

5589

Diag. Cht. No. 6380.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. Ph-26(47) Office No. T-5589 N&S.

LOCALITY

State Washington

General locality Bellingham

Locality Waldron Island

1949-54

CHIEF OF PARTY

C.W.Clark, Chief of Field Party

H.A.Faton, Baltimore Photo. Office

LIBRARY & ARCHIVES

DATE July, 1959

DATA RECORD

T -5589

Project No. (II): Ph-26(47)

Quadrangle Name (IV):

Field Office (II): Friday Harbor, Washington

Chief of Party: Lt. Comdr. Charles W. Clark

Photogrammetric Office (III): Baltimore, Maryland.

Officer-in-Charge: Hubert A. Paton

Instructions dated (II) (III): 31 August 1949

24 October 1949

Letter No. 73-rb, dated 17 March 1950

Copy filed in Division of
Photogrammetry (IV)

Office Files

Method of Compilation (III): Air-Photographic-Multiplex

Manuscript Scale (III): 1:10,000

Stereoscopic Plotting Instrument Scale (III): 1:10,000

Scale Factor (III): 1.00

Date received in Washington Office (IV): NOV 28 1951

Date reported to Nautical Chart Branch (IV): DEC 4 - 1951

Applied to Chart No.

Date:

Date registered (IV):

9/23/58

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): N.A. 1927

Vertical Datum (III): MSL

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): SPLICE, 1894

Lat. 48° 40' 04.965"

Long.: 123° 04' 12.995"

Adjusted

~~Unadjusted~~

Plane Coordinates (IV):

State: Washington

Zone:

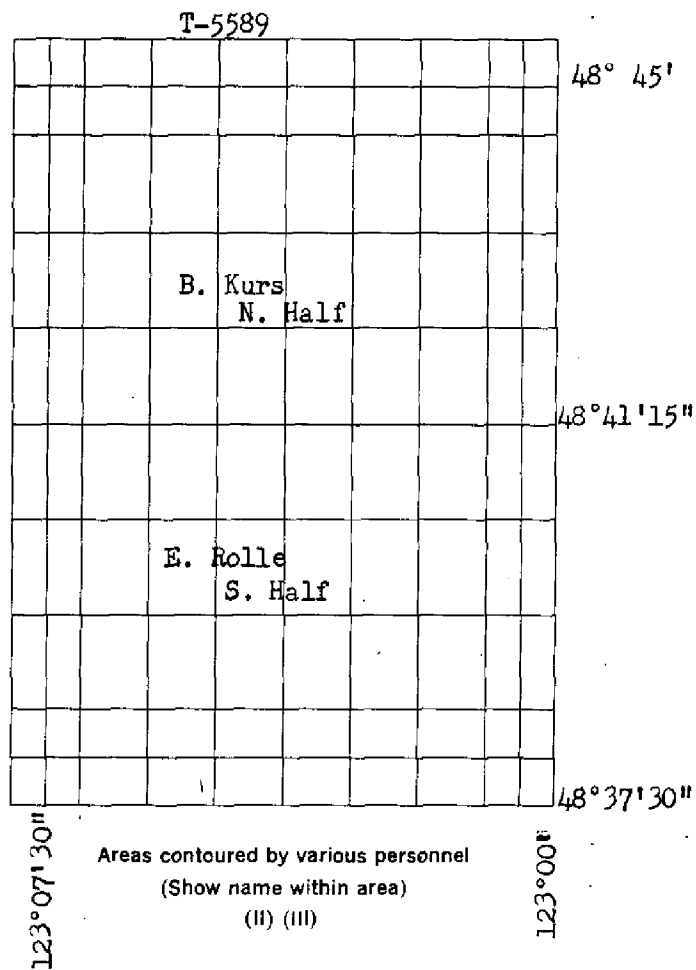
North

Y=

X=

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

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



DATA RECORD

Page 4

Field Inspection by (II): J.C. Lajoie & J.H. Winniford

Date: 12 September 1950

Planetable contouring by (II):

Date:

Completion Surveys by (II): *R-H. Skelton II, Chas. H. Bishop*

Date: *1952,*
1953 & 1954

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

Same as date of photography and date of field survey.
(Refer to item 35 of this report)

Projection and Grids ruled by (IV): T.L.J.

Date: July 1950

Projection and Grids checked by (IV): H.D.W.

Date: July 1950

Control plotted by (III): B. Kurs

Date: Feb. 1951

Control checked by (III): B. A. Dew

Date: Feb. 1951

Radial Plot or Stereoscopic

Date:

Control extension by (III): No control extension needed

Planimetry B. Kurs and E. Rolle

Date:

Stereoscopic Instrument compilation (III):

Contours E. Rolle and B. Kurs

Date: March, May 1951

Manuscript delineated by (III): B. A. Dew and B. Wilson

Date: May, June 1951

Assembly and delineation of Public Land Lines by
D. M. Brant

Photogrammetric Office Review by (III): A. C. Rauck, Jr.

Date: June 1951

Elevations on Manuscript

Date:

checked by (II) (III): A. C. Rauck, Jr.

June 1951

Camera (kind or source) (III): USC&GS Type O. Focal length 152.37 mm.

T-5589

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
49-0-1021 thru 1023	6-4-49	1018	1:24,000	5.3 above MLLW
49-0-1080 thru 1083	"	1103	1:24,000	5.0 above MLLW
49-0-1118 thru 1123	"	1134	1:24,000	4.8 above MLLW
49-0-1084 thru 1091	"	1110	1:24,000	5.1 above MLLW
49-0-1092 thru 1099	"	1119	1:24,000	5.1 above MLLW

Tide (III) *

Tide from predicted tables

Reference Station: PORT TOWNSEND, WASH.

Subordinate Station: TURN PT., STUART ISLAND

Subordinate Station: ALDEN PT., PATOS ISLAND

* MHW 7' above MLLW - based on tidal data for area. *SHR*Washington Office Review by (IV): *Everett H. Ramey*

Ratio of Ranges	Mean Range	Spring Range
	5.1	8.3
1.1	5.5	8.8
1.1	5.7	9.0

Date: 22 July 1955

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): 8

Shoreline (More than 200 meters to opposite shore) (III): 19

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

Control Leveling - Miles (II): 6

Number of Triangulation Stations searched for (II): 25 Recovered: 22 Identified: 14

Number of BMs searched for (II): 0 Recovered: 0 Identified: 0

Number of Recoverable Photo Stations established (III): --- 2

Number of Temporary Photo Hydro Stations established (III): --- 0

Remarks:

Although SANDY, 1940 was not recovered, Reference Marks 1 and 2 were recovered in good condition. A substitute station was established for SANDY R.M. 1, 1940 and Control Identification Card furnished. This station is not included among those recovered.

Summary to Accompany Topographic Map T-5589

Topographic map T-5589 is one of thirteen similar maps of Project Ph-26. It covers Waldrop Island and portions of Orcas Island and Spieden Island within San Juan County, Washington.

Project Ph-26 is a stereoscopic mapping project. Field work in advance of compilation included shoreline and interior inspection, the establishment of some additional control, and the investigation of civil boundaries, land lines and geographic names.

Map T-5589 was compiled in two parts at a scale of 1:10000, using 1949 single-lens photographs. It was completely field-edited. After the addition of hydrographic information, the map will be published as a standard 7½-minute topographic quadrangle.

Items to be registered under T-5589 will be a descriptive report, a ~~cloth-backed~~ ^{CRS-100} copy of each part of the map manuscript at a scale of 1:10000, and a cloth-backed color print of the published map.

MAP T. 5589

PROJECT NO. Ph-26(47)

SCALE OF MAP 1:10,000

SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ψ -COORDINATE LONGITUDE OR χ -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)
GULL, 1894	G-5649 P. 706	N.A. 1927	48 39 03.974 123 05 19.180	122.8 (1730.6) 392.6 (835.5)			
FLATTOP, 1894	G-5649 P. 693	"	48 38 43.837 123 05 09.858	1354.1 (499.3) 201.8 (1026.5)			
DRY, 1894	G-5503 Pg. 627	"	48 43 02.738 123 02 20.707	84.6 (1768.8) 423.3 (803.2)			
DISNEY, 1940	G-5649 Pg. 705	"	48 40 33.664 123 02 32.438	1039.9 (813.5) 663.6 (563.9)			
* DAISY, 1894	G.P. P. 1265	"	48 38 18.37 122 59 05.91	567.4 (1286.0) 121.0 (1107.4)		E. of map limits site	
CACTUS 2, 1942	G-5649 P. 704	"	48 38 53.598 123 07 26.396	1655.6 (197.8) 540.3 (687.9)			
CACTUS, 1894	"	"	48 38 53.563 123 07 26.443	1654.6 (198.8) 541.3 (686.9)		Not plotted. Approx. 1.4 mi. SW of Cactus 2, 1942	
BARE ISLAND 2, 1894	G-5503 P. 632	"	48 43 47.594 123 00 46.850	1470.2 (383.2) 957.4 (268.7)			
BARE, 1942	G-5503 P. 627	"	48 43 47.858 123 00 47.303	1478.3 (375.1) 966.6 (259.5)			
SANDY R.M. 1, 1940	Office Comp.	"	48 41 123 04	1823.5 (29.9) 222.6 (1004.3)			
SKIPJACK ISLAND LIGHT, 1950	Office Comp. GP. P. 1293	"	48 43 58.34 123 02 16.36	1801.3 (52.0) 322.6 (903.4) 334.3 (891.8)			
*Position determined by datum differences.							

1 FT. = 3048006 METERS
COMPUTED BY: H.P. Eichert

DATE 11/50

CHECKED BY: A.K. Heywood

DATE

M. 2388-12

MAP T. 5589

PROJECT NO. Ph-26(49)

SCALE OF MAP 1:10,000

SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y -COORDINATE LONGITUDE OR x -COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS	
				FORWARD	(BACK)		FORWARD	(BACK)	FORWARD	(BACK)
WEED, 1894	G-5649	N.A.	48 38 52.839	1632.2	(221.2)					
	P.705	1927	123 04 35.793	732.6	(495.5)					
SPLICE, 1894	G-5649		48 40 04.965	153.4	(1700.0)					
	P.693	"	123 04 12.995	265.9	(961.8)					
SPIKE, 1894	G-5649		48 38 29.277	904.4	(949.0)					
	P.705	"	123 00 59.224	1212.4	(15.9)					
SPIEDEN, 1894	G-5649	"	48 38 01.549	47.8	(1805.6)					
	P.693		123 06 25.338	518.8	(709.7)					
SMALL, 1894	G-5649		48 40 54.960	1697.7	(155.7)					
	P.705	"	123 01 10.758	220.1	(1007.3)					
SLANT, 1894	G-5649	"	48 40 29.622	915.0	(938.4)	Outside project limits				
	P.693		122 58 59.242	1212.0	(15.5)					
SKIPPY, 1940	G-5455	"	48 43 55.980	1729.0	(124.2)					
	P.607		123 01 53.166	1086.4	(139.6)					
SKIPJACK, 1894	G.P. P.29	U.S. Stand.	48 43 59.024	1823.2	(30.2)	-30.7 m	1792.5	(60.9)	1927 N.A. Datum: # 3282 P.1293 RM	
			123 02 17.632	360.2	(865.7)	-30.7m	329.5	*(896.4)		
ROUND, 1894	G-5649	N.A.	48 42 15.555	480.5	(1372.9)					
	P.705	1927	123 00 11.900	243.3	(983.4)					
PASTURE, 1894	G-5649		48 37 59.902	1850.4	(3.0)					
	P.702	"	123 07 02.138	43.8	(1184.7)					
LIME, 1940	G-5649		48 39 17.792	549.6	(1303.8)					
	P.693	"	123 00 32.151	658.0	(570.0)					
HAMMOND 3, 1940	G-5503		48 43 21.252	656.5	(1196.9)					
	P.632	"	123 00 32.233	658.8	(567.5)					

1 FT. = 3048006 METERS
COMPUTED BY: H.P. Eickert

DATE 11/50

CHECKED BY: A.R. Herwood

DATE 12/50

M-2388-12

COMPILATION REPORT T-5589

Field Inspection Report and Photogrammetric Plot Report

These will be found bound with the descriptive report for Survey No. T-5588.

31. DELINEATION

Refer to item 31 of compilation report for Survey No. 5588.

The parallax solution in model 49-0-1087-88 was weak due to the large expanse of water area. However, this was attempted and the location of White Rock was plotted from the model. Its location is very doubtful. See §52

32. CONTROL

Refer to Photogrammetric Plot Report and item 3 of the field inspection report.

33. SUPPLEMENTAL DATA

Land Plats -

1 - Township No. 36, North, Range No. 3 West, Willamette Meridian, Washington, dated December 30, 1874.

2 - Township No. 37 North, Range No. 2 West, Willamette Meridian, Washington, dated December 30, 1874 and June 28, 1878.

2 - Township No. 37 North, Range No. 3, West, Willamette Meridian, Washington, dated December 30, 1874 and June 28, 1878.

1 - Enlarged copy of section lines of Township No. 36, North, Range No. 3 West, Willamette Meridian, Washington.

For a description of how these data were used, refer to item 41, Boundaries of descriptive report for Survey No. T-5584.

34. CONTOURS AND DRAINAGE

In multiplex delineation several models were difficult to contour due to poor photography and/or heavy timber areas. This is particularly true in model 49-0-1082-83, 49-0-1087-88, and 49-0-1022-23.

See §53

In general, diapositives were fair to good.

35. SHORELINE AND ALONGSHORE DETAILS

In wooded shoreline areas, where identification was omitted by the field inspection party, the position of the mean high water line was stereoscopically delineated. These areas are believed to be correct.

No low water lines are shown nor were any indicated by the field party.

In the Sandy Point area and the north shore of Waldron Island between Fishery Point and Point Hammond, the mean high water line was located by the field inspection party by means of reference measurements from bushes, barns, fences, and grass lines.

36. OFFSHORE DETAILS

Rock data was partially incomplete. Where adequate rock data was given, leaders or arrows to designate their location were omitted. Also what may be rock ledge around some of the small islands, was not noted or described on the field inspection photographs. *Additional work done by field editor. 2112*

Offshore details, which are doubtful or incomplete are referred to the hydrographer by notations on the manuscript.

37. LANDMARKS AND AIDS

One fixed aid to navigation lies within this quadrangle. It is Skipjack Island Light, 1950, a triangulation station.* This is in agreement with the field inspection report.

* Form 567 filed as part of Chart Letter L 848(1950). *2112*

38. CONTROL FOR FUTURE SURVEYS

Refer to item 11 of the field inspection report. Forms 524 are submitted with this report for two recoverable topographic stations:

NASH, 1950
DOCK, 1950 *Reported destroyed 1954. 2112*

The position of these stations have been plotted by multiplex. They are also included under "49 - Notes for the Hydrographer".

39. JUNCTIONS

To the north are the waters of Boundary Pass.

To the east is the limit of this project and no contemporary survey.

Junctions are complete to the south and west with surveys Nos. T-5591 and T-5588, respectively.

40. HORIZONTAL AND VERTICAL ACCURACY

Refer to item 34, Contours and Drainage, of this report.

41. PUBLIC LAND LINES AND BOUNDARIES

The International Boundary United States-Canada, lies in the northwest corner of this survey. It is the only boundary shown on the manuscript, other than public land lines.

Refer to item 10 of the field inspection report, and item 41^{*} Boundaries, of descriptive report for Survey T-5584, concerning public land line data.

** discusses compilation procedure, etc.*

42. LANDING FIELDS AND AERONAUTICAL AIDS

On the east shore of Waldron Island, between Point Hammond and Mail Bay, is a private landing field.^{*} There are no aeronautical aids within this survey.

** Another landing field (w. side Waldron Id.) located by the field editor. etc.*

46. COMPARISON WITH EXISTING MAPS

There is no quadrangle available to the Baltimore Photogrammetric Office for comparison.

See §62

47. COMPARISON WITH NAUTICAL CHARTS

Chart No. 6380, scale 1:80,000, published March 1947 (8th edition) (8-21-50)

See §65

Items to be applied to nautical charts immediately:
None.

Items to be carried forward:
None.

Respectfully submitted

Albert C. Rauck, Jr.
Albert C. Rauck, Jr.
Cartographer

Approved and forwarded

Hubert A. Paton
Hubert A. Paton
Comdr., C&GS
Officer in Charge

PHOTOGRAMMETRIC OFFICE REVIEW

T. 5589

1. Projection and grids QCR 2. Title QCR 3. Manuscript numbers QCR 4. Manuscript size QCR

CONTROL STATIONS

5. Horizontal control stations of third-order or higher accuracy QCR 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations) QCR 7. Photo hydro stations — 8. Bench marks QCR 9. Plotting of sextant fixes QCR 10. Photogrammetric plot report QCR 11. Detail points QCR

ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline QCR 13. Low-water line QCR 14. Rocks, shoals, etc. QCR 15. Bridges QCR 16. Aids to navigation QCR 17. Landmarks QCR 18. Other alongshore physical features QCR 19. Other along-shore cultural features QCR

PHYSICAL FEATURES

20. Water features QCR 21. Natural ground cover QCR 22. Planetable contours — 23. Stereoscopic instrument contours QCR 24. Contours in general QCR 25. Spot elevations QCR 26. Other physical features QCR

CULTURAL FEATURES

27. Roads QCR 28. Buildings QCR 29. Railroads QCR 30. Other cultural features QCR

BOUNDARIES

31. Boundary lines QCR 32. Public land lines QCR

MISCELLANEOUS

33. Geographic names QCR 34. Junctions QCR 35. Legibility of the manuscript QCR 36. Discrepancy overlay QCR 37. Descriptive Report QCR 38. Field inspection photographs QCR 39. Forms QCR40. Albert C. Trauchys
ReviewerHenry J. Fisher
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.

Joseph D. McEvoy
CompilerHenry J. Fisher
Supervisor

43. Remarks:

48- GEOGRAPHIC NAMES

T-5589

- Bare Island
- Boundary Pass
- Cactus Islands (most of group on T-5588)
- Canada
- Cowlitz Bay Danger Rock
- Fishery Point
- Flattop Island
- Green Point
- Gull Rock
- Mail Bay
- New Channel Monatt Reef
- North Bay
- Orcas Island
- Point Disney
- Point Hammond
- President Channel
- Sandy Point
- Skipjack Island
- Spieden Channel
- Spieden Island
- Spring Passage
- United States
- Waldron
- Waldron Island
- White Rock

San Juan Islands
(for title)

San Juan County (from road net map,
False Bay quadrangle, War Dep't.
C. of E. Photostat copy dated
December 1941

Names underlined in red
are approved. (Based on
Project names report and
subject to Field Edit)

12-18-57
L. Heck

49. NOTES FOR THE HYDROGRAPHER - T-5589

Incomplete or doubtful offshore details are called to your attention by notation on the manuscript. These are to be proved, disproved or located in position. *

Only two recoverable topographic stations were established by the field inspection party for this survey. They are

BOCK, 1950 (Reported destroyed: Field Edit, 1954) ENR
NASH, 1950

* Some features referred to were mapped by the field editor. ENR

FIELD EDIT REPORT

Map Manuscript T-5589

Project Ph-26(47)

51. Methods;

No new or unusual methods have been used in the field edit of this sheet. All planimetric detail was compared with the map by inspection from a truck or mostly by walking. Topography was resketched where necessary using the plane table.

The shoreline was inspected from a small boat close to the shore or by walking. Most of the shoreline inspected from the boat was along the base of rocky bluffs where the shoreline is very rugged and where ledges are typical. There are tide rips along many of these bluffs. A small boat has no trouble in these rips when under way, but it is very difficult to control when it loses way. Shoreline inspection under these conditions is difficult, sometimes thrilling, and the field notes are apt to be rather sparing.

The unit moved up to Waldron Island while working that area. There are only poor accommodations, no store to speak of, no truck available. Time was lost housekeeping, chopping firewood, etc. All travel was walking or by boat. The unit worked an average of about ten hours a day on Waldron, including Saturday and Sunday, which accounts for the week end tidal datum references.

A legend showing the colored inks and symbols used is shown on Field Edit Sheet No. 1. Field Edit Corrections have been shown on six Field Edit Sheets numbered 1 to 6 inclusive, and on fourteen photographs numbered 1080, 1082, 1088 - 1090 inc., 1093, 1094, 1097 - 1099 inc., 1119, and 1121 - 1123 inc. Field Edit Sheet No. 2 was submitted as a portion of a composite plane table sheet submitted with field edit data for quadrangle T-5588. It covers the eastern portion of Spieden Island. The island was inspected as a unit and all notes submitted with the earlier quad. Photograph 1080 was also submitted with this quad.

52. Adequacy of Compilation:

The compilation seems adequate except for weaknesses in road delineation in the woods. The field inspection had trouble with roads in the woods also. There were few omissions of buildings.

No weakness in horizontal position was found except in the vicinity of White Rock.* Plane table traverses crossing the line fence between Sections 1 and 6 on Orcas Island seemed poor, but further investigation showed the identification of the section to the north corner to be in error. This was the only corner for which the station identification card was not returned to the field. I used the substitute sta-

* Repositioned by planetable using control on island. *ENR*

tion as pricked on the field photograph and tied the section corner to the multiplex position of the substitute station. The field inspector's distance is substantially correct but his azimuth is about 25 degrees in error. The new location of the corner gave a section line that checked all line fence crossings.

The compilation of hypsography is weak in the Orcas Island portion of the quad and is further discussed under the next heading.

53. Map Accuracy:

There are no known horizontal position errors except in the vicinity of White Rock. This was largely a water model.

See 546

The vertical accuracy of the sheet is weak. Contouring on Waldron Island seemed generally quite good and contouring on Orcas Island correspondingly weak.

Waldron Island is fairly heavily wooded, but the lower elevations of the island do not have the very detailed topography typical of most of the San Juan Islands. The higher elevations are more detailed and the contouring was weaker in these areas. Only fifteen percent of all shots observed on Waldron Island were in error over a half interval, making this one of the best contouring jobs in the project.

The portion of Orcas Island lying within this quadrangle is the typical detailed San Juan topography with many separate little tops mostly fairly heavily wooded at the time of photography. There have been some small logging operations subsequently. Progress in the field edit of this part of the quad was slower than anticipated, but the extra effort appears not in vain. About thirty-seven percent of shots observed in this portion of the quad were in error over a half contour interval.

27.5 miles of profile was run on the sheet, of which 76% of shots were within a half contour interval of their true elevation after the appropriate position shift. About 9% of all shots were in error over a full interval. About $1\frac{1}{2}$ square miles of topography were resketched. It is difficult to give a good figure for the resketched area because of considerable minor resketching along profile routes.

The routes of profile are too detailed to describe in this report, but are shown graphically on the accompanying plat of the quadrangle.

It is believed that after field edit corrections are applied to this quadrangle that it will comply with National Map Accuracy Standards.

Aside from difficulties due to heavy woods the only criticism of contouring on this sheet might be that the operator does not seem to realize how sharply the banks rise from the shoreline. Northeast of Point Disney on Waldron Island there is a fifty foot wide flat strip

shown on the manuscript along the shore line which in general simply isn't there. This can be due to an error in contouring or to a displacement of the shoreline. I can find no substantial error in the field inspected shoreline. The allowable position error will take care of much of the trouble, but it just doesn't look good. The contouring difficulties on Orcas Island are the result of unusually detailed topography, woodland cover, and summer photographs.

The junction along the east edge of the sheet has been secured by running a profile along the sheet edge except for a few hundred feet along the north end. The ground was very steep and heavily wooded. The space is too small for much error to develop and it did not seem practicable to pursue the matter.

54. Recommendations:

No recommendations are submitted at this time.

55. Examination of Proof Copy:

Mr. Hays Rehm, County Engineer, County of San Juan, Friday Harbor, Washington has agreed to examine proof copy of the sheet for any obvious errors or omissions.

No corrections to geographic names are submitted.

56. Shoreline:

The ship PATTON has been working in these waters during the 1954 season. On Orcas Island their work extended north to the vicinity of station LIME 1940. They whitewashed DISNEY 1940 on Waldron Island, but no hydrographic stations were located on Waldron at the time of field edit. They also worked in the Spieden Channel this year, but I have not been over there for a year and do not know what was completed. Reference should be made to the PATTON Surveys for possible shoreline revision. *(These hydrographic surveys are not available for comparison at the time of this review.)* ^{WR}

57. Boundaries:

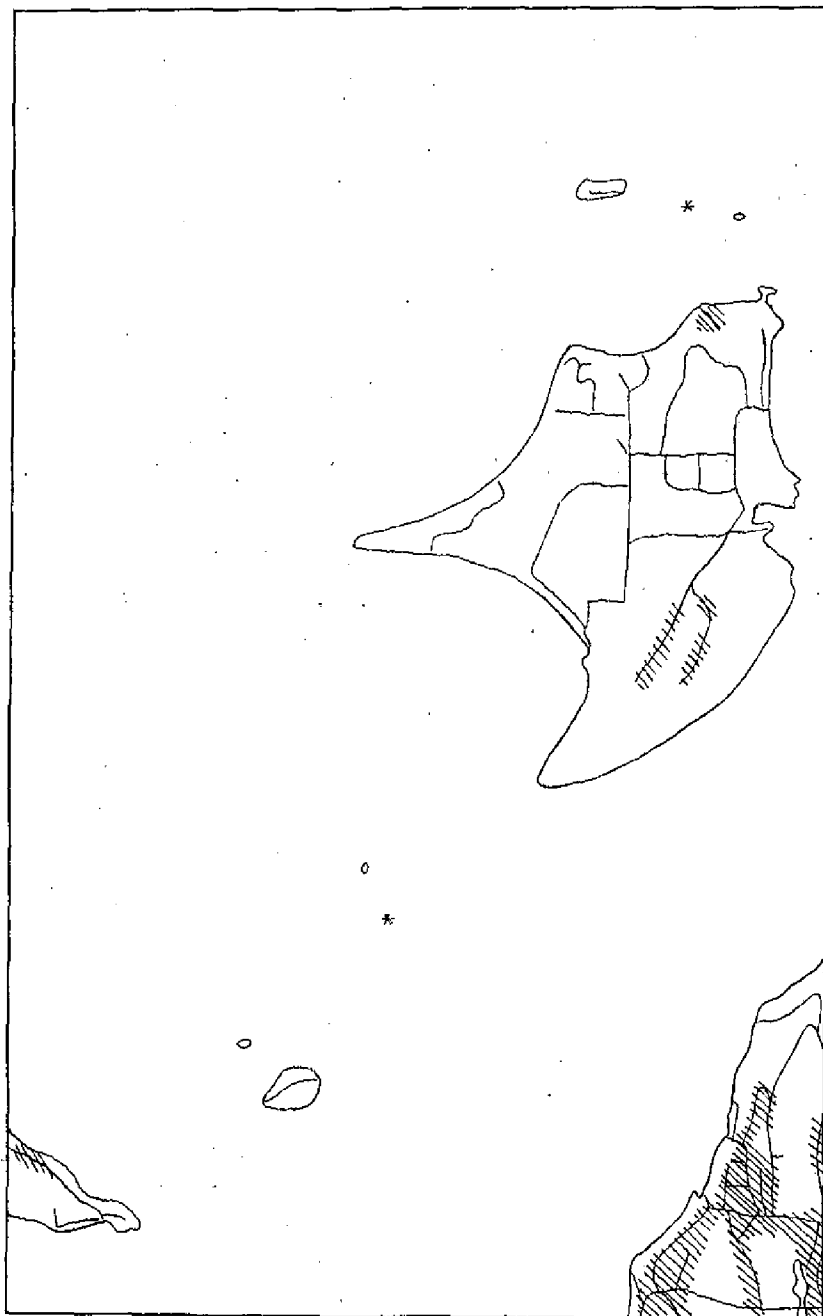
There are no local subdivisions to be shown on this sheet. The "Township" boundaries submitted by the field inspector turn out to be election precincts and are not to be mapped according to Par. 6, Chap. 5A7 of the Geological Survey Topographic Instructions.

Approved and forwarded:

Fred Natella
Fred Natella
Comdr., USC&GS
Chief of Party


Respectfully submitted:

Ray H. Skelton II
Ray H. Skelton II
Photogrammetric Engineer



T-5589

— Profile for vertical accuracy testing, 27.5 mis.

 Resketched topography, about $1\frac{1}{2}$ sq. mis.

Spieden Island

Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
Spieden Island, SE from sheet edge		SE along north shore			At Green Point.				
38	38	-	-		93	85	- 8	- 7	
45	39	-6	-						
42	20	222	-						
39	38	- 1	-						
32	19	413	-						
30	21	4 9	-						
27	19	4 8	-						
35	20	-15	-						
36	5	-31	-18						
55	55	-	-						
55	60	4 5	-						
59	60	4 1	-						
63	75	412	-						
60	60	-	-						
65	65	-	-						
63	60	- 3	- 3						
42	42	-	-						
24	24	-	-						
From southeast of boathouse to triangulation station PASTURE.									
27	25	- 2	-						
44	50	4 6	-						
North from above line.									
82	80	- 2	-						
69	71	4 2	-						
Spur SW from line along north shore.									
120	160	440	430						
Cuts along ridge crest on Spieden Is.									
358	360	4 2	-						
347	340	- 7	-						
266	261	- 5	- 3						
Cut on Sentinel Island.									
136	130	- 6	-						

Orcas Island

Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
West along south edge of sheet.									
19	31	12	9		22	22			
9	9	0	0		Spur to 365 top.				
14	18	4	4		167	179	12	2	
86	88	2	0		187	215	28	15	
130	135	5	5		196	231	35	25	
131	135	4	4		232	268	36	30	
126	135	9	9		255	277	22	14	
127	136	9	9		288	311	23	13	
125	137	12	10		330	360	30	18	
123	138	15	10		332	362	30	30	
127	139	12	10		West over ridge west of 365 top.				
132	148	16	13		159	178	19	16	
176	170	6			175	186	11	6	
168	170	2			185	196	11	3	
149	158	9	8		243	253	10		
148	157	9	8		248	279	31	22	
154	164	10	9		269	269			
157	167	10	9		262	281	19	9	
144	173	29	26		281	284	3	2	
133	163	30	25		305	278	27	25	
102	102				267	281	14	4	
64	87	23	21		275	275			
46	70	24	8		242	281	39	32	
206	210	4	0		246	239	7		
214	221	7			220	260	40	32	
230	235	5			206	241	35	25	
196	215	19	15		199	210	11	1	
205	220	15	9		136	194	58	53	
257	257				134	181	47	40	
277	277				150	165	15	5	
62	60	2			56	77	21	18	
44	48	4			59	69	10		
28	5	23	5						

Orcas Island

Test Elev.	Map Elev.	Error after shift	Remarks	Test Elev.	Map Elev.	Error after shift	Remarks
North	across	260 top.					
113	136	26		20	30	10	
112	126	14		100	107	7	
202	205	3		94	101	7	
220	222	2		63	59	4	
202	220	18		75	61	14	
197	228	31		33	40	7	
199	230	31		66	86	20	
220	222	2		85	98	13	
239	243	4		116	135	19	
245	250	5		104	107	3	
232	250	18		118	134	16	
222	239	17		185	195	10	
218	230	12		214	230	16	
206	223	17		236	241	5	
202	217	15		235	240	5	
190	208	18		242	242	0	
189	200	11		258	262	4	
164	191	27		260	264	4	
196	198	2		258	266	8	
196	202	6		263	279	16	
185	204	19		260	263	3	
189	204	15		252	261	9	
200	202	2		238	259	21	
201	202	1		268	268	0	
214	201	13		279	288	9	
165	200	35		255	269	14	
136	178	42		256	260	4	
166	201	45		257	270	13	
144	175	31		250	250	0	
North	along	east edge of sheet.		245	250	5	
67	76	9		304	304	0	
25	57	32		393	387	6	
18	29	11		435	422	13	
52	50	2		454	442	12	
				358	342	16	

Orcas Island

Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
350	328	-22	-12		160	182	-22	-10	
294	288	-6	-4		164	194	-30	-26	
290	282	-8	-		279	248	-31	-30	
326	306	-20	-10		146	159	-13	-13	
337	322	-15	-6		143	157	-14	-14	
356	344	-12	-5		143	159	-16	-16	
405	385	-20	-19		215	212	-3	-	
397	380	-17	-16		242	242	-	-	
East to west along Road 6					250	252	-2	-0	
95	106	-11	-5		297	301	-4	-	
93	102	-9	-7		312	312	-	-	
92	107	-15	-8		323	323	-	-	
75	94	-19	-16		308	320	-12	-6	
54	70	-16	-16		331	339	-8	-	
52	72	-20	-18		361	357	-4	-	
56	76	-20	-18		360	358	-2	-	
62	81	-19	-17		374	363	-11	-10	
60	89	-29	-27		380	370	-10	-	
76	97	-21	-19		394	389	-5	-	
95	112	-17	-14		392	382	-10	-4	
108	122	-14	-12		432	419	-13	-9	
105	134	-29	-26		431	418	-13	-9	
130	154	-34	-32		480	462	-18	-10	
150	160	-10	-7		505	485	-10	-6	
137	150	-13	-10		533	529	-4	-3	
79	99	-20	-18		537	526	-11	-7	
62	78	-16	-14		468	470	-2	-	
26	41	-15	-8		444	430	-14	-	
From F-rd, elev. 52 north to 530 top.					418	410	-8	-	
77	86	-9	-7		388	385	-3	-	
97	110	-13	-11						
106	118	-12	-10						
121	138	-17	-15						
140	155	-15	-13						
152	178	-26	-24						

Orcas Island

Test Elev.	Map Elev.	Error after shift	Remarks	Test Elev.	Map Elev.	Error after shift	Remarks
Spur line on-345 top.				206	221	+15	
99	115	+16		267	267	-	
74	92	+18		253	275	+22	
170	126	+16		263	300	+37	
141	147	+6		317	317	-	
186	203	+17		328	319	-9	
204	221	+17		330	330	-	
256	288	+32		336	342	+6	
300	310	+10		316	306	-10	
328	330	+2		301	281	+20	
348	322	-26		223	266	+43	
320	312	-8		216	248	+32	
328	310	-18		161	159	-2	
North from Road 6 to Sec. cor. 16,							
36, 37				Draw west of 345 top			
191	199	+8		96	142	+46	
200	202	+2		98	159	+61	
189	201	+13		98	148	+50	
168	220	+52		104	141	+37	
189	220	+31		113	156	+43	
222	220	-2		124	158	+34	
231	220	-11		148	159	+11	
205	200	-5		134	164	+30	
174	185	+11		122	169	+47	
209	205	-4		156	181	+25	
185	185	-		144	182	+28	
188	185	-3		161	198	+37	
184	194	+10		180	225	+45	
180	198	+18		171	198	+27	
224	204	-20		Vicinity Triangulation station SPIKE 1894			
237	216	-21		135	180	+45	
229	222	-7		60	120	+60	
226	226	-		46	80	+34	
236	241	+5		52	90	+38	
245	229	-16		44	62	+18	
				41	61	+20	

Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
Waldron Island					84	78	-6	-6	
From landing strip via schoolhouse to Waldron					75	75	-	-	
14	9	-5	-3		79	79	-	-	
48	48	-	-		45	45	-	-	
71	70	-1	-		20	20	-	-	
80	79	-1	-		12	20	+8	-	
94	92	-2	-		From T-road west, elevation 135, south then west from Mail Bay across ridge				
112	108	-4	-3		148	144	-4	-4	
120	114	-6	-5		129	122	-7	-5	
135	130	-5	-1		117	104	-13	-11	
183	176	-7	-6		71	68	-3	-5	
184	175	-9	-7		99	99	-	-	
183	173	-10	-8		110	106	-4	-3	
170	164	-6	-5		122	118	-4	-2	
152	153	+1	-		138	144	+6	-5	
141	139	-2	-		149	153	+4	-3	
125	119	-6	-5		170	170	-	-	
125	120	-5	-5		184	184	-	-	
124	123	-1	-		196	199	+3	+1	
122	120	-2	-2		205	205	-	-	
108	101	-7	-6		215	215	-	-	
87	79	-8	-8		194	189	-5	-3	
84	78	-6	-6		162	166	+4	+2	
81	76	-5	-5		136	140	+4	-2	
77	78	+1	+1		116	116	-	-2	
89	87	+2	+2		106	109	+3	+1	
89	93	+4	+3		100	106	+6	+5	
99	104	+5	+4		96	99	+3	+2	
111	119	+8	+7		Point of 205 Ridge				
136	142	+6	+6		144	144	-	-	
92	100	+8	+7		151	151	-	-	
74	74	-	-		159	158	-1	-	
66	66	-	-		174	170	-4	-2	
77	77	-	-		196	184	-12	-10	

Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
	Orcas Island					Gull Rock			
32	50	18	-		18	32	14	14	
29	52	13	3						
31	60	29	8		White Rock				
51	60	9	-		38	38			
60	98	38	20						
56	59	3	-						
	Flattop Island								
47	47	-	-						
153	150	- 3	-						
145	146	1	-						
143	142	- 1	-						
166	174	8	6						
169	170	1	-						
174	178	4	-						
157	167	10	9						
131	148	17	15						
142	145	3	3						
137	142	5	3						
143	141	- 2	-						
133	141	8	6						
139	141	2	-						
145	144	- 1	-						
124	146	22	16						
129	159	30	28						
124	124	-	-						
141	142	1	-						
139	141	2	-						
103	100	- 3	-						
65	66	1	-						
51	35	- 16	-						
22	22	-	-						

Waldron Island

Test Elev.	Map Elev.	Error after shift	Remarks	Test Elev.	Map Elev.	Error after shift	Remarks
200	190	-10		22	12	-10	
207	201	-6		22	15	-7	
215	205	-10		44	31	-13	
197	195	-2		55	45	-9	
180	181	+1		52	52	-	
175	181	-6		61	59	-2	
165	170	+5		61	59	-2	
166	166	-		68	65	-3	
165	165	-		66	61	-5	
220	205	-15		69	64	-5	
222	205	-17		71	66	-5	
222	205	-17		East of Sandy Point			
223	204	-19		18	15	-3	
206	201	-5		46	47	+1	
205	192	-13		57	59	+2	
Tie st Mail Bay				62	62	-	
104	102	-2		69	67	+2	
85	81	-4		75	72	-3	
73	59	-13		81	79	-2	
55	48	-7		79	81	+2	
31	21	-10		71	80	+9	
15	10	-5		76	80	+4	
From Waldron northwest across top				100	85	-15	
to T. road elev. 81				107	92	-15	
69	70	+1		115	100	-15	
63	63	-		120	98	-22	
53	53	-		70	74	+4	
60	60	-		52	51	-1	
72	62	-10		40	41	+1	
62	56	-6		41	40	-1	
65	65	-		34	27	-7	
51	53	+2		From schoolhouse north and west to beach			
60	60	-		111	111	-	
38	30	-8		100	105	+5	
17	10	-7					

Waldron Island

Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
93	97	+4	+3		9	9	-	-	
91	86	-5	-4		From cemetery north, east, and south to landing strip.				
92	85	-7	-7		154	150	-4	-2	
86	85	-1	-1		152	145	-7	-5	
86	83	-3	-3		138	125	-13	-10	
91	82	-9	-9		120	110	-10	-6	
86	82	-4	-4		117	104	-13	-9	
86	82	-4	-4		102	96	-6	-5	
85	80	-5	-5		86	92	+6	+5	
64	64	-	-		89	85	-4	-3	
54	56	+2	-		86	92	-4	-3	
41	43	+2	-		87	83	-4	-3	
38	34	-4	-1		87	86	-1	-0	
23	18	-5	-4		89	96	+7	+4	
8	5	-3	-2		85	85	-	-	
8	5	-3	-2		90	88	-2	-	
Vicinity Fishery Point									
87	82	-5	-5		93	91	-2	-	
81	81	-	-		88	87	-1	-	
68	81	+13	+13		60	56	-4	-2	
62	80	+18	+18		66	58	-8	-6	
59	78	+19	+16		68	65	-3	-1	
56	73	+17	+14		74	77	+3	-	
60	76	+16	+13		82	82	-	-	
62	76	+14	+11		92	88	-4	-2	
57	62	+5	+3		106	102	-4	-3	
64	44	-20	-19		111	108	-3	-2	
46	46	-	-		117	110	-7	-6	
65	59	-6	-5		120	115	-5	-4	
56	62	+6	+6		127	122	-5	-4	
47	62	+15	+15		130	130	-	-	
73	65	-8	-8		132	128	-4	-3	
33	40	+7	-		132	124	-8	-7	
21	27	+6	-		126	124	-2	-2	
8	15	+7	+6		148	140	-8	-5	

Waldron Island

Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
150	145	- 5	- 5		238	241	+ 3	+ 2	
117	114	- 3	- 3		254	253	- 1	-	
114	110	- 4	- 1		259	263	+ 4	-	
67	62	- 3	- 2		288	292	+ 4	+ 1	
				North along bluff from air strip.	326	320	- 6	- 1	
16	10	- 6	- 5		360	363	+ 3	-	
27	23	- 4	- 3		369	371	+ 2	-	
48	44	- 4	- 1		379	387	+ 8	+ 3	
74	67	- 7	-		397	397	-	-	
86	50	-36	-20		416	412	- 4	-	
81	61	-30	-20		429	424	- 5	- 1	
97	84	-13	-11		446	440	- 6	- 1	
				West of Pt. Hammond	457	457	-	-	
20	21	+ 1	-		469	458	- 9	- 7	
24	36	+12	+ 4		476	466	-10	- 1	
31	52	+21	+15		481	505	+24	+15	
37	74	+37	+31		484	521	+37	+33	
60	73	+13	+11		483	509	+26	+17	
				North of T-road west, elev. 91.	499	501	+ 2	-	
83	82	- 1	-		501n	505	+ 4	+ 2	
66	68	+ 2	-		524	510	-14	-12	
44	47	+ 3	+ 1		531	519	+12	+10	
38	30	- 8	- 7		510	519	+ 9	+ 5	
14	11	- 3	- 2		518	538	+20	+14	
19	12	- 7	- 6		524	550	+26	+16	
31	30	- 1	-		540	540	-	-	
29	25	- 4	- 1		550	550	-	-	
24	19	- 5	- 4		575	581	+ 6	-	
17	17	-	-		582	562	+10	+ 7	
				From Y-road 2000 feet WSW of Mail	547	569	+22	+19	
				Bay SW to 600 top.	551	570	+19	+18	
166	167	+ 1	-		590	570	-20	-	
187	189	+ 2	-		612	600	-12	-12	
215	222	+ 7	+ 5		Line tied to w.s. at Skipjack Island.				
223	231	+ 8	+ 7						

TOPOGRAPHIC MAPPING

Summary & Abstract of Vertical Accuracy Test

Project No. Ph-26 Quad. No. T-5589 Quad. Name _____
 Method of Testing Plane table profiling
 Tested by R.H.S.II Date Apr. 52, Summer 54 Evaluated by R.H.S.II
 Contour interval 20 ft. 1.22 M.M. allowable shift at 1/10,000
 map or manuscript scale.

609 Total number of points tested

76 % of points within $\frac{1}{2}$ contour interval or better

459 Test points correct within $\frac{1}{2}$ contour interval

98 Test points in error between $\frac{1}{2}$ and full contour interval

52 Test points in error over full contour interval

Waldron Island

Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
From northeast to southwest along bench east of 600 top.									
275	308	33	30						
278	308	30	24						
290	298	8	2						
303	305	2	-						
298	319	21	17						
308	362	54	44						
340	345	5	-						
355	352	- 3	-						
355	342	-13	- 6						
348	335	-13	- 7						
337	330	- 7	- 2						
323	313	-10	- 5						
311	294	-17	-13						
310	288	-22	-19						
307	287	-20	-18						
305	288	-17	-15						
293	280	-13	-11						
288	280	- 8	- 6						
292	281	-11	- 9						
290	281	- 9	- 2						
289	279	-10	- 8						
Skipjack Island									
42	42	-	-						
81	61	-20	- 5						
74	65	- 9	-						
68	68	0	-						
112	101	-11	- 8						
130	110	-20	-16						
Bare Island									
50	30	-20	-20						
21	20	- 1	- 1						

REVIEW REPORT
Topographic Map T-5589
21 July 1955

62. Comparison with Registered Topographic Surveys:

T-730	1:20000	1858
T-2192	1:10000	1894
T-2193	"	"
T-2229	"	1895

There is very close agreement in shoreline between these prior surveys and T-5589. These prior surveys seem to have mapped ledges more completely than was done on T-5589. Offshore rocks at lat. $48^{\circ} 41.5'$ - long. $123^{\circ} 02.3'$ are in disagreement between T-2192 and T-5589. Positions should be taken from T-5589. There have been many cultural changes since these prior surveys. For the area encompassed, T-5589 should supersede these prior surveys for nautical charting except for ledges as noted above.

63. Comparison with Maps of Other Agencies:

None.

64. Comparison with Contemporary Hydrographic Surveys:

None.

65. Comparison with Nautical Charts:

6379	1:20000	1953, corrected to 5/23/55
6380	1:80000	1947, " " 7/14/52

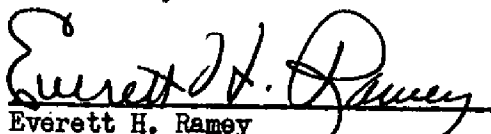
An advance copy of T-5589 was evidently used in compiling Chart 6379. Corrections in shoreline and contours which were made during the field edit should be applied to this chart.

Some differences exist in roads and contours between chart 6380 and T-5589.

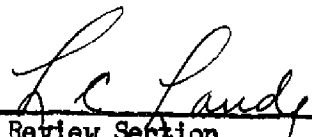
66. Adequacy of Results and Future Surveys:

This map complies with National Standards of Map Accuracy and project requirements. Alongshore rocks at lat. $48^{\circ} 41.1'$ - long. $123^{\circ} 00.8'$ were mapped without any field inspection and are subject to some error in symbol.


Reviewed by:


Everett H. Ramey


APPROVED:



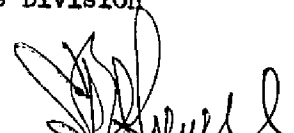
Chief, Review Section
Photogrammetry Division



Chief, Nautical Chart Branch
Charts Division



Chief, Photogrammetry Division
16 July 54



Chief, Coastal Surveys Division


History of Hydrographic Information for T-5589

Hydrography was added to the map manuscript in accordance with the Photogrammetry Division General Specifications of 18 May 1949.

Depth curves and soundings are in feet at Mean Lower Low Water datum and originate with the following Coast and Geodetic Survey hydrographic sources:

<u>Number</u>	<u>Scale</u>	<u>Date of Survey</u>
H-2113	1:20,000	1891
2213	1:10,000	1894
2214	1:10,000	1894
Chart 6379	1:20,000	(corrected to 23 May 1955)
6380	1:80,000	(corrected to 25 July 1955)

Hydrography was compiled by Lena T. Stevens on 8 August 1955 and verified by O. Svendsen on 19 September 1955.


G. A. Walker, Jr.

NAUTICAL CHARTS BRANCH

SURVEY NO. T-5589

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.