

# 8615

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

# 8615

Form 604	
U. S. COAST AND GEODETIC SURVEY	
DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey <u>Topographic</u>	
Field No. ....	Office No. <u>T-8615</u> <u>CS-317</u>
LOCALITY	
State <u>ALASKA</u>	
General locality <u>Alaska Peninsula</u>	
Locality <u>Imuya Bay</u>	
<u>1944</u>	
CHIEF OF PARTY <u>S.B. Gracell</u> <u>William F. Deane</u>	
LIBRARY & ARCHIVES	
DATE <u>Jan 24 - 1949</u>	

## DATA RECORD

T-8615

Quadrangle (II):

Project No. (II): CS-317

## Field Office:

Seattle, Washington

## Chief of Party:

S. B. Grenell

## Compilation Office:

Baltimore Photogrammetric Office

## Chief of Party:

William F. Deane

## Instructions dated (II III):

## Copy filed in Descriptive

29 Feb. 1944 (Supplemental), 18 March 1944 (Supplemental), 27 Feb. 1945, 21 Aug. 1946 (Supp),  
 30 Dec. 1946 (Memo. Instr.) and 31 Jan. 1947 (Supp)

Completed survey received in office: Feb. 26, 1947

Reported to Nautical Chart Section: March 11, 1947

Reviewed: Nov. 1948 Partially Applied - May 9, 1947  
 Applied to chart No. Date:

Redrafting Completed: 3-2-50

Registered: Dec. 14, 1948

Published:

Compilation Scale: 1:20,000

Published Scale:

Scale Factor (III): 1.000

Geographic Datum (III): N.A. 1927

(Preliminary)

Datum Plane (III): Mean Sea Level\*

Reference Station (III): ILMU, 1944 Vol. 5, pg. 20

Lat.:

Long.:

Adjusted  
 Unadjusted\*\*  
 (Preliminary)

State Plane Coordinates (VI):

X =

Y =

\* except for a few elevations of  
 islands which are referred to  
 mean high water

\*\* The N.A. 1927 adjusted datum has  
 been shown on the map manuscript  
 by supplemental grid ticks.

Military Grid Zone (VI)

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
* 06058	8-5-41	1350	1:20,000	6.5' above MLLW
* 10989-92 incl.	9-5-42	1347	1:20,000	4.2' above MLLW
* 10994-95 incl.	9-5-42	1347	1:20,000	4.2' above MLLW
* 11020-22 incl.	9-13-42	1035	1:20,000	1.8' above MLLW

\* Rectified prints of originals were also furnished.

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

Camera: (Kind or source) United States Coast and 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: date:

Date of Mean High-Water Line Location (III): All of the MHWL along the rocky  
shore was delineated from photographs taken in September 1942. The MHWL  
along the flat sandy beaches was located at the time of the field inspection  
in 1944.

Projection and Grids ruled by (III) S.R. date: 3-11-46

" " " checked by: S.R. date: 3-14-46

Control plotted by: F.J. Tarcza date: 4-3-46

Control checked by: R.E. Rudolph date: 6-12-46

Radial Plot by: F.J. Tarcza date: June 1946  
Contours by: Wm. D. Harris and *on Dalby* date: Jan. 15, 1947  
Contours inked by: R.E. Rudolph date: 1-30-47 to 2-3-47  
Detailed by: R.E. Rudolph date: 2-3-47 to 2-18-47

Reviewed in compilation office by: Raymond Glaser date: 2-14-47 to 2-20-47

manuscript  
Elevations on ~~Field Edit Sheet~~  
checked by: Raymond Glaser date: 2-20-47

STATISTICS (III)

Land Area (Sq. Statute Miles): 48

Shoreline (More than 200 meters to opposite shore): 20 statute miles

Shoreline (Less than 200 meters to opposite shore): 1 statute mile (measured along approximate centerline).

Number of Recoverable Topographic Stations established: 2

Number of Temporary Hydrographic Stations located by radial plot: 12

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-8615

Project CS-317

Alaska Peninsula

T-8615 is one of six topographic maps in project CS-317 located on the south shore of the Alaska Peninsula between Cape Kummik and Wide Bay. These maps are not of standard quadrangle size.

The field inspection was accomplished from the Motor Vessel WESID, RL, S. B. Grenell commanding, whose "Report of Field Inspection of Air Photographs, Alaska Peninsula, Wide Bay to Cape Kummik, 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*  
S. V. Griffith  
Chief, Review Section  
Div. of Photogrammetry

FIELD REPORT

SURVEY NO. T-8615

1. DESCRIPTION OF THE AREA:

T-8615 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)

This survey includes the area around Imuya Bay which is just south of Wide Bay. With the exception of the small sand beaches at the heads of the narrow bights between the cliffs and the long sand beach at the head of Imuya Bay, most of the shoreline is steep and very rocky. The interior is mountainous with elevations rising sharply, in some instances to a maximum of 2000 feet. There are no trees in the area and the only vegetation consists of moss, grass, and low alder brush.

2. COMPLETENESS OF FIELD INSPECTION:

Due to the limited time under favorable weather conditions which was available for field inspection, it was impossible to completely field inspect the area. Whenever the opportunity offered, an effort was made to denote the detail along the bold and rocky shore. Few landings were made on this type of beach and most notes were made from offshore. Approximately 10% of the MHWL has been delineated, mostly along the flat sand beaches. However, careful stereoscopic examination of the photographs should reveal the shoreline detail.

Notes on foreshore and offshore features have been made as complete as time permitted. Detailed notes on the character, formation, and heights of rocks and reefs which have been omitted at this time will have to be made at the time of the next hydrographic survey.

3. INTERPRETATION OF THE PHOTOGRAPHS:

No comment.

4. HORIZONTAL CONTROL:

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

4. HORIZONTAL CONTROL:(Continued)

The following is a tabulated list of information on the identification of the stations:

STATION	IDENTIFIED	IDENTIF. ON PHOTO.	METHOD OF IDENTIF.
IMU	yes	10989	arcs
IMUYA	no		
KILO	yes	10995	arcs
PEAK (5 mi. west of $\Delta$ IMUYA)	no		
/PEAK D-1 <sup>*</sup>	no		
PEAK E <sup>*</sup>	no		
/ WIDE	no		
WRECK	yes	10990	arcs
WRECKED SHIP S.S. ELNA, FOREMAST <sup>+</sup>	no		

<sup>+</sup> Refer to form M-2188-12, immediately following data record of this report, for correct names, as listed by the Division of Geodesy.

5. VERTICAL CONTROL:

Of the horizontal control stations established, six are also vertical control stations. The elevations of IMUYA, KILO, and WIDE were determined by reciprocal vertical angles and the elevations of PEAK E, PEAK D-1, and PEAK (5 mi. west of  $\Delta$  IMUYA) were determined by non-reciprocal vertical angles.

6. CONTOURS AND DRAINAGE:

No inspection.

7. MEAN HIGH WATER LINE:

In general, the high water line is very sharp and distinct, as a greater part of the shoreline is steep and rocky with no horizontal high to low water interval. The small sand beaches at the heads of the narrow bights between the cliffs are generally very steep with the high water line close to the cliff. The long sand beach at the head of Imuya Bay has a distinct storm high water line marked by a "windrow" of logs and drifts just outside the grass line with the mean high water line generally five to ten meters further offshore and marked by a second line of small drift and kelp which sometimes shows as a dark line on the photographs. Also see "Report of Field Inspection on Air Photographs - Alaska Peninsula, Wide Bay to Cape Kunmuk, 1944", submitted by Lt. Comdr. S.B. Grenell. (Filed in Library - Copy in Division of Photogrammetry files).

8. MEAN LOWER LOW WATER LINE:

The mean lower low water line has not been identified.

9. WHARVES AND SHORELINE STRUCTURES:

None

10. DETAILS OFFSHORE FROM THE 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.

nacle

A pin/rock in the northern part of Imuya Bay, which is a danger to navigation, has been located by sextant angles taken at the rock. Complete data is being submitted.

11. LANDMARKS AND AIDS TO NAVIGATION:

None.

12. HYDROGRAPHIC CONTROL:

None.

18. GEOGRAPHIC NAMES: *CLV*

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 sounding lines, using rocks, reefs, and tangents for 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.

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

*Ruth E. Rudolph*  
Photogrammetric Aid



## COMPILATION REPORT

MAP MANUSCRIPT, SURVEY NO. T-8615

### 26. CONTROL:

See radial plot report 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 0.655 mm. to the east and the arcs of the parallel moved 0.99 mm. to the north. (Computations attached).

This correction is shown on T-8615 by an intersection of polyconic projection lines drawn with red ink at their adjusted positions.

### 27. RADIAL PLOT:

See report for combined radial plot covering the areas of T-8614 to T-8619, inclusive, submitted to the Washington Office 3 December 1946.

### 28. DELINEATION:

*(Included in this descriptive report. See preceding pages)*  
Radial Plot Report filed in General Files of the Div. of Photogrammetry

The compilation of this map is in accordance with the written instructions for Project GS-317.

Rectified prints were furnished for all of the photographs except 10994 and 10995. The rectified photographs were used for delineation wherever practicable.

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

Very little field inspection was furnished. (See heading #2 of this report). Two different interpretations of a short stretch of shoreline about 3/4 mile NW of triangulation station IMU, 1944, were given. Stereoscopic examination of the photographs proved that the shoreline as shown on field photograph 10989 was more correct than that shown on 10990.

#### Contouring phase:

This is one of six surveys contoured with the Reading Stereocartograph in the Washington Office and inked in the Baltimore Compilation Office. The contour interval is 200 feet with occasional 100 foot contours shown with dashed lines in accordance with the letter 711-RCR dated 30 December 1946 attached to the descriptive report for T-8616. The topography is believed

28. DELINEATION: (Continued)

to conform to the standard map accuracy specifications for 200 foot contours except the first 100 foot contour above sea level, which is delineated throughout its length and which conforms to the accuracy standards for 100 foot contours. (See also the descriptive report for T-8616).

29. SUPPLEMENTAL DATA:

See heading #19 of this report.

30. MEAN HIGH WATER LINE:

Most of the mean high water line has been delineated after stereoscopic examination of the photographs, since approximately only 10 percent of the mean high water line was identified by the field party. (See heading No. 2, "COMPLETENESS OF FIELD INSPECTION")

31. MEAN LOWER LOW WATER LINE:

None.

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 outline of a foul area, northwest of Kilokak Rocks, was taken from the reconnaissance survey furnished by the field party.

A pin<sup>nacle</sup>/rock, in the northern part of Imuya Bay, which is a danger to navigation, has been located using sextant fix data submitted by the field party.

33. WHARVES AND SHORELINE STRUCTURES:

None.

34. LANDMARKS AND AIDS TO NAVIGATION:

None

35. HYDROGRAPHIC CONTROL:

Twelve hydrographic signal sites have been selected in this office. A list of their descriptions is attached to this report.

36. LANDING FIELDS & AERONAUTICAL AIDS:

None.

37. GEOGRAPHIC NAMES:

Refer to Item 37 of Final Review Report.

Geographic names have been taken from Nautical Chart No. 8502. The only two geographic names in the area are:

IMUYA BAY  
KILOKAK ROCKS

38. JUNCTIONS:

Junctions with Survey No. T-8614 to the north and with Survey No. T-8616 to the south have been made and are in good agreement. To the east is an all-water area and to the west is an undetailed interior area.

44. COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES:

No comparison with the United States Geological Survey topographic map of Kanatak District, Alaska Peninsula, scale 1:250,000 published in 1935 was practicable for the following reasons:

- (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 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 shown on T-8615 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:  
17 February 1947

Arthur C. Rudolph  
Photogrammetric Aid  
Compilation and Descriptive  
Report

Harry R. Rudolph  
Supervisor

Raymond Glasser  
Photogrammetric Aid  
Photogrammetric Office Reviewer

Approved and Forwarded  
26 February 1947

William F. Deane  
Officer in Charge  
Baltimore Photogrammetric Office

Division of Photogrammetry  
Review Report of  
Topographic Map Manuscript T-3615

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

26 Control

All horizontal control stations, identified in the field were held in the radial plot. Two of the office identified horizontal control stations were not held in the radial plot, namely PEAK E, 1944 and PEAK 5 miles west of LUYA 1944.

An examination of the photographs indicates the office identification of the afore-mentioned stations to be impracticable and it is presumed that the office identification was faulty.

Both the coordinate positions and the radial plotted positions of the questionable stations are being retained on the map manuscript, as an aid for future completion surveys.

Horizontal control data form M-2388-12 listing all triangulation stations, within the limits of the maps, 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 L.H.W.L. was very meager, the characteristic of the steep rocky bluff shoreline and steep sandy beaches, rigidly fix the line within very narrow limits. The same cannot be said of the shallow areas, ledge lines, and all other details offshore from the high water line. Such features are subject to change by the hydrographic party. The delineation of offshore features was based on the interpretation of the office compiler, and only as an aid to the hydrographic party.

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-8615 indicates it to be complete in all details as a base map for nautical charts and hydrographic surveys. From the U.S.N. Island, all delineated details are adequate for incorporation into standard quadrangle type 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 foot 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 accuracy equal to or better than National Map Accuracy Requirements.

##### Vertical

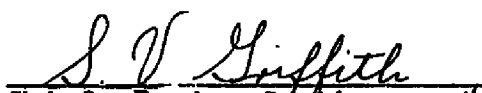
Vertical accuracy tests have not been made on this map, nor have similar areas, mapped by similar methods been previously tested.

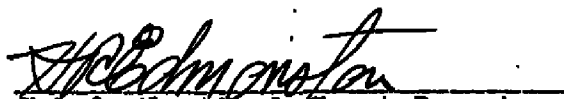
A consultation with the instrument operators indicates that contour errors have been minimized by the lack of woodland cover, and any discrepancies which occur, are caused by datum errors in the nine-lens chamber junctions. Such errors have been minimized by the presence of tide water as a basis for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

Reviewed by:


  
Harland R. Cravat Nov. 24, 1948

Approved by:

  
Chief, Review Section. *JB*

  
Chief, Nautical Chart Branch  
Division of Charts

  
Chief, Div. of Photogrammetry

  
Chief, Div. of Coastal Surveys *HP*

# GEOGRAPHIC NAMES

Survey No. **T-8615**

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	
<u>Alaska</u>									1
<u>Alaska Peninsula</u>								USGB	2
									3
<u>Imuya Bay</u>									4
<u>Kilokak Rocks</u>									5
									6
									7
									8
									9
									10
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									27
									M 234

Names underlined in red are approved. 11/24/48 L. Meek

NOTES  
FOR  
HYDROGRAPHIC PARTIES  
ALASKA PENINSULA

MAP MANUSCRIPT, SURVEY NO. T-8615

PROJECT NO. CS-317

The 2½ millimeter circle, accompanied with a name and date, is the position of the recoverable photo (topographic) station. The 1½ millimeter circles, accompanied with a number only, are the positions of the hydrographic signal sites. Two copies of the list of descriptions of the 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 the 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 shown on T-8615 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  
18 February 1947

Approved and Forwarded  
26 February 1947

William F. Dean  
Officer in Charge  
Baltimore Photogrammetric Office

Ruth E. Rudolph  
Photogrammetric Aid

LIST OF HYDROGRAPHIC SIGNAL SITES

Site No.	Description	Pricked on Photo. No.
✓47	Prominent pinnacle	10994
✓48	High point	10994
✓48A	Pyramidal rock	10995
✓49	High point of rock	10995
✓50	Small pinnacle	10995
✓51	Sharp pinnacle	10995
✓52	High point of rock	10995
✓53	Sharp corner	10990
✓54	High point of small pinnacle	10990
✓55	High point of rock	10990
✓56	High point of rock	10989
✓57	High point of rock	10989

Listed By: Rita E. Gerdolgh  
Photogrammetric Aid

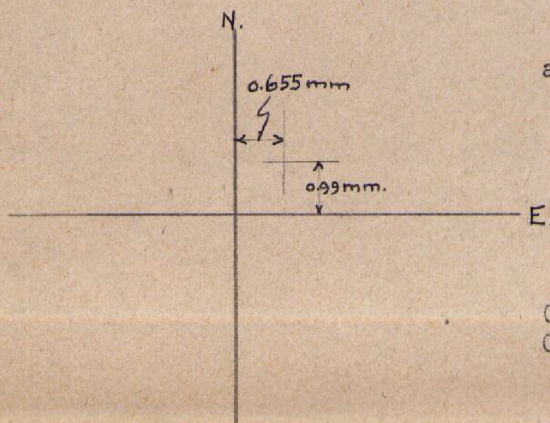
Checked by: Raymond G. Gerdolgh  
Photogrammetric Aid



COMPUTATIONS SHOWING ADJUSTMENT REQUIRED TO  
CORRECT PROJECTION LINES TO N. A. 1927  
ADJUSTED DATUM FOR SURVEY NO. T-8615

	Forward Lash Old Position Meters	Forward Lash New Position Meters	Differences Meters
✓ IMU, 1944	1392.7 930.6	1373.2 944.0	-19.5 +13.4
✓ IMUYA, 1944	1207.1 252.9	1187.2 266.0	-19.9 +13.1
✓ KILO, 1944	929.2 651.7	909.6 664.8	-19.6 +13.1
✓ PEAK 5 mi. W. of $\Delta$ IMUYA, 1944	998.3 382.3	978.1 395.6	-20.2 +13.3
✓ PEAK D1, 1944	912.6 459.0	894.5 470.3	-18.1 ) This station +11.3 ) not used.
✓ PEAKE E, 1944	861.2 763.7	841.1 775.8	-20.1 +12.1
✓ WIDE, 1944	1828.0 195.4	1808.2 209.1	-19.8 +13.7
✓ WRECK, 1944	716.1 423.4	696.4 436.5	-19.7 +13.1
✓ <del>WRECK SHIP</del> SS ELNA FOREMAST, 1944	585.0 893.9	565.3 907.2	-19.7 +13.3

Foremast  
(of Wreck SS  
ELNA) 1944



average  $\phi$  = 19.8 meters  
0.99 mm

average  $\lambda$  = 13.1 meters  
.655 mm

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



## NAUTICAL CHARTS BRANCH

SURVEY NO. 8615

### 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.