

# 8088

Diag'd. on Diag. Ch. No. 8863-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey Topographic Quadrangle

Field No. Ph-34 (48) Office No. T-8088

### LOCALITY

State Aleutian Islands, Alaska

General locality East of Amchitka

Locality Unalga Island

1945-'48

### CHIEF OF PARTY

R.F.A. Studde

### LIBRARY & ARCHIVES

DATE September 26, 1949

6-1870-1 (1)

## DATA RECORD

T-8088

Quadrangle (II): UNALGA ISLAND

Project No. (II): Ph-34(48)

Field Office: Ships Patton and Chief of Party: R.F.A. Studds and  
Surveyor C.D. Meaney (in command)Compilation Office: Wash. D.C. Chief of Party: Lou Reed  
(Stereoscopic Mapping Section)

Instructions dated (II III):

19 June 1945

Copy filed in Descriptive

8 April 1948

Report No. xTx (VI)x

Division of Photogrammetry  
Office Files

Completed survey received in office: 2-10-49

Reported to Nautical Chart Section: 2-15-49

Reviewed: 6-22-49

Applied to chart No.

Date:

Redrafting Completed:

Registered: 9-13-49

Published:

Compilation Scale: 1:20,000

Published Scale: 1:25,000

Scale Factor (III): 1.1

Geographic Datum (III): NA 1927

Datum Plane (III): MSL, except:

(25) = MHW

Reference Station (III): Unalga, 1944 (5) = MLLW  
P203, Vol 5, G6836

Lat.:

Long.:

Adjusted

Unadjusted

State Plane Coordinates (VI): None

X =

Y =

Military Grid Zone (VI) Universal Transverse Mercator  
Zone No. 1Plotted by K.N. Maki 1-20-50  
Checked by L.M. Gazik 1-20-50

M-2467-12(3)

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
(a) Field Inspection Photographs (Navy - 5 lens):				
471	1934	Unknown	1:20,000	Unknown
(b) Compilation Photographs (C&GS 6" single-lens):				
451	9-19-48	9:43	1:27,000	1.5 ft. above MLLW
452	9-19-48	9:46	1:27,000	

Tide from (III): Sweeper Cove Reference Station

Mean Range

Spring Range

Diurnal Range: 3.8 ft.  
Camera: (Kind or source)

USC&GS, 6" Single-lens, (0)

Field Inspection by:

R. F. A. Studds

date:

Summer, 1945

Field Edit by:

None

date:

Date of Mean High-Water Line Location (III):

Summer, 1945

Projection and Grids ruled by (III) Ruling Machine

date: 12-23-48

" " " checked by: T. J. Jansen

date: 12-23-48

Control plotted by: John B. McDonald

date: 12-24-48

Control checked by: Louis J. Reed

date: 12-24-48

Radial Plot by: None required

date:

Instrument Compilation (Stereoplaniograph by: Michael G. Misulia date: 12-28-48

Detected by:

date:

Manuscript Compilation by: Robert S. Sugden

date: 1-17-49

Reviewed in compilation office by: Louis J. Reed

date: 1/31/49

Elevations on ~~Field Photo Sheets~~ Manuscript  
checked by: Louis J. Reed

date: 1-31-49

STATISTICS (III)

Land Area (Sq. Statute Miles): about 1 mile

Shoreline (More than 200 meters to opposite shore): About 4 miles

Shoreline (Less than 200 meters to opposite shore): none

Number of Recoverable Topographic Stations established: three

Number of Temporary Hydrographic Stations located: ~~by hydrographic party~~ None  
~~plotter~~

Leveling (to control contours) - miles: None

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:

Summary to Accompany T-8088  
Unalga Island

Field inspection was accomplished in 1945 by the personnel of the Ship PATTON, R.F.A. Studds Commanding. All field inspection was indicated on one Navy five-lens photograph.

A radial plot was not required. Compilation was performed in the Washington Office on the stereoplanigraph using a contour interval of 50 feet and a supplemental contour interval of 25 feet. Photography for the instrument was taken with the U. S. Coast and Geodetic Survey 6" Cartographic ("O") Camera. Instrument delineation was supplemented, in part, by 1945 Graphic Control Surveys.

Depth curves and critical soundings were applied to the manuscript by the Division of Charts.

A cloth-backed lithographic print at compilation scale will be registered with the Descriptive Report. After publication, a cloth-backed color print at 1:25,000 scale will also be registered.

K. N. Maki  
K. N. Maki  
June 22, 1949

FIELD INSPECTION REPORT

1. Description of the Area.-

Unalga has steep bluffs, about 200 feet high, all around the island. The top is grass covered, but the shoreline is very ~~bare~~ and rugged. The water is deep offshore and is kelp-choked, especially at the south end of the island. Offlying rocks to the southwest are very steep and barren, therefore, quite prominent. A cabin exists near the southwest end of the island, but was not visited by the field party in 1945. Sea lion rookeries are numerous.

1-25 Photogrammetric field surveys were made prior to compilation by parties from the ship PATTON as part of the hydrographic work in this area. The field report on this work is included in descriptive report T-6999.

*Filed in the  
Bureau Archives.*

COMPILATION REPORT

26. Control.-The compilation is controlled by two adjusted 1944 triangulation stations, UNA and UNALGA. They are listed elsewhere in this report with their geographic positions.

Field identification of photographs was very poor since only one photograph of the island was available at the time, making stereoscopic inspection impossible. UNALGA, which is located on the main body of the island, was the better identified. UNA fell off the edge of the photograph and was identified in the office by the description only, as being the highest point in a group of offlying rocks.

However, the stations were identified quite definitely in the stereoplanigraph model as verified by good agreement with planetable located topographic and hydrographic control.

*graphic control not retained  
See H-7052*

The compilation was controlled vertically by the water surface in the photography and by the elevation furnished for station UNALGA.

27. Radial Plot.-None is required for stereoplanigraph plotting.

28. Detailing.-Compilation photography was entirely adequate, the two photos forming a single model for the stereoplanigraph.

There was no shoreline inspection on the lone field photograph. Therefore, the complete shoreline shown on the manuscript was delineated on the stereoplanigraph and will supersede any previous compilation.

29. Supplemental Data.-

- (a) Hydrographic Survey H-7052
- (b) Graphic Control Survey T-6999b *Destroyed 4/1/51*

*See H-7052*

~~These~~ planetable surveys<sup>were</sup> made to establish control for the hydrography, and includes the location of certain permanent topographic stations plus a few along shore rocks.

30. Mean High-Water Line.-All elevations on the (Graphic Control Survey sheet) are referenced to high water and have been transferred to the manuscript in proper symbol except for one elevation on the topographic station, TIT, located on a high rock lying off the northwest point of the island.

Compilation Report (Continued)

TIT is a landmark labeled 50 feet on the topo sheet, equal to 52 feet MSL. An elevation of 55 feet was read on it by the plotting instrument during compilation, making necessary the showing of the 50-foot contour. For this reason the instrument reading is selected over the topographic elevation and preserved on the manuscript.

31. Shoal Lines.-A foul line is shown on the compilation along the west side of the island, and around outlying groups of rocks. It is not a shoal line in the true sense, but does indicate in general that the area inside it can be considered as an area of shallow water. The foul line was delineated on the instrument guided more or less by the surf appearing in the photographs of the compilation model. This foul line is in agreement with details on the Hydrographic Survey.

32. Details Offshore from the High-Water Line.-After instrument delineation and manuscript compilation was complete, a thorough and detailed comparison of it was made with the Graphic Control and Hydrographic Surveys. Very few offshore rocks were located on the Graphic Control sheet and a note thereon indicates it to be incomplete. Therefore, the major portion of the comparison was made against the Hydro Survey. There are numerous offshore features, several of which were missing on one or the other sheet, mostly from the office compilation, since the surf probably covered and hid low lying rocks and rocks awash. These were transferred to the manuscript while oriented on the only two mutual control points, UNA and UNALGA. In cases where the shorelines of larger offshore islands disagreed, the photo delineation was accepted in accordance with the field man's recommendation found in paragraph G, page 2, of the Descriptive Report accompanying Hydrographic Survey H-7052. In the reference it is stated that because of kelp and constant swells, it was impossible to investigate and delineate the shoreline and offlying rocks, and therefore should be done in the office from photography. As a result, instrument delineation has been retained in cases of conflict.

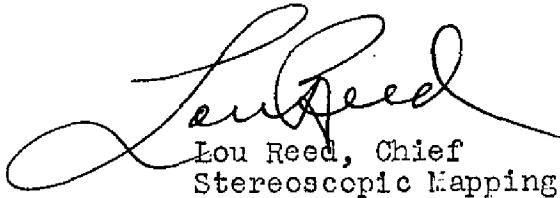
34. Landmarks and Aids to Navigation.-The island itself gives the appearance of a giant flattop, therefore, it might be well to here select two high offlying rocks, one to the southwest and one to the northwest, of the island, which could very well serve as landmarks and aids to navigation. The first rock is about a mile off the main

Compilation Report (Continued)

off the main body of the island, the second about a half mile. Both are high, quite prominent, and should be visible for some distance at sea. The southwest rock is triangulation station UMA 1944, the rock to the northwest is the 55 foot pinnacle mentioned in paragraph 30, above.

Hydrographic data is to be added to this manuscript to the limits of the sheet by the Nautical Chart Branch. It is recommended that the 20-fathom curve be made the bottom contour on this compilation because of the statement made by the field surveys as to shoals requiring development within the 20-fathom curve in the vicinity of Unalga Island. *History of Hydrographic Information is attached.*

37. Topographic Control.-Twenty-seven topographic stations were established by planetable, ~~± 600 ft~~, for use in controlling the subsequent hydrographic survey. Normally they would be photo identified for parallel service as control for office topographic compilation using aerial photography. In this case there was only one field photo available, and none of the topo stations were identified. Four were indicated thereon as being the highest point of a specific offshore rock. Forms 524 were submitted by the field party for three stations, DASH 1945, JUMP 1945, and PETE 1945. ~~Two were indicated on the field photo.~~



Lou Reed, Chief  
Stereoscopic Mapping Section

HISTORY OF HYDROGRAPHIC INFORMATION

*8088*  
T-9255

Unalga Island Quadrangle, Delarof Group,  
Aleutian Islands

The soundings are expressed in fathoms referred to mean lower low-water. The curves are drawn at depths of 1, 3, 5, 10, 20, 30, 40, 50 fathoms and at intervals of 100 fathoms.

The hydrography originates with the following hydrographic surveys by this Bureau:

H-7052 (1945) 1:20,000  
H-7050 (1945) 1:40,000  
H-7049 (1945) 1:160,000(reconnaissance survey)  
BP-39018 (1944) 1:300,000(reconnaissance survey)

The danger curve (foul line) on the southwest side of Unalga Island was compiled from the photographs. The curve was completed northeast of the island in applying the hydrography.

Hydrography applied by: R. E. Elkins - 5/10/49

Hydrography checked by: G. F. Jordan - 5/11/49

*R. E. Elkins*

R. E. Elkins  
5/12/49

## GEOGRAPHIC NAMES

Survey No.

T- 8088

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>Alaska</u>									1
<u>Aleutian Islands</u>									2
<u>Dalorof Islands</u>									3
<u>Pacific Ocean</u>									4
<u>Bering Sea</u>							USGB		5
<u>Unalga Island</u>									6
<u>Dinkum Rocks</u>									7
<u>Amchitka Pass</u>							USGB		8
									9
									10
Names underlined in red are approved.									11
						6-13-49	L. Heck		12
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Division of Photogrammetry  
Review Report of  
T-8088

39 Geographic Names

A list of Geographic Names was compiled by the Geographic Names Section, Division of Charts. It is attached to the Descriptive Report.

44a Comparison with Previous Surveys

<del>*T-69990</del> <small>Not registered</small>	1:20,000	1945
*H-7052	1:20,000	1945
H-7050	1:40,000	1945
H-7049	1:160,000	1945 (recon. Survey)
BP-39018	1:300,000	1944

\*These surveys were used to supplement the instrument delineation of detail. Refer to items 29 and 32 of the Compilation Report.

45 Comparison with Nautical Charts

8863                    1:300,000                    3-7-49

47 Adequacy of the Compilation

This map, T-8088, is a complete topographic map and has been compared and reconciled with all hydrographic and topographic surveys of record in this Bureau and becomes, therefore, the most authoritatively complete and accurate topographic map of record for Unalga Island as of the date of this report.

48 Accuracy Tests

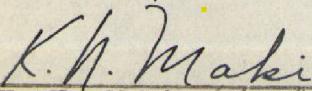
Horizontal

Photo coverage and horizontal control were adequate for instrument compilation methods and ensure that the map meets the National Map Accuracy Standards.

Vertical

No vertical accuracy tests have been made in the area of this map. All contours are within the accuracy requirements for a contour interval of 50 feet. The supplemental 25 foot contours are within the accuracy requirements for a contour interval of 25 feet.

Reviewed by:

  
K. N. Maki 6/22/49

T-8088  
Page 2

Approved by: S. Griffith

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

K.T. Adams  
Chief, Div. of Photogrammetry

A.C. Edmonston  
Chief, Nautical Chart Branch  
Division of Charts

W.M. Scaife  
Chief, Div. of Coastal Surveys <sup>1948</sup>