

5587

Diag. Cht. Nos. 6300-2 & 6380

Form 504

U. S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

## DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. Ph-26 Office No. T-5587

### LOCALITY

State Washington

General locality Bellingham

Locality Samish Bay

1949-54

### CHIEF OF PARTY

C.W.Clark, Chief of Field Party

E.H.Kirsch, Balto. Photo. Office

### LIBRARY & ARCHIVES

DATE June 6, 1960

USCOMM-DC 5087

5587

## DATA RECORD

Page 2

T- 5587

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

Quadrangle Name (IV):

Field Office (II): Bellingham, Washington

Chief of Party: Charles W. Clark

Photogrammetric Office (III): Baltimore, Maryland

Officer-in-Charge: E. H. Kirsch

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

Copy filed in Division of  
Photogrammetry (IV)

Supplement 1, dated 21 July 1950

Supplement 2, dated 16 January 1951

Letter 711-rs, dated 20 June 1950, Subject: Photogrammetric Field Surveys,  
Project Ph-26

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

Manuscript Scale (III): 1:10,000

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

Scale Factor (III): 1.000

Date received in Washington Office (IV):

Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV): 25 April 1957

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): N.A. 1927

Vertical Datum (III):

Mean sea level except as follows:

Elevations shown as (25) refer to mean high water

Elevations shown as (5) refer to sounding datum

i.e., mean low water or mean lower low water

Reference Station (III): LEARY, 1939

Lat.: 48° 30' 43.561"

Long.: 122° 29' 03.923"

Adjusted

~~Unadjusted~~

Plane Coordinates (IV):

State: Washington

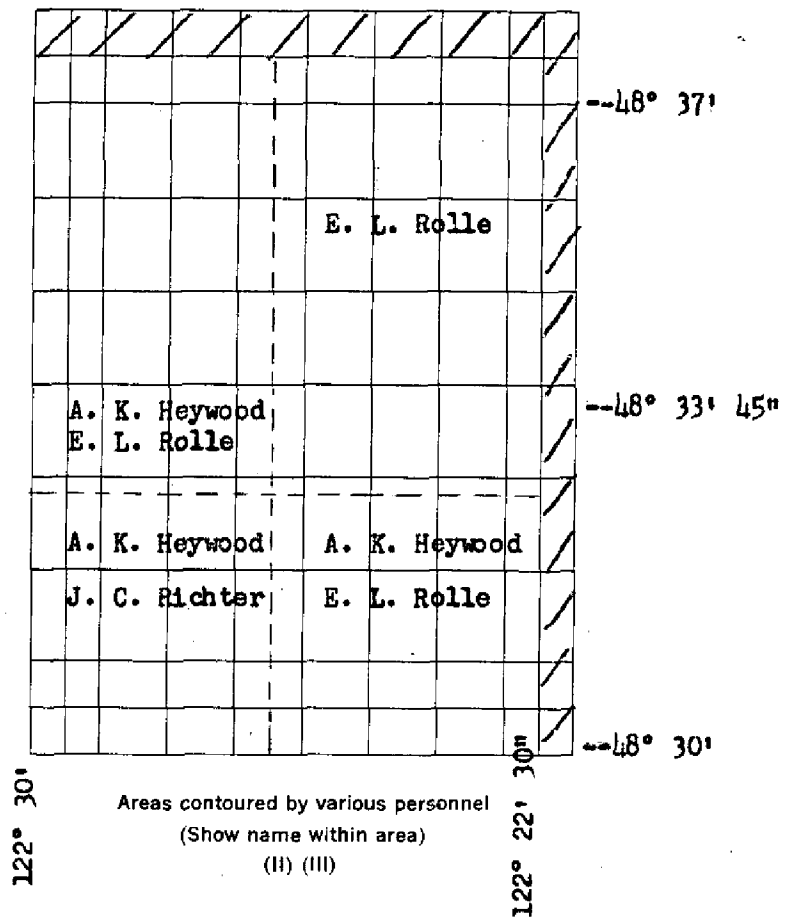
Zone: North

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): H. R. Spies and J. C. LaJoye

Date: 11/25/50  
1/20/51~~Planimetry and Contours by (II):~~

Date:

Completion Surveys by (II):

*Ray H. Skelton II*

Date:

*1954*

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

June 1949 - Photogrammetric

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

Date: 5/2/51

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

Date: 5/2/51

Control plotted by (III): D. Lafferman

Date: 7/51

Control checked by (III): B. Wilson

Date: 7/51

~~Reduction for Stereoscopic~~ A. C. Rauck, Jr. D. M. BrantDate: 8/51  
9/51

Control extension by (III): E. L. Rolle

Stereoscopic Instrument compilation (III):  
Planimetry ) E. L. Rolle  
                  ) A. K. Heywood  
Contours ) J. C. RichterDate: )  
          ) 11/2/51  
Date: )Manuscript delineated by (III): N. half - B. Wilson  
S. half - J. Y. CouncillDate: 4/1/52  
4/2/52

Photogrammetric Office Review by (III): D. M. Brant

Date: 2/1/55

Elevations on Manuscript D. M. Brant  
checked by (II) (III):

Date: 2/1/55

Camera (kind or source) (III): U.S.C. & G. S. Type "0" Focal length = 152.37 m.m.

## PHOTOGRAPHS (III)

| Number              | Date   | Time  | Scale    | Stage of Tide   |
|---------------------|--------|-------|----------|-----------------|
| 49-0-1255 thru 1260 | 6/4/49 | 13:13 | 1:24,000 | 2' above MLLW   |
| 1268 thru 1273      | "      | 13:22 | "        | " " "           |
| 1312 thru 1320      | "      | 13:49 | "        | No tidal waters |
| 1347 thru 1351      | "      | 14:07 | "        | 1' above MLLW   |
| 1340 thru 1341      | "      | 13:59 | "        | 2' above MLLW   |
| 1342 thru 1346      | "      | 14:00 | "        | No tidal waters |

## Tide (III)

## Diurnal

Reference Station: Port Townsend, Wash.

Subordinate Station: Bellingham, Wash.

Subordinate Station:

| Ratio of<br>Ranges | Mean<br>Range | Spring<br>Range |
|--------------------|---------------|-----------------|
|                    | 5.2           | 8.6             |
| 1.0                | 5.2           | 8.6             |
|                    |               |                 |

Washington Office Review by (IV):

*John M. Neal*

Date: 1956

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): 34

Shoreline (More than 200 meters to opposite shore) (III): 25

Shoreline (Less than 200 meters to opposite shore) (III):

Control Leveling - Miles (II): 59.5

Number of Triangulation Stations searched for (II): 41

Recovered: 32 Identified: 8

Number of BMs searched for (II): 22

Recovered: 13 Identified: 5

Number of Recoverable Photo Stations established (III): 21

Number of Temporary Photo Hydro Stations established (III):

None

Remarks:

MAP T-5587.

PROJECT NO. Ph-26

SCALE OF MAP 1:10,000

SCALE FACTOR 1.000

[illegible]

FT. = 3048006 METERS  
COMPUTED BY: D. Lafferman

DATE..... June 1951.....

CHECKED BY: H. P. Eichert

DATE June 1951

COMM-DC-5784

MAP T. 5587.

PROJECT NO. Ph-26

SCALE OF MAP 1:10,000

SCALE FACTOR ..... 1.000

[illegible]

! ET - 3048006 METER

COMPUTED BY: A. K. Heywood

DATE June 1951

CHECKED BY: **R. P. Eichert**

DATE June 1951

COMM-DC-5784

COMPILATION REPORT  
Project No. Ph-26  
Survey No. T-5587

Field Inspection Report:  
Bound with Descriptive Report for T-5585.

Photogrammetric Plot Report:  
Bound with Descriptive Report for T-5585.

31. DELINEATION

Refer to item 31, paragraph 2 of Compilation Report for T-5585 to be submitted.

32. CONTROL

Refer to item 23, "Adequacy of Control", Photogrammetric Plot Report and item 3, "Horizontal Control", Field Inspection Report.

33. SUPPLEMENTAL DATA

The following supplemental data were used to delineate public land lines:

Enlarged land plat, Township No. 36 North, Range No. 3 east, Willamette Meridian, Wash.  
General Highway and Transportation Map of Skagit. County, showing general layout of Townships.

Land Plats

One each of the following:

|                        |                   |                      |       |                |
|------------------------|-------------------|----------------------|-------|----------------|
| Township No. 35 North, | Range No. 2 East, | Willamette Meridian, | Wash. | Feb. 27, 1889. |
| " " " "                | " " " "           | " " " "              | " " " | June 8, 1917.  |
| " " " "                | " " " "           | " " " "              | " " " | July 25, 1891. |
| " " " "                | " " " "           | " " " "              | " " " | Feb. 21, 1872. |
| " " " "                | Range No. 3 East, | " " " "              | " " " | Jan. 27, 1871. |
| " " " "                | " " " "           | " " " "              | " " " | June 21, 1872. |
| " " 36 "               | " " 2 "           | " " " "              | " " " | Dec. 5, 1892.  |
| " " " "                | " " " "           | " " " "              | " " " | Dec. 13, 1875. |
| " " " "                | " " " "           | " " " "              | " " " | July 11, 1927. |
| " " " "                | " " " "           | " " " "              | " " " | Feb. 21, 1872. |

No individual township layouts for this survey were submitted by the field party.

Further discussion as to how these data were used will be found under item 41, "Boundaries", of the Descriptive Report for survey No. T-5584.



34. CONTOURS AND DRAINAGE

Refer to item 25, "Photography", of the Photogrammetric Plot Report.

Vertical control for the multiplex models was adequate. A large portion of the area of this survey is relatively flat and although no difficulty was encountered in leveling the models, it is believed that the accuracy demanded in the flat areas will be better attained by field methods.

Refer to item 4, "Vertical Control", T-5587 of the Field Inspection Report.

35. SHORELINE AND ALONGSHORE DETAILS

The shoreline of Samish Bay and Padilla Bay as described in the field inspection is mostly low and flat. The seaward side is protected by breakwaters, bulkheads and a levee. The delineation of these features presented quite a problem in compiling a readable map. Numerous descriptive notes have been used to make the map more legible.

No low water lines have been shown.

Field inspection was adequate.

36. OFFSHORE DETAILS

These are believed to be complete.

37. LANDMARKS AND AIDS

There are no landmarks and aids within this survey.

38. CONTROL FOR FUTURE SURVEYS

Twenty-one recoverable topographic stations are applicable to this survey. BURL, 1950 was established as control by theodolite; all others were established by multiplex. Forms 524, are herewith submitted.

39. JUNCTIONS

Junctions are complete with the following surveys:

To the north with T-5586.

To the east, south and west are the limits of the project and no contemporary surveys.

40. HORIZONTAL AND VERTICAL ACCURACY

Refer to item 23, "Adequacy of Control", of the Photogrammetric Plot Report.

41. BOUNDARIES, MONUMENTS AND LINES

Public land lines were delineated from recovered section corners and the original land plats. Cultural features such as roads, ditches, and tree lines were also used along with the recovered corners.

42 - 45 Inapplicable.

46. COMPARISON WITH EXISTING MAPS

Comparison was made with U.S.G.S. Samish Lake, 15-minute quadrangle, scale 1:62,500, edition 1918, reprinted 1947.

The only cultural change worthy of note is the railroad or railway from Blanchard to south of Field. This is no longer in existence. U. S. Alt. 99, is constructed on its alignment.

47. COMPARISON WITH NAUTICAL CHARTS

Harbor Chart No. 6378, scale 1:40,000, published June 1935 (11th edition) 8/9/54.

Coast Chart No. 6376, scale 1:25,000, published May 1945 (1st edition) 9/13/54.

Neither of these charts shows the extensive shoreline features, such as piling breakwaters, and bulkheads immediately adjacent to the shoreline.

Items to be Applied to Nautical Charts Immediately: None.

Items to be Carried Forward: None

Approved and Forwarded

11 Feb 1955

*E. H. Kirsch*

E. H. Kirsch,  
Comdr. USC&GS  
Officer in Charge  
Balto. Photo. Office

Respectfully submitted  
1 February 1955

*Donald M. Brant*

Donald M. Brant  
Carto. (Photo.)

## PHOTOGRAMMETRIC OFFICE REVIEW

T. 5587

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

## CONTROL STATIONS

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

## ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline ✓ 13. Low-water line ✓ 14. Rocks, shoals, etc. ✓ 15. Bridges ✓ 16. Aids to navigation ✓ 17. Landmarks ✓ 18. Other alongshore physical features ✓ 19. Other 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 ✓ 28. Buildings ✓ 29. Railroads ✓ 30. Other cultural features ✓

## BOUNDARIES

31. Boundary lines ✓ 32. Public land lines ✓

## MISCELLANEOUS

33. Geographic names ✓ 34. Junctions ✓ 35. Legibility of the manuscript ✓ 36. Discrepancy overlay ✓ 37. Descriptive Report ✓ 38. Field inspection photographs ✓ 39. Forms ✓ 40. Donald M. Brunt Henry P. Eichen

Reviewer

Supervisor, Review Section or Unit

41. Remarks (see attached sheet)

## FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

Judson Y. Council  
CompilerHenry P. Eichen  
Supervisor

43. Remarks:

M-2623-12

48. GEOGRAPHIC NAMES LIST

Alien

Bayview Cemetery (F.I.)

~~\*Bayview Township~~

~~\*\*Belfast Township~~

~~\*Bessner Township~~

Blanchard✓

~~\*Blanchard Township~~

Bow✓

~~\*Bow Township~~

Chuckanut Drive✓

Colony Creek✓

Colony Road✓

Edison✓

Edison Lutheran Church (F.I.)✓

Edison Slough✓

Edison Station✓

~~\*Edison Township~~

Field✓

Fish Point✓

Great Northern Railway✓

Harrison Creek✓

Johnson Road (F.I.)✓

Joe Leary Hill

Joe Leary Slough✓

~~\*\*Lookout Township~~

~~\*North Allen Township~~

Oyster Creek✓

Padilla Bay✓

Pigeon Pt.✓

Phillips Road (F.I.)✓

Pierson✓

~~\*Point Williams Township~~

Samish✓

Samish Bay✓

Samish Island✓

Samish River

Scotts Point✓

~~\*South Allen Township~~

Sunset✓

Skagit County✓

48. GEOGRAPHIC NAMES LIST (cont'd)

U.S. 99 Alt. ✓

Windy, Pt. ✓

Whitehill Creek ✓

F.I. names from field inspection data.

\* names from General Highway and Transportation Map of Skagit.  
County (Photostat).

\*\* names from Map of Election Precincts of Skagit County.

Township names deleted by Reviewer  
(none mapped on adjoining quads) *JMN*

✓ checked by Reviewer

49. NOTES FOR THE HYDROGRAPHER

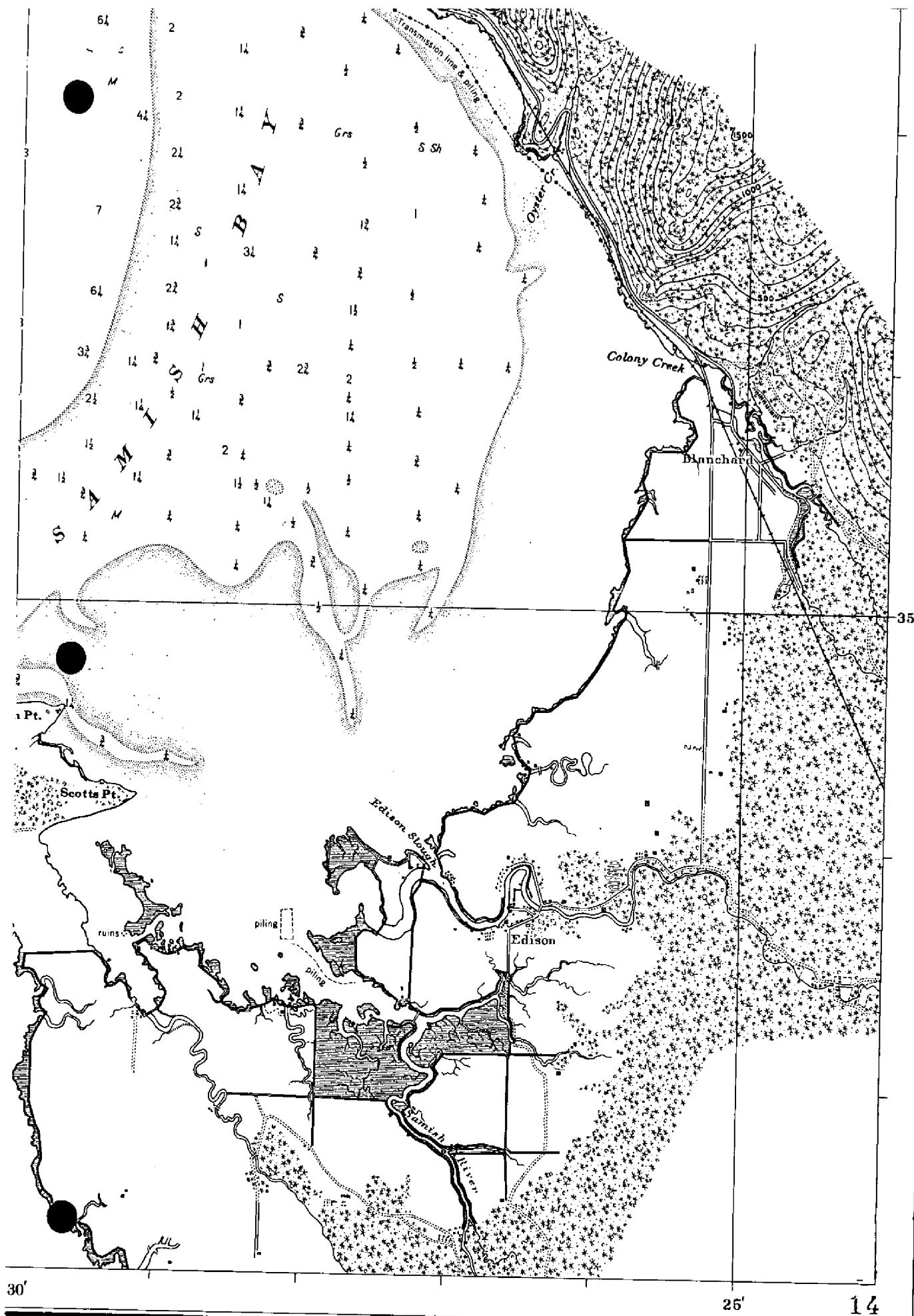
The following is a list of recoverable topographic stations which are within the limits of this survey.

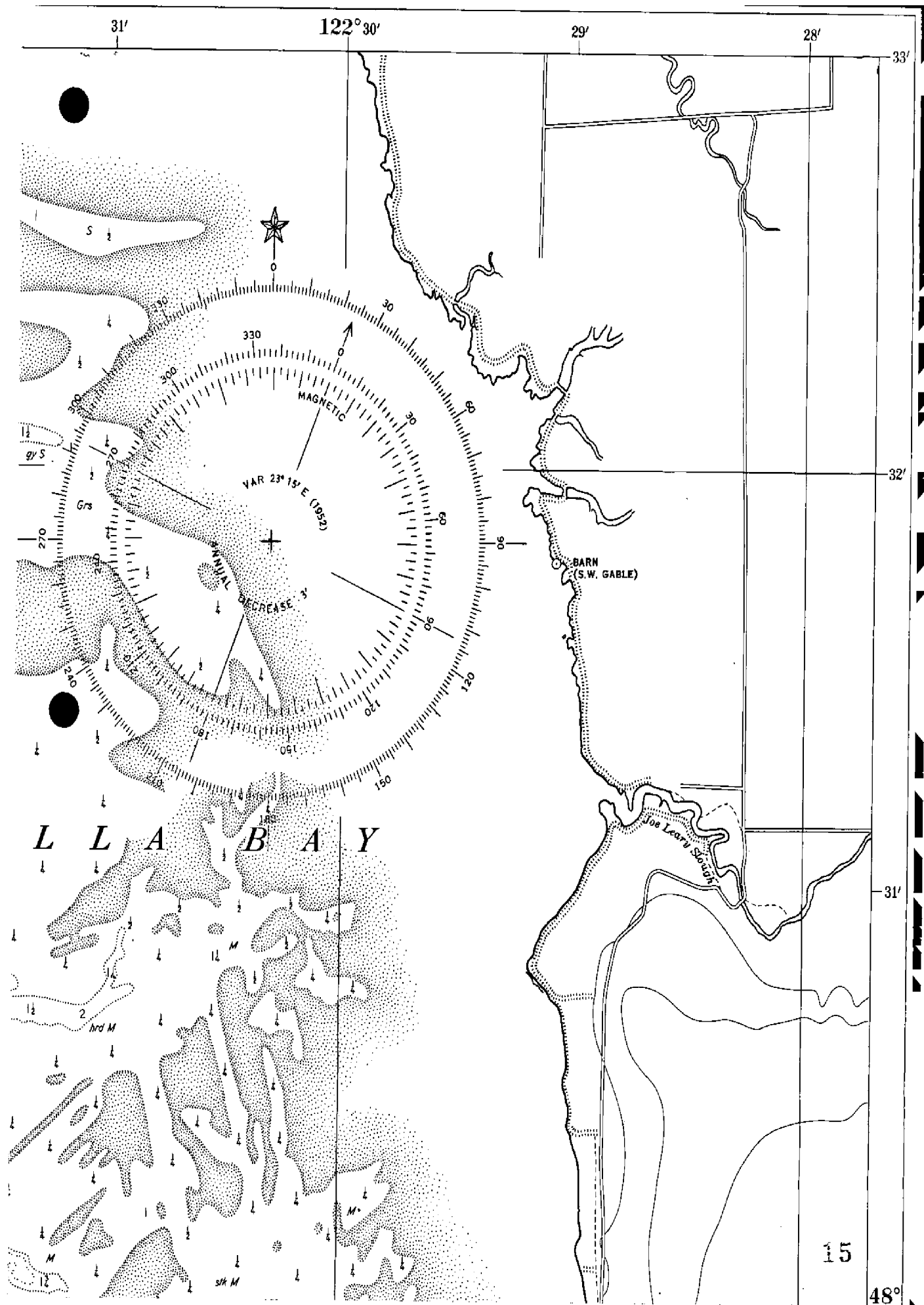
BURL, 1950 (E. of T-5587)  
 CHY, 1951  
 EDISON AZ MK (1941) 1950  
 FLAT, 1951

ISLE, 1951  
 POLE, 1951  
 ROCK, 1951

SEC MON T35N, R3E, 3-4-9-10, 1951  
 SEC MON T35N, R3E, 17-18-19-20, 1951  
 SEC MON T35N, R3E, 14-15-22-23, 1951  
 SEC MON T35N, R3E, 15-16-21-22, 1951  
 SEC MON T35N, R3E, 19-20-29-30, 1951  
 SEC MON T35 & 36N, R3E, 2-3-34-35, 1951  
 SEC MON T35 & 36N, R3E, 1-2-35-36, 1951  
 SEC MON T35 & 36N, R3E, 3-4-33-34, 1951  
 SEC MON T35 & 36N, R3E, 4-5-32-33, 1951  
 SEC MON T36N, R3E, 26-27-34-35, 1951  
 1/4 SEC MON T35N, R3E, 15-22, 1951  
 1/4 SEC MON T35N, R3E, 14-23, 1951  
 1/4 SEC MON T35N, R3E, 23-24, 1951  
 1/4 SEC MON T35N, R4 & 3E, 19-24, 1951 (Not plotted off east limit)

Reference is made to a letter dated 11 January 1955, (731-aal) stating that the photographs for the hydrographic party are being prepared by the Cartographic Branch of the Washington office.









## FIELD EDIT REPORT

Map Manuscript T-5587

Project Ph-26(47)

### 51. Methods

No new or unusual methods were used in the field edit of this sheet. All planimetric detail was compared with the map by inspection from a truck or by walking. Topography was resketched where necessary using the plane table. Limited use was made of the barometer in checking topography. In general, only positive barometric checks have been submitted. Negative checks which showed sub-standard topography were usually further investigated with the plane table.

Progress on this sheet was quite slow. Work was continued over three different late fall and winter periods from November 1952 to February 1954, during the rainy season, and in as much as fourteen inches of snow. Most of the work was done by Mr. Ray H. Skelton II, with a portion being done by Lt. (jg) William R. Kachel under Mr. Skelton's supervision.

A legend showing the colored inks and symbols used is shown on Field Edit Sheet No. 1. Field Edit corrections have been shown on Field Edit Sheets numbered 1 to 8, and on sixteen photographs numbered 1256, 1257, 1266 - 1269 inc., 1271, 1272, 1314 - 1319 inc., and 1350, and 1259.

### 52. Adequacy of Compilation.

The compilation of planimetric detail seems adequate in that it is a fairly faithful transcription of the field inspection. There were a few omissions of buildings. Some trails have been added, but these could not easily have been carried forward by the field inspector in any case.

Roads have been classified according to paragraph 5441 of the Topographic Manual. This classification does not permit a good match with the Geological Survey to the east, and I think does not give a good impression of the country. No style sheet is available in the field, but I believe a Road 4 is a red-fill road. Ordinarily red-fill roads will show the principal flow of traffic through an area, but in this wealthy, highly-developed rural community if all Road 4's are shown with a red fill the red loses meaning. Field Edit Sheet No. 8 gives a more conservative road classification for

the whole sheet that is consistent with the Geological Survey sheet to the east.

The adequacy of the vertical compilation has been sub-standard in some areas. (See also par. 53) The compiler has complained about the quality of the photography. (See par. 25 of the Photogrammetric Plot Report). It is true also that much of the area is in evergreen cover, but again, substantial areas have been cut over, and are now in a leafy second-growth. Winter photography would have been a decided help.

### 53. Map Accuracy.

No specific questions were raised relative to horizontal accuracy of the map and no further investigations were made, although, par. 23 of the Photogrammetric Plot Report indicates a possible weakness. The match line with Geological Survey work to the east shows only small differences.

The vertical accuracy of the map has been well established by 45 miles of plane table profiles over the whole sheet. A plat showing the route of these profiles, the areas resketched, and the summaries of these profiles are attached. 74% of all points tested appeared within one half contour interval of their true elevation, but 13% of points tested were in error over a full interval (20 feet). The greatest errors appeared in critical elevations - tops and saddles - in tree-covered areas.

The south half of the sheet was an excellent job of 20-foot contouring. No shot was in error over half-interval. The resketching done on the south half of the sheet was necessary only because of the addition of the 10-foot contour which tightened the vertical accuracy specification in the area.

The bare portions on the top of the mountain on the north half of the sheet checked very well. A couple of small tops were apparently simply overlooked, since the next lower contour was very well shaped, and other tops in the immediate vicinity were correctly shown. Profiles through some of the alder growth on the north half of the sheet were good enough to indicate that satisfactory work can be done in these areas, but the results are not at all consistent.

The bulk of the error has been confined to tree-covered areas. The cover is quite dense and the relief quite steep. Complete plane table coverage of the area will be quite difficult. Profiles were run along the routes of easiest access to all critical elevations, multiplex shapes and grades were preserved as far as possible, and the contours were adjusted over the area to fit the additional elevations. The work was extended as far as seemed practical. Some error may still be present, but it will be in the most

isolated areas; all of the truly critical elevations have been tested, and if the sheet is considered as a whole it should comply with National Map Accuracy Standards.

54. Recommendations.

No recommendations are submitted at this time.

55. Examination of proof copy.

The most competent individuals in the area to examine proof copy of the map hedged a little when approached on the subject, probably because they were impressed by the heavy contouring on the north end of the sheet, and were reluctant to assume any responsibility for such detail. However, I think, either George or Wilfred Lawson, R.D., Bow, Washington, would examine proof copy if properly approached by letter. Other contacts seemed poorer map-readers.

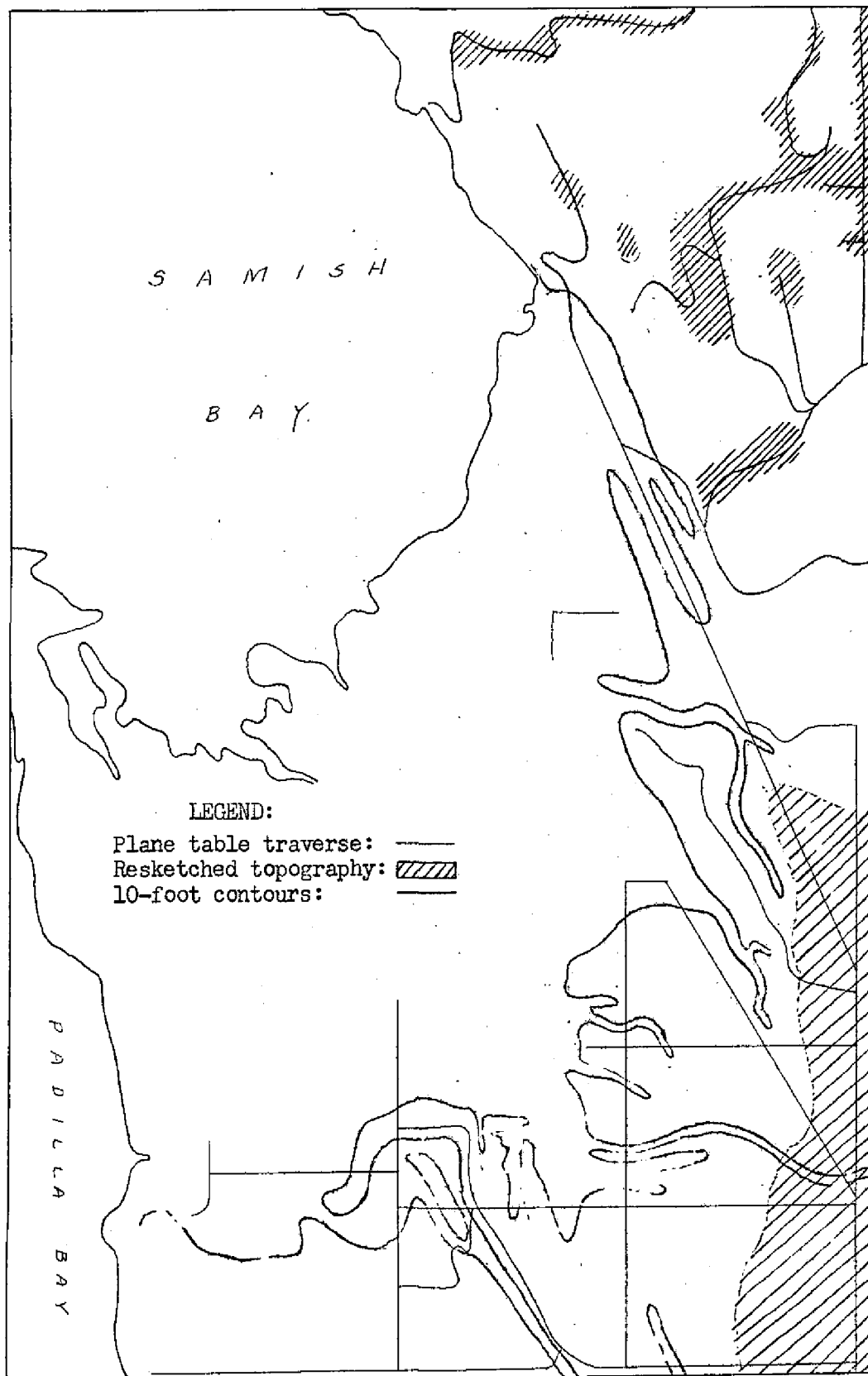
Several corrections and additions to geographic names were obtained, and will be submitted as a small supplement to the Geographic Names Report.

Respectfully submitted,

*for Fred Natella*  
Ray H. Skelton II  
Photogrammetric Engineer

Forwarded approved,

*Fred Natella*  
Fred Natella  
Comdr., USC&G Survey *Wm.*  
Officer-in-Charge



Project Ph-26

Quad T-5587

Plat showing routes of profile for vertical accuracy testing, for resketched topography, and for sketching 10-foot contours. Quantities: 45 mis. plane table traverse, about 3 sq. mis. resketched topography, and 42 lin. mis. or about 5 sq. mis. of 10-foot contouring.

| Test Elev.       | Map Elev. | Error   | Error after shift | Remarks          | Test Elev. | Map Elev. | Error | Error after shift | Remarks |
|------------------|-----------|---------|-------------------|------------------|------------|-----------|-------|-------------------|---------|
| From Samish Lake |           | Sta. E. |                   | up trail to Lily | 1029       | 1029      | 0     | 0                 |         |
| 109              | 94        | -15     | -13               |                  | 1085       | 1080      | -5    | 0                 |         |
| 136              | 129       | -7      | -5                |                  | 1091       | 1084      | -7    | 0                 |         |
| 189              | 161       | -18     | -17               |                  | 1115       | 1115      | 0     | 0                 |         |
| 156              | 162       | +6      | +5                |                  | 1138       | 1115      | -23   | 0                 |         |
| 170              | 172       | +2      | 0                 |                  | 1164       | 1155      | -9    | 0                 |         |
| 183              | 185       | +2      | 0                 |                  | 1185       | 1180      | -5    | 0                 |         |
| 192              | 198       | +6      | +2                |                  | 1197       | 1188      | -9    | 0                 |         |
| 201              | 204       | +3      | +2                |                  | 1217       | 1193      | -24   | -13               |         |
| 218              | 208       | -10     | -8                |                  | 1228       | 1225      | -3    | 0                 |         |
| 224              | 223       | -1      | 0                 |                  | 1227       | 1232      | +5    | 0                 |         |
| 251              | 246       | -5      | -4                |                  | 1231       | 1230      | -1    | 0                 |         |
| 263              | 250       | -13     | -12               |                  | 1241       | 1230      | -11   | 0                 |         |
| 290              | 260       | -30     | -28               |                  | 1268       | 1238      | -30   | -27               |         |
| 301              | 293       | -8      | -6                |                  | 1281       | 1240      | -41   | -31               |         |
| 321              | 316       | -5      | -4                |                  | 1281       | 1258      | -23   | -16               |         |
| 354              | 352       | -2      | 0                 |                  | 1315       | 1284      | -31   | -9                |         |
| 367              | 350       | -17     | -13               |                  | 1331       | 1304      | -27   | -8                |         |
| 414              | 422       | +8      | +4                |                  | 1336       | 1324      | -12   | 0                 |         |
| 452              | 470       | +18     | +6                |                  | 1337       | 1324      | -13   | 0                 |         |
| 460              | 490       | +30     | +25               |                  | 1356       | 1332      | -24   | -6                |         |
| 480              | 512       | +32     | +28               |                  | 1387       | 1365      | -21   | -7                |         |
| 506              | 518       | +12     | +9                |                  | 1403       | 1381      | -22   | -5                |         |
| 527              | 531       | +4      | 0                 |                  | 1405       | 1382      | -23   | -11               |         |
| 543              | 540       | -3      | -3                |                  | 1427       | 1402      | -25   | -17               |         |
| 573              | 565       | -8      | 0                 |                  | 1433       | 1419      | -14   | -3                |         |
| 631              | 620       | -11     | 0                 |                  | 1462       | 1455      | -7    | 0                 |         |
| 690              | 688       | -2      | 0                 |                  | 1513       | 1498      | -15   | -3                |         |
| 747              | 748       | +1      | 0                 |                  | 1528       | 1530      | +2    | 0                 |         |
| 806              | 815       | +9      | 0                 |                  | 1553       | 1535      | -18   | -15               |         |
| 859              | 859       | 0       | 0                 |                  | 1636       | 1620      | -16   | -8                |         |
| 907              | 918       | +11     | 0                 |                  | 1711       | 1710      | -1    | 0                 |         |
| 933              | 935       | +2      | 0                 |                  | 1751       | 1730      | -21   | -3                |         |
| 1000             | 985       | -15     | 0                 |                  | 1829       | 1785      | -44   | -29               |         |
|                  |           |         |                   |                  | 1854       | 1810      | -44   | -24               |         |

| Test Elev.   | Map Elev. | Error | Error after shift | Remarks        | Test Elev.                            | Map Elev. | Error | Error after shift | Remarks |
|--|-----------|-------|-------------------|----------------|---------------------------------------|-----------|-------|-------------------|---------|
| 1875   | 1838      | -37   | -30               |                | 734                                   | 778       | 44    | 424               |         |
| 1935   | 1877      | -51   | -45               |                | 821                                   | 850       | 29    | 47                |         |
| 1938   | 1905      | -33   | -28               |                | 895                                   | 900       | 5     | 0                 |         |
| 1947   | 1918      | -29   | -19               |                | 972                                   | 976       | 4     | 0                 |         |
| 1959   | 1935      | -24   | -17               |                | 1047                                  | 1062      | 15    | 47                |         |
| 1963   | 1942      | -21   | -13               |                | 1080                                  | 1098      | 18    | 47                |         |
| 1950   | 1945      | -5    | 0                 |                | 1148                                  | 1160      | 12    | 48                |         |
| 1974   | 1966      | -8    | 0                 |                | 1200                                  | 1208      | 8     | 42                |         |
| 1983   | 1982      | -1    | 0                 |                | 1231                                  | 1231      | 0     | 0                 |         |
| 1991   | 1985      | -6    | -3                |                | 1257                                  | 1260      | 3     | 0                 |         |
| 1993   | 1985      | -8    | 0                 |                | 1271                                  | 1278      | 7     | 41                |         |
| 2010   | 2005      | -5    | 0                 |                | 1290                                  | 1290      | 0     | 0                 |         |
| 2032   | 2021      | -11   | -3                |                | 1324                                  | 1319      | -5    | 0                 |         |
| 2063   | 2040      | -23   | -21               |                | 1353                                  | 1350      | -3    | 0                 |         |
| 2007   | 2007      | w.s.  |                   | Lily Lake- tie | 1367                                  | 1361      | -6    | -3                |         |
| From Blanchard N. up old incline bed. Line tied by v.a. to Edison Sta. x-rd. |           |       |                   |                |                                       |           |       |                   |         |
| 12   | 4         | -8    | -8                |                | Additional detail at west end of Lily |           |       |                   |         |
| 8  | 8         | 0     | 0                 |                | Lake trail.                           |           |       |                   |         |
| 8  | 15        | 7     | 7                 |                | 539                                   | 521       | -18   | -16               |         |
| 36   | 33        | -3    | -1                |                | 606                                   | 606       | 0     | 0                 |         |
| 53   | 56        | 3     | 4                 |                | 525                                   | 518       | -7    | 0                 |         |
| 67   | 72        | 5     | 3                 |                | 529                                   | 542       | 13    | 45                |         |
| 100  | 101       | 1     | 1                 |                | 538                                   | 520       | -18   | -6                |         |
| 106  | 102       | -4    | -4                |                | 519                                   | 530       | 11    | 44                |         |
| 107  | 100       | -7    | 0                 |                | 510                                   | 528       | 18    | 43                |         |
| 121  | 102       | -19   | -11               |                | 527                                   | 518       | -9    | -6                |         |
| 141  | 118       | -23   | -19               |                | 502                                   | 499       | -3    | 0                 |         |
| 249  | 251       | 2     | 0                 |                | 482                                   | 484       | 2     | 0                 |         |
| 357  | 365       | 8     | 0                 |                | 503                                   | 481       | -22   | -4                |         |
| 422  | 422       | 0     | 0                 |                | 475                                   | 475       | 0     | 0                 |         |
| 470  | 470       | 0     | 0                 |                | 458                                   | 462       | 4     | 0                 |         |
| 508  | 504       | -4    | 0                 |                | 370                                   | 380       | 10    | 45                |         |
| 558  | 564       | 6     | 0                 |                | 381                                   | 365       | -16   | -2                |         |
| 610  | 660       | 50    | 430               |                |                                       |           |       |                   |         |
| 694  | 728       | 34    | 424               |                |                                       |           |       |                   |         |

| Test Elev.  | Map Elev. | Error | Error after shift | Remarks            | Test Elev. | Map Elev. | Error | Error after shift | Remarks |
|---|-----------|-------|-------------------|--------------------|------------|-----------|-------|-------------------|---------|
| Barometric elevations NE of Blanchard and on top of mountain.       |           |       |                   |                    | 313        | 310       | -3    | -2                |         |
| 1471  | 1485      | +14   | +14               |                    | 318        | 317       | -1    | 0                 |         |
| 396   | 1425      | +29   | +29               |                    | 320        | 321       | +1    | 0                 |         |
| 1402  | 1425      | +23   | +23               |                    | 329        | 327       | -2    | 0                 |         |
| 1310  | 1300      | -10   |                   |                    | 346        | 339       | -7    | 0                 |         |
| 1353  | 1350      | -3    |                   |                    | 363        | 363       | 0     | 0                 |         |
| 1378  | 1382      | +4    |                   |                    | 433        | 442       | +9    | 0                 |         |
| 1391  | 1390      | -1    |                   |                    | 520        | 548       | +28   | +18               |         |
| 1480  | 1482      | +2    |                   |                    | 535        | 582       | +47   | +33               |         |
| 1637  | 1635      | -2    |                   |                    | 554        | 605       | +51   | +31               |         |
| 1618  | 1610      | -8    |                   |                    | 595        | 660       | +65   | +57               |         |
| 1769  | 1765      | -4    |                   |                    | 617        | 677       | +60   | +53               |         |
| 1801  | 1801      | 0     |                   |                    | 645        | 701       | +56   | +45               |         |
| 1855  | 1862      | +7    |                   |                    | 657        | 722       | +65   | +45               |         |
| 1925  | 1925      | 0     |                   |                    | 662        | 718       | +56   | +48               |         |
| 1904  | 1904      | 0     |                   |                    | 660        | 721       | +61   | +41               |         |
| 1912  | 1910      | -2    |                   |                    | 693        | 750       | +57   | +57               | Top.    |
| 2127  | 2125      | -2    |                   |                    | 753        | 780       | +27   | +27               |         |
| 2095  | 2090      | -5    |                   |                    | 675        | 722       | +47   | +35               |         |
| 2063  | 2050      | -13   |                   | Topographer missed | 698        | 758       | +60   | +44               |         |
| 2063  | 2050      | -13   |                   | tops.              | 732        | 788       | +56   | +48               |         |
| 2087  | 2085      | -2    |                   |                    | 739        | 788       | +49   | +41               |         |
| 2102  | 2102      | 0     |                   |                    | 752        | 792       | +40   | +32               |         |
| 2129  | 2122      | -7    |                   |                    | 744        | 802       | +58   | +58               | Top     |
| 2101  | 2182      | -19   |                   |                    | 680        | 738       | +58   | +44               |         |
| Practically all the above shots are tops, and no shift is involved. |           |       |                   |                    | 633        | 682       | +49   | +35               |         |
|   |           |       |                   |                    | 559        | 582       | +23   | +5                |         |
|   |           |       |                   |                    | 531        | 541       | +10   | 0                 |         |
| From 0.4 mi. ENE of Blanchard NE across top.                        |           |       |                   |                    |            |           |       |                   |         |
| 215   | 210       | -5    | 0                 |                    |            |           |       |                   |         |
| 236   | 236       | 0     | 0                 |                    |            |           |       |                   |         |
| 286   | 284       | -2    | 0                 |                    |            |           |       |                   |         |
| 309   | 309       | 0     | 0                 |                    |            |           |       |                   |         |



| Test Elev.   | Map Elev. | Error | Error after shift | Remarks   | Test Elev. | Map Elev. | Error | Error after shift | Remarks |
|--|-----------|-------|-------------------|-----------|------------|-----------|-------|-------------------|---------|
| From 1-rd 0.4 mi. SW, NW, and along road and old RR grade (trail). |           |       |                   | Sec. cor. |            |           |       |                   |         |
| 23, 24   | 362       | 0     | 0                 |           | 569        | 602       | +33   | +21               |         |
| 320  | 318       | +2    | 0                 |           | 584        | 610       | +26   | +10               |         |
| 334  | 339       | +5    | +4                |           | 594        | 614       | +20   | +2                |         |
| 346  | 350       | +4    | 0                 |           | 603        | 617       | +14   | 0                 |         |
| 353  | 358       | +5    | +4                |           | 609        | 620       | +11   | 0                 |         |
| 361  | 370       | +9    | +9                |           | 617        | 623       | +6    | 0                 |         |
| 369  | 370       | +1    | +1                |           | 625        | 641       | +16   | +12               |         |
| 370  | 370       | 0     | 0                 |           | 635        | 658       | +23   | +15               |         |
| 372  | 370       | -2    | -2                |           | 641        | 650       | +9    | 0                 |         |
| 376  | 370       | -6    | -6                |           | 649        | 655       | +6    | 0                 |         |
| 380  | 375       | -5    | -5                |           | 662        | 682       | +20   | +12               |         |
| 369  | 369       | 0     | 0                 |           | 664        | 684       | +20   | +16               |         |
| 361  | 365       | +4    | +4                |           | 665        | 694       | +29   | +25               |         |
| 367  | 372       | +5    | +5                |           | 681        | 702       | +21   | 0                 |         |
| 412  | 408       | -4    | -3                |           | 681        | 704       | +23   | +12               |         |
| 468  | 468       | 0     | 0                 |           | 695        | 726       | +31   | +15               |         |
| 480  | 486       | +6    | +5                |           | 711        | 751       | +40   | +29               |         |
| 496  | 507       | +11   | +11               |           | 724        | 762       | +38   | +28               |         |
| 510  | 519       | +9    | +9                |           | 734        | 778       | +44   | +26               |         |
| 522  | 562       | +40   | +40               |           | 739        | 775       | +36   | +16               |         |
| 515  | 580       | +65   | +45               |           | 753        | 790       | +37   | +17               |         |
| 515  | 580       | +65   | +45               |           | 769        | 799       | +30   | +19               |         |
| 511  | 579       | +68   | +39               |           | 783        | 809       | +26   | +17               |         |
| 500  | 545       | +45   | +40               |           | 797        | 810       | +13   | 0                 |         |
| 484  | 507       | +23   | +14               |           | 809        | 850       | +41   | +11               |         |
| 482  | 500       | +18   | +16               |           | 831        | 880       | +49   | +34               |         |
| 490  | 520       | +30   | +15               |           | 849        | 876       | +27   | +21               |         |
| 505  | 510       | +5    | +5                |           | 864        | 702       | +38   | +26               |         |
| 515  | 535       | +20   | +10               |           | 882        | 910       | +28   | +20               |         |
| 542  | 560       | +18   | 0                 |           | 888        | 910       | +22   | +2                |         |
| 550  | 560       | +10   | +4                |           | 899        | 899       | 0     | 0                 |         |
| 554  | 602       | +48   | +36               |           | 905        | 903       | -2    | 0                 |         |
|  |           |       |                   |           | 912        | 908       | -4    | 0                 |         |
|  |           |       |                   |           | 922        | 918       | -4    | 0                 |         |
|  |           |       |                   |           | 930        | 930       | 0     | 0                 |         |

| Test Elev.   | Map Elev. | Error after shift | Remarks    | Test Elev. | Map Elev. | Error after shift | Remarks |
|--|-----------|-------------------|------------|------------|-----------|-------------------|---------|
| 939  | 940       | +1                |            | 522        | 522       | 0                 |         |
| 947  | 952       | +5                |            | 539        | 540       | +1                |         |
| 954  | 971       | +17               |            | 542        | 540       | -2                |         |
| 966  | 980       | +14               |            | 559        | 561       | +2                |         |
| 975  | 970       | -5                |            | 572        | 578       | +6                |         |
| 983  | 957       | -26               |            | 625        | 625       | 0                 |         |
| 987  | 959       | -28               |            | 654        | 659       | +5                |         |
| 993  | 982       | -11               |            | 673        | 681       | +8                |         |
| 1006   | 1006      | 0                 |            | 693        | 701       | +8                |         |
| 1013   | 1030      | +17               |            | 719        | 731       | +12               |         |
| 1025   | 1025      | 0                 | Sheet edge | 768        | 772       | +4                |         |
| Barometric elevations 0.4 mi. SW of                            |           |                   |            |            |           |                   |         |
| Sec. cor. 11, 12, 13, 14.                                      |           |                   |            |            |           |                   |         |
| 933  | 933       | 0                 |            | 814        | 816       | +2                |         |
| 941  | 950       | +9                |            | 831        | 834       | +3                |         |
| 941  | 930       | -9                |            | 855        | 859       | +4                |         |
| 941  | 930       | -9                |            | 879        | 881       | +2                |         |
| 941  | 930       | -9                |            | 896        | 900       | +4                |         |
| 919  | 910       | -9                |            | 903        | 912       | +9                |         |
| 875  | 890       | +15               |            | 924        | 944       | +20               |         |
| 966  | 966       | 0                 |            | 972        | 986       | +14               |         |
| 932  | 942       | +10               |            | 990        | 1008      | +18               |         |
| 932  | 955       | +23               |            | 1008       | 1019      | +11               |         |
| 964  | 964       | 0                 |            | 1011       | 1024      | +13               |         |
| 961  | 961       | 0                 |            | 1029       | 1049      | +20               |         |
| From V-rd. 0.3 mi. W of Sec. cor. 23, 24, 25, 26 north to top. |           |                   |            |            |           |                   |         |
| 366  | 372       | +6                |            | 1054       | 1075      | +21               |         |
| 386  | 390       | +4                |            | 1030       | 1055      | +25               |         |
| 399  | 403       | +4                |            | 1030       | 1055      | +25               |         |
| 428  | 428       | 0                 |            | 1030       | 1059      | +29               |         |
| 443  | 443       | 0                 |            | 1107       | 1125      | +18               | Top.    |
| 460  | 459       | -1                |            | 1098       | 1132      | +34               |         |
| 483  | 483       | 0                 |            | 1140       | 1162      | +22               |         |
| 499  | 502       | +3                |            |            |           |                   |         |
| 514  | 514       | 0                 |            |            |           |                   |         |

| Test Elev.         | Map Elev. | Error             | Error after shift | Remarks         | Test Elev.                            | Map Elev. | Error | Error after shift | Remarks |
|--------------------|-----------|-------------------|-------------------|-----------------|---------------------------------------|-----------|-------|-------------------|---------|
| From V-rd 0.3 mis. |           |                   |                   | W. of Sec. cor. | 104                                   | 122       | +18   | +15               |         |
| 23, 24, 25, 26     | 25, 26    | SW to Colony Road |                   |                 | 72                                    | 72        | 0     | 0                 |         |
| 349                | 352       | +3                | 0                 |                 | 50                                    | 50        | 0     | 0                 |         |
| 337                | 340       | +3                | +1                |                 | Along Colony Road SW from sheet edge. |           |       |                   |         |
| 330                | 330       | 0                 | 0                 |                 | 263                                   | 263       | 0     | 0                 |         |
| 325                | 325       | 0                 | 0                 |                 | 263                                   | 263       | 0     | 0                 |         |
| 317                | 318       | +1                | 0                 |                 | 276                                   | 270       | -6    | -6                |         |
| 312                | 315       | +3                | +3                |                 | 275                                   | 273       | -2    | -2                |         |
| 310                | 310       | 0                 | 0                 |                 | 238                                   | 238       | 0     | 0                 |         |
| 302                | 303       | +1                | +1                |                 | 217                                   | 217       | 0     | 0                 |         |
| 298                | 302       | +4                | +3                |                 | 186                                   | 183       | -3    | -2                |         |
| 280                | 288       | +8                | +7                |                 | 140                                   | 136       | -4    | -2                |         |
| 274                | 280       | +6                | +6                |                 | 106                                   | 98        | -8    | -7                |         |
| 263                | 275       | +12               | +11               |                 | 86                                    | 80        | -6    | -5                |         |
| 257                | 270       | +13               | +12               |                 | 46                                    | 35        | -11   | -10               |         |
| 254                | 268       | +14               | +13               |                 | 18                                    | 18        | 0     | 0                 |         |
| 250                | 269       | +19               | +17               |                 | 13                                    | 13        | 0     | 0                 |         |
| 251                | 266       | +15               | +14               |                 | 10                                    | 10        | 0     | 0                 |         |
| 246                | 261       | +15               | +14               |                 | 8                                     | 8         | 0     | 0                 |         |
| 245                | 262       | +17               | +15               |                 | 7                                     | 7         | 0     | 0                 |         |
| 244                | 262       | +18               | +16               |                 | South 2.2 mis. along east sheet edge  |           |       |                   |         |
| 239                | 262       | +23               | +21               |                 | from NE corner of sheet.              |           |       |                   |         |
| 235                | 257       | +22               | +15               |                 | 598                                   | 572       | -26   | -16               |         |
| 224                | 250       | +26               | +21               |                 | 587                                   | 578       | -9    | -3                |         |
| 223                | 235       | +12               | +7                |                 | 591                                   | 560       | -31   | -16               |         |
| 224                | 210       | -14               | -6                |                 | 590                                   | 558       | -32   | -28               |         |
| 212                | 199       | -13               | -9                |                 | 590                                   | 558       | -32   | -28               |         |
| 138                | 140       | +2                | +2                | In drain.       | 586                                   | 556       | -30   | -26               |         |
| 206                | 204       | -2                | -2                |                 | 587                                   | 567       | -20   | -9                |         |
| 200                | 205       | +5                | +4                |                 | 587                                   | 578       | -9    | -5                |         |
| 190                | 202       | +12               | +11               |                 | 586                                   | 572       | -14   | -9                |         |
| 174                | 190       | +16               | +15               |                 | 585                                   | 572       | -13   | -6                |         |
| 163                | 179       | +16               | +15               |                 | 581                                   | 573       | -8    | -6                |         |
| 147                | 167       | +20               | +19               |                 | 572                                   | 574       | +2    | +2                |         |
| 128                | 145       | +17               | +16               |                 | 574                                   | 578       | +4    | +4                |         |

| Test Elev. | Map Elev. | Error | Error after shift | Remarks   | Test Elev.                 | Map Elev. | Error | Error after shift | Remarks      |
|------------|-----------|-------|-------------------|-----------|----------------------------|-----------|-------|-------------------|--------------|
| 576        | 577       | +1    | +1                |           | 604                        | 626       | +22   | +18               |              |
| 576        | 577       | +1    | +1                |           | 602                        | 621       | +19   | +15               |              |
| 573        | 576       | +3    | +3                |           | 582                        | 603       | +21   | +18               |              |
| 568        | 577       | +9    | +9                |           | 571                        | 598       | +27   | +19               |              |
| 568        | 578       | +10   | +10               |           | 561                        | 581       | +20   | +11               |              |
| 575        | 589       | +14   | +9                |           | 548                        | 574       | +26   | +16               |              |
| 567        | 589       | +22   | +17               |           | 525                        | 551       | +26   | +15               |              |
| 574        | 601       | +27   | +21               |           | 522                        | 548       | +26   | +20               |              |
| 575        | 602       | +27   | +23               |           | 481                        | 501       | +20   | +11               |              |
| 579        | 611       | +32   | +29               |           | 468                        | 479       | +11   | +7                |              |
| 597        | 625       | +28   | +25               |           | 459                        | 478       | +19   | +6                | N. end of rd |
| 608        | 634       | +26   | +23               |           | 426                        | 452       | +26   | +25               |              |
| 613        | 638       | +25   | +22               |           | 424                        | 444       | +20   | +19               |              |
| 617        | 642       | +25   | +24               |           | 420                        | 450       | +30   | +30               |              |
| 620        | 646       | +26   | +22               |           | 420                        | 435       | +15   | +15               |              |
| 615        | 645       | +30   | +27               |           | 416                        | 430       | +14   | +11               |              |
| 623        | 650       | +27   | +25               |           | 433                        | 439       | +6    | +6                | x-rd         |
| 623        | 652       | +29   | +27               |           | 402                        | 412       | +10   | +10               |              |
| 629        | 657       | +28   | +27               |           | 395                        | 401       | +6    | +5                |              |
| 625        | 650       | +25   | +20               |           | 394                        | 394       | 0     | 0                 |              |
| 595        | 624       | +29   | +23               |           | 379                        | 383       | +4    | +3                |              |
| 562        | 602       | +40   | +33               |           | 361                        | 363       | +2    | +2                |              |
| 563        | 586       | +23   | +6                |           | 353                        | 357       | +4    | +4                |              |
| 550        | 567       | +17   | +17               | In drain. | 366                        | 375       | +9    | +9                |              |
| 605        | 640       | +35   | +27               |           | Draw 0.4 mi N of Sec. cor. |           |       |                   |              |
| 614        | 644       | +30   | +26               |           | 13, 14, 23, 24             |           |       |                   |              |
| 614        | 643       | +29   | +24               |           | 447                        | 462       | +15   | +13               |              |
| 604        | 643       | +39   | +34               |           | 436                        | 456       | +20   | +20               |              |
| 607        | 637       | +30   | +23               |           | 451                        | 488       | +37   | +29               |              |
| 614        | 630       | +16   | +14               |           | 443                        | 480       | +37   | +29               |              |
| 613        | 626       | +13   | +9                |           | 454                        | 461       | +7    | +6                |              |
| 614        | 630       | +16   | +8                |           | 452                        | 472       | +20   | +10               |              |
| 609        | 625       | +16   | +12               |           | 457                        | 476       | +19   | +13               |              |
| 603        | 623       | +20   | +17               |           | 468                        | 484       | +16   | +12               |              |
| 606        | 626       | +20   | +16               |           | 491                        | 511       | +20   | +14               |              |

| Test Elev.   | Map Elev. | Error after shift | Remarks | Test Elev. | Map Elev. | Error after shift | Remarks |
|--|-----------|-------------------|---------|------------|-----------|-------------------|---------|
| 514  | 528       | +14               |         | 176        | 175       | -1                |         |
| 537  | 549       | +12               |         | 191        | 194       | +3                |         |
| 573  | 570       | -3                |         | 217        | 220       | +3                |         |
| Vicinity Sec. cor. 13, 14, 23, 24.   |           |                   |         | 210        | 207       | -3                |         |
| 426  | 442       | +16               |         | 209        | 209       | 0                 |         |
| 417  | 438       | +21               |         | 210        | 210       | 0                 |         |
| 434  | 470       | +36               |         | 206        | 204       | -2                |         |
| 468  | 502       | +34               |         | 198        | 200       | +2                |         |
| 496  | 522       | +26               |         | 172        | 172       | 0                 |         |
| 511  | 546       | +35               |         | 140        | 140       | 0                 |         |
| From Bow E. along road to sheet edge   |           |                   |         | 80         | 78        | -2                |         |
| 16   | 16        | 0                 |         | 14         | 16        | +2                |         |
| 18   | 17        | -1                |         | 10         | 11        | +1                |         |
| 46   | 42        | -4                |         | 15         | 15        | 0                 |         |
| 89   | 82        | -7                |         | 16         | 16        | 0                 |         |
| 116  | 116       | 0                 |         | 10         | 10        | 0                 |         |
| 164  | 162       | -2                |         | 14         | 14        | 0                 |         |
| 201  | 198       | -3                |         | 16         | 11        | -5                |         |
| 219  | 215       | -4                |         | 13         | 12        | -1                |         |
| SE along RR from Bow.  |           |                   |         | 18         | 20        | +2                |         |
| 18   | 18        | 0                 |         | 16         | 21        | +5                |         |
| 20   | 19        | -1                |         | 18         | 21        | +3                |         |
| 21   | 20        | -1                |         | 18         | 21        | +3                |         |
| 20   | 21        | +1                |         | 21         | 22        | +1                |         |
| 20   | 21        | +1                |         | 21         | 22        | +1                |         |
| From Sec. Cor. 16, 17, 20, 21 T 35 N, R 3 E south to sheet edge, thence east along south sheet edge, thence north along east sheet edge. |           |                   |         | 23         | 22        | -1                |         |
| 7  | 7         | 0                 |         | 24         | 22        | -2                |         |
| 7  | 10        | +3                |         | 22         | 22        | 0                 |         |
| 81   | 83        | +2                |         | 21         | 22        | +1                |         |
| 98   | 103       | +5                |         | 21         | 21        | 0                 |         |
| 137  | 137       | 0                 |         | 22         | 20        | -2                |         |
| 166  | 163       | -3                |         | 18         | 20        | +2                |         |

# TOPOGRAPHIC MAPPING

## Summary & Abstract of Vertical Accuracy Test

Project No. Ph-26 Quad. No. T-5587 Quad. Name \_\_\_\_\_  
 Method of Testing Plane table profiling  
 Tested by RHS II, WRK Date Nov. 52-Feb. 54 Evaluated by RHS II  
 Contour interval 20 ft. 1.22 M.M. allowable shift at 1/10,000  
 map or manuscript scale.

635 Total number of points tested  
74 % of points within  $\frac{1}{2}$  contour interval or better  
168 Test points correct within  $\frac{1}{2}$  contour interval  
83 Test points in error between  $\frac{1}{2}$  and full contour interval  
84 Test points in error over full contour interval 13%  
635

| Test Elev.   | Map Elev. | Error | Error after shift | Remarks | Test Elev.   | Map Elev. | Error | Error after shift | Remarks |
|--|-----------|-------|-------------------|---------|--|-----------|-------|-------------------|---------|
| 20   | 20        | 0     | 0                 |         | 149  | 149       | 0     | 0                 |         |
| 18   | 20        | +2    | +2                |         | 166  | 167       | +1    | +1                |         |
| 19   | 20        | +1    | +1                |         | 173  | 180       | +7    | +7                |         |
| 22   | 20        | -2    | -2                |         | 176  | 185       | +9    | +9                |         |
| 16   | 20        | +4    | +4                |         | 171  | 170       | -1    | -1                |         |
| 61   | 70        | +9    | +7                |         | 180  | 180       | 0     | 0                 |         |
| 104  | 112       | +8    | +8                |         | 185  | 183       | -2    | -2                |         |
| 131  | 138       | +7    | +7                |         | 180  | 180       | 0     | 0                 |         |
| 163  | 164       | +1    | +1                |         | 130  | 130       | 0     | 0                 |         |
| 193  | 188       | -5    | -4                |         | 114  | 115       | +1    | +1                |         |
| 212  | 210       | -2    | -2                |         | 81   | 78        | -3    | -3                |         |
| 234  | 234       | 0     | 0                 |         |  |           |       |                   |         |
| S and E edges, NW $\frac{1}{4}$ , Sec 21.          |           |       |                   |         |  |           |       |                   |         |
| 167  | 167       | 0     | 0                 |         | In addition to the above there were about 80 shots in the Samish River bottom whose values are difficult to interpolate owing to the very flat ground, but all were within $\frac{1}{2}$ contour interval. |           |       |                   |         |
| 85   | 88        | +3    | +1                |         |  |           |       |                   |         |
| 69   | 65        | -4    | -2                |         |  |           |       |                   |         |
| 61   | 64        | +3    | +3                |         |  |           |       |                   |         |
| 164  | 164       | 0     | 0                 |         |  |           |       |                   |         |
| 140  | 146       | +6    | +5                |         |  |           |       |                   |         |
| 117  | 129       | +12   | +10               |         |  |           |       |                   |         |
| 79   | 83        | +4    | +4                |         |  |           |       |                   |         |
| 53   | 53        | 0     | 0                 |         |  |           |       |                   |         |
| 13   | 15        | +2    | +2                |         |  |           |       |                   |         |
| From Sec. cor. 20, 21, 28, 29 west to Padilla Bay. |           |       |                   |         |  |           |       |                   |         |
| 134  | 136       | +2    | +2                |         |  |           |       |                   |         |
| 135  | 140       | +5    | +5                |         |  |           |       |                   |         |
| 138  | 143       | +5    | +5                |         |  |           |       |                   |         |
| 139  | 146       | +7    | +6                |         |  |           |       |                   |         |
| 141  | 149       | +8    | +7                |         |  |           |       |                   |         |
| 140  | 149       | +9    | +8                |         |  |           |       |                   |         |
| 142  | 148       | +6    | +5                |         |  |           |       |                   |         |
| 144  | 148       | +4    | +4                |         |  |           |       |                   |         |
| 145  | 148       | +3    | +3                |         |  |           |       |                   |         |
| 149  | 149       | 0     | 0                 |         |  |           |       |                   |         |

### Summary to Accompany Topographic Map T-5587

Topographic map T-5587 is one of 13 similar maps of Project 6026. It covers most of the shoreline of Samish Bay, part of Padilla Bay, Samish River and Chuckanut Mountain.

Project 6026 is a stereoscopic mapping project. Field work in advance of compilation included the establishment of supplementary horizontal and vertical control, the inspection of shoreline and interior features, and the investigation of civil boundaries, section lines and geographic names.

Map T-5587 was compiled by multiplex, in two parts (designated T-5587-N and T-5587-S) at a scale of 1:10,000, using photographs taken in 1949. The map was completely field edited. With the addition of hydrography the map will be forwarded to the Geological Survey for publication as a 7-1/2 minute topographic map.

Items registered under T-5587 will be a descriptive report, cloth-backed copies of the map manuscript (in two parts), and the published quadrangle.

Review Report  
Topographic Map  
T-5587  
May 1956

61. General Statement:

See Summary Report.

62. Comparison with Registered Topographic Surveys:

|        |          |      |
|--------|----------|------|
| T-1746 | 1:10,000 | 1886 |
| 1794   | "        | 1887 |
| 1795   | "        | "    |
| 6691   | "        | 1939 |

All above surveys are obsolete by comparison with T-5587. Most of the shoreline has been changed by cultural development. T-5587 supersedes the above surveys for charting purposes in common areas.

63. Comparison with Maps of other Agencies:

SW 1/4 USGS SAMISH LAKE 1:62,500 1918

Large differences exist in both elevations and positions of ridge tops in the rugged northeastern part of the quad. Cultural changes are extensive along the shoreline and the open flat areas in the central and SW parts of the quad.

64. Comparison with Contemporary Hydrographic Surveys:

None.

65. Comparison with Nautical Charts:

|            |          |                |
|------------|----------|----------------|
| Chart 6376 | 1:25,000 | 1945 (54-9/13) |
| Chart 6378 | 1:40,000 | 1935 (54-8/9)  |

All shoreline and cultural details on both charts should be revised to that shown on T-5587.

66. Adequacy of Results and Future Surveys:

This map complies with all instructions and with the National Map Accuracy Standards along the shoreline and within open areas. The heavily wooded ridges are not mapped within these standards (see field edit report). The Geological Survey has been requested to omit the accuracy statement on the published quadrangle. The shoreline and cultural details adjacent thereto are mapped with adequate accuracy for use as a base for future hydrographic surveys.



67. Junctions:

Final junctions were made to the N with T-5586 and to the E with USGS 7-1/2-minute quad "Alger" (dated 1952).

Reviewed by:

John M. Neal  
John M. Neal

APPROVED:

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Chief, Review and Drafting Section  
Photogrammetry Division

May Skellett  
Chief, Nautical Chart Branch  
Charts Division

Lee Burman  
Chief, Photogrammetry Division  
25 May 60

J. I. Bowie  
Chief, Coastal Surveys Division

## RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. 5587

## INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

[illegible]