**U.S. COAST AND GEODETIC SURVEY**
**DEPARTMENT OF COMMERCE**

**DESCRIPTIVE REPORT**

<table>
<thead>
<tr>
<th>Type of Survey</th>
<th>Topographic Quadrangle</th>
</tr>
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<tbody>
<tr>
<td>Field No.</td>
<td>Ph-34 (48)</td>
</tr>
<tr>
<td>Office No.</td>
<td>T-8088</td>
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</table>

**LOCALITY**

<table>
<thead>
<tr>
<th>State</th>
<th>Aleutian Islands, Alaska</th>
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<tbody>
<tr>
<td>General locality</td>
<td>East of Amchitka</td>
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<tr>
<td>Locality</td>
<td>Unalga Island</td>
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</table>

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**1945-48**

**CHIEF OF PARTY**

R.F.A. Studde

**LIBRARY & ARCHIVES**

**DATE** September 26, 1949
DATA RECORD

T-8068

Quadrangle (II): UNALGA ISLAND Project No. (II): Ph-34(48)


Compilation Office: Wash. D.C. Chief of Party: Lou Reed (Stereoscopic Mapping Section)

Instructions dated (II III): Copy filed in: Descriptive Report No. TX
19 June 1945 WLI
8 April 1948 Division of Photogrammetry

Completed survey received in office: 2-10-49 Office Files

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

Reference Station (III): Unalga, 1944 (5) = MLLW
P203, Vol. 15, 66836

Lat.: Long.: Adjusted

State Plane Coordinates (VI): None Unadjusted

\[ X = \quad Y = \]

Military Grid Zone (VI) Universal Transverse Mercator Zone No. 1

Plotted by K.N. Maki 1-20-50
Checked by L.M. Gazik 1-20-50

M-2457-12 (1)
PHOTOGRAPHS (III)

(a) Field Inspection Photographs (Navy - 5 lens):

<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Time</th>
<th>Scale</th>
<th>Stage of Tide</th>
</tr>
</thead>
<tbody>
<tr>
<td>L71</td>
<td>1934</td>
<td>Unknown</td>
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(b) Compilation Photographs (C&GS 6" single-lens):

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<th>Time</th>
<th>Scale</th>
<th>Stage of Tide</th>
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</thead>
<tbody>
<tr>
<td>L51</td>
<td>9-19-48</td>
<td>9:43</td>
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<td>1.5 ft. above MLLW</td>
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<tr>
<td>L52</td>
<td>9-19-48</td>
<td>9:46</td>
<td>1:27,000</td>
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Tide from (III): Sweeper Cove Reference Station

Mean Range: Spring

Diurnal Range: 3.8 ft.

Camera: (Kind or source)

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

Field Inspection by:
R. F. A. Stuells

Field Edit by:
None

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

Summer, 1945

Projection and Grids ruled by (III) Ruling Machine

" " " checked by: T. J. Jansen

Control plotted by: John B. McDonald

Control checked by: Louis J. Reed

Radial Plot by: None required

Instrument Compilation (Stereoplanigraph by: Michael C. Misula) date: 12-28-48

Detailed by:
Manuscript Compilation by: Robert S. Sugden date: 1-17-49

Reviewed in compilation office by: Louis J. Reed date: 1/31/49

Manuscript Elevations on Field

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: None

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. H. 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.
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 plane table located topographic and hydrographic control.

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-67992

These plane table surveys were made to establish control for the hydrography, and include 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, TTT, 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 UNA 1944; the rock to the northwest is the 50 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 survey as to shoals requiring development within the 20-fathom curve in the vicinity of Unalga Island. (Editor: Hydrographic Information is attached.)

37. Topographic Control.-Twenty-seven topographic stations were established by planetable, 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; the were indicated on the field photo.

Lou Reed, Chief
Stereoscopic Mapping Section
HISTORY OF HYDROGRAPHIC INFORMATION

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
5/12/49
<table>
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<th>Name on Survey</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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Names underlined in red are approved.  
6-1949 L. Week.
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

<table>
<thead>
<tr>
<th>Survey</th>
<th>Scale</th>
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<tbody>
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<td>H-7052</td>
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<td>H-7049</td>
<td>1:160,000</td>
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<td>BP-39018</td>
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<td>1944</td>
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*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

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<td>8863</td>
<td>1:300,000</td>
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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 authoritative 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:

[Signature]

K. N. Maki 6/22/49
Approved by:  

[Signature]

Chief, Review Section  
Division of Photogrammetry

[Signature]

Chief, Nautical Chart Branch  
Division of Charts

K.T. Adams  
Chief, Div. of Photogrammetry

W.M. Scifres  
Chief, Div. of Coastal Surveys