

# 8618

Diag'd. on Diag. Ch. No. 8502-3

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. CS-317 Office No. T-8618

### LOCALITY

State Alaska

General locality Alaska Peninsula

Locality West Side Nakalilok Bay

194 1-'46

CHIEF OF PARTY

S. B. Grenell

LIBRARY & ARCHIVES

DATE

May 18-1949

B-1870-1 (1)

# 8618



PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>Time</u> w. meridian	<u>Scale</u>	<u>Stage of Tide</u>
06066-06071	8-5-41	1350	1:20,000	6.5' above MLLW
*06121	8-5-41	1350	1:20,000	6.5' above MLLW
10959	9-5-42	1312	1:20,000	4.6' above MLLW

\*Rectified prints were also furnished

Tide from (III): Predicted Tide Tables, Pacific Ocean and Indian Ocean, 1941 and 1942. Reference Station: KODIAK, Alaska, with corrections  
 Mean Range: 6.6' Spring Range: 8.7' to Chignik, Anchorage Bay

Camera: (Kind or source) U.S. Coast & Geodetic Survey nine lens camera.  
 Focal length 8 $\frac{1}{4}$ ".

Field Inspection by:  
 Lt. Comdr. S.B. Grenell

date:  
 June-August 1944

Field Edit by: None

date:

Date of Mean High-Water Line Location (III): Same as date of photographs except for a small portion of MHWL at the northwestern part of Nakalilok Bay at the mouth of the mud flats which was identified at the time of field inspection in 1944.

Projection and Grids ruled by (III) S.R.

date: 4-3-46

" " " checked by: S.T.

date: 4-3-46

Control plotted by: F.J. Tarcza

date: 4-8-46

Control checked by: E.L. Bauman

date: May 1946

Radial Plot by: F.J. Tarcza

date: May 1946

Detailed by: D.M. Brant

date: 2-17-47 to  
 3-6-47

Reviewed in compilation office by: J.W. Vonasek

date: 3-6-47

manuscript  
 Elevations on ~~Field Edit Sheet~~  
 checked by: J.W. Vonasek

date: 3-6-47

STATISTICS (III)

Land Area (Sq. Statute Miles):

Shoreline (More than 200 meters to opposite shore): 9 statute miles

Shoreline (Less than 200 meters to opposite shore): 25 statute miles

Number of Recoverable Topographic Stations established: None  
signal sites

Number of Temporary Hydrographic ~~Stations~~ located by radial  
plot: 3

Leveling (to control contours) - miles:

Roman numerals indicate whether the item is to be entered  
by, (II) Field Party, (III) Compilation Party, or, (VI) the  
Washington Office.

When entering names of personnel on this record give the  
surname and initials (not initials only).

Remarks:

See heading #26 for explanation of correction from preliminary  
geographic position to corrected and adjusted position.

Preface to Descriptive Report T-8618

Project CS-317

Alaska Peninsula

T-8618 is one of six topographic maps in project CS-317 located on the south shore of the Alaska Peninsula between Cape Kunmik and Wide Bay. These maps are not of standard quadrangle size.

The field inspection was accomplished from the Motor Vessel WESTDAHL, S. B. Grenell commanding, whose "Report of Field Inspection of Air Photographs, Alaska Peninsula, Wide Bay to Cape Kunmik, 1944" is filed in the general files of the Division of Photogrammetry.

The radial plot for project CS-317 was made in the Baltimore Office using templates of nine-lens photographs on polyconic projection bases at 1:20,000 on the North American 1927 Datum. The shoreline was compiled by graphic methods on manuscript bases. All of the materials were then forwarded to the Washington Office where the contouring was compiled from rectified nine-lens photographs on the Reading Plotter, using a contour interval of 200 feet. The maps and materials were then forwarded to the Baltimore Office where the final compilation and inking of the manuscript were completed, after which they were again returned to the Washington Office where they were critically examined in the Stereoscopic Mapping Section, reconciling all discrepancies between hydrographic and topographic features.

A cloth-backed, advance, photographic print of the manuscript is registered with the descriptive report. When the map is printed a cloth-backed lithographic print will replace the advance photographic print. Depth curves and critical soundings are not shown on this map because the hydrography is very old and sketchy.

  
S. V. Griffith  
Chief, Review Section  
Div. of Photogrammetry

FIELD REPORT

SURVEY NO. T-8618

1. DESCRIPTION OF THE AREA:

T-8618 is one of six topographic surveys in Project No. CS-317 located on the Alaska Peninsula. The instructions for this project are dated

29 February 1944 (Supplemental)

18 March 1944 (Supplemental)

Instructions to the compilation office are dated

27 February 1945

21 August 1946 (Supplemental)

30 December 1946 (Memo Instructions)

31 January 1947 (Supplemental)

Instructions are supplemental to project instructions CS 279, filed in Office files of the Div. of Photogrammetry

This survey includes the area west of Nakalilok Bay. With the exception of small sand beaches at the heads of narrow bights between cliffs, and several long flat sand beaches, most of the shoreline is steep and rocky. The interior is mountainous and devoid of trees. The only vegetation consists of moss, grass and low alder trees.

2. COMPLETENESS OF FIELD INSPECTION:

It was impossible to carry out completely the instructions for field inspection because favorable weather conditions were limited. Whenever the opportunity offered, an effort was made to denote the detail along the bold and rocky shore. Only a very small portion of M.H.W.L. at the northwestern part of Nakalilok Bay around the sand flats has been identified. However, careful stereoscopic examination of the photographs should reveal the shoreline.

Detailed notes on the character, formation, and height of rocks and reefs which have been omitted at this time will have to be made at the time of the next hydrographic survey.

4. HORIZONTAL CONTROL:

Two horizontal control stations were established during the 1944 field season.

The following is a tabulated list of information on horizontal control:

STATION	ESTABLISH. AGENCY	IDENTIF. ON PHOTO.	METHOD OF IDENTIF.
CLIFF, 1944	USC&GS	No.06121	arcs
NAKOL, 1944	USC&GS	No.06121	arcs

5. VERTICAL CONTROL:

The two horizontal control stations CLIFF, 1944 and NAKOL, 1944, are also vertical control stations. Their elevations were determined by reciprocal vertical angles.

6. DRAINAGE:

No identification.

7. MEAN HIGH WATER LINE:

Refer to "Report of Field Inspection on Air Photographs - Alaska Peninsula Wide Bay to Cape Kunmik, 1944" submitted by Lieut. Comdr. S. B. Grenell.

8. MEAN LOWER LOW WATER LINE:

No identification.

9. WHARVES AND SHORELINE STRUCTURES:

None

10. DETAILS OFFSHORE FROM MEAN HIGH WATER LINE:

Notes on details offshore from the mean high water line have been made as complete as time permitted but only a few of the many rocks in the area have been noted. Detailed notes which have been omitted will have to be made at the time of the hydrographic survey.

11. LANDMARKS AND AIDS TO NAVIGATION:

None.

12. HYDROGRAPHIC CONTROL

None.

18. GEOGRAPHIC NAMES: 814

No investigation.

19. SUPPLEMENTAL DATA:

Five reconnaissance sheets without projections were made up by tracing shoreline directly from the photographs and adjusting this shoreline by aligning the centers of the photographs only. This gave fairly good detail on an approximate scale of 1:20,000 for running reconnaissance

19. SUPPLEMENTAL DATA:(Continued)

sounding lines, using rocks, reefs, and tangent fixes. On these sheets numerous rocks and reefs were located or noted, and other notes as to low water line, etc. were added. These sheets will be forwarded to Washington and should be referred to by the compiler when the airphoto compilations are executed. See par. 28, p. 7.

(This field report written in the compilation office from notes furnished by the field party).

Respectfully submitted

Donald M. Brant  
Photogrammetric Aid



COMPILATION REPORT

MAP MANUSCRIPT - SURVEY NO. T-8618

26. CONTROL:

See radial plot for layout of control in this area.

The radial plot for the six sheets in this project was run in May-1946, at which time only the preliminary geographic positions for the horizontal control stations were available. On 17 February 1947 the adjusted geographic positions for this horizontal control was received in the compilation office.

Computations have been made which determine that in order to correct the manuscript in respect to geographic position, the polyconic projections should be redrawn with the meridional arcs moved 0.62 mm. to the east and the arcs of parallel moved 1.06 mm. to the north. (Computations attached).

The final adjusted datum is shown on T-8618 by ticks drawn with red ink at four minute intervals on the arcs of parallel and two minute intervals on the meridional arcs. (See copy of letter from Chief, Division of Photogrammetry, No. 711-RCR, dated 25 February 1947, attached to this report).

27. RADIAL PLOT:

Refer to the report for combined radial plot covering the areas of T-8614 to T-8619, inclusive, submitted to the Washington Office, 3 December 1946. Radial Plot Report Filed in General Files of the Div of Photogrammetry.

28. DELINEATION:

The compilation is in accordance with the written instructions pertaining to Project No. CS-317.

With the exception of a few notes and the shoreline identified northwest of Nakalilok Bay no field inspection was furnished. (See heading #2 of this report.)

Parts of the west shore of Nakalilok Bay which fall on T-8617 have been delineated on T-8618.

Photograph No. 06121 was the only rectified print furnished but was received too late to be used for delineation.

A reconnaissance survey was supplied by the field party which was used to supplement data for offshore details. (See heading #19 of this report.)

29. SUPPLEMENTAL DATA:

See heading No. 19 of this report.

30. MEAN HIGH WATER LINE:

Since less than 10% of the mean high water line was identified by the field party most of the shoreline was delineated after stereoscopic examination of the office photographs. (See heading #2 "COMPLETENESS OF FIELD INSPECTION".)

31. MEAN LOWER LOW WATER LINE:

None shown.

31A. SHOAL AND REEF LINES:

Shoal and reef lines visible on the photographs have been delineated.

32. DETAILS OFFSHORE FROM THE MEAN HIGH WATER LINE:

The approximate location of kelp areas around Nakol, 1944 was taken from the reconnaissance survey furnished by the field party.

33. WHARVES AND SHORELINE STRUCTURES:

None

34. LANDMARKS AND AIDS TO NAVIGATION:

None

35. HYDROGRAPHIC CONTROL:

Three (3) hydrographic signal sites have been selected in this office.

A list of their descriptions is attached to this report. Two copies have been furnished for the use of the hydrographic party.

36. LANDING FIELDS AND AERONAUTICAL AIDS:

None.

37. GEOGRAPHIC NAMES:

The following three (3) geographic names are shown on the map manuscript:

NAKALILOK BAY (Taken from Nautical Chart No. 8502)  
NORTH FORK (Taken from U.S.G.S. topographical map  
Kanatak District)  
YANTARNI CREEK (Taken from U.S.G.S. topographical  
map Kanatak District)

38. JUNCTIONS:

Junctions with T-8619 to the south and T-8617 to the east has been made and are in agreement.

Junction with T-8620 to the west will be made when that survey is compiled.

44. COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES:

Due to the reasons stated below it was not practicable to make a comparison with the United States Geological Survey topographic map of Kanatak District, Alaska Peninsula, scale 1:250,000, published in 1935.

- (a) Great difference in scale
- (b) The greater portion of the area common to both maps is unsurveyed on the Geological Survey map.

45. COMPARISON WITH NAUTICAL CHARTS:

No comparison with the U. S. Coast and Geodetic Survey Chart No. 8502, scale 1:1,000,000, published August 1944, was made because of the great difference in scale.

The following topographic information shown on T-8618 is of sufficient importance to warrant immediate application to the chart:

None.

The following topographic details above the plane of mean high water are not shown on this manuscript, but are believed to still exist and should be carried forward on the chart:

None.

Low water features are shown in part and will be completed by the hydrographic party.

Respectfully submitted:  
10 March 1947

Donald M. Brant  
Photogrammetric Aid  
Compilation and Descriptive  
Report

H. R. Randolph  
Supervisor

Joseph W. Bonarck  
Photogrammetric Engineer  
Photogrammetric Office Reviewer

Approved and Forwarded  
12 March 1947

William F. Deane  
Officer in Charge  
Baltimore Photogrammetric Office

NOTES  
FOR  
HYDROGRAPHIC PARTIES  
ALASKA PENINSULA

MAP MANUSCRIPT    SURVEY NO. T-8618

PROJECT NO. CS-317

The  $1\frac{1}{2}$  millimeter circles accompanied with a number are the positions of the hydrographic signal sites. Two copies of the list of descriptions of all the hydrographic signal sites have been furnished for your use.

The outline of shoal and reef areas are approximate and are for your advance information only. They are shown with long and short dashed lines accompanied with the notes "Shoal" and "Reef" respectively.

No comparison with United States Coast and Geodetic Survey Chart No. 8502, scale 1:1,000,000 published August 1944 was made because of the great difference in scale.

The following topographic information on T-8615 is of sufficient importance to warrant application to the chart:

None.

The following topographic details above the plane of mean high water are not shown on this manuscript but are believed to still exist and should be carried forward on the chart:

None.

Low water features are shown in part and will be completed by the hydrographic party.

Respectfully submitted  
10 March 1947

  
Photogrammetric Aid

Approved and Forwarded  
12 March 1947

  
Officer in Charge  
Baltimore Photogrammetric Office

LIST OF HYDROGRAPHIC SIGNAL SITES

Site No.	Description	Pricked on Photo. No.
14	Point of bluff	06121
15	Point of bluff	06121
16	Highest point of island	06121

Listed by Donald M. Brant  
Photogrammetric Aid

Checked by Joseph W. Brant  
Photogrammetric Engineer

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

POST-OFFICE ADDRESS:

Washington 25

RE: 711-RCR

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

27 February 1947

C  
O  
P  
Y

TO: Lieutenant William F. Deane  
U. S. Coast and Geodetic Survey  
601-611 Gorsuch Avenue  
Baltimore 18, Maryland.

C  
O  
P  
Y

Subject: Datum correction, project CS-317

With reference to my letter of a few days ago on the same subject, I have just examined the completed manuscript for T-8615. After examining this manuscript and considering the problem further, I do not believe it will be worthwhile to attempt drafting new projection lines on the manuscripts by means of the ruling machine.

We are adding the additional North American 1927 projection ticks in red on T-8615 in this office. We are placing these ticks at the interval specified in my previous letter with this exception:

In the interior contoured area these ticks  
can be at a greater interval and need not be  
closer than three to four minute intervals.

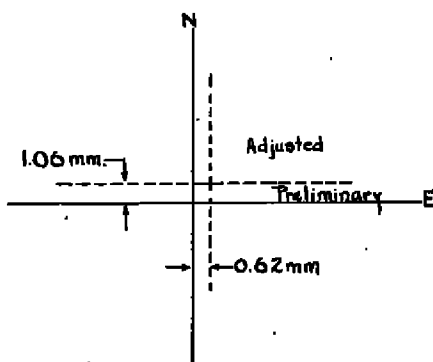
Thus, on T-8615 we are adding the ticks at two minute intervals in the vicinity of the shoreline, but in the interior contoured area are putting them on at about four minute intervals.

I think we are using a good method of placing these ticks and mention it in case you want to do the same. We first made a tracing on celluloid of the one tick which you already had plotted on the manuscript, that is, the tracing included a black intersection for the old datum and a red intersection for the new datum. This tracing is then placed under the manuscript and registered carefully with a magnifying glass and fine red lines traced. I believe this is much faster than plotting each tick with dividers and if carefully done is just as accurate. In tracing the black tick, we left a short break in each of the black lines. This makes it easier to register the tracing exactly under the manuscript.

(Signed) K.T.Adams  
Chief, Div. of Photogrammetry

COMPUTATIONS SHOWING ADJUSTMENT  
REQUIRED TO CORRECT PROJECTION  
LINES TO N.A. 1927 ADJUSTED DATUM  
FOR SURVEY NO. T-8618

	<u>Forward Lash Old Position Meters</u>	<u>Forward Lash New Position Meters</u>	<u>Difference Meters</u>
YUYU, 1944	1025.3 284.2	1004.2 296.4	- 21.1 + 12.2
NAKOLILOK E Base, 1944	161.4 362.1	140.2 374.6	- 21.2 + 12.5
NAKOLILOK W Base, 1944	983.3 916.3	962.0 928.6	- 21.3 + 12.3
NAKOL, 1944	147.1 859.7	125.8 872.0	- 21.3 + 12.3
CLIFF, 1944	466.2 35.1	444.8 47.4	- 21.4 + 12.3



average  $\phi$  = 21.260 meters  
= -1.06 mm.

average  $\lambda$  = 12.320 meters  
= +0.62 mm.

Computed by: H.R. Rudolph  
Checked by: J.W. Vonasek

# GEOGRAPHIC NAMES

Survey No: T-8618

Name on Survey	A	B	C	D	E	F	G	H	K	
<u>Alaska</u>										1
<u>Alaska Peninsula</u>									USGB	2
<u>Nakalilok Bay</u>										3
<u>Yanterni Creek</u>										4
<u>North Fork</u>										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
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										17
										18
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										21
										22
										23
										24
										25
										26
										27
										M 234

Names underlined in red are  
approved. 12/30/48 L.H.



Division of Photogrammetry  
Review Report of  
Topographic Map Manuscript T-8618

Subject numbers not used in this report have been adequately covered in other parts of the Descriptive Report.

26 Control

Horizontal control data form M 2388-12 listing all triangulation stations, within the limits of the map, on the N.A. 1927 adjusted datum, is attached to the descriptive report. The form supplements the previous listing on the preliminary N.A. 1927 datum.

28 Detailing

The final review corrections and changes were made on the map manuscript to insure completeness and conformance with specifications.

The delineation of shoreline was carefully examined and compared with both the office and field inspection photographs. Even though the field inspection of the M.H.W.L. was very meager, the character of the steep sandy beaches and the steep rocky bluff shoreline, rigidly fix the line within very narrow limits. The limits of shallow areas, ledge lines and all other details, offshore from the high-water line are subject to change by the hydrographic party. The delineation of offshore features was based on the interpretation of the office compiler, and shown only as an aid to the hydrographer.

The delineated contours were examined and compared with the photographs by stereoscopic methods. A large portion of the map has not been contoured because of incomplete and unsuitable photographic coverage for 9-lens plotter contouring. When photographic coverage becomes available, the incomplete contours will be added to the map manuscript.

37 Geographic Names

All geographic names shown on the map manuscript have been approved by the Geographic Names Section of the Division of Charts. Attached to the Descriptive Report is a list of approved geographic names.

47 Adequacy of compilation

An examination of map manuscript T-8618 indicates it to be complete in all details as a base map for nautical charts and hydrographic surveys. From the M.H.W.L. inland, all delineated details are adequate for incorporating into standard quadrangle maps, of publication scale recommended not to be larger than 1:24,000 and the contour interval not to be less than 200 feet, except for the first 100 ft. contour.

#### 48 Accuracy Tests

##### Horizontal

No horizontal accuracy test was made. The combination of adequate nine-lens photographic coverage, nine-lens radial plot methods and adequate horizontal control; ~~insures a horizontal control~~, insures a horizontal accuracy equal to or better than National Map Accuracy Standards.

##### Vertical

Vertical accuracy tests have not been made on this map, nor have similar areas ~~x~~ mapped by similar methods been previously tested.

A consultation with the instrument operators indicates that contour errors, and any discrepancies which occur, are caused by datum errors in the nine-lens chamber junctions. Such errors have been minimized by the presence of tide water as a basis for datum corrections at chamber junctions.

51. Application to Nautical Charts.

*T-8618 has been examined but not applied to chart 8802, prior to review.*

Reviewed by:


Under the direction of:

  
Harland R. Cravat Dec. 31, 1948

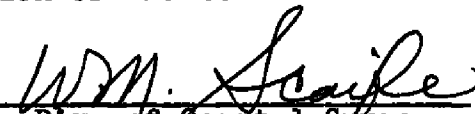
  
Chief, Review Section K. H. M.

Approved by:

~~Tech. Assistant to the Chief,  
Division of Photogrammetry~~

  
Chief, Nautical Chart Branch,  
Division of Charts

  
Chief, Div. of Photogrammetry

  
Chief, Div. of Coastal Surveys

# NAUTICAL CHARTS BRANCH

SURVEY NO. T8618

### Record of Application to Charts

[illegible]

**M-2168-1**

**A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.**