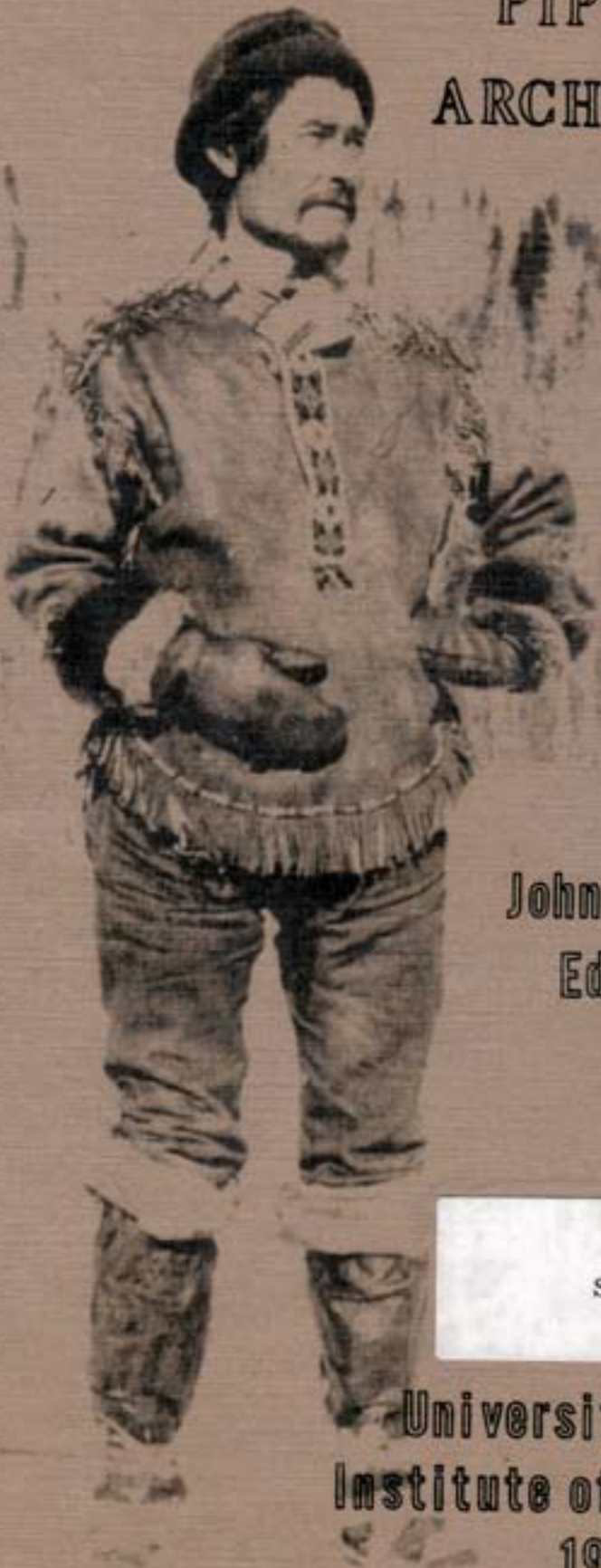
PIPELINE ARCHEOLOGY



John P. Cook
Editor

BOOK I
Sections I, II, III, IV (A, B)

University of Alaska
Institute of Arctic Biology
1977

INTRODUCTION

Since 1969, the University of Alaska, Fairbanks, has been involved in the mitigation of impact upon archeological resources caused by the construction of a large oil pipeline transecting the state of Alaska. The University has been responsible for the northernmost four construction sections, totaling 635 miles (1,016 km). Support and monies for this effort have come from the Alyeska Pipeline Service Company, formerly Trans-Alaska Pipeline System. This series of reports presents some of the results of these investigations. The reports are basically descriptive; i.e., relatively little comparative analysis or synthesis has been possible in the short time available since cessation of excavation in September, 1975. It has been thought necessary to present as many of the data as possible at this time to expedite dissemination of the rather large amount of information and to explain the methodologies and policies behind the efforts to reduce impact of a large construction project on a long transect of Alaska. This section will introduce some of these policies and methods, both in the field and during the last two years of analysis.

The individual reports which follow this section will illustrate how these methods have been put into practice. Some excavations have lent themselves more handily to one professional philosophy than another and there is a considerable diversity in the kind and quality of cultural data to be gleaned from them. This is inevitable considering the 1,000 km of pipeline involved and the 323 sites impacted by the pipeline.

General Considerations

In 1970 and 1971, the impending construction of a pipeline and an accessory supply road created an immediate need to locate cultural resources that might be impacted by this construction. The initial task, therefore, was not to explore cultural processes, to analyze any one (or more) cultural tradition(s), nor even to derive a culture history of Alaska, but to make sure that construction activities associated with the building of the pipeline would not destroy any of the raw materials that might be used by any of the above professional approaches.

Most of central and northcentral Alaska had received little in the way of a systematic (or even unsystematic) search for cultural resources of any kind. However, extrapolation from other areas and other theoretical predictive modeling (intuition) strongly suggested that the pipeline should impact quite a number of historic and prehistoric native sites, as well as some historic Euro-American camps (e.g., from the Gold Rush). That this was, indeed, the case, has been amply demonstrated.

Although "new" archeological methods and concepts are emminently suitable, the culture history of Alaska is still in the historiography stage of archeological development. Where possible, these should be integrated. In the present project, however, such approaches as the various sampling tactics were not considered to be strategic - any site has extremely high potential for archeological enlightenment. Not enough is known about any one phase, complex, or tradition to "let a site go". The same argument can be applied (and was) to each site itself. Simply sampling a site may be an adequate mitigation procedure if there is sufficient assurance that such sampling can accurately determine its location in time, environment, and cultural processes. Such a criteria could not be met. An additional factor is almost always present in a large construction project - there will be little or no chance to do any additional sampling if the first effort is insufficient or unsatisfactory. For these reasons - sampling is presently unsatisfactory and total destruction was imminent - the policy was set for total excavation of a site suffering from primary impact.

Total excavation, in this case, means a careful and accurate excavation of the entire site - out to where no more cultural elements are recognized (or, at least, a flake or two per two-meter square). Some further, although parenthetical, comments concerning excavation may be appropriate here, although the methodology was fairly standard. Early excavations of some sites was done in feet and inches (metric tapes could not be found in Fairbanks then and there was almost no lead time to order them). Trowels were used exclusively; there was no screening. All sites were shallow (usually less than 20 cm) and infiltrated with numerous roots of grass and shrubs which foul a screen. Exact provenience was desired for all tools. Orientation (horizontal/vertical) was usually

recorded to determine the amount of soil movement and thus the relevance of depth measurements and/or association with soil horizons (this tactic has not yet shown any meaningful correlations in the analysis). For these reasons, and the opinion of the Principal Investigator that troweling is faster and more accurate in almost all cases similar to those encountered along the pipeline, screens were simply not utilized.

Such a philosophy - basically that of salvage excavation - has remained central to the field operations of the project. In a few cases, sites subject to immediate secondary impact have been at least partially excavated. Whether more needs to be done with these will depend upon further integration of the sample data with the material presented in the following reports and subsequent analyses, as well as public accessibility to the sites.

The excavations themselves, notwithstanding their salvage beginnings, are sufficient and adequate to be examined according to several, and different, analytical philosophies. This is particularly true of those which are larger, either in area or cultural content. As mentioned above, most of the archeology of Alaska is still oriented toward attaining a satisfactory historiography. Hampered by a paucity of large, well excavated habitation sites (or reports on such sites), and poor chronometric control of smaller sites, Alaskan archeologists have had to rely heavily upon typological sets. This invariably oversimplifies matters, reducing comparisons to "horizon markers" or "diagnostic" artifacts - primarily projectile points, burins, or microblade cores. This approach is undeniably a subjective one, placing a heavy burden upon intuition and a "feeling" that components or artifacts are "like" one another and, therefore, should have a common cultural milieu. However, as pointed out in an earlier report (Cook, et al., 1971), a number of new ideas began to emerge from a consideration of the data. More specific, as well as more explicit, research goals were identified as worthy of increased attention and became what might be considered ex post facto rationalizations for excavation of the sites and will certainly form the justification for continued research in several areas adjacent to the pipeline corridor.

Since that time, these hypotheses have been major points of discussion during excavation and analysis of sites. Principal among these hypotheses are the following:

1. The boundary between Eskimo and Indian cultural spheres has been in a state of flux for several millenia. Not only does this problem concern the utilization of an area by one or the other groups, but diffusion of traits and trade patterns are potentially important.

   Earlier identification of Eskimo (Denbigh Flint Complex) kinds of artifacts within interior Alaska has not been refuted; however, these ties have not been particularly strengthened. On the other hand, attribution of North Slope components (with stemmed points) to a Kavik occupation (Athapaskan-Kutchin?), has been essentially negated. Other aspects of this question will be raised in the individual reports but this last brings up another thesis that is extremely pertinent to the pipeline data.

2. The development of the Eskimo (material) culture can be traced in the northern foothills of the Brooks Range. Although this is largely a problem of historiography, several questions concerning the origin and disappearance of certain traits (stemmed points, transverse burins) must introduce the possibilities of diffusion and/or trade contacts and the resultant impact upon a developing Eskimo continuum.

3. Similarly, a real possibility exists for deriving, at least tentatively, a (material) culture history of the Athapaskan populations. The excavations along the pipeline have definite bearing on this question. Although the analyses are not complete, some preliminary assessments will be described.

These, and others, will be outlined in more detail within the individual sections that follow.

Organization of the Project

Within a year of the confirmation of oil at Prudhoe Bay, a consortium of companies began preparation for a pipeline traversing the state of Alaska. Construction of necessary roads and camp facilities began in 1969 but the pipeline itself was held up pending settlement of several environmental suits and other technicalities. The hiatus during 1971 and 1972 ended when Congress passed and the President signed PL 93-153 which authorized construction of the pipeline.

Archeological work began in 1969 as the route of the pipeline and camp locations were being considered and studied. Over the next two years most of the corridor was surveyed in varying degrees of intensity. Where there was a high certainty of routing, excavation of several sites was accomplished and the results were written up as a report for the Alyeska Pipeline Service Company (APSC), then the Trans-Alaska Pipeline System. At first, the University of Alaska was contracted for the northern portion and Alaska Methodist University, in Anchorage, was responsible for the southern half. These contracts were later changed and the University of Alaska became charged with the northernmost four of the five construction segments.

From the start, although the pipeline consortium was directly responsible for the archeology through its environmental protection program, there have been state and federal monitors for the project. The earlier archeological work (1969-1971) maintained a liason with these monitors both through the antiquities permit system and through a committee of anthropologists from the Arctic Institute of North America who were advising the U.S. Department of Interior (Campbell 1973). Following the hiatus mentioned above, the committee was replaced by Environment and Ecology, Inc. (EEI). There was minimal contact between this latter group and the archeologists, although communication increased between the field archeologists and the Authorized Officer's Field Representative (of the Department of the Interior - AOFR) even though our formal contacts were still with the Alyeska personnel (Figure I-1).

During engineering, survey and construction phases, the archeologists were required to examine every aspect of the pipeline project that might present a threat to (assumed) archeological and/or historic resources. A simple form was filled out for each construction area, denoting clearance, provisional clearance, or a necessity for mitigation (Figure I-2). More than 1,700 of these were filed with Alyeska who, in turn, passed on the information to the monitoring agencies, usually the Alaska Pipeline Office (APO). In actuality, only a very few construction locations were denied (3%) and all of these were subsequently cleared through excavation of the cultural material. Many of the archeological sites encountered were found during initial surveys and were excavated before these Archeology Reports were filed - in which case, since the material had been recovered, construction involving the site was cleared. However, the bulk of the sites were surveyed, tested, and excavated before this system went into effect (fall of 1974).

In addition to this, a site survey form (Figure I-3) and an Alaska survey record card (Figure I-4) were also filled out and copies sent to the State Archeologist for inclusion in the state inventory.

The pipeline has been divided into five major construction segments (Figure I-5). These rather generally conform to major physiographic and environmental divisions of the pipeline corridor. For this reason and, of a more practical nature, because communication and logistics would be easier, the archeological effort was similarly partitioned. The present report deals with the northern four of these sections; Dr. William Workman (AMU - Anchorage) was responsible for the southernmost Section 1 (Workman 1976).

Two supervisory archeologists were assigned to each section. Their responsibilities were for surveillance of construction and selection of sites to be excavated. In addition, an excavation crew of eight persons plus a foreman was assigned to each section. These were under the overall direction of the supervisory archeologists although the foreman was in direct charge of the excavations. Needless to say, this was the ideal situation; field exigencies sometimes demanded redeployment of personnel.

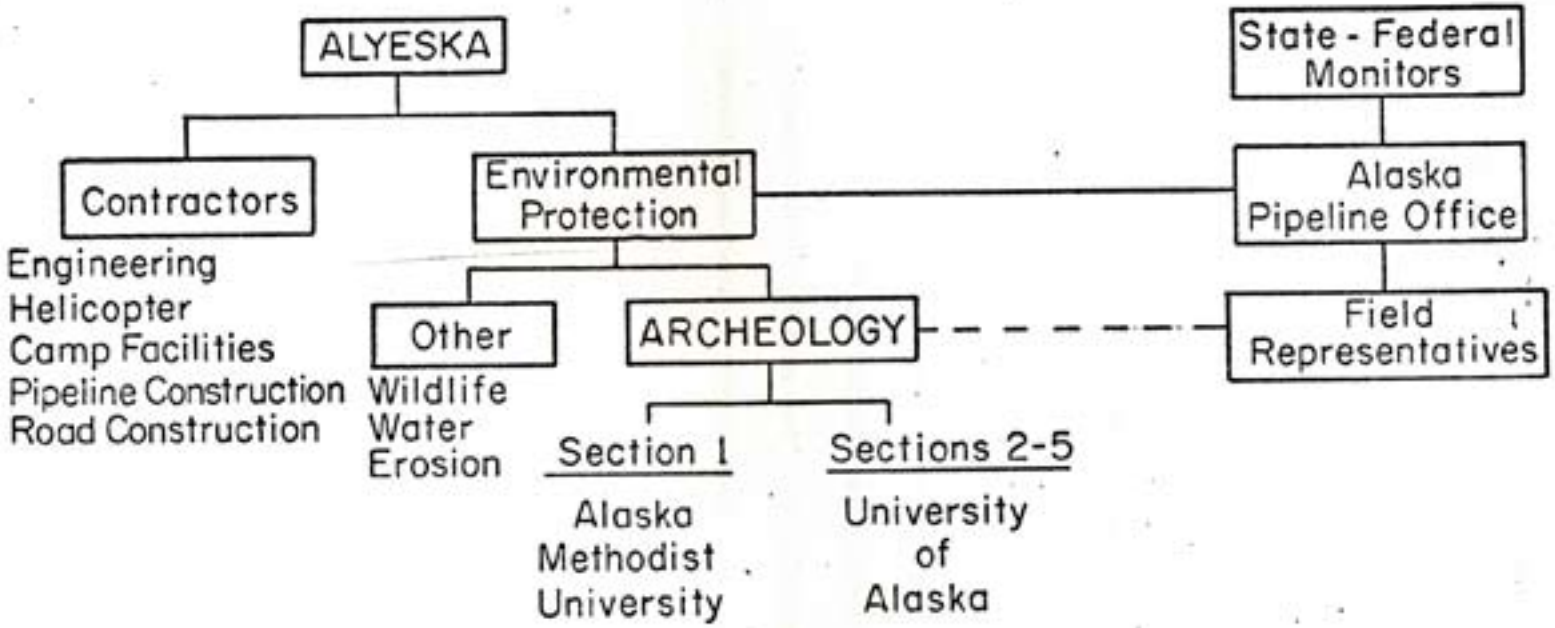

ALYESKA
Contractors
Engineering
Helicopter
Camp Facilities
Pipeline Construction
Road Construction
Environmental Protection
Other
Wildlife
Water
Erosion
ARCHEOLOGY
Section 1
Alaska Methodist University
Sections 2-5
University of Alaska
State - Federal Monitors
Alaska Pipeline Office
Field Representatives

Figure I-1

Alyeska pipeline SERVICE COMPANY

Archaeologist's Initials _____ Date _____

Serial Number _____ Pipeline Section No. _____

Alignment Sheet No. _____

ARCHAEOLOGY REPORT

Site Description _____

_____

Date Examined _____

The above site was examined for archaeological and paleontology artifacts, relics and fossils. Results of the inspection are as follows:

(Check one)

1. Site is clear of any archaeological or paleontological material of value. ☐
2. Site contained some material which has been recovered. ☐
3. Surface of site is clear but archaeologist should be present when excavation is started. ☐
4. Site contains material of value and further work is needed before any construction. ☐
5. Previously reported archaeological or paleontological discoveries at this location have now been cleared. ☐

Report of findings will be made by _____
(Date)

(Check one)

This is to certify construction work at this site is cleared ☐

conditionally cleared ☐

not cleared ☐

*Conditions: _____

_____

_____

_____
Alyeska Archaeologist Signature

cc: (White) Alyeska Manager Environmental Protection
(Canary) Alyeska Project Manager for this Section
(Green) Chief Archaeologist
(Blue) Archaeologist File

Figure I-2

UNIVERSITY OF ALASKA ARCHEOLOGICAL SITE STATUS REPORT FORM
ALYESKA PIPELINE ARCHEOLOGICAL SURVEY

State Survey Number_____

Other Designations _____

Museum Accession Number_____

USGS Quad_____

T_____R_____Sec._____ii_____iii_____

Approximate elevation _____ feet above sea level

_____

Date Survey Visit _____

Archeologist_____

Techniques employed and method which revealed cultural material _____
_____
_____

Archeological materials: portable and non-portable_____
_____
_____
_____
_____

Cultural classification of materials recovered_____
_____

Approximate site area_____meters x _____ meters

Nature of cultural deposit, depth (meters)_____
_____
_____
_____
_____
_____
_____

Natural forces affecting site_____
_____
_____

Construction activity endangering site_____
_____
_____

Possibility of faunal preservation_____
_____

Previous collections or excavations known or evidenced_____
_____
_____
_____

Condition of site: __disturbed __undisturbed

Research potential: __high __medium __low __?

Significance_____
_____
_____
_____
_____

Recommendations _____Avoid
_____Excavate est. _____man/days required
_____Clear without excavation

Remarks_____
_____
_____
_____
_____

Excavation:

Date: _____

Archeologist in charge:_____

Field personnel: _____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

Area excavated: _____Feet/meter squares

Date clearance issued: _____

Figure I-3

ALASKA ARCHEOLOGICAL/HISTORICAL SURVEY RECORD CARD 50-125 REV. 1972,1976

1. NAME OF SITE 2. PERTINENT DATES

3. LOCATION

4. DESCRIPTION (DIMENSIONS, PRESENT CONDITION, TOPOGRAPHICAL & OTHER ENVIRONMENTAL FEATURES, ETC.)

5. SIGNIFICANCE

6. DANGER OF DESTRUCTION

7. RELEVANT PRINTED, MANUSCRIPT, PHOTOGRAPHIC REFERENCES

8. OWNER OF PROPERTY/ADDRESS 9. DATE OF THIS REPORT

SPACE BELOW FOR ADP USE ONLY

QUAD ID ITEM

SITE NAME

LAT. (DEG) (MIN) (SEC)

LONG. (DEG) (MIN) (SEC)

BIOME RESOURCE NATURE

OWNERSHIP SIZE

PRESERVATION STATUS

CULTURAL AFFILIATION

BIBLIOGRAPHIC REFERENCE

DATES

RELIABILITY AREA DATA

RECORD DATE

SITE CONDITION

SITE ENVIRONMENT

SITE REPOSITORY

EXPLANATION OF ITEMS

1. ENTER COMMON NAME, ALSO ANY OTHER NAMES SITE IS KNOWN BY.
2. GIVE DATE OF CONSTRUCTION OR ANY OTHER SIGNIFICANT DATES ASSOCIATED WITH ITEM.
3. LOCATE AS EXACTLY AS POSSIBLE. IF IN TOWNSITE, GIVE LOT AND BLOCK NUMBERS. IF NOT, LOCATE ON MAP (PREFERABLY 1:63,630 USGS) AND ATTACH MAP. ALSO GIVE LATITUDE AND LONGITUDE OR TOWNSHIP, RANGE, SECTION, QUARTER SECTION, MERIDIAN, IF KNOWN.
4. GIVE PHYSICAL DESCRIPTION IN AS MUCH DETAIL AS POSSIBLE. ATTACH PHOTOS AND DRAWINGS IF AVAILABLE.
5. TELL WHY THIS ITEM IS SIGNIFICANT IN NATIONAL, STATE, OR LOCAL HISTORY.
6. REPORT ANY KNOWN DANGER TO THIS ITEM.
7. ENTER ANY SOURCE MATERIAL FOR INFORMATION ON THIS ITEM.
8. GIVE NAME AND ADDRESS OF PROPERTY OWNER.
9. ENTER CURRENT DATE.

RETURN ADDRESS

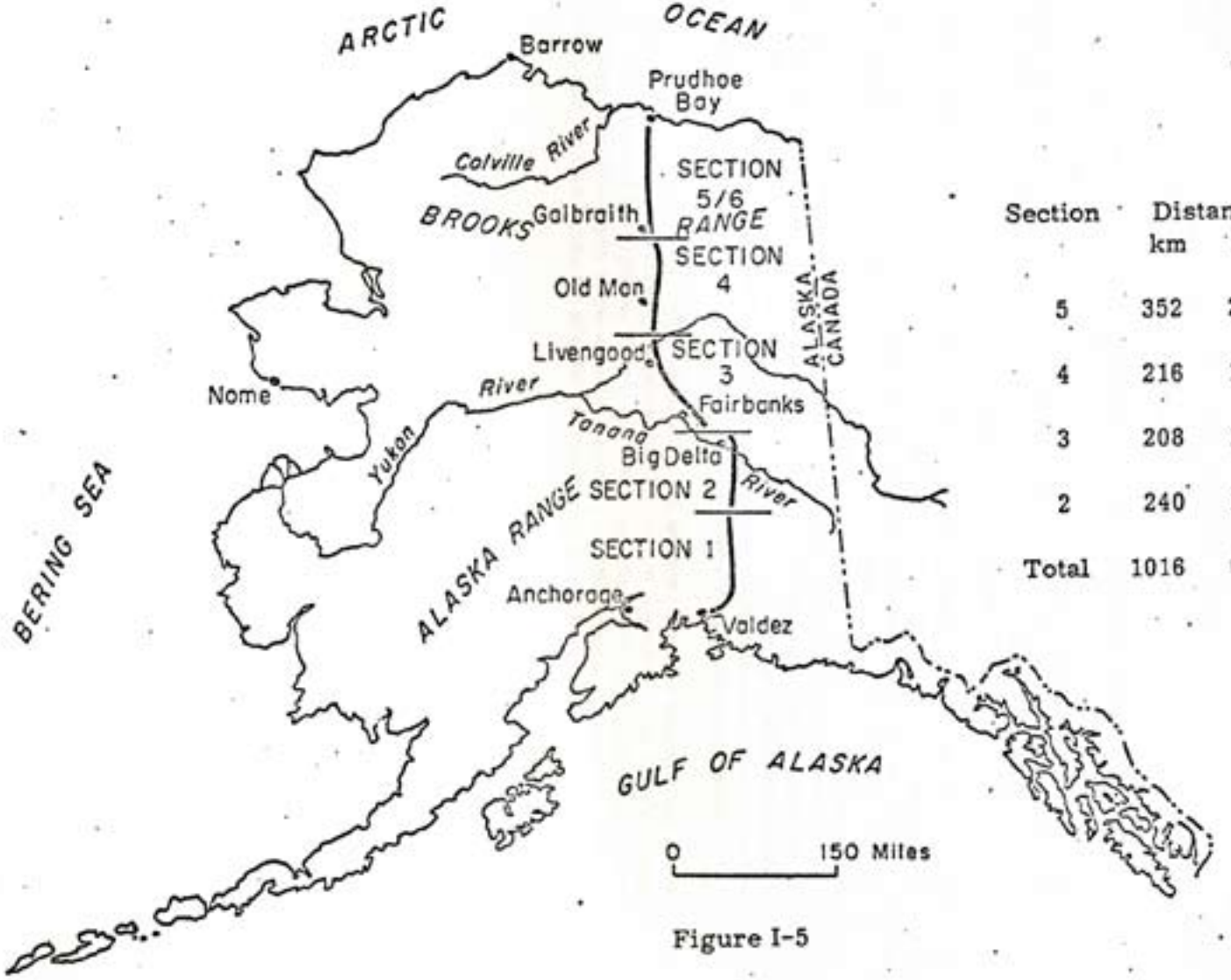
NAME/TELEPHONE

STREET OR BOX NUMBER

CITY AND ZIP CODE

HISTORIC SITE SURVEY
ALASKA DIVISION OF PARKS
323 EAST FOURTH AVENUE
ANCHORAGE, ALASKA 99501

Figure I-4



Section	Distance km	Distance mi	Sites
5	352	220	147
4	216	135	130
3	208	130	39
2	240	150	7
Total	1016	635	323

Figure I-5