9921 9922 8923

9921 9922 9923

Diag. Cht. No. 8863-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topgraphic

Field No. Ph-34 (48) Office No. T-9921 T-9922 T-9923

LOCALITY

State Alaska

General locality Aleutian Islands

Locality Tanaga Island

1948-53

CHIEF OF PARTY

S.B.Grenell, Chief of Field Party
L.J.Reed, Wash. Photogrammetry Div.

LIBRARY & ARCHIVES

DATE June 19, 1957

8-1870-1 (1)

DATA RECORD

T-9921, 9922, 9923

Project No. (II): Ph-34(48) Quadrangle Name (IV): T-9921 = CAPE SAJAKA, NORTH HALF
T-9922 = TANAGA VOLCANO
T-9923 = BUMPY POINT

Field Office (II): Ship EXPLORER Chief of Party: S.B.Grenell

Photogrammetric Office (III): Washington D.C. Officer-in-Charge: Radial Plot = Lester C. Lande
Compilation = Louis J. Reed

Instructions dated (II) (III): Copy filed in Division of Photogrammetry (IV)

Field = 8 Apr 48, 19 Mar 52, 20 Feb 53, and letter No 22/MEK, S-2-EX, dated 8 Mar 52, subject Modification of Instructions
Office = 14 Oct 53

Method of Compilation (III): Reading Plotter = All contours and T-9923 shoreline
Graphic Compilation = Shoreline on T-9921 and T-9922

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

Scale Factor (III): 1:1

Date received in Washington Office (IV): APR 29 1954 Date reported to Nautical Chart Branch (IV): MAY - 5 1954

Applied to Chart No. Date: Date registered (IV): 24 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.: Adjusted

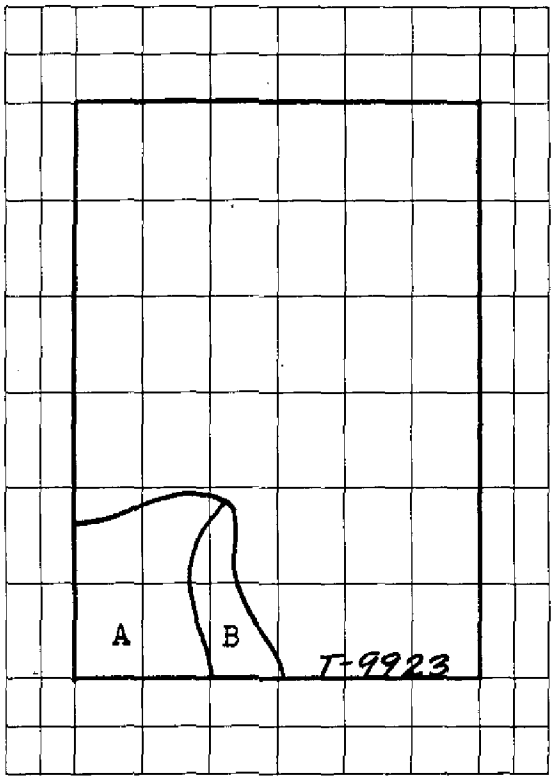
Plane Coordinates (IV): State: Zone:

Y= X=

Universal Transverse Mercator Grid, Zone 1, with 1,000m 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)

T-9921: 100% compiled by Clarence E. Misfeldt on the Reading Plotter, model "A".

T-9922: 100% compiled by Clarence E. Misfeldt on the Reading Plotter, model "A".

T-9923: See diagram above,

A = compiled by Clarence E. Misfeldt on the Reading Plotter, model "A"
B = compiled by the team of Louis Levin and Orvis N. Dalbey on the Reading Plotter, model "B".

M-2618-12 (4)

DATA RECORD

Field Inspection by (II): S.B.Grenell
Ship EXPLORER
Date: 1953

Planetable contouring by (II): None
Date:

Completion Surveys by (II):
Date:

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

The shoreline on this project was compiled following indications of the shoreline on photographs as produced during 1953 field inspection. Therefore the MHHWL is dated "1953".

Projection and Grids ruled by (IV): Austin R. Riley on the Reading Ruling Machine
Date: 15 Oct 53

Projection and Grids checked by (IV): Howard D. Wolfe
Date: 19 Oct 53

Control plotted by (III): Neil S. Shultz
Date: 8 Nov 53

Control checked by (III): Jeter P. Battley
Date: 13 Nov 53

Radial Plot or Stereoscopic Control extension by (III): Samuel G. Blankenbaker and Howard J. Murray
Date: 18 Dec 53

Stereoscopic Instrument ~~compilation~~ delineation (III): Planimetry by: Clarence E. Misfeldt, Louis Levin
Date: 26 Feb 54

Contours Orvis N. Dalbey
Date:

Manuscript ~~delineated~~ compiled by: (III): Robert L. Sugden
Date: 15 Apr 54
(All contours and shoreline on T-9923)

Shoreline on T-9921 and 22, by: Graphic Compilation 20 Dec 53

Photogrammetric Office Review by (III): Louis J. Reed
Date: 16 Apr 54

(Shoreline compilation checked by:
Roscoe J. French and Charles Theurer)-------20 Dec 53

Elevations on Manuscript checked by ~~(H)~~ (III): Louis J. Reed
Date: 16 Apr 54

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

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide

See Photo & Control Diagram, page 11,

and Photograph List, page 12

Tide (III)

diurnal

Ratio of Ranges	Mean Range	~~Spring~~ Range
---	---	3.7
1.1	---	4.0
1.1	---	4.2
0.8	---	3.1

Reference Station: Sweeper Cove, Adak Island

Subordinate Station: Tanaga Bay, Lash Bay,

Subordinate Station: Hot Springs Bay

Washington Office Review by (IV): K. N. Moki Date: 7-8-54

Final Drafting by (IV): R. Kelly (T-9921) 8-9-55

M Clinton (T-9922) Date: 1-20-56

M Day (T-9923) 1-20-56

Drafting verified for reproduction by (IV): Date:

Proof Edit by (IV): Date:

Land Area (Sq. Statute Miles) (III): T-9921 = 3 sq mi; T-9922 = 32 sq mi; T-9923 = 13 sq mi

Shoreline (More than 200 meters to opposite shore) (III): 5 miles on T-9921; 22 = 8 mi; 23 = 8 mi

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

Control Leveling - Miles (II): none

Number of Triangulation Stations searched for (II): Recovered: Identified: One

Number of BMs searched for (II): none Recovered: Identified:

Number of Recoverable Photo Stations established (III): One

Number of Temporary Photo Hydro Stations established (III): See remarks below

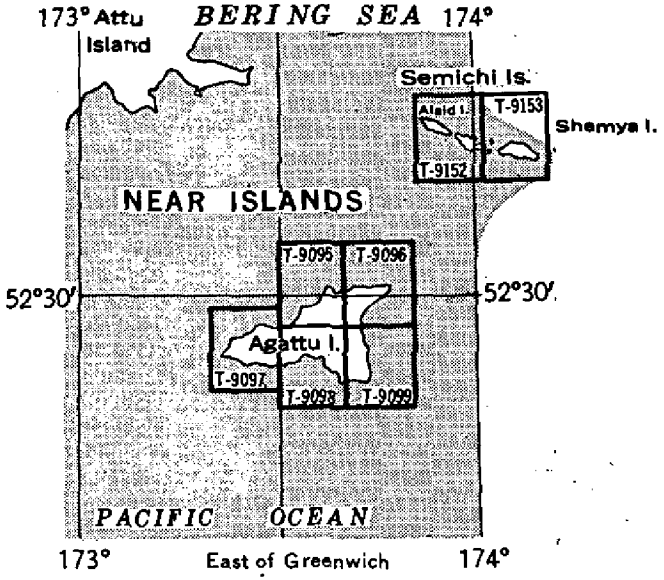
Remarks:

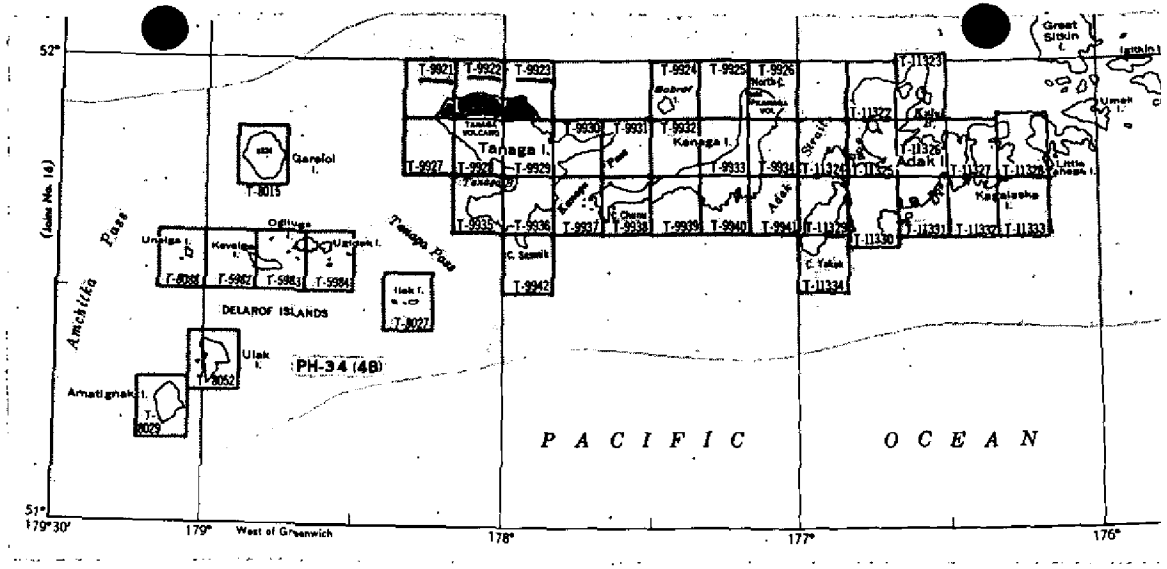
Numerous hydro stations were located with a theodolite and positions were computed by the field party. No 524 cards were submitted but the stations are dated 1953 and are shown on the manuscripts with a 2.5mm black circle. All dated stations without 524 cards are in this category.

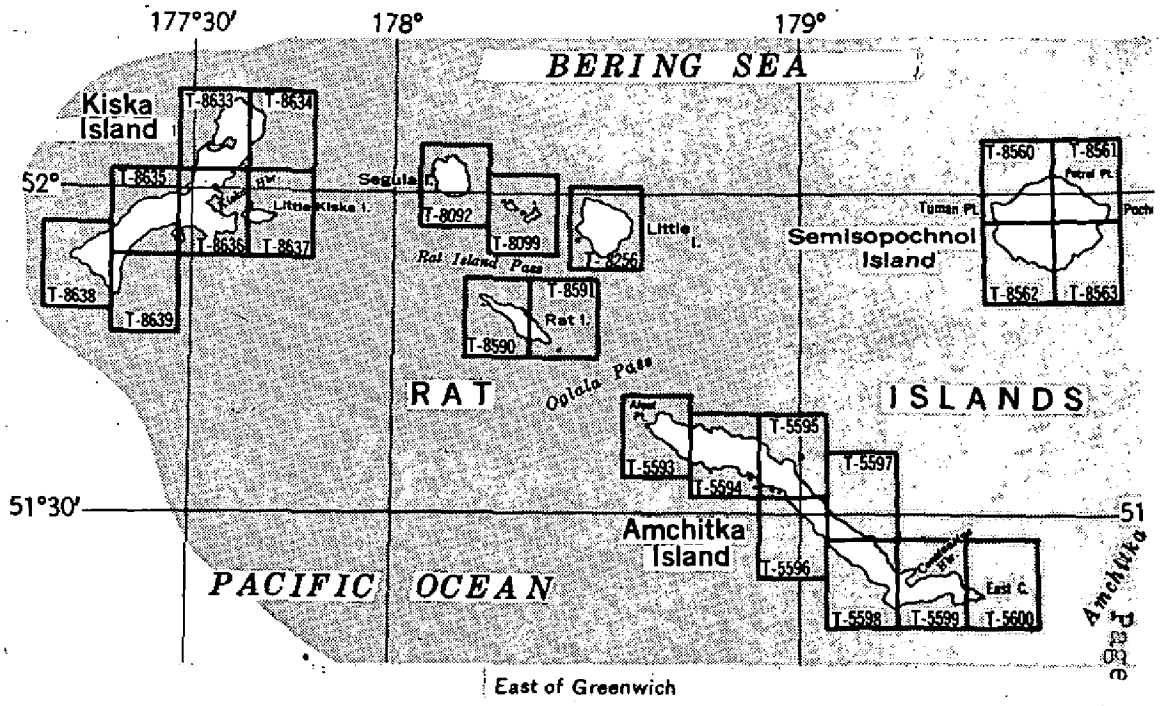
M-2618-12(4)

TOPOGRAPHIC MAPPING PROJECT PH- 34

Aleutian Islands ALASKA







Summary to Accompany Descriptive Report
T-9921, T-9922 and T-9923

T-9921 to T-9923, inclusive, are three topographic surveys of a series of 12 similar maps covering Tanaga Island in project Ph-34. These three surveys include the northwest end of Tanaga Island. They extend southward to latitude 51° 52' 30" and eastward beginning from Cape Sajaka to longitude 177 50'. These maps are a combination of graphic compilation and 9-lens Reading Plotter compilation. Field operations preceding compilation included field inspection, recovery and establishment of horizontal control and the determination of elevations required to control a stereo-instrument project vertically. The compilation was at a scale of 1:20,000. Contours were drawn at a 50 foot interval with 25 foot interval supplemental contours. The Maps were not field edited.

A cloth-backed lithographic print of each map at manuscript scale and the combined descriptive report will be registered and permanently filed in the Bureau Archives.

FIELD INSPECTION REPORT

2-20 See separate report entitled as follows:

FIELD INSPECTION REPORT

FOR MAPS

T-9921 thru T-9923
T-9927 thru T-9931
T-9935 thru T-9937
and T-9947

Project CS-218, Ph-34
Tanaga Island, Alaska

Ship EXPLORER
S.B.Grenell, Comdg

Photogrammetric Plot Report

21. Area Covered: The 12 topographic manuscripts included in the radial plot cover Tanaga Island.

T-9921)	T-9928)	T-9935)
T-9922(	T-9929(	T-9936(
T-9923)	T-9930)	T-9937)
T-9927)	T-9931(	T-9942(

22. Methods: The vinylite manuscripts were ruled at a scale of 1:20,000 with polyconic projections and UTM, Alaska zone-1, grids. The horizontal control was plotted from the polyconic projections.

Nine-lens metal mounted 1:20,000 scale photographs were used in the plot.

Photograph Numbers:

23880A	23880D	39032	37610	34314	23891
23879	23881A	39031	37611	34315	23892
23878	23881B	39030			23894
23877P	23883A	39029	42053	34307	23896
23877N	23884	39028	42056	34309	
	223886		42057	34310	41852
23915	23887	39054	42058	34311	41853
23916		39055	42062	34312	41854
23917	25124	39056	42059		41855

The templets were made from vinylite stock. Master Calibration templets were used to adjust for transforming errors.

Master templet nos.

22561	36269
33566	40915

The closure and adjustment to control was good. The disposition of control not held is discussed in section 23 of this report.

Some difficulty was encountered in assembling the plot in the area of the high mountainous area on the NW neck of the island. The good control points available along the coast were held. Good intersections of radials for photogrammetric points were obtained along the shore. The radials for points of high elevation in the area did not make good intersections in some instances.

23. Adequacy of Control: The index included with this report shows the density and distribution of horizontal control. A sheet showing the measured differences in millimeters between the radial plot positions and the computed plotted positions of control points is included with the report. It should be noted that errors in drilling up to 0.2 mm. (approximately) on control points occurred in some instances due to the obstruction of vision caused by a large number of overlapping templets.

A total of 67 horizontal control points was used as control for the plot. 44 control points held within 0.3 mm. 16 of the 23 stations not held within 0.3 mm. were established by fourth-order theodolite observations. The identification of these points (peaks) is indicated by the field party as doubtful. Office identification was also difficult.

Office identification on station Goose is poor. Photo identification on Beta, sub. pt. No. 1; Gust, Sajata sub.sta; and Tanaga Volcano is doubtful.

25. Photography: The photographs used in the plot are selected from four different years photography. Tilt in the photographs affected the intersections of radials on some of the points of higher elevations. Photograph No. 23892 is ~~sadly~~ badly tilted.

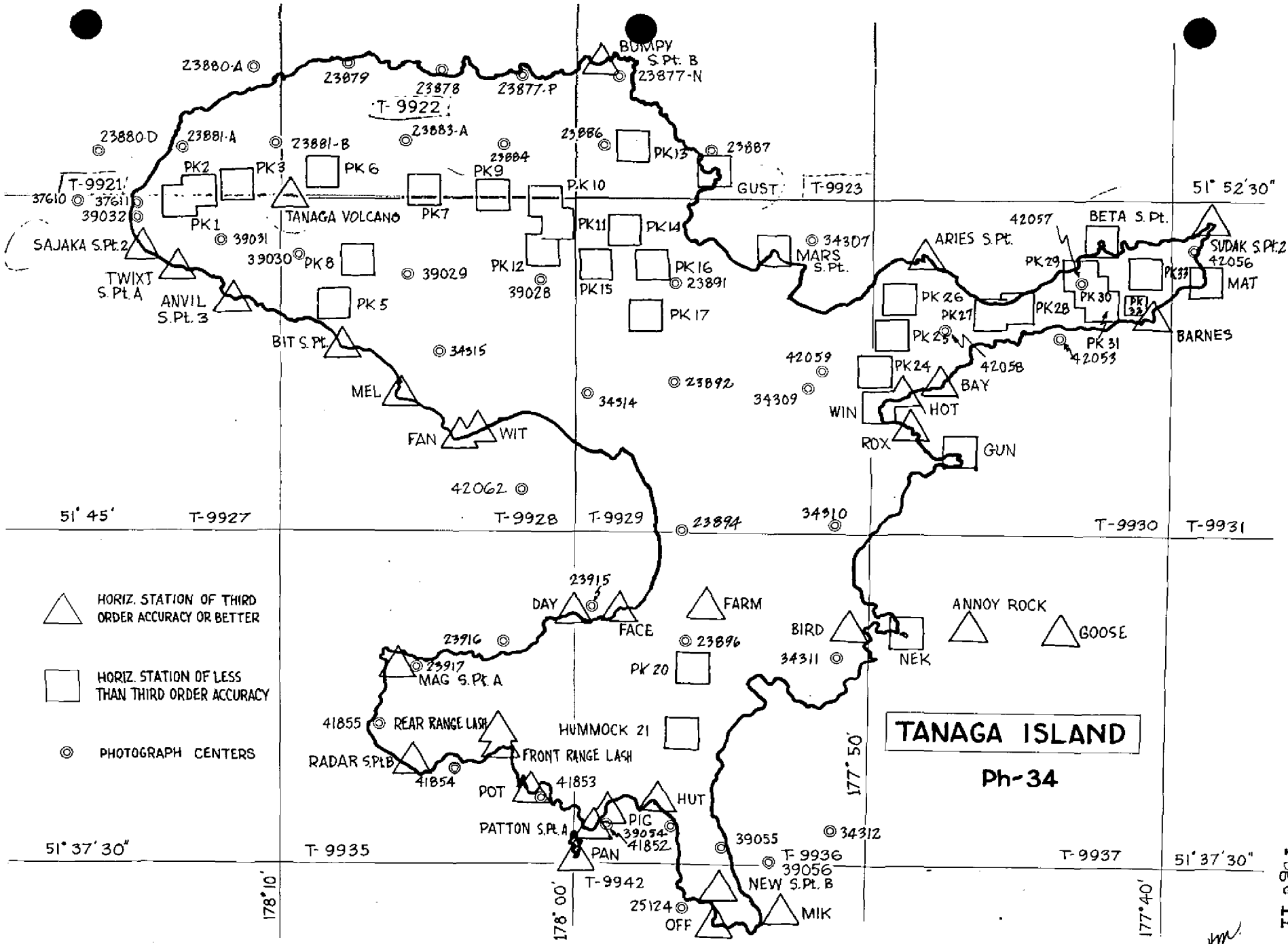
Submitted by
J. G. Blankenbaker

approved by
L. C. Lande

PLOT [illegible] (COMPUTED [illegible] POSITIONS)

Note: [illegible] Plot [illegible] "23" [illegible] drilling of [illegible]

Station		Peak	No.	
LINDA, 1944	HELD	PEAK	#1	1.3 mm
TANAGA VOLCANO E. HIGH POINT, 1953	48m	PEAK	#2	1.0 mm
POT, 1944	HELD	"	#3	0.4 mm
OFF, 1944	HELD	"	#5	HELD
MIX, 1943	HELD	"	#6	HELD
NEW, 1943 Sub. Pt. "B"	HELD	"	#7	0.7 mm
HUT, 1944	HELD	"	#8	0.5 mm
PIG, 1943	0.4 mm	"	#9	HELD
PATTON, 1944 Sub. Pt. "A"	HELD	"	#10	4.0 mm
PAN, 1944	HELD	"	#11	HELD
REAR RANGE LASH, 1944	HELD	"	#12	HELD
FRONT RANGE LASH, 1944	HELD	"	#13	HELD
RADAR, 1945 Sub. Pt. "B"	HELD	"	#15	0.6 mm
MAG, 1943 Sub. Pt. "A"	HELD	"	#17	1.7 mm
DAY, 1943	HELD	"	#24	0.8 mm
FACE, 1943	HELD	"	#25	1.3 mm
BIRD, 1943	HELD	"	#26	0.7 mm
ANNOY ROCK, 1943	HELD	"	#27	HELD
GOOSE, 1943	0.6 mm	"	#28	1.2 mm
NEK, 1943	HELD	"	#29	0.8 mm
HUMMOCK-21, 1953	HELD	"	#31	0.8 mm
PEAK, 20, 1953	HELD	"	#32	1.5 mm
FARM, 1943	HELD	"	#33	HELD
WIN, 1943	HELD	"	#16	0.6 mm
HOT, 1943	HELD			
ROX, 1944	HELD			
BAY, 1943	HELD			
GUN, 1943	HELD			
BARNES, 1943	HELD			
MAT, 1953	HELD			
SUDAK, 1953 Sub. Pt. #2	HELD			
BETA, 1953 Sub. Pt. #1	0.7 mm			
ARIES 1953 Sub. Pt.	HELD			
MARS, 1953 Sub. Pt.	HELD			
GUST, 1953	0.7 mm			
BUMPY, 1953 Sub. Pt. "B"	0.5 mm			
FAN-2, 1943	HELD			
WIT, 1943	HELD			
[illegible]EL, 1944	HELD			
BIT, 1943 Sub. Pt.	HELD			
ANVIL, 1953 Sub. Pt. #3	HELD			
TWIXT, 1953 Sub Pt. "A"	HELD			
SAJAKA, 1953 Sub. Pt. #2	1.0 mm			


TANAGA ISLAND
Ph-34
HORIZ. STATION OF THIRD ORDER ACCURACY OR BETTER
HORIZ. STATION OF LESS THAN THIRD ORDER ACCURACY
PHOTOGRAPH CENTERS
T-9921
T-9922
T-9923
T-9927
T-9928
T-9929
T-9930
T-9931
T-9935
T-9936
T-9937
T-9942
51° 52' 30"
51° 45'
51° 37' 30"
177° 50'
178° 10'
178° 00'
177° 40'
23880-A
23879
23878
23877-P
BUMPY S.Pt. B
23877-N
23880-D
23881-A
23881-B
23883-A
23884
23886
23887
PK1
PK2
PK3
PK6
PK7
PK9
PK10
PK11
PK12
PK13
PK14
PK15
PK16
PK17
PK5
PK8
PK20
PK23
PK24
PK25
PK26
PK27
PK28
PK29
PK30
PK31
PK32
PK33
GUST
TANAGA VOLCANO
SAJAKA S.Pt.2
TWIXT S.Pt.A
ANVIL S.Pt. 3
BIT S.Pt.
MEL
FAN
WIT
MARS S.Pt.
ARIES S.Pt.
BETA S.Pt.
SUDAK S.Pt.2
MAT
BARNES
BAY
WIN
HOT
ROX
GUN
NEK
BIRD
ANNOY ROCK
GOOSE
FARM
DAY
FACE
MAG S.Pt.A
REAR RANGE LASH
FRONT RANGE LASH
HUMMOCK 21
RADAR S.Pt.B
POT
HUT
PIG
PATTON S.Pt.A
PAN
NEW S.Pt. B
OFF
MIK
37610
37611
39032
39031
39030
39029
39028
34307
34315
34314
34309
34310
34311
34312
42057
42059
42058
42053
42056
42062
23891
23892
23894
23896
23915
23916
23917
41855
41854
41853
41852
39054
39055
39056
25124

PHOTOGRAPH DATA

Photos used in Tanaga Island Radial Plot

Photo No	Date	Time	Stage of Tide
23877N	20 Sep 48	11:29	2.0ft above MLLW
77P		11:30	
78		11:31	
79		11:32	
80A		11:32	
80D		11:39	
81A		11:40	
81B		11:41	
83A		11:41	
83B		?	
84		11:42	
85		11:42	
86		11:43	
87		11:43	
91		11:54	
92		11:54	
94		11:55	
96		11:56	
23915		12:32	
16		12:33	
17		12:33	
34307	6 Oct 51	16:48	4.0ft above MLLW
09		16:49	
10		16:50	
11		16:51	
14		17:00	
15		17:01	
37610	1 Jul 52	4:10	2.8ft above MLLW
11		4:11	
39028	9 Sep 52	10:19	3.0ft above MLLW
29		10:20	
30		10:21	
31		10:22	
32		10:23	
54	10 Sep 52	10:53	2.8 ft above MLLW
55		10:54	
42053	25 Sep 53	11:30	2,8 ft above MLLW
56		11:34	
57		11:35	
58		11:37	
59		11:38	
62		11:41	
41852	10 Sep 53	10:44	2.0ft above MLLW
53		10:45	
54		10:45	
55		10:46	

COMPILATION REPORT

31. Delineation:

Graphic methods were used to delineate the shoreline of T-9921 and T-9922. Shoreline and rock data were compiled from metal-mounted office photos with the aid of a stereoscope and field inspection photos. The method involved a preliminary investigation of the photos and the radial plot to determine those areas of common scale in order to aid the compiler when inking the manuscript. Detail and pass points of sea-level elevation were inked on the work sheet to hold to as control during the compilation. The proper density of detail points is dependent on scale and position of shoreline and islands. Offshore islands of any consequence have a minimum of two detail points to control their position. Where scale was not sufficiently close the work sheets were with the electric projector. The work sheets were detailed under the stereoscope and are therefore a stereoscopic interpretation of the MHHWL and foreshore aided by the field inspection information.

The shoreline and offshore details on T-9923, and the contours on all three sheets, were delineated on the Reading Plotters as outlined on page 2. Shoreline indications and other field inspection data on the field inspection photos was used as a guide during this delineation. The entire land areas of all three quads has been compiled.

32. Control:

Reference side-heading 23, page 9. Control, both horizontal and vertical, were adequate for instrument compilation purposes.

33. Supplemental Data:

Refer to side-heading 14, Field Inspection Report. No graphic control surveys in the area of this report.

34. Contours and Drainage:

The photographs were of good quality for contouring purposes and there remain no areas of questionable contours.

35. Shoreline and Alongshore Details:

Reference side-heading 7, page 14 of the Field Inspection report, and see side-heading 31 above. Field inspection was quite adequate and has been incorporated into this compilation, both the field inspection provided on photographs and that on RS-426.

36. Offshore Features:

Included as part of shoreline in one operation.

37. Landmarks and Aids:

No landmarks or aids to navigation exist in the area of T-9921, 22, or 23; Refer to side-heading 9 of Field Report.

38. Control for Future Surveys:

Refer to side-heading 11, page 16, of the Field Inspection Report. Certain hydro and topo stations were located by field methods. The remainder that were identified by field inspection were located by graphic plotting.

Hydro stations: No descriptions were furnished the compilation office; all were transferred from field inspection photos by pricking to office photos, and the transfer was verified by a second compiler. Manuscript location was then accomplished by graphic methods.

Topo stations: Those for which descriptions were written by the field party have 524 forms whether located by field or office methods. They include:

T-9921	Tan, 1953 (office)
T-9922	Jinx and Hawk, 1953 (office)
T-9923	Gust, 1953 (field)

39. Junctions:

See Map Layout Sketch, page 5, this report. All adjoining sheets were compiled as parts of the same project and therefore all junctions are in agreement.

40. Horizontal and Vertical Accuracy:

The three compilations of this report are considered meeting the specifications established by National Map Accuracy Standards, horizontally for maps of 1:20,000 scale, and vertically for maps having a 50ft contour interval with 25ft supplemental contours, the latter added to better protray the relief in relatively flat areas.

46. Comparison with Existing Maps:

No accurate maps of Tanaga Island were ever made prior to this project.

47. Comparison with Nautical Charts:

Preliminary Chart, Alaska-Aleutian Islands, KANAGA PASS AND APPROACHES, No.9145, 1:40,000, 1st edition, April 1945, last correction date of 13 August 1951.

Preliminary Chart, Alaska-Aleutian Islands, TANAGA BAY AND APPROACHES, No. 9146, 1:40,000, 1st edition, March 1945, last correction date of 27 August 1951.

Continued on page 15.

47. Comparison with Nautical Charts: Contd

Alaska-Aleutiam Islands, Harbors and Approaches, Andreanof Islands, HOT SPRINGS BAY, TANAGA ISLAND, No.9121, 1:10,000, 2nd edition, last correction date of 25 August 1952.

48. Geographic Name List:

See separate page, page 16.

49. Notes for the Hydrographer:

Not applicable.

50. Compilation Office Review:

See separate form, T-2, page 17.

submitted by:

Orvis N. Dalbey

Orvis N. Dalbey, Chief,
9-Lens Plotting Instrument Section

approved by:

Louis J. Reed

Louis J. Reed, Chief
Stereoscopic Mapping Branch
Photogrammetric Engineer

Form T-2

PHOTOGRAMMETRIC OFFICE REVIEW

T-9921, 22, 23

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 alongshore 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. _____

Reviewer — Supervisor, Review Section or Unit

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:

M-2623-12

GEOGRAPHIC NAMES

Survey No.

T-9921, 22, 23.

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
T-9921										1
BERING SEA										2
CAPE SAJAKA										3
TANAGA ISLAND										4
TANGENT POINT										5
T-9922										6
BERING SEA										7
FALLS POINT										8
RIBBON FALLS										9
TANAGA ISLAND										10
TANAGA VOLCANO										11
T-9923										12
BERING SEA										13
BUMPY POINT										14
GAGE POINT										15
TANAGA ISLAND					Names approved					16
					6-21-54. L. Heck					17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

62. Comparison with Registered Topographic Surveys:

The only previous survey within the area covered by T-9921, T-9922 and T-9923 is a revision survey, RS-426, compiled without field inspection as a preliminary shoreline survey for boat sheet use on hydrographic survey operations.

RS-426 comprises 6 sheets, each at 1:20,000 scale, dated 1952. Sheet No. 1 and 2 of 6 cover the area of T-9921 thru T-9923.

T-9921 thru T-9923 completely supersedes RS-426, Sheet No. 1 and 2.

63. Comparison with Maps of Other Agencies:

The area covered by these maps is previously unsurveyed and no maps are available for comparative purposes.

64. Comparison with Contemporary Hydrographic Surveys:

H-8052	1:20,000	1953
H-8054	1:20,000	1953
H-8057	1:60,000	1953

Surveys T-9921 thru T-9923 are in agreement with the above listed hydrographic surveys with reference to shoreline, rocks and soundings. Elevations of rocks above the sounding datum are not entirely in agreement. Some adjustments were made to rock elevations above the sounding datum. These adjustments, though small, usually one foot, occasionally changed rocks previously symbolized as awash to rocks that bare. In addition, rocks noted as "bare 2 feet at MHW" by field inspection and shown by the awash symbol were symbolized as rocks that bare at MHW. All corrections are shown in red on the map manuscript.

The above hydrographic surveys are unverified as of the date of this report.

65. Comparison with Nautical Charts:

8863	1:300,000, corrected to 1/14/52
9146	1:40,000, corrected to 8/27/51

The maps and the charts are in general agreement only. Shoreline configuration is more detailed on the maps than on the charts. As noted on page 12 of the Field Inspection Report, Tanaga Island, the elevation of Tanaga Volcano on T-9922 (5,911 feet) is not in agreement with the elevation on chart 9146 (6,975 feet). Form lines on the chart are higher than the highest peaks on the corresponding areas on the topographic maps.

66. Adequacy of Results and Future Surveys:

These maps are complete and adequate for use in hydrographic surveys and the construction and maintenance of nautical charts. These maps comply with the National Standards of Map Accuracy.

Reviewed By:

K. N. Maki

K. N. Maki

Approved By:

L C Lande
Chief, Review Branch
Div. of Photogrammetry

Max Hicketts
Chief, Nautical Chart Branch
Division of Charts

Chief, Div. of Photogrammetry

14 June '57

Chief, Div. of Coastal Surveys

History of Hydrographic Information
Quadrangles T-9921, T-9922 and T-9923
Tanaga Island, Alaska

Hydrography was applied to the map manuscripts of these quadrangles in accordance with Division of Photogrammetry, General Specifications, dated 18 May 1949, and Army Map Service TM45-14, Chapter 14.

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

H-7977	1:100,000	1952
7978	1:400,000	1952
8052	1:20,000	1953
8054	1:20,000	1953
8057	1:20,000	1953

~~Nautical chart 8863, 1:300,000, corr. to 1/14/52~~

Depth curves are shown at 1, 3, 5 and 10 fathoms. Hydrography compiled by J. M. Neal and checked by O. Svendsen.

John M. Neal

John M. Neal
Division of Photogrammetry
December 21, 1954