9925 9926

9926

9925

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-9925 and T-9926

LOCALITY

State Alaska

General locality Aleutian Islands

Locality Kanaga Island

194 54

CHIEF OF PARTY

S. B. Grenell, Cheif of Field Party

L. W. Swanson, Washington, D.C. Photo. Office

LIBRARY & ARCHIVES

DATE May 4, 1956

B-1870-1 (1)

DATA RECORD

T - 9925 and T-9926

Project No. (II): CS 218
Ph-34(48)

Quadrangle Name (IV): T-9925 Cape Miga
T-9926 Round Head

Field Office (II): Ship Explorer

Chief of Party: S. B. Grenell
Division of Photogrammetry, Washington, D. C.

Photogrammetric Office (III): Washington, D. C.

Officer-in-Charge: L. W. Swanson

Instructions dated (II) (III):

		Copy filed in Division of Photogrammetry (IV)
Supplemental Instructions	19 March 1952	
Supplemental Instructions	20 February 1953	Office files
Supplemental Instructions	23 December 1953	
Director's Letter No. 22/MEK, S-1-EX, 4 May 1954		
Compilation Instructions	21 September 1954	

Method of Compilation (III): Shoreline: Reading Plotter, Models A and B
Topography: Reading Plotter, Model A

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): February 1955

Date reported to Nautical Chart Branch (IV): 4-28-55

Applied to Chart No.

Date:

Date registered (IV): 1-9-56

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 (5) refer to sounding datum
i.e., ~~mean low water~~ or mean lower low water

Reference Station (III): Inapplicable

Lat.:

Long.:

Adjusted
~~Unadjusted~~

Plane Coordinates (IV):

State:

Zone:

Y=

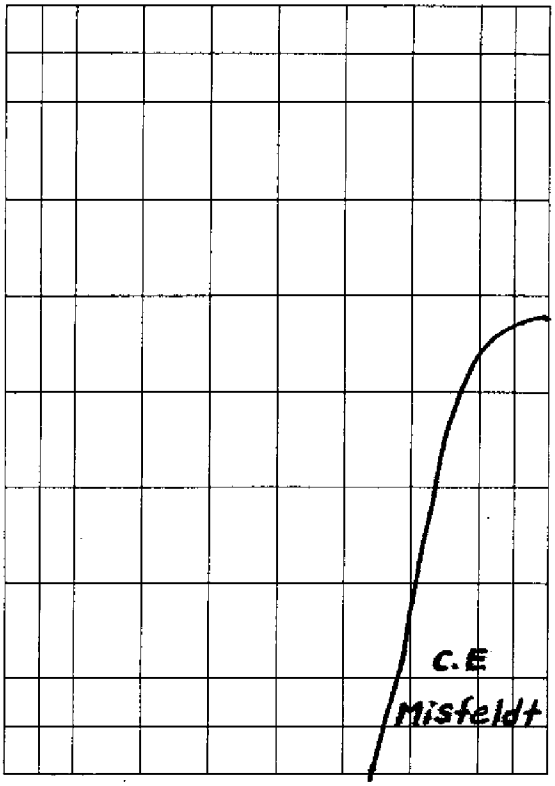
X=

Universal Transverse Mercator Grid Al. Zone I with 1000 m interval indicated with marginal ticks.

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

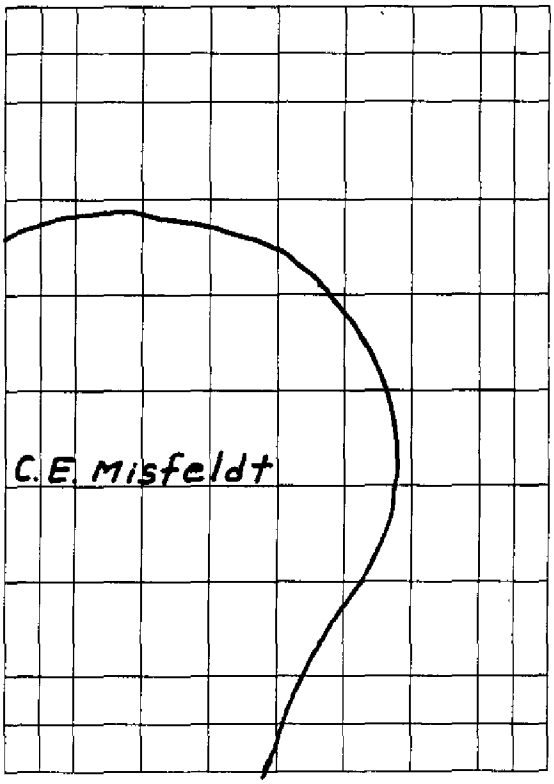
When entering names of personnel on this record give the surname and initials, not initials only.

T-9925



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

T-9926



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

DATA RECORD

Field Inspection by (II): Shoreline inspection by C. W. Clark and H. A. Garcia
Date: 1953 Season *
1954 Season

* The 1953 inspection covered the west ½ of Kanaga.

Interior inspection - none

Planetable contouring by (II): Inapplicable
Date:

Completion Surveys by (II): Inapplicable
Date:

Mean High Water Location (III) (State date and method of location): 1954
Located by extension of occasional indications on shoreline inspection photos

Projection and Grids ruled by (IV): A. Riley
Date: March 1954
Transferred to scribed manuscript by R. Sugden
November 1954

Projection and Grids checked by (IV): A. Riley
Date: April, May, 1954

Control plotted by (III): C. O. DeMarr and G. Amburn
Date: October 1954
Transferred to scribed manuscript by R. Sugden
November 1954

Control checked by (III): C. O. DeMarr and R. J. French
Date: October 1954

Radial Plot ~~or Stereoscopic Control extension~~ by (III): S. Blankenbaker
R. J. French
Date: November 1954

Stereoscopic Instrument compilation (III):
Shoreline ~~Planimetry~~)L. Levin and
)W. Heinbaugh
Date: November 1954

Contours ----C. Misfeldt
Date: December 1954

Manuscript delineated by (III): Shoreline: R. Sugden
Topography: R. Sugden
Date: November 1954
January 1955

Photogrammetric Office Review by (III): O. N. Dalbey
Date: 6 April 1955

Elevations on Manuscript checked by (II) (III): O. N. Dalbey
Date: 6 April 1955

M-2618-12(4)

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
37686 thru 90	1 July 1952	17:27 165° W	1:20,000	-1.1 MHW
37701 thru 04	1 July 1952	17:41	1:20,000	-1.1 MHW
42078 thru 80	25 September 1953	12:18	1:20,000	-0.5 MHW

Tide (III)

predicted diurnal

Ratio of Ranges	Mean Range	~~Spring~~ Range
		3.9
		3.1
		3.9

Reference Station: Sweeper Cove, Adak

Subordinate Station: Hot Springs, Tanaga (west coast)

Subordinate Station: Kanaga Bay, Kanaga (east coast)

Washington Office Review by (IV): Lina T Stevens Date: 2 Aug. 1955

Final Drafting by (IV): Date:

Drafting verified for reproduction by (IV): Date:

Proof Edit by (IV): Date:

Land Area (Sq. Statute Miles) (III): T-9925 6 sq. mi.; T-9926 20 sq. mi.

Shoreline (More than 200 meters to opposite shore) (III): T-9925 6 mi; T-9926 12

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

Control Leveling - Miles (II): None

Number of Triangulation Stations searched for (II): T-9925, one; 9926, one Recovered: 1 Identified: 1

Number of BMs searched for (II): None ~~Recovered:~~ ~~Identified:~~

Number of Recoverable Photo Stations established (III): T-9925, none; T-9926, one and one unmarked

Number of Temporary Photo Hydro Stations established (III): T-9925, 5; T-9926, 22

Remarks:

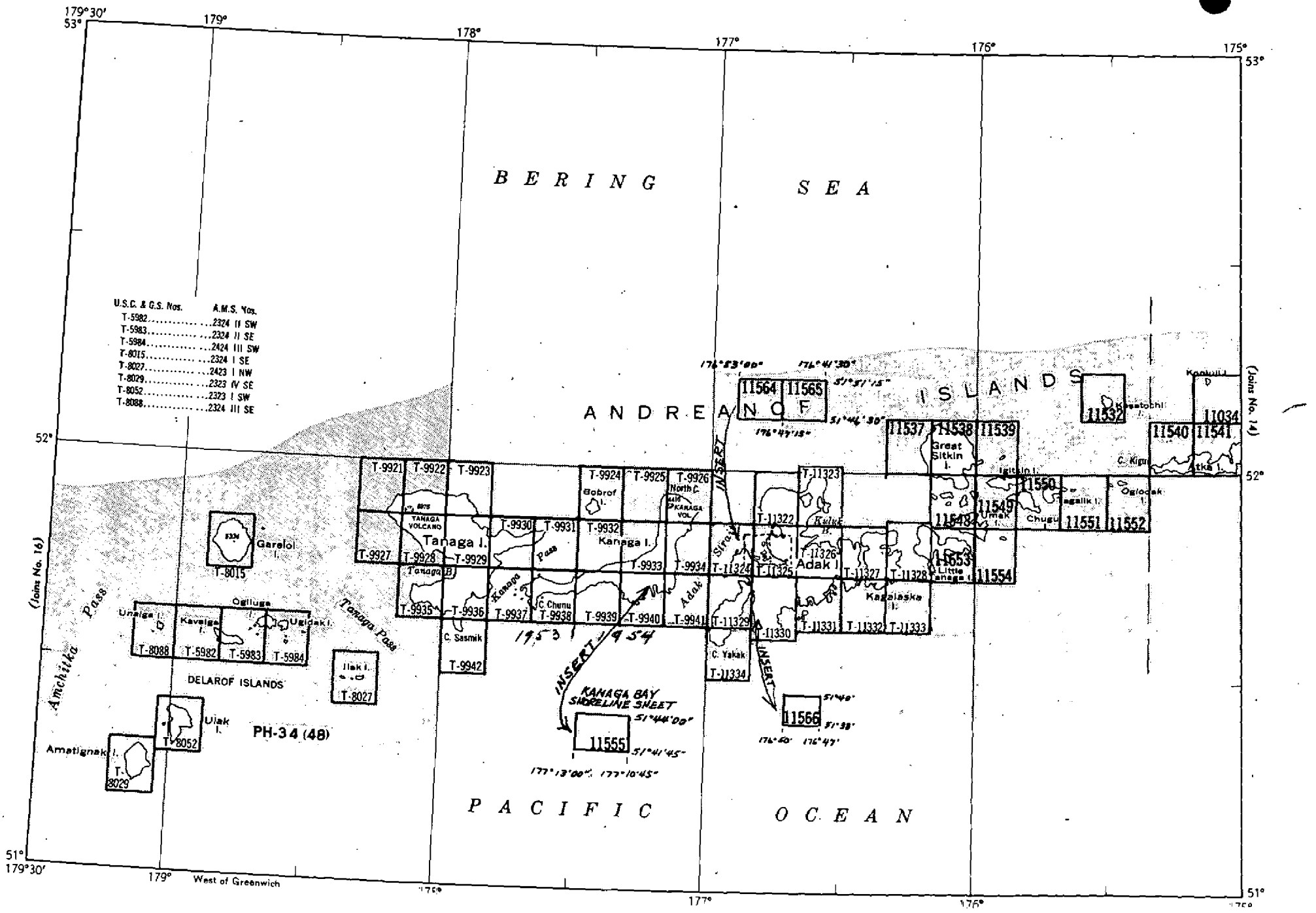
Summary to Accompany Descriptive Report
T-9925 and T-9926

T-9925 and T-9926 are two topographic surveys which cover the northeastern end of Kanaga Island. These maps were compiled on the 9-Lens Reading Plotter. Field operations preceding compilation included field inspection of shoreline and offshore rocks, recovery and establishment of horizontal control, and the determination of elevations required to control a stereo-instrument project vertically. Compilation was at the scale 1:20,000. Contours were drawn at a 50-foot interval, with a 25-foot interval supplementary contours. The maps received no field edit.

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.

TOPOGRAPHIC MAPPING PROJECT PH-34

Aleutian Islands, ALASKA Part B



FIELD INSPECTION REPORT
for
Maps T-9925, T-9926,
T-9932 thru T-9934
T-9940, T-9941
1959

2. Areal Field Inspection

These maps cover approximately the eastern half of Kanaga Island.

The dominating feature of Kanaga Island is Kanaga Volcano near the T-9926 north end. South and east of the volcano is an arc of peaks along the rim of an old caldera. Southward from the caldera there is a moderate downward slope to an elevation of perhaps 300 feet along a narrow neck of the island at approximate latitude 51-50. Continuing southward and southwestward, the terrain again rises to a plateau with maximum elevation of about 600 feet. From seaward the southerly parts of the area appear to be gently rolling terrain, but it is cut by deep ravines and canyons.

Round Head is a steep headland rising almost vertically to an elevation of about 1100 feet.

There are no very prominent features in the water area. The more promenent are Ship Rock and some of the higher islands in the vicinity of Naga Point. The high pinnacle at Signal PIN is prominent from northwest of southeast where it is clear of the tangents but is hardly visible from straight offshore.

The entire south shoreline of the island is a rugged, rocky shoreline with many detached rocks, none of which are very prominent.

There is a group of three buildings on the east shore of Kanaga Bay and a pier extending offshore from the buildings. At the inshore end of the pier is the burned out ruins of a Navy installation. The concrete footings on a rock ledge and part of the structure flooring are still intact. Approximately 50 feet at the inshore end of the pier is burned and only the piles remain in place. The outer portion of the pier is in fair condition. The three ranch buildings back from the shoreline and at a higher elevation are badly weathered but are in fair condition otherwise.

There is one cabin on the north shore of Kanaga Bay and several others on other parts of the island. Cabins were labeled on the photographs.

Several Aleutian village sites were noted and are labeled on the photographs. There are possibly others not seen during field inspection. These village sites can usually be distinguished on the photographs by a darker tone than the surrounding grass area and by a pock-marked effect made by the barabara depressions. The holes on the point on the west side of Kanaga Bay are apparently bomb craters.

Kanaga Volcano is considered an active volcano, although there is no record of an eruption in recent years. There is a large fissure on the southeast side near the top and a smaller one on the northwest side. Steam was observed emitting from both of these fissures on all occasions when the peak was visible.

The geology and topography of Northern Kanaga Island are described briefly in U. S. Geological Survey Publication "Alaska Volcano Investigations - Report No. 2 - Progress of Investigations in 1946."

The area is entirely covered with 9-lens photographs. The quality of these photographs is good to poor. The single flight of 1953 photography along the north shoreline is excellent except for shadows. Other photographs are generally of good quality except for clouds in some areas. Clouds obscure considerable shoreline detail in the vicinity of Cape Chlanak and Kanaga Bay.

All field inspection is substandard in some respects. Shoreline inspection is not as complete as is required for standard maps. All shoreline was field inspected and important features are noted on the photographs. In cloud covered areas some details were omitted and foul areas generalized. Shoreline inspection is considered adequate for the area with the possible exception of Kanaga Bay.

3. Horizontal Control

(a) The following horizontal control stations were established by second- or third-order triangulation:

ROUND, 1954 T-9934 CAMEO, 1954 T-9934
SHARP, 1954 T-9934 PERCH, 1954
LYRIC, 1953 T-9940

The following horizontal control stations were established by fourth-order theodolite observations:

KING T-9933 FOX TANK COG T-9940

In addition to the above numerous peaks, hummocks and hydro signals were located by theodolite observations. These were not identified for horizontal control but some of them are suitable for and can be used for horizontal control. Positions have been computed for several peaks, hummocks and hydro signals.

(b) All horizontal control is computed on the N. A. 1927 datum and no datum adjustments are necessary.

(c) All control was established by the Coast and Geodetic Survey.

(d) No specific stations were required by the instructions. More than the minimum to meet the spacing requirements were identified.

(e) The following stations were not searched for:

MID, 1943 GATE, 1943
KANAGA (USN), 1933 ABE, 1943 T-9926
ROE (USN), 1933 AGAT, 1943

KANAGA (USN) is an unmarked station. No evidence of a tripod is visible on the hill and the station is probably not recoverable. Part of the old tripod at AGAT, 1943 is visible from a boat, but the station is not considered recoverable. The other unrecovered stations probably are recoverable.

The following stations do not exist:
PYLAK, 1943 AGA, 1943 HILL , 1943

All of them are no-check positions and the two directions used to compute the positions were apparently on two different objects in each case.

Proposed additional triangulation between Cape Tusik and Kanaga Bay was not accomplished. Additional triangulation may be established in this area at a later date.

(f) The following horizontal control stations were identified:

Station	Map	Photograph	Order of Accuracy	
JUNE, 1943	T-9925	37688	Third	
ROUND, 1954	T-9926	42081	Second	
FOX, 1954	T-9932	38999	Fourth	
SHIP, 1943	T-9932	(1953)	Second	
DOG, 1943	T-9933	34292	Third	
KANA, 1943	T-9933	39000	Second	
BET, 1943	T-9933	37690	Third	
MAD, 1943	T-9933	37691	Fourth	
KING, 1954	T-9933	37691	Fourth	fm 524
NORTH, 1943	T-9933	37709	Third	
SHARP, 1954	T-9934	42080	Second	
CAMEO, 1954	T-9934	37700	Second	
LYRIC, 1953	T-9940	(1953)	Second	
CLIFF, 1943	T-9940	38997	Third	
KNOB, 1943	T-9940	37710	Third	
COG	T-9940	37694	Fourth	fm 524
TANK	T-9940	37694	Fourth	fm 567 (T-11555)
RAN, 1943	T-9941	37699	Second	

Horizontal control identified in adequate for a 1:20,000 scale radial plot, but control idenfified in Kanaga Bay is not adequate for a larger scale plot of that area. With the exception of objects visible on existing photographs, COG, TANK, and SAY, pricking on the 1:20,000 scale photographs is not considered accurate enough for transfer to larger scale photographs. If new photographs are taken this fall all signals should be visible, and they can then be pricked with the required accuracy.

Positions of several of the signals were computed from theodolite observations and others were located on graphic control sheet EX-C-54, scale 1:5,000. Positions of signals scaled from EX-C-54 are as follows:

*DUB (WW)	51-42	1584.4	(270.0)m	177-11	1002.4	(149.6)m
FEZ (ww)	51-42	667.4	(1187.0)m	177-11	525.7	(626.5)m
GUS (ww)	51-42	685.1	(1169.3)m	177-11	136.6	(1015.6)m
HOP (ww)	51-42	663.9	(1190.5)m	177-10	865.1	(287.1)m
*NIL (ww)	51-42	1171.5	(682.9)m	177-12	100.5	(1051.6)m
MOB (ww)	51-42	713.6	(1140.8)m	177-11	1026.7	(125.5)m
LUG (ww)	51-42	428.6	(1425.8)m	177-11	1004.4	(147.7)m

Signals JIM and KIP were not located.

* See 38, Compilation Report.

4. Vertical Control

(a) The only existing bench marks are tidal bench marks at Sharp Point, Cape Chlanak and Kanaga Bay. Tidal bench marks were not used to establish elevations of vertical control points. Bench marks were not identified except two identified as recoverable topo stations.

(b) Elevations of all points identified for vertical control were determined by trigonometric leveling from observations at horizontal control stations. All points identified for vertical control are either horizontal control stations or points (peaks or hummocks) observed on from two or more horizontal control stations.

Elevations were computed with checks for all points identified for vertical control. Numerous additional directions and zenith distances to points that were not identified are recorded and may be of some value if needed.

Peaks and hummocks were lettered at each station. Peaks and hummocks for which positions and/or elevations were computed, including some previously established triangulation stations, were assigned vertical control designations. Both letters and numbers are entered in the records and computations. The first and last designated vertical control points within the area of these maps are P-005 and P-021, respectively.

The datum for the computed elevations is mean high water based on the state of the tide computed from tide tables for the time of observations on the water surface. The datum thus established is probably within 1 foot of mean high water. No attempt was made in refinement of elevations beyond obtaining a check on the elevations within reasonable limits. All elevations are thought to be well within the limits of accuracy required.

see Compil. Report, p. 2

No vertical control points except occupied triangulation stations were visited for identification. All points were identified aboard the ship from stereoscopic examination of the best model available. Identification of all peaks is indicated as doubtful and can possibly be improved by office identification.

All identified vertical control points are plotted on manuscripts RS-489, and RS-490 on a print of T-9932.

(c) Vertical control points were identified as follows:

Vertical Control Point	Horizontal Control Name	Map. No.	Photo No.	Elevation in feet above MHW (MSL Adjusted (see p. 32, p. 2))	
P-005	--	T-9932	39001	362	
P-006	--	T-9932	39001	327	
KANA, 1943	Same	T-9933	39000	586	
P-007	--	T-9933	39000	602	
P-008	--	T-9933	39000	568	
P-009	--	T-9933	39000	586	
P-010	NORTH, 1943	T-9933	37709	568	
P-011	--	T-9926	42080	1094	1097
P-012 Kanaga Vol.	-- NE high pt.	T-9926	37688	4279	4287
P-013 " "	-- SW " "	T-9926	37688	4273	4265
P-014	--	T-9926	42079	1750	1752
P-015	--	T-9926	42079	2095	2100
P-016	--	T-9926	37666	1930	1935
P-017	--	T-9926	37689	2662	2663
SHARP, 1954	Same	T-9934	42080	204	
P-018	--	T-9934	37689	1290	
P-019	--	T-9934	37699	426	
PERCH, 1954	Same	T-9940	37693	188	190
P-020	KNOB, 1943	T-9940	37710	605	607
P-021	CLIFF, 1943	T-9940	38997	412	414
RAN, 1943	Same	T-9941	37699	253	255

Additional elevations of points not used for vertical control were determined as follows:

Station	Map No.	Elevation in feet above MHW	
SHIP, 1943	T-9932	35	
FOX, 1943-54	T-9932	25	
KING, 1943-54	T-9933	11	
ROUND, 1954	T-9926	22	See Compil. Rept. p. 2
CAMEO, 1954	T-9934	11	
REAR, 1943	T-9940	84	
DAM 2, 1943	T-9941	54	

Elevations of marked stations are on the marks. Elevations of all peaks and hummocks are on the highest points of the peaks or hummocks. The hummocks visited vary in height from about 8 to 15 feet above the surrounding nearly flat area. The average height of hummocks is about 10 feet.

Distribution of identified vertical control points is not uniform but vertical control established is considered adequate for stereoscopic contouring.

5. Contours and Drainage

Contouring is inapplicable.

Drainage is obvious and well defined. None of it was field inspected except to indicate several waterfalls on the photographs.

6. Woodland Cover

None exists.

7. Shoreline and Alongshore Features

(a) All shoreline was field inspected from a launch running as close inshore as was safe. The mean high-water line is essentially correct on manuscripts RS-489 and RS-490. Very little attention was given to details of the actual high-water line since office interpretation is essentially correct and discrepancies are relatively unimportant.

On the north side of the island shoreline inspection extended eastward from station FOX. This includes some shoreline compiled on T-9932 and may overlap 1953 field inspection.

In Kanaga Bay existing photographs are very poor and detailed shoreline inspection is very difficult. Time did not permit use of methods other than inspection of photographs. Shoreline inspection in Kanaga Bay may not be adequate for shoreline compilation on a scale of 1:5,000.

In the inner part of Kanaga Bay grass grows down to the high-water line.

(b) The actual low-water line is not defined except where it is at the outer edge of ledges. A low-water line or limiting line of foul areas is indicated on the photographs.

(c) Various types of foreshore including sand, gravel and boulder beaches, rock ledges and steep rocky foreshore exist in the area of these maps. Different types of foreshore are indicated at random intervals on the photographs.

(d) Most of the north shoreline of the island from Cape Miga to Round Head are steep rocky cliffs. Headlands and points are mostly rocky cliffs. In other areas there are steep grass covered bluffs close to the shoreline. Different types of bluffs and cliffs are noted on the photographs at random intervals.

(e) The only shoreline structure in the area is the partially burned pier in Kanaga Bay and the burned ruins of a building at the inshore end of the pier.

8. Offshore Features

Most of the shoreline on these maps is very foul with many offlying rocks and dangers.

All offshore features were field inspected. The more important features are noted on the photographs. These include all isolated rocks and breakers, outer limits of ledges and foul areas and the higher and larger rocks in groups of rocks.

Kelp areas were outlined approximately. Kelp areas are better defined on hydrographic sheets.

9. Landmarks and Aids

Landmarks will be covered under another phase of field work and are not reported here.

There are no aids to navigation within the area of these maps.

10. Boundaries, Monuments and Lines

Inapplicable.

11. Other Control

Recoverable topographic stations and photo-hydro stations established are listed on extra pages at the end of this report.

Several hydro signals were used for shoran calibration and positions of them were computed.

Station FOX is a recoverable topographic station established in 1943, but no data on it was available aboard the ship except 1943 lists of directions. The position of the station was computed from 1943 observations verified by 1954 observations. T-9932

Station KING is a triangulation-station disk set in 1943. No data on it was available except a rough description. The mark was found and established as a recoverable topographic station. T-9933

Theodolite observations for the location of Station APEX were not completed. This station was intended for horizontal control, but it should not be needed. T-9926

The approximate locations of topo and hydro stations are indicated on Manuscripts T-9932, RS-489 and RS-490.

12. Other Interior Features

Covered under Side Heading 2.

13. Geographic Names

To be reported as a separate report in connection with other phases of field work.

14. Special Reports and Supplemental Data

Supplemental data includes other phases of field work - triangulation, hydrography, Coast Pilot notes and geographic names.

Triangulation computations are not complete. Preliminary geographic positions of all control established will be forwarded with the project data.

Boat sheets will be forwarded to the Washington office upon arrival in Seattle.

Data forwarded with this report are:

- Field photographs
- Office photographs
- Manuscripts RS-489 and RS-490
- Black and white print of T-9932
- Lists of Directions - fourth order
- List of geographic positions
- Control station identification cards for horizontal and vertical control

Data to be forwarded at a later date:

- Observations of horizontal directions - fourth-order
- Observations of zenith distances
- Computations of triangles - fourth-order
- Computations of geographic positions - fourth-order
- Abstracts of zenith distances
- Computations of elevations
- Descriptions of recoverable topographic stations

Part of the above data were forwarded to the Washington office in Package No. 9 on transmitting letter dated 31 August 1954.

15. Field Inspection Notes

Photographs on which horizontal control identification notes appear are listed under Side Heading 3, Horizontal Control.

Photographs in which vertical control identification notes appear are listed under Side Heading 4, Vertical Control.

Photographs on which photo-topo or photo-hydro stations are identified are listed on a list of stations at the end of this report.

Photographs on which other field inspection notes appear are as follows:

34291
37687 thru 37694
37697 thru 37702
37707 thru 37710
38996 thru 39001 1953 and 1954 data
42077 thru 42081

16. Advance Manuscripts

Advance manuscripts RS-489 and RS-490 were used as described in Field Inspection Report for Tanaga Island - 1953 Season.

Bluff symbols along the shoreline are of little or no value for field use. It is suggested that the time spent in compiling bluffs be spent on further examination of photographs for offshore rocks. Several offshore rocks plainly visible on photographs are not on the manuscripts. Some rocks may not be visible on the photograph used to compile a particular area but many of them are visible on other photographs. Shoran controlled hydrography is often done in thick fog and often prior to shoreline inspection. The value of the location of rocks on the boat sheet is obvious.

Respectfully submitted

Charles W. Clark
Charles W. Clark
Commander, USC&GS

Approved and forwarded

S. B. Grenell
S. B. Grenell
Commander, USC&GS
Comdg. Ship EXPLORER

Photogrammetric plot report:

21. Area covered.-

The radial plot covers the east side of Kanaga Island, Alaska and furnishes the control and positions of the photo-hydro stations for T-9925, T-9926, T-9933, T-9934, T-9940 and T-9941.

22. Method.-

The plot was laid on the manuscripts directly on which a polyconic projection and a UTM grid with 1000 meter intervals was ruled. The grid was used to junction the manuscripts and they held scale well.

The photographs were nine lens metal mounts, and master calibration templet 40915 was used for the 42,000 series and 36269 for the 37000 series in making the vinylite templets.

The attached sketch shows the tolerance with which the stations used were held in the plot. Satisfactory closures were maintained on the triangulation and topographic stations and on some of the peaks where intersection positions were obtained. The excessive tolerances on the peaks not held is probably due to misidentification and will be resolved during compilation.

All control and pass points were drilled with a number 80 twist drill through the several templets through to the manuscript. The manuscript positions were then circled up with GPO permanent blue ink and all points were appropriately labeled. Elevations are referenced to the MHW datum plane, and all points of near zero elevation are identified as R points for rectification purposes.

23. Adequacy of control.-

The distribution and density of both horizontal and vertical control is considered adequate for this mapping scale and no deficiences are noted.

24. Supplemental data.-

None

25. Photography.-

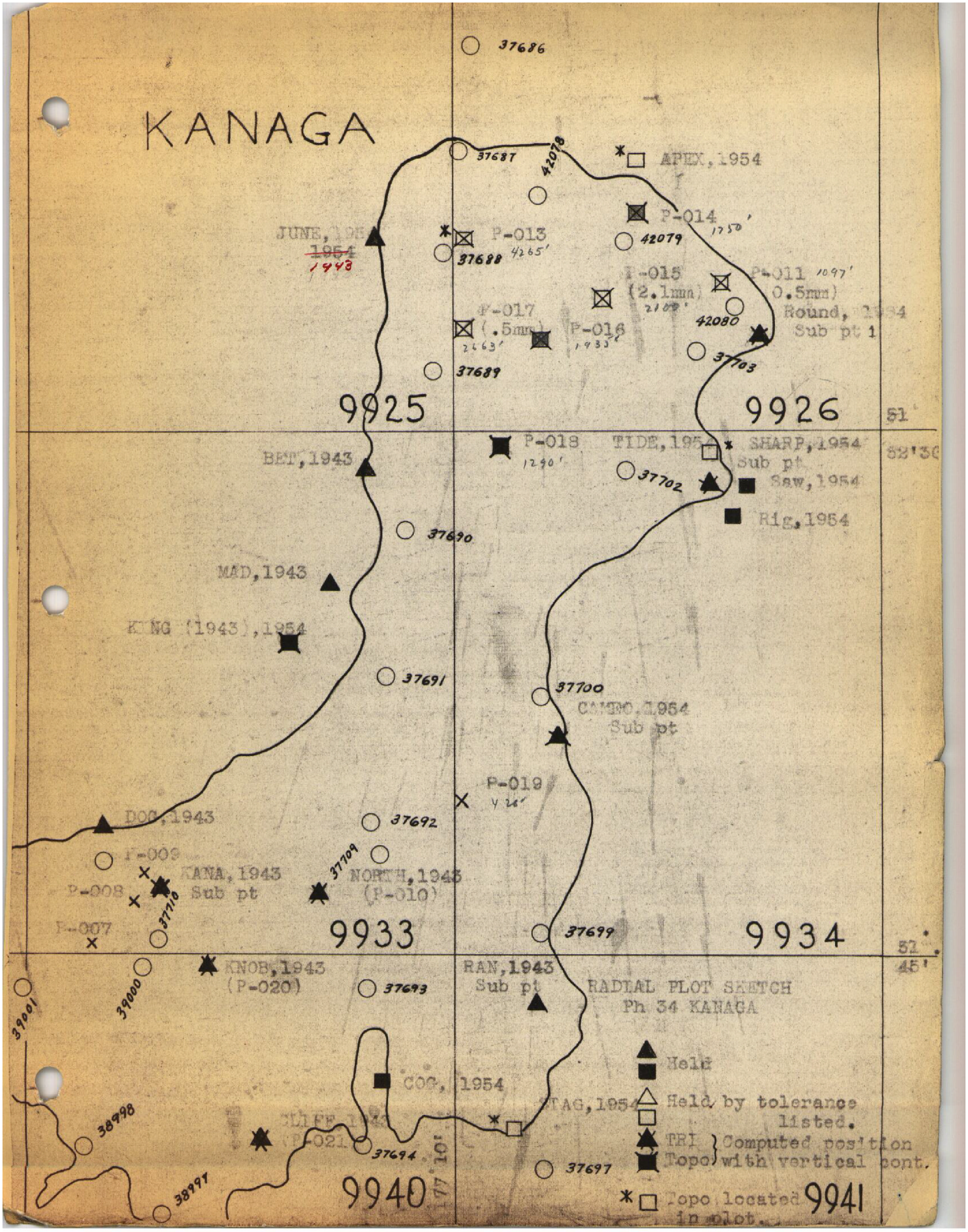
The photography is considered adequate as to coverage and overlap and little difficulty was experienced in their preparation for radial line plotting. Two years photography caused some trouble in getting third cuts on photo-hydros along the north shore of Kanaga on T-9926.

The 42000 series of photographs were flown inland a little more than is desirable for identifying photo-hydro and shoreline points due to cliff overhang displacement. The difference in the dates of photography caused difficulty in transferring pass points as well in the common area, but a satisfactory plot was resolved which indicates the tolerance in pricking points was not excessive to the point of straining the plot.

Submitted by

Roscoe J. French

Roscoe J. French


KANAGA
37686
37687
42078
APEX, 1954
P-014
1750'
42079
JUNE, 1954
1943
P-013
4265'
37688
P-015
(2.1mm)
2109'
P-011
1097'
(0.5mm)
Round, 1954
Sub pt 1
42080
P-017
(.5mm)
2663'
P-016
1933'
37703
37689
9925
9926
51'
P-018
1290'
TIDE, 1954
SHARP, 1954
Sub pt
37702
Saw, 1954
Rig, 1954
BET, 1943
37690
MAD, 1943
KING (1943), 1954
37691
37700
CAMP, 1954
Sub pt
P-019
DOG, 1943
37692
P-009
P-008
KANA, 1943
Sub pt
37709
NORTH, 1943
(P-010)
37710
P-007
9933
37699
9934
52'
45'
KNOB, 1943
(P-020)
37693
RAN, 1943
Sub pt
RADIAL PLOT SKETCH
Ph 34 KANAGA
39001
39000
Held
COG, 1954
STAG, 1954
Held by tolerance
listed.
38998
TRI
Topo
Computed position
with vertical cont.
37694
37697
38997
9940
9941
Topo located
in plot.

Photogrammetry

MAP T- 9925 PROJECT NO. Ph -34 SCALE OF MAP 1:20,000 SCALE FACTOR 1.0

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)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
June 1943 d.m.	V 184	NA1927	51-55-17.493	540.7 (1313.7)			
			177-11-54.283	1037.4 (109.4)			
Abe 1943 d.m.	184		51-53-46.472	1436.3 (418.1)			
			177-11-56.366	1077.8 (69.4)			

1 FT. = .3048006 METER

COMPUTED BY: LC. Lande DATE Oct. 1954 CHECKED BY: C.O. DeMarr DATE Oct. 1954

M-2388-12

Photogrammetry

MAP T- 9926 PROJECT NO. Ph-34 SCALE OF MAP 1:20,000 SCALE FACTOR 1.0

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)	DATUM CORRECTION	N.A. 1927 - DATUM *DISTANCE* FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	*FACTOR DISTANCE* FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
Kanaga Volcano 1943	186	NA 1927	51-55-30.156 177-09-39.526	932.0 (922.4) 755.3 (391.3)			
Kanaga USN 1933	164	"	51-54-18.642 177-03-15.113	576.2 (1278.2) 288.9 (858.3)			
Round 1954	GTZ 10815 (Field)	"	51-53-46.094 177-02-51.759	1424.6 (429.8) 989.7 (157.6)			

1 FT. = .3048006 METER

COMPUTED BY: L. C. Lande DATE October 15, 1954 CHECKED BY: C. O. DeMarr DATE October 29, 1954

M-2388-12

31. DELINEATION:

Shoreline was delineated with both models of the Reading Plotter to satisfy the urgency required by the Ship Explorer for plotting hydrographic smooth sheets. Rectified, negative, nine lens, metal-mounted prints were used.

Scribing of an emulsion-coated vinylite base to produce the compilation manuscript was initiated in the Ph-34 project; plastic inks were previously penned onto grained vinylite. The polyconic projection was transferred from the radial plot manuscripts (used only as base sheets) by affixing the coated manuscript onto it and scribing with a straightedge guide. Longitudinal lines were transferred by holding the ends of the 7-1/2 minute span with the straightedge and scribing the line in one motion; latitudinal lines were transferred with the straightedge along spans of only two minutes. UMT grids were transferred as marginal ticks. Horizontal control, photogrammetric points and hydro signals were transferred by affixing the radial plot base sheet to the coated manuscript, with the polyconic projection aligned, and piercing the emulsion with a tapered needle pushed into the No. 80 drill holes.

The coated manuscript was scribed in a positive or normal orientation from the negatively oriented Reading Plotter work sheets; this combination interposed two thicknesses of vinylite base and two diffusing surfaces between the copy and its transfer. Considerable difficulty was encountered in resolving the diffusion in congested areas but it is believed standard accuracy requirements are met.

Contours and interior planimetry were delineated with the Reading Plotter, Model A, using the same photographs, but not necessarily the same stereoscopic models, as were used to delineate the shoreline. As a result of separate delineations of shoreline and contours, with fuzzy definition and without details in the shadows of the rectified prints, small areas of conflict occurred among the rugged cliffs and sharp indentations of the northern coast. The prior shoreline was retained in most cases; a change was made near hydro Mix. T-9926

32. CONTROL:

Horizontal control was adequate. Peaks 11 and 12 and Peaks 14 thru ~~18~~ 17 have fourth order computed positions; either the Radial Plot Office's identification or the Compilation Office's identification of the points held closely. Peak 11 plots 1/2 ~~mm~~ mm. from Kanaga USN 1933 and could be assumed to be identical with it. Hydro Win has a fourth order computed position; the Compilation Office's identification of it held and it was shown on the manuscript as a Recoverable Photo Station.

Kanaga Volcano 1943, described as the center of top of conical volcano, elevation 4416; plots near the center of the top as delineated on the manuscript but the top cone is blown off with a two-hundred-foot deep by eight-hundred-foot diameter depression crater remaining. There is a fourth order station, Peak 12, on the rim with an elevation of 4287 which may be of value as a substitute if future tangent cuts on the crater rim are doubtful in recovering Kanaga Volcano.

Vertical control was adequate in density and identification. Some conflict was encountered in holding the computed elevations with water level. Computed elevations were five to fifteen feet low. In the averaging of the four to six observations on the peaks, only four were used and, with one exception, the higher elevations were rejected. New averages were computed with all observations included and, after adjustment to MSL from MHW, were thus shown on the manuscript.

Round has a computed elevation of 22 feet. The stereoscopic model and the identification card show it as a rock near shore and the much higher sub-station No. 1 as 25 feet. The elevation was rejected.

33. SUPPLEMENTAL DATA: None available.

34. CONTOURS AND DRAINAGE:

Some difficulty was encountered in contouring the steep broken cliffs of the northern and northwestern coast; shadows without details, poor resolution on the rectified prints, and a clouded area west of Pep required some sketching but it is believed the contour positions will meet the required accuracy ~~of~~ in elevation or in extent of area involved. F-4926

35. SHORELINE AND ALONGSHORE DETAILS:

Considering the inaccessib~~leness~~ility of the shore and its foulness the field inspection was adequate. Some difficulty was encountered in shadowed indentations of the shoreline and in resolving some rocks and rocks awash in light surf and general softness of detail. With the guidance of the field inspection photos during delineation, the compilation of shoreline is believed to be adequate.

No low water line is shown. The foul and kelp lines are transferred from field inspection photos.

36. OFFSHORE DETAILS:

With the field inspection photos used as a guide during delineation and compilation the offshore details are believed adequate.

37. LANDMARKS AND AIDS:

The steep, ~~conical~~ cone of Kanaga Volcano is the dominating feature.

38. CONTROL FOR FUTURE SURVEYS:

The positions of photo-hydro stations were established by the Radial Plot Office as an addition to the radial plot. The field identification of hydro signals was transferred to office prints; from there, to the respective templets as radial lines; the two or three templets involved were realigned upon the base sheet and the intersection of rays pricked through. Shadows, overhang and poor detail obscured some stations; these were identified on only two photos (a few on only one photo) and are considered weak; to be used with caution.

T-9925: Art, Vow, Wad, Yes - two photos; Zag - 1 photo.
T-9926: Ant, Beg, Bid, Coo, Daw, Fay, Pep, Quo, Toy - 2 photos.

Pin was located by plotter delineation; Win by computed position. No difficulty was encountered in holding the Radial Plot Office's positions during compilation.

39. JUNCTIONS:

T-9925 and T-9926 junction with T-9933 and T-9934, respectively, and are in agreement.

40. HORIZONTAL AND VERTICAL ACCURACY:

Both horizontal and vertical accuracy are considered adequate; see Items 31, 32, 34 and 38.

46. COMPARISON WITH EXISTING MAPS:

These quadrangles substantially agree with, and supersede:

War Dept., Corps of Engrs. Kanaga Island N5149-W17703/7.5X10 1/25,000 1943
USC&GS Preliminary Shoreline Manuscript RS-489 1953 1:20,000

47. COMPARISON WITH NAUTICAL CHARTS:

USC&GS Chart 9193 1:120,000 is the only one covering the area of T-9925 and T-9926.

48. GEOGRAPHIC NAME LIST, 49. NOTES FOR THE HYDROGRAPHER, are appended.

Approved:

Orvis N. Dalbey
Supervisory Cartographer

Respectfully submitted:

Clarence E. Misfeldt
Cartographer

GEOGRAPHIC NAMES

Survey No.

T-9925 and T-9926

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-9925										1
Aleutian Islands										2
Bering Sea										3
Cape Miga										4
Kanaga Island										5
Kanaga Sound										6
Kanaton Ridge										7
										8
T-9926										9
Adak Strait										10
Aleutian Islands										11
Bering Sea										12
Kanaga Island										13
Kanaga Volcano										14
Kanaton Ridge										15
North Cape										16
Round Head										17
Weed Bight										18
										19
										20
										21
					Names approved					22
					8-2-85					23
					a.l.w.					24
										25
										26
										27

M 234

NOTES TO THE HYDROGRAPHER

The following topographic stations were located by radial line plot:

T-9926

Station	Identified on Field Photo
Apex 1954	42079
Win 1954	42080

The following Photo-Hydro stations were located:

T-9925

Station	Description	Identified on Photograph No.
Yes	WW 10'	42077
Wad	Outer high point of rocky point	37688
Vow	WW	37687
Art	WW on rock bare 8 ft. MHW	42078
Zag	WW	42078

T-9926

Toy	WW	42078
Sob	Northwesterly and larger high point of rock 75'	42078
Raw	Northwesterly high point of large rock no WW 60'	42078
Quo	Rock bare 3 ft. MHW no WW 3'	42078
Pep	WW	42078
Out	Waterfall at lower grass line	42078
Nab	Waterfall at grassline top of bluff 25 ft. above beach	42078
Mix	WW 12'	42079
Lit	Sharp rock bare 3 ft. at MHW 3'	42079
Jib	Highest point of 25-ft. pinnacle	42079
Imp	Nub on west end of rock	42079
Pin	Highest point of 50-ft. pinnacle	42080
Had	WW on NW face of 20-ft. pinnacle	42079 10-ft above water
Gar	WW	42079
Fay	Base of waterfall	42079
Eye	WW on sharp point of bluff	42080
Daw	Sharp point of rock cliff	42080
Coo	Boulder on beach	42080
Beg	WW on large rock at HWL	42080
Bid	Rock bare 2 ft. at MHW	42080
Ant	WW	42080
Vex	Banner, mouth of stream under boulder	42080

Form T-2

PHOTOGRAMMETRIC OFFICE REVIEW

T- 9925

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. Orrin N. Dalby
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

Form T-2

PHOTOGRAMMETRIC OFFICE REVIEW

T-9926

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 ✓

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(Nautical Chart Data)

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Compiler

Supervisor

43. Remarks:

M-2623-12

Review Report T-9925 and T-9926
Topographic Maps
2 August 1955

62. Comparison with Registered Topographic Surveys:

There are no prior surveys in the area of T-9925 and T-9926.

63. Comparison with Maps of Other Agencies:

USE Kanaga Island, Sheet 1, 1:25,000 1943 (Local Datum, ~~approx.~~)

Because this map was made from 1943 aerial photographs and this area is not subject to rapid change, the maps are in good general agreement. The greater detail of shoreline and foreshore features on T-9925 and T-9926 makes them fitted to supersede the quadrangle for charting purposes.

64. Comparison with Contemporary Hydrographic Surveys:

H-8057 1:60,000, 1953

The hydrographic surveys around Kanaga Island did not include the foreshore area because the dense kelp and numerous off-shore rocks presented too great a hazard to the launches.

The shoreline and foreshore features for the hydrographic surveys are those of the contemporary topographic surveys.

65. Comparison with Nautical Charts:

9193 1:120,000 July, 1953

There is no conflict between the chart and the maps under review, but the scale of the maps allows much greater detail of shoreline and foreshore features.

66. Accuracy:

These maps comply with project instructions, are complete and adequate for charting, and meet the National Standards of Accuracy.

Reviewed by:

Lena T. Stevens
Cartographer

APPROVED:

L C Landy
Chief, Review Section
Photogrammetry Division

H R Edmonston
Chief, Nautical Chart Branch
Charts Division GFJ

Chief, Photogrammetry Division W/SR
3 May 1956

Chief, Coastal Surveys Division