

8029

Diag. Cit. No. 8863-2.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. Ph-34 (48) Office No. T-8029

LOCALITY

State Alaska

General locality Delarof Group, Aleutians

Locality Amatignak Island

1945

CHIEF OF PARTY

G. L. Anderson, Chief of Field Party

H. A. Paton, B'more Photo. Office

L. J. Reed, Div. of Photo. Washington

D.C.

LIBRARY & ARCHIVES

DATE August 2, 1957

B-1870-1 (1)

8029

## DATA RECORD

T- 8029

Project No. (II): Ph-34 (48)      Quadrangle Name (IV):      Amatignak Island

Field Office (II): USC&GSS Explorer  
Baltimore, MdChief of Party: George L. Anderson  
Radial Plot      Hubert A. Paton, chiefPhotogrammetric Office (III):  
Washington, D.C.Officer-in-Charge:  
Compilation      Louis J. Reed, chief

Instructions dated (II) (III):

Stereo map section  
copy filed in Division of  
Photogrammetry (IV)(II) = 19 Mar 52  
(III) = 1 Dec 52

Method of Compilation (III):      Reading Plotter

Manuscript Scale (III):      1:20,000

Stereoscopic Plotting Instrument Scale (III):      1:20,000

Scale Factor (III):      1.0

FEB 20 1953

Date received in Washington Office (IV):

Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV):

MAR 3 1953  
26 April 1957

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III):      NA 1927

Vertical Datum (III):

Mean sea level except as follows:

Elevations shown as (25) refer to mean high water

Elevations shown as (5) refer to sounding datum

i.e., mean low water or mean lower low water

Reference Station (III):

Lat.:

Long.:

~~XXXXXX~~  
Unadjusted

Plane Coordinates (IV):

State:

Zone:

Y=

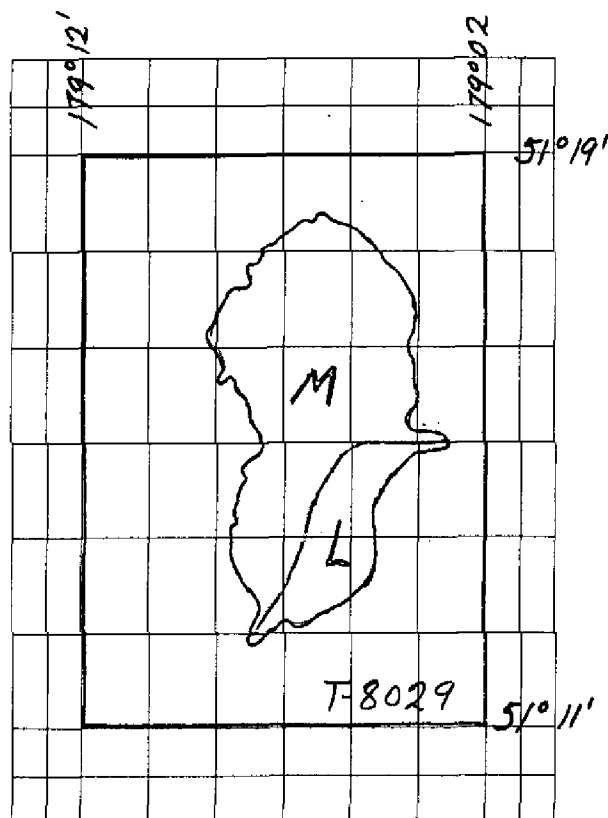
X=

MILITARY GRID = UTM, zone 1

1000 meter interval

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

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



Areas contoured by various personnel  
(Show name within area)  
(X) (III)

M = Contoured by Clarence Misfeldt  
with the Reading Plotter model "A"

L = Contoured by Louis Levin  
with the Reading Plotter model "B"

## DATA RECORD

Field Inspection by (II): George L. Anderson

Date: Sept 52

Planetable contouring by (II): none

Date: \_\_\_\_\_

Completion Surveys by (II): none

Date: \_\_\_\_\_

Mean High Water Location (III) (State date and method of location):

July 1952. Reading Plotter Delineation from 9-lens photographs

Projection and Grids ruled by (IV):

Jack Allen on the Reading Ruling Machine

Date: 3 Dec 52

Projection and Grids checked by (IV):

Howard D. Wolfe

Date: 3 Dec 52

Control plotted by (III):

Ruth Hartley

Date: 31 Dec 52

Control checked by (III):

Albert Queen

Date: 6 Jan 53

Radial Plot ~~XXXXXXXXXX~~

Control extension by (III):

Ruth Hartley

Date: 8 Jan 53

Stereoscopic Instrument ~~XXXXXXXXXX~~

delineation

Planimetry

Louis Levin and  
Clarence Misfeldt

Date: 17 Feb 53

Contours

Date:

compiled

Manuscript ~~XXXXXXXXXX~~ by (III):

Henri Lucas

Date: 19 Feb 53

Photogrammetric Office Review by (III): William D. Harris

Date: 20 Feb 53

Elevations on Manuscript  
checked by (II) (III):

William D. Harris

Date: 20 Feb 53



Camera (kind or source) (III): USC&GS 9-lens camera "B", f=8.25 inches

Number	Date	PHOTOGRAPHS (III) Time 175th Mer.	Scale	Stage of Tide
37595 thru 37608	1 Jul 52	1540	1:20,000	1.9 below MHHW 0.3 below MSL

See item 33, Supplemental Data,  
for additional information on photographs.

Tide data computed by Mr. Wilcox of Tides and Currents 26 Jan 53

Tide (III)

diurnal

Reference Station: **Sweeper Cove**  
Subordinate Station: **Lash Bay**  
Subordinate Station:

Ratio of Ranges	Mean Range	<del>Mean</del> Range
1.0		3.7
		4.2

Washington Office Review by (IV): K. N. MAKI;

Date: 3-3-54

Final Drafting by (IV): *M. C. Webber (AMS. Quad)*  
*M. Day*

Date: 4-2-56

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

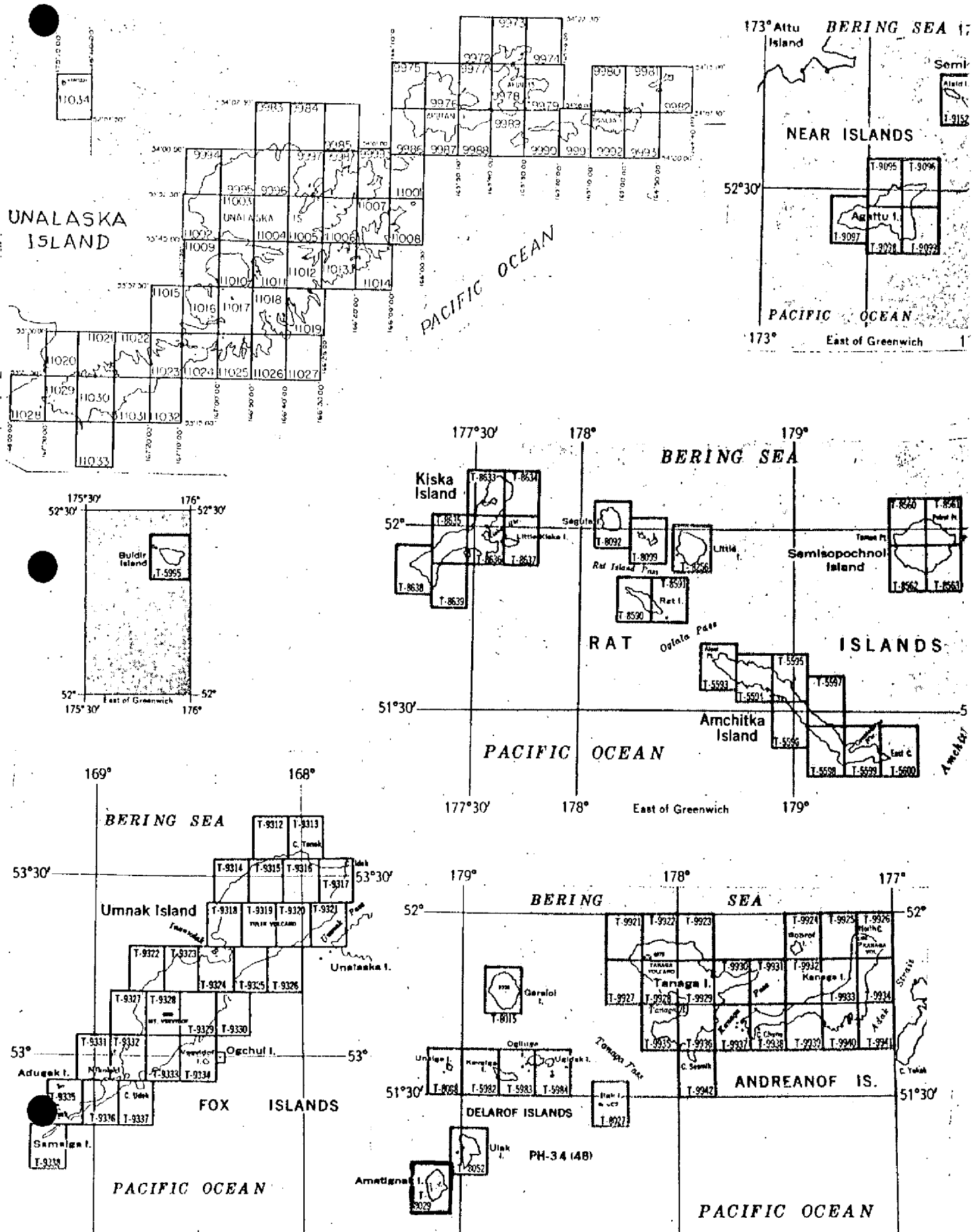
Date:

Land Area (Sq. Statute Miles) (III): **14.5 square miles**  
Shoreline (More than 200 meters to opposite shore) (III): **18.1 miles**  
Shoreline (Less than 200 meters to opposite shore) (III): **none**  
Control Leveling - Miles (II): **none**  
Number of Triangulation Stations searched for (II): **one**  
Number of BMs searched for (II): **none**  
Number of Recoverable Photo Stations established (III): **none**  
Number of Temporary Photo Hydro Stations established (III): **41**

Recovered: **one** Identified: **ten**  
Recovered: **none** Identified: **none**

Remarks: Seven of the photo-hydro stations of the 48 listed in the  
Field Inspection Report are also triangulation stations.

ALASKA-BERING SEA Aleutian Islands





Summary to Accompany  
Descriptive Report T-8029

Topographic map T-8029 covers the entire area of Amatignak Island of the Delarof Islands, Alaska. This map was compiled by stereo-instrument methods using the nine-lens Reading plotter. The field operations preceding compilation included inspection of shoreline and foreshore areas, the recovery of horizontal control, the establishment of additional horizontal control and the determination of elevations to control the stereo-instrument compilation vertically. The compilation was at a scale of 1:20,000, with a contour interval of 50 feet supplemented by a contour interval of 25 feet where needed. The map manuscript consists of one sheet  $7\frac{1}{2}'$  in latitude by  $10'$  in longitude. The map was not field edited.

Depth curves and critical soundings are to be applied to the manuscript by the Division of Charts. These features do not appear on the ~~preliminary~~ registration print.

The descriptive report and a ~~cloth-backed lithographic~~ print of the map, at compilation scale, will be registered in the Bureau Archives. After publication, a cloth-backed color print of the map will also be registered.

for preparation of  
copy for Army map service

by Army  
map service

PART I  
DESCRIPTIVE REPORT  
FIELD PHOTOGRAMMETRIC OPERATIONS  
AMATIGNAK ISLAND  
ALEUTIAN ISLANDS, ALASKA

Project Number: CS-218  
Chief of Party: G. L. Anderson  
Authority: Instructions-Project CS-218  
(PH-34), 19 March 1952  
Date of beginning field work: 30 June 1952  
Date of ending field work: 31 August 1952

METHODS EMPLOYED:

The method of field inspection of the shoreline on Amatignak Island is described in AREAL FIELD INSPECTION. Forty-eight photo-hydro stations were constructed along the shoreline of Amatignak Island as control for the hydrographic parties. These stations were located on the single lens photographs and radial plotted on the Advance Manuscript RS-443. The method of locating the strips of shoreline on the advance manuscript is explained in HORIZONTAL CONTROL.

For preliminary signals and shoreline for the boat sheets, the radial plotted locations of the photo-hydro stations on the 1/10,000 manuscript were transferred to the 1/20,000 photographic reproduction of the manuscript. The separate strips of shoreline were adjusted to the boat sheet locations of key hydrographic and triangulation stations and the radial plotted photo-hydro points were pricked through the 1/20,000 photographic reproduction on to the boat sheet. The photo-hydro stations were then located in relation to the topography on the bromoil manuscript. The position of the stations on the bromoil were fitted to the corresponding radial plotted stations located on the boat sheet and the shoreline was transferred to the boat sheet. For the smooth plot of the hydrographic sheet a new radial plot of



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photo-hydro signals using nine lens photographs and triangulation control will be necessary.

The method of determining the elevation of the more prominent land features is explained in VERTICAL CONTROL. See item 4

The advance manuscripts prepared by the Washington Office were helpful in making the field radial plot of the locations of the photo-hydro stations. Although the tilt in the photographs made it impossible to make a manuscript of the shoreline of the whole island, these three strips of uncontrolled shoreline were used as soon as the necessary horizontal control was established.

ADEQUACY OF INSTRUMENTS, MATERIALS AND EQUIPMENT:

The pocket stereoscope gave satisfactory results for examining the single lens photos in the field. More complete examination of the photos was made with the Schneider Prismatic Stereoscope aboard the ship. The adequacy and quality of the single lens photographs is discussed in AREAL FIELD INSPECTION. The adequacy of the Advance Manuscript is discussed in METHODS EMPLOYED.

STATISTICS:

Area Surveyed (square statute miles)	14.53
Shoreline Inspected (statute miles)	18.15
Triangulation Stations searched for	1
Triangulation Stations recovered	1
Triangulation Stations established	6
Triangulation Stations identified	5
Triangulation Intersection Stations identified	5
Photo-Hydro Stations identified	48

Respectfully submitted

*Robert C. Munson*

Robert C. Munson  
Ensign, USC&GS

Approved and Forwarded

*George L. Anderson*  
George L. Anderson  
Capt. USC&GS  
Chief of Party

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## PART II

## FIELD INSPECTION REPORT

## AMATIGNAK ISLAND

Project CS-218 (Ph-34)

2. AREAL FIELD INSPECTION:

## (a). Description of Area:

The area covered in this field inspection report is known as Amatignak Island. It is approximately five miles long and three miles wide with the longer dimension running north and south. The terrain of the island is very rugged with steep bluffs around its perimeter. The peaks of the island are seldom visible because of fog. From the few times that the top was visible, it was noted that no single peak was particularly outstanding. The top of the island is composed of several peaks about the same elevation. The rugged terrain is covered with three foot grass, tundra and bare rock.

The single lens photographs available to the field party do not cover the interior area of the island so the general drainage pattern can not be viewed as a whole. There appears to be a ridge running north and south a little west of the middle of the island. There are smaller ridges that branch off from the main ridge and run east and west to the shoreline. The water drains down both sides of these ridges into small lakes and streams. The bottom of the drains are swampy and covered with grass. Although the terrain is rugged and steep, there are many small upland lakes in the tundra. There are several waterfalls along the shoreline where streams flow over the bluff.

The character of the beach varies greatly around the island. The east coast is fairly regular and less rugged than the west coast with the narrow beaches at the foot of the steep slopes consisting of large boulders and small areas of rock. Knob Point (charted name) is the most prominent natural feature on the east coast. It is a large detached hill on a point outlined by a steep bluff. On the north side of Knob Point in Ulva Cove (name from Hydrographic Survey Sheet No. 7053) there is a break in the steep bluff line that extends around most of the island. At the head of Ulva Cove the drainage basin between the two high ridges fans out into a low, relatively flat area at the shoreline.



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This flat area is swampy and covered with grass. The only man-made feature on Amatignak Island is a shack on this flat area near the shoreline.

In the cove south of Knob Point there is an area along the shoreline where the face of the steep bluff is a tilted bare rock fault. This is a peculiar feature because there appears to be sedimentary rock formation here while the west coast appears to be of volcanic origin.

The southern shore of the island comes to a prominent point which has a charted name of Nitrof Point. There is a group of large pinnacle rocks offshore from Nitrof Point. The highest rock in this group was named INTER and was used as a photo-hydro station and a triangulation intersection station by this field party. Further offshore about six tenths of a mile southwest of Nitrof Point, there is a rock awash which was named PIP and also used as a photo-hydro signal and a triangulation intersection station.

The west coast is very irregular with more rugged terrain and steeper bluffs than the east coast and has cliffs, caves, arches, rugged rock formations and pinnacles. Just south of the central part of the west coast there is a small chain of offshore rocks that extend out westward from shore and end in a rocky reef. The highest point of the rock furthest from shore is photo-hydro station LOW. While this survey was in progress, the Greek ship S. S. Eugenia Chandris went aground in the small cove on the south side of these rocks. In the northern part of the west coast there is a small deep cove which is more protected for landing than any other part of the west coast of Amatignak Island.

See Geogr  
Names List.

There is a large, dome-shaped offshore rock in the northwestern part of the island. This grass-topped, prominent rock is about one hundred and seventy feet high and was used as a photo-hydro station and a triangulation intersection station.

(b). Field Inspection:

The shoreline in this area was field inspected while the party was locating photo-hydro stations for hydrography. The field inspection was completed on the beach when the party landed to construct a photo-hydro station. The remainder of the shoreline between photo-hydro stations was inspected from a launch running parallel to the shore. Vertical angles were taken with a sextant to some of the more prominent features around the island to determine their elevation.

This field inspection is believed to be standard.



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(c). Quality of Photographs:

These single-lens photographs were adequate for shoreline inspection but were unsuitable for complete mapping coverage. The photographs covering the southeastern portion of the island were badly tilted and have a very weak radial plot. The photographs covering the southwestern portion of the island were taken too far inland, making the shoreline obscured by the top of the bluff and by shadows. Some of the triangulation stations could not be identified because of clouds on the photo or lack of photo coverage.

3. HORIZONTAL CONTROL:

A small scheme of triangulation was extended to Amatignak Island. This is described in TRIANGULATION REPORT, SHIP EXPLORER, 1952. For the list of horizontal-control stations and the photographs on which they are identified, see INDEX TO FIELD WORK attached to this report. Information pertinent to the identification of stations is on the attached M-2226-12 forms. (Control Station Identification) Filed in Division of Photogrammetry general files - 11 stations.

The single-lens photographs did not cover the locations of triangulation stations DUSTY, 1952; FINIS, 1952, and AMATIGNAK, 1944. Because of the rugged terrain and prevalent poor visibility conditions, it was not practicable to extend the triangulation scheme or traverse lines along the west coast between stations INTER and DOM.

Only single-lens photographs and a preliminary manuscript were available for use with the hydrographic sheets. Three strips of uncontrolled shoreline that were compiled by the Washington Office on \*Advance Manuscript RS-443 were used for the radial plot of photo-hydro signals. These strips of shoreline were then adjusted to available hydrographic and triangulation positions of these signals.

\* Filed in Division of Photogrammetry general files.

The positions of the photo-hydro signals for the smooth hydrographic sheet should be obtained from a new radial plot using the triangulation control and nine-lens photographs.

4. VERTICAL CONTROL:

Vertical angles were observed by the triangulation parties to determine the elevation of the triangulation stations. For detailed information concerning vertical control see TRIANGULATION REPORT, SHIP EXPLORER, 1952. Filed in Bureau Library -(No. 121).

Additional vertical control was taken by the photogrammetric field inspection party in co-operation with the launch



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hydrographic party. Sextant angles to prominent land features were taken simultaneously with the launch hydrographic fixes. These fixes are recorded in \*SOUNDING VOLUME NO. 8, \*Sheet EX-2152, Launch No. 2, "h" day. The points to which vertical angles were taken are shown on the office photographs by green circles with the corresponding fix numbers. \* Filed in Bureau Archives. H-7974

5. CONTOURS AND DRAINAGE:

No contouring was done in this area. The drainage pattern on Amaticnak Island is described in AERIAL FIELD INSPECTION. item #2

6. WOODLAND COVER:

There is no woodland cover on this island. The only vegetation present is three foot grass and tundra.

7. SHORELINE AND ALONGSHORE FEATURES:

The entire shoreline of Amaticnak Island was inspected. The method of field shoreline inspection is described in AERIAL FIELD INSPECTION. The mean high water line is distinguished on the photographs by the color tone change from dark to light and is shown by a dashed line. In many areas on the west coast the cliffs come down to the water so the mean high water line is on the face of the cliff. The low water line is not distinguishable. The foreshore varies from boulders and tundra on the east coast to rock and cliffs on the west coast. There is a high bluff extending around the perimeter of most of the island. The bluff changes into high bare rock cliffs in areas along the west coast. The water action on the bottom of the cliffs has formed several caves, arches, bowls and tunnels along the water line. ||

8. OFFSHORE FEATURES:

The three triangulation intersection and photo-hydro stations INTER, DOM and PIP and the photo-hydro station LOW are prominent natural offshore features. These four stations are described in AERIAL FIELD INSPECTION. The elevations on INTER and DOM were determined by vertical angle observations by the triangulation parties.

9. LANDMARKS AND AIDS:

There are no fixed or floating landmarks or aids in this area. Pinnacles INTER and DOM are conspicuous natural landmarks. See item 37. |

10. BOUNDARIES, MONUMENTS AND LINES:

Inapplicable.



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11. OTHER CONTROL:

Forty-eight photo-hydro stations were established for the hydrographic field work. For the names and the photos on which these stations were located see INDEX TO FIELD WORK.

12. OTHER INTERIOR FEATURES:

Inapplicable.

13. GEOGRAPHIC NAMES:

There are so few names in this area that a special report for geographic names is not warranted. This island is uninhabited so there are no natives to contact as to the local names used on the island.

The charted name for this island is AMATIGNAK ISLAND. The prominent point on the east coast of the island has a charted name of KNOB POINT. NITROF POINT is the charted name of the prominent point on the southern end of the island. The cove on the north side of Knob Point has been named ULVA COVE on Hydrographic Survey Sheet No. 7053.

It is proposed that the name DOME be given to the large, dome-shaped rock off the northwest shore of the island. The rock is very prominent and has been used as a triangulation intersection station and a photo-hydro station by this party. It was also used as a hydrographic signal in 1945 for the field work on Hydrographic Survey Sheet No. 7053. In both instances its name was cut to three letters (DOM) for a hydrographic signal.

*Noted 854 L.H.*

14. SPECIAL REPORTS AND SUPPLEMENTAL DATA:

*List of names attached.*

COAST AND BEACH INTELLIGENCE REPORT  
GEOGRAPHIC NAMES - see 13 above  
TRIANGULATION REPORT, SHIP EXPLORER, 1952  
DESCRIPTIVE REPORT OF HYDROGRAPHIC SHEET EX-2152  
MAGNETIC OBSERVATIONS, Station KNOB, 1945

Respectfully submitted

*Robert C. Munson*

Robert C. Munson  
Ensign, USC&GS

Approved and forwarded

*George L. Anderson*

George L. Anderson  
Captain, USC&GS  
Commanding Ship EXPLORER

## INDEX TO FIELD WORK

TRIANGULATION STATIONS, Recovered and Identified:

Stations identified on single lens photos by field party in 1952

<u>STATION</u>	<u>PHOTO NO.</u>
KNOB	0-1670

TRIANGULATION STATIONS, Established and Identified:

Stations identified on single lens photos by field party in 1952

<u>STATION</u>	<u>PHOTO NO.</u>
ABOVE, 1952	0-1639
BELOW, 1952	0-1678
HAREM, 1952	0-1663
POWER, 1952	0-1670

TRIANGULATION INTERSECTION STATIONS, Identified:

<u>STATION</u>	<u>PHOTO NO.</u>
DOM, 1952	0-1693
INTER, 1952	0-1658
MONK, 1952	0-1674
PIP, 1952	0-1658
RAK, 1952	0-1680

LANDMARKS, Identified:

<u>STATION</u>	<u>PHOTO NO.</u>
DOM (170 foot pinnacle)	0-1693
INTER (140 foot pinnacle)	0-1658

PHOTO-HYDRO STATIONS, Identified: (to be located by nine lens photo radial plot - preliminary advance plot used on boat sheets)

<u>IDENTIFICATION ON PHOTO</u>	<u>IDENTIFICATION ON BOAT SHEET</u>	<u>PHOTO NUMBER</u>
101	SOW	0-1684
102	MAY	0-1684
103	LAR	0-1686
104	ABOVE	0-1639
105	DOM	0-1693
KEY	KEY	0-1693

<u>IDENTIFICATION</u> <u>ON PHOTO</u>	<u>IDENTIFICATION</u> <u>ON BOAT SHEET</u>	<u>PHOTO</u> <u>NUMBER</u>
106	JEN	0-1694
107	IDE	0-1695
108	HAL	0-1695
109	GAG	0-1695
110	FED	0-1696
111	SUE	0-1697
112	ERA	0-1697
113	DEF	0-1698
114	COR	0-1699
115	BUD	0-1703
116	WAR	0-1704
117	APE	0-1705
118	LOW	0-1705
UNO	UNO	0-1706
119	MAC	0-1651
120	NED	0-1652
HIE	HIE	0-1652
121	ODE	0-1653
122	PEP	0-1653
123	RAZ	0-1653
RO	ROW	0-1655
124	DOG	0-1655
125	TUB	0-1655
006	USE	0-1656
005	VIC	0-1656
TIT	TIT	0-1656
INTER	INTER	0-1658
PIP	PIP	0-1658
GOO	GOO	0-1658
003	DIK	0-1660
002	CUE	0-1661
001	DUZ	0-1662
FOG	FOG	0-1663
HAY	HAY	0-1663
AXE	AXE	0-1665
BOL	BOL	0-1666
BAS	BAS	0-1668
BIT	BIT	0-1669
MONK	MONK	0-1674
REEF	REEF	0-1669
RAK	RAK	0-1680
	FALL	
	CONE *	T-6993
	STAK	
MAP	MAP	0-1679

\* Positions of these stations were taken from previous survey T-6993.

SHORELINE INSPECTED:

<u>PHOTO NO.</u>	<u>PHOTO NO.</u>	<u>PHOTO NO.</u>
0-1648	0-1663	0-1686
0-1649	0-1665	0-1690
0-1650	0-1666	0-1692
0-1651	0-1668	0-1695
0-1652	0-1669	0-1696
0-1653	0-1670	0-1698
0-1654	0-1674	0-1701
0-1655	0-1675	0-1703
0-1656	0-1676	0-1705
0-1658	0-1679	0-1706
0-1660	0-1681	0-1707
0-1661	0-1683	



## SEXTANT OBSERVATIONS FOR VERTICAL CONTROL

AMATIGNAK ISLAND, ALASKA - FOR SHEET T-8029  
 COPIED FROM PAGES 58-67, SOUNDING VOLUME 8,  
 SHEET (EX 2152), H-7974.

SUPPLEMENT TO FIELD INSPECTION REPORT  
 AMATIGNAK ISLAND.

VERTICAL ANGLES FROM WATER #BASE TO TOP.

HEIGHT OF EYE - 6' for all angles.

AUGUST 30, 1952					
TIME	FIX	ANGLES	Vertical ANGLE	OBJECT	REMARKS.
08-30-30	HAY	34-44	03-03 D	REEF	Photo 0-1669
	MONK	73-26	03-13 R	REEF	
	RAK				
08-40	HAY	26-53	14-53	MONK	10 Meters toward
	MONK	180-00	02-28	REEF	Reef Sunken Rock
	REEF				Photo 0-1669
08-53	HAY	23-20	13-49	MONK	Photo 0-1669
	BOL	27-41			
	BAS				
08-57	HAY	24-51			R
	BOL	31-25			Rock bearing 2 feet
	BAS				inline with BAS.
					1674-C Another
					Sunken Rock halfway
					between 1674 & shore
09-19	AXE	34-31	04-29	BOL	Photo 0-1667
	BOL	143-15			
	BAS				
09-22	AXE	53-04	06-06	BOL	Photo 0-1667
	BOL	123-25			
	BAS				

✓ C.A.S.

TIME	FIX	ANGLES	VERTICAL ANGLE	OBJECT	REMARKS.
10-12	G00 CUE HAY  INTER G00	34-56 24-05  108-58	01-57 08-24 03-22 08-34 09-13	# 706 # 707 # 708 # 709 (INTER) # 710	OUTSIDE ROCK First high Rock Middle Rock Rock closest to Position - Photo 0-1659
10-25	RA2 INTER F06	46-12 20-10	02-24 08-06 02-44 09-53 02-34	# 706 # 707 # 708 # 709 (INTER) # 710	Photo 0-1659
10-35	TUB VIC INTER	77-02 146-37	12-04 08-14	# 711 (VIC) # 712	Photo 0-1656
10-39	TUB VIC INTER	96-04 133-32	17-51 08-19 19-33 15-03 16-01	# 711 (VIC) # 712 # 713 # 714 # 715	Photo 0-1656
10-52	RA2 DOG TUB	49-35 142-42	09-51 28-21	# 716 (DOG) # 714	Photo 0-1656
10-58	RA2 DOG TUB	92-04 83-23	11-10	# 716 (DOG)	Photo 0-1656
11-12	LOW NED ODE	44-02 116-40	31-12	HIE	Photo 0-1651

✓  
Ced

TIME	FIX	ANGLES	VERTICAL ANGLE	OBJECT	REMARKS
11 15 ✓	Low NED ODE	73-20 ✓ 83-47 ✓	30-28 ✓	HIE ✓	Photo 0-1651 ✓
11 22 ✓	UNO MAC NED	103-46 ✓ 75-14 ✓	11-24 ✓	MAC ✓	Photo 0-1651 ✓
11-23 ✓	UNO MAC NED	112-05 ✓ 70-19 ✓	11-38 ✓	MAC ✓	Photo 0-1651 ✓
11-24 ✓	Low ✓ UNO MAC	59-24 <sup>9</sup> ✓ 112-03 ✓	04-18 ✓ 08-15 ✓ 05-36 ✓ 04-34 ✓	UNO ✓ # 717 ✓ # 718 ✓ # 719 ✓	Photo 0-1706 ✓
11-27 ✓	Low ✓ UNO MAC	60-48 ✓ 118-30 ✓	04-09 ✓ 07-18 ✓ 05-46 ✓ 04-39 ✓	UNO ✓ # 717 ✓ # 718 ✓ # 719 ✓	Photo 0-1706 ✓
11-40 ✓	COR ✓ APE LOW	69-31 ✓ 111-15 ✓	01-27 ✓	LOW ✓	Photo 0-1706 ✓
11-43 ✓	BUD- low ✓ APE- low ✓	106-47 ✓ 84-03 ✓	03-04 ✓	Low ✓	Photo 0-1706 ✓
11-46 ✓	BUD ✓ low RAZ	81-10 ✓ 45-57 ✓	02-10 ✓	Low ✓	Photo 0-1706 ✓
13-08 ✓	COR ✓ BUD Low	124-33 ✓ 58-10 ✓	02-23 ✓	COR ✓	Photo 0-1648 ✓ VCS



TIME	FIX	ANGLES	VERTICAL ANGLE	OBJECT	REMARKS
13 11	DEF ✓ COR ✓ BUD ✓	15-48 ✓ 98-28 ✓	02-48 ✓	COR ✓	Photo 0-1648 ✓
13-18	DEF ✓ COR ✓ LOW ✓	105-59 ✓ 29-34 ✓	10-25 ✓	THUMB ✓	Photo 0-1698 ✓
13-20	DEF ✓ COR ✓ LOW ✓	104-21 ✓ 19-46 ✓	13-51 ✓	THUMB ✓	Photo 0-1698 ✓
13-23	DOM ✓ ERA ✓ DEF ✓	30-26 ✓ 83-07 ✓	03-53 ✓ 05-43 ✓	ERA ✓ SPUR ✓	Photo 0-1698 ✓
13-25	DOM ✓ ERA ✓ DEF ✓	54-09 ✓ 63-47 ✓	04-07 ✓ 06-42 ✓	ERA ✓ SPUR ✓	Photo 0-1698 ✓
13-50	ABOVE ✓ JEN ✓ IDE ✓	81-38 ✓ 49-51 ✓	05-52 ✓	DOM ✓	Photo 0-1691 ✓
13-53	ABOVE ✓ JEN ✓ IDE ✓	86-16 ✓ 38-04 ✓	06-39 ✓	DOM ✓	Photo 0-1691 ✓
14-10	SOW ✓ MAX ✓ ABOVE ✓	82-47 ✓ 29-30 ✓	01-57 ✓ 01-48 ✓	SPIN ✓ MAX ✓	Photo 0-1685 ✓
14-15	SOW ✓ MAX ✓ ABOVE ✓	77-06 ✓ 37-48 ✓	02-06 ✓ 01-59 ✓	SPIN ✓ MAX ✓	Photo 0-1685 ✓  ✓

TIME	FIX	ANGLES	VERTICAL ANGLE	OBJECT	REMARKS
14-30	BAB MAP RAK	56-48 ✓ 51-52 ✓	02-44 ✓ 02-37 ✓	# 720 ✓ # 721 ✓	Photo 0-1678 ✓
14-34	BAB MAP RAK	24-30 ✓ 38-58 ✓	02-59 ✓ 02-44 ✓	# 720 ✓ # 721 ✓	Photo 0-1678 ✓
14-35	KNOB POWER BELOW	32-59 ✓ 46-21 ✓	03-18 ✓ 02-45 ✓	# 720 ✓ # 721 ✓	Photo 0-1678 ✓

CHS.

## PHOTOGRAMMETRIC PLOT REPORT

PH-34(48)

Survey T-8029

## 21. AREA COVERED:

This radial plot covers the area of Survey T-8029, a topographic survey of Amatignak Island in the Aleutians, Alaska.

## 22. METHOD - RADIAL PLOT:

Map Manuscripts

A vinylite sheet with polyconic projections in black and Universal Transverse Mercator grid in red, at a scale of 1:20,000 was furnished by the Washington Office. No base sheet was required as the radial plot was constructed directly on the map projection sheet.

All control stations and substitute stations were plotted using the beam compass and meter bar, except Sub. Pt. ABOVE, 1952 which was plotted graphically.

A sketch, showing the distribution of control and photograph centers in this survey, is attached to this report.

Photographs

All photographs used were nine lens metal mounted photographs at a scale of 1:20,000. Eleven (11) photographs were used, numbering as follows -

37595 thru 37598  
37601 thru 37605  
37607 and 37608

The symbols used on the photographs were given in special instructions for all radial plots using the nine lens photographs which will be used later for compilation with a Reading Plotter.

Templets

Vinylite templets were made from all photographs using a master templet furnished by the Washington Office to adjust for errors due to chamber displacements. Radial lines were scratched on the templets with a sharp needle point and the scratches were filled in with china marking pencils. Red pencil was used for all shoreline (rectification) pass points. Due to the many points required to be established in this plot, black, blue, and green pencils were used for all other radial lines in order to differentiate between intersections.

### Closure and Adjustment to Control

The radial plot was constructed directly on the map manuscript. A preliminary plot was laid to determine whether there were any badly tilted photographs. The amount of tilt can be estimated by observing the displacement of the image points, indicated by red dots on the templets, of shoreline points. Two photographs, 37604 and 37596, that were found to be slightly tilted, were laid last and had no effect on the plot.

The final plot was started with photograph 37603 and no difficulty was encountered in laying the photographs as all photographs were well controlled.

SOW, 1952 could not be held but the field pricking was found to be incorrect and the station was repricked.

### Transfer of Points

The positions of all centers, pass points, and control stations were pricked on the top templet and circled with 3 mm. blue circles. The points were then established on the remaining templets and on the map manuscript by drilling down through them with a small (.01 inch) jeweler's drill. All points were circled on each templet as it was removed and on the map manuscript.

### 23. ADEQUACY OF CONTROL:

There was adequate control for a satisfactory plot. Each photograph had enough control stations on it to fix it.

The point pricked as Sub. Pt. HAREM, 1952 did not hold the Sub. Pt. but did hold the station. The Sub. Pt., a shadow caused by a break in tundra, easily identified on the 1:10,000 single lens photographs, could not be seen on the nine lens photographs.

SOW, 1952 was identified by the field only as a hydrographic station\*101. The radially plotted position falls 0.7 mm. east of the geographic position. No identification card was submitted for this station or for MAY, 1952 and LAR, 1952 which were also identified as hydrographic stations.

A pass point was pricked near AMATIGNAK, 1944, which was not field identified. It is felt that the station could be pricked as it is only 0.5 mm. from the pass point. However, no attempt was made to do so.

PEAK A, 1952 and PEAK B, 1952 were also office identified. Attempts were made to prick the highest point in each area but they did not hold the stations. (See also paragraph 26.)



## 24. SUPPLEMENTAL DATA:

No supplemental data were used in the radial plot. An uncontrolled shoreline manuscript, RS-443, was available but was of no value to this radial plot.

## 25. PHOTOGRAPHY:

Photographic coverage, definition, and overlap between flights were excellent.

No tilt determination was made for either of the slightly tilted photographs and they had no effect on the plot.

*For radial plot but not for contouring. Red*

## 26. VERTICAL CONTROL:

As stated previously, PEAKS A and B were not field identified but attempts were made to prick them in the office. The radially plotted position for Peak A falls 0.5 mm. southwest and for PEAK B 0.4 mm. south east. However, the elevations given for these peaks can be used as the elevations of the radially plotted positions.

## 27. PHOTO HYDRO STATIONS:

Forty-one photo hydro stations were identified and located in the radial plot. No descriptions or pricking cards were furnished. The stations were pricked as nearly like the field identification as possible.

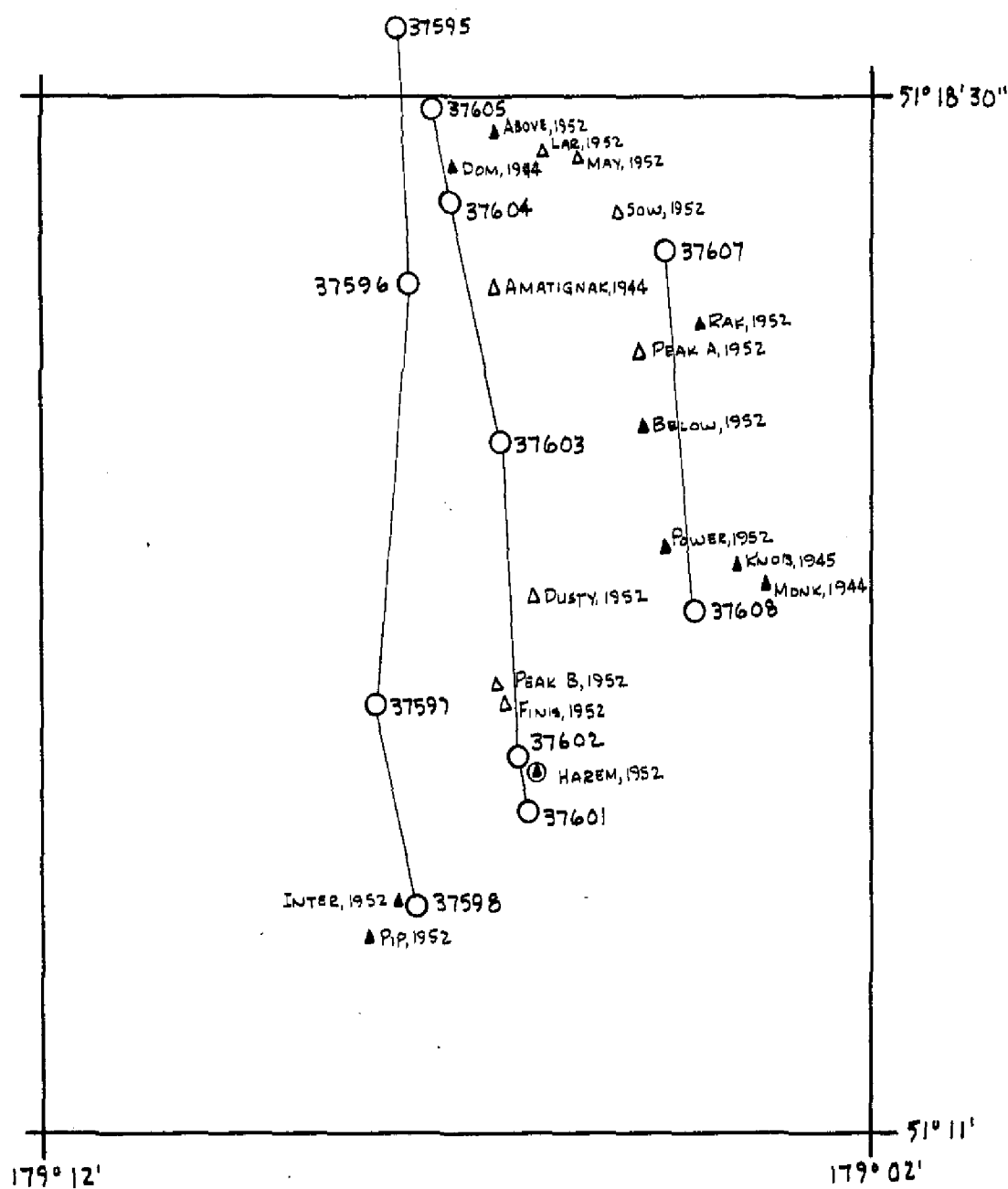
Respectfully submitted  
9 January 1953

*Ruth R. Hartley*

Ruth R. Hartley  
Carto Photo Aid

Approved and Forwarded  
January 1953

*Hubert A. Paton*  
Hubert A. Paton, Comdr.  
Officer in Charge  
Baltimore Photo Office



## LAYOUT SKETCH

Ph-34 (48)

T-8029

- Nine lens office photographs
- ▲ Control stations (identified)
- △ Control stations (not identified)
- ⊙ Control station (not held in plot)



COMPILATION REPORT T-802931. Delineation:

Amatignak Island is entirely mapped on this manuscript. There are no unmapped land areas within the limits of this manuscript.

32. Control:

Both the horizontal and vertical control were adequate for this compilation. (see side-heading 23)

33. Supplemental Data:

- a. Field Inspection photographs for this survey; 49-0-1639 thru 1706 (1:10,000 scale, single-lens)
- b. Topographic Survey T-6993 (1945)  
Aleutian Islands, Amatignak and Ulak Islands,  
USC&GSS Surveyor, C.D. Meaney comdg.
- c. Field Inspection photographs for survey T-6993 (1945)  
B-800 thru 859.
- d. The uncontrolled shoreline manuscript RS-443,  
1:10,000 scale, was used to supplement the delineation of the shoreline and alongshore features.  
(see sub-heading 35)
- e. Geographic Name sheet, compiled by Mr. Heck 26 Jan 52

34. Contours and Drainage:

The photographic quality of the instrument photographs was good except in the shadow areas. The photograph spacing was too great for drawing precise contours in a few deep sharp fissures. With the aid of the 1949 single-lens photographs the instrument operator was able to portray these areas without feeling it necessary to show the contours with the dashed-line symbol.

35. Shoreline and Alongshore Details:

transferred  
Both the 1949 single-lens and the 1952 9-lens photographs were used for the location of the high-water-line by stereoscopic methods. The manuscript was compiled using the nine-lens photographs on the plotting instrument while studying the single-lens field inspection photographs with a stereoscope. In a separate operation, the field inspection data were to the 1:10,000 scale manuscript (RS-443) which was then reduced to 1:20,000 scale for comparison with the nine-lens compilation.

The high-water-line was delineated by the field inspection party as a nearly continuous line thru areas where the line was apparent on the photographs as well as in places where field inspection was needed. The frequent inaccuracies in this shoreline delineation, where the actual line was visible on the photographs, indicates either misinterpretation of the photographs or delineation beyond the areas visited.

The low-water-line was not recognizable to either the field inspector or the office compiler.



36. Offshore Details:

The mapping of offshore rocks, ledges and foul areas was done at the same time and in the same manner as the shoreline. (see side-heading 35)

37. Landmarks and Aids:

Triangulation stations INTER, 1952 and DOM, 1952 are both pinnacle rocks which are natural landmarks.

Forms 524 <sup>rec. & opp.</sup> for Stations Two, 1945 and Map, 1945 submitted with new geographic positions as determined by photogrammetric methods. The new positions are shown in red on the forms for T-6993 and cross referenced to T-8029. They are filed in the Div. of Photogrammetry general files.

38. Control for Future Surveys:

Forty-one photo-hydro stations were identified by the field inspection party and located by this photogrammetric survey. The inshore hydrography was done concurrently with the field inspection thru the use of the advance photogrammetric survey (RS-443). The smooth sheet for the hydrographic survey will be controlled by the positions of the photo-hydro signals as located on this manuscript. There will be no need for "notes to the hydrographer" (side-heading 49) because the two surveys were made concurrently.

39. Junctions: Inapplicable.40. Horizontal and Vertical Control:

The scale of this map is 1:20,000 and the contour interval is 50 feet. It meets the requirements established for National Standards of Map Accuracy in both respects.

46. Comparison with Existing Maps: Inapplicable.48. Comparison with Nautical Charts:

The largest scale chart of the area is:

Chart No. 8863 IGITKIN ISLAND TO SEMISOPOCHNOI ISLAND  
scale 1:300,000 - Edition data, April 1945

48. Geographic Name List: See page 2349. Notes for the Hydrographer: Inapplicable.50. Compilation Office Review: See page 24

Submitted by:

Approved by:

Orvis N. Dalbey  
Orvis N. Dalbey,  
Cartographer-Photogrammetric

Louis J. Reed  
Louis J. Reed, Chief  
Stereoscopic Mapping Section  
Photogrammetric Engineer



## PHOTOGRAMMETRIC OFFICE REVIEW

T- 8029

1. Projection and grids ✓ 2. Title ✓ 3. Manuscript numbers ✓ 4. Manuscript size ✓

## CONTROL STATIONS

5. Horizontal control stations of third-order or higher accuracy ✓ 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations) ✓ 7. Photo hydro stations ✓ 8. Bench marks ✓  
9. Plotting of sextant fixes ✓ 10. Photogrammetric plot report ✓ 11. Detail points ✓

## ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline ✓ 13. Low-water line ✓ 14. Rocks, shoals, etc. ✓ 15. Bridges ✓ 16. Aids to navigation ✓ 17. Landmarks ✓ 18. Other alongshore physical features ✓ 19. Other along-shore cultural features ✓

## PHYSICAL FEATURES

20. Water features ✓ 21. Natural ground cover ✓ 22. Planetable contours ✓ 23. Stereoscopic instrument contours ✓ 24. Contours in general ✓ 25. Spot elevations ✓ 26. Other physical features ✓

## CULTURAL FEATURES

27. Roads ✓ 28. Buildings ✓ 29. Railroads ✓ 30. Other cultural features ✓

## BOUNDARIES

31. Boundary lines ✓ 32. Public land lines ✓

## MISCELLANEOUS

33. Geographic names ✓ 34. Junctions ✓ 35. Legibility of the manuscript ✓ 36. Discrepancy overlay ✓ 37. Descriptive Report ✓ 38. Field inspection photographs ✓ 39. Forms ✓  
40. William D. Harris Louis J. Reed

Reviewer

Supervisor, Review Section or Unit  
Louis J. Reed, Chief

41. Remarks (see attached sheet)

Stereoscopic Mapping Section  
Photogrammetric Engineer

## FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

Compiler

Supervisor

43. Remarks:

1 December 1952

Baltimore Photogrammetric Office &  
Chief, Stereoscopic Mapping Section,  
Washington Office

Chief, Division of Photogrammetry

Compilation of map T-8029, Amatignak Island, Ph-34

Ref: Attached correspondence with the Commanding Officer,  
Ship EXPLORER

Baltimore Office. Please prepare the radial plot of the subject manuscript for nine-lens plotter compilation. This should be given a high priority and forwarded to the Washington Office as soon as it is completed. Data for the radial plot will be forwarded to you without request.

The radial plot shall include the location of hydrographic signals as discussed in the attached correspondence and in the Field Inspection Report and as indicated on the single-lens field inspection photograph.

731. Please send the following data to Baltimore as soon as practicable.

- a. Nine-lens office photographs. See Reed about selection of photographs required. Not all will be needed.
- b. Manuscript projection, scale 1:20,000.
- c. Triangulation Report, Ship EXPLORER, 1952
- d. Triangulation Records for 1952 and previous years to include geographic positions, descriptions and elevations.
- e. Field Inspection Report.
- f. Manuscript RS 443 and the report for that manuscript.
- g. Single-lens field inspection photograph as indicated.

77. Please complete the manuscript compilation as soon as practicable after receipt of radial plot data from Baltimore. The Seattle Office will be interested only in the shoreline details, but I think there will be ample time to compile shoreline and contours together.

In compiling this manuscript, refer to paragraph 9, Shoreline Inspection, of Photogrammetry Instructions, Project Ph-34, copy is attached.

Page 2

See paragraph 4 of the field report on vertical control. The Commanding Officer of the EXPLORER has been requested to forward the section observations for vertical control and these can be plotted in your section during compilation as they are needed. Triangulation records may furnish all the required vertical control and the section observations may not be needed.

O. S. Reading,  
Chief, Div. of Photogrammetry

cc: 711  
731

PHOTOGRAMMETRY IN THE ALEUTIAN ISLANDS  
PROJECT CS-218 (Ph-34)

Shoreline Inspection

9. The shoreline shall be field-inspected, in general, in accordance with Paragraphs 1-6, 9-16, 18, and 20 of the Supplemental Instructions--Shoreline Inspection--dated 18 March 1944. On Project CS-218 (Ph-34) not all the shoreline is to be examined in detail, but is to be spot-checked, that is, typical short stretches of the shore are to be field-inspected in detail, thus furnishing information from which the compiler can detail adjacent sections by analogy. The shoreline manuscripts of Gareloi, Ilak, Amatignak, Tanaga, Bobrof, and Kanaga Islands have been compiled from an office interpretation of the photographs. Where these manuscripts show shoreline and alongshore details correctly no field-inspection notes are needed. Where they are not correct, sufficient notes shall be made on the photographs to enable the office compiler to map the shoreline correctly. In compiling the advanced manuscripts, free use has been made of the foul-line symbol to outline areas that are obviously shallow and rocky, but in which details cannot be seen clearly on the photographs. Where additional information is desirable in these foul areas, such as the symbolization of rocks and small islands, it shall be indicated on the field photographs.

711-sal

1 December 1952

88

To: Commanding Officer  
U.S.C. & G.S. Ship EXPLORER

Thru: Supervisor, Northwestern District  
U. S. Coast and Geodetic Survey  
705 Federal Office Building  
Seattle 4, Washington

Subject: Shoreline manuscripts of Amatignak (T-8029)  
and Ilak (8027) Islands

Reference: Your letter of 20 November, same subject

Compilation is now being started on the subject manuscripts. We probably can forward copies of manuscript T-8027 about 1 January 1953 and T-8029 about 1 February 1953, but will notify you later if it becomes necessary to change these dates for any reason.

Paragraph 4 "Vertical Control" in the Field Inspection Report for Amatignak Island states that vertical control observations by sextant are recorded in SOUNDING VOLUME NO. 3, Sheet EX-2152, Launch No. 2, "h" day. These records will be needed during manuscript compilation. Please abstract them or forward the SOUNDING VOLUME for copying.

(Signed) Robert W. Knox

Acting Director

cc:  
Supervisor, Northwestern Dist.  
Seattle Processing Office  
77  
22

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
SHIP EXPLORER  
705 FEDERAL OFFICE BUILDING  
SEATTLE 4, WASHINGTON

20 November 1952

88

To: The Director  
U. S. Coast and Geodetic Survey  
Department of Commerce Bldg.  
Washington 25, D.C.

Via: Supervisor, N. W. District

Subject: Request for final shoreline manuscripts. Amatignak and  
Ilak Islands.

This ship's 1952 season's photogrammetric records for  
Amatignak and Ilak Islands were forwarded to the Washington Office  
this date.

The boat sheet locations of shoreline and many signals  
on Amatignak Island were dependent on a preliminary plot of three  
strips of shoreline from single lens photographs. This plot was  
not continuous due to excessive tilt and limited coverage of the  
photographs. It was adjusted on the boat sheet to hydrographic  
locations of selected signals. For a more accurate location of  
shoreline and signals on the smooth sheet, a shoreline manuscript  
using nine lens photographs and triangulation control will be  
needed. Lists of geographic positions, control station identifi-  
cation cards, and field inspected single lens photographs are in-  
cluded with the photogrammetric records forwarded to the Office.  
We were advised verbally by Lt. Randall, in charge of aerial  
photographic mission, that nine lens photographs of Amatignak  
were taken during the past summer.

It is requested that shoreline manuscripts with radially  
plotted photo-hydro signals be made as soon as practicable, and  
copies forwarded to this ship in order that the past season's  
inshore hydrography can be smooth plotted.

*George L. Anderson*

George L. Anderson  
Captain, USC&GS  
Commanding Ship EXPLORER



# GEOGRAPHIC NAMES

Survey No.

T-8029

Name on Survey

page 23

29

	A	B	C	D	E	F	G	H	K	
AMATIGNAK ISLAND ✓										1
KNOB POINT ✓										2
NITROF POINT ✓										3
ULVA COVE ✓										4
<del>NORTH</del> PACIFIC OCEAN ✓										5
ULAK PASS ✓										6
AMCHITKA PASS ✓										7
Chandris Cove ✓										8
For title:										9
Alaska										10
Aleutian Islands										11
Delarof Islands										12
										13
										14
										15
Dome Rock ✓										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Names approved  
2-11-54  
h. Heck

Review Report T-8029  
Topographic Map  
3 March 1954

62. Comparison with Registered Topographic Surveys.-

T-6993	1:20,000	1945	(Planetable)
RS-443	1:10,000	(approx.)	1952

Differences occur between the above surveys and T-8029 with respect to shoreline configuration, number, size, and placement of foreshore and inshore rocks and their elevations. The 1952 field data, RS-443 above, was applied to T-8029 to determine rock elevations and shoreline delineation. T-8029 supersedes T-6993 for nautical charting purposes. RS-443 is a preliminary compilation of the shoreline of Amatignak Island and is superseded by T-8029.

63. Comparison with Maps of Other Agencies.-

Gareloi Island, Alaska, USGS, 1:250,000, 1951.

Amatignak Island is included on the above USGS map, but cannot be compared adequately with T-8029 because of the vast scale difference between the two maps.

64. Comparison with Contemporary Hydrographic Surveys.-

H-7974	1:20,000,	1952
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This map has been compared with H-7974. There are no conflicting features between T-8029 and the hydrographic survey.

65. Comparison with Nautical Charts.-

8863, 1:300,000, corr. to 8/13/51

There are no significant differences between the map and the chart. However, the small scale of the chart precludes an adequate comparison with this large scale map.

66. Adequacy of Results and Future Surveys.- This map is adequate for use in hydrographic surveys and the construction of nautical charts and meets the National Standards of Map Accuracy.

Reviewed by:

K. N. Maki  
K. N. Maki



- 2 -

T-8029

APPROVED:

R. C. Lande  
Chief, Review Branch  
Div. of Photogrammetry

Wallace A. Bruder  
Chief, Nautical Chart Branch  
Division of Charts

P. W. Swanson  
Chief, Div. of Photogrammetry

S. H. Russell  
Chief, Div. of Coastal Surveys

1 Aug '57

MS

History of Hydrographic Information  
Quadrangle T-8029  
Amatignak Island, Alaska

Hydrography was applied to the map manuscript of this quadrangle in accordance with Division of Photogrammetry General Specifications dated 18 May 1949 and Army Map Service TM 45-14, Chapter 14.

The depths are in fathoms at mean lower low water and originate with the following surveys:

H-7053	(1945)	1:20,000, Ad.Wk. 1952
7895	(1950)	1:80,000,
7974	(1952)	1:20,000

The reliability of the hydrographic coverage is considered good. However, the compilation was prepared in part from an unverified survey subject to revisions in the Washington Office.

Depth curves are shown at 3, 5, and 10 fathoms. Hydrography compiled by K. N. Maki and checked by O. Svendsen, 11 June 1954.

*K. N. Maki*  
K. N. Maki  
Div. of Photogrammetry  
5/21/54