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PNE - 407

PROJECT CHARIOT--FINAL REPORT

ARCHAEOLOGICAL SURVEY AND EXCAVATIONS

AT

OGOTORUK CREEK, NORTHWESTERN ALASKA

Contract Number AT(04-3)-310

Between the

University of Alaska

and the

United States Atomic Energy Commission

by

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PREFACE

Through a contract between the United States Atomic Energy Commission and the University of Alaska, the Department of Anthropology and Geography performed an archaeological survey of the vicinity of the mouth of Ogotoruk Creek on the northwest coast of Alaska. It is at this location, seven miles south of Cape Thompson, that the AEC contemplates an experiment in harbor construction through the use of underground nuclear explosions. It was recognized that Project Chariot (one aspect of the "atoms for peace" program, Operation Plowshare) would, of necessity, be destructive to any archaeological or palaeontological remains in the immediate vicinity. Since this could have meant a permanent loss both to science and the public at large, the AEC made the decision to subsidize the necessary field studies first, to evaluate the situation as to the presence of sites, likelihood of destruction, etc., and secondly, to perform such salvage excavations as seemed indicated and feasible in order to mitigate the possible loss.

Parts of two seasons were spent in the field--from July 26 until September 2, 1959, and July 15 through August 1, 1960. Field personnel were the following: Archaeologist (both seasons), Frederick Hadleigh-West, Assistant Professor, Department of Anthropology and Geography, University of Alaska; Field Assistants for 1959, Kenneth E. Howell, then of College, Alaska, and Elmer Ipalook of Kotzebue; for 1960, Ronald B. Boyce of College, Alaska, and Jack E. DeVille of Cordova, Alaska. About halfway through

the 1959 season, Henry Nashookpuk of Point Hope was hired as a shovel hand.

As is the case with any such undertaking, debts of gratitude are incurred on all sides: Dr. Ivar Skarland, Head of the Department of Anthropology and Geography at the University of Alaska deserves the credit for initiating and following through the proposal for salvage work in connection with Project Chariot. He has, in addition, lent continuing support to all its phases. The administrative officers of the University were also active in the efforts to have this project established and were largely instrumental in the accomplishment of that aim. Dr. J. Louis Giddings of the Haffenreffer Museum, Brown University, was, as always, most helpful and cooperative on the several occasions his advice was sought during the period in which the work was carried out. My assistants deserve special thanks for the quality and quantity of their work and for the interest they displayed in its various, and often tedious, aspects. Identification of faunal remains was cheerfully performed by Dr. Otto William Geist of the University of Alaska. Both he and Dr. Skarland also aided in the identification of some problematical artifacts. Dr. William O. Pruitt of the University of Alaska and Mr. Robert A. Rausch of the Alaska Department of Fish and Game were also kind enough to identify some of the faunal material. Professor Charles J. Keim of the University of Alaska lent real assistance in his identification and chronological placement of some of the more exotic cartridge cases uncovered in the upper levels. For their support

at the Chariot Site, thanks are extended to the following Project Officers for the AEC--Mr. James A. Sugden (1959), Mr. Merle Smith (1960), and Mr. Henry Schlacks (1960); Mr. Roland W. Wallstedt, Deputy Support Coordinator of the Lawrence Radiation Laboratory; and Mr. Ralph Chase, representative of Holmes and Narver Incorporated of Los Angeles. There were several persons connected in various ways with the Atomic Energy Commission who interested themselves in seeing this project established. Some of these gentlemen are known to me, some are not, and I cannot bring myself to make the invidious distinctions concomitant to naming those two or three whose efforts are known. To these men a most particular note of gratitude is due; probably the major part of the success in setting up the archaeological project was due to their interest and efforts. Finally, to my colleagues from other disciplines, who were also engaged in various field studies of the area--to these people, thanks. It would be difficult indeed to express the pleasure I had in their company and the intellectual stimulation gained from the many conversations held with them.

Any success which may have attended this enterprise is due, most largely, to the aid and assistance rendered by these and other people.

INTRODUCTION

The Geographic Setting:

The setting for the work described in this report is the lower end of Ogotoruk Creek Valley located approximately $68^{\circ}06'N$, $165^{\circ}45'W$ on the northwest coast of Alaska. Ogotoruk Creek, in that portion of its course, is aligned in a north-northeast--south-southwest orientation. For convenience, up-valley directions will be referred to simply as north. The lowermost end of Ogotoruk Creek is marked by a small lagoon the size of which must vary according to conditions at the mouth. The actual mouth of the creek, where it debouches into the Chukchi Sea, is subject to closure at which times there is evident some damming effect. Communication with the sea is apparently not completely impeded, however, and presumably takes place by a rather rapid seepage through the beach ridge which is composed of fairly coarse materials. The creek for most of its course is a braided stream with a rather low normal flow volume.

The valley, at its lower end, is about two miles wide. The ridges which form its walls rise to elevations of over seven hundred feet, with high points rising another hundred feet and more. The flood plain proper tends to be rather marshy and is occupied by grasses and sedges. The valley floor for the most part is covered with tussock heath vegetation and with occasional groups of low willows. There are no trees; it is an area of true tundra.

Long-term climatic data are not available for Ogotoruk Creek. Point Hope, twenty-six miles to the north, has a January mean temperature of $-3.9^{\circ}F$. and a July mean of $43.9^{\circ}F$. Average minimum temperature is -13.5° for January, with the extreme low recorded

temperature being -47° . These figures, of course, reflect maritime influence on the local climate. The presence, throughout most of the year, of windy conditions, greatly increases their feelable effect. The average annual precipitation at Point Hope is 10.21 inches. It may be assumed that these values would closely approximate those for Ogotoruk Creek. Wind conditions, however, in such a hilly environment would probably tend to be more local. Ogotoruk Creek Valley seems to have the reputation of being an exceptionally windy area. Certainly this was true through most of the summers of 1959 and 1960.

The nearest permanent settlements are Point Hope as mentioned above and Kivalina about forty-five miles southeast. The length of time that Kivalina has been occupied is not known; Point Hope, from archaeological evidence, appears to have been a site of Eskimo occupation for some two thousand years (Larsen & Rainey, 1948). The question which must arise after a review of the archaeology of Ogotoruk Creek--why there was not a more extensive settlement there--must be explained in some measure by the smallness of the valley itself and, otherwise, by ecological factors which spring in part from the valley size, its topography, etc. These questions will be treated in a later section.

History of Previous Work:

So far as is known the only archaeological work done previous to that performed by this survey was a brief reconnaissance executed by J. Louis Giddings of Brown University and his companion for the summer in work farther south, Hans-Georg Bandi of the University of Berne. Giddings and Bandi made their visit to the Chariot Site on 10 July 1959 at the behest of Ernest D. Campbell, Field Coordinator

of AEC's Environmental Program there. At that time the status of the University of Alaska's project was unsure.

SUMMARY OF WORK ACCOMPLISHED

Methods of Investigation:

The procedures followed and work accomplished in this survey were largely determined by three factors: (1) imminence of destruction of sites, (2) time available, and (3) personnel available. The first factor confined the limits of the survey to the region of the mouth of Ogotoruk Creek. After reconnaissance of the area disclosed the presence of four sites, it then became possible to rank these in importance according to their proximity to the proposed crater. First attention then was given that material located within the crater itself. As it happened, one site only was found to occur here. Secondary attention was given to material on or about the rim of the crater which would be subject to destruction or disturbance due to the fall back of debris raised by the explosions. In the latter category was one site--the largest of the four encountered. Sequentially third in importance, but actually considered much less so, were sites in the close vicinity which could conceivably be disturbed or destroyed either by the detonations or by some of the attendant activity at Ogotoruk Creek.

Sites were numbered serially as encountered. The prefix "CT" (for Cape Thompson) was used as a regional designation. Where a site might consist of a series of house pits, these were likewise numbered with the customary "H" per house. Any given unit chosen for excavation, whether house, cache, or whatever, was also given an excavation

unit number, or "X" number. If the unit were a house, then the house number would serve for an X number. Where the unit was equivocal as to its definition, or, in any case, was not a house pit, it was designated as "X-". The complete designation for a given house might be CT1, H1; for some other cultural feature, CT1, X2, and so on. Where indicated, a system of quadrants and arbitrary levels was maintained in excavation.

Summary of Results:

As nearly as possible work proceeded according to the schedule of priorities outlined above. The entire survey area was covered quite thoroughly by foot. Four sites were discovered within it. As time allowed, the survey was extended up Ogotoruk Valley for a distance of about six miles. For a somewhat lesser distance the flanking ridges were reconnoitered and eminences spot-checked. The objective of these undertakings was to determine the true extent, both spatially and chronologically, of human occupation of the valley. Such information would have had an obvious bearing on any conclusions drawn regarding occupation of the main survey area. Nothing, beyond indications of recent, transient hunting activity, was found as a result of these efforts. Such occupation as there was of this region evidently was restricted to the seaside locations found in the main survey area.

Area of Primary Importance:--The Crater:

The one site here, designated CT1, consisted of three separate structural units strung out on the east bank of Ogotoruk Creek, beginning almost one thousand feet back from the ocean. These were

the only archaeological remains found in the crater area. They were completely excavated. Both north and south of these units were other irregular depressions occupying the same kind of position with respect to the creek bank and having the same aspect. These had been noted by Giddings and Bandi in their reconnaissance as well. Test pits put in them, however, revealed them to be only the abodes of ground squirrels. It may be noted here that in site, situation, and ultimate surface expression, many ground squirrel burrows are indistinguishable from old house and cache pits. The only way to determine their true nature is by test excavation. This mutual appreciation for the proper dwelling location is apparently recognized by the ground squirrels, since one commonly finds them occupying abandoned human habitation sites--much to the detriment of the archaeological record.

The yield of artifact material was exceptionally low at CT1, but was sufficient to indicate these units as being quite recent.

Area of Secondary Importance:--The Rim:

Site CT2, the only site in the rim area, consisted of the remains of six dwellings. This, by far, was the most extensive of the four sites. Because of this fact, plus its position, CT2 received the major amount of time and attention of the survey. As will be seen, the choice of units to investigate was somewhat narrower than would be indicated by the number of houses. The houses were aligned in a general east-west axis and faced the sea. They were numbered 1 through 6 from east to west. Two of the houses were so recent that their former owners were known. H6 formerly belonged to a Mr. Lane of Point Hope. H3 was the property of Charlie Jensen of Kotzebue.

The latter house, at least, was in repairable condition. It had evidently been occupied by transient hunters since Jensen abandoned it. Investigation of these houses was eschewed in favor of ones which were older in appearance. H5 might have been one of these, but examination of it was effectively precluded by a two-foot mantle of gravel fill which largely obscured it. The fill formed part of one of the connecting roads between the Chariot Site camp and the airstrip across Ogotoruk Creek. Accordingly then, excavation was confined to H4 (completely excavated), H1 (tested), and H2 (completely excavated). Artifact recovery was relatively abundant at CT2, especially so in the case of H2.

On the basis of evidence found in these excavations, it can be shown that with one exception all these units are very recent in origin. They apparently were occupied variously between 1890 and 1930. The exception, discussed later, occurred in connection with the excavation of H2.

Area of Tertiary Importance:--Outlying Sites:

Situated westward on the beach and probably well beyond any mechanical effects of the proposed detonation were two sites, CT3 and CT4. The first consisted of two recent-appearing house pits set quite close together located about a half-mile west of CT2. Both of these were tested with negative results. CT4 consisted of three house pits located to either side of a small intermittent stream approximately a quarter mile west of CT3. Tests here were also negative. That tests were negative in finding cultural remains is not to say that these were not man-made structures. It does, however, leave their definition something of a question. In view of their "safe" location

and the need for all hands to work at CT2, further work here--already shown to be unpromising--was halted.

Information derived from the survey indicates a very light--possibly seasonal--occupation of the lower end of Ogotoruk Valley. The evidence also indicates this to have been only in recent times. The results of the survey, though not spectacular, at least serve to fill in one of the numerous geographical lacunae on the northwest coast of Alaska. Fortunately, it does not appear that any really important manifestations of Alaskan prehistory are in danger of destruction by Project Chariot. Obviously, however, that this is the case could not have been known had no survey been performed.

SITES

CT1:

Site CT1 consisted of three units occupying the west bank of Ogotoruk Creek. All three occurred at approximately the same elevation--about twelve feet above sea level. The southernmost, X2, was about seven hundred feet north of the beach. Twenty feet north of it was X3. About six hundred feet farther north was X1.

Unit 1 of CT1 was presumed to be a house. The surface indications were of a shallow, irregularly-shaped depression occupied by a dense stand of low willow identified as Salix pulcra. Jutting through in various places were timbers used in the construction. As the shallow overburden was stripped away, more timbers and rocks were disclosed, which tended to confirm the initial identification. It became apparent at this stage that the impression of some antiquity gained from surface indications was quite erroneous. Associated with the timbers and rocks, and continuing to appear throughout the excavation, were articles of very recent American manufacture. These included such things as an iron stove top, modern nails, crockery fragments, a rusted fox trap, and a snuff can. It furthermore developed, that if this were a house it was decidedly aberrant, for beneath the timbers and rocks uncovered at very shallow depth, there was nothing. There also was no indication of an entrance passage. In the southeastern quadrant of the structure there was some indication of burning--possibly a fireplace. Except for lacking an apparent entryway, the situation encountered here--paucity of timbers--parallels that described by Giddings for Intermediate Kotzebue houses where, upon abandonment, timbers were removed for use in other constructions (1952:20). The continuance of such an obviously utilitarian trait from ca. 1550 (Intermediate Kotzebue) practically to the present would require no great stretch of the imagination. There are suggestions elsewhere of the same trait in recent times--e.g., Barrow. However, lacking further supporting evidence, it would not be possible to state categorically that this was a house.* It may actually have been merely

*House, as here used, means the "permanent" wood and sod igloo of the Northwest Alaskan Eskimos. The term dwelling encompassed this and the more transitory forms of abode.

a fairly elaborate frame for a canvas tent. The shallowness of the depression would support the latter interpretation.

Excavation Unit 2 was marked by a clearly defined, small, rectangular depression. Excavation disclosed a small stage, or cache, structure. The uppermost timbers, those lying horizontally forming the stage, were about one foot below the surface. The structure was supported by four upright posts, two of which had been saddle-notched to receive the stringers. The other two posts were crotch sections of spruce on which the natural saddle had been widened somewhat for placement of the stringers. The structure resembled in miniature the above-ground caches on which meat and fish are hung to dry, except that the middle horizontal timbers were missing. On the bottom of the structure were scraps of willow--indicative of a former lining. One unidentified wooden object was the only artifact found. The identification of the structure as a pit cache is probably correct.

Although there was no definite indication of age, it seems most likely that this cache was of the same vintage as X1. Evidence supporting this conclusion consists in, (1) the very sharply defined rectangular surface expression, and (2) the observation that the saddling, mentioned above, had evidently been accomplished with a steel ax.

Excavation Unit 3, located twenty feet north of the foregoing, appeared as an irregular depression about five by eleven feet. There appeared to be some mounding of earth about its perimeter. Excavation revealed this to have been another pit cache like X2. The major differences lay in its slightly larger size and the fact that it had either collapsed or had been largely dismantled. The four supporting posts remained intact, but no horizontal members were so disposed. Lying jumbled in the interior of the rectangle formed by the posts were four short logs (averaging about four feet) and portions of several more. Lying about a foot away at the southeast end of the excavation were two slightly larger logs and fragments of possibly two others--all aligned parallel to each other in a manner suggesting the "top" of the cache X2. Very likely those logs in the interior of the structure had also been part of the top or cover. Beneath the latter were willow scraps, again suggestive of a lining as in the previous unit. No artifacts were found, but again evidence of the use of a steel ax would indicate a probable contemporaneity with Units 1 and 2.

In summary, the three units comprising Site CT1 consisted of one former dwelling--probably of a temporary nature--and two underground storage structures, or pit caches. Although the dearth of artifact material does not allow a positive statement, the evidence seems sufficient to indicate all three units as being roughly coeval. In all probability, the age of the site is not in excess of fifty years. It was the only site of the four not located directly facing the sea. The significance of this, if it represents anything more than individual idiosyncrasy, is not clear.

CT2.

Site CT2 was the major subject of investigation in the 1959 survey and was the basis for continued work in 1960. It is situated on the eastern end of an older beach ridge or bay mouth bar on the west side of Ogotoruk Creek. It is about four hundred feet from the ocean, on which it faces. As the location for habitations it combines several features which would have been important to the Eskimo: From its elevation of some twenty feet, a commanding view of the ocean is obtained. For hunters of sea mammals and polar bears, this would be quite important. Its location relatively close to the sea meant that boats could be quickly launched. The proximity of Ogotoruk Creek assured a readily available supply of drinking water. Furthermore, the elevation was sufficient to allow a good view of the hinterland to the north. Undoubtedly, these factors account for the relatively high concentration of archaeological remains at this place.

There were present here surface indications of six houses. As previously observed, for several reasons work was concentrated on two of the six units present. A third was tested for artifact content. All were mapped and photographed. Although the neutral term "dwelling" is probably preferable for reasons to be brought out below, these six units are all referred to as houses and were so designated in the field. See Figure 1.

House 4: A low mound of sod delineated this house and its abbreviated entryway. It was hoped that its low relief was a reflection of somewhat greater age than its neighbors. Such, however, was not the case.

One of the most surprising features of this house was an almost total lack of timbers. One post, set vertically into the ground, appeared on the western edge of the structure. In the interior, near the northern rim, a possible post mold was found. Four feet east of the vertical post, a charred area indicated a possible fireplace; this was an irregular circle of less than one foot diameter and very shallow. Just to the front of the house and to the side of the apparent entry were three rather small, badly deteriorated stakes set in the ground. They may have been used for tying dogs. With removal of the heavy sod mantle, the outline of the house became very irregular. Much of the observed irregularity was due to the burrowing of ground squirrels. When the house fill was removed, the house plan was that of a vague oval. No definite traces of the entryway could be detected. These factors combined to give no clear picture at all of the original plan or nature of the house. This situation may have been another of those where the timbers were removed at the time of the abandonment of the house. On the other hand, there may never have been anything more substantial here than a tent with sod piled around its sides.

Artifact recovery at H⁴ was light. The recency of its occupation is attested by such items as 30-30 shell cases, Prince Albert tobacco cans, and sled parts of hickory. There were some articles of aboriginal manufacture found--some worked bone and chipped stone. Whether all of these were in actual use contemporaneously with the house or were simply picked up elsewhere and brought home is conjectural.

House 1: A test pit was dug in the floor of this house. Surface indications were of a rather large, sharply-defined house depression with a very long entryway. There were indications that fairly recently a tent had been set up in the depression. The objective in testing this recent-appearing house was to obtain a sample of the artifact material. Nothing, however, was found. There was some indication of burning at what should have been the floor level, but the wood fragments did not seem to be of a size to have formerly been floor timbers. Because of its unproductiveness and the press of work at H², which was being excavated at the same time, the test was not extended.

House 2: House 2 because of its structural complexities and high artifact content is treated in a separate section below.

With respect to the anomalous house depressions characteristic of CT3, CT4, and perhaps H4 of CT2, Nelson (1899:262) saw in 1881, "near Cape Thompson," a small encampment of Point Hope people occupying conical seal skin tents. He does not specify the location and it would be folly to suggest that any of these depressions dated from that encampment. However, other similar encampments, either before or after 1881, could have produced some of these. The possibility is thus clearly established that these could have been the sites of temporary, tent, dwellings.

THE ARTIFACTS

Listed below are the artifacts found at all units of excavation except House 2, CT2, which is considered separately.

Site CT1:

Excavation Unit 1:

- 1 Fox trap and chain.
- 150 Small pieces of light metal. A container of recent manufacture.
- 1 Fragmentary snuff can.
- 1 Piece of thin iron strap.
- 1 Piece of iron stove top.
- 1 Shell case. 44 Winchester center fire. End cut off and oval hole cut in side.
- 14 Nails of various sizes. Modern design.
- 3 Pieces modern clear glass jar. Bottom marked " ... Preserve Co."
- 17 Pieces stoneware demijohn. Raised lettering high on shoulder.
- 1 Flat bone fragment. Unidentifiable.
- 3 Pieces bone sled shoes. Drilled for attachment to runner.

The paucity of artifact material here may indicate a seasonal occupation which probably did not extend over many years. Occupation of this unit was probably no earlier than 1900-1910. It may have been as much as twenty years later. In some localities bone sled shoes are still in use.

Excavation Units 2 and 3:

On the surface near X3 were found pieces of three small pegs commonly used for stretching seal skins. At the bottom of X2 a small wooden artifact was found. Its appearance was more that of a piece remaining from the manufacture of something else than of an implement (or part thereof) itself. Aside from the structures themselves, these were the only indubitable artifacts associated with these two units.

Site CT2:

House 4:

- 1 Steel axhead, single bit.
- 1 Flat spring for fox trap.
- 5 Nails of modern type.
- 2 Prince Albert tobacco cans.
- 1 Small bronze thimble with end section removed.
- 2 30-30 rifle shell cases. One cut about one-third way from base.
- 1 Wire handle.
- 1 Pair scissors. Broken.
- Several scraps rusted tin container.
- 1 Brass generator for gas pressure appliance.
- 4 Pieces unidentifiable metal.
- 3 Fragments 3-in-1 oil bottle.
- 1 Piece patent medicine bottle.
- 1 Piece of two pointed fish-jigging hook. Probably originally set in ivory.
- 1 Cylindrical wooden handle. 16 cm. long. Drilled at both ends. Possibly from a tent support line.
- 1 Flat wooden handle, same size. Drilled. Perhaps same use.
- 5 Wooden skin stretching pegs. Round in section. Average 28 cm.
- 1 Wooden peg. Pointed. Rectangular in section.
- 11 Pieces sled parts. Including one complete stanchion, a length of runner and one bow-shaped piece which ties together the runners and supports the bed. The latter piece is spruce; the former, and many fragments are probably hickory.*

*Identified by Leslie A. Viereck of the University of Alaska as eastern deciduous hardwood--probably hickory or oak. The former is commonly used today.

1 Hickory implement handle. 22.5 cm. long. Drilled at proximal end.

Fragments of lead pencil.

Several fragments of worked wood. Unidentifiable.

1 Wooden carving of whale. Not detailed. Dorsal and flukes shown on same plane. 10 cm. long.

1 Large bone wedge, 16.5 cm. long; 6.5 cm. wide. (Plate 2:5)

1 Bone implement. Plano-convex section. Pointed both ends. Perhaps snow beater. 22.6 cm. long.

1 Bone pin-like object. Curved. Probably a probe for loosening blubber of newly-killed seal so that air may be blown in and the carcass floated. 19.6 cm. long.

1 Ivory drum handle. Small. Drilled transversely near attaching end.

1 Bone dog trace buckle. Shaped like figure 8. 6 cm. long. (Plate 2:3)

1 Bone awl or bodkin. Point, 6.5 cm.; handle 9.6 cm. (Plate 2:4)

1 Fragment subconical ivory tube. Drilled down length. Perhaps pipe stem. 4.4 cm. long.

1 Piece subtriangular ivory point. Flat tang. Point cut off.

1 Bone object of round rib. Curved. Points both ends. Resembles net gauge. 16.5 cm.

25 Fragments cut bone and antler. Unidentifiable.

2 Small fragments Plain pottery.

1 Chipped stone blade. Rounded base. Probably a knife. (Plate 2:2)

1 Fragment of chipped stone point or blade. Material as blade above. Point missing. Former length ca. 8.5 cm.

1 Arrowpoint. Chert. Class 1. (Plate 2:1)

2 Very small beads. Dark blue glass.

HOUSE 2, SITE CT2

House 2 should perhaps appear in quotation marks since actually there were here the remains of four dwellings superimposed. They represent a time span that can only be estimated but is probably not over 200 years. From earliest to latest, well into this century, there is no indication of any important break, though this is not to be interpreted as meaning occupation of any one house was continuous through the span of its existence. More than likely there was some seasonal use involved, plus breaks of perhaps several years between occupations. There is no

direct evidence for either of these assumptions, but both seem rather likely in view of the nature of the locality, the indications of sparse settlement elsewhere in the valley, and the fact that such has been common practice in the area as long as it has been known.

House 2 covers an important and often-neglected period archaeologically, that of immediate pre-contact and contact with Western European culture. As may be judged here there is virtually no evidence for any sort of internal cultural change. All materials of Eskimo manufacture, throughout all levels, are basically the same. All would be classified, quite properly, as "recent" for this area. What is to be observed, however, is the introduction of exotic articles of European and American origin, supplanting traditional forms but apparently being well integrated into this small piece of Alaskan Eskimo culture. It is for this reason, plus the richness of remains, that the artifacts from House 2 are arranged in functional categories and the whole unit given separate consideration. As there is relatively little described of this period in the region between Kotzebue and Point Barrow, it is hoped that the material presented here will be of aid to other students of late Eskimo prehistory.

Structural Remains:

In the initial excavation of House 2 a system of arbitrary levels was maintained. Analysis both of what appear to be structural alterations of the house, plus a fairly good separation of types of artifacts, has led to the conviction that a distinction between late and earlier phases of the upper floor was functionally meaningful. They are therefore described separately. No such indications were obtained in subsequent levels; hence below this, each floor is considered and described as a unit. Dimensions and details are shown in Figures 2 through 5. Since it was not possible to determine whether each of the four floors was actually a completely new house or whether they represented simply rebuildings of existing houses, the neutral term "floor" is used. Floors are numbered from top to bottom. The artifacts associated therewith are described with each floor.

In order to avoid unnecessary repetition of description, several shortcuts are employed in the sections dealing with the artifacts. Virtually all chipped stone arrowpoints are of the type termed Class 1 by Ford in his work on Barrow (Ford, 1959:135). The form is common to late phases at Point Hope as well (Larsen and Rainey, 1948:176, 179). It is

to the latter that the Ogotoruk points bear closest resemblance. The size of the point varies somewhat but the form is constant: The sides are parallel curving off to a point. Below abrupt shoulders is a tang, also parallel-sided and rounded at its base. At the shoulders there may occur a slight flaring out; more generally the sides continue straight to the shoulders. These points are thick, frequently lozenge-shape in cross section. The flaking, sometimes horizontal parallel, is neatly executed. Throughout the lists that follow these are termed simply Class 1.

Bone and antler arrowpoints likewise show a high degree of typological conformity. Here Ford (1959:126) again is followed using his category "late single barb with spurred tang." Almost all bone and antler arrowpoints fall into this class. The only liberty taken here is that of abbreviation. These points are here designated LSB, Late Single Barb. As with those above, size is variable. Sides are parallel, tapering to a point. The single lateral barb is a continuation of one edge. An engraved line may appear running pointward from the junction of the barb with the body of the point. Shoulders are fairly sharp. The tang is conical and usually has two small nodes--the spurs--to either side, probably to aid in keeping the point in its socket. Frequently ownership marks are found just above the shoulder on a plane 90 degrees from that of the barb.

In the case of pottery, like much of late Eskimo wares, most of that recovered from House 2 is rather crude. The walls are thick, paste and surfaces usually black, the tempering of coarse sand and small gravels. Feather impressions may frequently be seen in the paste, added as an aplastic. The vessels are poorly fired. Surfaces when present are usually grease-encrusted. Very often the surface is found to have deteriorated or exfoliated. The great majority of pottery found in the excavations combined these characteristics with plain surfaces. Accordingly, all such pottery in the descriptions that follow is termed Plain and no further discussion is accorded it. This is a deliberate, arbitrary act and in no wise is it meant to convey the notion of a type; it is simply a shorthand device.

Late Floor 1: This was essentially the same house as Floor 1, a small rectangular living room confronted by a long above-ground entrance passage. This was the aspect of the house pit prior to excavation. The

dimensions, basic construction, etc., were of course the same as the next unit to be described. The dating here might be from about 1900-1910 until some time in the 1920's.

Artifacts from Late Floor 1:

Hunting Equipment

Harpoon gear

- 5 brass shot shell cases. 8 gauge. From harpoon gun. (Plate 2:7)
- 1 heavy steel hammer from harpoon gun. Probably brass shoulder model. (Plate 2:9)
- 1 hand reloading tool. An older type. ca. 1900. Probably used in reloading 8 gauge shot shells.
- 1 fuse cutter. Probably for cutting fuse for harpoon gun bomb. With last item probably part of a set.
- 1 whaling harpoon blade fragment. Rubbed slate. Median ridge.
- 1 harpoon blade fragment. Rubbed slate. Fluted. Characteristic of late sites at Point Barrow (Ford, 1959:97).
- 1 harpoon ice pick fragment. Antler. Wedge shaped to fit into end of harpoon shaft. Two small holes drilled part way into the side possibly housed bone pins to further secure the hafting. Recent at Point Hope, (Larsen and Rainey, 1948:PL. 93, Fig. 11); resembles recent Type E of Barrow (Ford, 1959:102-104).

Lance points

- 1 dart foreshaft and receiver. Antler. Small.

Specialized sealing gear

Seal poke inflation plugs

- 1 specimen. Ivory. Wooden stopper intact. (Plate 2:10)

Drag handles

--none

Seal scratchers

--none

Retrieving hooks

- 1 specimen. 2 large steel hooks set on opposite sides of an ivory plug.

Net weight

- 1 net sinker of ivory. "D" shape. 2 flanges set out on straight face to receive line. 9.7 cm. long. In view of the evident lack of importance of fishing this weight was probably used with seal net. (Plate 3:10)

Archery gear

Bows

--none

Arrows

--none

Wristguards

--none

Arrowshaft wrenches

--none

Arrow points

Chipped stone

9 specimens. Chert. Several broken. Class 1.
(Plate 2:14, 15; Plate 3:2,6)

Antler and bone

4 specimens. One cylindrical of antler. Point broken.
Ownership mark. One small probable LSB. Tang
detail worn away. Ownership mark at base on
plane with barb. One of bone--resembles LSB
except slotted for point. One ivory blank.

Hunting knives

1 specimen. Fragmentary. Rubbed slate. (Plate 2:13)

Gorges

--none

Miscellaneous

1 large wooden pin. Notch at top creates head; end spatulate.
Closely resembles piece from Miyowagh (St. Lawrence Isl.)
Identified as possibly part of a snare (Collins, 1937:
Pl. 57, Fig. 7). Dr. O. W. Geist suggests it may be a
boot stretcher (personal communication).

A number of non-aboriginal items found fall into the
hunting category: 6 rifle shell cases, calibers 30-06,
2 30-30, 38-55, 22 Hornet and 50 caliber Sharps rimfire.
38-55 was a popular caliber during the first decade or
so of this century. The 50 caliber Sharps is earlier.
The others are still in use.

1 trap spring.

Fishing Equipment

Fish hooks

1 ivory fish hook shank.

Netting needles

1 of antler. Curved. 21 cm. long. Possibly marlinespike.

Miscellaneous

--none

Transportation

Sleds

11 sled shoe fragments. One of antler. 8 whale bone, 2 of which are cut to fit in line by means of a "V" in one and a corresponding projection on another. One of hickory and one apparent sled shoe of steel. Latter has holes placed as with sled shoes. (Plate 3:1)

1 sled stanchion of hickory

Dog harness

1 dog chain catch with swivel, of steel. Modern.

Boats

--none

Kayaks

--none

Umiaks

--none

Snowshoes

--none

Ice creepers

1 ice creeper of bone. Individual raised teeth. 5.4 cm. long. (Plate 3:11).

Snowbeaters

1 fragmentary snowbeater of antler

Miscellaneous

1 match container of 2 brass shot shell cases--12 gauge inserted into 10 gauge. Matches inside.

Men's Tools

Ivory bone and antler working tools

Composite knives and engraving tools.

1 antler handle. Rectangular cross section slightly tapered to one end. Slotted at both ends for very small blades. 8.3 cm. long; slots ca. 1 mm. wide.

1 flake graver. Chert.

1 bone handle. Badly worn. Subconical with open end. Possibly a graver or an awl.

Crooked knives

1 handle. Antler. Slightly tapered at butt end. 13.1 cm. long.

Saws

--none

Drills

1 fragment of apparent chipped stone drill.

1 ferrule of long bone. 1.5 cm. high. A small piece projects as a point in the shaft axis. Matches antler ferrule on "flint-bladed reamer" collected at Barrow by Murdoch (1892:189, Fig. 160).

1 cut end of bird bone. 2.5 cm. long. Cut just below articular end. Possibly a drill bearing.

Whet stones

1 jade whet stone. Fragmentary. (Plate 2:12).

Woodworking tools

Adzes

2 bone adze heads. 1 large (9.8 cm.); 1 small (5.3 cm.). socketed, drilled transversely and grooved for hafting to handle.

Wedges

--none

Large crooked knives

--none

Miscellaneous

1 wood chisel. Steel. Made from a piece of strap.

Flint flakers

--none

Firemaking gear

See Miscellaneous Transportation.

Modern nails and pieces of scrap steel should probably also go in this category.

Marlinespikes and sinew twisters

Household Equipment and Women's Tools

Skin working and clothing manufacture

Ulus

3 blade fragments. Rubbed slate. (Plate 2:11).

2 ulu handles of ivory. One has 5 drill holes across the side (Plate 3:5). The larger has one. Lengths: 6.7 cm. and over 8 cm. (end broken).

Skin scrapers

Side scrapers

1 small chipped stone scraper. Chert. Ovate. 5 cm. long.

End scrapers and handles

--none

Wooden skin stretching pegs

4 fragments wooden pegs used for staking out skins. Average length 22.9 cm.

Awls

2 antler awls. Rectangular section. One has a broadly tapered point at one end, a long cylindrical one at the other.

1 small wooden awl with metal point. Total length 5.5 cm.

Needlecases and thimble holders.

1 ivory needlecase. Single incised line at both ends. (Plate 2:8).

1 thread spool of modern type.

1 sewing machine sprocket. Fragmentary.

Grass combs

--none

Miscellaneous

-none

Cooking and eating equipment

Cooking vessels

7 sherds Plain pottery.

2 fragments of a heavy metal container.

1 metal handle. Resembles that of wash tub. (These last items are questionable here.)

Ladles and spoons

1 bone spoon. Bowl parallel-sided, tapered handle with single drill hole. Over 9 cm. (Plate 2:6).

Dishes

2 pieces of small china bowl. Plain.

1 glass jar bottom. Clear.

1 fragment china cup or bowl. Plain.

Meat forks

--none identifiable as such, but probably present among various wood dowel fragments.

Lamps

1 metal object with spout. Perhaps part of kerosene lamp.

Snow shovels

--most of the blade of a steel shovel was found. This may have functioned as a snow shovel about the house.

Root picks

1 small root pick fragment.

A number of pieces of bottles, both medicine and otherwise, an older appearing Lea & Perrin's bottle, and several bottle corks.

Ornaments, Clothing and Toys

Hair combs

1 bone hair comb fragment. Drill hole in handle.

Clothing remains

--in the uppermost parts of this deposit there were bits of cloth, a piece of shoe pac, etc.

1 mother-of-pearl button. Small.

Labrets

--none

Pendants and beads

1 glass bead. Red, translucent.

Toys

1 toy smoking pipe. Roughly carved of bark.

Miscellaneous

2 plated pocket watch backs.

1 coin purse. Small. Leather. Cross catches at top.

1 fragment of spectacle frames. Imitation tortoise shell.

Miscellaneous

Floor 1: This earlier phase of the foregoing consisted of a living room of well-laid puncheons and a long above-ground entryway. A small side room off the entry to the west existed early in this period but was abandoned and sealed off. This feature appears to have been continued from Floor 2. Sleeping benches were evidently set to the sides of the living room. These were not clearly marked at all and possibly should be included under Late Floor 1. On one of these were the remains of a caribou or reindeer skin. Forming a margin about the floor were horizontally laid logs. Four corner posts provided support for the roof. Beyond this point direct evidence was lacking, but it appears most probable that construction was like that of House 3 which is still standing. There the four corner posts supported horizontal members. Between these and the corresponding set below, small slabs were set vertically forming

thus the walls. The remains of a few such slabs were found with Floor 1. House 3 had lateral gables formed of driftwood planks which were braced on the interior with vertical pieces. Across them was a ridgepole. From the upper horizontal wall supports to the ridgepole, smaller slabs, closely set, formed the roof. The entryway of House 3 was short and on the same level as the living room. To one side of the entry was a small room. Sod covered the whole house, resulting in the often noted visual impression of a tumulus. In view of the close proximity physically and temporally of H3 and H2, it seems safe to conclude that the basic architecture was the same in each.

There is a strong similarity between the floor of this house and Ford's House B at Utkiavik (Ford, 1959: Fig. 25). Further resemblance is misleading, however, in that where the latter had an opening in the floor to its tunnel entry, what appears to be a corresponding feature here (indicated as a charred area in Fig. 1) could not possibly serve as such and probably is merely the result of accidental burning.

This floor probably dates from about the 1880's. See Figure 2.

Artifacts from Floor 1:

Hunting Equipment

Harpoon gear

- 1 harpoon head. Bone. Small. Plain. Closed socket. Round line hole. Resembles the recent type Nuwuk Closed Socket of Barrow except that rivet holes are lacking in the prongs. (Ford, 1959: 93; Fig. 33a-e). (Plate 4:5).
- 1 point fragment of slate harpoon head blade. Wide edge facets and central thinning.
- 1 harpoon blade. Small. Slate. Fluted. Incomplete
- 1 bone pointed object. Incomplete. Possibly foreshaft.
- 1 harpoon shaft section with ivory receiver. Shaft drilled 6 cm. below lower edge of receiver for line attachment. Shaft diameter 3 cm. (Plate 3:7).
- 1 harpoon foreshaft. Ivory. Short, 8.9 cm. Tapered. Round in section. Shouldered at proximal end. Single line hole. ("Used in historic times in Bering Strait region." [Ford, 1952: 97.] Ford describes this as "common" for Utkiavik and Nuwuk.)
- 1 bone ice pick. Probably for harpoon. 22.7 cm. long. Drill hole at proximal end. Grooved (by removal of cancellous tissue) and roughened for hafting. Plano-convex section.

PUNCHEONS

CHARRED AREA

WHALEBONE

STUMP

AXE CUT

WHALEBONE

STUMP

FLOOR NO.
ONE

SITE CT2

HOUSE 2

1 end piece of ice pick for harpoon. Plano-convex section.
Drill hole at end.

1 harpoon ice pick fragment. Bone. Subtriangular section.

Lance points

--none

Specialized sealing gear

--none

Archery gear

Bows

--none

Arrows

3 arrowshaft fragments. Two are proximal ends, one of which has remains of two feathers still bound forward. A lighter area just forward of the nock shows where the other end was bound. (Plate 6:10).

1 piece possible wooden arrowshaft. 9 mm. diameter.

Wristguards

1 specimen. Bone. Oval. Plain. Holes at either side for attachment. (Plate 3:3).

Arrowshaft wrenches

1 specimen. Antler. Broken. Flat, slightly flaring handle. (Plate 5:13).

Arrowpoints

Chipped stone

13 arrowpoints. Class 1. Materials are jasper, grey and black chert and translucent chalcedony.
(Plate 4:3)(Plate 3:8)

1 ivory arrowpoint blank.

3 bone specimens. Two fragmentary. One LSB. One small (7.5 cm.) single barb and smooth tang.

Hunting knives

3 chipped stone knives. 2 fragmentary, of chert, unstemmed with rounded bases. Ovate. All between 7 and 8 cm. (Plate 3:4,9).

2 slate knives. One chipped, probably a blank. Other rubbed, tanged with single shoulder, laurel leaf form with both edges ground. Latter 11.2 cm. long; 2.9 cm. widest point.

2 bone knife handles fitted for end blades. One specimen has three lashing holes, two along blade slot. Latter is drilled at butt for thong and is 14.8 cm. long; 2.4 cm. wide. Second specimen is rectangular, slightly tapered to butt. Along one side is a series of parallel diagonal grooves to provide grip. Rectangular thong hole at butt. 11.8 cm. long; 2.8 cm. wide.

1 wooden knife handle fragment. One half of two piece handle similar to that shown in Plate 6:3. Over 14 cm. long.

1 small knife handle. Hollow in end for blade. Evidence of lashing. Other end evidently drilled several times, possibly for attachment of ornaments. Length, 9.2 cm.; width, 2.2 cm.

1 fragment slate blade. Almost parallel-sided.

Gorges

--none

Miscellaneous

1 hunter's lamp. Stone. A small pecked depression in a broken beach cobble.

8 rifle shell cases: 30-30 Western, 38-55 W.R.A. Co., 45-70 possibly or 11 mm., 4 50-cal. rimfire. Copper. Possibly Sharps, 44 cal. rifle, possibly Henry.

Fishing Equipment

Fish hooks

1 fish hook shank. Ivory. 7.2 cm. long.

1 fish hook barb. Antler. End pointed, flattened, and slightly barbed bilaterally. 8.1 cm. long; .4 cm. wide.

1 ivory fish line sinker. Drilled for attachment of several leaders with hooks on each. Conical 1.9 cm. high.

Netting needles

1 needle-like object of ivory. Flat oval section. Gentle taper two-thirds way back from point. Here it widens and has a hole drilled through. From hole to butt round in section, constricted finally flaring slightly at end. 9.3 cm. long; .8 cm. wide at drill hole. Probably belongs here.

Miscellaneous

--none

Transportation

Sleds

6 sled shoe sections. 5 of bone; 1 of antler.

1 piece drilled ivory. Resembles sled shoe, but rather thin.

1 dog harness swivel. Bone. Two piece. (Plate 4:2).

Boats

Kayaks

1 strut (?). Flat oval section. Drilled either end with bits of baleen showing. Ends tenoned. 23.9 cm.

2 frame pieces. One a probable rib section; the other, having scarf faces at ninety degrees to each other, is probably an end piece.

Umiaks

--none

Snowshoes

1 cross-bar. Tenoned ends. Curved forward. Drill holes across.
29.8 cm. long.

Ice creepers

--none

Snowbeaters

--none

Miscellaneous

--none

Men's Tools

Ivory, bone, and antler working tools

Composite knives and engraving tools

1 composite knife handle fragment (one half). Fossil ivory.
End blade. Lashing groove scored to secure binding.
Collar at blade end. Viewed from side tapers sharply
from blade end (1 cm.) to butt (1 mm.). 6 cm. long.

1 antler handle. Small. Slotted at both ends. 9.5 cm.
long. Possibly a dagger.

1 very small chipped stone graver. Retouched at point.
Lanceolate. 2.2 cm. long; 9 mm. wide.

Crooked knives

4 handles. Specimen 1 of a rib, incurved at blade end.
Blade set in narrow curved slot in side. Three drill
holes: two near blade end for lashing; one at opposite
end for carrying thong. 17.5 cm. (The appearance of
this piece is suspiciously old; it may have been picked
up elsewhere.) Specimen 2 is similar, also made from
rib. A small slot almost at the end received the side
blade. 15.3 cm. long. Specimen 3 is fragmentary.
The blade slot is curved, 3.9 cm. long. Opposite it
are drill holes for binding. Handle shortened by
cutting. Specimen 4 is of antler, slightly curved
and with a definite taper back to butt. Two deeply
cut lines run from blade end to butt--perhaps to
facilitate reception of blade. Roughened and grooved
at blade end for lashing. 8.8 cm. long.

Saws

1 specimen. A piece of metal saw blade (possibly a meat
saw) set in an ivory handle. Lashed with braided
sinew through holes in saw blade and grooves on handle.
Probably used for bone and ivory. Blade length 10.5 cm.;
Overall 15 cm. (Plate 5:10).

Drills

--none

Whetstones

--none

Woodworking tools

Adzes

2 adze heads. Bone. One specimen is deeply socketed for blade and has three transverse drill holes and grooves below these for lashing onto handle. Resembles specimen shown in Nelson (1899: Plate XXXLX, Fig. 1). The second specimen appears much older. Blade slot is small and very shallow (1.2 cm. deep). Lacking drill holes, lashing to handle was accomplished by means of two broad three-quarter grooves. Except that they have only one groove, the two specimens from Ambler Island (Giddings, 1952: Plate III, Figs. 1 and 3) appear similar. Lengths are 10.5 cm. and 11.2 cm. respectively.

Wedges

3 bone specimens, 2 of whale rib, one 22.5 cm. long, 5.4 cm. wide; the other, 22.8 cm. long. The third is 9 cm. long. Formerly proximal end ice pick (?).

Large crooked knives

--none

Miscellaneous

--none

Flint flakers

1 specimen. Bone. Point in place. Resembles specimen from Utkiavik illustrated by Ford (1959:119, Fig. 53). (Plate 4:1)

2 heavy, irregularly shaped cores of chert.

Firemaking gear

--none

Marlinespikes and sinew twisters

2 marline spikes. Fragmentary. One of a small rib, pointed one end. 21 cm. long. The other of antler. Tip cut off. 23.8 cm. long.

Household Equipment and Women's Tools

Skin working and clothing manufacture

Ulus

2 slate blades. One large; one small: 6.8 cm. long. 3 cm. wide.

2 blade fragments. Rubbed slate.

Skin scrapers

Side scrapers

2 specimens. One small, bifacially chipped, 4.2 cm. long; the second possibly a flake knife. Chert. 7.3 cm. long; 3.5 cm. wide.

End scrapers and handles

3 end scrapers, 2 of chert, one of weathered chert or flint. One bifacial and stemmed, probably from a Class I arrowpoint. Other two are of thumbnail variety.

Wooden skin stretching pegs

2 skin pegs. 22 cm. and 24 cm. long.

Awls

3 bone awls. Specimen 1, of bone, shows straight taper from butt end to point. 13.9 cm. Specimen 2 is of antler. Point and most of handle broken off. Last is of ivory, crudely fashioned from rectangular piece. Length 6.3 cm.

Needlecases and thimble holders

--none

Grass combs

--none

Miscellaneous

1 boot sole crimper (?). Bone. Parallel sides taper gently to point. Plano-convex in section. 15.1 cm. x 2.2 cm.

Cooking and eating equipment

Cooking vessels

1 sherd pottery cooking vessel. Dentate stamp. Resembles the type "Deering Pyramid Paddles" (Oswalt, 1955). (Plate 4:4).

78 sherds Plain pottery.

Ladles and spoons

1 spoon. Horn. Small. Bowl broken--oval shaped. Handle tapered then shouldered rather abruptly to form inverted "V." Handle triangular in section, flat side up. Two small holes drilled near butt end of handle. Probable overall length over 11 cm.; length of handle 3.5 cm.; handle 12 cm.; width of bowl ca. 12 cm.

Dishes

4 curved fragments of root section of spruce. Possibly a bowl. Interiors blackened as from grease. Drill hole in one piece.

Meat forks

- 2 small pointed wooden objects, possibly belong here.
- 1 possible specimen with point missing. 29 cm. long.

Lamps

- 1 iron stove lid.
- 1 large unaltered rock with a natural depression. Probably utilized.

Snow shovels

- 1 fragment large scapula. Possibly snowshovel.

Root picks

- 1 wooden handle. Large. Drilled for heavy lashing. Incomplete. Probably for root pick or heavy maul.
- 1 pick end of ivory. Point only. Plano-convex section.
- 1 large root pick. Whale rib? 45 cm. long. (Plate 3:12).
- 1 piece of a small glass bottle. Old appearance.
- 1 barrel stave. Two and a half feet long.

Ornaments, clothing, and toys

Hair combs

- 2 hair combs. Specimen 1 is of antler. Lateral constriction toward end terminates in a ring or a "u"-shaped scallop. If the latter, upper part of the ring is missing. In either event, it resembles recent combs from Barrow (cf. Murdoch, 1892:149-150, Fig. 98 and Ford, 1952:208, Fig. 100b). 8.7 cm. long; 2.9 cm. wide. 14 teeth. Specimen 2 is of baleen and fragmentary. Copy of European-style combs.

Clothing remains

- 1 button, small, White glass with printed small pattern design on front.
- 1 button. Small. Mother-of-pearl.

Labrets

- none

Pendants and beads

- none

Toys

- 1 toy umiak of cottonwood bark. 10.2 cm. long.
- 1 clay marble. Blue glaze. Exotic.
- 1 toy bow fragment.

Miscellaneous

- 1 bone handle for box or bag. Plano-convex. Rounded ends with two transverse grooves for binding. 10.6 cm. long, 2.7 cm. wide.

Miscellaneous

- 1 metal tag. Circular. From plug tobacco. "Master Workman & The American Tobacco Company." Believed intrusive from sod immediately outside house.
- 1 antler strip. Fragmentary. Split so that section is plano-convex. Two flat oval slots at one end; pairs of small drill holes beyond. Possibly a boat part. 33 cm. long. This object appears to be of the same sort as those discussed by Ford under heading, "Antler Strips, Possibly Kayak Ribs" (1959:158-160). Ford is unable to successfully identify them, although they occurred at both recent sites, Nuwuk and Utkiavik. As mentioned by Ford, Mathiassen encountered the same difficulty at Naujan (Mathiassen, 1927:78, Plate 34, Fig. 1).
- 1 bone object. Flat. Resembles net gauge handle section. The piece that would be diagnostic, the gauge, is missing. Oval hole at end spatulate handle. 10.9 cm.
- 1 piece green bottle glass.
- 1 fragment strap iron.
- 1 fragment clear glass.
- Numerous pieces of worked wood--dowel-forms and the like. Arrows shafts, meat forks are undoubtedly represented.
- Several strands of knotted baleen.

Floor 2: Floor 2 almost exactly underlays the one above, separated by about half a foot of sand and organic fill. Though smaller, the arrangement of the floor leads to the conclusion that its construction was like that of Floor 1. The side room off the entryway evidently belongs to this building and the entry was at floor level. The very close correspondence of the two floors, plus the fact that the entry side room evidently continued in use with the early phase of Floor 1, constitute good evidence of a rebuilding from Floor 2 to Floor 1. Floor 2 also had another side room to the west which made an extension of the living room, bringing the total of components to four.

No non-aboriginal materials were found associated with this floor. While, based upon the typologies of the materials that were found, this unit would ordinarily then "float" in recent time, the fact that Floor 1 almost certainly was a rebuilding of this older house and that very likely this would mean Floor 2 was exposed at that time--all suggest that it does not long predate Floor 1. That no European materials were found may mean simply that none were owned--or lost--by the inhabitants

of this house. It seems unlikely that Floor 2 is actually precontact, at least in the entirety of its span of existence. A guess dating might place this unit between 1830 and 1880. See Figure 3.

Artifacts from Floor 2:

Hunting Equipment

Harpoon gear

- 1 harpoon dart head. Ivory. Slightly curved. Two lateral barbs and barbed point (broken) symmetrically arranged. Triangular line hole with engraved line extending short distance toward the point. The base is a tapered cylinder with flattened end; cross section at line hole rectangular with a distinct beveling from line hole outward on the incurved face. Resembles specimen of antler from Ahteut (1250 A.D.) on the middle Kobuk River (Giddings, 1952:56; Plate XVI, Fig. 4). Does not appear to fit with rest of H2 material. 17.2 cm. long. (Plate 6:1).
- 1 harpoon head. Antler. Small. Blade slit parallel to round line hole. Closed socket. Single barb. To either side of line hole on both faces two engraved lines start from base of head and converge midway between line hole and blade sit, continue from there to just above blade slit as single line. 6.7 cm. long. Like that described for Floor 1 with exception of engraved lines. (Plate 6:9).

Lance points

--none

Specialized sealing gear

- 1 Wooden seal drag handle. Cylindrical, 2.4 cm. diam. Slotted full length and grooved across midsection to receive cord. 16.6 cm. long.

Archery gear

Bows

--none

Arrows

- 5 arrowshaft fragments. Four proximal ends with nocking; one distal scooped out and slit at sides to receive point. (Plate 6:12)
- 1 shaft end, cleft with fragment of chert point in place. Diameter of the shaft is such to suggest a drill rather than an arrow, however, the piece shows evidence of having been struck with great force, the flint remaining even being broken and the wooden shaft bent back and split. Since the shaft was deliberately cut, this may have been an arrow used on game--the protruding portion of the shaft cut off.

FLOOR NO.
TWO

(R=ROCK)

SITE CT2

HOUSE 2

--Six other pieces may also be so interpreted on basis of similar diameter and cross section. (Plate 4:7, 8).

Wristguards

--none

Arrowshaft wrenches

--none

Arrowpoints

Chipped stone

14 arrowpoints, of which three complete. All conform to Class 1 category. Materials are green-gray chert, black chert, translucent chalcedony, and brown jasper.

1 arrowpoint (?) Gray chert. Point missing, sloping shoulders, long tapering tang. Conforms to Ford's Class 2 category and resembles the first specimen of that class shown in his Fig. 6t (Ford, 1959:135). Actually appears more drill-like. Probable total length over 6 cm.; width 1.6 cm.; length of tang 2.4 cm.

1 arrowpoint. Chert. Point broken. As Class 1 except stem tapered to point. May have been used as awl or drill.

Antler and bone

2 arrowpoints. Antler. LSB. Points broken off. One may have been barbless.

1 arrowhead, Antler. Barbed one side only. Originally double barbs one below other. Lower broken off present specimen. Head terminates in parallel-sided shouldered area, split laterally and gouged out to receive chipped stone point. Tang spurred. Matches in style and size that shown by Ford (1959) in Fig. 58s. 12.6 cm. (See also Murdoch, 1892:202-203, Fig. 186a.) Used for hunting big game; listed by Murdoch as among "bear arrows." According to Ford (1959:126) in use in the "latter part of the nineteenth century." (Plate 6:6).

2 arrowpoint blanks. Antler. 21.1 cm. and 11 cm.

1 blunt arrowpoint. Ivory. End cut off. Bifurcated tang. Matches that from Utkiavik shown by Ford (1952) in Fig. 57u. 4.2 cm. present length.

1 arrowpoint. Antler. Broken and repointed just above tang. Spurred tang. 4.8 cm. long.

Hunting knives

1 Man's knife. Complete: flint blade in two piece wooden handle. Bound with braided sinew. Blade assymetrically triangular. 5.9 cm. long (not including stem); 4.3 cm. wide at base. Handle 17 cm. long. Blade shape suggests use in skinning. (Plate 6:3).

1 blank. Slate. Roughly shaped by chipping. Laurel leaf shape. 11.4 cm.

Gorges

1 specimen. Bone. 12.2 cm. long; .7 cm. wide. Grooved across middle. Probably for catching gulls. (Plate 6:2).

Miscellaneous

1 narrow spatulate wooden rod with baleen strip wrapped and tied about one section. 27 cm. long. Baleen strip 1 mm. wide. Possibly a bird snare.

1 forked wooden object consisting of two wooden dowels 12.6 and 13.5 cm. long each pointed at one end and joined by scarf joint and bound with baleen. Diameters approximately .9 cm. Possibly part of snare or trap.

Fishing Equipment

Fish hooks

1 piece pyrites. Appears unaltered. Possibly a fishhook sinker. (So identified by Amos Lane of Point Hope.)

Netting needles

--none

Miscellaneous

--none

Transportation

Sleds

1 sled runner fragment. Forward, curved section. Scarf face to rear with series of wooden pegs for join rest of runner. 5.3 cm. high; 3.7 cm. wide.

1 flat piece of wood. Probably a cross piece for sled basket.

Boats

Kayaks

--none

Umiaks

1 keel section of an umiak. Forward piece--tapered and gently up-curved. Triangular cross section. 64 cm. long.

Snowshoes

1 snowshoe crossbar. Flat oval section. 23 cm. long, 2.5 cm. wide. Five small holes drilled along one edge. Babiche or sinew still in holes

Ice creepers

--none

Snowbeaters

- 1 snowbeater or marlinespike. Antler. Incomplete. 17 cm. long, 1.8 cm. wide. Indications of lashing and drill hole at proximal end.

Miscellaneous

--none

Men's Tools

Ivory, bone, and antler working tools

Composite knives and engraving tools

- 1 bone handle fragment. Plano-convex. Perhaps of composite knife. Two drill holes, lateral scoring indicate its joining with another half. 10.5 cm. long (incomplete); 2.5 cm. wide.

Crooked knives

--none

Saws

--none

Drills

- 1 drill bearing. Caribou astragalus. Articular edges cut down smoothly.

Whetstones

--none

Woodworking tools

Adzes

--none

Wedges

- 1 wedge. Bone. Probably beluga rib. 19.4 cm.

Large crooked knives

- 1 knife handle. Of a large rib. Slotted in curved area to receive side blade. Drill hole near this at end. Much larger than ordinary crooked knife--perhaps used as drawknife. 37.2 cm. long; blade slot almost 10 cm.

Miscellaneous

--none

Flint flakers

--none

Fire making gear

- 1 fire drill spindle. Wooden. Working end charred. Shouldered and tapered at bearing end. Length, 21.8 cm.; diameter 1.8 cm.
- 1 charred stick. Rounded end. Possibly fire drill spindle. 1.6 cm. diameter.

Marlinespikes and sinew twisters

- 1 Marlinespike. Made from rib. Curved. One end round; smaller blunted. 18.4 cm. by 2.5 cm.
- 1 sinew twister. Ivory. Resembles in shape and size the lower piece shown in Nelson's Fig. 30. (Nelson, 1897:111). Rectangular section 9.4 cm. long.

Household Equipment and Women's Tools

Skin working and clothing manufacture

Ulus

- 7 fragments. Rubbed slate. Five grey-green; two brown.

Skin scrapers

Side scrapers

--none

End scrapers

- 1 end scraper handle of wood. Plain. Down curved to fit palm. Two lashing grooves to bind flint blade. After part of handle missing; appears to have been broken off and mended by sewing--four small holes pierced through probably for this purpose. 8 cm. long; 4.5 cm. wide. (Plate 5:2).
- 1 thumbnail scraper. Grey chert. Small and carefully made. Sides slightly concave. A concavity at the base, plus a slight shoulder at one side create two ear-like projections--both of which appear to have been used for scribing. Overall length 4 cm.; width 2 cm.

Wooden skin stretching pegs

--none

Awls

- 2 specimens. One a pointed caribou metapodial. Second of antler--small and of piece. Handle 4.2 cm., point 9 mm.
- 1 small section cut caribou antler. "T" shaped. May have served as handle for awl.

Needlecases and thimble holders

- 1 fragmentary object of fossil ivory. Flat and thin. One edge straight; one curved, terminate in point. Hole 4 cm. back from point connected with edge by an irregular slit. Possibly a thimble guard. Fragment is 7.2 cm. long; 3.4 cm. wide.

Grass combs

--none

Miscellaneous

- 1 rib bone. Cut. Possibly boot sole creaser. 11.3 cm.

Cooking and eating equipment

28 sherds Plain pottery.

8 pieces decorated pottery include almost half of one vessel. Total height of vessel: ca. 28 cm. Diameter at rim: ca. 22.2 cm. Decoration: Dentate stamp. Not clear whether entire pot so decorated. Surface has exfoliated badly. Decoration shows near top of vessel where heavy carbon deposit has protected original surface. Rim slightly outcurved and thinned. The lip is built up on the outer edge giving it something of a wedge-shaped profile. Small lines are depressed diagonally into the top of the lip but appear haphazard and not continuous. Body of the vessel is a slightly elongated globe. The base is rounded. Heavy encrustations of grease and carbon plus exfoliation elsewhere give little reliability to measures of wall thickness. About 1 cm. at the rim; thicker at base. Paste is uniformly black all the way through. Heavy beach sands and feathers employed as tempering. On basis of surface decoration would appear related to the recent "Deering Pyramid Paddled" (Oswalt, 1955).

Ladles and spoons

--none

Dishes

--none

Meat forks

2 meat forks (?). Wood. Gradual taper to point. One 33 cm.; other 24.4 cm. Slight burning near tip of longer specimen.

5 meat fork fragments. Some with charring. (Plate 4:9).

Lamps

2 stone lamps. One a flat rectangular beach cobble pecked out on one surface. Blackened from use; second a large beach rock with a shallow natural depression. Perhaps used as lamp as oil and soot occur on top.

3 large rocks with natural depressions in them--probably utilized in some manner. No trace of oil or burning. Depression in one appears to have been enlarged.

4 pieces stone lamp. Sandstone. Large. Not complete enough to define shape. Probably like the semi-lunar lamps from Barrow area.

Snow shovels

--none

Root picks

--none

Ornaments, Clothing and Toys

Hair combs

- 1 specimen of antler. Handle tapered. Surmounted by ring.
8.7 cm. long; 3 cm. wide. 12 teeth. Of recent type.

Clothing remains

--none

Labrets

- 1 specimen. Ivory. Elliptical. 3.5 cm. long; 2.2 cm. wide;
1.1 cm. high. (Plate 5:6).

Pendants and beads

- 1 ivory object. Small and flat. Shaped like short handled canoe paddle. At "blade end" a diamond-shaped opening with slits extending on long axis. A triangular hole at handle end which is accentuated by an engraved line extending from apex toward blade. Two small lateral projections on shaft. A scratchy line outlines blade. At point a series of tiny scratches. A corresponding set of scratches same area on under side. An engraved line connects apex of triangular hole on this surface with that on blade. Use unknown. Possibly a pendant. (Plate 5:8).

Toys

- 1 toy wooden bow. Ends notched for string. 15.5 cm. long.
- 1 toy snowshoe of bark. Square hole in center. 9 cm. (Plate 4:6).

Miscellaneous

- 1 wooden bodkin-like object. Carved head.
- 1 small ivory fragment. Flat. Appears old. A spurred line engraved on both faces.
- 58 wood fragments. Dowels of various diameters. Some are almost certainly arrowshafts, others meat forks, others skin pegs, pins and the like. Some charred.
- 1 wooden handle. Cylindrical. Distal and scarfed and keyed for hafting. Collar on unaltered extreme distal end to keep lashing in place. Proximal end broadly notched. 2.5 cm. diameter. 23.2 cm. long.
- Several strips baleen. Some knotted. (Plate 4:10).

Floor 3: This, because of its rather wide variance with the foregoing two units, may be taken as a separate house. It consisted apparently of two basic components only--a living room and an entryway. Whereas in the upper units heat and light must have been provided by seal oil lamps (and probably very late, aided by a gas pressure appliance), it appears that here an interior hearth existed to the back of the living room. Evidences of burning and rocks disposed about this area are almost surely to be so interpreted. To either side of the living room were raised platforms which probably served as sleeping benches. They were about one foot above the level of the small living room proper. The entryway was about one foot below the living room floor level.

The closest resemblance to this house seems to be with Ambler Island houses of the 18th century (Giddings, 1952). Placing an age bracket, however, is quite difficult since the resemblance to the latter houses is not too close nor is it known whether the same tradition extended this far north. However, in view of the dates given the overlying units with their implied life expectancy of 30-40 years, Floor 3 might be placed at ca. 1790-1820. Allowance of the ten-year gap between the abandonment of this house and the building of the next is merely to enforce the impression expressed above, that where there seems to be direct continuity between Floors 1 and 2 this does not seem to be the case for Floors 2 and 3.

Figure 4 shows this house as uncovered by excavation.

Artifacts from Floor 3:

Hunting Equipment

Harpoon gear

1 wooden shaft section. Harpoon or ice tester and retrieving hook. End scarfed to accept ice pick. 148 cm. long; 3.5 cm. diameter.

1 harpoon blade. Ground slate. Point missing. 2.6 cm. wide.

Lance Points

--none

Specialized sealing gear

--none

Archery gear

Bows

--none

Arrows

--none

Wristguards

--none

Arrowshaft wrenches

--none

Arrowpoints

Chipped stone

3 arrowpoint fragments. Chert. Class 1. One specimen appears to have been repointed as a drill, then broken.

FLOOR NO.
THREE

(R = ROCK)

SITE CT2

HOUSE 2

1 arrowpoint. Chert. Small. Gently tapered point.
Resembles Ford's second specimen illustrative of
Class 1 (1959:135, Fig. 6t.). 5 cm. long.

1 arrowpoint. Red and green chert. Small. Con-
tinuous taper from shoulders to point. Very long
stem. 4.6 cm. long; 2.3 cm. widest point. Stem
rounded 1.8 cm. long.

Antler and bone

1 arrowpoint. Antler. Single barb. Tang missing.
Probably LSB.

Hunting knives

2 fragments ground slate knives.

1 fragmentary chipped stone knife.

1 ground slate knife. Purplish material. Median ridge leads to
tapered point. Proximal end missing. Central grooves
either face with drill hole in middle. 8.3 cm. long; 4.6
cm. widest point. (Plate 6:8).

Gorges

--none

Miscellaneous

1 fragment spatulate wooden rod. Possibly snare stick. 1.2 cm.
maximum width.

Fishing Equipment

Fish hooks

--none

Netting needles

--none

Miscellaneous

--none

Transportation

Sleds

--none

Boats

Kayaks

--none

Umiaks

--none

Snowshoes

--none

Ice creepers

--none

Snowbeaters

--none

Miscellaneous

--none

Men's Tools

Ivory, bone and antler working tools

Composite knives and engraving tools

--none

Crooked knives

--none

Saws

--none

Drills

--none

Whetstones

--none

Woodworking tools

Adzes

--none

Wedges

--none

Large crooked knives

--none

Miscellaneous

--none

Flint flakers

--none

Firemaking gear

--none

Marlinespikes and sinew twisters

--none

Household Equipment and Women's Tools

Skin working and clothing manufacture

Ulus

1 fragment

Skin scrapers

Side scrapers

1 large flake blade. Chert. Parallel-sided. Plano-convex section. 8.5 cm. long; 2.8 cm. wide.

End scrapers and handles

2 end scrapers. Chert. Thumbnail. Hafting end of one broken. Complete specimen 6.5 cm. long; other probably about 3 cm. (Plate 5:1).

Wooden skin stretching pegs

--none

Awls

--none

Needlecases and thimble holders

1 thimble holder. Ivory. Like that shown by Ford (1959:209, Fig. 100p). Latter recent, from Utkiavik. 11.6 cm. long. May have been engraved as latter specimen but surface is badly eroded. (Plate 5:5).

Grass combs

--none

Miscellaneous

--none

Cooking and eating equipment

Cooking vessels

2 small sherds pottery. Poor condition. Probably Plain.

Ladles and spoons

1 fragment bowl of wooden ladle.

Dishes

--none

Meat forks

3 fragments tapered wooden sticks. Probably meat forks.

Lamps

--none

Snow shovels

--none

Root picks

--none

Ornaments, Clothing, and Toys

Hair combs

1 antler comb. Plain. Slight taper to rounded proximal end.
8.8 cm. long; 2.3 cm. wide. 12 teeth. (Plate 5:4).

Clothing remains

--none

Labrets

--none

Pendants and beads

1 ivory pendant. Small. Cylindrical. Drill hole one end.
2.4 cm. long. .4 cm. diameter. Perhaps needle case pull.

Toys

--none

Miscellaneous

--none

Miscellaneous

--none

Floor 4: This bottommost structure was highly fragmentary, but this seems not to result from poor preservation so much as from a probable robbing of timbers by later house builders. In any event, little actual detail of construction could be found. What remained of the floor resembled the floor above both in the arrangement of the boards and in the placement of the hearth. Had there been any doubt about the hearth in Floor 3 there could be little here since it contained abundant evidence of cooking--feathers, bird bones, several pieces of what probably was caribou stomach, fish tails, seal claws, a fish head, and pieces of baleen--most of which was impregnated with seal oil. The oil lamp fragments described below were also associated with this material. Rather scanty evidence of a curved entryway was found. A small amount of artifact material was discovered under this floor but in type and appearance it could not be separated from that on and above the floor; it is therefore grouped with Floor 4.

Since it is inferred that timbers were taken from this house for the construction of another and since there seems no better candidate for it, it is suggested that they were used in the building of Floor 3 and that hence no great time interval separated these two. If this inference is correct then the dating for the bottom unit of House 2 would be perhaps 1750 to 1780 or so.

That which remained of this floor upon excavation may be seen in Figure 5.

Figure 6 below presents the reconstructed plans of the four houses.

Figure 6. Apparent building stages of House 2. Not to scale.

Artifacts from Floor 4:

Hunting Equipment

Harpoon gear

- 1 harpoon blade. Rubbed slate. In two pieces, incomplete. From tip 2.3 cm. back, point is lozenge shape in section; flattened beyond to take prongs of harpoon head. Reconstructed size: 8 cm. long; 2.8 cm. wide.

Lance points

--none

Specialized sealing gear

--none

Archery gear

Bows

- 1 bowstave fragment. Deeply shouldered with narrow tapered end for string attachment. 3.3 cm. wide; 1.4 cm. deep. (Plate 6:13).

SITE CT2

HOUSE 2

FLOOR NO.
FOUR

(R=ROCK)

Arrows

5 arrowshaft fragments. 3 proximal; 2 distal. Both of latter show ownership marks near end. One is slotted and split to receive blade; other appears slotted to receive wedge-shape tang. Latter illustrated. (Plate 6:11).

15 probable arrowshaft fragments.

Wristguards

--none

Arrowshaft wrenches

--none

Arrowpoints

Chipped stone

9 arrowpoints. Class 1. One broken and repointed. One small specimen shattered back from point giving it burin appearance. (Plate 6:7).

1 arrowpoint. Small. Tip missing. Parallel-sided with broad, rounded stem, narrow shoulders. Heavily patinated. Undoubtedly intrusive. Ca. 3 cm. long; 1.3 cm. wide.

Antler and bone

3 arrowpoint fragments of antler. All probably LSB. Ownership mark on one. On two other specimens single engraved lines continue pointward the separation of barb from shaft.

1 blank. Antler.

1 blunt arrowpoint. Antler. In treatment of wedge-shaped tang resembles Ford's (1959) Fig. 57r; size would place it Fig. 57g. 5.3 cm. long; 1.4 cm. diam. (Plate 6:5).

Hunting knives

--none

Gorges

--none

Miscellaneous

1 bird snare (?). A baleen strip with a noose at one end; small loop at other.

Fishing Equipment

Fish hooks

--none

Netting needles

--none

Miscellaneous

--none

Transportation

Sleds

- 1 sled runner. Fragmentary. 6 cm. by 3.2 cm. dimension.
Mortised at top for stanchion. Hole drilled at bottom of
mortise for lashing. 43.5 cm. long.

Boats

Kayaks

- 1 piece wood, curved, flat oval in section. 2.4 cm. wide.
Three small holes drilled through in center. Possibly
a kayak part.

Umiaks

--none

Snowshoes

--none

Ice creepers

--none

Snowbeaters

--none

Miscellaneous

--none

Men's Tools

Ivory, bone and antler working tools

Composite knives and engraving tools

- 1 man's knife blade. Jade (nephrite). Small, roughly triangular. Ground along one edge. 3.5 cm. long.
- 1 composite knife handle. Ivory. Fragment.
- 1 graver. Chert. On flake. 2.9 cm. long; 1.8 cm. wide.

Crooked knives

- 1 knife handle. Rib of caribou. Crudely fashioned. Cancellous, spongy tissue of one end removed to form receiving slot. 7.5 cm. long.
- 5 knife blade fragments. Rubbed slate. Most complete specimen has double edges. Distal end missing. 5.5 cm. wide. (Plate 6:4).
- 1 large chipped slate knife. Lanceolate. Broken. 14.5 cm. long; 5.3 cm. wide. Possibly a blank.

Saws

- 1 saw-like object of fossil ivory

Drills

--none

Whetstones

--none

Woodworking tools

Adzes

--none

Wedges

6 specimens. 5 of antler, 1 of bone. Vary from 7.1 cm. to 15 cm. in length.

Large crooked knives

--none

Miscellaneous

--none

Flint flakers

1 specimen of horn. Possibly mountain sheep; more likely musk oxen. Butt end forms an angle from shaft. Butt long, tapering with median ridge. (Plate 5:14).

2 flaker points. Very dense bone. Rectangular section.

Firemaking gear

2 pieces pyrites. One unaltered; other faceted from rubbing. Facets ca. 2.6 cm. Perhaps for starting fire as suggested for Ambler Island (Giddings, 1952:65; Plate XI, Fig. 14.). (Plate 5:11).

Marline spikes and sinew twisters

1 sinew twister. Ivory rod, rectangular section, knobs at each end. 10 cm. long. Similar to Nelson's (1899) Fig. 30, lower piece. Holes drilled at each end--do not go all the way through. (Plate 5:12).

Household Equipment and Women's Tools

Skin working and clothing manufacture

Ulus

7 blade fragments. Rubbed slate. Most gray-green slate. One brown and one red slate.

1 blank. Chipped slate.

Skin scrapers

Side scrapers

--none

End scrapers and handles

1 end scraper. End missing. A concave face on right is steeply retouched; opposite, convex edge is

not. Resembles closely that class of end scrapers described for Ipiutak as Type 3, left slant (Larsen and Rainey, 1948:108; Fig. 25c). Probable total length 7 cm.; 2.7 cm. wide.

1 end scraper. Chert. Ovate. 4.4 cm. long.

Wooden skin stretching pegs

--none

Awls

1 specimen caribou ulna.

Needlecases and thimble holders.

--none

Grass combs

1 grass comb. Fragment. Ivory. Material, diameter of point match the point only found with grass insole. Probably same comb. Outer edge of piece is undulating possibly as finger grip. (Plate 5:3) (See below)

Miscellaneous

--none

Cooking and eating equipment

Cooking vessels

32 sherds Plain pottery.

1 sherd corrugated surface pottery. Better fired, thinner walls --.9 cm. Surfaces grey; core black, appears to fit Oswalt's (1955) category St. Lawrence Corrugated. Like sherd from Ambler Island shown in Giddings' (1952) Plate IX, No. 4.

Ladles and spoons

1 ladle of wood. Large. Incomplete. Cylindrical handle; shallow bowl. Total length was probably over 35 cm.; bowl width probably over 12 cm.

1 spoon. Horn, probably sheep. Small--possibly a toy. Approximately 6.7 cm. long. Bowl 2.8 cm. diameter.

1 spoon. Small. Bark. Deep bowl. Broken. Reconstructed length 7 cm.

1 piece small wooden spoon. Bowl crudely hollowed. Not finished.

Dishes

1 side piece for wooden dish. 4.6 cm. high. Grooved to accept bottom. Sewn with baleen. Apparently oval, about 26 cm. by 14.5 cm.

Meat forks

5 fragments. Tapered. (Plate 5:9).

1 complete specimen. 28 cm. long. Handle end broad and flattened.

Lamps

3 sherds clay cooking lamp. Rim rounded; constricted 3.5 cm. below rim. Poorly fired, thick. Crumbly. 1.9 to 2.4 cm. thick. Evidently round shallow saucer shape perhaps like those from Tigara (Larsen and Rainey, 1948:177, Plate 91, Figs. 1-3). Heavily encrusted with seal oil and other organic material. Associated with hearth.

Snow shovels

2 snow shovels of seal (ugruk) scapula. One is oval shape. Shows no hafting. Perhaps unfinished or used as scoop. 29.3 cm. long; 21 cm. widest point. Other is fragmentary. Articular end removed.

Root picks

1 specimen. Curved. Spatulate end. Three grooves for hafting. Walrus or whale rib. 37 cm. long; 3.1 cm. wide.
1 bone pick end. Cut and broken.

Ornaments, Clothing, and Toys

Hair combs

--none

Clothing remains

7 sealskin scraps. All show cutting.
1 grass innersole for boot insulation. What appears to be the tooth of a grass comb was found imbedded in grass innersole. Impregnated with oil.
2 pieces of thin gut; perhaps from rain parka.

Labrets

1 labret. Cylindrical with circular lip. Ivory. Small. 1.6 cm. long; flange 1.9 cm. diameter. Like that shown for Intermediate Kotzebue by Giddings in Plate XLI, Fig. 7 (Giddings, 1952). (Plate 5:7).

Pendants and beads

--none

Toys

1 toy bow. Fragmentary. Total length was probably ca. 20 cm.
1 toy arrowpoint. Bone. Small. 5.1 cm.

Miscellaneous

2 possible skin bags. First specimen is very small. Identification unsure. Other is small. Tied with baleen. An apparently human hair clings to surface.
1 piece of sewn sealskin to which adheres feather moss-- possibly a skin bag more likely a piece of baby diaper.

Miscellaneous

--none

FAUNAL REMAINS

In order to gain a better understanding of the ecology of the Ogotoruk settlement, all animal bones encountered in excavation were collected. This material was then identified, at least as to major types, and converted to percentages. In 1959 one box of specimens from the second floor was lost in shipment, hence the total here is less than it should be. It is hoped the relative proportion has not been altered too greatly as a result of this loss.

It is not held that the procedure followed here provides more than a rough idea of a people's hunting and food gathering activities. Too many other factors intervene--differential preservation of various kinds of materials, differences in modes of taking and treating various species and others. However, as a rough index the procedure is felt to have some merit. Table 1 presents these data from House 4; Table 2 those from the five levels of House 2.

Table 1. House 2, CT2. Proportions of various species utilized as represented by faunal remains.

	Caribou	Seal	Whale	Walrus	Fox	Bird	
Number	95	102	2	11	3	2	215
Per cent	44.2	47.5	0.9	5.1	1.4	0.9	100.0

Data from House 4 and Late Floor 1 of House 2 agree fairly well, even to indicating a slightly higher percentage of seal over caribou. With such small differences, however, it is difficult to read in too much significance. It is perhaps noteworthy, though, that at this latest period, reindeer were being herded in Ogotoruk Valley. Whether this might have affected these percentages in some way is unknown. Without doubt, some of the bones identified as caribou on this level are actually reindeer. The two are, of course, anatomically indistinguishable.

Table 2. House 2, CT2--Proportions of various species utilized as represented by faunal remains.

	Caribou	Seal	Bear	Whale	Sheep	Walrus	Dog	Fox	Bird	Arctic Fox	Arctic Hare	Ground Squirrel	Wolf	Musk Ox	Mussels	Sea Shells	Unidentified	Total
Late Floor 1																		
No.	103	108	4	2	-	-	8	11	15	-	-	-	-	-	-	-	6	257
%	40.1	42.0	1.6	0.8	-	-	3.2	4.2	5.7	-	-	-	-	-	-	-	2.3	99.9
Floor 1																		
No.	373	328	2	2	1	-	22	19	264	-	-	1	-	-	1	3	39	1055
%	35.4	31.1	0.2	0.2	0.1	-	2.1	1.8	25.2	-	-	0.1	-	-	0.1	0.3	3.6	100.2
Floor 2																		
No.	237	199	-	-	1	-	-	1	23	13	-	3	1	-	-	-	-	478
%	49.6	41.6	-	-	0.2	-	-	0.2	4.8	2.7	-	0.6	0.2	-	-	-	-	99.9
Floor 3																		
No.	20	22	2	-	-	-	3	4	26	-	-	-	-	1	-	-	38	116
%	17.4	18.9	1.7	-	-	-	2.6	3.5	22.4	-	-	-	-	0.9	-	-	32.8	100.2
Floor 4																		
No.	143	67	4	3	-	6	7	12	125	-	3	4	10	-	-	3	191	578
%	24.7	11.6	0.6	0.5	-	1.0	1.2	2.1	21.6	-	0.5	0.6	1.7	-	-	0.5	33.0	99.6
Totals																		
No.	876	724	12	7	2	6	40	47	453	13	3	8	11	1	1	6	274	2484
%	35.3	29.1	0.5	0.3	0.08	0.2	1.6	1.8	18.3	0.5	0.1	0.3	0.4	0.04	0.04	0.2	11.0	99.8

Probably the safest reading of these data is the expectable one: caribou and seal were mainstays of the diet importantly supplemented by other available kinds of game. There appears to have been some alteration in the consumption of avifauna from earliest phases to the latest. Both House 4 and the last phase of House 2 yielded rather low percentages here. Perhaps this may be correlated with an increasing use of purchased foods which helped fill this supplemental gap. Still, the staples were those two species which occur in relative abundance and on their take the economy was based. This is still an immutable fact of life in most of the American Arctic.

One caution should be observed respecting the low percentages of whale bones recovered. Whaling as an activity of some importance is attested by the presence of whaling harpoon gear, by the use of whale bone for various implements and by the abundance of baleen. That few unaltered remains of whale were found is probably partly due at least to the practice of butchering near the scene of the kill. Meat, blubber, and baleen would be the items normally taken home, bones remaining at the site of the butchering.

SUMMARY AND CONCLUSIONS

Ogotoruk was not the site of a large Eskimo population, nor does there seem to be any great time depth. The first fact is not surprising; the second, however, is.

There are a number of areas in Arctic Alaska which have, over long periods of time, supported large populations. Cape Prince of Wales is one such, Point Hope is another, while Point Barrow furnishes a third example. Each of these is populated today. There are other similar coastal localities that until the recent past were also sites of fairly high population. Capes Kruzenstern and Espenberg exemplify such localities. The last have in common with the first named a very distinctive physiography and, therefore, very particular ecological attributes: each forms a point of land jutting out bastion-like into the ocean, and each is therefore a prime location for maritime hunters. On the basis of present evidence it appears that on the mainland at least, sites of this kind were the only ones that supported large populations in aboriginal times. Most

of the many other settlements that dotted the north coast of Alaska were of smaller size. Probably, too, many of these were more distinctly seasonal or occasional in the character of their utilization. The nature of all these settlements, their size and degree of permanency, may be taken as a direct response to their geographic setting. In the hierarchy of coastal Eskimo settlements, Ogotoruk apparently was among the smallest. As well as the limitations imposed by the relatively small valley, another factor probably acted to limit the size of Ogotoruk. This was its proximity to the large village of Tigara (Point Hope). It is known that in recent years most of the people who occupied the Ogotoruk hamlet were Point Hopers and folk from Kivalina. The Point Hope affiliation probably was the case also for the earlier phases (represented by Floors 1 through 4 of House 2) of its settlement. In a sense, then, Ogotoruk was tributary to, or more exactly, an outlier of the populous Tigara community. Other reasons for its low population appear obvious: There is no lagoon of such size at Ogotoruk Creek to allow sealing or fishing to become important activities. The creek itself apparently is of insufficient size to act as a salmon spawning stream. Finally, the valley, while of undoubted importance as a temporary halting place for caribou appears small to support large numbers for extended periods of time. There are valleys in northern Alaska which at times may contain caribou in numbers throughout the winter.

The reasons for Ogotoruk's low resident population, then, seem clearly related to the limitations of the immediate environment. However, particular note should be made of the phrase resident population. Because Ogotoruk was not capable of supporting a large resident population is not to say that it was unimportant in the Eskimo economy of the region. It undoubtedly was, but its major importance, in terms of numbers of people, was to other communities, most notably Tigara to the north and later to the Kivalina settlement. To these people and perhaps others, Ogotoruk Valley was one of a number of areas which supported their community.

Because, presumably, of our own agriculturally-based economy, we tend to think in rather restricted terms areally. A hunting (hunting, fishing, and gathering) economy though it may support a sedentary population of some size, nonetheless requires a very extensive area of production. From its center it sends tentacles out in all possible directions seeking the means for its support. The extent of the area used would vary with

population size, with the amount and dependability of game, with transportation facilities and so on. Nevertheless the picture holds: a hunting economy demands area. In the specific case of Ogotoruk, the presence of bird cliffs has evidently long drawn and continues to draw people seeking murre eggs. This activity is quite important but occupies only a brief period of the summer. In itself it would scarcely lead to the establishment of a permanent village. Undoubtedly some of the apparent tent sites at Ogotoruk reflect summer egg gathering by people resident elsewhere. The whitened antlers of caribou to be found about the valley attest the hunting of that species. Activities of these sorts do not leave behind much in the way of tangible remains, but this cannot diminish the importance of such an area to regional Eskimo economic life. A more appropriate perspective would thus reveal that Ogotoruk, while relatively insignificant as a settlement in itself, is to be equated with the outlying fields of a large farm. The hunting community is in no way coterminous with the limits of its village. Ogotoruk has apparently been a piece of the Tigara community for at least 100 years, probably more.

Returning to the question of time-depth in Ogotoruk's settlement, perhaps it may be concluded that permanent residence there was simply one of those ecological possibilities not exploited until recent times. That it occurred then and not earlier may have had its explanation in slightly changed economic practices of the 18th century or it may have been in response to some condition of stress felt at that time. However, that may be, settlement was permanent and continuous, apparently, from some time in the 18th century until very recent years.

Placing an approximate terminal date on the occupation of Houses 2, 3, and 4 of CT2 and House 1 of CT1 presents no problem. House 4 contained, among other pieces of similar or later time, two Prince Albert tobacco cans with a process patent date imprinted on them of 1907. House 3 was owned and lived in by Charlie Jensen of Kotzebue. According to Mr. Jensen this house was occupied from about 1912 until 1922. Evidence from the upper level of Floor 1, House 2, would indicate a similarly late date. H1 at CT1 contained virtually nothing of aboriginal manufacture and undoubtedly fits the same late period. Thus, the only evidence uncovered of earlier habitation came from the lower levels of House 2. The articles there associated with Late Floor 1 suggest the dating indicated above.

Shells of the 50 caliber rimfire rifle variety are good "index fossils." Their earliest widespread use would be about 1870. They continued in use until about 1900. The year 1880, then, represents a reasonable midpoint between these extremes and is a likely dating for Floor 1.

That a number of elements of distinctly aboriginal manufacture continued in use through the 1880's is an interesting and well-documented fact. Murdoch (1892:287), speaking of the Barrow area in the years 1881-1883, says, "These people still retain the art of making flint arrow and spear heads, and other implements such as the blades for skin scrapers..." Many of those purchased by him in his collecting were newly made and "as finely formed and neatly finished as any of the ancient ones." The instrument used was a flaker of the same type as described above, found in the second level of the living room of House 2. In speaking of firemaking, he states (ibid:289-291) that the fire drill was in use as late as 1837 at Barrow, but that at the time of his writing, flint and steel had supplanted it. Nelson (1899:75-76), in writing of the years 1877-1881 spent generally well south of Barrow on the coast, speaks of the fire drill as being "in common use throughout the region visited..." Nelson, it may be recalled, travelled as far north as Point Barrow. In speaking of the bow the same author notes (ibid:155) that "bows and arrows were still in common use for shooting birds and fish in some districts of northwestern Alaska during my residence there." Similarly, pottery manufacture, an occupation of women, was noted as being widespread "among the Eskimo with whom I came in contact" (ibid:201). Murdoch records that the use of pottery was extinct at Barrow (op. cit.:92), but this was evidently at variance with much of coastal Alaska at the time--specifically so at Ogotoruk Creek.

Ogotoruk then presents in miniature a picture of late prehistoric Eskimo culture leading without important break into contact with modern times. It appears evident that while many new material traits entered as a result of this contact, they were in the main those which were sensible in terms of the older culture. There is no evidence of drastic, disruptive, change. Rather, the new elements appear to have been easily integrated into the traditional culture. Eskimo culture here, if we may judge by material remains, maintained its autochthonous character well into the 20th century.

The first major breakdown of Eskimo culture of northwestern Alaska is probably to be correlated with the drawing-in of these outlying hamlets to larger communities with their stores, churches and so on.

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Site CT1. Upper portion of cache

Site CT2. House 3, still in occasional use, formerly owned by Charles Jensen of Kotzebue.

Site CT2. House 2. Raised area at rear in this view (east) is probably a sleeping platform.

Site CT2. House 4 being excavated. Apparent limits of house depression marked by string. Directly beyond figure on right is part of depression H5, largely covered with road fill. Above head of left hand figure is H6.

Site CT2. Floor levels one and two exposed.

Sits CT2. House 2. Fireplace of fourth floor.

Plate 2

Site CT2

<u>Description</u>	<u>House</u>	<u>Level</u>	<u>Ref. Page</u>
1. Arrowpoint	4	-	13
2. Knife	4	-	13
3. Trace buckle	4	-	13
4. Bodkin or awl	4	-	13
5. Whalebone wedge	4	-	13
6. Bone spoon	2	Late floor 1	20
7. Shell for harpoon gun. 8 ga.	2	Late floor 1	16
8. Ivory needlecase	2	Late floor 1	20
9. Hammer for harpoon gun	2	Late floor 1	16
10. Inflation plug, ivory. Seal float	2	Late floor 1	16
11. Slate ulu blade	2	Late floor 1	19
12. Jade whetstone	2	Late floor 1	19
13. Slate hunting knife blade	2	Late floor 1	17
14. Arrowpoint	2	Late floor 1	17
15. Arrowpoint	2	Late floor 1	17

Plate 3
Site CT2

<u>Description</u>	<u>House</u>	<u>Level</u>	<u>Ref. Page</u>
1. Bone sled shoe	2	Late floor 1	18
2. Arrowpoint	2	Late floor 1	17
3. Wristguard	2	Floor 1	23
4. Knife	2	Floor 1	23
5. Ivory ulu handle	2	Late floor 1	19
6. Arrowpoint	2	Late floor 1	17
7. Harpoon shaft	2	Floor 1	22
8. Arrowpoint	2	Floor 1	23
9. Knife	2	Floor 1	23
10. Net sinker	2	Late floor 1	16
11. Ice creeper	2	Late floor 1	18
12. Root pick	2	Floor 1	28

Plate 4
Site CT2

<u>Description</u>	<u>House</u>	<u>Level</u>	<u>Ref. Page</u>
1. Flint flaker	2	Floor 1	26
2. Dog harness swivel	2	Floor 1	24
3. Arrowpoint	2	Floor 1	23
4. Potsherd. Dentate stamp	2	Floor 1	27
5. Small harpoon head	2	Floor 1	22
6. Toy snowshoe? Bark	2	Floor 2	36
7. Arrowshaft	2	Floor 2	31
8. Arrowshaft	2	Floor 2	31
9. Probable meat fork	2	Floor 2	35
10. Baleen strip	2	Floor 2	36

Plate 5
Site CT2

<u>Description</u>	<u>House</u>	<u>Level</u>	<u>Ref. Page</u>
1. End scraper	2	Floor 3	40
2. Scraper handle of wood	2	Floor 2	34
3. Fragment of ivory grass comb	2	Floor 4	46
4. Hair comb of antler	2	Floor 3	41
5. Thimble holder. Bone	2	Floor 3	40
6. Ivory labret	2	Floor 2	36
7. Ivory labret	2	Floor 4	47
8. Pendant (?) of ivory	2	Floor 2	36
9. Meat fork fragment. Wood	2	Floor 4	46
10. Saw. Metal blade, ivory handle	2	Floor 1	25
11. Pyrites cube, faceted	2	Floor 4	45
12. Ivory sinew twister	2	Floor 4	45
13. Arrowshaft wrench	2	Floor 1	23
14. Flint flaker of musk ox horn	2	Floor 4	45

Plate 6

Site CT2

<u>Description</u>	<u>House</u>	<u>Level</u>	<u>Ref. Page</u>
1. Harpoon dart head	2	Floor 2	30
2. Gorge	2	Floor 2	32
3. Hunting knife. Chipped stone blade in wooden handle	2	Floor 2	31
4. Hunting knife blade of slate	2	Floor 4	44
5. Blunt arrowpoint	2	Floor 4	43
6. Arrowhead of antler. Socketed for stone point	2	Floor 2	31
7. Arrowpoint	2	Floor 4	43
8. Knife blade. Purplish slate. or whaling harpoon blade	2	Floor 3	38
9. Harpoon head. Bone	2	Floor 2	30
10. Arrowshaft fragment with fletching	2	Floor 1	23
11. Arrowshaft, distal end. Ownership mark	2	Floor 4	43
12. Arrowshaft fragment, showing nock	2	Floor 2	30
13. Bow stave fragment	2	Floor 4	42

Ogotoruk Creek
ARCHAEOLOGICAL SITES

- Site
- Dwelling
- Cache
- Negative test

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