T-13148

DESCRIPTIVE REPORT

Type of Survey: Shoreline

Field No. PH-5712 Office No. T-13148
FINAL Field Edited Map Edition 1*

LOCALITY

State: Washington
General locality: Elliott Bay
Locality: Magnolia Bluff

1966-1970

CHIEF OF PARTY
V. Ralph Sobieralski
Div. of Photogrammetry, Wash., D.C.

LIBRARY & ARCHIVES

DATE

* Refer to Memo, page 12.
# DESCRIPTIVE REPORT - DATA RECORD

**T - 13148**

**PROJECT NO. (III):**

PH-6712, Elliott Bay, Washington

**FIELD OFFICE (III):**

**CHIEF OF PARTY**

**PHOTOGRAMMETRIC OFFICE (III):**

Rockville, Maryland

**OFFICER-IN-CHARGE**

V. Ralph Sobieralski

**INSTRUCTIONS DATED (III) (III):**

No written instructions.

**METHOD OF COMPILATION (III):**

Graphic

**MANUSCRIPT SCALE (III):**

1:5,000

**STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):**

----

**DATE RECEIVED IN WASHINGTON OFFICE (IV):**

**DATE REPORTED TO NAUTICAL CHART BRANCH (IV):**

**APPLIED TO CHART NO.**

**DATE:**

**DATE REGISTERED (IV):**

SEPT. 1976

**GEORGRAPHIC DATUM (III):**

N.A. 1927

**REFERENCE STATION (IV):**

Pulmer 1934

**LAT.:** 47° 38' 27.091"

**LONG.:** 122° 24' 50.760"

**PLANE COORDINATES (IV):**

\[ y = 1,610,321.41 \]

\[ x = 237,767.09 \]

**STATE**

**ZONE**

Washington North

**VERTICAL DATUM (III):**

Mean sea level except as follows:

Elevations shown as (23) refer to mean high water

Elevations shown as (5) refer to sounding datum

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

**ADJUSTED**

**UNADJUSTED**

**ROMAN NUMERALS INDICATE WHETHER THE ITEM IS TO BE ENTERED BY (I) 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.**
### DESCRIPTIVE REPORT - DATA RECORD

**T-13148**

**FIELD INSPECTION BY (III):**

**DATE:**

**MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):**

Date of photography - office interpretation of photography listed in the Data Record next page.

**PROJECTION AND GRIDS RULED BY (IV):**

- **A. E. Roundtree**
  - **DATE:** 3/15/67

**PROJECTION AND GRIDS CHECKED BY (IV):**

- **R. Glaser**
  - **DATE:** 3/20/67

**CONTROL PLOTTED BY (III):**

- **J. C. Richter**
  - **DATE:** April 1967

**CONTROL CHECKED BY (III):**

- **H. Lucas**
  - **DATE:** April 1967

**RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):**

- **T-12519 (Chart 6442)**
  - **DATE:**

See Photogrammetric Plot, Dec. 1963, John Gerlach

**STEREOSCOPIC INSTRUMENT COMPILATION (III):**

- **PLANIMETRY:** ---
- **CONTOURS:** ---

**MANUSCRIPT Delineated BY (III):**

- **J. C. Richter**
  - **DATE:** May 1967

- **M. Webber**
  - **DATE:**

**SCIBING BY (III):**

**PHOTOGAMMETRIC OFFICE REVIEW BY (III):**

**DATE:**

**REMARKS:**

Field edit by Allan F. Davis in Sept-Oct, 1970
**DESCRIPTIVE REPORT - DATA RECORD**

**T-13/48**

**CAMERA (KIND OR SOURCE) (III):**

"S" 6" focal length

**PHOTOGRAPHS (III):**

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>DATE</th>
<th>TIME</th>
<th>SCALE</th>
<th>STAGE OF TIDE</th>
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<tbody>
<tr>
<td>66-S(c)-3200A</td>
<td>7/26/66</td>
<td>12:44</td>
<td>1:15,000</td>
<td>8.8 above MLW</td>
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<tr>
<td>3201A</td>
<td>7/26/66</td>
<td></td>
<td></td>
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<tr>
<td>3202A</td>
<td>7/26/66</td>
<td></td>
<td></td>
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<td>66-S(c)-3223A</td>
<td>7/26/66</td>
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<tr>
<td>3224A</td>
<td>7/26/66</td>
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<td></td>
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<tr>
<td>57026-48-12</td>
<td>9-4-70</td>
<td>unknown</td>
<td>1:12,000</td>
<td>unknown</td>
</tr>
<tr>
<td>(C. of E.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TIDE (III):**

<table>
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<tr>
<th>REFERENCE STATION:</th>
<th>Seattle, Washington</th>
<th>RATIO OF RANGES</th>
<th>MEAN RANGE</th>
<th>SPRING RANGE</th>
</tr>
</thead>
</table>

**SUBORDINATE STATION:**

**WASHINGTON OFFICE REVIEW BY (IV):**

J. B. Phillips  

**DATE:** July 6, 1976

**PROOF EDIT BY (IV):**

**DATE:**

**NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):**

RECOVERED:  
IDENTIFIED:

**NUMBER OF BM(5) SEARCHED FOR (II):**

RECOVERED:  
IDENTIFIED:

**NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):**

**NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):**

**REMARKS:**


JOB PH-6712
ELLIOTT BAY
WASHINGTON

SHORELINE MAPPING
SCALE 1"=5,000

OFFICIAL MILEAGE
FOR COST ACCOUNTS

Sheet No. | Sq. Mile
--- | ---
T-13148 | 2
T-13149 | 2
T-13150 | 2
T-13151 | 4
T-13152 | 3
T-13153 | 3
PH-6712
ELLIOTT BAY, WASH
Photo Coverage

Color photography; scale 1:5,000,
dated July 26, 1966.
<table>
<thead>
<tr>
<th>Compilation Record</th>
<th>Completion Date</th>
<th>Remarks</th>
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</thead>
<tbody>
<tr>
<td><em>(See Below)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field Edit Applied</td>
<td>May 1971</td>
<td></td>
</tr>
</tbody>
</table>

* - Field inspection and field edit completed in 1964 for T-12519 (chart 6442) scale 1:10,000. Cronaflex copies enlarged 2X were paneled on this manuscript and details revised with 1966 "S" photography in June 1967.
T-13149 is one of six 1:5,000 scale shoreline manuscripts prepared for photo-hydro support. These manuscripts originated with PH-21411 (T-12519) compiled in April 1964 and field edited in September 1964.

PH-21411 was compiled at 1:10,000 scale and served as the base for Nautical Chart 6442. Photographic enlargements on film were made of the chart manuscript and these were applied to base sheets ruled for the new 1:5,000 scale shoreline mapping project. In July 1966, 1:5,000 scale photography was flown over the area for photo revision and for preparation of ratio prints for photo-hydro support. The photography was ratioed and prepared for hydrography in May 1967.

Field edit and hydrographic operations were delayed until September and October 1970. The Corps of Engineers supplied 1:12,000 scale panchromatic photography taken in September 1970 for field edit use. The field editor visually verified the adequacy of the 1970 photography for use in revising map details. Edit information, including the 1970 photography, was applied in 1971. In 1975 the hydrographic survey reviewer requested the photogrammetric map for use in his review. Upon examination of the map the reviewer found errors in the application of field edit. The errors resulted, primarily, from the poor quality of the photographic prints used in 1971. Better quality prints were obtained and applied in 1975.

Refer to page 12 of this Descriptive Report concerning the disposition of inadequacies in PH-6712 maps.

Final review was accomplished at the Rockville Office in July 1976.

Several changes were made to the shoreline and foreshore features during review. No attempt was made to update the buildings or other cultural features.

A stable base positive copy of the map and a Descriptive Report will be registered in the NOS Archives.
This manuscript was compiled from a 2X enlargement of T-12519 (chart 6442) which was compiled in April 1964 and field edited in September 1964.

The enlargement on cronaflex was brought up to date graphically with 1:5,000 scale black and white cronapaque ratios of color photographs taken in July 1966. After corrections the cronaflex enlargement was paneled on 1:5,000 scale ruled manuscripts and photographs were prepared for hydro support.

Refer to Descriptive Report for Chart Compilation of T-12519 (Chart 6442) of June 1963 - September 1964.

31. **Delineation**

Graphic methods were used.

32. **Control**

There is an abundance of triangulation stations in the area of this manuscript.

33. **Supplemental Data**

None

34. **Contours and Drainage**

None

35. **Shoreline and Alongshore Detail**

There was no field inspection of the 1966 photography.

No low water or shoal lines were visible on the photographs.

36. **Offshore Detail**

No comment

37. **Landmarks and Aids**

Two aids and one landmark were abstracted from Form 567 of T-12519 (chart 6442) and listed on Form 567 of this manuscript.
38. Control for Future Surveys
   None

39. Junctions
   To the east with T-13149 in agreement.
   To the north, south and west no contemporary survey.

40. Horizontal and Vertical Accuracy
   No comment

41. thru 45.
   Inapplicable

46. Comparison with Existing Maps
   Comparison was made with USGS Quadrangle Shilshole Bay, 1949, scale 1:24,000.

47. Comparison with Nautical Charts
   A comparison was made with nautical chart No. 6442, scale 1:10,000, 2nd edition, August 8, 1966, corrected to Jan. 14, 1967.

   Items to be applied to nautical charts immediately:
     None

   Items to be carried forward:
     None

Submitted by:

Approved by: J. C. Richter
Cartographer

K. N. Maki
Chief, Compilation Section
FIELD EDIT REPORT
MAP T-13148
Magnolia Bluff

Field edit of map T-13148 was accomplished during September and October 1970 from a skiff in conjunction with photogrammetric signal location and from a launch during hydrography.

METHOD

Field photographs and a paper ozalid copy of the manuscripts were employed in the field in place of Field Edit Ozalids which were not provided. The mean high water line and shoreline detail were verified by visual comparison of the shore area to field photographs and ozalid manuscripts. Army Corps of Engineers 1:12,000 scale photographs of September 1970 were also used during field edit. Notes have been made in violet ink on the field edit ozalid and cross-referenced where necessary to matte ratio prints. Unless otherwise indicated, all shoreline features are verified correct as interpreted.

ADEQUACY OF COMPILATION

Compilation of the map is good. Field inspection of the map is complete.

RECOMMENDATIONS

It is recommended that the map be revised in accordance with the field edit notes and the revised map be accepted as an advance manuscript.

Respectfully submitted,

Allan F. Divis

Allan F. Divis
LTJG; NOAA
62. Comparison with Registered Topographic Surveys

T-12519  1:10,000  1964

Refer to memorandum page 12.

63. Comparison with Maps of Other Agencies - Refer to the Compilation Report, Item 46.

64. Comparison with Contemporary Hydrographic Surveys

H-9167  1:5,000  1970

During review a shoreline revision was made on T-13148. The area is indicated in pencil on the hydrographic smooth sheet. Other features are in agreement with the hydro survey.

65. Comparison with Nautical Charts

6442  1:10,000  1964

Refer to memorandum page 12.

66. Adequacy of Results and Future Surveys

This map meets horizontal accuracy standards but does not meet NOS requirements for use in nautical chart maintenance. Refer to page 12 of this Descriptive Report concerning the inadequacies of this map.

Submitted by:

J. B. Phillips

Approved and Forwarded:

Chief, Photogrammetric Branch

Chief, Coastal Mapping Division
July 22, 1976

TO: Chief, Coastal Mapping Division
FROM: Quality Control Group

SUBJECT: Recommendation for New Mapping, Elliott Bay, Washington

1. Purpose

The memo outlines the need for a 2nd Edition of Map T-12519 (PH-21411), date 1964.

2. Background

Map T-12519, scale 1:10,000, was used in hydro operations in 1970. Six 1:5,000 scale maps (PH-6712), 2X enlargements of portions of the 1:10,000 scale map, were processed and revised with 1966 photography. Hydrography and field edit were accomplished in 1970.

3. Map Adequacy

For reasons outlined under Section 4, the six 1:5,000 scale maps do not meet NOS requirements for use in nautical chart maintenance. The inadequacies do not affect the basic hydrographic (sounding) information on the contemporary hydrographic surveys.

4. Map Deficiencies

Field edit of the 1:5,000 scale maps was inadequate. The field edit reports state that after revision of the maps with 1970 Corps of Engineers photography in areas indicated (by the editor) they will meet requirements. Many changes in shoreline and alongshore features, apparent on the photographs, were not noted by the editor. The photographs were generally poor for interpreting details and little clarification was done by the editor. Although the hydrographer corrected some photogrammetric survey details on the boat sheet, many changes, apparent on the 1970 photographs, were accepted as compiled from the 1966 photographs.
5. Disposition of 1:5,000 Scale Maps

The six 1:5,000 scale maps were reviewed in July 1976. Changes required in hydrographic survey details were called to the attention of the hydro survey reviewer by notes on the reviewed smooth sheet or by memo, as applicable.

6. Recommended Procedures

New bridging and basic compilation is recommended for the 2nd map edition.

\textit{Note}: The last complete investigation of landmarks and aids was done in 1963.
48. Geographic Names List

Fourmile Rock
Magnolia Bluff
Puget Sound
Smith Cove
**U.S. DEPARTMENT OF COMMERCE**
**COAST AND GEODETIC SURVEY**

**NONELECTRIC AID OR LANDMARKS FOR CHARTS**

Seattle, Washington  
July 1967

I recommend that the following objects which have been inspected from seaward to determine their value as landmarks be charted on the charts indicated.

The positions given have been checked after listing by Robert B. Melby

Fred Natella, Capt., C&GS  
Chief of Party

<table>
<thead>
<tr>
<th>CHARTING NAME</th>
<th>DESCRIPTION</th>
<th>SIGNAL NAME</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
<th>DATUM</th>
<th>METHOD OF LOCATION AND SURVEY No.</th>
<th>DATE OF LOCATION</th>
<th>CHARTS AFFECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flagpole</td>
<td>Flagpole near Alder High, 1934 Ht. = 71 (234)</td>
<td>47 37</td>
<td>1707.6</td>
<td>122 23</td>
<td>651.5</td>
<td>1927 Trl.</td>
<td>9/23/63</td>
<td>6449 6442</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>55.290</td>
<td>31.208</td>
<td>N.A.</td>
<td>T-13148</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.
I recommend that the following objects which have been inspected from seaward to determine their value as landmarks be charted on the charts indicated.

The positions given have been checked after listing by Robert B. Melby, October 11, 1967.

Fred Natella, Capt., C&GS
Chief of Party.

<table>
<thead>
<tr>
<th>STATE</th>
<th>CHARTING NAME</th>
<th>DESCRIPTION</th>
<th>Lt. List No.</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
<th>DATUM</th>
<th>METHOD OF LOCATION AND SURVEY NO.</th>
<th>DATE OF LOCATION</th>
<th>CHARTS AFFECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Light</td>
<td>Fourmile Rock Light, 1963</td>
<td>2283</td>
<td>47 38'25&quot;</td>
<td>122 24'45&quot;</td>
<td>T-1314</td>
<td>Triang 9/17/63</td>
<td>x</td>
<td>6449 6450</td>
</tr>
<tr>
<td></td>
<td>Horn</td>
<td>Smith Cove Fog Signal</td>
<td>2287</td>
<td>47 37'13&quot;</td>
<td>122 22'13&quot;</td>
<td>T-13144</td>
<td>Photo 9/23/63</td>
<td>x</td>
<td>6446 6460</td>
</tr>
</tbody>
</table>

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if reetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.
<table>
<thead>
<tr>
<th>STATION</th>
<th>P.C.'s</th>
<th>SOURCE OF INFORMATION</th>
<th>LATITUDE OR ( \nu )-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>
<th>FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
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<tr>
<td></td>
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<td></td>
<td>FORWARD (BACK)</td>
<td>FORWARD (BACK)</td>
<td>FORWARD (BACK)</td>
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<tr>
<td>FULMER 1934</td>
<td>pg. 44</td>
<td></td>
<td>237.767.09</td>
<td>1,610.321.41</td>
<td>14,4943.1</td>
<td>98,1653.9</td>
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<tr>
<td>FOUR MILE ROCK</td>
<td>pg. 386</td>
<td>Vol. 11</td>
<td>237.149.60</td>
<td>1,610.765.27</td>
<td>14,4566.7</td>
<td>98,1924.4</td>
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<td>LIGHT 1963</td>
<td></td>
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<tr>
<td>ALDER HIGH 2</td>
<td>Vol. 11</td>
<td>pg. 86</td>
<td>234.406.73</td>
<td>1,615.759.58</td>
<td>14,2894.6</td>
<td>98,4969.0</td>
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<tr>
<td>1958</td>
<td></td>
<td></td>
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<tr>
<td>PIER 41 1933</td>
<td>pg. 49</td>
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<td>232.485.61</td>
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<td>14,1723.5</td>
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<tr>
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<td>pg. 53</td>
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<td>232.414.86</td>
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<td>14,2911.5</td>
<td>98,4934.4</td>
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</tbody>
</table>
**TIDE COMPUTATION**

**PROJECT NO. Ph-6712T-13148**

**Time and date of exposure**: 12:44 7/26/66  
**Reference station**: Seattle, Washington  
**Mean range**: 7.6  
**Diurnal**  
**Ratio of ranges**: 11.3

<table>
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<th></th>
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<th>Height</th>
<th>Height x Ratio of ranges</th>
<th>Time</th>
<th>Height</th>
<th>Height x Ratio of ranges</th>
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</thead>
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<tr>
<td></td>
<td>h. m.</td>
<td>feet</td>
<td></td>
<td>h. m.</td>
<td>feet</td>
<td></td>
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<tr>
<td>High tide</td>
<td>13:24</td>
<td>9.0</td>
<td></td>
<td>13:24</td>
<td>9.0</td>
<td></td>
</tr>
<tr>
<td>Low tide</td>
<td>6:12</td>
<td>0.2</td>
<td></td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Duration of rise or fall</td>
<td>7:12</td>
<td>8.8</td>
<td></td>
<td>13:24</td>
<td>8.8</td>
<td></td>
</tr>
</tbody>
</table>

| Time H. T. or L. T. | 13:24 | Ht. H. T. or L. T. | 9.0 | Feature bares |
| Required time | 12:44 | Tabular correction | 0.2 | Stage of tide above MLW |
| Interval | :40 | Stage of tide above MLW | 8.8 | Feature above MLW |

**Computed by**: J. C. Richter  
**Checked by**: ---