

10649

Diag. Cht. Nos. 6002-2.

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

General locality Vicinity of Mouth of
Columbia River

Locality Breaker 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

COMM-DC 61300

10649

DATA RECORD

T-10649

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

Field Office (II): Seaview, Washington Chief of Party: V. Ralph Sobieralski

Photogrammetric Office (III): Washington, D. C. Officer-in-Charge: CAPT L. W. Swanson

Instructions dated (II) (III): 10 January 1958 Copy filed in Division of
(Copy included) 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

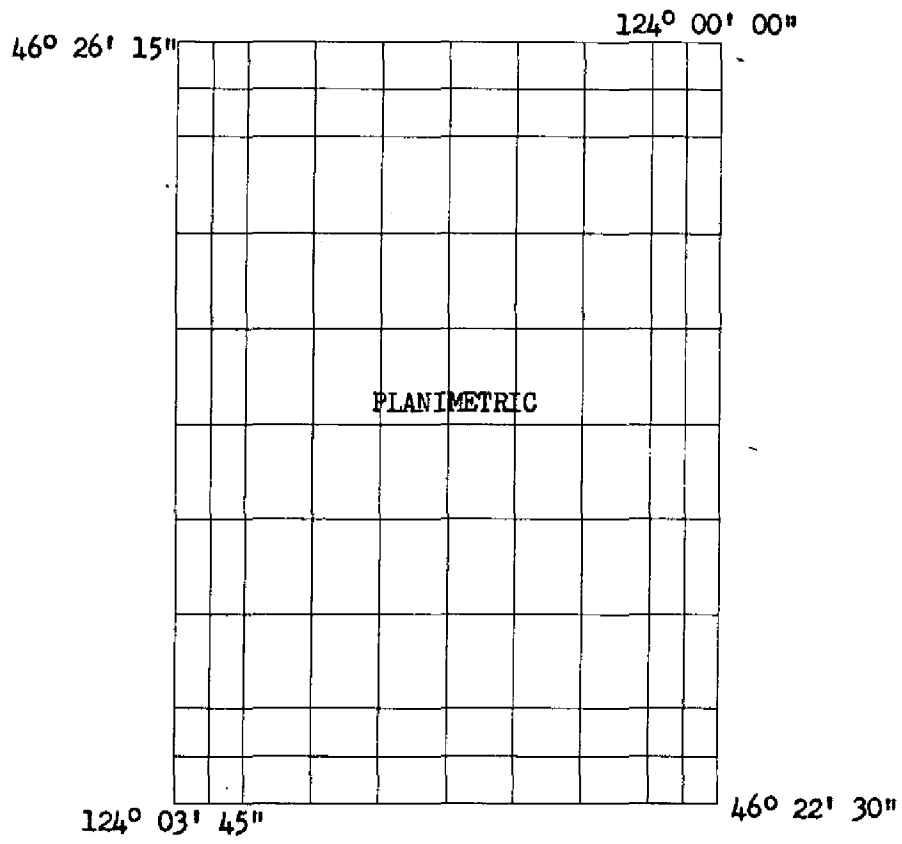
Lat.: 46° 25' 31.864 Long.: 124° 13' 11.152" Adjusted X
Unadjusted

Plane Coordinates (IV): State: Washington zone: South

y = 418, 454.37 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)

July to Nov 1957
Date: Feb. 1958
June 1958

Planetable contouring by (II):

Date:

Completion Surveys by (II):

Date:

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

~~Radial Plot~~ Stereoscopic

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

Date: 3-25-58

Stereoscopic Instrument compilation (III):

Planimetry J. D. Perrow, Jr.
Contours L. L. Graves, Interior

Date: 3-26-58

Date:

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):

Date:

Camera (kind or source) (III): **C&GS Camera "L"**

Number	Date	PHOTOGRAPHS (III)		Scale	Stage of Tide
		Time			
57L 1832-1835	8-18-57	1510		1:10,000	4.8 above MLW ^L
57-L-1843 thru 1845	"	1520		"	"

Tide (III)

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

Ratio of Ranges	Mean Range	Spring Range
	6.5	
	6.0	

Washington Office Review by (IV): *A.K. Hingwood*

Date: *2/23/62*

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

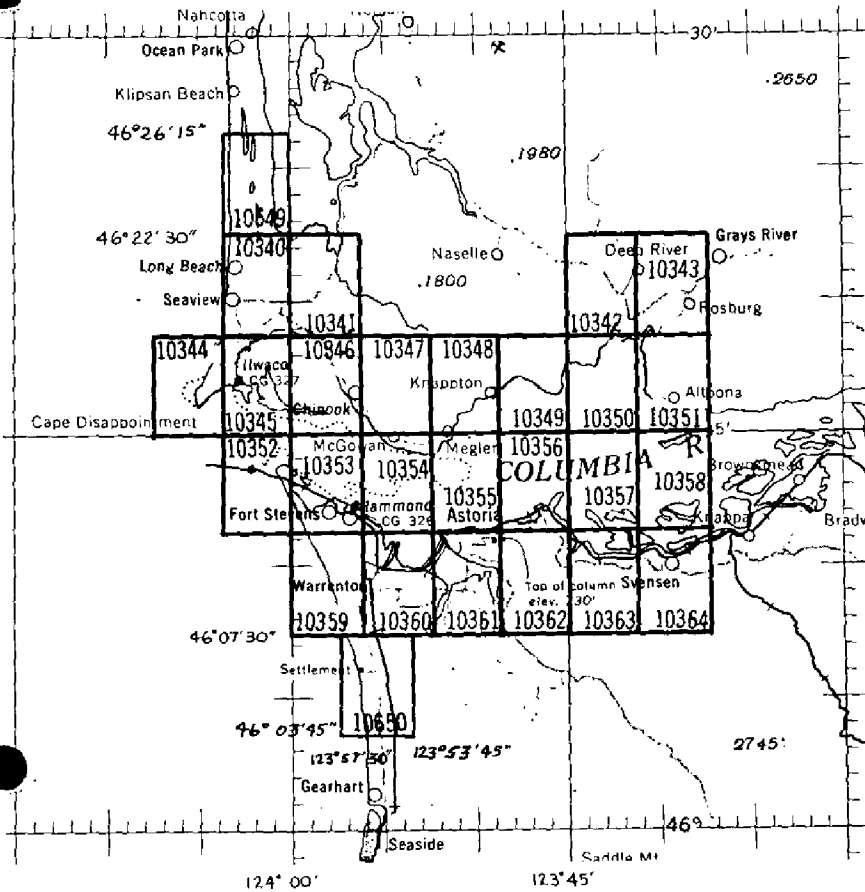
Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): **8**
 Shoreline (More than 200 meters to opposite shore) (III): **4 miles**
 Shoreline (Less than 200 meters to opposite shore) (III): **None**
 Control Leveling - Miles (II):
 Number of Triangulation Stations searched for (II): **9** Recovered: **6** Identified: **6**
 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:

PLANIMETRIC PROJECT PH-155
MOUTH OF COLUMBIA RIVER, WASH.-OREGON



OFFICIAL MILEAGE FOR COST ACCOUNTS		
SHEET NO.	LIN. MI. SHOR. LINE	AREA SQ. MILES
10340	9	10
10341	8	12
10342	4	13
10343	7	13
10344	6	2
10345	13	3
10346	11	6
10347	3	12
10348	4	11
10349	4	8
10350	6	3
10351	8	9
10352	3	1
10353	9	4
10354	3	1
10355	4	2
10356	5	5
10357	8	1
10358	21	3
10359	5	6
10360	14	11
10361	15	9
10362	8	12
10363	17	10
10364	12	12
10649	8	8
10650	4	8
TOTAL	219	193

FIELD INSPECTION REPORT

PROJECT PH-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 Megler, 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's ports for sea-going 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 Warrenton. 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:

<u>Station</u>	<u>Sheet</u>	<u>Established by</u>
GROUSE (temporary)	10341	Three Point Fix
CANEY	10345	Triangulation & Traverse
Iiwaco Dock Light	10345	Triangulation Intersection
Farm	10346	" "
Sock	10346	" "
NOOK (USE)	10346	Triangulation
PICNIC	10346	"
SLOPE (temporary)	10347	Three Point Fix
KNAPP 2	10348	Triangulation
Mit	10359	Triangulation Intersection
Lucas (shoran)	10650	" "
Rocky Point Light	10350	Triangulation

Station CANEY 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, GALENA 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:

<u>Station</u>	<u>Sheet</u>	<u>Established</u> <u>by</u>	<u>Date</u>	<u>Order of</u> <u>Accuracy</u>	<u>Disposition</u>
BAY	10349	U.S.E.	1936	Unknown	Not recovered
ERUIN	10341(E.of)	"	1937	"	Recovered
BR 3	10342(W.of)	"	1936	"	Destroyed
BR 3, RM 2	10342(W.of)	"	1936	"	Recovered
V 62	10342	"	1936	"	Not recovered
W 62	10342	"	1936	"	Recovered
X 62	10343	"	1936	"	"
Y 62	10343(E.of)	"	1936	"	"
BR 2	10343(E.of)	"	1936	"	Not recovered
BR 2, RM 1	10343(E.of)	"	1936	"	Recovered

<u>Station</u>	<u>Sheet</u>	<u>Established by</u>	<u>Date</u>	<u>Order of Accuracy</u>	<u>Disposition</u>
18 (USGS)	10353	U.S.E.	1935	Unknown	Recovered
A-31	10353	"	1935	"	"
S-31-A3	10353	"	1935	"	"
Q-31	10353	"	1935	"	Not recovered
B 31	10354	"	1936	"	" "
J 309	10354	"	1939	"	Recovered
C 31	10360	"			Destroyed
P-8 (PP&LCo)	10360	"	1935	"	Recovered
F-9 (PP&LCo)	10360	"	1935	"	"
Q-100 (PP&LCo)	10360	"	1935	"	"
S-100 (PP&LCo)	10360	"	1935	"	"
TBN RLOW	10360	"	1935	"	Not recovered
P-10 (PP&LCo)	10360	"	1935	"	Recovered
P-22 (PP&LCo)	10362	"	1935	"	"
P-23 (PP&LCo)	10362	"	1935	"	Not recovered
P-24 (PP&LCo)	10362	"	1935	"	Recovered
FF 203	10364	"	1936	"	"
H-203	19364	"	1936	"	"
JJ-203	10364	"	1936	"	"
K-203	10364	"	1936	"	"
B-203	10364	"	1936	"	"
J-46 (OSHD)	10650	"	1935	"	"
F-11 (PP&LCo)	10650	"	1935	"	"
F-12 (PP&LCo)	10650	"	1935	"	"

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

<u>Station</u>	<u>Sheet</u>	<u>Reason for Omission</u>	<u>Supplemented by Station</u>
BEAR 1911) BRUIN U.S.E. 1937)	10341	In dense timber, could not identify	GROUSE 1957 (temporary)
APEX 1939	10340	In dense timber, could not identify	No substitution
Main Channel Beacon 4, 1935	10341	Mis-plotted on Project Diagram by Wash. Office	Farm 1958
BAKER WEST BASE 1851) POINT B 1851)	10340	Not recovered	Sock 1958
Ilwaco Channel Light) No. 9, 1937)	10345	Not recovered	Ilwaco Dock Light 1958
DOCK 1926) FOUNT (USE) 1913)	10347	Not recovered	SLOPE 1957 (temporary)
WORRY 1939) BAY U.S.E. 1936)	10349	Not recovered	Knappton Taller Smoke Stack 1935
GRAYS BAY 1952) Rocky Point Light 1935)	10350	Not recovered	Rocky Point Light 1958
GRAYS RIVER 1852) MOUTH 1935)	10351	Not recovered	DEEP 1935

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

<u>Station</u>	<u>Reason</u>
TANSY POINT 3, 1935 INDIAN PT. 1851	Original description not adequate No description available

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

Navy West Wireless 1913
North Head Radio Pole 1909

Sheet 10345

BAKER 1935
DOCK 1926
HILL 1926
BAY 1935

POINT 2, 1926
SANDS 1935
START 1926

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
BAKER BAY 1851

CHINOOK (U.S.E.) 1913
SAND 1952

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
 Megler Front Range Board 1935
 Megler Water Tank 1913

Sheet 10350

ALAMICUT PT. 1852 Grays Bay Light 1947
 Grays 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 MISHLER 1942
 DUNE 1935 Naval Radio Compass 1935
 DUNE AUXILIARY 1935 North Radio Mast 1926
 JETTY A 1909 Point Adams Lighthouse 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 ECCENTRIC 1926
 SANDY 1935

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. Marys 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 Cable 1935
 Knappton Channel, Front Range Light 1935
 POINT ELLICE 1851
 Upper Sands Light 1935

Sheet 10356

Astoria, Adair School, Cupola 1909
 Astoria, Full Gospel Church, Spire 1935
 Buoy Deport, 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 Mast of Beached Ship 1926

Sheet 10360

DOG 1951
 MARSH PT. 1, 1851
 Oil Works Stack 1913
 Skeppernawin Cr. 1851
 SKIPPAN 1951
 Skipanon Waterway Light 1935
 Skipanon Waterway Front Range Light 1951
 Skipanon Waterway Rear Range Light 1935
 Youngs 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
 Youngs Bay Light 1935
 YOUNGS RIVER 1851
 65 / 20 1935

Sheet 10362

ASTORIA FERRY, UPPER REAR RANGE LIGHT ECC. 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)

Fort 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-121-18 (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 P 2 RESET (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 3 (1925)
 BENCH MARK 5 (1925)
 BENCH MARK 7 (1939)
 BENCH MARK 8 (1940)

BENCH MARK 9 (1942)
 BENCH MARK I 198 (1940)
 BENCH MARK W 198 (1940)
 BENCH MARK G 472 (1941)

Settler Point, Columbia River, Oregon (Sheet 10364)

BENCH MARK 3 (1935)
 BENCH MARK 4 (1947)
 BENCH MARK 5 (1947)

BENCH MARK 10 (1929)
 BENCH MARK 11 (1945)
 BENCH MARK P-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 draws on the slopes contain a perennial stream. Generally the image of the stream bed is not visible in 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 maple.

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 south jetty was located by planetable on Photo 55 W 8641 in the summer of 1957. Also approximately two miles of ocean shoreline in Sheet 10359 were located by planetable 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 planetable 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 planetable 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:

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

The submarine cable crossings in Baker Bay have been abandoned and are in various stages of salvage.

g. 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 Willacut 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.

B. 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 BURNT 1956, TRESTLE 1942 and T3N, RLLW Secs. 5, WCMC, 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 8594 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, Port 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:

<u>Point</u>	<u>Photo</u>	<u>Boundary</u>	<u>Map</u>
A	57 L 1823	Camp Clatsop	Blue print sheet 9-7-10
B	57 L 1823	Camp Clatsop	Blue print sheet 9-7-10
C	57 L 1823	Camp Clatsop	Blue print sheet 9-7-10
D	57 L 1823	Camp Clatsop	Blue print sheet 4-7-10
E	57 L 1822	Camp Clatsop	Blue print sheet 4-7-10
F	55 W 8596	Camp Clatsop	Blue print sheet 32A-8-10
G	55 W 8596	Camp Clatsop	Blue print sheet 29-8-10 and City of Warrenton
H	57 L 1819	Fort Stevens Park	Map of Fort Stevens Park
J	57 L 1820	Fort Stevens Park	Map of Fort Stevens Park
K	57 L 1820	Fort Stevens Park	Map of Fort Stevens Park
L	57 L 1819	Fort Stevens Park	Map of Fort Stevens Park
M	55 W 8634	Hammond - Warrenton	Tracing of Fort Stevens Addition to City of Hammond, City Map of Hammond, City Map of Warrenton, Fort Stevens Management Area (Oregon State Game Commission) and Fort Stevens Park
N	55 W 8634	Warrenton	Fort Stevens Management Area (Oregon State Game Commission) and City Map of Warrenton
P	55 W 8634	Oregon State Game Refuge - Fort Stevens	Fort Stevens Management Area (Oregon State Game Refuge) and Map of Fort Stevens
Q	55 W 8634	Hammond - Fort Stevens	Tracing of Fort Stevens Addition to City of Hammond and Map of Fort Stevens
R	55 W 8634	Hammond - Fort Stevens	Map of Fort Stevens, Map of Hammond and tracing of Fort Stevens Addition to City of Hammond.
S	55 W 8634	Fort Stevens	Map of Fort Stevens
T, U, V & W	55 W 8634	Hammond - Coast Guard Lifeboat Sta- tion, Point Adams	Map of Coast Guard Lifeboat Station, Point Adams, Hammond, Oregon
X	55 W 8633	Hammond - Warrenton	City map of Hammond, City Map of Warrenton
Y	55 W 8634	Hammond	Tracing of Fort Stevens Addition to City of Hammond
Z	55 W 8595	Warrenton	City Map of Warrenton

<u>Point</u>	<u>Photo</u>	<u>Boundary</u>	<u>Map</u>
AA	55 W 8595	Warrenton	City Map of Warrenton
BB	55 W 8595	Warrenton	City Map of Warrenton
CC	55 W 8594	Warrenton	City Map of Warrenton
DD	55 W 8594	Warrenton	City Map of Warrenton
EE	55 W 8594	Warrenton	City Map of Warrenton
FF	55 W 8594	Warrenton	City Map of Warrenton
GG	55 W 8593	Fort Clatsop	Tracing, Plat of Fort Clatsop
HH	55 W 8593	Fort Clatsop	Tracing, Plat of Fort Clatsop
Concrete Monument	55 W 8633	Hammond - Warrenton	City Map of Hammond

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:

Bridge Clearances in Feet

<u>Stream</u>	<u>Type</u>	<u>Horizontal</u>			<u>Vert.</u>	<u>Time</u>	<u>Hwy or RR</u>
		<u>Left</u>	<u>Center</u>	<u>Right</u>			
Lewis and Clark River	Bascule		100		15.3	@MHW	Hwy 101
Skipanon River	Fixed		34		2.9	"	Hwy 101
Skipanon River	Floating		37		4.3	"	Hwy (county)
Skipanon River	Swing	15		33	2.3	"	RR (SP&S)
Svensen Slough	Fixed		22		10	"	Hwy (county)

Bridge Clearances in Feet

<u>Stream</u>	<u>Type</u>	<u>Horizontal</u>			<u>Vert.</u>	<u>Time</u>	<u>Hwy or RR</u>
		<u>Left</u>	<u>Center</u>	<u>Right</u>			
Youngs Bay	Double Bascule		151		20	@MHW	Hwy 101
Youngs Bay	Swing	126		129	10	"	RR (SP&S)
John Day River	Swing	45			17	"	Hwy 30
John Day River	Swing	59		59	6.0	"	RR (SP&S)
Walluski River	Swing	50		49	5.0	"	Hwy

Overhead Cable Clearances in Feet

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

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. Ozalid of Fort Stevens Park.
- c. Ozalid 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 Plat of Fort Clatsop
- j. City Map of Astoria
- k. Composite Map, U. S. Naval Station, Tongue Point

Approved:

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

Respectfully submitted,

Charles H. Bishop
Cartographer

Robert B. Melby
Cartographic Survey Aid

Photogrammetric Plot Report T-10649
Ph-155
Mouth of Columbia River
Scale 1:10,000

21. Area Covered:

This report applies to the single map T-10649. 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:

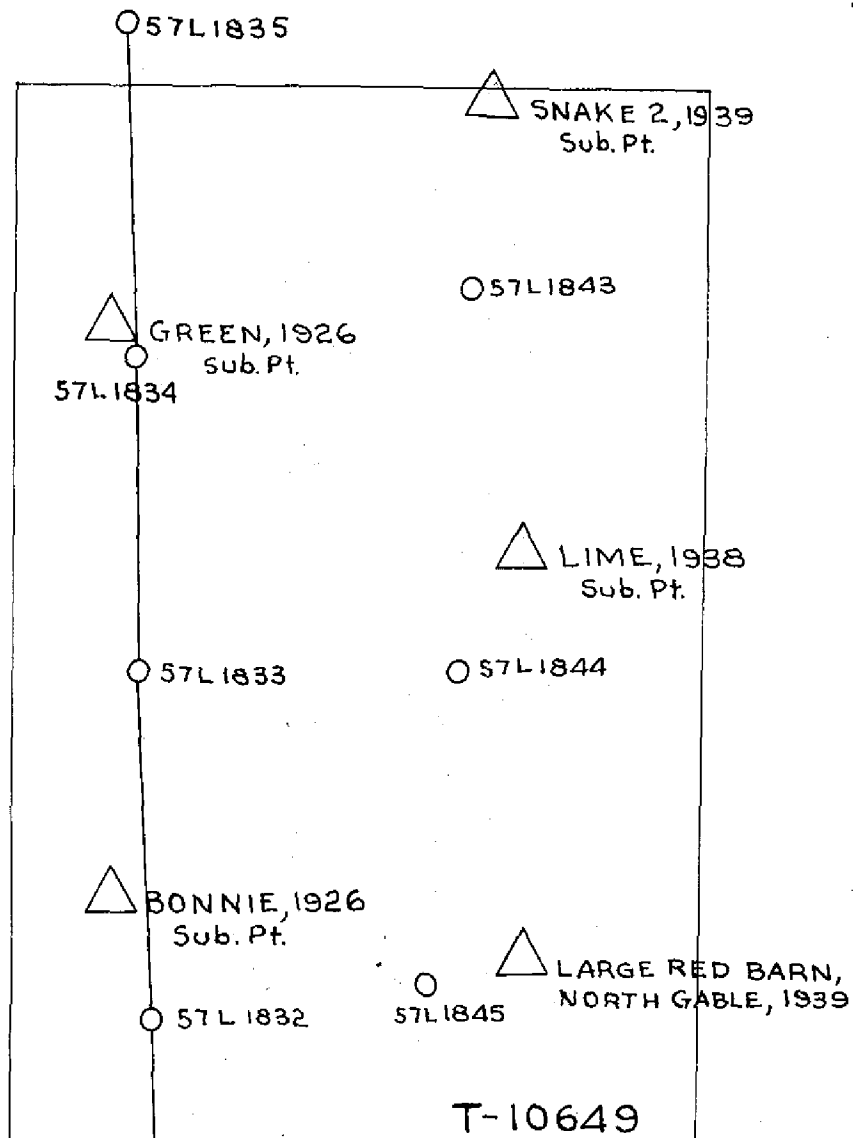

John Perrow, Jr.
Cartographer (Photo)

Approved:


Morton Keller
Supervisory Cartographer (Photo)

057L1842

9.



T-10649

057L1846

* TIoga, 1926 Sub. Pt.
57L1831

PHOTOGRAMMETRIC PLOT — PH-155
SCALE 1:10,000

All control field identified.
* - Not used in plot (stereobridge).

SEAVIEW, R.M.1, 1926
57L1830 Sub. Pt.

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
DESCRIPTIVE REPORT
CONTROL RECORD

MAP T. 10649

PROJECT NO. Ph-155

SCALE OF MAP 1:10,000

SCALE FACTOR None

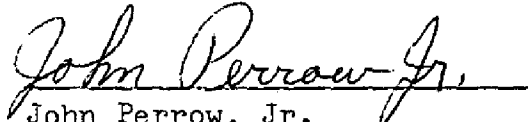
STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE LONGITUDE OR x-COORDINATE		DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
			FORWARD	(BACK)	FORWARD	(BACK)		FORWARD	(BACK)	
GREEN, 1926	Wash. So. 2 P-216	N.A. 1927	418,454.37	1,104,297.67	3454.37 (1545.63)	4297.67 (702.33)		1052.9 (471.1)	1309.9 (214.1)	
Ditto Sub Point	Office Comp.	N.A. 1927	418,598.20	1,104,213.98	3598.20 (1401.80)	4213.98 (786.02)		1096.7 (427.3)	1284.4 (239.6)	
KLIPSAN, 1926	Wash. So. 2 P-216	N.A. 1927	432,727.18	1,104,610.10	2727.18 (2272.82)	4610.10 (389.90)		831.2 (692.8)	1405.2 (118.8)	
Ditto Sub Point	Office Comp.	N.A. 1927	432,965.81	1,104,835.13	2965.81 (2034.19)	4835.13 (164.87)		904.0 (620.0)	1473.7 (50.3)	
LIME R.M.1 1938	Office Comp.	N.A. 1927	412,374.72	1,113,268.63	2374.72 (2625.28)	3268.63 (1731.37)		723.8 (800.2)	996.3 (527.7)	
Ditto Sub Point	Office Comp.	N.A. 1927	411,856.27	1,113,070.57	1856.27 (3143.73)	3070.57 (1929.43)		565.8 (958.2)	935.9 (588.1)	
SNAKE 2, 1939	Wash. So. 2 P-155	N.A. 1927	422,230.08	1,112,995.90	2230.08 (2769.92)	2995.90 (2004.10)		679.7 (844.3)	913.2 (610.8)	
Ditto Sub Point	Office Comp.	N.A. 1927	422,086.25	1,112,722.36	2086.25 (2913.75)	2722.36 (2277.64)		635.9 (888.1)	829.8 (694.2)	
BONNIE, 1926	Wash S. P. 216	N.A. 1927	405,290.46	1,103,804.41	290.46 (4709.54)	3804.41 (1195.59)		88.5 (1435.5)	1159.6 (364.4)	
BONNIE, 1926 Sub Point	Office Comp.	N.A. 1927	405,441.41	1,103,886.86	441.41 (4558.59)	3886.86 (1113.14)		134.5 (1389.5)	1184.7 (339.3)	5
LARGE RED BARN, North GABLE, 1939	Wash S. P. 158	N.A. 1927	403,557.39	1,113,069.59	3557.39 (1442.61)	3069.59 (1930.41)		1084.3 (439.7)	935.6 (588.4)	

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 \times 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 photo-hydro 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.

-2-

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 $46^{\circ}-05'$. 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 stereo-planigraph 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. 7½ 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:

Comparison was made with Nautical Chart No. 6185, 39th Edition July 4, 1960, hand corrected to May 13, 1961, Scale 1:40,000 and Nautical Chart No. 6002, Scale 1:180,789, 10th Edition July 9, 1942, Revised May 23, 1960, Corrected through Jan. 7, 1961.

Items to be Applied to Nautical Charts Immediately.

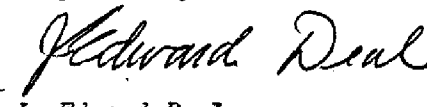
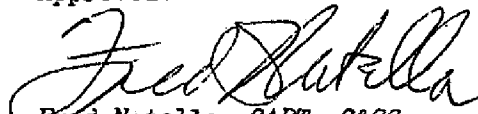
None

Items to be Carried Forward.

None.

Approved:

Respectfully submitted:



Fred Natella, CAPT, C&GS
Portland District Officer
for
Lorne G. Taylor, CDR, C&GS

J. Edward Deal
Cartographer

Map Manuscript T-10649

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 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) None 7. Photo hydro stations None 8. Bench marks None
9. Plotting of sextant fixes None 10. Photogrammetric plot report 11. Detail points

ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline 13. Low-water line None 14. Rocks, shoals, etc. 15. Bridges None 16. Aids to navigation None 17. Landmarks None 18. Other alongshore physical features 19. Other along-shore cultural features

PHYSICAL FEATURES

20. Water features 21. Natural ground cover 22. Planetable contours None 23. Stereoscopic instrument contours None 24. Contours in general None 25. Spot elevations None 26. Other physical features

CULTURAL FEATURES

27. Roads 28. Buildings 29. Railroads 30. Other cultural features

BOUNDARIES

31. Boundary lines None 32. Public land lines None

MISCELLANEOUS

33. Geographic names 34. Junctions 35. Legibility of the manuscript 36. Overlap overlay None 37. Descriptive Report 38. Field inspection photographs 39. Form

40.

Reviewer

Edward Dent
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.

Compiler

Supervisor

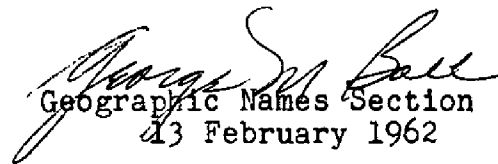
43. Remarks:

H-3623-10

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
7 Pacific Park
*Shoalwater Bay
Tape Lake

* B.G.N. Decision


Geographic Names Section
13 February 1962

REVIEW REPORT
T-10340 through T-10351 and T-10649
Planimetric
February 21, 1962

62. Comparison with Registered Topographic Surveys:

Survey	Scale	Date	Survey	Scale	Date
H-240	836,000	1850	1341b	10,000	1873
317	22,762	1850-51	1342a	10,000	1873
H-334	221,360	1852	1894	20,000	1889
H-402			1806	10,000	1887
1123	10,000	1868	H-1930	10,000	1889
1138	10,000	1869	4251	20,000	1926
1139a+b	10,000	1869	6724ab	10,000	1936
1234	10,000	1870	6725ab	10,000	1936
1249	10,000	1870	6521b	10,000	1936

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 most 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:

6002	1:180,789	10 Edition	1942	1/7/61
6151	1:40,000	34 Edition	1960	1/7/61

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.

Respectfully submitted:

A. K. Heywood
A. K. Heywood

Approved:

L. C. Lande
L. C. Lande, Chief
Review and Edit Section

Marvin T. Pearson
Chief, Nautical Chart Div.

J. E. Waugh
Chief, Div. of Photogrammetry

Walter S. Kelly
Chief, Coastal Surveys Div.
Operations Div.

