

# 11566

Diag. Cht. No. 8863-2.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey Shoreline (Photogrammetric)

Field No. Ph-34 Office No. T-11566

### LOCALITY

State Alaska

General locality Andreanof Islands

Locality Chapel Cove - Adak Island

1954

### CHIEF OF PARTY

S.B.Grenell, Chief of Field Party

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

### LIBRARY & ARCHIVES

DATE June 24, 1958

# 11566

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Camera (kind or source) (III): W Camera USC&GS Single-lens

Number	Date	Time	Scale	Stage of Tide
54W-2865	9/6/54	16:17	1:5,000	2.4 above MLLW
2866	"		Ratio from	"
2867	"	to	1/15,000	"
--				
2872	"			
2873	"			"
2874	"	16:26		

Tide (III)

Diurnal

Reference Station: Sweeper Cove, Adak Island, Alaska  
Subordinate Station: \* Same  
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range
		3.7
1.1		3.7

Washington Office Review by (IV):

Date:

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): 2      Recovered: 2      Identified: 2

Number of BMs searched for (II): --      Recovered:      Identified:

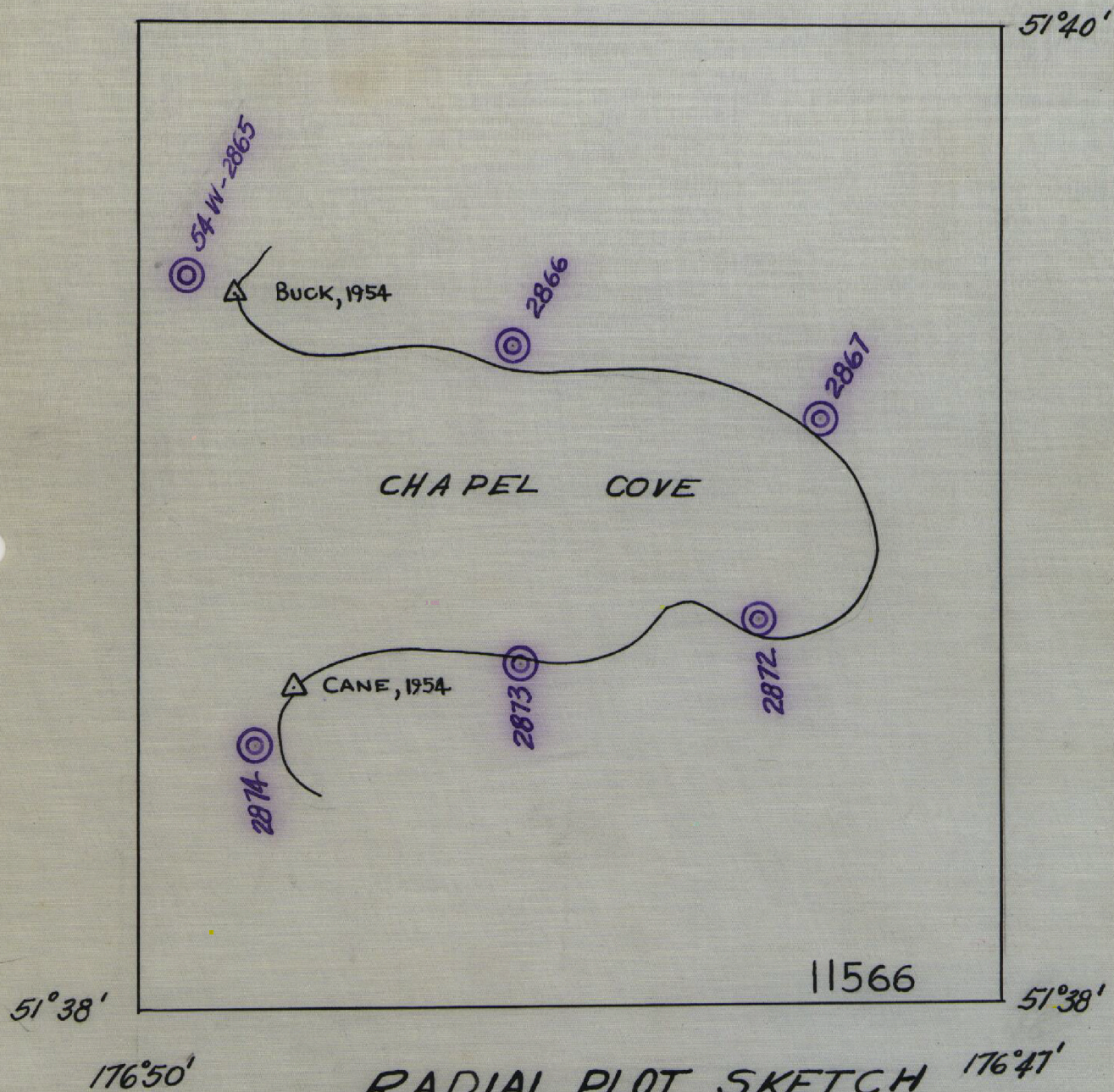
Number of Recoverable Photo Stations established (III): None

Number of Temporary Photo Hydro Stations established (III): None

Remarks:

\*Bay of Waterfalls - 1<sup>h</sup> 40'; and ratio of ranges 1.1





# RADIAL PLOT SKETCH

Ph 34 Adak, Alaska

△ stations held

⊙ Photo centers





PHOTOGRAMMETRIC PLOT REPORT  
T-11566

21. AREA COVERED

This report covers just one manuscript in Chapel Cove on the east side of the Bay of Waterfalls on Adak Island (T-11566).

22. METHOD

Stereo-photogrammetric templates were made with the Kelsh plotter after orienting the models properly to eliminate tilt as a factor in drawing the templates. The templates were laid down on the two horizontal control stations available to control the plot, and six manuscript positions of common detail which were located and transferred from the nine-lens 1:20,000 radial plot. The method did not provide what was considered a rigid plot, whereupon radials were drawn and templates were made in the conventional way from the principal point centers on the ratio prints. Both sets of templates were laid together and intersections were effected which insured a rigid plot. Azimuths and cross azimuths were strong enough to consider the head of the Bay strong where only the 1:20,000 scale points were available. The 1:20,000 scale points would not hold except to a closest tolerance of 0.5 mm. of map position for two out of the six used. This last assumes no criterion for the accuracy of the plot which is considered good.

23. ADEQUACY OF CONTROL

Control was inadequately placed to provide an absolute assurance of accurate position at the head of the cove. However, azimuths were good and the two control stations held well, which would indicate no serious error in the plot.

24. SUPPLEMENTAL DATA

None.

25. PHOTOGRAPHY

The diapositives were of good quality; and the ratio prints were of good detail considering a three-time enlargement. Shadows and displacements were the main obstacles to accurate detailing, but images were clear in most instances.

SKETCH AND FORM M-2388-12, CONTROL STATIONS

The attached sketch shows the placement of photographs and control, and the unadjusted field positions are listed on M-2388-12.



Approved:

Respectfully submitted:

*Roscoe J. French*  
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Roscoe J. French  
Supervisory Cartographer

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B. J. Colner  
Cartographer

## COMPILATION REPORT T-11566

### 31. DELINEATION

The Kelsh plotter was used to detail the approximate MHWL in Chapel Cove without benefit of any field inspection of the shoreline. Due to the fact that ratio prints were available a visual comparison was made, and graphic methods were used to correct the shoreline where shadows and displacements made it impractical for the Kelsh plotter to delineate properly. Rock data and reference to the vertical datum is lacking, and an effort has been made by office interpretation to indicate rocks awash and those that bare at MHW.

### 32. CONTROL

Only two control stations were field identified and are on the headlands of the cove. An additional station at the head of the cove would have insured the horizontal accuracy on the eastern end of the sheet. The two stations held were also used to control a 1:20,000-scale nine-lens plot in the same general area on T-11330. (See radial plot report attached.) The control was field identified on 1:15,000-scale photography and transferred to the 1:5,000-scale ratio prints prior to identification on the diapositives. All points held to in the plotter were first identified on the ratio prints and had a manuscript position established by the plot.

### 33. SUPPLEMENTAL DATA

None.

### 34. CONTOURS AND DRAINAGE

No interior drainage is shown.

### 35. SHORELINE AND ALONGSHORE DETAILS

All features are shown as determined by office interpretation only, and no field inspection was furnished for delineation at this time.

### 36. OFFSHORE DETAILS

Office interpretation only.

### 37. LANDMARKS AND AIDS

None.

### 38. CONTROL FOR FUTURE SURVEYS

The office ratio prints have shoreline pass points at short and regular intervals which have manuscript positions established by the radial plot. These pass points can be used by the hydrographic party in using Photogrammetry Instructions No. 45 for locating additional photo-hydro stations.

No other supplementary control has been located.

39. JUNCTIONS

Although the manuscript joins T-11330 on three sides, no junction was made with it due to the scheduling of operations, and for the reason that position and delineation on T-11330 are of a "preliminary" classification.

40. HORIZONTAL AND VERTICAL ACCURACY

Vertical accuracy does not apply.

A final appraisal of the horizontal accuracy is dependent on further field verification of the manuscript at the head of the cove where the map position is considered least accurate. However, it is believed from what information is available that there are no areas in excess of 0.5 mm. of true position.

41 through 45. Not applicable.

46. COMPARISON WITH EXISTING MAPS

None.

47. COMPARISON WITH NAUTICAL CHARTS

9121 1:10,000 52-8/25

Items to be carried forward - none.

48. GEOGRAPHIC NAMES

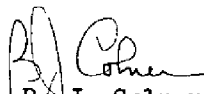
Shown on form for Geographic Names which accompanies this report.

Approved:



Roscoe J. French  
Supervisory Cartographer

Respectfully submitted:



B. J. Colner  
Cartographer

## ADDITION TO COMPILATION REPORT T-11566

### 31. DELINEATION

Considerable changes were made in the delineation of shoreline and offshore features by using the July 1955 field-inspected photographs listed below:

<u>Photo</u>	<u>Date</u>
54W-2865	9-6-54
" 66	"
" 67	"
" 2872	"
" 73	"
" 74	"

T-11566, with the application of 1955 field inspected data and hydro-signal location completed, is a final advance shoreline manuscript.

### 32. CONTROL

The 1955 field identification of triangulation station Buck, 1954 verified the radial plot and the 1954 field identification of same. Triangulation station Cane, 1954 was pricked direct in 1955 and its radial plot position falls on the plotted geographic position.

33. None

34. None

### 35. SHORELINE AND ALONGSHORE DETAILS

See addition to Paragraph 31.

### 36. OFFSHORE DETAIL

Covered by addition to Paragraph 31.

### 37. LANDMARKS AND AIDS

None.

38. None

39. None

### 40. HORIZONTAL AND VERTICAL ACCURACY

None.

41-45. Not applicable.

46. None.

47. None.

48. None.

Respectfully submitted:

*C. O. DeMarr*

C. O. DeMarr  
Cartographer

Approved:

*K. N. Maki* 10/55  
K. N. Maki  
Supervisory Cartographer

49. NOTES FOR THE HYDROGRAPHER

The 1955 hydrographic party identified the following photo-hydro signal sites to be located by the radial plot for final smooth sheet plotting:

Awe	Fog	Kal	OBA	Ten	Vue
Cue	Gar	LAK	Pas	Yak	
Did	Hit	Nat	Ret	Zoo	
Eat	Ish	Moo	Sap	Urn	

The above stations were located graphically by three radial line cuts, and the transfer from field pricking to office photographs was good.

Station Pas on the field photograph was called Ret on Boat Sheet EXO 5155.

Station Pas on Boat Sheet EXO 5155 was not named on the field photograph. However, a prick hole was found in the approximate area and was assumed to be same. This station was located graphically and is not named on the manuscript. Its approximate location is  $\phi = 51^{\circ} 38' 44''$   
 $\lambda = 176^{\circ} 48' 45''$

The following photo-hydro stations are shown on Boat Sheet EXO 5155; however, they are not field identified and could not be located graphically:

Bev  
Won  
Even



## GEOGRAPHIC NAMES

Survey No. T-11566

[illegible]

Review Report  
Shoreline Survey T-11566  
22 August 1956

62. Comparison with Registered Topographic Surveys:

T-6941 (U.S.N.) 1933 1:40000  
T-6942 (U.S.N.) 1933 rec. - no scale

These surveys are to be superseded by T-11566 for nautical charting.

63. Comparison with Maps of Other Agencies:

Adak Island (No. 7 and 8 of 10), AMS, 1:25000, 1943

Difference in datum (local datum AMS Maps) discloses considerable differences in shoreline and offshore features. Detailing of T-11566 (1:5000) agrees with Topographic Map Manuscript T-11330 (1:20000), which is to be published by AMS at scale 1:25000 and will replace the above-mentioned 1943 editions.

64. Comparison with Contemporary Hydrographic Surveys:

H-8238                      1:20000                      1955

The subject photogrammetric survey was used in compiling inset at scale of 1:5000 of hydrographic survey smooth sheet H-8238, 1:20000, 1955. The two surveys agree in all common detailing.

65. Comparison with Nautical Charts:

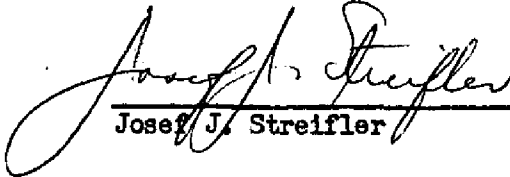
9121	1:10000	1947, corrected to 52-8/25
9193	1:120000	1953, corrected to 54-7/5

Differences in shoreline and alongshore features exist. However, results of subject photogrammetric survey will be used for the new printing of Nautical Chart 9121.

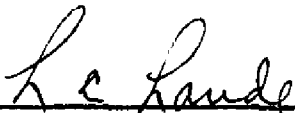
66. Adequacy of Results and Future Surveys:


This survey is adequate for Bureau requirements. No significant deficiencies in accuracy and adequacy were indicated.

Reviewed by:


  
Josef J. Streifler

APPROVED:

  
Chief, Review and Drafting Section  
Photogrammetry Division

  
Chief, Nautical Chart Branch  
Charts Division

  
Chief, Photogrammetry Division

  
Chief, Coastal Surveys Division

Summary to accompany Shoreline Survey T-11566

Shoreline Survey T-11566 was accomplished as part of project 6034. It is the only sheet in this vicinity at scale of 1:5000 covering Chapel Roads and Chapel Cove in the Bay of Waterfalls (SW portion of Adak Island) of the Aleutian Islands.

The survey was accomplished to furnish shoreline and alongshore details for 1:5000 Inset of Hydrographic Survey H-8238.

Diapositives from "W" Camera, single-lens photography of 1954 were used for detailing with the Kelsh Plotter, without benefit of field inspection.

Results of later field work (July 1955), consisting of identification of control and inspection of shoreline and alongshore features, were applied to the map manuscript in October 1955. Detailing of corrected map manuscript was applied to the smooth sheet of Hydrographic Survey H-8238 (1955).

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