

8027

ORIGINAL

Diag. Cht. 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-8027

LOCALITY

State Alaska
Aleutian Islands
General locality Delarof Islands
Locality ILAK ISLAND

194 52

CHIEF OF PARTY
George L. Anderson, Chief of Party
Div. of Photogrammetry, Wash. D.C.

LIBRARY & ARCHIVES

JUL 19 1955

DATE

8027

DATA RECORD

T-8027

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

Field Office (II): USC&GSS Explorer

Chief of Party: George L. Anderson

Photogrammetric Office (III): Washington D.C.

Officer-in-Charge: Louis J. Reed, chief
Stereomap section

Instructions dated (II) (III):

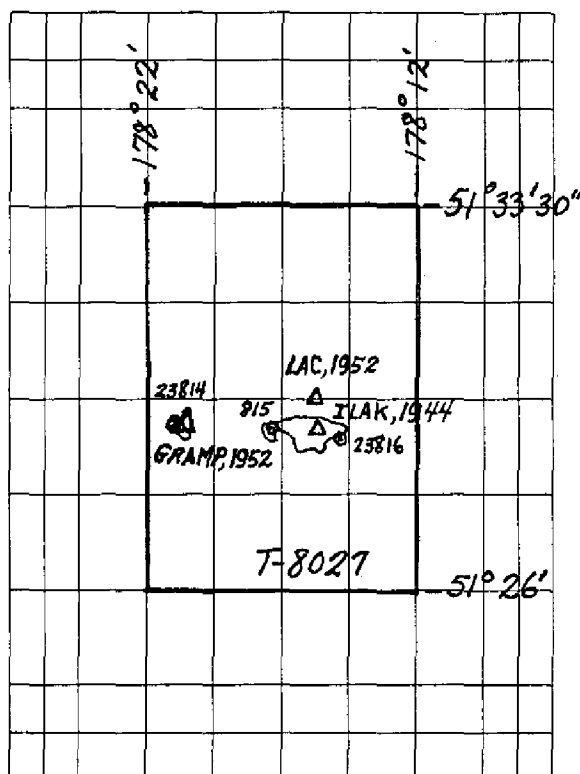
Copy filed in Division of

Instructions- Project CS-218(Ph-34) 19Mar52 Photogrammetry (IV)

Compilation of T-8027 Ph-34 1 Dec 1952

Office Files

Method of Compilation (III): Name of Photographer (IV): Date of Compilation (V):



Areas contoured by various personnel
(Show name within area)

~~XX~~ (III)

Compiled on the Reading Plotter, model "B"
by: Louis Levin

DATA RECORD

Field Inspection by (II): George L. Anderson

Date: 12 Sep 1952

Planetable contouring by (II): None

Date:

Completion Surveys by (II): None

Date:

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

September 1952. Location by field inspection.

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):

William D. Harris

Date:

21 Jan 53

Control checked by (III):

Arthur B. Zimmerli

Date:

22 Jan 53

Radial Plot or ~~Sketch~~

Orvis N. Dalbey

Date:

23 Jan 53

Control extension by (III):

delineation
Stereoscopic Instrument ~~XXXXXX~~ (III):

Planimetry

Louis Levin

Date:

27 Jan 53

Contours

Date:

compiled

Manuscript ~~XXXXXX~~ by (III):

Henri Lucas

Date:

29 Jan 53

Photogrammetric Office Review by (III):

William D. Harris

Date:

30 Jan 53

Elevations on Manuscript
checked by ~~XX~~ (III):

William D. Harris

Date:

30 Jan 53

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

Number	Date	PHOTOGRAPHS (III) Time	Scale	Stage of Tide
23814		#12		
23815	19 Sep 48	10:00	1:20,000	2.7 below MHHW
23815				0.9 below msl

Tide data computed by Mr. Wilcox of Tides and Currents 26 Jan 52

Tide (III)

Reference Station: Sweeper Cove
Subordinate Station: Lash Bay - Tanager Island
Subordinate Station:

DIURNAL

Ratio of Ranges	Mean Range	Spring Range
1.1		3.7
		4.2

Washington Office Review by (IV): C. Theurer

Date: 4-14-54

Final Drafting by (IV): MELVIN CHARITY

Date: 9-16-54, 9-21-54

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

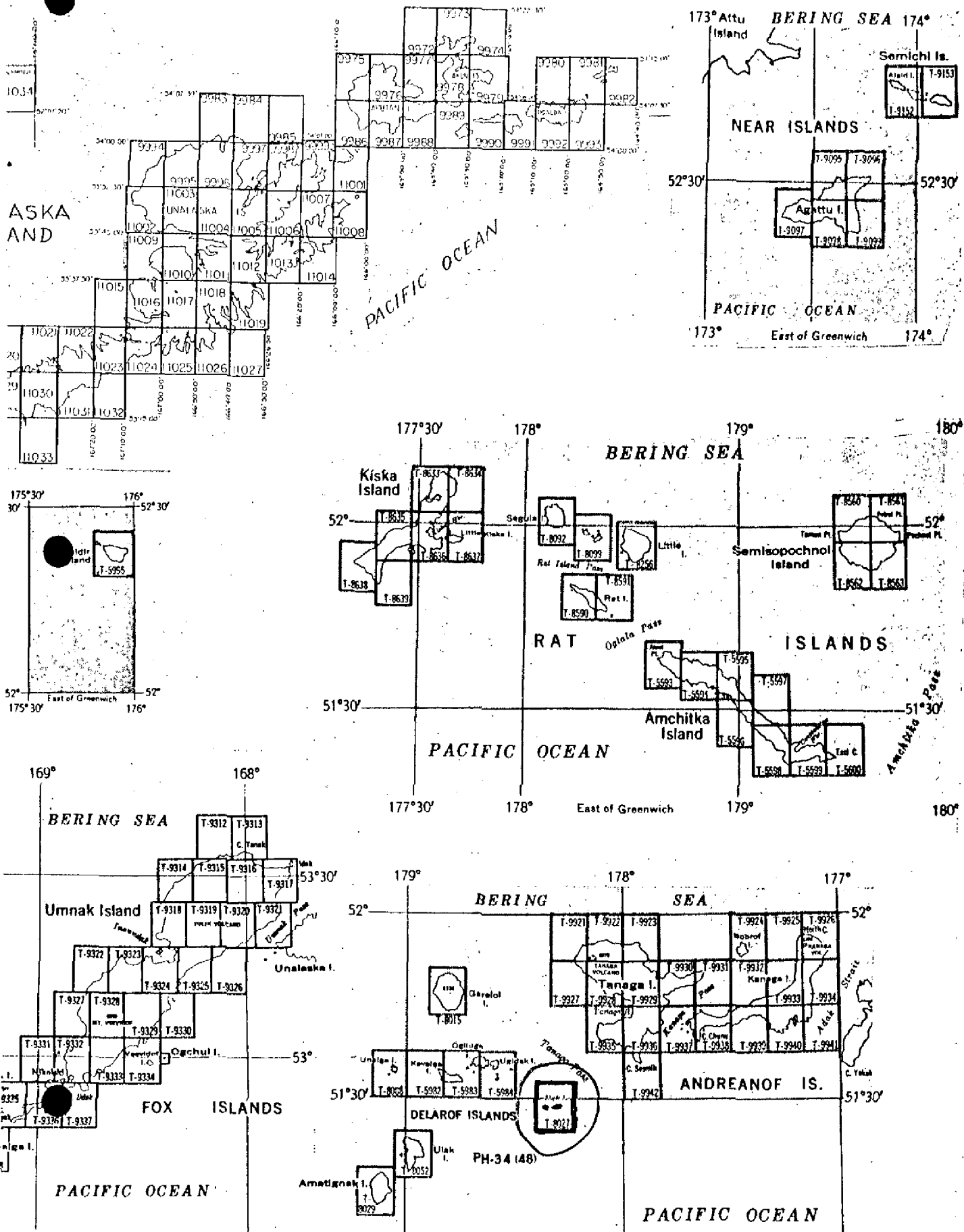
Date:

Land Area (Sq. Statute Miles) (III): 0.5 square mile
Shoreline (More than 200 meters to opposite shore) (III): $5\frac{1}{2}$ 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): fourteen

Recovered: one Identified: three
Recovered: none Identified: none

Remarks:

ALASKA-BERING SEA Aleutian Islands



Summary to Accompany

T-8027

This map is a 7.5 x 10 minute quadrangle in Topographic Mapping Project Ph-34. This map completely covers Ilak Island in the Delarof Islands, Aleutian Islands. Ilak Island is approximately fifteen miles southwest of Tanaga Island and approximately fifteen miles southeast of Oglivga Island.

This map was compiled by Reading Plotter from 1:20,000 scale nine-lens photographs taken in 1948. Field inspection of the photographs was accomplished during hydrographic survey operations in 1952. The compilation scale is 1:20,000 and the contour interval is 50 feet with an occasional 25 foot supplementary contour.

Depth curves and sounding will be added to the map manuscript for publication.

Cloth-backed lithographic prints of this map at compilation scale will be registered with the Descriptive Report in the Bureau Archives. After publication by the Army Map Service, a cloth-backed color print will also be registered.

PART I
DESCRIPTIVE REPORT
FIELD PHOTOGRAMMETRIC OPERATIONS
ILAK 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: 1 September 1952
Date of ending field work: 12 September 1952

METHODS EMPLOYED:

The method of field inspection of the shoreline is described in AREALL FIELD INSPECTION. * Photo-hydro signals were built along the southern shore of Ilak Island and the smaller island where the hydrographic launches were not able to receive the shoran signals. Fourteen photo-hydro stations, eight white-washes and six natural objects, were used for visual control by the launches. Eight of these signals were located on the advanced manuscript by the Washington Office and the other six signals were located on the photographs and radial plotted on the manuscript in the field.

* Sub-heading 2 of Field Inspection Report which follows.

The shoreline and photo-hydro signals were transferred from the bromoil positive and the manuscript to the launch hydrographic boat sheets. The scale and azimuth of the advanced manuscript were determined using the positions of triangulation stations ILAK, 1944 and GRAMP, 1952. Smooth plot of hydrography will await final office photogrammetric location of photo-hydro signals.

The preparation of the description and location of proposed photo-hydro signals on the photographs and the manuscript by the Washington Office was very helpful and time saving to the hydrographic party. The officer in charge of the photo-hydro signal building party saved time and labor by designating the position of an advanced plotted signal to members of the crew and have them land and build the signal. The procedure enables two

- 2 -

signal building parties to work from one launch with great efficiency while the officer does the shoreline inspection on the photographs. The advanced manuscript saves time by eliminating the process of pricking the signals on the photos and radial plotting them on the manuscript. Of course not all of the proposed signals are used and some additional signals have to be built because of various field conditions. The time and labor in locating and plotting these additional signals is also greatly reduced by the use of the advanced manuscript.

This method of pre-season preparation of advanced manuscripts and the location of selected points for photo-hydro signals is recommended to be continued in the future.

ADEQUACY OF INSTRUMENTS, MATERIALS AND EQUIPMENT:

The adequacy and quality of the three nine-lens photographs is discussed in AREAL FIELD INSPECTION. The adequacy of the advanced manuscripts and office location of photo-hydro signals is discussed in METHODS EMPLOYED. These photographs are too long to be thoroughly and accurately inspected with a pocket stereoscope but the Schneider Prismatic Stereoscope gave good results.

STATISTICS:

Area surveyed (square miles)	1.2
Shoreline inspected (statute miles)	5.8
Triangulation stations searched for	1
Triangulation stations recovered	1
Triangulation stations established	1
Triangulation stations identified	2
Triangulation intersection stations identified	1
Photo-hydro stations identified	14

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

PART II
FIELD INSPECTION REPORT
ILAK ISLAND
Project CS-218

2. AREAL FIELD INSPECTION:

(a). Description of Area:

This field inspection report covers the area generally referred to as ILAK ISLAND. It consists of a large island and a number of adjacent offshore rocks. Ilak Island, the largest of the group, is approximately one and one half miles long and three-quarters of a mile wide. The smaller island to the west is approximately one half mile long and one tenth of a mile wide. The foul areas and offshore rocks that surround Ilak make landing on the beach hazardous. The beach itself is composed of rugged rock outcrop and boulders. A steep bluff extends around the perimeter of the island leveling off abruptly leaving a relatively flat top. The narrow strip between the rock beach and the foot of the bluff is covered with six foot grass and tundra interspersed with occasional grass covered pinnacle rocks. The top of the island slopes gradually from northeast to southwest with the lowest bluffs along the southwest part of the island. The top is covered with three to five foot grass and tundra.

There is the wreck of a grounded four engined plane on the western end of the island. It has been completely stripped of useable parts and has been used for target practice by naval aircraft. The only other man-made feature on the island is a shack on the northwest shore.

The small island to the west of Ilak is of rock outcrop structure with a few patches of grass about three feet high. This island is also surrounded by foul areas. Hundreds of sea lions gather on the rock island during their mating season.

(b). Field Inspection:

The southern shores of the two islands were field inspected while the party was white-washing photo-hydro stations for hydrography. The field inspection for that particular area was completed on the beach when the party landed to construct a

- 2 -

hydro station. The remainder of the shoreline was inspected from the launch. The northern shoreline of the two islands was inspected from a launch running parallel to the shoreline. This inspection is believed to be standard.

(c). Quality of Photographs:

The quality of these three nine-lens photographs is very good. Ilak Island is in the center on two of the photos and just out of the center on the third photo. The photographs are clear with good color tone giving excellent stereopsis and enabling the field inspection to be completed with a minimum of difficulty. There are a few white spots on the photographs due to their processing, but they did not interfere with the inspection.

(d). Items of Historical Interest:

Inapplicable

3. HORIZONTAL CONTROL:

There are two triangulation stations and one triangulation intersection station in this area. They are:

ILAK, 1944 - on Ilak Island.

GRAMP, 1952 - on the small island two miles west of Ilak Island.

LAC, 1952 - on a prominent rock off the north shore of Ilak Island.

Information pertinent to the identification of these stations is on the attached M-2226-12 forms. For detailed information concerning horizontal control see TRIANGULATION REPORT, SHIP EXPLORER, 1952.

4. VERTICAL CONTROL:

The triangulation observing parties observed vertical angles to determine the elevation of triangulation stations Ilak, 1944 and Gramp, 1952. The elevations computed from these observations are:

Ilak, 1944	188 feet
Gramp, 1952	34 feet

For detailed information concerning vertical control see TRIANGULATION REPORT, SHIP EXPLORER, 1952.

Not available
for compilation
12/5/52

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5. CONTOURS AND DRAINAGE:

No contouring was done in this area. The only apparent drainage on the top of Ilak Island is located along the edge of the bluff on the southwest shore. This drainage has a dendritic pattern with the sides and bottom of the ditches covered with tundra and grass. The drainage from the top of the bluff has only slightly eroded the top edge of the bluff. There are no lakes or streams on the island.

6. WOODLAND COVER:

There is no woodland cover in this area. The small island is bare rock with small areas of three foot grass and Ilak Island is covered with grass three to five feet high and tundra.

7. SHORELINE AND ALONGSHORE FEATURES:

The entire shoreline in the area was inspected. The method of field inspection is mentioned in AREAL FIELD INSPECTION. The mean high water line is distinguished on the photographs by the color tone change from dark to light as shown by a dashed line on the office photograph 23816. The low water line is not definitely distinguishable because of the foul areas along the shore. A small change in the water elevation has the effect of relatively large, irregular horizontal displacements of the shoreline. The foreshore on Ilak Island is deep grass and tundra with occasional grass topped pinnacles. The small island has a foreshore of bare rock. Ilak Island is plateau-like in shape with a steep, grass and tundra covered bluff.

8. OFFSHORE FEATURES:

The offshore areas around Ilak Island are foul with rock outcrop, boulders and light kelp. Out from the southeastern shore there is a group of rocks with several rocks awash in the surrounding area. North of the island there is a prominent, pointed sixteen foot rock (LAC) and southwest of this rock there is a large submerged rock. Offshore from the western end of the island there is a large area of five foot jagged rocks and rocks awash. The only offshore feature around the smaller island to the west of Ilak other than the foul areas around the shoreline is a rock awash at high water one half of a mile west of the island.

The photogrammetric field inspection was done in conjunction with the hydrography so none of these rocks and obstructions will require further investigation. The elevations of the rocks in this area were established by estimation of the field inspector landing in the area or observing from a short distance away in a launch.

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9. LANDMARKS AND AIDS:

Inapplicable

10. BOUNDARIES, MONUMENTS AND LINES:

Inapplicable

11. OTHER CONTROL:

There are fourteen photo-hydro signals that were located along the southern shore to aid the launch hydrography where shore signals could not be received. There are five natural signals, not white-washed, which were used only for inshore hydrography. For names and the numbers of the photos on which these signals are shown see INDEX TO FIELD WORK.

12. OTHER INTERIOR FEATURES:

Inapplicable

13. GEOGRAPHIC NAMES:

There is only one charted name in this area so a special report for geographic names is not warranted.

The charted name for the larger island in this area is ILAK ISLAND.

The small rock island two miles west of Ilak Island has no assigned name. This area is uninhabited so there are no natives to contact as to the local name of the island. It is proposed that the name GRAMP ROCK be given to this island. The triangulation station GRAMP, 1952 was established on this island during this season and it is referred to as GRAMP ROCK by the ship's personnel.

Noted:
854
L.H.

14. SPECIAL REPORTS AND SUPPLEMENTAL DATA:

COAST AND BEACH INTELLIGENCE REPORT, SHIP EXPLORER, 1952
GEOGRAPHIC NAMES REPORT ----- SEE 13 ABOVE
TRIANGULATION REPORT, SHIP EXPLORER, 1952
DESCRIPTIVE REPORT OF HYDROGRAPHIC SHEET (EX-2252)
MAGNETIC OBSERVATIONS, STATION ILAK, 1944

Respectfully submitted:

Robert C. Munson

Robert C. Munson
Ensign, USC & GS

Approved and forwarded:

George L. Anderson
George L. Anderson

Captain, USC & GS

Chief of Party

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INDEX TO FIELD WORK

TRIANGULATION STATIONS, RECOVERED AND IDENTIFIED:

Stations identified on nine-lens photos by field party in 1952

<u>STATION</u>	<u>PHOTO NO.</u>
ILAK, 1944	23815

TRIANGULATION STATIONS, ESTABLISHED AND IDENTIFIED:

Stations identified on nine-lens photos by field party in 1952.

<u>STATION</u>	<u>PHOTO NO.</u>
GRAMP, 1952	23815

TRIANGULATION INTERSECTION STATIONS, IDENTIFIED:

Stations identified on nine-lens photos by field party in 1952.

<u>STATION</u>	<u>PHOTO NO.</u>
LAC, 1952	23815

VERTICAL CONTROL STATIONS, IDENTIFIED:

Stations identified on nine-lens photos by field party in 1952.

<u>STATION</u>	<u>PHOTO NO.</u>
ILAK, 1944	23815
GRAMP, 1952	23815

HYDROGRAPHIC STATIONS, IDENTIFIED: (to be located by radial plot - preliminary advance plot used on boat sheet).

<u>STATION</u>	<u>PHOTO NO.</u>
ALL	23815
BAH	"
CUL	"
DAY	"
EBB	"
FEL	"
GAD	"
HAM	"
HOW	"
IRE	"
JOY	"
KED	"
LAC	"
MIL	"

SHORELINE INSPECTED:

<u>PHOTO NO.</u>
23816

RADIAL PLOT REPORT21. Area covered:

This report applies to map manuscript T-8027

22. Method:

Three nine-lens photographs (23814-15-16) were used for this radial line plot. They were the same metal-mounted photographs that were used for the preparation of the "advance shoreline map" RS-425 in January 1952.

The six new field selected photo-hydro points and the sub-station point for station "GRAMPS, 1952" were transferred from the field photographs to the office photographs to complete their preparation for the radial plot.

The vinylite map manuscript served as the base-sheet for this plot. Since each photograph could be "fixed" independently on all of the control points, the three photographs were placed under the manuscript in turn and oriented to the control points so that penciled "outs" could be drawn directly on the manuscript without the use of templates.

The long narrow shape of the area made the photograph tilt and scale determinations more difficult than usual but the registry between the positions of sea-level points on the rectified photographs and the radial plot positions of those points gave assurance that all of the photo-hydro points were located within 0.3mm (6meters) of their correct positions.

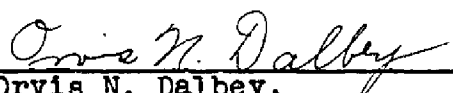
23. Adequacy of control:

The density, placement and identification of control was very good.

24. Supplemental Data: Inapplicable25. Photography:

The photography was excellent in quality, coverage and placement.

submitted by


Orvis N. Dalbey,
Cartographer-Photogrammetric

Approved by



COMPILATION REPORT31. Delineation:

The land area in this quadrangle consists of two small islands and it has been completely mapped in this survey by the Reading plotter, model "B".

32. Control:

The density and placement of horizontal control was very satisfactory. The sea-level datum provided excellent vertical control for the model.

33. Supplemental Data:a. Field Inspection & Control Identification Photos:

Nine-lens photographs 23815 and 16

b. Name Sheet: Official name sheet compiled by Mr. Heck.34. Contours and Drainage:

The photographic quality of the instrument photographs was good and no areas of questionable contours remain.

35. Shoreline and Alongshore Details:

The field inspection of the shoreline was very good. The High water line and the foul area limits were furnished by the field inspection. The low water line was not distinguishable because of the foul area.

36. Offshore Details:

There were a few offshore foul areas in which the field inspection reported rocks awash that could not be seen in the stereo-model. ~~They were simply outlined and labeled foul.~~

Rocks were symbolized where indicated by field

37. Landmarks and Aids: Inapplicable.

inspector.

38. Control for Future Surveys:

Fourteen Photo-hydro stations were identified by the field party and located by this Photogrammetric survey. The inshore hydrography was done concurrently with the field inspection thru the use of an advance photogrammetric shoreline survey. The smooth sheet for the hydrographic survey will be controlled by the positions of the hydro signals as determined by this map. There are no ⁵⁰⁴ ~~no~~ description required since the two surveys were made concurrently.

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

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

46. Comparison with Existing Maps: Inapplicable

See Review Report.

47. Comparison with Nautical Charts:

No chart of comparable scale exists; the following is the largest scale chart of the area:

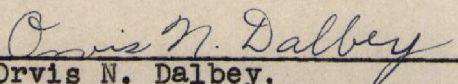
Chart No. 8863 IGITKIN ISLAND TO SEMISOPOCHNOI ISLAND
Scale 1:300,000 - Edition date, April 1945

48. Geographic Name List: See page 17

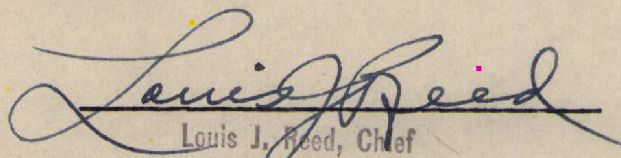
49. Notes for the Hydrographer: Inapplicable

50. Compilation Office Review: See page 18

Submitted by


Orvis N. Dalbey,
Cartographer-Photogrammetric

Approved by


Louis J. Reed, Chief
Stereoscopic Mapping Section
Photogrammetric Engineer

GEOGRAPHIC NAMES

Survey No.

T-8027

Name on Survey

	A	B	C	D	E	F	G	H	K	
ILAK ISLAND ✓										1
NORTH PACIFIC OCEAN ✓										2
TANAGA PASS ✓										3
Alutian Islands } for title										4
Delarof Islands }										5
Gramp Rock ✓										6
										7
										8
										9
										10
										11
										12
										13
										14
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										27

Names approved
4-9-54 L. Heck.

PHOTOGRAMMETRIC OFFICE REVIEW

T. 8027

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) N 7. Photo hydro stations ☒ 8. Bench marks N 9. Plotting of sextant fixes N 10. Photogrammetric plot report ☒ 11. Detail points N

ALONGSHORE AREAS

(Nautical Chart Data)

N = None or Non-existent

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

PHYSICAL FEATURES

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

CULTURAL FEATURES

27. Roads N 28. Buildings ☒ 29. Railroads N 30. Other cultural features N

BOUNDARIES

31. Boundary lines N 32. Public land lines N

MISCELLANEOUS

33. Geographic names ☒ 34. Junctions N 35. Legibility of the manuscript ☒ 36. Discrepancy overlay N 37. Descriptive Report ☒ 38. Field inspection photographs ☒ 39. Forms ☒

40. William D. Harris
Reviewer

Louis J. Reed
Supervisor, Review Section or Unit
Louis J. Reed, Chief
Stereoscopic Mapping Section
Photogrammetric Engineer

41. Remarks (see attached sheet)

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:

Review Report T-8027
Topographic Map
April 14, 1954

62. Comparison with Registered Topographic Surveys.-There are no previous topographic surveys registered covering this area.

63. Comparison with Maps of Other Agencies.-

USGS Gareloi Island 1:250,000 1951

Scale difference makes comparison impractical.

64. Comparison with Contemporary Hydrographic Surveys.-

An advance copy of the map manuscript supplied shoreline and hydrographic signals for the hydrographic survey. See Part I of this report. Field inspection for the photogrammetric survey was accomplished during the hydrographic survey. See Part II of this report. H-7975

Two rocks off the northeastern shore of Gramp Rock and one off the southwestern shore are not shown on the hydrographic survey. These rocks were noted as Awash MLLW by the hydrographic party on the photographs.

Elevations and symbolization of many of the rocks awash were changed during review to conform with field inspection data and standard symbolization. These rocks should be corrected on the hydrographic survey. *when it is verified (GFC)*

65. Comparison with Nautical Charts.-

Chart No. 8863 1:300,000 1951

Scale difference makes comparison impractical.

66. Adequacy of Results.-The map manuscript was compiled in conformance with Bureau standards and has served as an adequate base for hydrographic surveys.

Complete field inspection and adequate placement of control insure this map's conformance with the National Standard of Map Accuracy.

Reviewed by:


C. Theurer

APPROVED

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

H. M. Edmonson
Chief, Nautical Chart Branch
Division of Charts *CFD*

R. W. Swanson
Chief, Div. of Photogrammetry *MSH*

Earl O. Hartman
Chief, Div. of Coastal Surveys

July 8, 1955

History of Hydrographic Information
Quadrangle T-8027
Ilak Island, Alaska

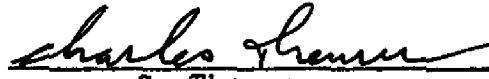
Hydrography was applied to the map manuscript of this quadrangle in accordance with Division of Photogrammetry General Specifications dated 18 May 1949 and Army Map Service TM 45-14, Chapter 14.

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

H-7975	(1952)	1:20,000	advance information
H-7977	(1952)	1:100,000	" "

The reliability of the hydrographic information is considered good. However, the compilation was prepared from unverified surveys subject to revisions in the Washington Office.

Depth curves are shown at 5 and 10 fathoms. Hydrography compiled by C. Theurer and checked by O. Svendsen, 12 May 1954.


C. Theurer
Div. of Photogrammetry
5/3/54