits in this area that were brought to our attention. We believe these pits are natural features and did not attempt to excavate.

Ke14

Location: Sec. 24, T. 4 N., R.11 W. (Kenai B-4)

The village of Kalifonski is still listed on the maps although it has been abandoned since 1927. Mrs. Louis Nissen of Kenai, who is the granddaughter of Kalifonski the founder of the former village, said that after the Russians came to the area all the people moved to Kenai, the Russian trading center. Today there is a lot of beach salmon fishing activity in the area. We found five house depressions at the mouth of a small creek approximately where the old village of Kalifonski is situated on the map. None of the houses seemed very old, and in trenching across one of them we found only small bits of iron and small bones. Again the fire pit was located midway between the entrance to the extra room and the outside entrance.

There was also a graveyard at this location, but it appeared to be fairly recent. There are pieces of three or four former grave houses, and one complete one. Someone had dug small holes into a number of the graves to a depth of four to five feet. Someone had also dug in one of the house pits. There is an old abandoned cannery at this site, and there are many indications of recent fishing activities.

DeLaguna (1934) mentions this site but did not visit it.

Ke15

Location: 151° of 30° W. Long., 60° 43' N. Lat.

There is a house depression in the backyard of a homestead on Daniels Creek midway between Daniels Lake and Bishop Creek. The horizontally laid log walls are still visible in this house which probably means the house is not very old. The homesteader's children use the house for a play area.

Ke16

Location: N. E. ¼ of the S. E. ¼ of Sec. 21, T. 4 N., R.11 W. (Kenai B-4)

There are four former villages located on high ground six and one-half miles southwest of Soldotna near the Sterling Highway. These villages are in a group of low, heavily wooded, rolling hills. The area is dotted with many small lakes which contain a good supply of freshwater clams and beavers. These hills are the first high land south of the Kenai River, and they are also
**Table 4. Location of houses in relation to each other, Site Ke16**

<table>
<thead>
<tr>
<th>House #</th>
<th>Size of main room</th>
<th>Extra rooms</th>
<th>Size</th>
<th>Paces from preceding house</th>
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</tr>
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<td>poor condition</td>
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<td>8’ × 8’</td>
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</tr>
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<td></td>
</tr>
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<td>1</td>
<td>10’ × 6’</td>
<td>18</td>
</tr>
<tr>
<td>22</td>
<td>28’ × 26’</td>
<td>1</td>
<td>8’ × 8’</td>
<td>60</td>
</tr>
<tr>
<td>23</td>
<td>26’ × 24’</td>
<td>1</td>
<td>8’ × 8’</td>
<td>10</td>
</tr>
<tr>
<td>24</td>
<td>20’? × 20’?</td>
<td>none</td>
<td>poor condition</td>
<td>16</td>
</tr>
<tr>
<td>25</td>
<td>20’ × 24’</td>
<td>none</td>
<td>poor condition</td>
<td>0 (from #23)</td>
</tr>
</tbody>
</table>

about two miles back, or east, of the old village of Kalifonski on Cook Inlet.

Ke16 is the largest of the four villages, containing twenty-five house depressions. Many pits of various sizes and shapes were found around each house depression. The site is on the homestead of Mr. Rex Stubblefield and is situated on the side of a hill back about fifty yards from a small lake. The entire area is heavily wooded, one spruce tree growing inside a house depression measured sixty-one inches in circumference. These trees do not seem to be the first growth as many of the depressions are littered with deadfalls, old snags, and stumps.

A large oval-shaped mound is located at the southwest end of the village. This mound is roughly twenty feet by thirty feet at its widest point and ranges from eight to ten feet high. There is a portion dug out of the mound that resembles an entryway, but it is a dead end. There was not time to excavate, but the mound should be a promising starting place for such.

Some of the houses were close enough together to be able to use a common
wall, while others were as much as one hundred paces away from the nearest house. The houses are in fairly good shape on the whole with most being well preserved but others deteriorated to the point where it is difficult to make out the outline. This was probably a winter village, for the summers would have been more profitably spent salmon fishing along the coast (Fig. 8).

Ke17

Location: S. W. ¼ of Sec. 21, T. 4 N., R111W. (Kenai B-4)

Three-fourths of a mile west of Ke16 there is a site that contains thirteen
### Table 5. Location of houses in relation to each other, Site Ke17

<table>
<thead>
<tr>
<th>House #</th>
<th>Size of main room</th>
<th>Extra rooms</th>
<th>Size</th>
<th>Distance from preceding house in paces</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24' × 32'</td>
<td>1</td>
<td>10' × 12'</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>22' × 24'</td>
<td>none</td>
<td>poor condition</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>24' × 26'</td>
<td>1</td>
<td>8' × 8'</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>22' × 25'</td>
<td>1</td>
<td>10' × 10'</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>23' × 26'</td>
<td>1</td>
<td>10' × 10'</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>20' × 20'</td>
<td>none</td>
<td>poor condition</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>24' × 24'</td>
<td>none</td>
<td>8' × 8'</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>22' × 23'</td>
<td>1</td>
<td>6' × 6'</td>
<td>30</td>
</tr>
<tr>
<td>9</td>
<td>24' × 24'</td>
<td>1</td>
<td>12' × 12'</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>20' × 22'</td>
<td>1</td>
<td>8' × 8'</td>
<td>10 (from #9)</td>
</tr>
<tr>
<td>11</td>
<td>22' × 24'</td>
<td>2</td>
<td>8' × 8'</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>22' × 24'</td>
<td>3</td>
<td>8' × 8'</td>
<td>30</td>
</tr>
<tr>
<td>13</td>
<td>20' × 24'</td>
<td>3</td>
<td>8' × 8'</td>
<td>30</td>
</tr>
</tbody>
</table>

House depressions. These pits are on top of a rise that gradually slopes toward a lake. The depressions are in two groups, with the one on the west side of the lake containing six depressions, and the one at the southern end of the lake containing seven depressions. There are about one hundred and fifty yards separating the two groups, with those at the southern end being generally in poorer condition than those on the west side of the lake. This may mean that the location was changed in favor of the western location, and that the two groups of houses were not occupied at the same time. Also in the group on the western side of the lake two of the house depressions have three extra rooms while none of the houses at the south end have more than one.

About seventy-five yards east of the group of house depressions at the south end of the lake is a single house pit. This depression is on a small rise overlooking the lake and the mouth of a small creek. The location would seem to have been the best place for a village. This single depression, being twenty-four by thirty-two feet with a ten- by twelve-foot extra room, is larger than the average depressions in the area. Unlike the group of depressions closest to it on the south end of the lake, it appeared not very old. There was also some indication of recent trapping activity in the area (Fig. 9).

**Ke18**

*Location: S. E. ¼ of Sec. 20, T. 4 N., R11 W. (Kenai B-4)*

One-fourth mile west-southwest of Ke17 there is a site containing six house depressions. This site is on a ridge overlooking Kalifonski Beach on
Figure 9  Sketch Map of Ke. 17

Ke. No. 17

SW 1/4 of SE 1/4 Sec. 21 T. 4N, R 11 W
Kenai (B 4) Quadrangle

Small Lake
Figure 10 Sketch Map of Ke. 18
Cook Inlet just over two miles away. These depressions are very poorly preserved and difficult to define. Often we could only make out two or three of the walls and portions of the extra room. We had to approximate the size of some of the depressions. From the state of preservation it would seem that this site is older than the other sites in the area. There are also two large circular-shaped depressions at this site which are forty and sixty-eight paces in diameter, respectively. These depressions look as though they are natural in origin and yet they appear too symmetrical to be natural. There were house depressions around these larger depressions. We came to no decision as to whether or not they were man-made. We were told of these large depressions by Mr. Phil Williams of Kenai who had seen them from the air (Fig. 10).

This is the only site we found in the survey that was not on a lake or pothole. There is no stream nearby which raises the question of how water was obtained; almost certainly this was a winter village. This site may prove to be the most interesting from an archaeological point of view due to its apparent age. Excavation would have been desirable but time would not allow it.

Ke19

Location: S. E. 1/4 of Sec. 21, T. 4 N., R11 W. (Kenai B-4)

There are two well-preserved house depressions on a low ridge overlooking a small pothole midway between Ke16 and Ke17. These two depressions are the same size being twenty-two feet by thirty feet with an extra room ten by eight feet.

The area in which the sites Ke16, 17, 18, and 19 are located has been known for a long time. As early as 1935 Sections 21 and 28 and the eastern half of Sections 20 and 29 were set aside in the Federal Land Withdrawal, E. O. 7888. The withdrawal has apparently been allowed to lapse, however, as there is now homesteading activity in the area. It is unfortunate that the land could not be preserved in some manner as the area is dotted with many small picturesque lakes. The hills around the lakes are covered with large trees which are spaced far enough apart as to give the area a natural park-like
Figure 11  Sketch Map of Ke. 19
appearance. We located the forty-six house depressions on one trip into the area and are convinced that there must be many more village sites in the area as there are a number of lakes that we did not have time to visit (Fig. 11).

Ke20

Location: Sec. 5, T. 5 N., R11W. (Kenai C-4)

There is a collection of copper artifacts in the possession of Mr. Jordan, an employee of the Federal Aviation Agency at Kenai. The collection was made during the leveling of the present FAA administrative and employee housing area about one-half mile east of Kenai. This site overlooks the Kenai River and is about one mile northeast of its mouth. Many of the natives moved into the Kenai area after the Russians set up their trading post there.

Ke21

Location: N. W. ¾ of Kenai B-3

Behind the Bureau of Public Roads station at Soldotna, there were two house depressions. Mr. Mullins of Soldotna showed us where there had been two house depressions located on the bank of the Kenai River. The depressions had been bulldozed over the bank accidentally earlier in the year. The area around the depressions had only been scraped to a shallow depth but no indication of the depressions remained. We had planned to trench across the area, but due to the negative results obtained from excavating other depressions in the area the idea was abandoned.

Sites not visited

Ke22

Location: Center of Sec. 19, T. 5 N., R10W. (Kenai C-3)

Mr. Mullins of Soldotna told us of an old campsite on the Kenai River which was called Big Eddy. The site is said to have a spring and a small creek on it.

Ke23

Location: Center of Sec. 19, T. 5 N., R.10W. (Kenai C-3)

Upstream from Big Eddy just around the bend is a site called Old Camp. Mr. Mullins said that this site was used by the hunters from Tyonek. The hunters used to come from the western side of the inlet to hunt moose. It is interesting to observe that the reverse is now true for a good percentage of hunters from the Kenai side cross over to the western side to hunt.
Ke24

Location: Sec. 11, T. 4 N., R11W. (Kenai B-4)

We were told that there was an old graveyard somewhere on the north bank of Slikok Creek in Section 11. We were interested in this graveyard as it was not very far from the large sites of Ke16 and 17. We searched for some time along the creek without finding it, but people of the area claim they have been there so it must exist. There was no opportunity to return and search further.

Ke25

(Location uncertain)

Mr. Mullins and other people of Kenai told us of a site called Custom House located somewhere on the Kenai River. DeLaguna mentions this site also as being on the Kenai River but does not state a definite location (1934:134). There were so many other sites in the area for which the exact location was known that we did not take the time to search for this one.

Ke26

Location: 150°28' W. Long., 60°26' N. Lat. (Kenai B-2)

Mr. Ted Meining of Nikishka told us that people have been picking up artifacts on a small knoll on the south bank of the Kenai River at the point where the river drains out of Skilak Lake. This site seemed to us to be a natural camping site. We were disappointed not to be able to visit the site due to the lateness of the season. DeLaguna (1934) mentions sites above and below this locality but does not mention this one in her report. Osgood mentions a village called Skilak on the south side of Skilak Lake but gives no definite location (1937:13).

Ke27

Location: 151°20' W. Long., 60°46' N. Lat. (Kenai G-4)

A number of people in the Kenai area told us of material that had been collected at Boulder Point north of Kenai. There is a lot of beach seining activity in this area in the summer season, and fish camps are dotted all along the beach. There was no opportunity to visit this locality.

Ke28

Location: 151°11' W. Long., 60°44' N. Lat. (Kenai G-4)

Mr. Daniels of Kenai is said to have some copper artifacts he picked up while working his field next to Daniels Lake. We did not have an opportunity to talk with Mr. Daniels or to visit the site. Daniels Lake is about twenty miles north of Kenai.
ARTIFACTS

Due to the nature of the fieldwork, there was little time for excavating and consequently few artifacts were collected. The greater part of two house pits were excavated, however, besides a number of test cuts—all of which produced little of archaeological value in this connection. This problem of the paucity of artifacts can in part be explained by the apparent short occupation time of the dwellings. In most of the houses tested, the floor layer was close to the surface and the general condition of the pits would tend to indicate that the house pits in most cases are not very old.

The only major archaeological work on the Kenai area was carried out by Frederica DeLaguna in 1933. DeLaguna also mentions the sparseness of artifacts. She states, “The thinness of the humus in three house ruins shows that they cannot be very old. They were probably not inhabited for very long, or we should have found something more than the few objects mentioned and the scanty piles of bath stones outside the door” (DeLaguna, 1934:136).

Osgood (1937) mentions that “the Tanaina are among the less nomadic of the Northern Athapaskan people.” From this statement one would conclude that the house pits should show a longer occupation time. The Tanaina had two house types however, the winter and the summer house. The winter houses were those that were dug in and are the easiest to locate. The summer house was constructed aboveground, and often the family lived in the smokehouse with the drying salmon (Osgood, 1937). There would expectably be no surface indication remaining to mark the location of summer houses.

Unlike the Eskimo of the Arctic, the Tanaina had a generous supply of building material from which to construct houses so that a family or clan would not feel compelled to return to an area they had occupied the winter before. In fact, it may have been more advantageous to move to a new location after a couple of seasons to get to better hunting grounds. It would not take long for fifteen men feeding families to deplete the game within a radius of five miles of the village. Therefore, the people of the Kenai area probably did migrate within a given area, but they were undoubtedly back at their favorite fishing camps in early spring.

It is difficult to explain why so few of the sites seemed to be very old. A partial answer may be that older houses were built close to the beach and have since been washed away. This process of erosion was encountered in a well-defined house pit at Ke13. The residents of the area state that after severe storms artifacts have been picked up on the beach. DeLaguna mentions an old village called Titukiksk, which appears on Petroff's map. She believed the village was an old one, but that it must have been covered by slides from the high bluff or by high-tide deposits as her party could find no trace of it (1934:134).

Items of Native Manufacture

A stone adz fragment was discovered on the floor layer of House 1 at
Ke11. It is 9 cm. in length, 7.2 cm. high, and 4.5 cm. in width. It is made of a fine-grained basalt and has a ground groove across its upper surface where it was hafted. The adz is a common artifact in the Kenai area. A number of people have collected them, and DeLaguna mentions them often in her work (DeLaguna, 1934) (Fig. 12, h).

A whetstone 12.8 cm. in length and 2.5 cm. wide made out of a dark slate-like material was found on the floor layer of House 1 at K14. The stone is square on two edges giving the worker three surfaces to use. Three other oddly shaped stones were encountered in this house, but they were unidentifiable as to function (Fig. 12, f).

Three rock fragments discovered on the floor layer of House 1 at Ke7 showed signs of having been used in some process of pounding or grinding red ocher. The pores of the rocks are plugged with a reddish powder. The fragments are from 2 to 3.5 cm. in length (Fig. 12, g).

Osgood, in his work The Ethnography of the Tanaina, mentions that the Kenai people liked to put paint on almost "everything." The method of manufacturing paint is given by Osgood as follows: "To make the red paint, they put a red mineral (probably red ocher or hematite) in the concavity of a small rock and place another stone on top. Then they set the whole thing in the center of a fire and cook it for five or six hours. They scrape out the residue and smash it up. Before the actual application they mix this powder with water in a stone mortar" (1937:417).

Five rolls of birch bark from 18 cm. wide and 4 cm. in diameter to 0.5 cm. wide and 1 cm. in diameter were encountered on the floor layer of House 1, and Ke7. The smallest roll was coiled so tightly that it resembled a piece of leather. Birch bark was used for a number of purposes in the Kenai area including baskets, bowls, cooking pits, boats, and roofing (Osgood, 1937). Figure 12 shows the several pieces mentioned above (a–e).

**Objects of European Manufacture**

There were seven small pieces of china (1.5 cm. to 0.7 cm. in size) encountered on the floor layer of House 1 at K17. Although the fragments of china are too small to identify, two of the pieces have blue markings that resemble a piece on exhibit at the University of Alaska Museum. The latter was excavated in 1958 from the Tlingit fort at Sitka destroyed by the Russians in 1804 (West, 1959). It is interesting to note that Osgood comments on the fact that the Tanaina Indians, who were fond of shell beads, traded with the natives in the vicinity of Sitka (Osgood, 1937:52) (Fig. 13, d).

Altogether forty-three glass beads were found in the excavation House 1 at Ke7. It has already been mentioned that the Tanaina traded with the Sitka natives for shell beads. The Tanaina placed much value upon beads and even sewed them into their clothes, especially along seams of garments and on boots, belts, and hats. Beads then were undoubtedly a highly valued trade item among the Tanaina and early Russians. Most of the beads found were cylindrical,
ranged from 2 to 5 mm. in diameter, and were red, black, and white (Fig. 13, c).

One large bead (5 mm.) in diameter was located on the surface of a cutbank at Ke6. This bead was found with a number of human bones suggesting that the beads were burial offerings.

A piece of iron that looked like it may have been part of a cooking pot was also found in House 1 at Ke7. The piece is 10.7 cm. long and 4 cm. wide (Fig. 13, a).

A piece of copper 3.6 cm. on a side and roughly square was also found in House 1 at Ke7. Native copper was gained in trade from the upper Inlet people who in turn obtained it from the Copper River people. Copper was probably also used for trade between the Russians and Tanaina. The piece found had a hole in it indicating it may have been used for ornamentation. A number of residents in the Kenai area have copper artifacts that were found locally (Fig. 13, b).

An interesting piece of iron, 16.7 cm. long and coiled at the ends, was also found at House 1, Ke7. There is a small white stone set in the center of each coil. The piece of iron resembles the style of knife handle found in the area. The two coiled ends would be drawn up together forming a handle. Osgood mentions these knives and describes them as follows: "The knives are long, thin, and have handles ending in double spirals" (Osgood, 1937:102). From this description it would seem that the knives are all one piece with the ends of the handles being split and coiled. The resemblance is too great, however, to classify it as anything other than a knife handle of the design Osgood mentions. The piece compares favorably with the appropriate parts of Kutchin knives on display at the University of Alaska Museum. The handle was probably an attempt to copy the original design with the use of material available. (Fig. 13 shows these several items.)

HUMAN REMAINS

A few human bones were collected from the surface of a cutbank next to the Sterling Highway at site Ke6. Most of the bones had been picked up by Mr. Charles Doser, the owner of the property, after they washed down during spring runoff. The entire collection consisted of two skull fragments with the auditory meatuses intact, along with a number of smaller fragments; a pelvic fragment, a vertebral section, and one complete phalanx. All of these bones were picked up on the surface and had washed down from an area that had been greatly disturbed by machinery.

FAUNAL REMAINS

The faunal remains collected consist of two beaver teeth, the neurospine of a porpoise, three caribou leg bone fragments that had been cracked to
extract the marrow, the complete radius and part of the ulna of a caribou, and a fragment of a seal pelvic section. This collection from a single house (House 1, Ke7) seems to uphold Osgood’s statement (1937) that the people of Kachemak Bay relied heavily on fish and sea mammals, and that this dependence on sea life became less important and caribou more important farther north on the peninsula until, in the upper Inlet area, the people were almost entirely dependent upon caribou. The people of the Kenai area seem to have utilized both land and sea mammals.

A number of clam and nautilus variety sea shells were collected from middens and fire pits along with an assortment of fish and broken bird bones.

CONCLUSION

The large number of storage pits, the thinness of the floor layer in house pits, and the small amount of artifacts are the most puzzling aspects of the archaeology in the northwest Kenai area. DeLaguna, as well as the few other people who have worked in the area also encountered this problem. The Tanaina made the majority of their tools and utensils out of wood and bone, and the moist climate of the peninsula would tend to limit preservation of these items. Even considering this, however, one should think that more artifacts might be found, for Osgood does not give one the impression that the Tanaina were materially poor.

Both pipeline rights-of-way were walked for their entire length, with a zigzag course being followed. There was nothing of great enough archaeological value encountered on either line to suggest rerouting of the pipelines. Both pipelines were cleared for construction over the proposed routes. As stated elsewhere in this report, the most interesting sites were located off of the rights-of-way.

Bibliography

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Hadleigh-West, Frederick
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1937. The Ethnography of the Tanaina. Yale University Publications in Anthropology, No. 16, New Haven.
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Figure 1. Looking south along the Alaska Natural Gas Pipeline Company's cleared right-of-way.
Figure 2. Ket After exploration: storage pit with floor exposed.
Figure 3. Ke3 View from inside House 1 looking out through the entrance.
Figure 4. Ke4 Cooking pit after excavation.
Figure 5. Ke5 Profile of storage pit.
Figure 6. Ke7 Interior of House 1 showing firepit and entryway into extra room.
Figure 12. Artifacts of native manufacture. a–e, 5 sizes of rolled bark; f, 1 piece of stone showing signs of red ocher; g, 1 whet stone fragment; h, 1 adz fragment.
Figure 13. Objects of European manufacture. a, 1 piece of iron from cooking pot; b, 1 piece of copper with hole in it; c, black, red and white glass beads of various sizes; d, 4 pottery fragments; e, knife handle with stones set in the spiral.