

11540

Diag. Cht. No. 8862.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Shoreline

Field No. Ph-34 Office No. T-11540

LOCALITY

State Alaska (Aleutian Islands)

General locality Andreanof Islands

Locality Atka Island

1954-58

CHIEF OF PARTY

E.H.Kirsch, Chief of Field Party

L.W.Swanson, Div. of Photo. Wash., D.C.

LIBRARY & ARCHIVES

DATE May 1963

USCOMM-DC 5067

11540

DATA RECORD

T-11540

Project No. (II): Quadrangle Name (IV):

Field Office (II): Ship EXPLORER

Chief of Party: E. H. Kirsh

Photogrammetric Office (III): Wash. D. C.

Officer-in-Charge: L. W. Swanson

Instructions dated (II) (III):
Project Instructions: 16 Dec. 1954
Supplemental " 10 Nov. 1955
" " 1 Oct. 1956
Compilation " 5 Nov. 1957

Copy filed in Division of
Photogrammetry (IV)
Office files

Method of Compilation (III): Shoreline
Graphic

Contours
Reading Nine Lens Plotter

Manuscript Scale (III): 1:20,000

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

Scale Factor (III): 1.0

Date received in Washington Office (IV) APR 8 - 1958

Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV): 16 Aug 1960

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): N. A. 1927

Vertical Datum (III):

Mean sea level except as follows:
Elevations shown as (25) refer to mean high water
Elevations shown as (S) refer to sounding datum
i. e., mean low water or mean lower low water

Reference Station (III):

Lat.:

Long.:

Adjusted
Unadjusted

Plane Coordinates (IV):

U.T.M.

State: Alaska

Zone: 1

Y=

X=

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.

DATA RECORD

Field Inspection by (II): R. E. Williams Date: 1957 Field Season
 E. B. Brown 1958 Season

Planetable contouring by (II): None Date:

Completion Surveys by (II): None Date:

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

Identified by office interpretation of photographs taken 1954

Projection and Grids ruled by (IV): Haskins Date: 2 Dec. 1957

Projection and Grids checked by (IV): Haskins Date: 2 Dec. 1957

Control plotted by (III): B. Hale Date: 11-21-55
 J. Battley Jan 1958

Control checked by (III): D. Carrier Date: 1-20-56

Radial Plot or Stereoscopic J. Battley Date: 1-6-58
 Control extension by (III):

Planimetry Date:
 Stereoscopic Instrument compilation (III):
 Contours C. Misfeldt Date: 1-28-60

Manuscript delineated by (III): J. Battley- Shoreline Date: 1-22-58
 G. Misfeldt - Contours 1-28-60

Photogrammetric Office Review by (III): E. Ramey Date: 1-24-58
 L. Levin 2-16 -60

Elevations on Manuscript L. Levin Date: 2-16-60
 checked by (II) (III):

4

Camera (kind or source) (III): C&GS 9-lens

Number	Date	PHOTOGRAPHS (III) Time	Scale	Stage of Tide
46046- 46050	6 Sept '54	1425-1432	1:20,000	2.8
45986,987	"	1312	"	1.8
57-L 1899-1915	13 Sept 57	15:41-15:44	1:20,000	2.8

Tide (III)

Reference Station: Sweeper Cove, Adak I.
 Subordinate Station: Bechevin Bay, Atka I.
 Subordinate Station: Sagchudak I

Ratio of Ranges	Mean Range	Spring Range	Time H	L
	3.7			
0.9	3.3		+0:10	+0:05
1.2	4.6		-1:25	-2:25

Washington Office Review by (IV):

W. Streifer

Date:

July 1960

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III):

Shoreline (More than 200 meters to opposite shore) (III):

Shoreline (Less than 200 meters to opposite shore) (III):

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II):

Recovered:

Identified:

Number of BMs searched for (II):

Recovered:

Identified:

Number of Recoverable Photo Stations established (III):

Number of Temporary Photo Hydro Stations established (III):

Remarks:

SUMMARY

to Accompany Topographic Map Manuscripts T-11540 thru T-11543.

These four (4) topographic surveys are part of Project Ph-34 (B & C). They cover the western portion of Atka Island from Cape Kigun eastward to Island Point near Bluefox Bay. Atka Island belongs to the Andreanof Islands group in the Aleutians of the state of Alaska.

Shoreline, foreshore and offshore were compiled graphically from December 1957 to March 1958 from nine-lens photography of 1954 and 1957 and furnished as preliminary manuscripts for hydrographic surveys. The four compilations were completed as topographic manuscripts from January to June 1960 on the Reading Plotter.

A limited field inspection was accomplished during seasons of 1957 and 1958 and the results applied to the manuscripts. This limited field inspection covered the south shore of Atka Island only since the plane-table surveys of the north shore of said island from 1943 were deemed adequate. At the request of the "Explorer" a number of the field-inspection photographs were returned to that ship and unfortunately not available to the reviewer during final review.

Cronar film positives at manuscript scale of 1:20,000 and the Descriptive Reports will be registered and filed in the Bureau Archives.

July 1960

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PHOTOGRAMMETRIC PLOT REPORT
Project PH-34 Atka Island
December 1957

21. AREA COVERED

The radial plot covers the western end of Atka Island to Island Point and includes Ikiginak and Oglodak Island lying west of Atka Island. The manuscripts are T-11552, T-11540, T-11541, T-11542 and T-11543.

22. METHOD

The plot was laid on vinylite manuscripts at 1:20,000 scale with a ruled polyconic projection and UTM 1000-meter grid. The grids were used to junction the manuscripts.

The photographs used were metal-mounted, nine-lens. Master calibration templet 44842-8 was used for the 45000 and 46000 series and master calibration templet 42061 for the three templets covering Ikiginak and Oglodak Islands.

A preliminary plot was previously laid in this area on office-identified control. The 1957 field-identified control positions were added to the photography for this present plot.

Utilizing the previously prepared templets only the new control stations had to be added to the templets.

With the addition of field-identified control a stronger fix in datum was obtained and resulted in a shift in datum from the preliminary plot positions. This shift was greatest on the western tip of Atka (approx. 3MM) and along the entire south shore of Atka (aprox. 1.5MM) which was void of control in the preliminary plot.

The attached sketch shows tolerances of control used in plot. Good closure was achieved in junctioning with the adjoining sheet(T-11533) to the northeast which was laid on previous field-identified control and was considered fixed in datum. A junction was not made with T-11544 which falls due east of this plot as this survey was compiled as "preliminary". Junction between this plot and T-11544 will be made when a finalized plot will be done for this area.

23. ADEQUACY OF CONTROL

The sketch shows the density and distribution of control. There were 20 field-identified triangulation stations and 2 office-identified stations. Of these, 3 stations (all field-identified) could not be held in the plot and are discussed herein:

23. ADEQUACY OF CONTROL CONTINUED

FOUL 1943 (1mm SE of plotted position); this station was considered doubtful when pricked on the photographs as the field-identified position did not seem to agree with the original description for the station. The office-identified station in the preliminary plot would have held in this plot.

BECH 1943 (0.7mm N of plotted position); this station had only a "fair" identification rating by the field party and could not be positively identified in the office---other well-defined control held nearby.

SANDY 1957 sub. pt. (0.6 mm NE of plotted position); there is a discrepancy on the control card on the direction turned to observe the substitute station and was consequently considered doubtful. Three well-defined stations held nearby.

Most of the control station identification cards furnished by the field did not indicate the direction of angle turned to the substitute stations. In these instances the sketch on the card was used to determine if the angle turned was right or left and these substitute points were closely observed in the radial plot.

24. SUPPLEMENTAL DATA

None.

25. PHOTOGRAPHY

The photography is considered adequate as to coverage and overlap. Definition was considered excellent.

Submitted by
Jeter P. Battley, Jr.
Cartographer

Jeter P. Battley Jr

Approved by

E. H. Ramey

E. H. Ramey
Chief, Graphic Compilation Unit

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September 1958

Addendum to Dec. 1957 Plot Report for
Atka Island, Alaska, PH-34

T-sheets T-11540 - 11541 - 11542 - 11543

29 September 1958

22. Method

During the 1958 field season an error was found in the 1957 triangulation positions on the S. shore of Atka Island. Of the six 1957 control stations in this area (see attached plot sketch) only three positions were in error enough to be plottable at 1:20,000 scale. These three are SANDY 1957 sub. pt., DOLLY 1957 sub. pt. and WINDY 1957.

The plot was relaid on the original manuscripts utilizing the previously prepared templets. There was no additional photo preparation needed. The templets were relaid holding to the new positions for the above mentioned stations. On T-11543, T-11542 and the western half of T-11540 there was no shift in position and the original drilled holes on the templets held to the manuscript. On T-11541 and the eastern half of T-11540 the templets were redrilled for the new positions established. As the templets had been previously drilled the new drill holes were circled for clarification and use in the nine-lens instrument unit. The maximum shift in position effected by this new plot was less than 0.5 mm.

23. Adequacy of Control

(see original report)

The control is considered adequate for an accurate fix in datum.

On the original report three control stations, FOUL 1943, BECH 1943 and SANDY 1957 sub. pt. could not be held in the plot and were discussed. Of these, SANDY sub. pt. held in this plot to the new 1958 position and BECH 1943 shifted to within 4 mm of the plotted position instead of the previous 46 mm. FOUL 1943 held in the same plot position as before. All other control held.

Approved


Everett H. Ramey

Chief, Graphic Compilation Unit

Submitted by


Jeter P. Battley, Jr.

MAP T. 11540

PROJECT NO. PH-34

SCALE OF MAP 1:20,000

SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE LONGITUDE OR x-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD (BACK)	TOTAL FORWARD (BACK)	N.A. 1927 - DATUM		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
						DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	
JOHN (W.W.Rock) 1943	V 155	N.A. 1927	52 02 03.31 175 14 12.82	<i>Not plotted</i>	1854.5 1143.8	102.3 244.4	1752.2 899.4	
NERO (W.W.Rock) 1943	V155	N.A. 1927	52 03 06.797 175 11 47.970	<i>Not plotted</i>	1854.5 1143.4	210.1 914.1	1644.4 229.3	
GUN (PEAK) 1943 (ND)	V155	N.A. 1927	52 01 23.62 175 19 19.75		1854.5 1144.0	730.0 376.6	1124.5 767.4	
ZIP (PEAK) 1943 (ND)	V156	N.A. 1927	52 02 00.22 175 15 52.89		1854.5 1143.8	6.8 1008.3	1847.7 135.5	
BECH 1943	V146	N.A. 1927	52 03 12.059 175 11 06.759		1854.5 1143.3	372.7 128.8	1481.8 1014.5	
SIM 1943	V146	N.A. 1927	52 02 36.980 175 15 30.742		1854.5 1143.6	1143.0 585.9	711.5 557.7	
KIGUN 1943	V146	N.A. 1927	52 01 39.579 175 19 41.842		1854.5 1144.0	1223.3 797.8	631.2 346.2	
FOUL 1943	V148	N.A. 1927	52 01 58.522 175 17 34.926		1854.5 1143.8	1808.8 665.8	45.7 478.0	
BLOW 1943	V148	N.A. 1927	52 01 59.448 175 13 55.489		1854.5 1143.8	1837.4 1057.8	17.1 86.0	
BE (W.W.Rock) 1943	V154	N.A. 1927	52 03 17.549 175 11 15.114	<i>Not plotted</i>	1854.5 1143.3	542.4 288.0	1312.1 855.3	

COMPILATION REPORT
T-11540

31. DELINEATION:

This manuscript was compiled by graphic methods using nine-lens photographs taken in 1954. Some field inspection was done in 1957 for the area east of longitude 175°12' and was applied to the manuscript.

This manuscript was compiled in 1956 without benefit of field-identified control to accurately establish datum. Shifts in position resulted between the preliminary manuscript and this final compilation as great as 60 meters.

32. CONTROL

The horizontal control was adequate for compilation. See the attached Photogrammetric Plot Report.

33. SUPPLEMENTAL DATA:

Single-lens infra-red photographs were available for the north shore of Atka which falls on this manuscript. These photographs were of some value in the delineation of features which were obstructed on the nine-lens photographs by shadow and overhang. They were also useful in the delineation of kelp areas.

Topographic surveys T-6921 and T-6922, 1943, 1:20,000 scale were used to aid in the interpretation of shoreline features.

34. CONTOURS and DRAINAGE:

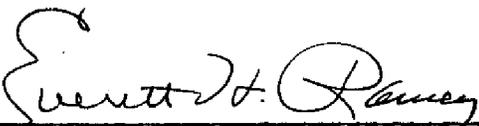
Many of the elevations on planetable survey T-6922 were in good agreement with the instrument delineation. Where agreement was within five feet the planetable elevation was retained as an unchecked field elevation

35. SHORELINE AND ALONGSHORE FEATURES:

These features were compiled primarily from office interpretation of photographs using the field inspection notes (Item 31 above) and the supplemental data listed under item 33 as a guide. They are believed to be adequately compiled.

ADDENDUM TO COMPILATION REPORT
T-11540, T-11541, T-11544, T-11545 and T-11546
9 October 1958

Segments of shoreline were redelineated on these manuscripts to incorporate a slight shift in datum which resulted from changes in positions of basic control. All changes are shown in red on the manuscripts and represent shifts in position up to approximately 0.6 mm. For a detailed discussion of the changes in position, see the appropriate photogrammetric plot reports filed as part of the Descriptive Reports for the above surveys.



Everett H. Ramey
Chief Graphic Compilation Unit

GEOGRAPHIC NAMES LIST

Andreanof Islands (Title)

*Atka Island

*Atka Pass

*Bering Sea

*Cape Kigun
Crescent Bay

Kigun Bay

Pacific Ocean

Slope Point
Stripe Point

* B.G.N. Decision

George M. Bass
GEOGRAPHIC NAMES SECTION
21 JUNE 1960

T-11540

49. NOTES TO THE HYDROGRAPHER:

A new manuscript was delineated in December 1957 to incorporate a datum shift which resulted from a new radial plot and to add field inspection data for shoreline features. Photo-hydro stations were also repositioned using field identifications.

The area west of long. 175° 12' had no field inspection and is subject to errors in office interpretation of photographs. The manuscript is now in final form but subject to change by a final office review.

The photogrammetric plot report for this area will be filed as part of the Descriptive Report for T-11540.

The south coast from Atka Pass to 175° 17' was field inspected in 1959 and has been applied to the manuscript

REVIEW REPORT OF

TOPOGRAPHIC MANUSCRIPTS T-11540 THRU T-11543

July 1960

62. Comparison with Registered Topographic Surveys:

T-6917 ^b	1:20,000	1943
T-6920	1:20,000	1943
T-6921	1:20,000	1943
T-6922	1:20,000	1943

The shoreline is in good agreement between these surveys.

Some forshore information from the north shore of Atka Island was transferred from the 1943 T-sheets to subject manuscripts since that part was not field-edited and some of this information was not clearly defined on the photography. However, the intricate shoreline of subject manuscripts indicates complete detailing of its present condition and T-11540 thru T-11543 are to supersede above listed registered topographic surveys for nautical charting purposes of common areas.

63. Comparison with Maps of Other Agencies:

ATKA, ALASKA, 1:250,000 U. S. Geological Survey, 1952

Agreement is as well as scale difference allows.

2.

64. Comparison with Contemporary Hydrographic Surveys:

H-6846	1:20,000	1943
H-6847	1:20,000	1943
H-6848	1:20,000	1943
H-8438	1:20,000	1957
H-8439	1:20,000	1958
H-8474	1:20,000	1958

There are some shoreline and foreshore differences between the 1943 hydrographic surveys and subject surveys, none of which appear to interfere with the hydrographic information shown. Advance shoreline and control of subject T-sheets was furnished for hydrographic surveys H-8438, H-8439 and H-8474. However, minor changes resulting from field inspection, adjustments in the application of contours by instruments and final review should be considered for application prior to completion of these hydrographic surveys.

65. Comparison with Nautical Charts:

9136	1:40,000	Revised to 52 1/28 (Preliminary Chart)
9137	1:40,000	Revised to 51 11/5 (Preliminary Chart)
8862	1:300,000	Revised to 60 6/6

Charts 9136 and 9137 are based on 1943 hydrographic surveys (listed under item No. 64) and indicate similar discrepancies with subject surveys. The scale of chart 8862 does not permit a conclusive comparison.

3.

66. Adequacy of Results and Future Surveys:

A limited field inspection was confined to the south shore of Atka Island. Some of the field inspection photographs were not available during final review. Other than these, no deficiencies in accuracy or adequacy are indicated.

Reviewed by:

Joseph J. Streifler
Joseph J. Streifler

Approved;

L. C. Lund
L. C. Lund
Chief, Review and Drafting Section
Div. Of Photogrammetry

James G. Taylor
James G. Taylor
Chief, Div. of Nautical
Charts

J. E. Waugh 11/16/62
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Horace B. Conely
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