
Form 504

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Shoreline

Field No. Ph-155 Office No. T - 10649

LOCALITY

State Washington
Vicinity of north of
General locality Columbia River
Locality Breaking Lake to Loomis Lake

1957-1958

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

LIBRARY & ARCHIVES

DATE May 1962
DATA RECORD
T-10649

Project No. (II): Ph-155  Quadrangle Name (IV):

Field Office (II): Seaview, Washington  Chief of Party: V. Ralph Sobierański
Instructions dated (II) (III): 10 January 1958 (Copy included)  Copy filed in Division of
Photogrammetry (IV)

Method of Compilation (III): Stereo. instrument

Manuscript Scale (III): 1:10,000  Stereoscopic Plotting Instrument Scale (III): 1:15,000

Scale Factor (III): None

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

Applied to Chart No. Date: Date registered (IV): 3/14/62

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

Geographic Datum (III): N. A. 1927  Vertical Datum (III): X
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): GREEN, 1926

(Unadjusted)

Plane Coordinates (IV):

State: Washington zone: South

x = 1, 104, 297.67

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): V. Ralph Sobieralski
R. B. Melby (Interior)
Date: Feb. 1958
June 1958

Planetable contouring by (II):

Completion Surveys by (II):

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

Office inspection on Stereoplanigraph
and field inspection.

Projection and Grids ruled by (IV): J. R. Haskins
Date: 12-18-57

Projection and Grids checked by (IV): I. Y. Fitzgerald
Date: 1-2-58

Control plotted by (III): J. B. Phillips
Date: 3-26-58

Control checked by (III): J. D. Perrow, Jr.
Date: 3-26-58

Stereoscopic
Control extension by (III): J. D. Perrow, Jr.

Instrument compilation (III):

Planimetry J. D. Perrow, Jr. Date: 3-26-58

Stereoscopic Instrument compilation (III):

Manuscript delineated by (III): J. B. Phillips, Shoreline
L. L. Graves, Interior
L. L. Graves, Scribing
C. C. Harris, Stick-up
Date: 3-26-58
9-5-58
9-26-58
4-14-59

Photogrammetric Office Review by (III): C. C. Harris, rough draft
J. E. Deal, Advance
Date: 4-10-59
8-30-60

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

Form T-Page 3
**Camera (kind or source) (III):** C&GS Camera "L"

<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>57L 1832-1835</td>
<td>8-18-57</td>
<td>1510</td>
<td>1:10,000</td>
<td>4.8 above MLW</td>
</tr>
<tr>
<td>57-L-1843 thru 1845</td>
<td></td>
<td>1520</td>
<td></td>
<td></td>
</tr>
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</table>

**Tide (III)**

<table>
<thead>
<tr>
<th>Ratio of Ranges</th>
<th>Mean Range</th>
<th>Spring Range</th>
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</thead>
<tbody>
<tr>
<td>6.5</td>
<td>6.0</td>
<td></td>
</tr>
</tbody>
</table>

Reference Station: Astoria, Oregon
Subordinate Station: Entrance Light N. Jetty

Washington Office Review by (IV): A.K. Hargood

Final Drafting by (IV):

Drafting verified for reproduction by (IV):

Proof Edit by (IV):

Land Area (Sq. Statute Miles) (III): 8
Shoreline (More than 200 meters to opposite shore) (III): \( \frac{1}{4} \) miles
Shoreline (Less than 200 meters to opposite shore) (III): None
Control Leveling - Miles (II):
Number of Triangulation Stations searched for (II): 9
Number of BMs searched for (II): Recovered: 6
Number of Recoverable Photo Stations established (III): None
Number of Temporary Photo Hydro Stations established (III): None

Remarks:
FIELD INSPECTION REPORT

PROJECT FR-155

Mouth of Columbia River to Altoona

July 1957 to November 1957

2. Areal Field Inspection:

The area along the coast is flat with ponds and marshes. Much of this area was "blow sand" a few years ago, but is now fairly well stabilized by the planting of beach grasses and different varieties of pine trees. The gradient of the ocean beach is gradual and automobiles may be driven most of the length of it except at high tide. The interior is hilly and heavily wooded.

The coast is paralleled by U. S. Highway 101, which connects by ferry between Astoria, Oregon, and Nez Perce, Washington. U. S. Highway 30 parallels the south side of the Columbia River from Astoria eastward to the end of the project. The Spokane, Portland and Seattle Railway parallels U. S. Highway 30 from the east edge of the project to Astoria and then parallels U. S. Highway 101 to the south edge of the project.

North of the river are the towns of Longbeach, Seaview, Ilwaco and Altoona. Longbeach and Seaview are principally summer resorts and depend largely on the tourist trade for their existence. Ilwaco is mainly a fishing port and Altoona is a fishing village with a fish cannery.

South of the river is Astoria, county seat of Clatsop County and the site of Fort Astoria which no longer exists but is marked by a historical marker. This is one of Oregon ports for seagoing vessels. Large quantities of grain and lumber are loaded on ships at the port docks.

Four and one-half miles south of Astoria near U. S. Highway 101 is the replica of Fort Clatsop which is on the exact site of the original fort. It was the headquarters for the Lewis and Clark Expedition during the winter of 1805-1806 and was the first military post west of St. Louis. Efforts are being made to make Fort Clatsop a national monument.

Also on the south side of the river are Hammond and Warren- ton. There are canneries and a sawmill here. Svenson is a small community along U. S. Highway 30 at the east edge of the project.
3. Horizontal Control:

(a) The following supplemental control was established and used for control of the photographs:

<table>
<thead>
<tr>
<th>Station</th>
<th>Sheet</th>
<th>Established by</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROUSE (temporary)</td>
<td>10341</td>
<td>Three Point Fix</td>
</tr>
<tr>
<td>CANBY</td>
<td>10345</td>
<td>Triangulation &amp; Traverse</td>
</tr>
<tr>
<td>Ilwaco Dock Light</td>
<td>10345</td>
<td>Triangulation Intersection</td>
</tr>
<tr>
<td>Farm</td>
<td>10346</td>
<td>&quot;</td>
</tr>
<tr>
<td>Sock</td>
<td>10346</td>
<td>&quot;</td>
</tr>
<tr>
<td>NOOK (USE)</td>
<td>10346</td>
<td>Triangulation</td>
</tr>
<tr>
<td>PICNIC</td>
<td>10346</td>
<td>&quot;</td>
</tr>
<tr>
<td>SLOPE (temporary)</td>
<td>10347</td>
<td>Three Point Fix</td>
</tr>
<tr>
<td>KNAPP 2</td>
<td>10348</td>
<td>Triangulation</td>
</tr>
<tr>
<td>Mit</td>
<td>10359</td>
<td>Triangulation Intersection</td>
</tr>
<tr>
<td>Lucas (shoran)</td>
<td>10650</td>
<td>&quot;</td>
</tr>
<tr>
<td>Rocky Point Light</td>
<td>10350</td>
<td>Triangulation</td>
</tr>
</tbody>
</table>

Station CANBY was located by request from the U. S. Engineers to replace Station EAST BATTERY 1911 which possibly will be destroyed by quarrying.

Station Lucas (shoran) was located by the hydrographic party as a shoran site and was also used as photo control.

Station Mit is a hydrographic disc which was discovered while attempting to recover Station BEACH ROAD 1935. No record of this station was available to the field party and it was located by triangulation intersection from stations ASTOR 1935, CALENA RM 2, 1942 and CHUMMY 1956.

(b) No datum adjustments were made by the field party.

(c) The following stations not established by the Coast and Geodetic Survey were searched for:

<table>
<thead>
<tr>
<th>Station</th>
<th>Sheet</th>
<th>Established by</th>
<th>Date</th>
<th>Accuracy</th>
<th>Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAY</td>
<td>10349</td>
<td>U.S.E.</td>
<td>1936</td>
<td>Unknown</td>
<td>Not recovered</td>
</tr>
<tr>
<td>BRUIN</td>
<td>10341(E.of)</td>
<td>&quot;</td>
<td>1937</td>
<td>&quot;</td>
<td>Recovered</td>
</tr>
<tr>
<td>BR 3</td>
<td>10342(W.of)</td>
<td>&quot;</td>
<td>1936</td>
<td>&quot;</td>
<td>Destroyed</td>
</tr>
<tr>
<td>BR 3, RM 2</td>
<td>10342(W.of)</td>
<td>&quot;</td>
<td>1936</td>
<td>&quot;</td>
<td>Recovered</td>
</tr>
<tr>
<td>V 62</td>
<td>10342</td>
<td>&quot;</td>
<td>1936</td>
<td>&quot;</td>
<td>Not recovered</td>
</tr>
<tr>
<td>W 62</td>
<td>10343</td>
<td>&quot;</td>
<td>1936</td>
<td>&quot;</td>
<td>Recovered</td>
</tr>
<tr>
<td>X 62</td>
<td>10343</td>
<td>&quot;</td>
<td>1936</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>Y 62</td>
<td>10343(E.of)</td>
<td>&quot;</td>
<td>1936</td>
<td>&quot;</td>
<td>Not recovered</td>
</tr>
<tr>
<td>BR 2</td>
<td>10343(E.of)</td>
<td>&quot;</td>
<td>1936</td>
<td>&quot;</td>
<td>Recovered</td>
</tr>
<tr>
<td>BR 2, RM 1</td>
<td>10343(E.of)</td>
<td>&quot;</td>
<td>1936</td>
<td>&quot;</td>
<td>Recovered</td>
</tr>
<tr>
<td>Station</td>
<td>Sheet</td>
<td>Established by</td>
<td>Date</td>
<td>Order of Accuracy</td>
<td>Disposition</td>
</tr>
<tr>
<td>--------------</td>
<td>-------</td>
<td>----------------</td>
<td>------</td>
<td>------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>18 (USGS)</td>
<td>10353</td>
<td>U.S.E.</td>
<td>1935</td>
<td>Unknown</td>
<td>Recovered</td>
</tr>
<tr>
<td>A-31</td>
<td>10353</td>
<td>&quot;</td>
<td>1935</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>S-31-K3</td>
<td>10353</td>
<td>&quot;</td>
<td>1935</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>Q-31</td>
<td>10354</td>
<td>&quot;</td>
<td>1935</td>
<td>&quot;</td>
<td>Not recovered</td>
</tr>
<tr>
<td>B 31</td>
<td>10354</td>
<td>&quot;</td>
<td>1936</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>J 309</td>
<td>10354</td>
<td>&quot;</td>
<td>1939</td>
<td>&quot;</td>
<td>Recovered</td>
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<tr>
<td>C 31</td>
<td>10360</td>
<td>&quot;</td>
<td>1939</td>
<td>&quot;</td>
<td>Destroyed</td>
</tr>
<tr>
<td>P-30 (PP&amp;LCo)</td>
<td>10360</td>
<td>&quot;</td>
<td>1935</td>
<td>&quot;</td>
<td>Recovered</td>
</tr>
<tr>
<td>P-9 (PP&amp;LCo)</td>
<td>10360</td>
<td>&quot;</td>
<td>1935</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>Q-100 (PP&amp;LCo)</td>
<td>10360</td>
<td>&quot;</td>
<td>1935</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>S-100 (PP&amp;LCo)</td>
<td>10360</td>
<td>&quot;</td>
<td>1935</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>TBN FLOW</td>
<td>10360</td>
<td>&quot;</td>
<td>1935</td>
<td>&quot;</td>
<td>Not recovered</td>
</tr>
<tr>
<td>F-10 (PP&amp;LCo)</td>
<td>10360</td>
<td>&quot;</td>
<td>1935</td>
<td>&quot;</td>
<td>Recovered</td>
</tr>
<tr>
<td>F-22 (PP&amp;LCo)</td>
<td>10362</td>
<td>&quot;</td>
<td>1935</td>
<td>&quot;</td>
<td>&quot;</td>
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<tr>
<td>F-23 (PP&amp;LCo)</td>
<td>10362</td>
<td>&quot;</td>
<td>1935</td>
<td>&quot;</td>
<td>Not recovered</td>
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<tr>
<td>F-24 (PP&amp;LCo)</td>
<td>10362</td>
<td>&quot;</td>
<td>1935</td>
<td>&quot;</td>
<td>Recovered</td>
</tr>
<tr>
<td>FF 203</td>
<td>10364</td>
<td>&quot;</td>
<td>1936</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>H-209</td>
<td>10364</td>
<td>&quot;</td>
<td>1936</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>JJ-209</td>
<td>10364</td>
<td>&quot;</td>
<td>1936</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>K-209</td>
<td>10364</td>
<td>&quot;</td>
<td>1936</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>L-203</td>
<td>10364</td>
<td>&quot;</td>
<td>1936</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>J-46 (OSHD)</td>
<td>10650</td>
<td>&quot;</td>
<td>1935</td>
<td>&quot;</td>
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<td>F-11 (PP&amp;LCo)</td>
<td>10650</td>
<td>&quot;</td>
<td>1935</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>F-12 (PP&amp;LCo)</td>
<td>10650</td>
<td>&quot;</td>
<td>1935</td>
<td>&quot;</td>
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</tr>
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</table>

(d) The following stations required by the project instructions for control of compilation were omitted:

<table>
<thead>
<tr>
<th>Station</th>
<th>Sheet</th>
<th>Reason for Omission</th>
<th>Supplemented by Station</th>
</tr>
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<tbody>
<tr>
<td>BEAR 1911</td>
<td>10341</td>
<td>In dense timber, could GROUSE 1957 (temporary) not identify</td>
<td></td>
</tr>
<tr>
<td>BRUN U.S.E. 1937</td>
<td>10340</td>
<td>In dense timber, could not identify</td>
<td>No substitution</td>
</tr>
<tr>
<td>APEX 1939</td>
<td>10341</td>
<td>Mis-plotted on Project Farm 1958 Diagram by Wash.Office</td>
<td></td>
</tr>
<tr>
<td>Main Channel Beacon 4, 1935</td>
<td>10340</td>
<td>Not recovered</td>
<td>Sock 1958</td>
</tr>
<tr>
<td>BAKER WEST BASE 1851</td>
<td>10345</td>
<td>Not recovered</td>
<td>Ilwaco Dock Light 1958</td>
</tr>
<tr>
<td>POINT B 1851</td>
<td>10347</td>
<td>Not recovered</td>
<td>SLOPE 1957 (temporary)</td>
</tr>
<tr>
<td>Ilwaco Channel Light No. 9, 1937</td>
<td>10349</td>
<td>Not recovered</td>
<td>Knappton Taller</td>
</tr>
<tr>
<td>DOCK 1926</td>
<td>19347</td>
<td>Not recovered</td>
<td>Smoke Stack 1935</td>
</tr>
<tr>
<td>POINT (USE) 1913</td>
<td>19349</td>
<td>Not recovered</td>
<td>Rocky Point</td>
</tr>
<tr>
<td>WORTH 1939</td>
<td>10350</td>
<td>Not recovered</td>
<td>Light 1958</td>
</tr>
<tr>
<td>BAY U.S.E. 1936</td>
<td>10351</td>
<td>Not recovered</td>
<td>DEEP 1935</td>
</tr>
</tbody>
</table>
(e) The following stations established by the Coast and Geodetic Survey were not searched for:

<table>
<thead>
<tr>
<th>Station</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAWSY POINT 3, 1935</td>
<td>Original description not adequate</td>
</tr>
<tr>
<td>INDIAN PT. 1851</td>
<td>No description available</td>
</tr>
</tbody>
</table>

The following stations were listed as lost or destroyed on Form 526:

**Sheet 10340**

Red House in Cove, Shingle Roof 1926

**Sheet 10341**

PT. B 1851

**Sheet 10344**

DRIFT 1942

DRIFT 2, 1956

North Head Radio Pole 1909

**Sheet 10345**

BAKER 1935

DOCK 1926

HILL 1926

BAY 1935

Ilwaco High School Dormitory, Projection over Entrance 1926

Sand Island Lower Dike Light 1935

Sand Island Tower 1935

**Sheet 10346**

BAKER (NEW)(U.S.E.) 1935

CHINOOK (U.S.E.) 1913

BAKER BAY 1851

Chinook Channel Front Range Light 1913

Chinook, Red Water Tank, 1935

Entrance Front Range 1935

Entrance Rear Range 1935

Sand Island White Water Tank 1935

Sand Island Post Light 1913

**Sheet 10347**

SCARBORO HILL 1851

COLUMBIA 1942
Sheet 10348
CLIFF POINT 1851
Knapp 1935
Knappton, Sawmill Cupola with Flagpole 1913
Knappton, Taller Smoke Stack 1935
Mugler Front Range Beard 1935
Mugler Water Tank 1913

Sheet 10350
ALAMICUT FT. 1852
Graye Bay Light 1947
Graye Bay Light 1935
Rocky Point Light 1935

Sheet 10351
Altoona Cannery, Light on End of Jetty 1935
*Elliot Point Light 1913
*Elliot School Flagpole 1935
Harrington Point Front Range Light 1935
Levenhausens Store, Flagpole 1913
Harrington Point Rear Range Light 1935
Miller Sands Channel 4 1947
Miller Sands Fish Barn, River Gable 1935
*Pillar Rock Channel Light 2
*Pillar Rock Dolphin 1935
*Pillar Rock Channel Light 1, 1935

Stations preceded by an asterisk (*) are east of Sheet 10351.

Sheet 10352
EAST JETTY 1926
Jetty Sands Light 1935
Tank Tower Beacon 1926
WEST JETTY 1926

Sheet 10353
Coast Guard Lookout Tower 1935
DUNE 1935
DUNE AUXILIARY 1935
JETTY A 1909
Fort Stevens North Radio Pole 1935 (good for topo, lost for triang)
Fort Stevens South Radio Pole 1935 (good for topo, lost for triang)
Fort Stevens Wharf, Flashing Red Light 1935
Fort Stevens Wireless, North Pole 1913
Radio Compass Aerial Mast 1935
RADIO ESCENTRIC 1926
SANDY 1935

MISHLER 1942
Naval Radio Compass 1935
North Radio Mast 1926
Point Adams Lighthouse 1909

Sheet 10354

Flavel Range Front Light 28, 1951
Flavel Range Rear Light 1951
Fort Columbia Light 1913
Lower Sands Light 1935
Point Ellice Range Front Light 1951
Priest's House, Cross 1851
SANDS 2, 1916
TANSY POINT 2, 1913
Tansy Point, East House, Offshore Gable 1951
Tansy Point, Flavel Tank Platform 1951
Tansy Point, West House, Upstream Gable 1951

Sheet 10355

Astoria Box Co., Tallest Stack 1935
Astoria, Columbia River Packing Association, Stack 1935
Astoria Ferry, Lower Front Range Light 1938
Astoria Ferry, Upper Front Range Light 1938
Astoria, Finnish Congregationalist Church, Spire 1913
Astoria, Flour Mill Co., Flagpole 1916
Astoria, Hotel, Northeast Radio Mast 1935
Astoria, Hotel, Southwest Radio Mast 1935
Astoria, Municipal Dock, Elevator, Point of Top 1916
Astoria, Old Parker House Cupola 1935
Astoria, Railroad Depot, Flagpole 1935
Astoria, St. Mary's Hospital Cross 1909
Astoria, U. S. Weather Bureau, Flagpole 1913
Astoria, U. S. Weather Bureau Tower 1935
Astoria, Union Oil Company, Marine Service Station
Downstream Gable 1935
Knappton Channel, Front Range Light 1935
POINT ELILICE 1851
Upper Sands Light 1935

Sheet 10356

Astoria, Adair School, Cupola 1909
Astoria, Full Gospel Church, Spire 1935
Buoy Depot, Flag 1913
Main Channel Beacon 2, 1935
OLD TONGUE (U.S.E.) 1905
OLD TONGUE 2 (U.S.E.) 1935
Tongue Point Crossing Light 1935
SLIDE 1935
TONGUE POINT 1851
TORO 1935
Sheet 10357

Beacon 2, 1916
Harrington Point Front Range Light 1935
Main Channel Beacon 4, 1935
Prairie Channel East Light 1947
Prairie Channel West Light 1947
Tongue Point Channel Rear Range Light 1935

Sheet 10358

Green Island Fish House, North Gable 1935
LOG 1935
Megler's Fish House, South Gable, Flag 1913
North Island, Dolphin 1950
SNAG 1935
Snag Island Beacon 1935
Snag Island Fish Station, Northeast Gable 1950
Snag Island Fish Station, Northwest Gable 1950
WATER 1913

Sheet 10359

GALENA (ASTOR) 1926
Top of East of Beached Ship 1926

Sheet 10360

DOG 1951
MARSH PT. 1, 1851
Oil Works Stack 1913
Speckernawin Cr. 1851
SKIPPAN 1951
Skopanon Waterway Light 1935
Skopanon Waterway Front Range Light 1951
Skopanon Waterway Rear Range Light 1935
Younge Bay Entrance Light 1935

Sheet 10361

Astoria Ferry Lower Range Rear Light 1938
ASTOR POINT 1851
Astoria, Marconi Southwest Wireless 1913
Astoria, Radio Station KVAS, Tower 1951
COXCOMB 1916
LUNDMAN 1935
LEWIS 1916
MATTSON 1935
Smith Point, Iron Chimney 1909
Younge Bay Light 1935
YOUNGS RIVER 1851
65 ft 20 1935
Sheet 10362

ASTORIA FERRY, UPPER REAR RANGE LIGHT EGC. 1938
Astoria Ferry, Upper Rear Range Light 1938

Sheet 10363

JOHN DAY 1935
JOHN DAY POINT 1851

Sheet 10364

SETTLERS POINT 1851

Sheet 10650

CALLENDER 1874.
SYLAR 1926

In Sheet 10348, the base of the old stack which was station Knappton, Taller Smoke Stack 1935 was found and identified for control of the compilation.

4. Vertical Control:

As Project Ph-155 is a planimetric project, no systematic recovery of vertical control was made except for tidal bench marks. A few bench marks with horizontal positions by the 29th Engineers were recovered for control of the photographs. See 3. (c).

The following tidal bench marks were recovered:

Tarlatt Slough, Willapa Bay, Washington (Sheet 10340)

BENCH MARK 2 (1933)
BENCH MARK 3 (1933)

Fort Canby, Columbia River, Washington (Sheet 10345)

BENCH MARK 1 (1926)
BENCH MARK 3 (1926)
BENCH MARK 4 (1951)
BENCH MARK MDW (1942)

Ilwaco, Baker Bay, Columbia River, Washington (Sheet 10345)

BENCH MARK 1 (1933)
BENCH MARK 3 (1933)
BENCH MARK 5 (1945)
Chinook, Baker Bay, Columbia River, Washington (Sheet 10346)

BENCH MARK 1 (1933)
BENCH MARK 2 (1933)
BENCH MARK 3 (1933)
BENCH MARK 4 (1933)
BENCH MARK 5 (1952)

Hungry Harbor, Columbia River, Washington (Sheet 10348)

BENCH MARK 1 (1935)
BENCH MARK 3 (1945)
BENCH MARK 4 (1945)

Altoona, Columbia River, Washington (Sheet 10351)

BENCH MARK 3 (1935)
BENCH MARK 4 (1940)
BENCH MARK 5 (1940)
BENCH MARK 6 (1950)

Port Stevens, Columbia River, Oregon (Sheet 10353)

BENCH MARK 1 (1935)
BENCH MARK 2-10 (USGS)-9.68 (P.P. & L.Co.)
BENCH MARK 3 (1940)
BENCH MARK 4 (1940)
BENCH MARK A-1 (USE)
BENCH MARK A-2 (USE)
BENCH MARK S-31-A-3 (USE)
BENCH MARK A-12L-18 (USGS)
BENCH MARK 17.80 (P.P. & L.Co.)
BENCH MARK 12.40 (P.P. & L.Co.)

Astoria (Youngs Bay), Columbia River, Oregon (Sheet 10361)

BENCH MARK P1 (1924)
BENCH MARK P2 RESIT (1929)
BENCH MARK P3 (1924)
BENCH MARK 17 (1931)

Astoria (Port Docks), Columbia River, Oregon (Sheet 10355)

BENCH MARK 13.26 (Port of Astoria)=W 193 (OSHD)(1926)
BENCH MARK 3 (1946)
BENCH MARK 4 (1946)
Astoria (Tongue Point), Columbia River, Oregon (Sheet 10356)

Bench Mark 1 (1925)  Bench Mark 9 (1942)
Bench Mark 3 (1925)  Bench Mark X 198 (1940)
Bench Mark 5 (1925)  Bench Mark W 198 (1940)
Bench Mark 7 (1939)  Bench Mark G 472 (1941)
Bench Mark 8 (1940)

Settlor Point, Columbia River, Oregon (Sheet 10344)

Bench Mark 3 (1935)  Bench Mark 10 (1929)
Bench Mark 4 (1947)  Bench Mark 11 (1945)
Bench Mark 5 (1947)  Bench Mark F-31 8 (USGS) (1898)

5. Contours and Drainage:

Contours not applicable to this project.

Drainage in the flat coastal areas was delineated on the field photographs where not obvious. Except to indicate direction of drainage where it is crossed by roads, no attempt was made to delineate drainage in the rougher terrain which is mostly covered by heavy growth of timber. Most of the drainage on the slopes contain a perennial stream. Generally the image of the stream bed is not visible on the photographs due to the woodland cover which is often deciduous along the streams. This deciduous cover produces lighter tones when photographed as compared with the adjoining darker tone of the conifers.

6. Woodland Cover:

Representative areas of woodland cover were classified on the field photographs. The hills are covered mostly with conifers while the drains and marshy lowlands support a deciduous growth of alder, maple, willow and wild crabapple. In logged-over areas the growth is usually mixed, the deciduous growth being mostly vine maples.

7. Shoreline and alongshore Features:

a. The mean high water line was indicated on the field photographs in the usual manner. In many places along the ocean shoreline the position of the mean high water line was determined by reference measurements to identifiable points on the photographs. The shoreline at the north end of Clatsop Spit on the north side of the mouth jetty was located by plantable on Photo 55 W 8641 in the summer of 1957. Also approximately two miles of ocean shoreline in Sheet 10359 were located by plantable in 1957. This shoreline is subject to seasonal changes and is correct as of the date of location.
Shoreline on Sheet T-10650 for which no photographs were available was located by planestab on a 1:10,000 projection in 1958 and submitted to the Portland Photogrammetric Office with the field inspection data.

Shoreline on the east side of Jetty A and the south side of Sand Island (Sheet 10345) was located by planestab on the field photographs.

b. The approximate mean low water line was delineated in the marshy area in Cathlamet Bay.

c. The character of the foreshore was indicated on the field photographs.

d. The only bluff or cliff in the project that is along the ocean shoreline is at North Head, where the cliff rises to more than two hundred feet above the water. The most prominent cliff along the Columbia River is Cape Disappointment. Here the cliff rises to around three hundred feet. There are numerous other low cliffs and bluffs along the north shore of the river.

There are no bluffs or cliffs in the project area on the south side of the Columbia River except at Tongue Point where the bluff rises to a height of approximately two hundred seventy-five feet and at John Day Point where a vertical cliff attains the height of seventy feet.

e. All docks, wharves, piers, landings, etc. were indicated on the field photographs.

f. The shore ends of submarine cable crossings were indicated on the following field photographs:

<table>
<thead>
<tr>
<th>Photo</th>
<th>Type of Crossing</th>
<th>Body of Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>55 W 8644</td>
<td>Communication</td>
<td>Columbia River</td>
</tr>
<tr>
<td>55 W 8645</td>
<td>Communication</td>
<td>Columbia River</td>
</tr>
<tr>
<td>55 W 8669</td>
<td>Communication</td>
<td>Columbia River</td>
</tr>
<tr>
<td>55 W 8593</td>
<td>Communication &amp; Power</td>
<td>Lewis and Clark River</td>
</tr>
<tr>
<td>55 W 8602</td>
<td>Communication</td>
<td>Skipanon River</td>
</tr>
<tr>
<td>55 W 8603</td>
<td>Power</td>
<td>Youngs River</td>
</tr>
<tr>
<td>55 W 8625</td>
<td>Communication</td>
<td>John Day River</td>
</tr>
<tr>
<td>55 W 8625</td>
<td>Power</td>
<td>Cathlamet Bay at</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maritime Reserve Fleet</td>
</tr>
<tr>
<td>55 W 8623</td>
<td>Communication</td>
<td>Columbia River</td>
</tr>
<tr>
<td>55 W 8629</td>
<td>Communication</td>
<td>Columbia River</td>
</tr>
</tbody>
</table>

The submarine cable crossings in Baker Bay have been abandoned and are in various stages of salvage.
b. At Ilwaco a new boat basin was completed while the field party was in the area. It was located by planetable on a field photograph of the area. A new boat basin at Chinook was also located by planetable on a field photograph. Tide gates at or near the mouth of the Chinook and Wallacut Rivers close these streams to navigation. The north shore of the mouth of the Columbia is stabilized by a boulder jetty, known as the North Jetty. A similar jetty, known as the South Jetty, is on the south side of the river at the mouth. A boulder jetty, known as Jetty A, projects southward from the southeast extremity of Cape Disappointment. Four pile dikes have been constructed to control the river current erosion of the south shore of Sand Island. South of the village of Chinook there is a pile dike known as Chinook Dike. Earth dikes have been erected along much of the shoreline of the Deep, Grays and Bear Rivers to prevent inundation of the low ground which has been reclaimed for pasture and cultivation.

8. Offshore Features:

Offshore rocks are present in the vicinity of North Head and Tongue Point. There are numerous piling in the river, especially in Baker Bay. Some of these were located by planetable and stadia from shore, others by sextant fixes and check angles which were plotted directly on the photograph in the field and others were circled with a dashed line and labeled "approximate position". Fixed aids to navigation which are offshore were located by third-order triangulation unless they had previously been located by that method. See 9 d.

The mast of a wreck on the north side of the north jetty and close to shore was located by theodolite cuts from stations BURST 1956, TRESTLE 1942 and T3N, R1W Secs. 5, WC5, 1956. The angles are recorded on the field photograph that covers the area.

Heights of rocks and piling were estimated and heights of fixed aids to navigation were obtained from the "List of Lights and Other Marine Aids, Pacific Coast of the United States, 1958 Edition".

9. Landmarks and Aids:

a. All charted landmarks within the project area were inspected and those that are no longer useful or cease to exist were listed on Form 567 to be deleted. All charted landmarks that are still useful and new landmarks were listed on Form 567 to be charted. Heights of landmarks were determined by vertical angles from points of known position and elevation.

b. One interior landmark to be located photogrammetrically was selected namely:

TANK 1957 identified on 55 W 8722
c. The only aeronautical aid in the project area is the aero beacon at the Clatsop County Airport. It was identified on Photo 55 W 85% and is to be located photogrammetrically.

d. The following fixed aids to navigation were located by third-order triangulation methods in 1958:

- Astoria Crossing Range Front Light
- Astoria Crossing Range Rear Light
- Astoria Lower Range Front Light
- Astoria Lower Range Rear Light
- Baker Bay East Channel Light 2
- Baker Bay East Channel Light 6
- Baker Bay East Channel Light 13
- Baker Bay East Channel Light 15
- Baker Bay West Channel West Jetty Light
- Baker Bay West Channel East Jetty Light
- Baker Bay West Channel Light 22
- Chinook Dike Light
- Desdemona Sands Light
- Grassy Island Light 8A
- Grays Bay Light
- Harrington Point Channel Light 52
- Harrington Point Channel Light 54
- Harrington Point Range Rear Light
- Ilwaco Basin Entrance Light
- Ilwaco Dock Light
- Megler Range Front Light
- Megler Range Rear Light
- Miller Sands Upper Range Front Light
- Miller Sands Upper Range Rear Light
- Pillar Rock Lower Range Rear Light
- Prairie Channel Light 3
- Quarantine Light
- Sand Island Lower Dike Light
- Sand Island Range Front Light
- Tongue Point Crossing Light 49

e. Floating aids to navigation - not applicable.

10. Boundaries, Monuments and Lines:

Boundaries of Camp Clatsop Military Reservation, Fort Stevens Park, Oregon State Game Refuge, Fort Stevens, Coast Guard Lifeboat Station at Point Adams, Fort Clatsop, City of Hammond and City of Warrenton were located in the following manner: Plats or maps of the boundaries were obtained and enough points on the boundaries identified on the field photographs and the maps to enable the compiler to control a projection of the map onto the manuscript. The points were designated by capital letters of the alphabet and cross-referenced on the maps and the field photographs. Violet ink was used. A tabulation of the points identified follows:
<table>
<thead>
<tr>
<th>Point</th>
<th>Photo</th>
<th>Boundary</th>
<th>Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>57 L 1823</td>
<td>Camp Clatsop</td>
<td>Blue print sheet 9-7-10</td>
</tr>
<tr>
<td>B</td>
<td>57 L 1823</td>
<td>Camp Clatsop</td>
<td>Blue print sheet 9-7-10</td>
</tr>
<tr>
<td>C</td>
<td>57 L 1823</td>
<td>Camp Clatsop</td>
<td>Blue print sheet 9-7-10</td>
</tr>
<tr>
<td>D</td>
<td>57 L 1823</td>
<td>Camp Clatsop</td>
<td>Blue print sheet 4-7-10</td>
</tr>
<tr>
<td>E</td>
<td>57 L 1822</td>
<td>Camp Clatsop</td>
<td>Blue print sheet 4-7-10</td>
</tr>
<tr>
<td>F</td>
<td>55 W 8596</td>
<td>Camp Clatsop</td>
<td>Blue print sheet 32A-8-10</td>
</tr>
<tr>
<td>G</td>
<td>55 W 8596</td>
<td>Camp Clatsop</td>
<td>Blue print sheet 29-8-10</td>
</tr>
<tr>
<td>H</td>
<td>57 L 1819</td>
<td>Fort Stevens Park</td>
<td>Map of Fort Stevens Park</td>
</tr>
<tr>
<td>J</td>
<td>57 L 1820</td>
<td>Fort Stevens Park</td>
<td>Map of Fort Stevens Park</td>
</tr>
<tr>
<td>K</td>
<td>57 L 1820</td>
<td>Fort Stevens Park</td>
<td>Map of Fort Stevens Park</td>
</tr>
<tr>
<td>L</td>
<td>57 L 1819</td>
<td>Fort Stevens Park</td>
<td>Map of Fort Stevens Park</td>
</tr>
<tr>
<td>M</td>
<td>55 W 8634</td>
<td>Hammond - Warrenton</td>
<td>Tracing of Fort Stevens</td>
</tr>
<tr>
<td>N</td>
<td>55 W 8634</td>
<td>Warrenton</td>
<td>Addition to City of Hammond, City Map of Hammond, City Map of Warrenton, Oregon State Game Commission, and Fort Stevens Park</td>
</tr>
<tr>
<td>P</td>
<td>55 W 8634</td>
<td>Oregon State Game Refuge - Fort Stevens</td>
<td>Oregon State Game Commission, and Map of Fort Stevens</td>
</tr>
<tr>
<td>Q</td>
<td>55 W 8634</td>
<td>Hammond</td>
<td>Tracing of Fort Stevens</td>
</tr>
<tr>
<td>R</td>
<td>55 W 8634</td>
<td>Hammond - Warrenton</td>
<td>Map of Fort Stevens</td>
</tr>
<tr>
<td>S</td>
<td>55 W 8634</td>
<td>Fort Stevens</td>
<td>Map of Coast Guard Lifeboat Station, Point Adams, Oregon</td>
</tr>
<tr>
<td>T, U, V &amp; W</td>
<td>55 W 8634</td>
<td>Fort Stevens</td>
<td>Map of Coast Guard Lifeboat Station, Point Adams, Oregon</td>
</tr>
<tr>
<td>X</td>
<td>55 W 8633</td>
<td>Hammond - Warrenton</td>
<td>City map of Hammond, City Map of Warrenton</td>
</tr>
<tr>
<td>Y</td>
<td>55 W 8634</td>
<td>Hammond</td>
<td>Tracing of Fort Stevens</td>
</tr>
<tr>
<td>Z</td>
<td>55 W 8595</td>
<td>Warrenton</td>
<td>City Map of Warrenton</td>
</tr>
<tr>
<td>Point</td>
<td>Photo</td>
<td>Boundary</td>
<td>Map</td>
</tr>
<tr>
<td>-------</td>
<td>-------</td>
<td>-----------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>AA</td>
<td>55 W 8595</td>
<td>Warrenton</td>
<td>City Map of Warrenton</td>
</tr>
<tr>
<td>BB</td>
<td>55 W 8595</td>
<td>Warrenton</td>
<td>City Map of Warrenton</td>
</tr>
<tr>
<td>CC</td>
<td>55 W 8594</td>
<td>Warrenton</td>
<td>City Map of Warrenton</td>
</tr>
<tr>
<td>DD</td>
<td>55 W 8594</td>
<td>Warrenton</td>
<td>City Map of Warrenton</td>
</tr>
<tr>
<td>EE</td>
<td>55 W 8594</td>
<td>Warrenton</td>
<td>City Map of Warrenton</td>
</tr>
<tr>
<td>FF</td>
<td>55 W 8594</td>
<td>Warrenton</td>
<td>City Map of Warrenton</td>
</tr>
<tr>
<td>CG</td>
<td>55 W 8593</td>
<td>Fort Clatsop</td>
<td>Tracing, Plat of Fort Clatsop</td>
</tr>
<tr>
<td>HH</td>
<td>55 W 8593</td>
<td>Fort Clatsop</td>
<td>Tracing, Plat of Fort Clatsop</td>
</tr>
<tr>
<td>Concrete Monument</td>
<td>55 W 8633</td>
<td>Hammond - Warrenton</td>
<td>City Map of Hammond</td>
</tr>
</tbody>
</table>

No points on the city limit of Astoria were identified. In a conference with the city engineer of Astoria, it was learned that there is only one marked point on the boundary. In a discussion of boundaries with the Officer-in-Charge, Portland Photogrammetric Office, it was decided that the Map of Astoria furnished by the city engineer and submitted with the field data for this project is adequate for the compiler to transfer the Astoria City Limit to the manuscripts.

In the vicinity of Tongue Point, Boundaries of the U.S. Coast Guard Buoy Depot, U.S. Naval Station and U.S. Maritime Commission may be obtained by the compiler from a Composite Map, U.S. Naval Station, Tongue Point, dated 10 September 1953. No points on these boundaries were identified on the photographs in the field.

Geodetic positions of turning points on the boundary between Washington and Oregon were obtained from the Oregon-Washington Boundary Commission.

The city limit of Longbeach, Washington was delineated on the field photographs.

The limits of Fort Canby, North Head Lighthouse Station and Cape Disappointment Lighthouse Station were not located in the field. Plats of these boundaries were submitted to the Portland Office.

No points on the city limit of Ilwaco, Washington were identified. A plat was obtained from the County Engineer and submitted to the Portland Office.

One point on the boundary of Fort Columbia State Park was identified on a field photograph. A plat of the park obtained from the Washington State Park Commission was submitted to the Portland Office.
11. Other Control:

The spacing of recoverable topographic stations was complied with. The following recoverable topographic stations not listed as landmarks or aids were established and located by photogrammetric methods:

Sheet 10359
JEEP 1957 DUNE 1957

During the spring and summer of 1958, photo-hydro support for the hydrographic party was accomplished by ENS Wesley P. James, who identified photo-hydro points on photographs and transferred the points to black-line prints of the shoreline manuscripts. The field location of these points was considered final. Photographs for this work were obtained from the hydrographer and returned to the Portland Photogrammetric Office.

12. Other Interior Features:

Previous to the receipt of Photogrammetric Instruction 54, all buildings to be mapped were circled on the photographs with red ink. After receipt of this instruction, only landmarks and public buildings were shown.

Before receipt of Photogrammetric Instruction 56, roads and trails were classified in accordance with Topographic Manual — Part II, Section 5441. Upon receipt of said instruction, roads and trails were classified in accordance with the new instruction.

Clatsop County Airport has been indicated on Photo 55. W 8602.

A tabulation of bridge and overhead cable clearances follows:

<table>
<thead>
<tr>
<th>Stream</th>
<th>Type</th>
<th>Horizontal Left</th>
<th>Center</th>
<th>Right</th>
<th>Vert.</th>
<th>Time</th>
<th>Hwy or RR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lewis and Clark River</td>
<td>Bascule</td>
<td>100</td>
<td>15.3</td>
<td>@MHW</td>
<td>Hwy 101</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skipanon River</td>
<td>Fixed</td>
<td>34</td>
<td>2.9</td>
<td>&quot;</td>
<td>Hwy 102</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skipanon River</td>
<td>Floating</td>
<td>37</td>
<td>4.3</td>
<td>&quot;</td>
<td>Hwy (county)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Svensen Slough</td>
<td>Swing</td>
<td>15</td>
<td>23</td>
<td>&quot;</td>
<td>RR (SP&amp;S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fixed</td>
<td>22</td>
<td>10</td>
<td>&quot;</td>
<td>Hwy (county)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Bridge Clearances in Feet

<table>
<thead>
<tr>
<th>Stream</th>
<th>Type</th>
<th>Horizontal</th>
<th>Vertical</th>
<th>Time</th>
<th>Hwy or RR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youngs Bay</td>
<td>Double</td>
<td>151</td>
<td>20</td>
<td>65W</td>
<td>Hwy 101</td>
</tr>
<tr>
<td>Youngs Bay</td>
<td>Bascule</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>John Day River</td>
<td>Swing</td>
<td>126</td>
<td>129</td>
<td>10</td>
<td>RR (SP&amp;S)</td>
</tr>
<tr>
<td>John Day River</td>
<td>Swing</td>
<td>45</td>
<td>17</td>
<td></td>
<td>Hwy 30</td>
</tr>
<tr>
<td>Walluski River</td>
<td>Swing</td>
<td>59</td>
<td>59</td>
<td>6.0</td>
<td>RR (SP&amp;S)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50</td>
<td>49</td>
<td>5.0</td>
<td>Hwy</td>
</tr>
</tbody>
</table>

## Overhead Cable Clearances in Feet

<table>
<thead>
<tr>
<th>Type</th>
<th>Located</th>
<th>Photo</th>
<th>Clearance</th>
<th>Temperature (Fahrenheit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>Skipanon River near RR bridge</td>
<td>55 W 8602</td>
<td>64</td>
<td>60</td>
</tr>
<tr>
<td>Power</td>
<td>Skipanon River near Highway 101</td>
<td>55 W 8602</td>
<td>59</td>
<td>55</td>
</tr>
<tr>
<td>Power</td>
<td>Lewis and Clark R. at Highway 101</td>
<td>55 W 8593</td>
<td>86</td>
<td>55</td>
</tr>
<tr>
<td>Power</td>
<td>Skipanon River at Highway 101</td>
<td>55 W 8601</td>
<td>17</td>
<td>50</td>
</tr>
<tr>
<td>Power</td>
<td>Walluski River</td>
<td>55 W 8591</td>
<td>61</td>
<td>55</td>
</tr>
<tr>
<td>Power</td>
<td>John Day River 2200 feet north of Highway 30</td>
<td>55 W 8606</td>
<td>99</td>
<td>55</td>
</tr>
<tr>
<td>Power</td>
<td>John Day River on south side of Highway 30</td>
<td>55 W 8606</td>
<td>57</td>
<td>55</td>
</tr>
<tr>
<td>Power</td>
<td>John Day River 1200 feet southeast of bridge over Highway 30</td>
<td>55 W 8606</td>
<td>73</td>
<td>55</td>
</tr>
</tbody>
</table>

13. Geographic Names:

*Geographic names is the subject of a special report - GEOGRAPHIC NAMES REPORT - PART I and PART II, MOUTH OF COLUMBIA RIVER, OREGON, PROJECT PH-155.*

14. Special Reports and Supplemental Data:

No special reports other than the Geographic Names Report were compiled.
The following maps, tracings and plats were obtained to assist in the compilation of the manuscripts:

a. Blue print of Camp Clatsop Military Reservation in six parts.
b. Oszalid of Fort Stevens Park.
c. Oszalid of Oregon State Game Refuge.
d. Map of Fort Stevens
e. City Map of Hammond.
f. City Map of Warrenton
g. Tracing of Fort Stevens Addition to City of Hammond
h. Tracing of Flat of Fort Clatsop
i. City Map of Astoria
j. Composite Map, U. S. Naval Station, Tongue Point

Approved: Respectfully submitted,

Lorne G. Taylor
LCDR, C&GS
Officer-in-Charge

Charles H. Bishop
Cartographer

Robert B. Melby
Cartographic Survey Aid
Photogrammetric Plot Report T-106149
Ph-155
Mouth of Columbia River
Scale 1:10,000

21. Area Covered:

This report applies to the single map T-106149. It is the most northwesterly map of the project and covers some of the coastline area of the Pacific Ocean just north of the Columbia River mouth.

22. Method:

A standard bridge consisting of stereo-models 57-L-1830 thru 1835, was run to obtain additional control for compilation. Seven field identified triangulation stations were available in the area covered. A three point solution by IBM was used to obtain positions for all bridge points identified. No difficulty was encountered in either the bridging or computational phase of this project.

23. Adequacy of Control:

Horizontal control available for the stereo-bridging was adequate.

Triangulation station S.S. Tioga could not be clearly identified and was omitted.

24. Supplemental Data:

None

25. Photography:

Photography was adequate. Only the westerly flight was bridged since it also covered the western shoreline of Shoalwater Bay.

Submitted:

[Signature]

Approved:

John Perrow, Jr.
Cartographer (Photo)

Morton Kelley
Supervisory Cartographer (Photo)
PHOTOGRAMMETRIC PLOT — PK-155
SCALE 1:10,000
All control field identified. *
* — Not used in plot (stereobridge).
<table>
<thead>
<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
<th>LATITUDE OR $\delta$-COORDINATE</th>
<th>LONGITUDE OR $\lambda$-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREEN, 1926</td>
<td>Wash. So. P-216</td>
<td>N.A.</td>
<td>618.154.37</td>
<td>1,104.297.67</td>
<td>315.177 (1565.63)</td>
</tr>
<tr>
<td>Ditto</td>
<td>Office Comp.</td>
<td>N.A.</td>
<td>618.598.20</td>
<td>1,104.213.98</td>
<td>359.20 (1101.80)</td>
</tr>
<tr>
<td>KLIPSAN, 1926</td>
<td>Wash. So. P-216</td>
<td>N.A.</td>
<td>432.727.18</td>
<td>1,104.610.10</td>
<td>2727.18 (2272.82)</td>
</tr>
<tr>
<td>Ditto</td>
<td>Office Comp.</td>
<td>N.A.</td>
<td>632.965.81</td>
<td>1,104.835.13</td>
<td>2965.81 (2034.19)</td>
</tr>
<tr>
<td>LINE R.M.1</td>
<td>Office Comp.</td>
<td>N.A.</td>
<td>612.371.72</td>
<td>1,114.268.63</td>
<td>2371.72 (2625.28)</td>
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<td>Ditto</td>
<td>Office Comp.</td>
<td>N.A.</td>
<td>611.856.27</td>
<td>1,113.070.57</td>
<td>1856.27 (3171.73)</td>
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<tr>
<td>SNAKE 2 1939</td>
<td>Wash. So. P-155</td>
<td>N.A.</td>
<td>422.230.08</td>
<td>1,112.995.90</td>
<td>2230.08 (2769.92)</td>
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<tr>
<td>Ditto</td>
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<td>N.A.</td>
<td>422.086.25</td>
<td>1,112.722.36</td>
<td>2086.25 (2913.75)</td>
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<tr>
<td>BONNIE, 1926</td>
<td>Wash S P-216</td>
<td>N.A.</td>
<td>605.290.16</td>
<td>1,104.804.41</td>
<td>200.16 (4709.54)</td>
</tr>
<tr>
<td>BONNIE, 1926</td>
<td>Office Comp.</td>
<td>N.A.</td>
<td>605.111.41</td>
<td>1,103.886.86</td>
<td>111.41 (1558.59)</td>
</tr>
<tr>
<td>LARGE RED BARN, North GABLE, 1939</td>
<td>Wash. So. P-155</td>
<td>N.A.</td>
<td>603.557.39</td>
<td>1,113.069.59</td>
<td>3557.39 (111.2.61)</td>
</tr>
</tbody>
</table>

**SCALE FACTOR:** None

**SCALE OF MAP:** 1:10,000

**COMPUTED BY:** J. E. W.  
**DATE:** 2/18/58  
**CHECKED BY:** R.B.M.  
**DATE:** 2/18/58
Compilation Report T-10649

Stereo-models 57 L-1832 thru 1835 were detailed. All control and bridge points were held to within 0.2 mm. Only the shoreline necessary for hydrographic operations was detailed. The field inspection delineates the mean high water line on the photographs at the point of contact of water and sand. The water datum at time of photography was 1.2 feet below MHW and it appears that the MHW line is slightly further inshore and has been so delineated. Verification of the mean high water line should be made in the field. Detail points, pass points, and photo-centers were shown on the manuscript. A set of office ratio prints on positype paper was prepared for use during hydrographic operations for locating signal positions by photogrammetric methods.

The manuscript will be fully detailed as a planimetric map at a later date and a compilation report following the standard format will be written at that time.

Submitted:

John Perrow, Jr.
Cartographer (Photo)

Approved:

Morton Keller
Supervisory Cartographer (Photo)
10 January 1958

To: Officer in Charge
Portland Photogrammetric Office
Coast and Geodetic Survey
405 Customhouse
Portland 9, Oregon

To: Cartographic Branch

Subject: Instructions, planimetric mapping (Field and Office) - Project PH-155, Lower Columbia River Supplement 2

References: a) Instructions, planimetric mapping (Field and Office) - Project 6155 dated 5 Oct. 1955
b) Instructions, planimetric mapping (Field and Office) - Project 6155 - Supplement 1 dated 12 October 1955

Two new maps Nos. T-10649 and T-10650 have been added to this project for control of next season's hydrography. The maps are on the outer coast as indicated on the revised project diagram.

Field surveys are assigned to the Portland Photogrammetric Office. A minimum amount of field work will be required this winter as indicated on the revised project diagram. Additional field surveys as outlined in reference instructions shall be completed by the photohydro support party during hydrography.

Compilation of map T-10649 is assigned to the Cartographic Branch. Compilation of map T-10650 is assigned to the Portland Photogrammetric Office.

Delineation of features shall be restricted to the shoreline sections of the maps this winter. Method 1 of general instructions dated 11 January 1956 shall be observed. The Portland Photogrammetric Office will complete both maps under method 2 after field surveys are complete and additional photographs have been obtained.
Infra-red photography taken in 1957 shall be used for bridging and compilation of both maps. This photography gives an unusually clear and positive contact line between water and the beach. No inspection of shoreline on the outer coast will be required.

Photography is incomplete for map T-10650 and does not extend south of latitude 46°37'54". Shoreline and signals south of this point will be located by plane-table methods by the photo-hydro support unit.

(Signed) Charles Pierce,
Assistant Director

CC: Portland District Office
20
83
COMPILATION REPORT
Map Manuscript T-10649
Project Ph-155

31. Delineation:
The alongshore features and interior details were compiled on the Kelsh instrument using diapositives made from infrared photography. Field inspection was adequate.

32. Control:
Identified horizontal control and that located in the stereoplanigraph bridge was adequate.

33. Supplemental Data:
None.

34. Contours and Drainage:
Contours are not applicable.

Drainage was field inspected and easily discernable in the Kelsh Models. Reference was made to the U.S.G.S. 7 1/2 minute quadrangle Ocean Park, Washington.

35. Shoreline and Alongshore Details:
Refer to Compilation Report by John Perrow, Jr. Which is included in this descriptive report.

The area of the shoreline referred to in this report is constantly changing and it is practically impossible to return to the site and ascertain the accuracy of a mean high-water line delineated from photographs taken at a predicted tide of 1.2 ft. below mean high-water. No attempt was made to verify the Washington Office interpretation of the mean high-water line.

Foreshore areas were detailed where visible on the photographs.

Approximate low-water lines could not be determined from the photography.

36. Offshore Details:
None.
37. **Landmarks and Aids:**

   None.

38. **Control for Future Surveys:**

   None.

39. **Junctions:**

   A satisfactory junction was made to the south with T-10340, to the west is the Pacific Ocean. There are no contemporary surveys to the north and east.

40. **Horizontal and Vertical Accuracy:**

   Vertical accuracy is not applicable. There are no areas that are believed to be of sub-normal accuracy.

46. **Comparison with Existing Maps:**

   Comparison was made with U.S.G.S. 7½ minute Ocean Park, Wash., quadrangle, Scale 1:24,000, Published 1949.

47. **Comparison with Nautical Charts:**


   **Items to be Applied to Nautical Charts Immediately.**

   None

   **Items to be Carried Forward.**

   None.
Approved: Fred Natella, CAPT, C&GS
Portland District Officer for
Lorne G. Taylor, CDR, C&GS

Respectfully submitted: J. Edward Deal
Cartographer
49. Notes to the Hydrographer:

No recoverable topographic stations were located.

All triangulation stations shown were recovered and identified during field inspection.
PHOTOGRAMMETRIC OFFICE REVIEW

T.10649

1. Projection and grids  
2. Title  
3. Manuscript numbers  
4. Manuscript data  

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. Ellipsoids overlay  
37. Descriptive Report  
38. Field inspection photographs  
39. Form  

Reviewer: [Signature]  
Supervisor: [Signature]

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: [Signature]  
Supervisor: [Signature]

43. Remarks: [Text]
48. Geographic Names:

Albers Slough
Breaker Lake
Briscoe Lake
Clam Lake
Cranberry Lake
Deer Lake
Freshwater Lake
Giles Lake
Giles Slough
Island Lake
Litschke Lake
Loomis Lake
Lost Lake
North Beach Peninsula
Oceanside
Pacific Park
*Shoalwater Bay
Tape Lake

* B.G.N. Decision

Geographic Names Section
43 February 1962
REVIEW REPORT
T-10340 through T-10351 and T-10649
Planimetric
February 21, 1962

62. Comparison with Registered Topographic Surveys:

<table>
<thead>
<tr>
<th>Survey</th>
<th>Scale</th>
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<th>Survey</th>
<th>Scale</th>
<th>Date</th>
</tr>
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<td>H-240</td>
<td>83,600</td>
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<td>1341b</td>
<td>10,000</td>
<td>1873</td>
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<tr>
<td>317</td>
<td>22,762</td>
<td>1850-51</td>
<td>1342a</td>
<td>10,000</td>
<td>1873</td>
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<td>H-334</td>
<td>221,360</td>
<td>1852</td>
<td>1894</td>
<td>20,000</td>
<td>1889</td>
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<tr>
<td>H-402</td>
<td>1806</td>
<td>10,000</td>
<td>1887</td>
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<td></td>
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<td>1123</td>
<td>10,000</td>
<td>1868</td>
<td>H-1930</td>
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<td>1870</td>
<td>6521b</td>
<td>10,000</td>
<td>1936</td>
</tr>
</tbody>
</table>

The manuscripts listed in this report supersede those surveys listed above for construction of nautical charts.

63. Comparison with Maps of Other Agencies:

Comparison was made with all available maps during the photographic review. For specific details refer to the Compilation Report for each manuscript.

64. Comparison with Contemporary Hydrographic Surveys:

Hydrographic survey H-8416 (1958) covers the three western sheets in the project T-10340, T-10344 and T-10649. Comparison between these three sheets and the hydro survey revealed no inconsistencies.

65. Comparison with Nautical Charts:

<table>
<thead>
<tr>
<th>Chart</th>
<th>Scale</th>
<th>Edition</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>5002</td>
<td>1:180,789</td>
<td>10</td>
<td>1/7/61</td>
</tr>
<tr>
<td>6151</td>
<td>1:40,000</td>
<td>34</td>
<td>1/7/61</td>
</tr>
</tbody>
</table>

66. Adequacy of Results and Future Surveys:

These maps comply with instructions and meet National Standards of Map Accuracies except as detailed below.

Many offshore details such as fishtraps, lines of pile, etc. were shown on the manuscript and labeled P.D. (Position Doubtful). These features were not field inspected, being some distance offshore their accuracy may not be standard. They should be accurately positioned during hydrography.
<table>
<thead>
<tr>
<th>DATE</th>
<th>CHART</th>
<th>CARTOGRAPHER</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Before After Verification and Review</td>
</tr>
<tr>
<td>9-14-74</td>
<td>18504</td>
<td>D. C. Larson</td>
<td>Fully After Verification and Review</td>
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<td>Before After Verification and Review</td>
</tr>
</tbody>
</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.