Form 804
U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey  Shoreline

Field No. Ph-50 (49) Office No. T-9511 N & S

LOCALITY
State Oregon and Washington
General locality Columbia River
Locality Deer Island, Martin Island, Burke Island.

1948 - '51

CHIEF OF PARTY
Horace G. CONNOLLY, Chief of Party
Charles C. Clarke, Portland Photogrammetric Office.

LIBRARY & ARCHIVES

DATE November 17, 1955
DATA RECORD

T-9511

Project No. (II): Ph-50(49) Quadrangle Name (IV):

Field Office (II): Ship HODGSON Chief of Party: Horace G. Connerly

Photogrammetric Office (III): Portland, Oregon Officer-in-Charge: Charles W. Clark

Instructions dated (II) (III): 21 September 1950 (field) Copy filed in Division of
                           9 June 1950 (Office) Supplement 1 Photogrammetry (IV)

Method of Compilation (III): Graphic

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

Scale Factor (III): None

Date received in Washington Office (IV): SEP 25 1951 Date reported to Nautical Chart Branch (IV):

Applied to Chart No. Date: Date registered (IV): 26 August, 1956

Publication Scale (IV): Publication date (IV):

Geographic Datum (III): N.A. 1927 Vertical Datum (III): Mean Sea Level

Reference Station (III): MARTIN BLUFF (WASH.), 1878 Mean sea level except as follows:

Lat.: 45° 57' 44.288" 1367.4 m Long: 122° 48' 35.410" 762.5 m Adjusted X
                     (485.1 m) (529.5 m) Unadjusted

Plane Coordinates (IV): State: Zone:

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.
Areas contoured by various personnel

(Show name within area)

(II) (III)
DATA RECORD

Field Inspection by (II): Ship HODGSON	Date: May & June 1951

Planetable contouring by (II):

Completion Surveys by (II):

Mean High Water Location (III) (State date and method of location): By analogy from previous field inspection made in 1949. The gradient of the high water line is 4.5 ft. M.S.L. at southern limits to 4.7 ft. M.S.L. at northern limits which equals a water plane 5.0 ft. above the U.S. Engineers Columbia River M.L.L.W. plane.

Projection and Grids ruled by (IV):

Projection and Grids checked by (IV):

Control plotted by (III): Ree H. Barron	Date: 21 August 1951

Control checked by (III): M.B. Elrod	Date: 21 August 1951

Radial Plot or Stereoscopic Control extension by (III):

J.L. Harris	Date: 28 August 1951

Planimetry

Stereoscopic Instrument compilation (III):

Contours

Manuscript delineated by (III): Ree H. Barron	Date: 10 September 1951

Photogrammetric Office Review by (III): J.E. Deal	Date: 10 September 1951

Elevations on Manuscript checked by (II) (III):

None	Date:
Camera (kind or source) (III): Single lens, K-17, Focal length 12 inches.

PHOTOGRAPHS (III)

<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Time</th>
<th>Scale</th>
<th>Water Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>3933 to 3942 Incl.</td>
<td>9/5/48</td>
<td>2:07 P.S.T.</td>
<td>1:10,000 ratio</td>
<td>All flights are about 2.4 ft. above M.S.L. at Deer Island.</td>
</tr>
<tr>
<td>3949 to 3956 Incl.</td>
<td>&quot;</td>
<td>12:55 &quot;</td>
<td>&quot;</td>
<td>&quot;</td>
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<tr>
<td>3990 to 3997 Incl.</td>
<td>&quot;</td>
<td>1:50 &quot;</td>
<td>&quot;</td>
<td>&quot;</td>
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<tr>
<td>4032 to 4036 Incl.</td>
<td>&quot;</td>
<td>2:35 &quot;</td>
<td>&quot;</td>
<td>&quot;</td>
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<tr>
<td>4145 to 4156 Incl.</td>
<td>9/6/48</td>
<td>1:07 &quot;</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>4173 to 4175 Incl.</td>
<td>&quot;</td>
<td>1:37 &quot;</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
</tbody>
</table>

Tide (III)

Water level reduced from actual readings of
Reference Station: U.S. Engineers Automatic River gages at
Subordinate Station: Longview, Washington and St. Helens Oregon.
Subordinate Station: 0 + 00 of Longview gage = -0.67' MSL
0 + 00 of St. Helens gage = +0.42' MSL
Washington Office Review by (IV): Date: 2-1-64
Drafting verified for reproduction by (IV): Date: 2-28-57

Proof Edit by (IV):

Land Area (Sq. Statute Miles) (III): 9.2
Shoreline (More than 200 meters to opposite shore) (III): 16.6 statute miles
Shoreline (Less than 200 meters to opposite shore) (III): 15.4
Control Leveling - Miles (II):
Number of Triangulation Stations searched for (II): Recovered: 27 Identified: 14
Number of BMs searched for (II): Recovered: Identified:
Number of Recoverable Photo Stations established (III): None
Number of Temporary Photo Hydro Stations established (III): None

Remarks:
SHORELINE MAPPING PROJECT PH-50 (49)
WASHINGTON-OREGON, Lower Columbia River
Compilation scales 1:5,000 and 1:10,000'

SHORELINE SURVEYS:
T-9254 to T-9255, scale 1:5,000; T-9266 to T-9272, T-9510, T-9511 and T-9886 to T-9895, scale 1:10,000, prepared from U. S. E.-photographs of September 1948.
Summary to Accompany T-9511

As originally set up, Columbia River shoreline project Ph-50(49) consisted of two parts:

Part I from Sandy Island, near Kalama, downstream to include Crims Island; Part II from Wallace Island, downstream to Altoona and Svensen, Cathlamet Bay. This layout left a four-minute gap between parts I and II and between Part I and project CS-322 next south.

Two new surveys (1:10,000) were added to project Ph-50(49) by supplementary instructions 1 and 2: T-9510 for the gap west of Part I and T-9511 for the gap south of Part I.

A third supplementary instruction provided for a series of surveys to complete the shoreline mapping of Columbia River from Cathlamet Bay to the Pacific Ocean. This is Part III of project Ph-50(49).

Part I consists of twelve map manuscripts at a scale of 1:5,000, T-9254 to T-9265 inclusive.

Part II has seven map manuscripts at a scale of 1:10,000, T-9266 to T-9272, inclusive.

Part III has ten map manuscripts at a scale of 1:10,000, T-9886 to T-9895, inclusive.

These three parts, together with T-9510 and T-9511, provide for the shoreline mapping of Columbia River from its mouth to Woodland, Washington.

Hydrographic and photogrammetric parties worked concurrently and cooperatively on the whole project, under the supervision of Comdr. H. J. Healy on the Ship HODGSON.
FIELD INSPECTION REPORT
Map Manuscript No. T-9511
Project Ph-50(49)

The field inspection for this area was done by the Ship HODGSON during May and June 1951. It consisted of the identification of 14 horizontal control stations and notes relative to the interpretation of alongshore details.

It is believed that the water level plane of 5.0 ft. above the U. S. Engineers Columbia River Low Water Plane was not located in the field because of the high water level of the river at the time of the field inspection.

At the time of the compilation of this map manuscript no field inspection report or hydrographic survey report was available to the Photogrammetric Office.
PHOTOGRAHMETRIC PLOT REPORT
Map Manuscript No. T-9511
Project Ph-50(49)

21: AREA COVERED:

Map Manuscript No. T-9511 covers shoreline areas of the portion
of the Columbia River from Caples Lending to Ahle Point.

22: METHOD:

Hand templates of single lens ratio prints were used for this
radial plot.

Paper distortion of the ratio prints was corrected by use of the
"Distortion template for photographs printed with the Saltzman Projector".

The templates were oriented directly on the map manuscript which
was ruled with a polyconic projection.

Most of the radials to horizontal control stations passed through
or were held tangent to their plotted positions and the intersections
of pass points were very good throughout this radial plot.

23: ADEQUACY OF CONTROL:

The identified horizontal control stations are believed to be
adequate for radial plotting the shoreline areas of this map manuscript.

The following stations were identified in the field: RAP 1949
(USE); BLUFF 1912 (USE); BURNT HILL 1978; MAPLE HILL 2, 1937; MERRILL
2, 1937; HUNTER BAR UPPER DIKE LIGHT 1949 (USE); FRONT 1949 (USE);
COLUMBIA CITY SCHOOL CUPOLA 1937; LOWER DOLPHIN 1951; STORE GABLE (USE);
MARTIN ISLAND RANGE FRONT 1949 (USE); DEER ISLAND MIDDLE DIKE LIGHT 1937
(remains of light structure); DEER ISLAND SLOUGH DIKE (Dal.) 1937 (USE).

In addition stations 4 TRAVERSE 42, 29th Eng. (WASH) 1948 and
GRUSS R.M. 2 were identified at the Photogrammetric Office. Station SAINT
1937 was also identified in the field but it falls too far south of the
radial plot area.

All other stations shown on Control Station Forms M-2388-12,
which are included, were submitted as recovered by the Ship HODGSON
except the following:

Also on P-4265
The 2 stations listed above as identified at Photogrammetric Office.

KALAMA UPPER RANGE FRONT LIGHT, 1948
KALAMA UPPER RANGE REAR LIGHT, 1943

The lights appear in the 1951 Light List and their positions were obtained from the U.S. Engineers Portland District Office.

All identified stations in the area were satisfactorily held to in the radial plot.

24: **SUPPLEMENTAL DATA:**

There were none furnished for the area of this radial plot.

25: **PHOTOGRAPHY:**

The photograph coverage was adequate for the radial plot work.

Approved:

Charles W. Clark
Officer-in-Charge

Respectfully submitted:

J. Edward Deal, Jr.
Cartographer
PH 50 (50)
DEER ISLAND-COLUMBIA RIVER
<table>
<thead>
<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
<th>LATITUDE OR y-COORDINATE LONGITUDE OR x-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET OR PROJECTION LINE IN METERS FORWARD (BACK)</th>
<th>N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARTIN BLUFF (WASH.) 1878</td>
<td>G-4453 P. 386</td>
<td>1878</td>
<td>45° 57' 44.288&quot;</td>
<td>1367.4 (485.1)</td>
<td>1367.4 (485.1)</td>
</tr>
<tr>
<td>MAPLE HILL 2 ORG.1937</td>
<td>G-4453 P. 386</td>
<td>1937</td>
<td>45° 54' 38.659&quot;</td>
<td>1193.6 (658.9)</td>
<td>1193.6 (658.9)</td>
</tr>
<tr>
<td>DAVIS (OREG) 1937</td>
<td>G-4453 P. 324</td>
<td>1937</td>
<td>45° 58' 13.45&quot;</td>
<td>1155.3 (136.5)</td>
<td>1155.3 (136.5)</td>
</tr>
<tr>
<td>H 232 (USE) (WASH.) 1912</td>
<td>G-3719 P. 375</td>
<td>1912</td>
<td>45° 59' 51.195&quot;</td>
<td>1580.6 (271.9)</td>
<td>1580.6 (271.9)</td>
</tr>
<tr>
<td>COLUMBIA CITY SCH. CUPOLA FLAGSTAFF (ORE.) 1937</td>
<td>Midwest Dist. Office</td>
<td>1937</td>
<td>45° 53' 29.03&quot;</td>
<td>597.2 (696.4)</td>
<td>597.2 (696.4)</td>
</tr>
<tr>
<td>H 21 (USE) (WASH.) 1912</td>
<td>G-6331 P. 759</td>
<td>1912</td>
<td>45° 59' 18.406&quot;</td>
<td>568.3 (1284.2)</td>
<td>568.3 (1284.2)</td>
</tr>
<tr>
<td>HILL (USE) (WASH.) 1912</td>
<td>G-6331 P. 761</td>
<td>1912</td>
<td>45° 58' 06.807&quot;</td>
<td>210.2 (1642.3)</td>
<td>210.2 (1642.3)</td>
</tr>
<tr>
<td>MARTIN ISLAND RANGE FRONT LIGHT (WASH.) 1949</td>
<td>Ship Hodgson</td>
<td>1949</td>
<td>45° 56' 18.808&quot;</td>
<td>580.5 (1272.0)</td>
<td>580.5 (1272.0)</td>
</tr>
<tr>
<td>HUNTER BAR UPPER DIKE LIGHT 1949</td>
<td>H.S.E. Portland District</td>
<td>1949</td>
<td>45° 58' 46.962&quot;</td>
<td>1450.0 (402.5)</td>
<td>1450.0 (402.5)</td>
</tr>
<tr>
<td>DEER ISLAND MIDDLE DIKE LIGHT 1947</td>
<td>Ship Hodgson</td>
<td>1947</td>
<td>45° 56' 13.079&quot;</td>
<td>538.6 (753.0)</td>
<td>538.6 (753.0)</td>
</tr>
<tr>
<td>DEER ISLAND DIKE DOLPHIN (USE) 1949</td>
<td>Ship Hodgson</td>
<td>1949</td>
<td>45° 54' 45.30&quot;</td>
<td>403.8 (1448.7)</td>
<td>403.8 (1448.7)</td>
</tr>
<tr>
<td>BLUFF (USE) (WASH.) 1912</td>
<td>G-6331 P. 785</td>
<td>1912</td>
<td>45° 57' 36.866&quot;</td>
<td>1138.2 (714.3)</td>
<td>1138.2 (714.3)</td>
</tr>
</tbody>
</table>

NOTE: The name of this light is now HUNTER UPPER DIKE 56 LIGHT.
<table>
<thead>
<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
<th>LATITUDE OR Y-COORDINATE</th>
<th>LONGITUDE OR X-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET OR PROJECTION LINE IN METERS</th>
<th>DATUM CORRECTION</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>
</tr>
</thead>
<tbody>
<tr>
<td>FRONT (USE) 1949</td>
<td>Ship HODGSON</td>
<td>N.A. 1927</td>
<td>45° 57'</td>
<td>17.336&quot;</td>
<td>535.2</td>
<td>(1317.3)</td>
<td>126.8</td>
<td>(865.3)</td>
</tr>
<tr>
<td>STORE GABLE (USE)</td>
<td></td>
<td></td>
<td>45° 53'</td>
<td>31.59&quot;</td>
<td>975.3</td>
<td>(877.2)</td>
<td>134.9</td>
<td>(858.7)</td>
</tr>
<tr>
<td>GRUSS R.M. 2</td>
<td>Computed Portland Office</td>
<td></td>
<td>45° 53'</td>
<td>S. of ms. limit</td>
<td>282.1</td>
<td>(1566.6)</td>
<td>1282.7</td>
<td>(8.4)</td>
</tr>
<tr>
<td>4 TRAVERSE 42 29th ENGR.</td>
<td></td>
<td>1938</td>
<td>45° 59'</td>
<td>18.013&quot;</td>
<td>299.8</td>
<td>(1552.7)</td>
<td>434.1</td>
<td>(856.9)</td>
</tr>
<tr>
<td>ENGR. (WASH.)</td>
<td></td>
<td></td>
<td>46° 00'</td>
<td>09.711&quot;</td>
<td>1678.3</td>
<td>(174.2)</td>
<td>440.8</td>
<td>(851.9)</td>
</tr>
<tr>
<td>DUMP (USE) (WASH.)</td>
<td></td>
<td></td>
<td>45° 55'</td>
<td>54.358&quot;</td>
<td>785.3</td>
<td>(1067.2)</td>
<td>545.6</td>
<td>(746.1)</td>
</tr>
<tr>
<td>BURNT HILL (WASH.) 1878</td>
<td>Midwestern District Office</td>
<td></td>
<td>45° 58'</td>
<td>25.435&quot;</td>
<td>1024.6</td>
<td>(827.9)</td>
<td>85.8</td>
<td>(1206.3)</td>
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<tr>
<td>H-19 (USE) (WASH.)</td>
<td></td>
<td></td>
<td>45° 51'</td>
<td>20.175&quot;</td>
<td>404.8</td>
<td>(851.9)</td>
<td>434.1</td>
<td>(856.9)</td>
</tr>
<tr>
<td>MERRILL 2 (ORE.)</td>
<td></td>
<td></td>
<td>45° 57'</td>
<td>33.187&quot;</td>
<td>85.8</td>
<td>(1206.3)</td>
<td>1282.7</td>
<td>(8.4)</td>
</tr>
</tbody>
</table>

**TOPOGRAPHIC STATIONS**

- Ship HODGSON
- LOWER DOLPHIN, 1951
- BUCK (USE) 1949
- MED (USE), 1949

1 FT = 0.3048006 METER

COMPUTED BY: R.H. Barron  DATE 8/17/51

CHECKED BY: J.L. Harris  DATE 8/21/51
<table>
<thead>
<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
<th>LATITUDE OR y-COORDINATE Longitude OR x-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>HOOF (USE) 1949</td>
<td>Ship Hodgson</td>
<td>1927</td>
<td>45° 55'</td>
<td>Removed from designated on H-752</td>
<td>1816.3                          (36.2)</td>
</tr>
<tr>
<td>RAP (USE) 1949</td>
<td>&quot;</td>
<td>&quot;</td>
<td>45° 54'</td>
<td></td>
<td>211.0                            (164.1.5)</td>
</tr>
<tr>
<td>KALAMA UPPER RANGE, 1948</td>
<td>USE Portland District</td>
<td>&quot;</td>
<td>45° 58' 14.35&quot;</td>
<td></td>
<td>442.6                            (1409.9)</td>
</tr>
<tr>
<td>KALAMA UPPER RANGE, 1948</td>
<td>&quot;</td>
<td>&quot;</td>
<td>45° 58' 01.915&quot;</td>
<td></td>
<td>59.1                             (1783.4)</td>
</tr>
<tr>
<td>REAR LIGHT, 1948</td>
<td>&quot;</td>
<td>&quot;</td>
<td>45° 58' 01.915&quot;</td>
<td></td>
<td>954.4                            (337.5)</td>
</tr>
</tbody>
</table>
SHORELINE AND ALONGSHORE DETAILS:

The mean high-water line is on a gradient at the plane of 5.0 feet above mean lowest low water (Columbia River Datum) and was adequately located by the field party in July and August 1949 on single lens photographs taken when the river was at a low-water stage after the Columbia River Flood. The gradient of the water plane is from 4.85 ft. above M.S.L. at a point 1.6 miles south of Kalama, Washington to 3.45 ft. above M.S.L. at Oak Point, Washington. The data on the Columbia River Datum were furnished by the Corps of U. S. Engineers, Portland District and the above water plane above M.S.L. is based on -0.15 ft. M.S.L. @ 1.6 miles south of Kalama, Washington and -1.55 ft. M.S.L. at Oak Point, Washington (Columbia River Datum). It is suggested that the high-water line for surveys in the Columbia River, downstream from Oak Point, Washington, be based on the mean high-water line at the outer end of jetties at the mouth of the Columbia River which is ± 7.4 ft. above M.L.L.W. or ± 3.2 ft. above M.S.L. When this mean high-water line is extended upstream in the Columbia River it converges with the high-water plane of these map manuscripts at about the west limits of T-92S1 or at about Oak Point, Washington. See attached sketch. (O.R. T-92S1)

Areas that bare during low-water stages and approximate shoal areas were delineated for the most part by office examination of the photographs.

Alongshore details were excellently delineated by the field inspection party.
31: **DELINEATION:**

Graphic methods were used for the compilation.

Only a limited field inspection of planimetric details was made. Interpretation of photographic details was made by stereoscopic examination of the photographs and by comparison with similar areas previously field inspected.

32: **CONTROL:**

The horizontal control stations were well identified and were of sufficient density to adequately control the photographs.

33: **SUPPLEMENTAL DATA:**

There were none furnished for this area.

34: **CONTOURS AND DRAINAGE:**

Inapplicable.

35: **SHORELINE AND ALONGSHORE DETAILS:**

The shoreline and alongshore details shown on this map manuscript were not field inspected probably because of the high water level of the river at the time of field inspection.

The water level line shown is on a gradient at the plane of 5.0 ft. above mean lowest low water (Columbia River Datum). It was delineated from single lens photographs taken when the river was at a low water stage after the 1948 Columbia River Flood. The gradient of the water plane shown on this map manuscript is from 5.5 ft. above M.S.L. at the southern limits to 4.7 ft. above M.S.L. at the northern limits.

Refer to side heading 35 of the Descriptive Report for T-9254 to T-9265 Incl. (1949) Project Ph-50(49).

Several areas believed to bare during low water stages and approximate shoal lines, believed to be visible on the photographs, have been shown.
36: OFFSHORE DETAILS:

Since the hydrographic work was done prior to the compilation of this shoreline survey it is assumed that any offshore feature not delineated by field inspection or which cannot be easily seen on the photographs has been located by the Ship HODGSON. (H-7893)

37: LANDMARKS AND AIDS:

None were recommended or submitted to the Photogrammetric Office. It is assumed that the proper forms for these features will be submitted by the Ship HODGSON. H-7893 C. Let: 678 (1951) see also Review Report 64.

38: CONTROL FOR FUTURE SURVEYS:

None

39: JUNCTIONS:

A junction was made on the north with an ozalid print of a reduction of Map Manuscript T-9265 Project Ph-59(49) Scale 1:10,000.

A junction was made on the south with ozalid prints of reductions of Map Manuscripts T-8651 and T-8652 Project CS 322, Scale 1:10,000.

There are no junctions at the east and west limits of this map manuscript.

40: HORIZONTAL AND VERTICAL ACCURACY:

Vertical accuracy is not applicable.

There are no areas believed to be of sub-normal horizontal accuracy.

46: COMPARISON WITH EXISTING MAPS:

A visual comparison was made with the St. Helens, Oreg.-Wash., War Department Corps of Engineers U.S. Army, 15 min. quadrangle, 1940, Scale 1:62,500.

47: COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with Chart No. 6151, March 1947 (24th Edition) last printed 2/21/49, hand corrected 9/2/49, Scale 1:40,000.
Items to be Applied to Nautical Charts Immediately:

None

Items to be Carried Forward:

None

Approved:
Charles W. Clark
Officer-in-Charge

Respectfully submitted:
J. Edward Deal, Jr.
Cartographer
No geographic name list was furnished this office. Names were taken from Chart #6153 and U.S. Engineers "St. Helens Quad".

- AHEE POINT
- BURKE ISLAND
- BURKE SLOUGH
- CAPLES LANDING
- DEER ISLAND
- DEER ISLAND POINT
- DEER ISLAND SLOUGH
- MARTIN ISLAND
- MARTIN SLOUGH
- SANDY ISLAND

Oregon
Washington
Columbia River
U.S. 99 and 230
U.J. No. 30
Spokane Portland and Seattle R.R.
Tide Creek
Sandy Island West Channel
Martin Bluff
Northern Pacific Railway

Names underlined in red are approved
8-29-52
L. Heck
PHOTOGRAMMETRIC OFFICE REVIEW
T. 95'11

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 alongshore cultural features  

PHYSICAL FEATURES
20. Water features  
21. Natural ground cover  
22. Planetary 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  

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.
62. **Comparison with Registered Surveys:**

- T-1495  1:10,000  1879
- T-6569 b  1:10,000  1937
- T-6570 a  1:10,000  1937

63. **Comparison with Maps of other agencies:**

USE St. Helens, Oreg.-Nash., 1:50,000, 1947 (photos. 1937)

64. **Comparison with Contemporary Hydrographic Surveys:**

- H-7893  1:10,000  1951

Some pilings on H-7893 could not be identified on the photographs and were not added to the map manuscript.

The foul areas on the east shore appear to be rocks in water. Other foul areas seem to be either old piling or perhaps debris. No field inspection notes assisted in the interpretations.

**Lights that fall in the area of T-9511:**

<table>
<thead>
<tr>
<th>Name in lists prior to 1951</th>
<th>1951 Lt. List</th>
<th>Form 524</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunter Bar Dike 1</td>
<td>No. 52</td>
<td>T-9265</td>
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<tr>
<td>&quot; &quot; &quot; Daybeacon 2</td>
<td>54</td>
<td>&quot;</td>
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<tr>
<td>&quot; &quot; &quot; 4</td>
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<tr>
<td>&quot; &quot; &quot; Upper Dike</td>
<td>49</td>
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<td>&quot; &quot; &quot; Able Point</td>
<td>57</td>
<td>&quot;</td>
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<td>Hoffman</td>
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<td>Kalama Upper Range Rear</td>
<td>58</td>
<td>Ch. Lt. 678(1951)-OK</td>
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<td>&quot; &quot; &quot; Front</td>
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<tr>
<td>Deer Island Lower Dike</td>
<td>72</td>
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<tr>
<td>&quot; &quot; &quot; Upper Dike</td>
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<td>Deer Island</td>
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<td>Martin Slough Dike</td>
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<td>&quot; &quot; &quot; Middle Dike</td>
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<td>&quot; &quot; &quot; Range Front</td>
<td>69</td>
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<td>Burke Dike</td>
<td>73</td>
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<tr>
<td>Caples</td>
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</tr>
</tbody>
</table>

*These names occur on T-9265 (1949 F.I.)*

**These names appear on T-9511 because they are control points. The other names appear on H-7893. In addition, Martin Island Range Rear Light is on H-7893. The light was not on the photographs from which T-9511 was compiled. (Rebuilt, 1949). Photos 1948.
Dikes across Deer Island Slough amended. These dikes are evidently designed to reclaim the Deer Island land.

65. Comparison with Nautical Charts:

6153  1:40,000  May 1952  1st ed.

See heading 64 above for other information.

This map manuscript was applied to the chart prior to review.

66. Accuracy:

The delineation is as accurate as the lack of field shoreline inspection makes possible. The shoal line approximates the mean low water line in most places. Features not subject to seasonal change or to office interpretation only meet the National Standards of Accuracy.

Reviewed by:

Lena T. Stevens

APPROVED:

Le Lande
Chief, Review Section
Photogrammetry Division

Earl N. Balmore
Chief, Nautical Chart Branch
Charts Division

Paul Gramm
Chief, Photogrammetry Division

Earl A. Newton
Chief, Coastal Surveys Division
29 Aug. 1955
### NAUTICAL CHARTS BRANCH

#### SURVEY NO. ______

Record of Application to Charts

<table>
<thead>
<tr>
<th>DATE</th>
<th>CHART</th>
<th>CARTOGRAPHER</th>
<th>REMARKS</th>
</tr>
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<td>10-11-51</td>
<td>6153</td>
<td>Joe R. Johnson</td>
<td>Before After Verification and Review</td>
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<tr>
<td>8-13-62</td>
<td>6153</td>
<td>O. Svendsen</td>
<td>Before After Verification and Review</td>
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</table>

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under “Comparison with Charts” in the Review.