
Form 604
U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Shoreline (Photogrammetric)
Field No. Ph-5905 Office No. T-11621

LOCALITY
State Washington
General locality Puget Sound - Port Susan
Locality Tulare Beach

1959-1960
CHIEF OF PARTY
Lorne G. Taylor & Fred Natella

LIBRARY & ARCHIVES
DATE September 1964
DESCRIPTIVE REPORT - DATA RECORD


Planetable contouring by (II):  Date:

Completion Surveys by (II):  Date:

Mean High Water Location (III) (State date and method of location):  Spot located by field inspection on 7-13-60; 7-15-60 & 7-26-60. Compiled by Kelsh Instrument and graphic methods.

Projection and Grids ruled by (IV):  J. Keefer  Date: 7-12-60

Projection and Grids checked by (IV):  W. S.  Date: 8-17-60

Control plotted by (III):  C. C. Harris  Date: 10-11-60

Control checked by (III):  L. L. Graves  Date: 10-11-60

Radial Plot or Stereoscopic Control extension by (III):  W. A. Kuncis  J. L. Harris, Radial Plot  Date: July 1960 2-14-61

Stereoscopic Instrument compilation (III):  D. N. Williams  Date: 11-17-60

Contours

Manuscript delineated by (III):  C. C. Harris, Rough Draft  Date: 2-16-61
D. N. Williams, Scribing  3-22-61
C. C. Harris, Stick-up  8-16-61

Photogrammetric Office Review by (III):  D. N. Williams, Rough Draft  Date: 3-21-61
J. E. Deal, Advance  9-21-61

Elevations on Manuscript checked by (II) (III):  None  Date:
PHOTOGRAPHS (III)

<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Time</th>
<th>Scale</th>
<th>Stage of Tide</th>
</tr>
</thead>
<tbody>
<tr>
<td>60202 thru</td>
<td>9-9-59</td>
<td>11:05</td>
<td>1:10,000</td>
<td>9.4 ft. above MLLW</td>
</tr>
<tr>
<td>60204</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-S-2483 &amp; 2484</td>
<td>4-25-60</td>
<td>13:04</td>
<td>1:30,000</td>
<td>3.0 ft. above MLLW</td>
</tr>
<tr>
<td>59-L-8483</td>
<td>9-9-59</td>
<td>11:05</td>
<td>1:30,000</td>
<td>9.4 ft. above MLLW</td>
</tr>
<tr>
<td>thru 8489</td>
<td></td>
<td></td>
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<td></td>
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Tide (III)

<table>
<thead>
<tr>
<th>Reference Station:</th>
<th>Seattle, Washington</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subordinate Station:</td>
<td>Tulalip, Washington</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ratio of Diurnal Range</th>
<th>Mean Spring Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7.6</td>
</tr>
<tr>
<td></td>
<td>11.3</td>
</tr>
<tr>
<td></td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td>11.2</td>
</tr>
</tbody>
</table>

Washington Office Review by (IV):

Final Drafting by (IV):

Drafting verified for reproduction by (IV):

Proof Edit by (IV):

Land Area (Sq. Statute Miles) (III): 5.6

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

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

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II): 11
Recovered: 2
Identified: 1

Number of BMs searched for (II): None
Recovered: None
Identified: None

Number of Recoverable Photo Stations established (III): None

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

Remarks:
FIELD INSPECTION REPORT
Map Manuscript T-11621
Project Ph-5905

PHOTOGRAMMETRIC PLOT REPORT

Map Manuscript T-11621

Project Ph-5905

Refer to the combined Photogrammetric Plot Report (Stereo-planigraph Bridge) for Strips 1, 3, 4, 5, 6, 7, 8, 9, 10 and 11 by Willard A. Kuncis, July 1960. Filed with Desc. Report T-11584.

Refer to Radial Plot Report for T-11621; T-11622 and T-11623 thru T-11630 which is included in the report beginning with page 9.
PHOTOMETRIC PLOT REPORT

Radial Plot
T-11621, T-11622 and T-11628 thru T-11630

Project Ph-5905

21. Area Covered:

This radial plot covers an area along and adjacent to the northeast shoreline of Port Susan from McKees Beach to the north part of Everett, Washington. It comprises map manuscripts T-11621, T-11622 and T-11628 thru T-11630. It is a continuation south of the radial plot for T-11598 thru T-11600; T-11606 thru T-11610 and T-11616 which is described and included in the Descriptive Report for T-11598 (1960).

22. Method:

Prints of the nine lens photographs were furnished on Cronapque and these were prepared by the usual methods. A pass point situated on the east shoreline of Camano Island which had been located in Strip 8 by stereoplanigraph bridge was transferred to the nine lens photography from the single lens photography and was used to supplement the field identified horizontal control.

Hand templates of nine lens photographs were drawn on vynlite and corrected for paper distortion and transforming errors by use of master templet No. 59741.

Horizontal control stations identified in the area were plotted and checked. The pass points located by stereoplanigraph bridge in flights of single lens photographs to the west and which were common to the nine lens photographs were also plotted and checked.

The manuscripts were joined together by matching at the neat lines and the templates were oriented.

Excellent intersections of radials were obtained and all identified horizontal was held. A few of the pass points located in the previous stereoplanigraph bridge plots were discarded because they could not be identified with certainty on the nine lens photographs.

23. Adequacy of Control:

The identified horizontal control was adequate.
24. **Supplemental Data:**


25. **Photography:**

The photography was adequate except for definition which was poor in many instances. Images appearing on the paper field prints did not appear on the corona print office prints. This made it quite difficult to transfer a few sub stations from field photographs to office prints and many pass points from contact prints to office prints.

Approved: Respectfully submitted:

Fred Natella, CAPT, C&GS
Portland District Officer

Edward Deal
Cartographer
<table>
<thead>
<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>LATITUDE OR y-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS</th>
<th>N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>FORWARD (BACK)</td>
<td>FORWARD (BACK)</td>
</tr>
<tr>
<td>SOUCAM, 1954</td>
<td>Wash.N. F-269</td>
<td>394,098.54</td>
<td>4098.54 (901.46)</td>
<td>1249.2 (274.8)</td>
</tr>
<tr>
<td>SUSAN 2, 1924</td>
<td>Office R.M. 1</td>
<td>404,227.40</td>
<td>4227.40 (772.60)</td>
<td>1288.5 (235.5)</td>
</tr>
<tr>
<td></td>
<td>Comp.</td>
<td>1,624,658.59</td>
<td>1368.83 (3631.17)</td>
<td>417.2 (1106.8)</td>
</tr>
</tbody>
</table>

1 FT = 0.3048006 METER

COMPUTED BY: J.L.H.  DATE: 9-22-60  CHECKED BY: J.E.D.  DATE: 10-10-60
31. **Delineation:**

The planimetry along the southwest shoreline of Port Susan was compiled by Kelsh Instrument and that along the northeast shoreline was compiled by graphic methods from nine-lens photographs. Infrared photography was also available in this area and it was made simultaneously with the nine-lens photography.

Some roads leading to waterfront facilities were not classified by field inspection.

Two marsh areas were not indicated by field inspection.

These features were delineated and compiled after careful stereoscopic study of the photographs assisted by reference to the U.S.G.S. Tulalip quadrangle.

32. **Control:**

Horizontal control was adequate.

33. **Supplemental Data:**

Map of Island County, Washington, Scale 1" = 1 Mile, Compiled by Island County Engineer, March 1958.

34. **Contours and Drainage:**

Contours are not applicable.

No drainage was indicated by field inspection and none is shown in this area on the U.S.G.S. Tulalip, Washington, quadrangle.

35. **Shoreline and Alongshore Details:**

The mean high-water line was spot located by field inspection and delineated during compilation.

Along the Camano Island shoreline the limits of the foreshore areas as seen on photography taken at 3.0 ft. above M.L.L.W. are compiled.
Along the northwest shoreline of Port Susan foreshore areas could not be determined because the photography was taken at mean high-water. Numerous notes have been shown indicating the character of the foreshore.

No approximate low-water or shoal lines are shown.

36. **Offshore Details:**

Refer to the Descriptive Report for T-11617 (1960).

37. **Landmarks and Aids:**

None.

38. **Control for Future Surveys:**

None.

39. **Junctions:**

Satisfactory junctions were made with T-11616 on the north, T-11620 on the west, T-11622 on the east and T-11627 on the south.

**Items 40, 46 and 47:**

Refer to the Descriptive Report for T-11627 (1960).

Approved: \[Signature\]  
Respectfully Submitted: \[Signature\]

Fred Natella, CAPT, C&GS  J. Edward Deal  
Portland District Officer  Cartographer
49. **Notes to the Hydrographer:**

None.
<table>
<thead>
<tr>
<th>COMPILATION RECORD</th>
<th>COMPLETION DATE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PHOTOGRAMMETRIC OFFICE REVIEW
T. 11621


CONTROL STATIONS

ALONGSHORE AREAS
(Nautical Chart Data)

PHYSICAL FEATURES

CULTURAL FEATURES

BOUNDARIES
31. Boundary lines None  32. Public land lines None

MISCELLANEOUS

40. D.N. Williams
Reviewer

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.

Compiler

Supervisor

43. Remarks:
48. **Geographic Names:**

Camano Island

Cummings Lake

McKees Beach

Fort Susan

Spee-Bi-Dah

Sunny Shores

Tulalip Indian Reservation

Tulalip Shores

Tulare Beach

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Geographic Names Section
8 February 1963
61. **General Statement**

There are six (6) shoreline maps of Project PH 5905, Puget Sound, Washington. These maps were prepared primarily to provide basic maps, including the location of all non-floating aids and landmarks for use in revising our nautical charts and for control of proposed hydrographic surveys.

62. **Comparison with Registered Topographic Surveys**

<table>
<thead>
<tr>
<th>T-1164</th>
<th>1:10,000</th>
<th>1870</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-1388a</td>
<td>1:10,000</td>
<td>1872</td>
</tr>
<tr>
<td>T-1682</td>
<td>1:20,000</td>
<td>1885</td>
</tr>
<tr>
<td>T-1775</td>
<td>1:20,000</td>
<td>1886</td>
</tr>
<tr>
<td>T-1994</td>
<td>1:20,000</td>
<td>1888</td>
</tr>
</tbody>
</table>

These surveys agree with subject manuscripts as well as could be expected under consideration of the time interval. These map manuscripts are to supersede the above listed surveys of common areas for nautical charting.

63. **Comparison with Maps of Other Agencies**

<table>
<thead>
<tr>
<th>Freeland</th>
<th>1:24,000</th>
<th>1953</th>
</tr>
</thead>
<tbody>
<tr>
<td>Langely</td>
<td>1:24,000</td>
<td>1953</td>
</tr>
<tr>
<td>Tulalip</td>
<td>1:24,000</td>
<td>1956</td>
</tr>
</tbody>
</table>

There are cultural and shoreline differences but in general the agreement is good.

64. **Comparison with Contemporary Hydrographic Surveys**

<table>
<thead>
<tr>
<th>H-8609</th>
<th>1:10,000</th>
<th>1960</th>
</tr>
</thead>
<tbody>
<tr>
<td>H-8699</td>
<td>1:10,000</td>
<td>1961</td>
</tr>
</tbody>
</table>

Shoreline and control of the subject surveys was furnished prior to the hydrography and as no changes of importance have been made there is good agreement.

65. **Comparison with Nautical Charts**

<table>
<thead>
<tr>
<th>6448</th>
<th>1:40,000</th>
<th>1935 revised to 1962</th>
</tr>
</thead>
<tbody>
<tr>
<td>6450</td>
<td>1:80,000</td>
<td>1961 revised to 1963</td>
</tr>
<tr>
<td>1845.C.</td>
<td>1:80,000</td>
<td>1963</td>
</tr>
</tbody>
</table>

There are no differences of importance between the charts and the manuscripts.
66. Accuracy of Results and Future Surveys

These surveys were prepared according to project instructions, and are within the required accuracy for nautical charting.

Reviewed by:

L. C. Lande

Approved by:

Carlos Thomas
Chief, Photogrammetric Branch
Chief, Nautical Chart Division

M. C. Matte
Chief, Photogrammetry Division
Acting
### 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.

<table>
<thead>
<tr>
<th>CHART</th>
<th>DATE</th>
<th>CARTOGRAPHER</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>6300</td>
<td>8-20-65</td>
<td>G. P. Johnson</td>
<td>Full Part Before Verification Review Inspection Signed Via Drawing No.</td>
</tr>
<tr>
<td>18441</td>
<td>4/24/60</td>
<td>R. A. Lillis</td>
<td>Full Part Before Verification Review Inspection Signed Via Drawing No. 49</td>
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<td>18423</td>
<td>2/23/61</td>
<td>R. C. Dawson</td>
<td>Full Part Before Verification Review Inspection Signed Via Drawing No. 21</td>
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<tr>
<td>18440</td>
<td>3/11/61</td>
<td>R. C. Dawson</td>
<td>Full Part Before Verification Review Inspection Signed Via Drawing No. 33</td>
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**FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. T-11621**

**USCOI 65-86-P65**

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