

8099

ORIGINAL

Diag. Cht. No 8864-2

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-8099

LOCALITY

State Aleutian Islands, Alaska

General locality Rat Island Group

Locality DAVIDOF-KVOSTOF-PYRAMID
ISLANDS

194 8

CHIEF OF PARTY

Henry E. Finnegan, Chief of Field Party
Div. of Photogrammetry, Wash., D.C.

LIBRARY & ARCHIVES

DATE MAY 4 1956

B-1870-1 (1)

8099

DATA RECORD

T-8099

Project No. (II): Ph-34(48) Quadrangle Name (IV): Davidof, Kvostof^h, and Pyramid Islands

Field Office (II): Ship Pioneer

Chief of Party: Henry E. Finnegan

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

Officer-in-Charge: Louis J. Reed, Chief,
Stereoscopic Mapping Section

Instructions dated (II) (III):

Copy filed in Division of
Photogrammetry (IV)

8 April 1948

Method of Compilation (III): Stereoplanigraph

Manuscript Scale (III): 1:20,000

Stereoscopic Plotting Instrument Scale (III): 16,000

Scale Factor (III): Manuscript: Photograph:: 20,000 ; 27,000

Date received in Washington Office (IV): 4-7-50 Date reported to Nautical Chart Branch (IV): 4-9-50

Applied to Chart No.

Date:

Date registered (IV): 2-8-56

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~~
Unadjusted

Plane Coordinates (IV): none

State:

Zone:

Y=

X=

*mit land
Plotted R.H. Water 10/20/50
checked R.J. French 10/23/50*

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)
 (II) (III)

100% by Michael G. Misulia
 on the Stereoplanigraph

DATA RECORD

Field Inspection by (II): Henry E. Finnegan

Date: Summer 1948

Planetable contouring by (II): None

Date:

Completion Surveys by (II): None

Date:

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

MEWL delineated from compilation photography since it was not located by field inspection
Shoreline as of September 1948.

Projection and Grids ruled by (IV): Ruling Machine

Date: 28 Feb. 1949

Projection and Grids checked by (IV): W. E. Ward

Date: 28 Feb. 1949

Control plotted by (III): Orvis N. Dalbey

Date: 2 March 1949

Control checked by (III): Robert L. Sugden

Date: 2 March 1949

~~XXXXXX~~
Radiation or Stereoscopic Control extension by (III): Michael G. Misulia

Date: 10 June 1949

Stereoplanigraph

Planimetry

~~XXXXXXXXXX~~
Stereoscopic instrument compilation (III): Michael G. Misulia
Contours

Date: 10 June 1949

Date:

Compiled
Manuscript delineated by (III):

John B. McDonald
and
Robert L. Sugden

Date: 5 July 1949

Date: 5 April 1950

Photogrammetric Office Review by (III): Louis J. Reed

Date: 12 April 1950

Elevations on Manuscript
checked by (II) (III):

Louis J. Reed

Date: 12 April 1950

Camera (kind or source) (III): USC&GS 6" (Metrogon), "O" Camera and
USAAF 6" (Metrogon) Camera.

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
<u>Compilation Photography</u>				
(C&GS) 0-538	9-19-48	13:03	1:27,500	1.5' above MLLW
thru 0-542		to 13:12		
(USAAF) FV-31	7-24-43	unknown	36,000	unknown
thru FV-36				

Field Inspection Photography

USAAF - the same numbered photos as listed above
9-lens - #21,226 and #21,227

Tide (III)

Reference Station: Kiska Harbor
Subordinate Station:
Subordinate Station:

Washington Office Review by (IV): *K. N. Maki*

Final Drafting by (IV): *H. Lucas*

Drafting verified for reproduction by (IV): *C. Kupiec*

Proof Edit by (IV):

Diurnal

Ratio of Ranges	Mean Range	Spring Range
0.9		3.86

Date: *10 Oct 1980*

Date: *April 21, 1951*

Date: *April 21, 1951*

Date:

Land Area (Sq. Statute Miles) (III): about 2.5 sq. mi.
Shoreline (More than 200 meters to opposite shore) (III): about 17 mi.
Shoreline (Less than 200 meters to opposite shore) (III): none
Control Leveling - Miles (II): none
Number of Triangulation Stations searched for (II): (III) *12*
Number of BMs searched for (II): none
Number of Recoverable Photo Stations established (III): none
Number of Temporary Photo Hydro Stations established (III): none

Recovered: *12*
Recovered:

Identified: *12*
Identified:

Remarks:

Summary to Accompany T-8099

Topographic map T-8099 is one of a group of similar maps in Project Ph-34(48). This map covers Davidof Island, Khvostof Island and Pyramid Island of the Rat Islands group in the Aleutian Islands.

A radial plot was not required. The map was compiled in the Washington Office on the stereoplanigraph using a contour interval of 50 feet supplemented by a contour interval of 25 feet. The manuscript was compiled on acetate ruled with a polyconic projection at 1:20,000 scale on the North American 1927 Datum. A military grid, one thousand meter universal transverse mercator, was ruled on the manuscript.

Photography for the instrument was taken with the U. S. Coast and Geodetic Survey 6" Cartographic "C" camera and the USAAF 5" Metrogon camera.

Depth curves and critical soundings were applied to the manuscript by the Division of Charts. These features do not appear on the preliminary registration prints.

A cloth-backed lithographic print of the map, at compilation scale, will be registered with the descriptive report in the Bureau Archives. After publication, a cloth-backed color print of the map will be registered.

Field Inspection Report

1. Description of the Area:

This quadrangle includes three principal islands and several offlying rocks and small islands, the named islands being Davidof, Khvostof, and Pyramid. The group lies halfway between Little Sitkin Island and Segula Island in the Rat Island Group of the Aleutian Island Chain, and is nearly two degrees ~~west~~ of the 180th parallel.

In comparison with their neighbors, these islands are very small. Most of their shoreline is gravel beach backed by cliffs; steep slopes rise from the cliffs to the summits. Offshore waters contain many ledges, pinnacles, and rocks, with the passes between the islands heavy with kelp.

1-25

Field inspection was accomplished prior to this compilation by parties from USC&GS Ship PIONEER during the summer of 1948 as part of the hydrographic survey in the area. The report on this inspection is contained in Finnegan's 1948 "Air Photo" report covering North Kiska and Segula to Little Sitkin Islands.

Compilation Report

26. Control:

Horizontal control for this quadrangle totaled 12 positions all but one of which (TOF, 1948) were photo identified and used to control the compilation. In general, station identification was weak, three stations requiring reidentification from descriptions in this office. Only unadjusted field positions were available at the time of compilation, except for DAVIDOF ISLAND (USN) 1935. Later after receipt of the adjusted positions, a comparison was made and no appreciable differences were noted. An additional control point was included in the adjusted geographic positions, an unchecked point described as the top^{of} islet north of Davidof Island, 1948. This station was not plotted on the manuscript since it is so close to SUM, 1948, that congestion would result.

The water surface was the primary source of vertical control and was available in every model. It was supplemented during compilation by 1948 field-established elevations on five triangulation stations and the highest point on Pyramid Island, as follows:

DAVIDOF ISLAND (USN) 1935	171 ft.	<i>Add 2' to</i>
KNIFE, 1948	* 282 ft. ²⁵⁰	<i>reduce to MSL</i>
DAVE, 1948	919 ft.	<i>reduce to MSL</i>
MAX, 1948	1074 ft.	
VOS, 1948	868 ft.	
PYRAMID ISLAND	536 ft. ✓	

Except for one, all the above elevations are considered checked since their values agreed with the datum established by the stereoplanigraph model or models in which each was located. *The exception was 282 ft. for KNIFE, 1948, for which the instrument read 250 ft. When the adjusted horizontal positions became available it was noted that the 282 ft. elevation was omitted indicating the discovery of an error in the original computations. For this reason the instrument elevation is shown on the manuscript in proper symbol. Also, the final adjusted elevations were altered one to three feet and the revised values are incorporated in the map. In addition, several instrument elevations have been shown on the manuscript in proper symbol for unchecked spot elevations.

28. Detailing:

Delineation and compilation of all topographic and planimetric features were accomplished on the stereoplanigraph for the entire area using a combination of USC&GS 1948 photography and USAAF 1943 photography, neither of which offered complete stereoscopic coverage of the islands in this quadrangle.

The field inspection data as furnished was studied and is incorporated in the manuscript compilation which meets standard

requirements of map accuracy. Field inspection that was made is classified good by this section but for our use should have been implemented. The MHW line was not identified; short sections would have been useful as a guide for the instrument operator who had to delineate the entire shoreline covered by this report without such a check. It is realized that the tide range in this area is comparatively small, being under 4 ft., and this may be why the MHWL was not identified. The field inspector could have saved some time consumed in labeling features, such as cliffs, that are obvious on the photograph.

29. Supplemental Data:

- (a) Field Inspection photographs, #FV-31 thru #FV-36.
- (b) Field Inspection photographs, #21226 and #21227.
- (c) Air-Photo Reports, 1948, by Henry E. Finnegan:

- 1. Vertical Control, two 504 forms.
- 2. Field Inspection, one 504 form.

- (d) H-7647, 1:20,000, 1948, PIONEER, Finnegan
- (e) PI-D(b), 1:20,000, 1948, PIONEER, Finnegan
- (f) T-6955, 1:31,000, 1935, U.S.S. OGLALA, Navy
- (g) H-6903, 1:60,000, 1935, U.S.S. OGLALA, Navy

30. Mean High Water Line:

The MHWL was delineated on the stereoplanigraph from compilation photography listed in data records, page 4.

32. Offshore Details:

All offshore detail\$ visible in the stereoscopic model was delineated using the field inspection as a guide. Later, during final compilation, a check was made to assure that all field inspection data ^{were} incorporated in the map, and, at the same time, a comparison was made with the 1948 hydro survey of these coastal waters, and the two are in general agreement. However, local discrepancies in graphic control were noted; certain topo stations and an occasional nearby rock were displaced in their two corresponding positions on the map and on the hydro sheet. Where these discrepancies were discovered the instrument location has been accepted and is that shown on the manuscript since it is more in line with the overall consistency of the placement of map details. A bluff line at the west point of Khvastof Island as shown on Graphic Control survey PI-D(b)-48 is not evident in the compilation photography and is suspected of being in error.

35. Hydrographic Control:

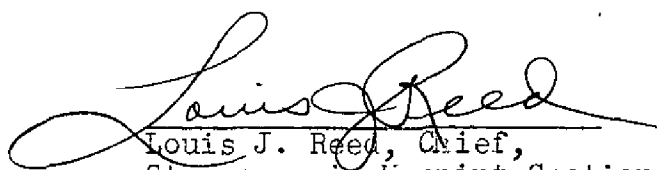
None was established by this compilation inasmuch as contemporary hydro surveys were in existence.

37. Hydrographic Data:

Hydrography is to be added to this survey to the limits of the quadrangle by the Nautical Chart Branch.

40. Quality of Contours:

All contours on this map sheet conform to the national map standards of accuracy for a contour interval of 50 ft., except for the 25 ft. contour which meets the accuracy standard for a 25 ft. interval.


Louis J. Reed, Chief,
Stereoscopic Mapping Section

PHOTOGRAMMETRIC OFFICE REVIEW

T. 8099

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) None 7. Photo hydro stations None 8. Bench marks None 9. Plotting of sextant fixes None 10. Photogrammetric plot report None 11. Detail points None

ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline ☒ 13. Low-water line None 14. Rocks, shoals, etc. ☒ 15. Bridges None 16. Aids to navigation None 17. Landmarks None 18. Other alongshore physical features ☒ 19. Other along-shore 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 None 28. Buildings None 29. Railroads None 30. Other cultural features None

BOUNDARIES

31. Boundary lines None 32. Public land lines None

MISCELLANEOUS

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

40. Robert L. Sugden Louis J. Reed
Reviewer Supervisor/Review Section or Unit

41. Remarks (see attached sheet)

Chief, Stereoscopic Mapping Section

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:

GEOGRAPHIC NAMES

Survey No. T-8099

GEOGRAPHIC NAMES											
Survey No. T-3099											
Name on Survey											
	A	B	C	D	E	F	G	H	K		
Alaska			(for title)								1
Aleutian Islands			"								2
Rat Islands			"								3
											4
Bering Sea									USGB		5
Davidof Island									"		6
Khvostof Island									"		7
Pyramid Island									"		8
Little Sitkin Pass									"		9
Khvostof Pass									"		10
Rat Island Pass									"		11
Greter Bay											12
											13
											14
											15
											16
											17
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											25
											26
											27

M 234

Names underlined in red are approved. 10-5-50 L. Heck

Review Report T-8099
Topographic Map
October 10, 1950

62. Comparison with Registered Topographic Surveys

T-6955 1:31,000, 1935 (USN)
P-1D(b) 1:20,000, 1948

These surveys are superseded by T-8099 for nautical charting purposes.

63. Comparison with Maps of other Agencies

None.

64. Comparison with Contemporary Hydrographic Surveys

H-7647, 1:20,000, 1948
H-6903, 1:60,000, 1935 (USN)

These surveys were compared with T-8099 and no critical differences were evident.

65. Comparison with Nautical Charts

8864 1:300,000, 1948, corr. 3-8-48
9102 1:1,126,000, 1948, corr. 3-8-48
9155 1:50,000, 1944, corr. 5-5-44

There are no significant differences between T-8099 and the nautical charts.

66. Adequacy of Results and Future Surveys.

T-8099 is a complete topographic map and has been compared and reconciled with all hydrographic and topographic surveys of record in this Bureau and becomes, therefore, the most authoritatively complete and accurate map of record for the area covered as of the date of this report.

Adequate photo coverage, well distributed horizontal and vertical control and instrument compilation guarantees the conformance of this map to the National Map Accuracy Standards.

No vertical accuracy tests have been made. All contours meet the national map accuracy standards for a contour interval of 50 feet and, where shown, for a contour interval of 25 feet.

67. Military Grids

The universal transverse mercator grid, military zone 60, was applied to the manuscript during review. It is represented by $\frac{1}{2}$ centimeter ticks at one thousand meter intervals outside but touching the neat lines.

68. Geographic Names

A list of geographic names was prepared by the Geographic Names Section, Division of Charts, and attached to the descriptive report.

69. Classification

The area covered by this map is unclassified.

Review by:

K. N. Maki
K. N. Maki

Approved by:

L. C. Lande
Chief, Review Section
Division of Photogrammetry

H. C. Edmonston
Chief, Nautical Chart Branch
Division of Charts *6/10*

L. W. Swanson
Chief, Division of Photogrammetry *mor*
4 May 1956

J. D. Russell
Chief, Division of Coastal
Surveys

HISTORY OF HYDROGRAPHIC INFORMATION

T-8099

Davidof Island and Khvostof Island Quadrangle, Aleutian Islands

Hydrography was applied to the manuscript of this quadrangle in accordance with Division of Photogrammetry request of 26 January 1951, and general specifications of 18 May 1949, and with Army Map Service TM-35-XVII.

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

USC&GS Hydrographic Surveys

H-7647	(1948)	1:20,000
H-7648	(1948-49)	1:20,000
H-7649	(1948)	1:40,000

The reliability of the hydrography is considered to be good; however, the compilation was prepared from unverified surveys subject to revisions in the Washington Office.

Bottom contours are shown at 3, 5, and 10 fathoms.

The compilation was prepared by R. E. Elkins and checked by G. F. Jordan.

R. E. Elkins

R. E. Elkins, 2 February 1951
Nautical Chart Branch

NAUTICAL CHARTS BRANCH

SURVEY NO. T. 8099

Record of Application to Charts

[illegible]

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.