

# 5270

~~CONFIDENTIAL~~

5270

Form 504 Rev. April 1935 DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
<del>Topographic</del> <del>Hydrographic</del>	Air Photo Compilation Sheet No. <u>T-5270</u>
State	<u>ALASKA Aleutian Is.</u>
LOCALITY	
<u>ALEUTIAN ISLANDS,</u>	
<u>UNALASKA ISLAND, -NORTH COAST-</u>	
<u>Pumicestone Bay</u>	
Photographs taken <del>in 1936</del> <u>in 1935</u>	
CHIEF OF PARTY	
<u>A.M. Sobieralski, Commanding Officer,</u> <u>U.S.C. &amp; G.S. Ship SURVEYOR</u>	

U. S. GOVERNMENT PRINTING OFFICE

DECLASSIFICATION BY NOAA  
PURSUANT TO DOC SYSTEMATIC REVIEW  
GUIDELINES AS DESCRIBED IN SECTION  
3.3 (a), EXECUTIVE ORDER 12356

Inspected after review - No Cr. - JFW 12/30/41

Applied to Chart Comp. 9022 (prior to review) Dec 21, 1938 H. M. A. E.  
Applied to chart comp. 9020. June 1940. L. A. M.  
" " " 8802 Nov. " F. M. A.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO.

AIR PHOTO COMPILATION  
~~TOPOGRAPHIC TITLE SHEET~~

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. T-5270

REGISTER NO.

State ~~ALASKA~~ Aleutian Is.

General locality ~~ALEUTIAN ISLANDS~~ Unalaska I.

Locality ~~UNALASKA ISLANDS--NORTH COAST~~ Pinnestone Bay

Scale 1:20000 Date of survey U.S. Navy in 1934 <sup>From air photos taken by</sup>

Vessel U.S.C. & G.S.S. SURVEYOR

Chief of party A. M. SOBIERALSKI

Surveyed by U.S. NAVY 5 LENS CAMERA AIR PHOTOGRAPHS

Inked by J.C. TISON, Jr.

Heights in feet above MHW to ground ~~to tops of trees~~

~~Contour, Approximate contour,~~ Form line interval 100 feet

Instructions dated APRIL 13, 1934

Remarks: \_\_\_\_\_

DESCRIPTIVE REPORT  
TO ACCOMPANY  
AIR PHOTO COMPILATION No. 2  
UNALASKA ISLAND, ALASKA--NORTH COAST  
SEASON 1936

PROJECT HT-176

U.S.C. & G.S.S. SURVEYOR

A. M. SOBIERALSKI, COMMANDING

1. GENERAL DESCRIPTION OF COAST AND CHARACTER OF COUNTRY.

The area covered by this compilation is mountainous, distinguished by ridges of mountains extending in a general east and west direction with comparatively low valleys between. The coastline along Bering Sea is very irregular with Bays or Bights forming indentations at the western end of each valley. Large streams and lakes of various sizes exist in the valleys and empty into the sea at the heads of Bays or Bights. The land area is all grass covered with large marshy area in the valleys. All mountains except those adjacent to the head of Pumicestone Bay are free from snow in the summer months and generally grass covered.

The shoreline is rocky with steep rocky cliffs or grassy bluffs rising directly back of the high water line. Rocky and boulder strewn beaches are found everywhere except at the heads of Bays where the ground is low and the beaches consist of sand and pebbles. The area between the high and low water line consists of a flat rocky reef or ledge, evidently the result of lava flow, and this ledge is usually strewn with boulders.

2. GENERAL DESCRIPTION OF COAST AND CHARACTER OF COUNTRY:(cont.)

The most precipitous land formations are in the vicinity of Pumicestone Bay. Eastward of the turn in this Bay the shoreline consists of steep rocky slopes rising directly from the water with no beaches at the base. The mountains in this vicinity are rugged and the numerous jagged peaks are difficult to identify individually.

The large lakes lying inland adjacent to Kashega Bay appear to be quite deep.

3. CONTROL: Control for the photographs consisted largely of points located by means of the planetable on the aluminum control sheets covering the area. A well spaced system of second and third order triangulation provided control for the planetable surveys.

Most triangulation stations in the area were so situated as to make it impossible to locate them on the photographs with any degree of accuracy, and for this reason a series of clearly identifiable control points was established by <sup>planetable</sup> topography. These points were located with the same accuracy prescribed for the location of topographic stations, and carefully transferred to the compilation from the aluminum sheets. No appreciable error in the control was evidenced in the making the compilation.

T6546  
T6547



#### 4. RADIAL LINE PLOT:

The standard radial line plot method was used with no particular difficulties encountered. A scale difference was noted in the photographs when passing directly over high ridges, causing bad radial line intersections for points near the top of the ridges, but by adjusting the plot it is believed that such points were located with sufficient accuracy.

5. PHOTOGRAPHS: The photographs are clear and distinct except where fog banks blotted out detail entirely in the area around the head of Pumicestone Bay. The shoreline on the north side of Kashega Point was also blotted out by an over hanging cliff. The shoreline in both of these areas, that is at the head of Pumicestone Bay and on the north side of Kashega Point, was rodded in on the aluminum control sheet No. UB-36. *T6546*

There was no evidence of excessive tilt in the photographs.

6. ELEVATIONS: Elevations were determined with the planetable on the aluminum control sheets, and those used for form lining transferred temporarily to the compilation and then shown on the overlay sheet constructed for the compilation. Where a single cut with vertical angle was obtained to some distant peaks visible from a planetable set-up, it was first recorded on the aluminum sheet, then later transferred to the compilation; and if the peaks could be identified, its elevation was computed. Elevations which appear on the overlay sheet for the compilation and are not shown on aluminum control sheets were determined in this manner.

7. FORM LINES: Form lining was done for as much of the area covered by the compilation as possible, with the elevations that were available. The form lines were first drawn on the compilation itself with india ink then transferred to the over lay sheet.

8. JUNCTIONS: This compilation joins compilation ~~#1~~ *T5269* in the north along the parallel 53 -34' N., and joins topographic sheet ~~UE 36~~ *T6548* on the west and south west. All junctions were checked and found satisfactory. *6640 m south*

9. COMPARISONS WITH OTHER SURVEYS: A careful comparison was made with all hydrographic sheets and aluminum control sheets included in the area of this compilation. No large discrepancies were noted and in instances of small discrepancy adjustments were made by the compiler, they being due to faulty interpretation of the photographs.

10. NAMES: For list of names in this area see descriptive reports for Aluminum Control sheets Nos. UB-36, UC-36, UE-36. *name sheet is attached T6546 T6547 T6545 at back.*

11. FIELD INSPECTION OF PHOTOGRAPHS: The field inspection of photographs was carried on simultaneously with the execution of the plane table



works on Aluminum control sheets. Points chosen for control of the compilation, other than triangulation stations which could be identified \* on the photographs, were in all cases directly visible on the photograph and could be pricked in the field. Notes regarding shoreline and other features were either recorded directly on the field prints or in a sketch book in rough form for use by the compiler.

12. INTERPRETATION: No difficulty was encountered in interpreting detail on the photographs. The fact that the compiler had executed the aluminum control sheet surveys and done the field inspection, greatly facilitated interpretation.

13. MISCELLANEOUS: Form lining for the point of land forming <sup>Kismaliuk Bay</sup> ~~Hague Cape~~ <sup>Sedanka Pt.</sup> was done on this compilation to the shoreline on the east and north sides of Middle Bay. Streams in this area are also shown on the compilation, while the shoreline was located on Topographic Sheet #UE\*36. (76545)

The easterly end of the radial plot for this compilation is very weak due to the absence of control where fog blots out all detail on the photographs. This end of the plot was used only for locating inland streams and lakes of little importance, and for form lining in the vicinity of the head of Pumicestone Bay. The plot is believed to be accurate enough for use in locating such detail.

Streams and other inland detail was compiled for the area adjacent to Kuliliak Bay on the south side of Unalaska Island but no attempt was made to compile the shoreline of the Bay itself, due to absence of control. It was deemed advisable to compile as much inland detail as possible, regardless of accuracy, to facilitate form lining in that area when a topographic survey is executed there.

14. ACCURACY: Well defined and important detail as shown on this compilation is believed to be compiled with a probable error of not more than 10 meters; while less well defined detail, appearing a considerable distance out on the wing prints and in areas of little control, is believed to be compiled with a probable error of not more than 30 meters.

Respectfully submitted,  
James C. Tison, Jr.  
James C. Tison, Jr.

Approved & Forwarded  
A. M. Sobieralski  
Commanding Officer

A. M. Sobieralski

\* These points were located by the planimeter and transferred to the collimator for the radial plot. They were erased from the planimeter sheets (graphic control sheets) and from the collimator before the sheets were forwarded to the office. The points are shown on the photographs.  
B.g.f.



- STATISTICS -

on

SHEET, FIELD NO. 2, REG. NO.       

PHOTOS, NO. 1871 TO NO. 1890 (Acc. #680)

DATE OF PHOTOGRAPHS                      TIME                     

	BY	DATE
		FROM      TO
ROUGH RADIAL PLOT <u>1:20,000 scale</u>	<u>J. C. Tison, Jr.</u>	<u>1/29/37</u> <u>2/1/37</u>
SCALE FACTOR <u>(.725)</u>	<u>J. C. Tison, Jr.</u>	<u>2/1/37</u> <u>2/1/37</u>
SCALE FACTOR CHECKED	<u>J. C. Ellerbe</u>	<u>2/2/37</u> <u>2/2/37</u>
PROJECTION	<u>J. C. Tison, Jr.</u>	<u>2/5/37</u> <u>2/5/37</u>
PROJECTION CHECKED	<u>J. C. Ellerbe</u>	<u>2/5/37</u> <u>2/5/37</u>
CONTROL PLOTTED	<u>J. C. Tison, Jr.</u>	<u>2/6/37</u> <u>2/8/37</u>
CONTROL CHECKED	<u>J. C. Ellerbe</u>	<u>2/8/37</u> <u>2/8/37</u>
TOPOGRAPHY TRANSFERRED	<u>J. C. Tison, Jr.</u>	<u>2/10/37</u>
TOPOGRAPHY CHECKED	<u>J. C. Ellerbe</u>	<u>2/10/37</u>
SMOOTH RADIAL LINE PLOT	<u>J. C. Tison, Jr.</u>	<u>2/11/37</u> <u>2/28/37</u>
RADIAL LINE PLOT CHECKED	<u>J. C. Ellerbe</u>	<u>3/1/37</u>
DETAIL INKED	<u>J. C. Tison, Jr.</u>	<u>3/2/37</u> <u>4/15/37</u>
PRELIMINARY REVIEW OF SHEET	<u>A. M. Sobieralski</u>	<u>4/8/37</u>
AREA OF DETAIL INKED <u>65</u> sq. Statute Miles		(Land Area)
AREA OF DETAIL INKED <u>---</u> sq. Statute Miles		(Shoals in Water Area)
LENGTH OF SHORELINE (more than 200 m. from nearest opposite shore)		<u>44</u> Statute Miles
LENGTH OF SHORELINE ( <del>rivers-and-sloughs</del> <sup>streams</sup> less than 200 m. wide)		<u>100</u> Statute Miles
LENGTH OF <del>STREETS, ROADS, TRAILS, RAILROADS, etc.</del>		<u>6.5</u> Statute Miles
GENERAL LOCATION	<u>Alutian Islands, Alaska</u>	
LOCATION	<u>Unalaska Island--North Coast.</u>	
DATUM	<u>North-American-1937</u>	<u>Unalaska Datum 1901</u>
		Latitude <u>53 -29'-00.138" (o4.3m.)</u>
STATION	<u>Lake 1935</u>	Longitude <u>167 -07'-59.400" (1095.4)</u>

	Remarks	Decisions
1	Not Unalaska Is.	USGB
2		535670
3		" USGB
4		"
5		535670 USGB
6	In Kashega Bay	" USGB
7		"
8	Kashega Bay, south Buck Island	"
9	Not Middle Bay	" MSGB
10	Omit word village	"
11		"
12	Between Kashega Bay and Kismaliuk Bay	" USGB
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
M 234		



# GEOGRAPHIC NAMES

Survey No. T-5270

GEOGRAPHIC NAMES											
Survey No. T-5270											
Name on Survey											
	A, On Chart No.	B, On previous survey No.	C, On U. S. quadrangle Maps	D, From local information	E, On local Maps	F, P. O. Guide or Map	G, Rand McNally Atlas	H, U. S. Light List	K		
<u>Unalaska I.</u>											1
<u>Pumicestone Bay</u>											2
<u>Kashega Pt.</u>											3
<u>McIver Bight</u>											4
<u>Kashega Bay</u>											5
<u>Kashega Pinnacles</u>											6
<u>Buck Island</u>											7
<u>Buck Bight</u>											8
<u>Kismaliuk Bay</u>											9
<u>Kashega (village)</u>											10
<u>Kuliliak Bay</u>											11
<u>Sedanka Pt.</u>											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

M 234-1A

DIVISION OF CHARTS

Section of Field Records

REVIEW OF AIR PHOTOGRAPHIC SURVEY T-5270  
Scale 1:20,000

Graphic Control Surveys.

T-6546 (1936) 1:20,000.

T-6547 (1936) 1:10,000.

These graphic control surveys were made for the location of hydrographic control, location of control for the photo plots, location of elevations for form lines drawn from the photographs, and the location of rocks awash and shore line details not clear on the photographs. T-6546 and 47 are complete and adequate for the purpose for which they were made.

All details on the graphic control surveys within the area of T-5270 have been transferred to T-5270 with the exception of hydrographic stations and the magnetic declinations.

Previous Topographic Surveys.

None.

Hydrographic Surveys.

H-6175 (1936) 1:20,000.

H-6183 (1936) 1:10,000.

H-6212 (1936-37) 1:20,000.

The above hydrographic surveys were compared with T-5270 by the hydrographic reviewer.

Comparison with Chart 8802 (38-11/3), 9022 (not yet published).

T-5270 was applied to chart 9022 December 21, 1938, prior to this review. No changes have been made in T-5270 since that date except for redrafting as stated in the following paragraphs of this review.

Only a general comparison was possible between T-5270 and Chart 8802 due to the small scale of 8802.

Junctions.

These have been checked and are satisfactory.

Low Water Line.

The dashed line on T-5270 is the limit of rock ledge visible on the photographs. The time of the photography and stage of tide are not known and the field inspection has furnished no information as to how nearly this line may approximate actual low water. The line has been carried forward as a dashed line on the hydrographic surveys.

Form Lines.

These are controlled by the elevations, shown on the sheet, which were determined by the graphic control surveys. Form lines were drawn by viewing the photographs under the stereoscope and sketching on the celluloid in much the same manner as done on the plane table surveys.

Redrafting.

T-5270 will not be published. The original compilation, on a celluloid sheet with form lines on a tracing paper overlay, was made at a scale of about 1:30,000. These drawings were transferred by projector in this office to a projection on Whatmans paper and inked in the Philadelphia office, scale 1:20,000. The new drawing has been carefully checked against the original for completeness of detail and accuracy of copy.

General.

T-5270 is complete except for information regarding the dashed line (low water line?)

It would have been preferable had the form lines been drawn directly on the celluloid with black celluloid ink. These could be inked either on the back or front of the sheet. The tracing paper overlay on which the form lines for T-5270 were shown has shrunk more than the celluloid and for this reason some additional work has been necessary in this office in transferring the form lines.

Photographic flight lines for this sheet and T-5269 were rather widely spaced for form lining. On future air photographic surveys in Alaska, it is anticipated that Coast and Geodetic Survey photographs will be available and that flight lines will probably be better spaced. In this case it will be possible to improve the form lines and reduce the amount of plane table work by determining additional





elevations from the photographs. Where the photography is done sufficiently in advance it will also probably be practical to locate most of the hydrographic signals by the photographic plots.


Reviewed by - H. D. Reed, December 1939.


Inspected by - B. G. Jones, December 1939.

Examined and approved:

  
T. B. Reed,  
Chief, Section of Field Records.

  
K. T. Adams  
Chief, Division of Charts.

  
Raymond P. Egan  
Chief, Section of Field Work.

  
G. H. Hinde  
Chief, Division of H. & T.