

5590

Diag. Cht. No. 6380.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. Ph-26(47) Office No. T-5590 N&S.

LOCALITY

State Washington

General locality San Juan Island

Locality Haro Strait

1949-54

CHIEF OF PARTY

C.W.Clark, Chief of Field Party

H.A.Paton, Baltimore Photo. Office

LIBRARY & ARCHIVES

DATE July 26, 1962

USCOMM-DC 5087

5590

DATA RECORD

T -5590

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, Md.

Officer-in-Charge: H.A. Paton

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

Copy filed in Division of
Photogrammetry (IV)
Office Files

Letter No. 73-rb, dated 17 March 1950

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): **MAR 17 1952**

Date reported to Nautical Chart Branch (IV): **MAR 24 1952**

Applied to Chart No.

Date:

Date registered (IV): *19-Mar-1952*

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): N.A. 1927

Vertical Datum (III): *Half-Tide Level*

Mean sea level except as follows:
Elevations shown as (25) refer to mean high water
Elevations shown as (S) refer to sounding datum
i.e., mean low water or mean lower low water

Reference Station (III): KOPET, 1894

Lat.: 48° 34' 43.252"

Long.: 123° 10' 20.402"

Adjusted
~~Unadjusted~~

Plane Coordinates (IV):

State: Washington

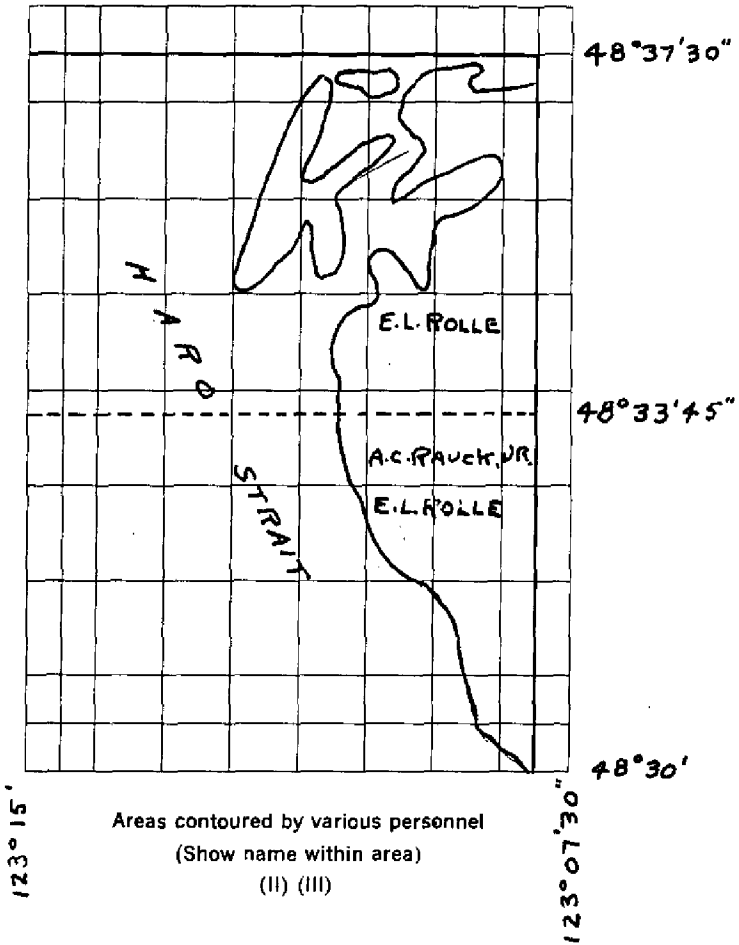
Zone: North

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

Field Inspection by (II): I. Zirpel
L.D. Zuck

Date: 19 September 1950

Planetable contouring by (II):

Date:

✓ Completion Surveys by (II): Charles H. Bishop

Date: 1953-54

Mean High Water Location (III) (State date and method of location):
4 June 1949 Photogrammetric

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

Date: Nov. 1950

Projection and Grids checked by (IV): "

Date: "

Control plotted by (III): A.K. Heywood
D.M. Brant

Date: Jan. 1951

Control checked by (III): W. Lineweaver
E. L. Rolle

Date: Feb. 1951

~~REVISIONS~~ Stereoscopic Control extension by (III): E. L. Rolle and D.M. Brant

Date: Feb. March, 1951

Stereoscopic Instrument compilation (III):
Planimetry) E.L. Rolle
) W. F. Edinger
Contours) A. C. Rauck, Jr.

Date: April
 May 1951
Date: June

Manuscript delineated by (III): W.F. Edinger S/2
 B. Wilson N/2
Evaluation and assembly of data for Public Land Lines
By Donald M. Brant

Date: June)
 July) 1951

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

Date: April 1952

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

Date: April 1952

Camera (kind or source) (III): U.S.C. & G.S. Camera, Type "0" focal length, 152.37 mm

Number	Date	PHOTOGRAPHS (III)			Computed
		Time	Scale	Stage of Tide	
49-0-1022 thru 1024	6-4-49	1120	1:24,000	4.4 above MLLW	
49-0-1052 thru 1056	"	1040	"	4.7 above "	
49-0-1041 thru 1046	"	1033	"	4.8 above "	
49-0-1015 thru 1016	"	1009	"	4.9 above "	
49-0-1011 thru 1014	"	1005	"	3.8 above "	
49-0-1072 thru 1074	"	1059	"	3.4 above "	

11-12, 14-16, 43-46, 53-54, 74

Tide (III)

From tables of predicted tides

Reference Station: PORT TOWNSEND, WASHINGTON
 Subordinate Station: ROCHE HARBOR, SAN JUAN ISLAND
 Subordinate Station: KANAKA BAY, SAN JUAN ISLAND

Diurnal

Ratio of Ranges	Mean Range	Spring Range
	5.1	8.3
1.0	5.2	8.8
0.8	3.9	7.0

✓ Washington Office Review by (IV): *Everett H. Ramey*

Date: *14 Oct 1955*

Final Drafting by (IV): *FRAZIER J.H. T-5590-N*
FRAZIER J.H. T-5590-S

Date: *12 JUNE, 1959*
8 July, 1959

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): *14*

Shoreline (More than 200 meters to opposite shore) (III): *32 statute miles*

Shoreline (Less than 200 meters to opposite shore) (III): *1 statute mile*

Control Leveling - Miles (II): *11.2*

Number of Triangulation Stations searched for (II): *27* Recovered: *24* Identified: *6*

Number of BMs searched for (II): *0* Established: *19* Recovered: *19* Identified: *19*

Number of Recoverable Photo Stations established (III): *10*

Number of Temporary Photo Hydro Stations established (III): *none*

III

Remarks: Of the 19 BMs searched for and identified, (18) were found on:
Quad T-5590 and (1) on T-5591

Summary to Accompany Descriptive Report T-5590

Topographic map T-5590 is one of 13 similar maps of Project Ph-26. It covers the west portion of San Juan Island and Henry Island.

Project Ph-26 is a stereoscopic mapping project. Field work in advance of compilation included the establishment and recovery of horizontal and vertical control, field inspection of shoreline and interior features and the investigation of boundaries, land lines and geographic names. T-5590 is a multiplex compilation at scale 1:10,000 from 1949 single-lens photographs. The entire map was field-edited in 1954. The manuscript consists of two sheets, each 3-3/4' in latitude by 7-1/2' in longitude. With the addition of hydrographic data, the map is to be published by the Geological Survey at a scale of 1:24,000 as a standard topographic quadrangle.

Prints

Items registered under T-5590 will include one ~~cloth-mounted print~~ ^{*Crown film*} at a scale of 1:10000 for each half of the map manuscript, a cloth-mounted color print at a scale of 1:24000 of the published map and the descriptive report.

MAP T- 5590

PROJECT NO. Ph-26(47)

SCALE OF MAP 1:10,000

SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR μ -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)	
LIME KILN LIGHT, 1926	G-5503 Pg. 625	N.A. 1927	48	30	57.767	1784.4	69.0			
			123	09	04.393	90.2	1141.2			
LIME, 1942	G-5649 Pg. 702	N.A. 1927	48	36	20.394	630.0	1223.4			
			123	09	03.533	72.4	1156.8			
KOPET, 1894	G-5503 Pg. 630	"	48	34	43.252	1336.0	517.3			
			123	10	20.402	418.2	811.6			
KELP, 1894	G-5503 Pg. 631	"	48	36	34.603	1068.9	784.5			
			123	11	28.967	593.4	635.7			
KELLETT BLUFF LIGHT, 1942	G-5503 Pg. 633	"	48	35	19.478	601.7	1251.7			
			123	12	02.594	53.2	1176.4			
HENRY 2, 1942	G-5503 Pg. 626	"	48	35	48.252	1490.5	362.9			
			123	12	05.152	105.6	1123.8			
GRANITE 1894	G-5503 Pg. 630	"	48	33	41.333	1276.7	576.6			
			123	10	28.073	575.6	654.6			
DAVE, 1942	G-5649 Pg. 702	"	48	37	26.749	826.2	1027.1			
			123	08	24.820	508.3	720.4			
BELLEVUE 2, 1942	G-5503 Pg. 625	"	48	31	46.755	1444.2	409.1			
			123	09	41.785	857.3	573.7			
BELLEVUE, 1854	G-5503 Pg. 632	"	48	31	47.215	1458.4	394.9			
			123	09	41.598	853.5	377.5			
BATTLESHIP, 1942	G-5503 Pg. 626	"	48	37	29.251	903.5	949.8			
			123	11	03.459	70.8	1157.9			

1 FT. = 3048006 METER A.K. Heywood
 COMPUTED BY:
 DATE: 12/50
 CHECKED BY: D.M. Brant
 DATE: 1/51
 M-2368-12

MAP T. 5590

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 α -COORDINATE		DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS	
					FORWARD	(BACK)		FORWARD	(BACK)	FORWARD	(BACK)
WESTCOTT, 1942	G-5649 Pg. 703	N.A. 1927	48 35	49.104	1516.8	336.6					
			123 08	35.037	717.9	511.5					
SORREL, 1894	G-5508 Pg. 630	"	48 35	11.720	362.0	1491.3					
			123 11	38.969	798.6	431.0					
ROUCH, 1894	G-5503 Pg. 632	"	48 30	50.628	1563.8	289.5					
			123 08	57.443	1178.9	52.5					
ROCHE, 1942	G-5649 Pg. 702	"	48 37	06.513	201.2	1652.2					
			123 10	24.406	4991.9	729.0					
QUEEN, 1894	G-5503 Pg. 630	"	48 34	02.464	76.1	1777.2					
			123 10	31.057	636.7	593.4					
PASS, 1942	G-5649 Pg. 703	"	48 35	46.063	1422.8	430.5					
			123 09	56.364	1154.9	74.5					
OPEN 2, 1942	G-5503 Pg. 630	"	48 35	00.122	3.8	1849.6					
			123 10	46.689	956.9	272.8					
MOSQUITO, 1894	G-5503 Pg. 630	"	48 37	16.353	505.1	1348.2					
			123 10	46.473	951.8	277.0					
MAPLE, 1894	G-5503 Pg. 625	"	48 35	19.365	598.2	1255.2					
			123 12	01.524	31.2	1198.3					
LOW 2, 1942	G-5503 Pg. 629	"	48 32	36.298	1121.2	732.1					
			123 09	48.230	989.3	241.4					

1 FT. = 3048006 METER
COMPUTED BY: A.K. Heywood

DATE: 12/50

CHECKED BY: D.M. Brant

DATE: 1/51

MAP T..... 5590

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		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)	
BARREN, 1894	G-5649	N.A. 1927	48 37	21.949	678.0	1175.4				
	Pg. 702		123 09	33.542	686.9	541.8				
ANDREWS BAY R.M., 1909	G-5503	"	48 33	06.101	188.5	1664.9				
	Pg. 629		123 10	02.819	57.8	1172.7				
BARNACLE, 1894	G-5649	"	48 36	31.114	961.1	892.3				
	P. 703		123 09	27.624	565.9	663.2				
KELP REEFS BEACON (CAN.) 1894	G.P.	"	48 32	52.334	1616.5	236.8				
	P. 625		123 14	08.631	177.0	1053.5				

COMPILATION REPORT

T-5590

Field inspection report and Photogrammetric Plot Report

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

31. DELINEATION

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

32. CONTROL

Refer to items 3 and 4 of field inspection report, and item 23 of photogrammetric plot report.

33. SUPPLEMENTAL DATA

1 Photostat copy of land plat, Township 35 North, Range No. 4 west, Willamette Meridian, Wash. dated April 15, 1875.

2 Photostat copies of land plats, Township 36 North, Range No. 4 west, Willamette Meridian, Wash. dated April 15, 1875 and July 30, 1878.

1 Photostat copy of map of San Juan County, Wash. showing political townships.

1 Blue on white print of San Juan Island, San Juan County showing section lines, public land surveys.

2 Enlarged land plats, one of Township 35 North, Range No. 4 west and one of Township 36 North, Range No. 4 west.

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

34. CONTOURS AND DRAINAGE

On the west side of Henry Island at Kellett Bluff are two horizontal control stations, Kellett Bluff Light, 1942 and Maple 1894. The elevations of these stations, as reported on their recovery cards, are not in agreement with the contours.

As there was very poor stereoscopic coverage in the area, and multiplex contouring was done using the extreme edge of the only available model (49-0-1044-1045), it is recommended the contours in this vicinity should be verified in the field.

35. SHORELINE AND ALONGSHORE DETAILS

Generally, the inspection of shoreline and alongshore details was adequate. However, additional photography to the west of Henry Island would have better facilitated the field inspection and delineation of the shoreline in that area.

35. SHORELINE AND ALONGSHORE DETAILS (continued)

A more detailed field inspection of shoreline at Roche Harbor could also have been used to better advantage.

The field inspection of shoreline was inadequate in areas of dense timber and relief displacement. These areas although scattered, were interpreted by stereoscopic study and delineated in conjunction with available inspection.

Only approximate low water lines indicated by the field party are shown. Shallow lines are from office interpretation.

See § 54

36. OFFSHORE DETAILS

Those offshore details of doubtful existence or identified by incomplete field data are referred to the hydrographer or field edit party by notations on the discrepancy overlay.

37. LANDMARKS AND AIDS

The following aids to navigation are within this survey:

Lime Kiln Light, 1926 (Triangulation station)
Kellett Bluff Light, 1942 (" ")
Kelps Reef Light, 1894 (" "). Haro Strait, Canada)

38. CONTROL FOR FUTURE SURVEYS

As per item 11 of the field inspection report, 10 recoverable topographic stations are plotted within this survey.

All are plotted by multiplex methods and will be found listed under item 49, "Notes for the Hydrographer" .

39. JUNCTIONS

Junctions are complete with the following surveys:-

To the north with survey No. T-5588
To the east with survey No. T-5591
To the south with survey No. T-5592 extended
To the west are the waters of Haro Strait and Canada.

40. HORIZONTAL AND VERTICAL ACCURACY

Refer to item 26, Photogrammetric Plot Report.

The contours of the west side of Henry Island are believed not in agreement with the vertical accuracy requirements and are subject to *See §53* correction during field edit.

41. BOUNDARIES, MONUMENTS AND LINES

Refer to item 10 of field inspection report and Special Report on the Investigation of Boundaries and Land Lines. Also see descriptive report for survey No. T-5584 concerning delineation of public land line data.

The boundaries of San Juan No. 1 Township, No. 2 Township and No. 3 Township are delineated from approximate data submitted by the field inspection party. This consisted of a photostat copy of San Juan County with townships outlined. *(Township boundaries not shown) ERK*

42-45. Inapplicable.

46. COMPARISON WITH EXISTING MAPS

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

47. COMPARISON WITH NAUTICAL CHARTS

General Chart No. 6300, scale 1:198,000, published September 1941 (11th edition) (11-6-50) *See §65*

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

Harbor Chart No. 6381, scale 1:10,000, published Dec. 1943 (3rd edition) (8-11-45). *(This chart since discontinued) ERK*

The topography of these charts requires considerable revision.

The comparison of the north half of this map with Harbor Chart No. 6381 is in good agreement with the following cultural changes as exceptions.

New piers, shoreline structures and ruins at Roche Harbor are not charted. Large shoreline structures east of Pearl Island are no longer in existence.

Ruins and piles at Westcott Bay, piers at the east of Davison Head, at Garrison Bay and at Mitchell Bay also are not charted.

Many interior cultural changes are not shown on the chart. This chart does not cover the area of the south half of the manuscript.

Comparison with Coast Chart No. 6380 is in good agreement.

47. COMPARISON WITH NAUTICAL CHARTS (continued)

Due to the large difference in scale, an adequate comparison with General Chart No. 6300 could not be made. However, a visual comparison showed the general configuration of shoreline in good agreement with the manuscript.

See § 65

Items to be applied to nautical charts immediately:

New piers, shoreline structures, and ruins at Roche Harbor should be applied. Just north of Roche Harbor and east of Pearl Island are large shoreline structures which are no longer in existence and should therefore be removed from the charts.

Items to be carried forward

None.

Respectfully submitted

9 May 1952

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

Approved and forwarded
29 May 1952

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

T-5590.

-48- Geographic Names.

- United States
- Canada
- Washington
- British Columbia
- San Juan County
- San Juan No. 1 Township
- San Juan No. 3 Township
- San Juan Island

} Not mapped. ^{etc}

✓ West Side Road ~~XXXXXXXX~~

✓ Deadman Bay

✓ Mt. Dallas

✓ Lime Kiln Light

Lime Kiln

(on chart 6380 and in coast pilot as a locality or landmark; not listed in project names report) - Not a name. ^{ajd}

✓ Bellevue Point

✓ Trout Lake

✓ Smallbox Bay

✓ Low Island

✓ Andrews Bay

✓ Mountain Road

✓ Smugglers Cove

✓ Mitchell Bay

✓ Mitchell Bay Road

✓ Young Hill

✓ Hanbury Point

✓ Mosquito Pass

✓ Delacombe Point

✓ Horseshoe Bay

✓ Yacht Haven (land area)

✓ Garrison Bay

✓ Guss Island

✓ Bell Point

✓ English Camp (Historical Site): names report places it at 7 miles NW of Friday Harbor: note that name is repeated near village of Roche Harbor* (?)

* Deleted by field editor.

✓ White Point

✓ Westcott Bay

✓ Roche Harbor Road

✓ Roche Harbor (village)

✓ Bazalgette Point

✓ Pole Island

✓ Spieden Channel

✓ Davison Head

✓ Barren Island

✓ Posey Island

✓ Pearl Island

✓ Battleship Island

✓ Roche Harbor Lime and Cement Co. Pier

Geographic Names, T-5590, page 2.

- ✓ Henry Island
- ✓ McCracken Point
- ✓ Roche Harbor (water)
- ✓ Nelson Bay
- ✓ Open Bay
- ✓ Kellett Bluff

Names underlined in red
are approved, on basis of
project names report.

4-15-52

L. Heck

49. Notes for the Hydrographer T-5590

The following are recoverable topographic stations within this survey:

BARK, 1950	WEST, 1950
PINE, 1950	TIDE, 1950
MIKE, 1950	POLE, 1950
GOAT, 1950	CHAN, 1950
BELL, 1950	ROCK, 1950

KELLETT BLUFF LIGHT, 1942 at the west shore of Henry Island and LIME KILN LIGHT, 1926 just north of Deadman Bay, are also called to your attention as further use in hydrography. Both are triangulation stations.

-50- PHOTOGRAMMETRIC OFFICE REVIEW

T. 5590

1. Projection and grids A.C.R. 2. Title A.C.R. 3. Manuscript numbers A.C.R. 4. Manuscript size A.C.R.

CONTROL STATIONS

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

ALONGSHORE AREAS

(Nautical Chart Data)

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

PHYSICAL FEATURES

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

CULTURAL FEATURES

27. Roads A.C.R. 28. Buildings A.C.R. 29. Railroads — 30. Other cultural features A.C.R.

BOUNDARIES

31. Boundary lines A.C.R. 32. Public land lines A.C.R.

MISCELLANEOUS

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

40. Albert C. Rausch, Jr.
Reviewer

Henry J. Eisenthal
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.

Bernice W. Jones
Compiler

Henry J. Eisenthal
Supervisor

43. Remarks:

FIELD EDIT REPORT

Project Ph-26

T-5590 North and South

51. Methods:

The map was edited by use of the planetable and sensitive altimeter. Deletions have been made with green ink, elevations obtained during field edit and corrections to topography (including shoreline and rock data) with purple ink and additions and corrections to cultural features with red ink. Barometric elevations and contour changes resulting from them are also shown with red ink.

All the mean high water line was compared with the manuscript by running a boat close to the shoreline and by walking along the shoreline where corrections were made. Numerous corrections were made and cross-referenced on Field Edit Sheets 4, 5 and 6. The mean high water line on Henry Island from (AHENRY 2 1942 southeastward to ASORRELL 1894) was located by planetable traverse. That part of the shoreline which lies within the area covered by Nautical Chart 6381 was closely compared with the chart and any very noticeable discrepancies investigated. *ref on A-5, 17*

Mean high water line corrections are on Field Edit Sheet No. 1 (planetable traverse on Henry Island) and on the photographs. Rock data is on the photographs and Field Edit Sheets 5 and 6. All other information is on Field Edit Sheets 1, 2 and 3.

A legend describing symbols and colored inks used during field edit is on Field Edit Sheet No. 3.

Field Edit information is on photographs (1011, 1012, 1014, 1015, 1016, 1043, 1044, 1046, 1053, 1054 and 1074) and on Field Edit Sheets 1 - 6 inclusive.

Cross references have been made near each query on the discrepancy sheets and on Field Edit Sheets 4, 5 and 6.

52. Adequacy of Compilation:

Compilation is adequate. Apparently the compiler has followed field inspection closely.

See § 66

53. Map Accuracy:

No errors were found in horizontal accuracy.

Seventy-nine percent of the elevations checked are within one-half contour interval or better, thirteen percent are between one-half and full interval and eight percent are in error over a full contour interval. An area of approximately one square mile in the southeast corner of T-5590 N was contoured during field edit. This area was apparently heavily wooded at the time of photography but has since been logged off. One Elevation tested in this area was off 76 feet.

A small area about 3000 feet north of Trout Lake (T-5590S) was also contoured during field edit.

Vertical accuracy tests were run in areas suggested on the discrepancy sheets with the following results:

Location	Points checked	% within $\frac{1}{2}$ contour interval
Henry Island, Vicinity of Δ KELP	17	70
Spieden Channel to Westcott Bay	31	97
Bellevue Point	25	96

See pages 2 and 3 of Summary and Abstracts for T-5590S and pages 1, 2, 7, and 8 for T-5590N.

54. Recommendations:

In the area from the vicinity of Δ KELP on the west side of Henry Island southward to the south limit of the shoreline the low water line may be determined from the 1953 hydrographic survey by the Ship LESTER JONES. In other areas the shallow line indicated on the manuscript is inconsistent, it being inside the low water line in places and outside in others. It is recommended that the shallow lines shown on the manuscript be deleted and the low water line in areas not included in the 1953 hydrographic survey be taken from the 1954 hydrographic survey by the Ship PATTON when available.

55. Examination of Proof Copy:

The following residents have been consulted and have agreed to examine a proof copy of the map for possible errors:

Name: Mr. Hays Rehm
Address: Friday Harbor, Wash.
Occupation: County Surveyor

Name: Mr. William W. Baker
Address: Friday Harbor, Washington
Occupation: County Agent

No corrections or additions to geographic names were found.

Approved and forwarded:

Respectfully submitted:

Fred Natella
Comdr., USC&G Survey
Chief of Party

Charles H. Bishop
Cartographer

Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
TBM 40	200	ft. N.W.			43	48	+5	+4	
176	178	+2*	0		48	52	+4	0	
189	183	-6*	+4		69	72	+3	0	
207	207	0	0		74	80	+6	+5	
					95	99	+4	+3	
BM X-237	160	160			98	99	+9	0	
132	135	+3	0		82	88	+6	+3	
130	143	+13	+9						
120	122	+2	0						
108	118	+10	+9		R-239 to N.E. edge of sheet				
106	112	+6	+4		133	140	+7	0	
88	119	+31	+28		162	160	-2	0	
96	99	+3	+2		177	180	+3	0	
87	95	+8	+8		200	192	-8*	-6	
83	101	+18	+15		193	199	+6	+4	
81	95	-14	+14		174	198	+24	+18	
76	81	+5	+4		182	199	+17	+10	
61	61	0	0		220	202	-18	-2	
87	95	+8	+5		243	221	-22*	+5	
137	140	+3	0		253	247	-6*	0	
95	101	+6	+5		230	222	-8*	0	
101	118	+17	+16		212	199	-13*	0	
154	154	0	0		208	217	+9	0	
144	144	0	0						
81	80	-1	0		7-237, west				
45	50	+5	+4		along West				
37	42	+5	+3		114	109	-5*	0	
71	71	0	0	spur	114	118	+4	0	
73	58	-15	-10	spur	134	115	+11	+8	
42	39	-3	0		142	125	+3	+1	
48	48	0	0		117	123	+6	+3	
40	47	+7	+5		67	83	+16	+13	
36	42	+6	+4		149	163	+14	+12	
34	40	+6	+3		139	153	+13	+8	
63	69	+6	+5		113	119	+6	+3	
					123	123	0	0	
					138	145	+7	+3	

Test Elev.	Map Elev.	Error after shift	Remarks	Test Elev.	Map Elev.	Error after shift	Remarks
106	132	+28		291	281	-10	
159	168	+9		273	275	+2	
194	200	+6		254	258	+4	
204	210	+6		270	270	0	
183	193	+10		292	275	-17	
				306	294	-12	
R-238, to sec. cor. 2, 1, 11, 12				333	327	-6	
83	81	-2		338	340	+2	
71	71	0		314	318	+4	
70	70	0		334	327	-7	
125	120	-5		320	305	-15	
133	129	-4		325	300	-25	
170	160	-10					
TM 70, S.E. to edge of sheet							
268	258	-10		347	335	-12	
289	262	-27		372	362	-10	
345	345	0		364	364	0	
351	358	+7		373	368	-5	
332	327	-5		388	381	-7	
378	368	-10		334	339	+5	
377	372	-5		352	350	-2	
				333	341	+8	
BM V-237, to U-237				346	341	-5*	
242	225	-17		352	335	-17	
241	239	-2		322	322	0	
251	255	+4		348	342	-6	
268	275	+7		318	322	+4	
283	281	-2		329	341	+12	
295	295	0		322	329	+7	
294	294	0		331	320	-11	
292	290	-2		316	320	+4	
290	302	+12		314	314	0	
292	295	+3		241	240	-1	
277	287	+10		195	189	-6	

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Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
162	159	-3	0			Elev. 468,	to Hi	1.580	
127	120	-7	-5			492	-12	-10	
100	103	+3	0			463	+12	+10	
46	41	-5	0			500	0	0	
22	20	-2	0			523	+2	0	
						511	+21	+19	
						521	0	0	
Elev. 294, N.	Along trail,					520	+9	+8	
324	329	+4	0			529	+7	+5	
350	353	+3	0			540	-16	-15	
361	361	0	0			558	-11	-10	
456	460	+4	0			553	-6	-5	
425	421	-4	-16			548	+12	+11	
457	439	-18	-8			533	+10	+8	
451	440	-11	0			543	0	0	
434	434	0	-10			577	+5	+3	
452	440	-12	-7			548	+7	+6	
486	472	-14	-8			550	0	0	
491	481	-10	-5			539	-14*	-12	
508	500	-8	-10			574	-22	-14	
490	475	-15	-7			565	-10	-5	
488	480	-8	0			564	-9	-5	
479	480	+1	-5			575	-10	-10	
486	479	-7*	+2			576	-18	-16	
472	475	+3	+2			545	+13	+12	
472	478	+4	0			582	-1	0	
469	471	+2	-6			560	+10	+10	
491	483	-8	+8			583	-3	-3	
452	461	+9	0						
468	468	0	-4						
484	472	-12	-9						
471	458	-13	-6						
464	451	-13	0						
441	447	+6	+5						
452	450	+8							

Test Elev.	Map Elev.	Error around	Error after Shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
Traverse		around	Trout	Lake	Sec.	Cor.	18 S.	To B.M.	S-237
379	379	0	0		694	680	-14	0	
421	430	+9	0		698	698	0	0	
730	735	+5	0		688	680	-8	0	
734	739	+5	0		681	670	-11	-2	
306	306	0	0		754	736	-18	0	
302	302	0	0		762	758	-4	0	
254	259	+4	+1		816	816	0	0	
283	285	+2	0		826	826	0	0	
279	294	+15	+10		819	781	-38	-19	
275	291	+16	+13		783	783	0	0	
295	308	+13	+5		740	740	0	0	
532	532	0	0		666	660	-6	0	
315	318	+3	0		592	588	-4	0	
318	321	+3	0	Spur line W	496	496	0	0	
312	310	-2	0		398	395	-3	0	
301	301	0	0		402	392	-10	-7	
311	315	+4	0		398	390	-8	-3	
283	299	+16	+15		426	386	-40	-38	
					385	379	-6	-2	
					403	393	-10	-2	
					415	405	-10	-5	
					357	362	+5	0	
					276	262	-14	0	
					TBM 29.	E.	to Elev.	398	in above line
					373	359	-14	-4	
					412	408	-4	0	
					525	511	-14	0	
					526	508	-18	-8	
					517	495	-22	-19	
					495	485	-10	-8	
					499	478	-21	-18	
					512	499	-13	-0	
					520	499	-21	-1	

Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
531	522	-9	0		520	545	+25	+24	
546	539	-7	-1		539	549	+10	+8	
560	539	-21	-15		530	555	+25	+20	
539	499	-40	-27		563	560	-3	0	
518	500	-18	0		533	530	-3	0	
617	599	-18	-14		477	522	+45	+43	
594	565	-29	-22		537	520	-17	-5	
520	517	-3	0		604	581	-23	0	
536	522	-14	-14		664	630	-34	-6	
521	502	-19	-10		698	700	+2	0	
538	532	-6	0		680	690	+10	+5	
528	542	+14	+2		727	721	-6	-6	
579	562	-17	-7		732	722	-10	-3	
520	510	-10*	-1		401	411	+10	+8	
521	505	-16	-7		447	420	-27	-17	
512	505	-7	-5		432	432	0	0	
506	480	-26	-19		444	442	-2	-1	
484	486	+2	0		436	442	+6	+4	
490	498	+8	+7		448	448	0	0	
499	485	-14	-9		563	541	-22	-21	
480	479	-1	0		523	555	+32	+30	
430	422	-8	0		441	442	+1	0	
				(from Mt. Road (Road S))	426	446	+20	+18	
Retw	Trout Lake & Mt.				477	458	-19	0	
326	326	0	0		430	457	+27	+26	
357	369	+12	+3		414	458	+44	+44	
417	407	-10	-6		478	458	-20	-18	
417	410	-7	-3		510	510	0	0	
427	423	-4	-3		409	458	+49	+44	
435	427	-8	-2		452	452	0	0	
411	420	+9	+2		408	442	+34	+32	
446	458	+12	+4		388	441	+53	+52	
505	465	-40	-26		385	438	+53	+48	
540	530	-19	-9		390	432	+42	+40	
553	550	-3	-3		395	430	+35	+32	

Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
				Roche Harbor ruins of Pier NE, then	23	21	-2	0	
				NW to MHW					
45	45	0	0		Elev. 62 NE to pier		+2	0	in Spieden Channel
59	57	-2	0		114	117	+3	0	
128	132	+4	0	spur S	129	125	-4	0	
146	141	-5	-1		135	136	+1	0	
140	148	+8	+5		136	136	0	0	
107	107	0	0	end spar	134	127	-7	-2	
62	59	-3	0		128	141	+13	+12	spur W.
83	81	-2	0	along rd. NE	132	145	+13	+10	
93	90	-3	0		139	150	+11	+10	
99	97	-2	0	NW thru log- ged over spur	140	150	+10	+9	
119	119	0	0		137	146	+9	+6	end spur
129	129	0	0		121	119	-2	-1	
129	129	0	0		115	115	0	0	
177	151	-26	-17	spur W.	127	121	-6	0	
184	184	0	0		125	124	-1	0	Accuracy Test
192	192	0	0	top	129	120	-9	0	" "
163	175	+12	0		144	144	0	0	" "
136	145	+9	+9		92	93	+1	0	" "
148	162	+14	+13	end spur	67	77	0	+3	" "
128	125	-3	-3		47	53	+6	0	" "
114	114	0	0		40	40	0	0	
108	105	-3	0						
91	101	+10	+7		Elev. 125 S to E rd and T-rd N (near A2. WEST)				
77	82	+5	+2		108	112	+4	+4	
68	77	+9	+1		103	110	+7	+7	
58	68	+10	+2		117	121	+4	+2	
45	52	+7	1		115	115	0	0	
43	47	+4	0	spur NE	115	132	+17	+13	
39	39	0	0		118	122	+4	+3	
41	40	-1	0		132	135	+3	0	
39	39	0	0		144	142	-2	-1	
38	40	+2	0	end spur	144	140	-4	-3	
35	40	+5	+4		144	140	-4	-3	

Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
137	139	+2	0		161	170	+9	+7	
136	134	-2	0		182	202	+20	+18	
130	129	-1	0		184	194	+10	+9	
120	122	+2	+1		186	190	+4	+4	
116	120	+4	+3		183	189	+6	+4	
123	120	-3	-1		174	180	+16	+15	
114	118	+4	+4		189	200	+11	+10	Sec. Cor.
121	121	0	0		162	166	+4	+3	W of Sec. Cor.
135	135	0	0	Accuracy Test	146	143	-3	-1	" "
126	130	+4	0	"					" "
104	120	+16	+4	"					
75	85	+10	+5	"	BM C-238	Spur NNE			
67	75	+8	+3	"	54	57	+3	+1	E rd
61	62	+1	+0	"	56	65	+9	+4	
				"	59	71	+12	+9	
				13 18	89	102	+13	+11	
				24 19					
80	79	-1	-1		BM C-238	Spur W			
79	89	+10	+6		88	95	+7	+7	
104	101	-3	0		75	80	+5	+3	
75	90	+15	+23		76	92	+16	+14	
60	61	+1	0		75	92	+17	+15	
81	90	+9	+5		87	92	+5	0	
87	87	0	0		99	103	+4	+1	
74	79	+5	+4						
102	110	+8	+7		BM C-238 S. around	E. side Young Hill to			
125	120	-5	-4		110	115	+5	+3	
97	107	+10	+4		133	139	+6	+2	
108	132	+24	+20		191	200	+9	+4	
114	132	+18	+13		215	215	0	0	
139	145	+6	+1		225	238	+13	+8	
136	146	+10	+5		252	260	+8	+6	T-5591
145	149	+4	+1		265	270	+5	+1	T-5591
157	150	-7	-5		271	278	+7	+6	T-5591
168	178	+10	+9		291	201	+10	+8	24 19
172	180	+8	+6		285	202	+17	+15	Sec. Cor. 25 30

A-238

Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
274	281	+7	+6	T-5591	180	182	+2	0	
258	268	+10	+4	T-5591					
246	252	+6	+2	T-5591	Loop E'ward	from			Elev. 304 in above line
230	241	+11	+9		315	317	+2	+1	
222	227	+5	+5		323	323	0	0	
224	228	+4	+4		290	320	+30	+28	
249	250	+1	0		280	301	+21	+18	
261	264	+3	0	T-5591	272	289	+17	+9	
281	292	+9	+6	T-5591	335	345	+10	+4	
294	296		0	T-5591	413	418	+5	0	
328	339	+11	0	T-5591	437	461	+24	+13	
300	303	+3	0	T-5591	437	461	+24	+14	
283	299	+16	+2		457	472	+15	+3	
278	282	+4	+1		448	462	+14	+1	
285	292	+7	+0		409	432	+23	+13	
287	295	+8	0		423	439	+16	+6	
312	325	+13	+7		466	502	+34	+32	
286	291	+5	0		502	503	+1	0	
276	286	+10	+4		410	417	+7	0	
280	280	0	0		347	347	0	0	
557	550	-7	0		297	305	+8	+2	
283	291	+8	+2		205	265	+60	+55	
287	298	+11	+5		235	240	+5	+3	
298	302	+4	+3		268	272	+4	0	
299	301	+2	+1		272	280	+8	0	
294	302	+8	+8		650	650	0	0	Top of Young Hill
316	320	+4	0		TBM 46 to English Camp				
319	321	+2	0		158	158	0	0	
310	317	+7	+7		139	145	6	1	
294	315	+21	+21		144	143	-1	0	
304	317	+13	+13		133	137	+4	0	
310	301	-9	0		101	119	+18	+2	
295	295	0	0		59	81	+22	+19	
231	232	+1	0		58	63	+5	+2	
307	310	+3	0	T-5591	456	478	+22	+7	

Test Elev.	Map Elev.	Error	Error after Shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
48	48	0	0		Roche Harbr:	71	0	0	S. Ruins (Westcott Bay)
15	20	+5	+4		71	71	0	0	
7	5	-2	-2		57	59	+2	0	
8	5	-3	-2		94	93	-1	0	
					114	117	+3	+2	
					135	139	+4	+3	
					191	199	+8	+6	
					210	210	0	0	
					147	151	+4	0	
					151	162	+11	+8	
					158	159	+1	0	
					175	119	-56	-16	
					143	158	+15	+7	
					106	109	+3	0	
					55	67	+12	+5	
					31	25	-6	0	
					50	50	00	0	
					40	45	+5	0	
					105	102	-3	00	
					75	87	+12	+7	
					BM Y-237 W	ward			
					158	158	0	0	
					165	172	+7	+2	
					180	189	+9	+5	
					182	195	+13	+8	
					189	197	+8	+3	
					204	218	+14	+9	
					224	258	+34	+33	
					241	250	+9	+5	
					241	249	+8	+2	
					243	259	+16	+10	
					252	271	+19	+10	
					250	262	+12	+10	
					235	245	+10	+6	

SEC.
Cor.
about 1400 ft. SSW
E Mitchell Bay Rd. 1/6

Test Elev.	Map Elev.	Error after Shift	Remarks	Test Elev.	Map Elev.	Error after shift	Remarks
A-238 to 116 to Elev. 82			(cont)				
201	210	+9		230	240	+10	+2
212	232	+20		230	237	+7	0
245	243	-2		161	159	-1	0
225	301	+76		73	88	+15	+15
308	320	+12		84	84	0	0
234	252	+18		82	82	0	0
235	256	+21		Spur from +197 to BM A-238			
224	268	+44		195	202	+7	+5
306	312	+6		158	171	+13	+10
260	272	+12		154	165	+11	+7
409	420	+11		79	159	+80	+76
206	208	+2		123	161	+38	+37
197	212	+15		134	148	+14	+9
223	223	0		107	107	0	0
272	278	+6		84	80	-4	0
292	309	+17		69	70	+1	0
280	315	+35		83	79	-4	-1
347	352	+5		91	91	0	0
255	311	+56		74	74	0	0
309	322	+13		54	59	+5	+4
194	329	+35		42	56	+14	+10
323	326	+3		53	60	+7	0
339	359	+20		67	71	+4	0
387	401	+14		45	55	+10	+4
432	445	+13		Along S. edge of sheet			
446	456	+10		190	200	+10	+5
466	480	+14		104	95	+9	+5
502	508	+6		about 1400 ft. SSW E Mitchell Bay Rd. 1/6			
540	542	+2					
475	498	+23					
409	435	+26					
395	395	0					
308	321	+13					
266	287	+11					

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Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
	HENRY ISLAND								
	-A ROCHE to Δ MOSQUITO								
42	50	+8	0		176	200	+24	+20	
20	30	+10	0		215	240	+25	+16	
17	20	+3	0		225	248	+23	+20	
20	35	+15	+15		226	248	+22	+21	
19	30	+11	+11		206	236	+30	+24	
25	30	+5	0		183	218	+35	+28	
39	45	+6	+2		153	184	+31	+27	
34	41	+7	+5		138	160	+22	+16	
32	45	+13	+10		158	194	+36	+28	
43	45	+2	0		142	180	+38	+28	
37	40	+3	0		72	221	+49	+28	
12	21	+9	+6		43	35	-8	0	
24	41	+17	+11		101	142	+41	+37	
20	35	+15	+8		120	150	+30	+23	
					150	153	+3	0	
					157	152	-5	0	
	Cuts to hill tops				Elev. *50 in		above	line to Δ	KELP
138	140	+2	0		42	62	+20	+19	
47	85	+38	+23		49	53	+13	+10	
					22	31	+8	+5	
					45	48	+3	+2	
					58	55	-3	-3	
	AZ. @ PINE N.W. TO West Side				68	75	+7	+5	
31	45	+14	+10		34	21	-13	-12	
23	40	+17	+15		43	43	0	0	
25	39	+14	+13		47	61	+14	0	
23	40	+17	+15		36	18	-18	0	
35	43	+8	0						
54	52	-2	0						
50	52	+2	0		Δ KELP to	bight on W.	side of Roche	Harbor	
87	77	-10	-7		32	39	+7	+7	Accuracy Test
90	102	+12	+10		39	39	0	0	"
114	132	+18	+14		60	60	0	0	"
120	140	+20	+16		77	78	+1	0	"
131	151	+20	+13		47	60	+13	+12	"

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Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
38	55	+17	+13		292	300	+8	+7	
64	73	+9	+7		279	290	+11	+11	
49	70	+21	+18		281	290	+9	+9	
37	68	+31	+20		270	275	+5	0	
22	52	+30	+23		278	278	0	0	
82	83	+1	0		248	259	+11	+2	
88	88	0	0		289	281	-8	-3	
93	93	0	0		271	269	-2	0	
96	100	+4	0		284	284	0	0	
111	111	0	0		279	275	-4	0	
115	120	+5	0		242	240	-2	0	
128	138	+10	0		203	220	+17	0	
About 1100 ft. SSW A ROCHE									
81	110	+29	+27		159	161	+2	0	
94	112	+18	+16		127	121	-6	0	
104	109	+5	+1		67	51	-16	0	
Elev. 72 (about 1400 ft. N. Sec. Cor. 2827 to A HENRY)									
*72	92	+20	+9		98	90	-8	0	
94	115	+21	+15		82	108	+26	+19	Line to bldgs. SE of Sec. Cor.
118	121	+3	0		107	130	+23	+13	
114	125	+11	+7		142	159	+17	0	
155	170	+15	+5		96	120	+24	+13	
195	201	+6	0		66	90	+24	+19	
211	220	+9	0		119	138	+19	+2	
230	231	+1	0		161	170	+9	0	
214	214	0	0		74	81	+7	+4	
248	268	+20	+18		26	43	+17	0	
268	280	+12	+12		16	21	+5	0	
247	270	+23	+13		2122				
237	261	+24	+18		Sec. Cor. 2827	W.S. & E. to fish shacks.			
224	252	+28	+17		106	115	+9	+3	
223	245	+22	+17		197	201	+4	+2	
266	280	+14	+8		203	212	+9	+6	
					187	189	+2	0	

Accuracy Test

Test Elev.	Map Elev.	Error after shift	Remarks	Test Elev.	Map Elev.	Error after shift	Remarks
219	208	-11		24	24	0	at fish shacks
209	215	+6		210	220	+10	cont. NW from 212
178	180	+2		200	207	+7	
217	221	+4		172	181	+9	
173	180	+7		142	141	-1	
205	214	+9		96	90	-6	
247	258	+11		72	75	+3	
136	142	+6		120	111	-*9	
94	101	+7		101	99	-1	
56	57	+1		122	130	+8	
				144	140	-4	
A SORREL to Δ MAPLE to Elev. 292 at sm. "300" top							
44	23	-21		173	188	+15	+5
94	60	-34		179	190	+11	+9
166	141	-25		162	176	+14	+4
195	175	-20		184	182	-2	0
128	100	-28		149	158	+9	0
48	8	-40		112	135	+23	+8
145	110	-35		98	95	-3	0
121	100	-21		82	59	-13	0
192	172	-20		31	20	-11	0
204	200	-4		188	188	0	0
243	225	-18		293	293	0	0
96	80	-16		282	295	+13	+9
60	50	-10		285	286	+1	0
124	140	+16					440 ft. SW "300"
215	221	+6					
237	231	-6					
212	242	+30					
218	238	+20					
202	239	+37					
181	229	+48	top of hill				
142	190	+48	NE to fish shacks				
109	151	+42					
28	35	+7					

TOPOGRAPHIC MAPPING

Summary & Abstract of Vertical Accuracy Test

Project No. Ph-26 Quad. No. 7-5590-X Quad. Name _____
Method of Testing Plane table profiling
Tested by CMB Date _____ Evaluated by CMB
Contour interval 20 ft. 1.2 M.M. allowable shift at 1:10,000
map or manuscript scale.

868 Total number of points tested
79 % of points within $\frac{1}{2}$ contour interval or better
703 Test points correct within $\frac{1}{2}$ contour interval
117 Test points in error between $\frac{1}{2}$ and full contour interval
68 Test points in error over full contour interval



Project No. Ph-26 Quad. No. T-5590-N

17 Total number of points tested
65% % of points within $\frac{1}{2}$ contour interval or better
11 Test points correct within $\frac{1}{2}$ contour interval
4 Test points in error between $\frac{1}{2}$ and full contour interval
2 Test points in error over full contour interval
17

Test Elev.	Map Elev.	Error	Error after shift	Remarks	Test Elev.	Map Elev.	Error	Error after shift	Remarks
<i>NE corner of plot, along deleted road.</i>									
186	192	+4	+3						
176	183	+7	+5						
165	176	+11	+8						
163	173	+10	+7						
164	171	+7	+6						
162									
<i>From new road N. to MHW.</i>									
116	119	+3	+2						
108	130	+22	+12						
110	162	+52	+50						
101	138	+37	+21						
98	120	+22	+17						
112	137	+25	+20						
127	127	0	0						
107	123	+16	+14						
83	98	+15	+4						
68	72	+4	0						
51	42	-9	0						
32	18	-14	0						

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 24-A
Rev. Oct., 1932

LIST OF DIRECTIONS

Station WESTCOTT, 1942 State Washington
 Chief of party C. W. Clark Date 7/14/50 Computed by J. C. L.
 Observer J. H. Winniford Instrument Kern P-36563 Checked by C. W. C.

U. S. GOVERNMENT PRINTING OFFICE: 1932 O-26602

OBSERVED STATION	Observed direction ° ' "	Eccentric reduction " "	Sea level reduction*	Corrected direction with zero initial ° ' "	Adjusted direction*
PASS, 1942	0 00 00.00			0 00 00.00	
R.M. No. 1, ^{16.578 meters} 54.39 feet	246 45 10				
R.M. No. 2, ^{12.105 meters} 39.72 feet	311 13 20				

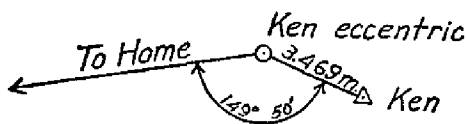
* These columns are for office use and should be left blank in the field.

Station: Ken
 Chief of party: C. V. H.
 Observer: C. V. H.

State: Maryland
 Date: 1917
 Instrument: No. 168

Computed by: O. P. S.
 Checked by: W. F. R.

OBSERVED STATION	Observed direction ° ' "	Eccentric reduction "	Sea level reduction "	Corrected direction with zero initial			Adjusted direction " "
				°	'	"	
Chevy	0 00 00.00	- 7.31	"	0 00 00.00			
Tank west of Δ Dulce	29 03 37.0	-1 09.8		29 02 34.5			
Ken (center), 3.469 meters	176 42						
Forest Glen standpipe	313 24 53.0	+3 01.2		313 28 01.5			
Home	326 31 30.21	+ 31.93		326 32 09.45			
Bureau of Standards, wireless pole..	352 17 20.8	+ 5.7		352 17 33.8			
Reno	357 28 48.63	- 1.16		357 28 54.73			
Reference mark, 16.32 m	358 31 20						



This form, with the first three and fifth columns properly filled out and checked, must be furnished by field parties. To be acceptable it must contain every direction observed at the station.

It should be used for observations with both repeating and direction theodolites.

The directions at only one station should be placed on a page.

If a repeating theodolite is used, do not abstract the angles in tertiary triangulation. The local adjustment corrections (to close horizon only) are to be written in the Horizontal Angle Record, and the List of Directions is to be made from that record directly.

Choose as an initial for Form 24A some station involved in the local adjustment, and preferably one which has been used as an initial for a round of directions on objects not in the main scheme. Use but one initial at a station. Call the direction of the initial 0° 00' 00." 00, and by applying the corrected angles to this, fill in opposite each station its direction reckoned clockwise around the whole circumference regardless of the direction of graduation of the instrument. The clockwise reckoning is necessary for uniformity and to make the directions comparable with azimuths.

If a station has been occupied eccentrically, reduce to the center and enter in this form, in ink, the resulting corrections to the observed directions in the column provided for them. If an eccentric reduction is necessary, but not made in the field, leave the column blank. If the station was occupied centrally, and no eccentric reduction is required, put dashes in the column to show that no corrections are necessary.

Directions in the main scheme should be entered to hundredths of seconds in first-order triangulation; otherwise to tenths only. Points observed upon but once, direct and reverse, should be carried to tenths in first-order and second-order triangulation, and to even seconds only in third-order triangulation. In general, but two uncertain figures should be given.

It is recommended that the following simple plan of observing be used with a repeating instrument: Measure each single angle in the scheme at each station and the outside angle necessary to close the horizon. Measure no sum angles. Follow each measurement of every angle immediately by a measurement of its supplement. Six repetitions are to constitute a measurement. The local adjustment will consist simply of the distribution of the error of closure of the horizon.

Review Report
Topographic Map T-5590
14 October 1955

62. Comparison with Registered Topographic Surveys:

T-2194	1:10000	1894
T-2300	"	1897
T-4243	1:20000	1926

In general agreement but numerous differences in culture and topography. For the area it encompasses, map T-5590 should supersede the above surveys for nautical charting purposes.

63. Comparison with Maps of Other Agencies: None.

64. Comparison with Contemporary Hydrographic Surveys: None.

65. Comparison with Nautical Charts:

6379	1:20000	corrected to 53-3/2
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Evidently an advance print of T-5590 was used in compiling this chart. Numerous corrections in contours and shoreline features were made during field edit and are shown in red on the map manuscript. Deletions were made as follows: Dolphins and piles at latitude $48^{\circ} 37.3'$ - longitude $123^{\circ} 08.7'$, rocks awash at latitude $48^{\circ} 37.0'$ - longitude $123^{\circ} 11.0'$ and latitude $48^{\circ} 37.2'$ - longitude $123^{\circ} 10.8'$, a pile at latitude $48^{\circ} 36.5'$ - longitude $123^{\circ} 10.7'$, and pier ruins at latitude $48^{\circ} 36.0'$ - longitude $123^{\circ} 09.4'$. This chart shows a pier at latitude $48^{\circ} 35.4'$ - longitude $123^{\circ} 09.7'$ which was not added during field edit and does not appear on the 1949 photographs.

6380	1:80000	corrected to 54-8/9
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No significant differences.

66. Adequacy of Results and Future Surveys:

This map complies with the National Standards of Map Accuracy and Bureau requirements. *after application of Field Edit corrections.*

Field Edit corrections have been applied E.H.

Reviewed by:


Everett H. Ramey

APPROVED:

L C Landy

Chief, Review Section
Photogrammetry Division

Marvin J. Paulson

Chief, Nautical Chart ~~Branch~~
~~Charts~~ Division

J E Waugh 7/23/62

Chief, Photogrammetry Division

Max Ricketts

Chief, ~~Coastal Surveys~~ Division
Operations

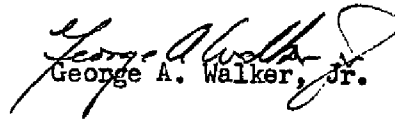
History of Hydrographic Information for T-5590

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 surveys:

<u>Number</u>	<u>Scale</u>	<u>Date of Survey</u>
H-4607	1:20,000	1926
Chart 6379	1:20,000	(corrected to 23 May 1955)
6380	1:80,000	(corrected to 25 July 1955)

Hydrography was compiled by G. A. Walker, Jr. on 9 November 1955 and verified by O. Svendsen on 14 November 1955.


George A. Walker, Jr.

