

9254 - 9265 Incl

9265 Incl

9254

Diag. Cht. Nos. 6152 & 6153

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey SHORELINE (PHOTOGRAMMETRIC)
Field No. Ph-50 (49) Office No. T-9254 to T-9265 Incl.

LOCALITY

State OREGON-WASHINGTON
General locality COLUMBIA RIVER
Locality KALAMA, WASHINGTON TO THE DOWNSTREAM

END OF CRIMS ISLAND

1949

CHIEF OF PARTY

H.J.Healy, Chief of Field Party.
C.W.Clark, Portland Photogrammetric Office

LIBRARY & ARCHIVES

DATE May-25-1953

DATA RECORD

T -9254 to T-9265 Inclusive

Project No. (II): Ph-50 (49)

Quadrangle Name (IV):

Field Office (II): Ship "HODGSON"

Chief of Party: Henry J. Healy

Photogrammetric Office (III): Portland, Oregon

Officer-in-Charge: Charles W. Clark

Instructions dated (II) (III): 27 June 1949 (Field and Office)

Copy filed in Division of
Photogrammetry (IV)

Method of Compilation (III): Graphic

Manuscript Scale (III): 1:5,000

Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III): None

Date received in Washington Office (IV): 2-15-50 Date reported to Nautical Chart Branch (IV): 2-21-50

Applied to Chart No.

Date:

Date registered (IV):

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): N.A. 1927

Vertical Datum (III): ~~Mean Sea Level~~ ^{River Level (see p. 26)}

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): See reverse side of this page.

Lat.:

Long.:

Adjusted
Unadjusted

Plane Coordinates (IV):

State:

Zone:

Y=

X=

Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office, or (IV) Washington Office.

When entering names of personnel on this record give the surname and initials, not initials only.

Reference Stations

T-9254

MIDWAY TREE (USE) (WASH.), 1936

Lat. 46° 11' 28.535" 881.0(971.5)
Long. 123° 08' 44.460" 953.4(333.2)

T-9255

WORK (USE) (WASH.), 1936 RM 1.

Lat. 46° 10' 41.187" 1271.7(580.8)
Long. 123° 05' 41.063" 880.8(406.2)

T-9256

No control in this map manuscript.

Use WORK (USE) (WASH.) 1936 RM. 1 listed above.

T-9257

FISHER ISLAND DIKE 1 LIGHT U.S.E. (Topo. Station)

Lat. 46° 09' 27.147" 838.2(1014.4)
Long. 123° 03' 15.824" 339.5(947.9)

T-9258

RINEARSON 2 (ORE.), 1936

Lat. 46° 07' 56.538" 1745.7(106.9)
Long. 123° 02' 29.346" 630.0(658.0)

T-9259

BLAST (USE) (WASH.), 1936

Lat. 46° 07' 41.163" 1270.9(581.7)
Long. 122° 59' 14.128" 303.3(984.8)

T-9260

WILLIAMS, 1934

Lat. 46° 06' 24.423" 754.1(1098.5)
Long. 123° 01' 33.816" 726.3(562.4)

T-9261

RAINIER HIGH SCHOOL FLAGPOLE (ORE.), 1936

Lat. 46° 05' 07.793" 240.6(1611.9)
Long. 122° 55' 46.724" 1003.9(285.2)

T-9262

COWEMAN (WASH.), 1873

Lat. 46° 06' 25.499" 787.3(1065.3)
Long. 122° 52' 35.678" 766.2(522.3)

T-9263

WARREN 2, (ORE.), 1937

Lat. 46° 04' 58.148" 1795.4(57.1)
Long. 122° 54' 40.041" 860.3(428.9)

T-9264

COFFIN ROCK (USE) (ORE.), 1912

Lat. 46° 02' 02.706" 83.5(1769.0)
Long. 122° 52' 47.150" 1014.0(276.3)

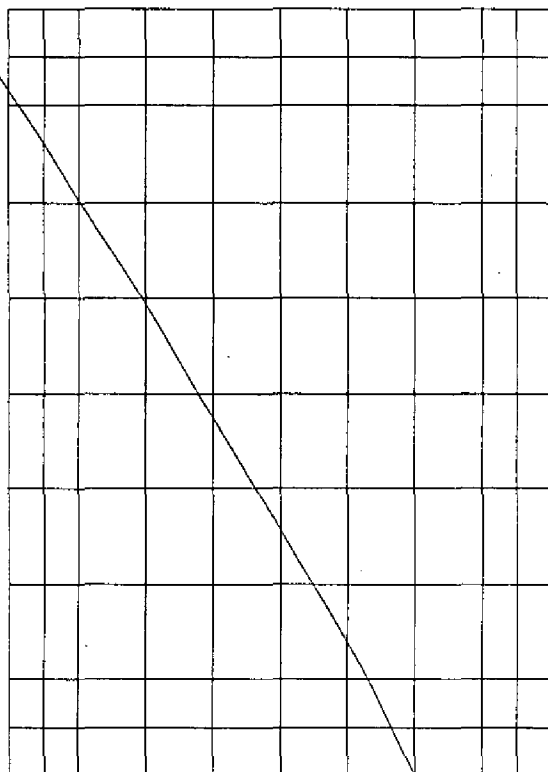
Reference Stations - Continued

T-9265

DUMP (USE) (WASH.), 1937

Lat. 46° 00' 09.711" 299.8(1552.7)

Long. 122° 51' 20.175" 434.1(856.9)



Areas contoured by various personnel
(Show name within area)
(II) (III)

DATA RECORD

Field Inspection by (II): Ship "HODGSON"
Chief of Party: Henry J. Healey
Survey J. O. Boyer

Date: July & Aug. 1949

Planetable contouring by (II):

Date:

Completion Surveys by (II):

Date:

* See side heading 35 of Compilation Report

* Mean High Water Location (III) (State date and method of location): The ~~mean~~^{mean} high-water line is 5.0 ft. above mean lowest low water (Columbia River Datum) and was located in the field in July and August 1949 on U.S. Engineers photographs made on the 5th, 6th, and 18th Sept. 1948 when the river was at a low stage after the 1948 flood. The low-water of the U.S. Engineers gage at Longview, Washington is 0 + 00 = -0.67ft.

Projection and Grids ruled by (IV):

Date: Mean Sea Level

Projection and Grids checked by (IV):

Date:

Control plotted by (III): Marie B. Elrod, Roy A. Davidson and Helen L. Laube

Date: Aug., Sept. 1949

Control checked by (III): Frank H. Elrod, James L. Harris and Ree H. Barron

Date: Aug., Sept. 1949

Radial Plot or Stereoscopic Control extension by (III): James L. Harris & J.E. Deal

Date: Aug., Sept. 1949

Stereoscopic Instrument compilation (III):
Planimetry

Date:

Contours

Date:

Manuscript delineated by (III): See Reverse Side

Date:

Photogrammetric Office Review by (III): See Reverse Side

Date:

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

Date:

Manuscript Delineation

		Date
Marie B. Elrod	T-9254, T-9260, T-9261, T-9264	Sept. 1949
Carita C. Wiebe	T-9255, T-9262, T-9263	Sept. 1949
Helen L. Laube	T-9256, T-9258, T-9265	Sept. 1949
Ree H. Barron	T-9257, T-9259	Sept. 1949

Photogrammetric Office Review

Frank H. Elrod	T-9254, T-9256, T-9257, T-9258, T-9259, T-9261 T-9262, T-9263, T-9264 and T-9265	Sept. & Oct. 1949
Ree H. Barron	T-9255 and T-9260	Sept. & Oct. 1949

- T-9254 Crims Island
- T-9255 Crims Island to Fisher Island
- T-9256 Mayger
- T-9257 Fisher Island
- T-9258 Walker Island
- T-9259 Mount Coffin
- T-9260 Longview Bridge
- T-9261 Longview Bridge to Rainier Bar
- T-9262 Carroll Channel North
- T-9263 Cottonwood Island
- T-9264 Coffin Rock
- T-9265 Sandy Island

Camera (kind or source) (III): Single lens K-17 12 inch focal length

Number		Date	Time	Scale	Stage of Tide
3940 to 3944	Incl.	9/5/48	2:07	1:5,000 ratio	1.45 ft. above M.S.L.
4153 to 4160	"	9/6/48	1:07	" "	1.35 " " "
4175 to 4190	"	9/6/48	1:37	" "	1.25 " " "
4202 to 4213	"	9/6/48	1:30	" "	1.25 " " "
4225 to 4231	"	9/6/48	1:17	" "	1.45 " " "
4239 to 4246	"	9/18/48	1:25	" "	0.35 " " "
4252 to 4296	"	9/18/48	2:00	" "	1.75 " " "
4308 to 4321	"	9/18/48	2:13	" "	1.95 " " "
4370 to 4390	"	9/18/48	3:10	" "	3.15 " " "
4426 to 4429	"	9/18/48	3:20	" "	3.35 " " "

Tide (III)

Reference Station: Stage of tide reduced from actual readings
 Subordinate Station: of U.S. Engineers Tide Gage, Longview,
 Subordinate Station: Washington. 0+00 of gage = - 0.67 ft. M.S.L.

Ratio of Ranges	Mean Range	Diurnal Spring Range
	3.3	4.0

Washington Office Review by (IV): L. T. Stevens Date: 8-21-52
 Final Drafting by (IV): Various Date: Oct-Nov. 1952
 Drafting verified for reproduction by (IV): Hallin - Strippler Date: Nov. 52 - Jan. 53
 Proof Edit by (IV): Hallin - Strippler Date: Jan -

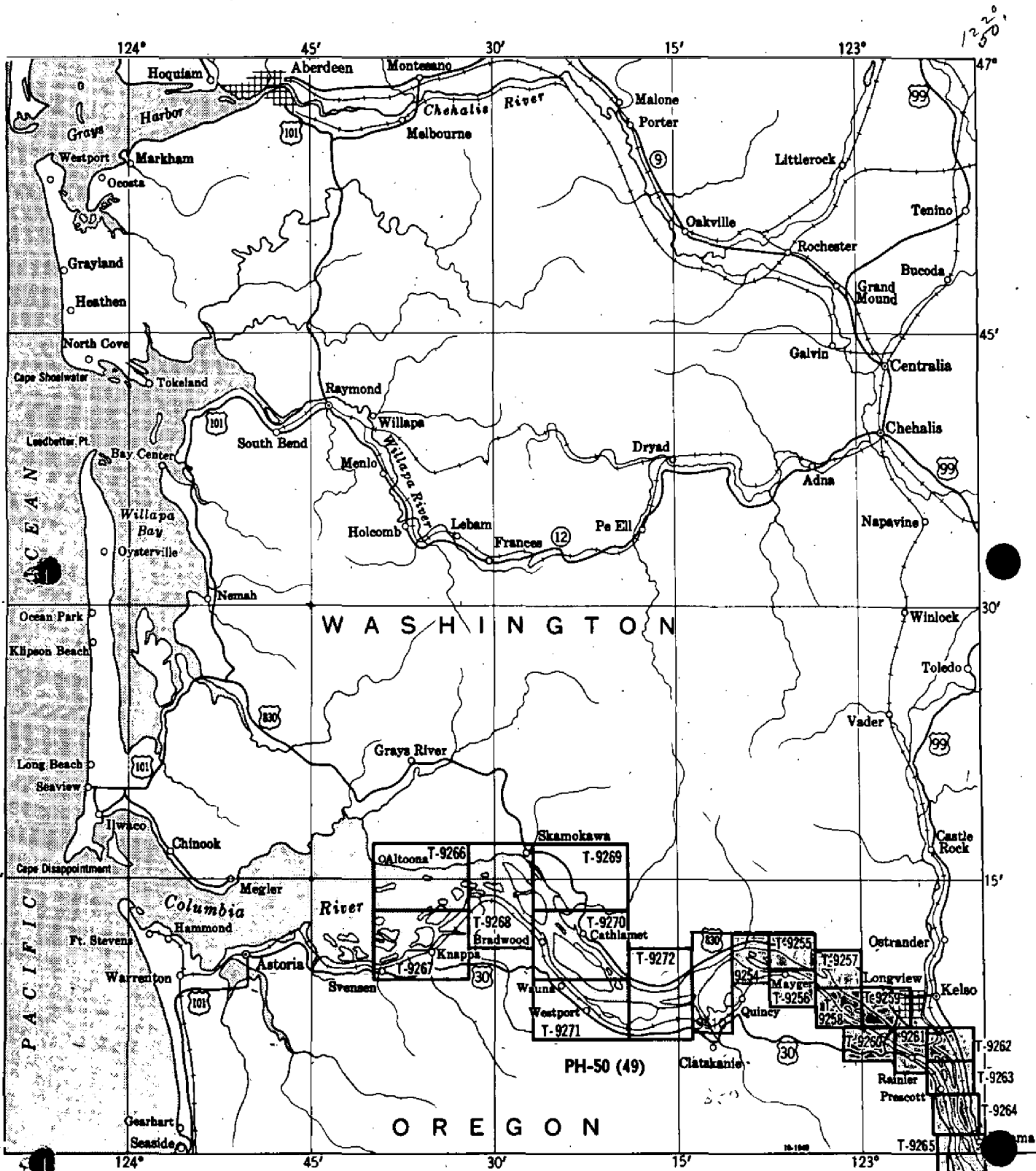
Land Area (Sq. Statute Miles) (III): 6.7 (No interior detail inshore from shoreline.)
 Shoreline (More than 200 meters to opposite shore) (III): 81.8 Statute Miles
 Shoreline (Less than 200 meters to opposite shore) (III): 7.5 Statute Miles
 Control Leveling - Miles (II):
 Number of Triangulation Stations searched for (II): 174 Recovered: 73 Identified: 40*
 Number of BMs searched for (II): Unknown Recovered: Identified:
 Number of Recoverable Photo Stations established (III): 62 = 39 aids + 23 other
 Number of Temporary Photo Hydro Stations established (III): 91

Remarks: * In addition there were 24 stations that were formerly triangulation stations but now can only be considered topographic stations which were identified for use in the radial plot. See remarks in Photogrammetric Plot Report under "Control". see p. 38a

UNITED STATES
DEPARTMENT OF COMMERCE
Coast and Geodetic Survey
Washington, D. C.

ASHINGTON - OREGON

MAP INDEX 52-F



T-9254 to T-9265 Scale 1:5,000
T-9266 to T-9272 Scale 1:10,000

45°54' 9511

Summary to Accompany T-9254 - T-9265
(One Descriptive Report)

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

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

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

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

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

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

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

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

Hydrographic and photogrammetric parties worked concurrently and cooperatively on the whole project, under the supervision of Comdr. H. J. Healy on the Ship HODGSON.

FIELD INSPECTION REPORT
Map Manuscripts T-9254 to T-9265 Inclusive
Project Ph-50(49)
1st. Priority Section

The field inspection for this area was done by the Ship
"HODGSON" during July and August 1949.

For facts concerning the field inspection work refer to the
Descriptive Reports for the hydrographic survey Project C.S. 339.

H-7742 to 7748, H-7742 to H-7748

PHOTOGRAMMETRIC PLOT REPORT
Project Ph-50(49)
Map Manuscripts T-9254 to T-9265 Inclusive

21: AREA COVERED:

This radial plot covers the shorelines of approximately a thirty mile portion of the Columbia River from the northwest end of Crims Island upstream to the north end of Deer Island. The area comprises map manuscripts No'd. T-9254 to T-9265 inclusive and was radially plotted at a scale of 1:5,000.

22: METHOD:

The radial plot was run in three sections and each section included four map manuscripts as follows:

Section No. 1: T-9254 to T-9257 inclusive.
Section No. 2: T-9258 to T-9261 "
Section No. 3: T-9262 to T-9265 "

Base grid sheets were not necessary and each section of the radial plot was laid directly on the map manuscripts with acetate templets made from 1:5,000 scale ratio prints of 1:12,000 contact scale single lens photography.

This photography was made at a low water stage after the 1948 flood of the Columbia River by the Leonard Delano Co. of Portland, Oregon for the Corps of U.S. Engineers, Portland District. The contact negatives were obtained by this office and forwarded to the Washington Office where ratio prints were made.

Special fiducial marks for paper distortion correction were printed on these ratio prints. At the time these radial plots were started this office had not been furnished a master templet for use in paper distortion correction. Due to the urgency of completing the radial plots so that locations of photo hydro stations could be immediately furnished to the Ship "HODGSON", the corrections for paper distortion were omitted in the radial plots for Sections 1 and 2 when drawing the radials on the acetate templets. No serious trouble was encountered when orienting the templets in the area of these two sections of the radial plot.

Since the completion of the radial plot for section 3 was not especially urgent because the hydrographic work had been finished, paper distortion corrections were applied. The Washington Office was

requested to furnish a master templet for paper distortion corrections and on separate dates two templets were received. Both of these templets were laid out in twelve sections instead of sixteen. The master templets were measured and it was found that the two sides containing four sections each were divided equally. The other two sides containing only two sections each were then subdivided into four equal sections each by rotating the guide templet 90 degrees or one-quarter turn.

There were many cases where large differences existed between the principal point (located by the camera fiducial marks) and the position of the cross printed on the photographs. None of the differences equalled the maximum amount of 2 "m" millimeters when "m" is the ratio of enlargement.

Much more difficulty was encountered when orienting these templets in Section 3 of the radial plot which were corrected for paper distortion, than was encountered when orienting the templets in Sections 1 and 2 which were not corrected for paper distortion. Other factors however, such as the distribution and identification of horizontal control stations, tilted photographs, and the location of photograph flights may have been contributing to the difficulty. The radial plot was satisfactorily completed with the radials corrected for paper distortion.

Most of the radials to horizontal control stations passed through or were held tangent to their plotted positions and the intersections of radials to pass points, topographic station, and photo hydro stations, were very good throughout all three sections of this radial plot.

23: ADEQUACY OF CONTROL:

The horizontal control stations identified by the field party were adequate to control the orientation of the templets.

Attached to this report is a copy of a letter to The Director giving facts regarding triangulation stations FISHER (USE) 1936 and LONGVIEW LONG-BELL LUMBER CO., Center Tank (Wash.) 1934 both of which could not be held to during the running of the radial plot.

Many of the stations in the area are aids to navigation for which positions, by triangulation methods, had been established by the Coast and Geodetic Survey in 1934, 1935, and 1936. According to the 1949 Pacific Coast Light List practically every one of these aids to navigation has been rebuilt since 1936 and in most cases information could not be obtained to determine if the original object was rebuilt in exactly the same position or the distance and direction in which it may have been moved. The Portland District, Corps of U.S. Engineers

7-9257
7-9261
(from 528)

has established new positions since 1936 on most of these rebuilt aids to navigation but they state that these positions are probably less than 3rd. order accuracy. In any event many of these stations have again been rebuilt since their positions were established by the U.S. Engineers. After conferring with parties concerned with the location and upkeep of aids to navigation in the Columbia River it was believed that most of these aids to navigation when rebuilt were moved only slightly and in some cases not at all. It was therefore deemed advisable to classify these stations as recoverable topographic stations and plot the latest position available for use as control in the radial plot.

In general these rebuilt stations could be held to strongly along with the numerous 2nd and 3rd order Coast and Geodetic Survey stations which had been identified by the field party for use in the radial plot. Attention is called to the fact that a movement of as much as six feet from the original position would be difficult to detect by radial plot methods.

In several instances, however, errors were found in the positions furnished this office by the U.S. Engineers and in each of these cases evidence was obtained which proved that the aid to navigation had been moved considerably since the U.S. Engineers position was established.

These conditions are also applicable to dolphins on the Columbia River on which positions have been established. There were cases where aids to navigation and dolphins were being rebuilt and moved from their original location while the hydrographic and planimetric surveys were in progress.

Forms 524 have been submitted to the Ship "HODGSON" for all of these rebuilt aids to navigation having positions established by the U.S. Engineers and which were held to in the radial plot. Also Forms 524 have been submitted to the Ship "HODGSON" for other stations, held to in the radial plot, established by the U.S. Engineers and which have not been tied into a Coast and Geodetic Survey scheme of triangulation. The geodetic position, converted from a position on Oregon State Grid coordinates, is shown on the Forms 524. It is assumed that the Ship "HODGSON" has made recommendations for the deletion as triangulation stations, of these rebuilt aids to navigation on Forms 526, "Recovery Note, Triangulation Station."

Listed
pp 27, 38

ok

Attached to this descriptive report are Forms M-2388-12 for each map manuscript listing all recovered horizontal control stations in the area. Notes have been added on these forms to show how the stations were used during the running of the radial plot.

24; SUPPLEMENTAL DATA:

For the area of this radial plot this office was furnished enlargements at a scale of 1:5,000, printed on clear acetate, of the 1936 topographic surveys, scale 1:10,000 which show graphic control stations established at that time. As previously stated in side heading 23, "Adequacy of Control", the dolphins and aids to navigation are continually being rebuilt and moved due to damage by annual floods in the Columbia River and because of deterioration. It is believed that because of these reasons the field party was unable to recover more than two or three of these 1936 graphic control stations.

Attention is also called to the fact that discrepancies were noted when positions of triangulation stations, accurately plotted on the map manuscripts, were compared with those on the enlargements of the 1936 surveys. These errors are believed to be due to the magnification during the enlarging process of small errors in the plotting of triangulation stations on the original surveys.

These same discrepancies were found on the boat sheets when this office attempted to transfer the photo hydrographic stations, located during the radial plot, to the boat sheets. It is believed that the 1936 topographic survey data, on the boat sheets, was traced from the enlargements and therefore the same errors would exist.

25: PHOTOGRAPHY:

The photograph coverage was adequate for the radial plot work. Photograph No. 4379 is believed to be excessively tilted and should be used with caution. This photograph is not needed for coverage since photograph No. 4292 may be used in its place.

26: REMARKS:

It is believed that this radial plot furnished accurate locations for photo hydrographic stations, for use by the Ship "HODGSON" during the hydrographic survey and that shoreline surveys have been compiled that are well within the limits of the accuracy requirements for the project.

Approved:

Charles W. Clark
Charles W. Clark
Chief of Party

Respectfully submitted:

J. Edward Deal Jr.
J. Edward Deal, Jr.
Cartographer

SECRET

DEPARTMENT OF COMMERCE
U.S. Coast and Geodetic Survey
c/o Swan Island Postal Station
Portland 18, Oregon

RESTRICTED

19 October 1949

To: The Director
U.S. Coast and Geodetic Survey
Washington 25, D.C.

Subject: Triangulation Stations Project Ph-50(49)

During the running of the radial plots for Project Ph-50(49) the two substitute stations identified by the field party for FISHER (USE), 1936 could not be held. This station has a no check position and was established by an angle and distance from FISHER (USE) Auxiliary (Wash.) 1936, (See description: Pamphlet 395 Page 11). This latter station has been washed out or covered over. The land area in the vicinity of FISHER (USE) 1936 is flooded during high water in the Columbia River. A temporary station was established on the downstream end of Fisher Island to replace FISHER (USE) 1936 for use as control in the radial plot. This station held along with other stations in the area. For this reason it is believed that either the pipe recovered by the field party is not FISHER (USE) 1936 or the published geographic position is in error. The pricking card (Form M-2226-12) notes that the station identified is FISHER (USE) 1926. The U.S. Engineers do not have any record of a station of this name established in 1926.

R. card No 4174 (Healy) says "A disk set in concrete mon. about 8 in below surface, stamped "Fisher, 1926."

*R N 4174 disk P.
along F. 1926*

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In addition the intersection station LONGVIEW LONG-BELL LUMBER CO., Center Tank (Wash.) 1934 could not be held by approximately 10 meters in latitude during the running of the radial plot.

7-9261

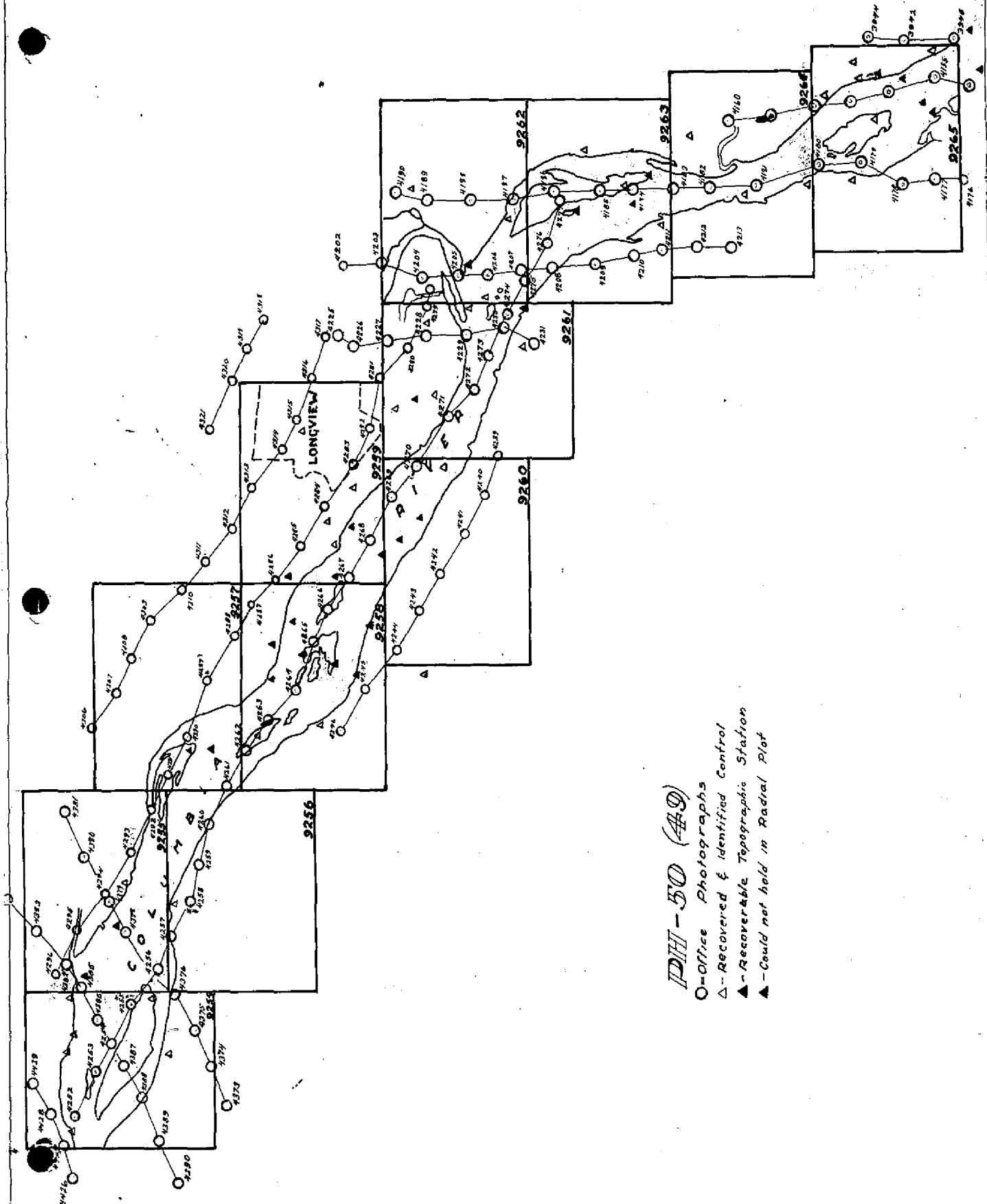
Lt. Comdr. Paul Taylor of the Ship "HODGSON" was consulted about this station and he stated that while the hydrographic survey for this area was in progress it was evident that the published position of the tank was in error. He further stated that since there were many other smaller tanks in the area, it was believed that an error had been made in identification when observations were originally made on the station. This tank has been radially plotted and the scaled position is:

Latitude 46° 06' 487 meters
Longitude 122° 56' 439 meters

Form 524 "Description of Recoverable Topographic Station" is being submitted for this tank.

Charles W. Clark
Lt. Comdr.-USC&G Survey
Chief of Party

CWC/gr



PHI-50 (49)

- O - Office Photographs*
- △ - Recovered & Identified Control*
- ▲ - Recoverable Topographic Station*
- - Could not hold in Radial Plot*

MAP T-9254..... PROJECT NO. Ph-50(49)..... SCALE OF MAP 1:5,000..... SCALE FACTOR None

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ν -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)	FORWARD	(BACK)
MIDWAY TREE (USE) (WASH.), 1936	G-3422 Page 331	N.A. 1927	46° 11'	28.535"				881.0	(971.5)		
SCOTT R.M. 1 (Oreg.), 1936	Office Comp. G-3422 Page 317	"	123° 08'	44.460"				953.4	(333.2)		
LACODA SCHOOL FLAGPOLE (Ore.) 1936	G-3422 Pg. 317	"	46° 10'	14.215"				438.9	(1413.7)		
STELLA RANGE REAR LIGHT (WASH.), 1936	G-3422 Page 358	"	123° 07'	42.008"				901.2	(386.0)		
ABERNETHY POINT LIGHT (WASH.), 1936	G-3422 Page 358	"	46° 10'	08.715"				269.1	(1583.5)		
			123° 08'	45.366"				973.2	(313.9)		
			46° 11'	23.37 "				721.6	(1131.0)		
			123° 07'	32.39 "				694.6	(592.1)		
			46° 11'	25.69 "				793.2	(1059.4)		
			123° 09'	59.44 "				1274.6	(12.0)		
The following stations were recovered but not identified for use in the radial plot.											
LACODA (Oreg.) 1936	G-3422 Page 317	"	46° 10'	10.064"				310.7	(1541.8)		
MIDWAY (USE) (WASH.), 1936	G-3422 Page 317	"	123° 08'	49.847"				1069.4	(217.8)		
NEST (WASH.) 1936	G-3422 Page 317	"	46° 11'	29.88 "				922.5	(930.0)		
			123° 08'	45.46 "				974.8	(311.8)		
			46° 11'	22.872"				706.2	(1146.3)		
			123° 07'	59.430"				1274.5	(12.2)		
The following station has been rebuilt since it was established but is now considered a recoverable topographic station and satisfactory for use as control in the radial plot.											
BUNKER HILL LIGHT 1949 (Topo.)	G-3422 Page 359	"	46° 11'	22.52 "				695.3	(1157.2)	Farm 524	
			123° 08'	18.04 "				386.9	(899.8)		

MAP T. 9255 PROJECT NO. Ph. 50(49) SCALE OF MAP 1:5,000 SCALE FACTOR None

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR μ -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)
WORK (USE) R.M. 1 (WASH.), 1936	G-3422 Pg. 330 Office Comp.	N.A. 1927	46° 10' 41.187" 123° 05' 41.063"				1271.7 880.8	(580.8) (406.2)		
MAYGER TANK (Oreg.) 1936	G-3422 Page 249	N.A. 1927	46° 10' 05.501" 123° 06' 11.366"				169.8 243.8	(1682.7) (1043.3)		
POINT 1 (TEMPORARY), 1949	Office Comp.	N.A. 1927	46° 10' 11.174" 123° 04' 28.710"	<i>dashed symbol</i>			345.0 594.5	(1507.6) (692.7)		
The following stations have been rebuilt since they were established but are now considered recoverable topographic stations and satisfactory for use as control in the radial plot.										
CLEVELAND LIGHT, 1949 (Topo.)	G-3422 Page 358	N.A. 1927	46° 10' 54.90 " 123° 06' 21.58 "	<i>spelled "Cleveland"</i> <i>of " " "Cleveland"</i>			1695.1 462.8	(157.5) (824.0)	<i>Factor 5.24</i>	
STELLA RANGE FRONT LIGHT (WASH.), 1949 (Topo.)	G-3422 Page 350	N.A. 1927	46° 11' 17.800" 123° 07' 22.266"				549.6 477.5	(1303.0) (809.2)		

Page

MAP T. 9256 PROJECT NO. Ph-50(49) SCALE OF MAP 1:5,000 SCALE FACTOR None

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ψ -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)	
			The following station was recovered but not identified for use in the radial plot.						
TUNNEL (USE)	G-3422	N.A.	46° 09' 39.72 "				1226.4	(626.2)	
(Orig.) 1936	Page 331	1927	123° 04' 53.60 "				1150.0	(137.3)	

MAP T. 9257 PROJECT NO. Ph-50(49) SCALE OF MAP 1:5,000 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 FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM		FACTOR DISTANCE	
						FORWARD	(BACK)	FROM GRID OR PROJECTION LINE	IN METERS (BACK)
			The following station was identified but could not be held in the radial plot. Letter written to The Director.						
FISHER (USE) 1936 <i>(wash.)</i>	G-3422 Page 332	N.A. 1927	46° 09' 46.736" 123° 03' 03.097"			1443.0 (409.5) 66.4 (1220.9)			
FISHER ISLAND DIKE LIGHT (USE) 1949 (Topo.)	Converted from USE Coordinates	N.A. 1927	46° 09' 27.147" 123° 03' 15.824"				838.2 (1014.4) 339.5 (947.9)		<i>Farm 524</i>

MAP T-2258 PROJECT NO. Pa-50(49) SCALE OF MAP 1:25,000 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)	FORWARD	(BACK)
WALKER ISLAND RED BARN CUPOLA (Ore.) 1949	G-3422 Page 359	N.A. 1927	46° 08' 49.30"	123° 02' 45.44"				1522.2	(330.4)		
RINEARSON 2 (Ore.) 1936	G-3422 Page 318	"	46° 07' 56.538"	123° 02' 29.346"				1745.7	(106.9)		
BROWN (USE) (Ore.) 1935	G-3422 Page 332	"	46° 07' 57.31"	123° 00' 26.44"				1584.2	(268.4)		
			The following station was recovered but not identified for use in the radial plot.					567.6	(720.4)		
			The following stations, which were established by the U.S. Engineers, are considered to be of recoverable topographic station accuracy and satisfactory for use in the radial plot.								
JW (USE), 1949 (Topo.)	Converted from USE Coordinates	"	46° 07' 18.86"	123° 00' 51.53"				582.3	(1270.3)		Form 524
TOWER 2 (USE), 1949 (Topo.)	"	"	46° 08' 30.847"	123° 00' 50.707"				1106.4	(181.9)		"
TOWER 3 (USE), 1949 (Topo.)	"	"	46° 08' 06.508"	123° 01' 11.555"				949.5	(903.0)		"
TOWER 4 (USE), 1949 (Topo.)	"	"	46° 07' 44.593"	123° 01' 30.384"				1088.3	(199.5)		"
TOWER 5 (USE), 1949 (Topo.)	"	"	46° 07' 29.375"	123° 01' 43.459"				201.0	(1651.6)		"
			859 (1444)	4675 (1417) ?				248.0	(1039.9)		"
								1376.9	(475.7)		"
								652.3	(635.8)		"
								907.0	(945.6)		"
								933.1	(355.1)		"

1 FT. = .3048006 METER
 COMPUTED BY J.C. LaJoye
 CHECKED BY G. Richter
 DATE 7/26/49
 M-2388-12

MAP T... 2258

PROJECT NO. Pa. 50 (49) SCALE OF MAP 1:25,000 SCALE FACTOR None

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ν -COORDINATE LONGITUDE OR x -COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
				FORWARD	(BACK)		FORWARD	(BACK)	
The following stations have been rebuilt since they were established but are now considered recoverable topographic stations and satisfactory for use as control in the radial plot.									
BARLOW POINT LIGHT	Converted from USI	N.A.	46° 08' 40.04 "	08' 40.04 "	0.31		1236.3	(616.3)	From 524
WASH., 1949 (Topo.)	Coordinates	1927	123° 01' 44.37 "	01' 44.37 "			952.3	(335.4)	"
SLAUGHTERS LOWER RANGE FRONT LIGHT	"	"	46° 08' 18.11 "	08' 18.11 "	0.35		559.2	(1293.4)	"
1949 (Topo.)	at list		123° 00' 21.07 "	00' 21.07 "	see HO.N.M. 3, 1951		452.2	(835.1)	"

MAP T. 2259 PROJECT NO. Ph-50(42) SCALE OF MAP 1:5,000 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)	FORWARD	(BACK)
BLAST (USE) (WASH.), 1936	G-3422 Page 331	N.A. 1927	46° 07'	41.163"				1270.9	(581.7)		
LONGVIEW WEYER HAUSER LUMBER CO. SOUTHEAST TANK (WASH.), 1934	G-3422 Page 353	"	46° 07'	21.070"	<i>Weyerhaeuser</i>	<i>10m</i>		650.6	(1202.0)		
LONGVIEW WEYER HAUSER LUMBER CO. NORTHWEST TANK (WASH.), 1934	G-3422 Page 353	"	46° 07'	50.689"	<i>Weyerhaeuser</i>	<i>10m</i>		1565.1	(287.5)		
LONGVIEW COMMUNITY CHURCH TOWER SPIRE (WASH.), 1934	G-3422 Page 360	"	46° 08'	03.74 "				872.2	(415.9)		
ALUMINUM TANK USE, 1949 (Topo.) Coordinates	Converted from USE	"	46° 08'	18.234"	The following station which was established by the U.S. Engineers is considered to be of recoverable topographic station accuracy and satisfactory for use in the radial plot.			563.0	(1289.6)	<i>DR</i>	<i>A-2248 from 5-6-49m. Form 5-24</i>
WALKER ISLAND DIKE LIGHT USE, 1949 (Topo.)	"	"	122° 59'	58.233"	<i>Landmark (C. det. 8-5-1949)</i>			1250.0	(37.9)		<i>c. det. # 819 (1949)</i>
DIBLEE DIKE LIGHT USE, 1949 (Topo.)	"	"	46° 07'	38.63 "	The following stations have been rebuilt since they were established but are now considered recoverable topographic stations and satisfactory for use as control in the radial plot.			1192.7	(659.9)		"
LONGVIEW RANGE FRONT LIGHT USE, 1949 (Topo.)	"	"	122° 59'	55.14 "	<i>HO. N.M. 31 (1952)</i>			1183.8	(104.3)		"
		"	46° 07'	00.74 "				22.9	(1829.7)		"
		"	122° 59'	13.74 "				295.0	(993.4)		"
		"	46° 07'	27.419"				846.6	(1006.0)		"
		"	122° 58'	41.246"				885.6	(402.6)		"
			The following station was recovered but not identified for use in the radial plot.								
LONGVIEW WEYER HAUSER LUMBER CO SOUTHWEST TANK (WASH.), 1934	G-3422 Page 353	"	46° 07'	28.834"	<i>10m (Twin stacks)</i>			890.3	(962.2)		
		"	122° 58'	34.584"	<i>NE stack killed</i>			712.5	(515.7)		

1 FT. = 3048006 METER
COMPUTED BY: F. H. Elrod
DATE: 7/27/49
CHECKED BY: G. Richter
DATE: 7/27/49
M. 2388-12

MAP T-2260..... PROJECT NO. Ph-50(49)..... SCALE OF MAP 1:5,000..... 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)	
✓ LONGVIEW BRIDGE (Wash.-Ore.) 1934 9006 L-859(1449) 5110	G-3422 Page 360	N.A. 1927	46° 06'	22.359"				690.3	(1162.2)	
✓ LONGVIEW BRIDGE SOUTHWEST LIGHT (WASH.-ORE.) 1934	G-3422 Page 359	"	122° 57'	33.716"				724.2	(564.5)	
✓ WILLIAMS (ORE.) 1934	G-3422 Page 311	"	46° 06'	12.367"				381.8	(1470.7)	
		"	122° 57'	42.864"				920.6	(368.1)	
		"	46° 06'	24.423"				754.1	(1098.5)	
		"	123° 01'	33.816"				726.3	(562.4)	
The following stations have been rebuilt since they were established but are now considered recoverable topographic stations and satisfactory for use as control in the radial plot.										
✓ SLAUGHTER'S DIKE LIGHT (USE), 1949 (Topo.)	Converted from USE Coordinates p. 319	"	46° 06'	34.625"				1069.1	(783.5)	Form 5-24
✓ SLAUGHTER'S DIKE 2, LIGHT (USE) 1949 (Topo.)	" p. 313	"	122° 58'	36.420"				782.2	(506.4)	"
		"	46° 06'	46.47 "				1434.8	(417.7)	"
		"	122° 58'	53.85 "				1156.4	(132.1)	"

MAP T...9261..... PROJECT NO...Ph.50(49)..... SCALE OF MAP 1:5,000..... SCALE FACTORNone.....

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ν -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)
✓ RAINIER HIGH SCHOOL FLAGPOLE (Ore.) 1936	G-3422 Page 352	N.A. 1927	46° 05'	07.793"				240.6	(1611.9)		
✓ LONGVIEW FIBRE CO. G-3422	Page 352	"	122° 55'	46.724"				1003.9	(285.2)		
✓ TANK (WASH.) 1934	Page 352	"	46° 06'	10.158"				313.6	(1538.9)		
✓ LONGVIEW LONG-BELL LUMBER CO. NORTH -	G-3422	"	122° 55'	13.230"				284.2	(1004.5)		
✓ WEST TANK (WASH.) 1934	Page 354	"	122° 56'	35.456"				1532.5	(320.0)		
✓ RED, 1949	Field	943/4672 G-5228	46° 05'	52.201"				1611.8	(240.8)		Desc # 396, p. 23
✓ LONGVIEW LONG-BELL LUMBER CO. SOUTH -	Comp.	"	122° 55'	06.263"				134.5	(1154.3)		Cont. 142 R Ent 1 base Rebuilt 18.5.50
✓ WEST STACK (WASH.) 1934	G-3422 Page 353	"	46° 06'	13.558"				418.6	(1433.9)		
DOBELBOWER LIGHT (USE 1940), 1949 (Topo.)	Converted from USE Coordin- ates	" p. 379	122° 56'	24.528"				526.8	(761.9)		
			The following station which was established by the U.S. Engineers is considered to be of recoverable topographic station accuracy and satisfactory for use in the radial plot.								
			46° 05'	02.996"				92.5	(1760.0)		Form 524
			122° 54'	46.038"				989.2	(300.0)		
The following station could not be held to during the running of the radial plot. Letter to The Director.											
			46° 06'	15.444"				476.7	(1375.8)		Form 624 = 15.76" = 487.0 m
✓ LONGVIEW LONG-BELL LUMBER CO. CENTER TANK (WASH.) 1934	G-3422 Page 354	"	122° 56'	20.444"				439.0	(849.7)		19.108" = 489.0 m
The following stations were recovered but not identified for use in the radial plot.											
✓ LONGVIEW LONG-BELL LUMBER CO. NORTH - EAST STACK (WASH.) 1934	G-3422 Page 354	"	46° 06'	14.673"				453.0	(1399.5)		
			122° 56'	23.685"				508.7	(779.9)		
✓ BLUFF (USE) (ORE) 1912	G-3719 Page 376	"	46° 05'	11.412"				352.4	(1500.1)		
			122° 55'	12.796"				274.9	(1014.2)		

MAP T.....9261..... PROJECT NO.....En-50(49)..... SCALE OF MAP.....1:5,000..... SCALE FACTOR.....None.....

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ν -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)	FORWARD	(BACK)
✓ ¹⁹⁴⁹ 1926 EMI (USE) (WASH.)	G-3719 Page 376	N.A. 1927	46° 05'	57.231"				1767.1	(85.4)		
✓ ¹⁹⁴⁹ 1926 BELL (USE) (WASH.)	"	"	122° 55'	55.665"	<i>on dike</i>			1195.6	(93.2)		
✓ ¹⁹⁴⁹ 1926 LONGVIEW FIERRE CO. STACK (WASH.)	G-3422 Page 352	"	46° 05'	58.378"	<i>on dike</i>			1802.5	(50.0)		
✓ ¹⁹³⁴ 1934 (USE) (Oreg)	G-6331 Page 774	"	122° 55'	38.834"				834.1	(454.7)		
✓ 1912 RAINIER 2, 1912	G-3422 Page 352	"	46° 06'	10.633"				328.3	(1524.2)		
✓ 1913 EAST RAINIER (OREG.) 1913	G-6331 Page 774	"	122° 55'	13.091"				281.2	(1007.5)		
✓ 1936 RAINIER MINERAL SOAP FACTORY (OREG.) 1913	G-3719 Page 374	"	46° 05'	22.603"				697.9	(1154.6)		
✓ 1936 LONGVIEW LONG-BELL LUMBER CO. NORTH EAST TANK (WASH.)	G-6331 Page 775	"	122° 55'	52.355"				1124.8	(164.3)		
✓ 1934 LONGVIEW GRAIN AND ELEVATOR CO. FLAGSTAFF (WASH.)	G-3719 Page 374	"	46° 05'	13.327"				411.5	(1441.0)		
✓ 1936 LONGVIEW GRAIN AND ELEVATOR CO. FLAGSTAFF (WASH.)	G-6331 Page 775	"	122° 55'	26.769"				575.1	(714.0)		
✓ 1936 LONGVIEW GRAIN AND ELEVATOR CO. FLAGSTAFF (WASH.)	G-3422 Page 354	"	46° 05'	21.64 "				668.2	(1184.3)		
✓ 1936 LONGVIEW GRAIN AND ELEVATOR CO. FLAGSTAFF (WASH.)	G-3422 Page 354	"	122° 55'	43.84 "				941.9	(347.2)		
✓ 1936 LONGVIEW GRAIN AND ELEVATOR CO. FLAGSTAFF (WASH.)	G-3422 Page 354	"	46° 06'	27.188"	<i>landmark</i>			839.5	(1013.0)		
✓ 1936 LONGVIEW GRAIN AND ELEVATOR CO. FLAGSTAFF (WASH.)	G-3422 Page 353	"	122° 55'	34.834"				748.1	(540.5)		
✓ 1936 LONGVIEW GRAIN AND ELEVATOR CO. FLAGSTAFF (WASH.)	G-3422 Page 353	"	46° 06'	23.251"				717.9	(1134.6)		
✓ 1936 LONGVIEW GRAIN AND ELEVATOR CO. FLAGSTAFF (WASH.)	G-3422 Page 353	"	122° 57'	06.691"				143.7	(1144.9)		

MAP T. 9262..... PROJECT NO. PA-50(49)..... SCALE OF MAP 1:5,000..... 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)	
LOG RAFT DOLPHIN (WASH.) 1937	G-3719 Page 378	N.A. 1927	46° 05' 23.178"					715.6	(1136.9)	
COVEMAN (WASH.), 1873	G-3422 Page 321	"	46° 06' 25.499"					382.8	(906.2)	
6 DIKE LIGHT 1879. (RAINIER BAR LOWER DIKE EAST END LIGHT)	Field Comp. HODGSON	943/1672 G-8228	46° 05' 36.379"		= 36.379° 943/G-720			787.3	(1065.3)	
COMLITZ RIVER ENTRANCE 2 LIGHT 1949 (Topo.) Coordinates	Converted from USE Coordinates	"	122° 54' 38.311"		= 38.311° G-8346			766.2	(522.3)	
			The following station which was established by the U.S. Engineers is considered to be of recoverable topographic station accuracy and is satisfactory for use in the radial plot.							
			46° 05' 54.995"					1123.2	(729.3)	= Carroll Channel Light 2 in 1902 Light List.
			122° 54' 21.132"					823.0	(465.9)	
			The following stations were recovered but not identified for use in the radial plot.							
ISLAND (USE) R.M. (WASH.), 1937	G-3719 Page 376	"	46° 05' 05.446"					1698.0	(154.5)	Form 524
RAFT, 1949	Field Comp. HODGSON	943/G-72 G-8228	122° 53' 27.125"					453.9	(834.8)	
SNAG, 1949	"	"	46° 05' 27.562"		= 27.562° 943/G-720			168.2	(1684.3)	
			122° 53' 24.340"		= 24.339° G-8346			582.8	(706.4)	
			46° 05' 52.846"		= 52.845°			851.0	(1001.5)	
			122° 54' 25.587"		= 25.584°			522.9	(766.1)	
								1631.7	(220.9)	
								549.6	(739.2)	

MAP T-9263..... PROJECT NO..... Ph-50(49)..... SCALE OF MAP..... 1:5,000..... SCALE FACTOR..... None.....

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ν -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)	
CAR, 1949	Field Comp. HODGSON	943/672 N.A. G-8224 1927	46° 03' 38.637" = 122° 52' 34.920" =	38.63" in 943/672 0 34.916" " G-8224		1193.0 (659.6) 750.6 (539.1)			
BLUFF, 1949	Field Comp. HODGSON	"	46° 04' 11.656" = 122° 51' 57.910" =	4.655" " 57.904" "		359.9 (1492.7) 1244.5 (44.9)			
PRESCOTT, CLARK & WILSON LUMBER CO. TANK (OREG.) 1937	G-3719 Page 382	"	46° 03' 12.222" 122° 53' 18.399"			377.4 (1475.1) 395.5 (894.3)			
COTTONWOOD ISLAND UPPER & LOWER FRONT RANGE LIGHT 1949 (Topo.)	Converted from USE Coordinates	"	46° 04' 32.830" 122° 53' 08.567"	see L.N.M. 164, 1951		1013.7 (838.9) 184.1 (1150.2)		Factor 5.25/ (400 or A.F. result 1981 div. of Up. A.F.)	
CARROLLS DIKE LIGHT 1949 (Topo.)	"	" ¹⁹³⁷ A-381	46° 03' 20.460" 122° 52' 25.501"	96.03 20.445 63.3 122 52 25.611	63/13	631.7 (1220.8) 548.2 (741.6)		" (now Carroll Channel L.N.M. 4)	
DIKE 42.4 Dolphin West End "PHIN" 1949 Topo.	"	" ¹⁹³⁷ C-380	46° 03' 58.500" 122° 52' 55.901"	P-280 46-03-58.501 122-52-57.901	1606.3M 1201.5 M	1806.2 (46.3) 1201.4 (88.1)		"	
RAILROAD TANK (OREG.) 1937	G-3719 Page 380	"	46° 04' 10.75 " 122° 53' 48.22 "			331.9 (1520.6) 1036.3 (253.2)			
GALLOWAY 2 (OREG.), 1937	G-3719 Page 374	"	46° 03' 51.484" 122° 53' 35.222"			1589.6 (262.9) 757.0 (532.6)			
WARREN 2 (OREG.) 1937	"	"	46° 04' 58.148" 122° 54' 40.041"			1795.4 (57.1) 860.3 (428.9)			
D-5 (USE) (OREG.) 1912	G-6331 Page 769	"	46° 03' 50.874" 122° 53' 34.178"			1570.8 (281.8) 734.6 (555.0)		Page	

1 FT. = 3048006 METER
COMPUTED BY: J. C. LaJoye..... DATE: 8/25/49..... CHECKED BY: G. Richter..... DATE: 8/26/49.....

MAP T. 9264 PROJECT NO. Ph-50(49) SCALE OF MAP 1:5,000 SCALE FACTOR None

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ψ -COORDINATE LONGITUDE OR χ -COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS	
				FORWARD	(BACK)		FORWARD	(BACK)	FORWARD	(BACK)
DRAYS MOUND (WASH.), 1878	G-3719 Page 375	N.A. 1927	46° 03' 37.521"	122° 51' 34.833"			1158.5 (694.0)			
COFFIN ROCK (USE) (OREG.) 1912	G-3719 Page 377	"	46° 02' 02.706"	122° 52' 47.150"			83.5 (1769.0)			
GOBLE POINT 2 (OREG.) 1937	G-3719 Page 375	"	46° 01' 02.325"	122° 52' 27.987"			71.8 (1780.7)			
The following stations were recovered by not identified for use in the radial plct.										
D-3 (USE) (OREG.) 1912	G-6331 Page 774	"	46° 02' 53.378"	122° 53' 03.257"			1648.0 (204.5)			
KALAMA, AIRWAY BEACON, (WASH) 1934	G-3719 Page 382	"	46° 01' 14.444"	122° 51' 29.479"			446.0 (1406.5)			
D-1 (USE) (OREG.) 1912	G-3719 Page 377	"	46° 02' 16.874"	122° 52' 51.559"			634.1 (656.5)			
GOBLE DOLPHIN (USE) (WASH.), 1937	G-3719 Page 382	"	46° 01' 01.558"	122° 51' 58.839"			521.0 (1331.5)			
D-3 (USE) Aux. (OREG.) 1937	G-3719 Page 374	"	46° 02' 53.910"	122° 53' 03.936"			1108.7 (181.5)			
							48.1 (1804.4)			
							1265.7 (25.0)			
							1664.5 (188.0)			
							84.6 (1205.4)			

MAP T. 9265 PROJECT NO. Ph-50(49) SCALE OF MAP 1:5,000 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		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
						FORWARD	(BACK)	
KALAMA BURNER (USE) (WASH.) 1937	G-4453 Page 396	N.A.	46° 00' 51.851"			1600.9	(251.6)	
(Wash.)	Furnished by HODGSON	"	122° 51' 03.335"	943/5720		71.7	(1219.0)	
H-21 (USE)	G-6331 Page 768	"	46° 59' 18.406"	G-8344		568.3	(1284.2)	
H-28 (USE) (OREG.), 1912	G-3719 Page 376	"	122° 50' 04.347"			93.6	(1197.8)	
DUMP (USE) (WASH.), 1937	G-3422 Page 321	"	46° 00' 33.073"			1021.1	(831.4)	
ELLIS (WASH.) 1934	G-4453 Page 397	"	122° 52' 24.480"			526.7	(764.2)	
KALAMA HIGH SCHOOL SOUTHEAST BUILDING FLAGSTAFF (WASH.) 1937		"	46° 00' 09.711"			299.8	(1552.7)	
		"	122° 51' 20.175"			434.1	(856.9)	
		"	46° 00' 23.518"			726.1	(1126.4)	
		"	122° 50' 35.991"			774.4	(516.6)	
		"	46° 00' 29.310"			904.9	(947.6)	
		"	122° 50' 16.822"			361.9	(929.0)	
The following stations were established by the U.S. Engineers and considered to be of recoverable topographic station accuracy and satisfactory for use in the radial plot.								
AHLE POINT LIGHT, 1949, (Topo.)	Converted from USE Coordinates	"	45° 59' 53.785"			1660.6	(191.9)	Form 524
HUNTER BAR DIKE LIGHT, 1949 (Topo.)	"	"	122° 50' 37.037"	(18072)	(118.0)	797.0	(424.2)	"
HUNTER BAR DIKE LIGHT, 1949 (Topo.)	"	"	45° 59' 18.053"	(152878)	(1091.0)	557.4	(1295.1)	"
HUNTER BAR DIKE LIGHT, 1949 (Topo.)	"	"	122° 50' 50.887"	(30.131)	(99.8)	1095.2	(196.1)	"
HUNTER BAR DIKE LIGHT, 1949 (Topo.)	"	"	45° 59' 30.603"	(00.529)	(140.5)	944.9	(907.6)	"
HUNTER BAR DIKE LIGHT, 1949 (Topo.)	"	"	122° 51' 06.593"	East of eastern limit of T-9265. Presumably belongs on T-9511 (1:10,000)		141.9	(1149.4)	"
HOFFMAN LIGHT (USE) 1949 (Topo.)	"	"	45° 58' 50.586"			1561.8	(290.6)	"
HUNTER BAR UPPER DIKE LIGHT (USE) 1949 (Topo.)	"	"	122° 49' 49.800"	Delta on T-9511 same G.P.		1072.1	(219.6)	"
		"	45° 58' 46.962"			1449.9	(402.5)	"
		"	122° 50' 25.022"			538.6	(752.9)	"

MAP T. 2265 PROJECT NO. Ph-50(49) SCALE OF MAP 1:5,000 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)	
KALAMA LOWER RANGE REAR LIGHT (USE) 1949 (Topo.)	Converted from USE Coordinates 1927	N.A.	46° 00' 19.657" 122° 50' 35.486"				606.9 (1245.6) 763.5 (527.4)	Form 524	
The following stations were recovered but not identified for use in the radial plot.									
H-23 ₂ (USE) (WASH.), 1912	G-3719 Page 375	"	45° 59' 51.195" 122° 50' 30.458"				1580.6 (271.8) 655.4 (635.7)		
KALAMA CHURCH WITH STAR (WASH.), 1913	G-6331 Page 778	"	46° 00' 37.82 " 122° 50' 33.33 "				1167.7 (684.8) 717.1 (573.8)		
KALAMA, METHODIST CHURCH SPIRE (WASH.) 1873	G-6277 Page 729	"	46° 00' 26.41 " 122° 50' 28.12 "				815.4 (1037.1) 605.0 (685.7)		
KALAMA CATHOLIC CHURCH SPIRE (WASH.), 1913	G-6331 Page 778	"	46° 00' 32.577" 122° 50' 19.138"				1005.8 (846.7) 411.8 (878.7)		
KALAMA EPISCOPAL CHURCH CROSS (WASH.), 1873	G-6277 Page 729	"	46° 00' 37.27 " 122° 50' 32.97 "				1150.7 (701.8) 709.3 (581.5)		

COMPILATION REPORT
Map Manuscripts T-9254 to T-9265 Inclusive
Project Ph-50(49)

These map manuscripts, showing shoreline surveys of a portion of the Columbia River, have practically identical characteristics and their compilation may be adequately described in a combined report for all twelve sheets.

31: DELINEATION:

Compilation was by graphic methods. The field inspection for the area was satisfactory and the photograph coverage was adequate.

Except in cases where it was deemed necessary to accentuate the shoreline, planimetric details inshore from the high-water line have not been shown.

There were places along the high-water lines where minor detail points could not be selected because of shadows on the photographs. This slight difficulty was not considered serious because of the excellent scale of the photographs and because it was not necessary to consider relief displacement. The high-water line could be delineated, in these areas obscured by shadows, with the aid of the stereoscope.

32: CONTROL:

The horizontal control stations were well identified and were of sufficient density to adequately control the photographs. For additional data refer to side heading 23, "Adequacy of Control", Photogrammetric Plot Report, for these map manuscripts.

33: SUPPLEMENTAL DATA:

Enlargements at a scale of 1:5,000 printed on clear acetate of the 1938 topographic surveys scale: 1:10,000 were furnished this office as follows:

T-6567a	(T-9257, T-9258)
T-6567b	
T-6568a	(T-9254 to T-9262)
T-6568b	
T-6569a	(T-9262 to T-9265)
T-6569b	

Because of the drastic changes in shoreline and other details in this area these surveys were of little use for the compilation work.

A print furnished by the Portland District of U.S. Engineers showing water profiles Columbia River, Mouth to Bonneville, Scales: Hor. 1" = 4 miles, Vert. 1" = 4 feet, was used for computing the high-water line of this area. *see p. 36*

34: CONTOURS AND DRAINAGE:

Inapplicable.

35: SHORELINE AND ALONGSHORE DETAILS:

The mean high-water line is on a gradient at the plane of 5.0 feet above mean lowest low water (Columbia River Datum) and was adequately located by the field party in July and August 1949 on single lens photographs taken when the river was at a low-water stage after the 1948 Columbia River Flood. The gradient of the water plane is from 4.85 ft. above M.S.L. at a point 1.6 miles south of Kalama, Washington to 3.45 ft. above M.S.L. at Oak Point, Washington. The data on the Columbia River Datum ~~was~~ ^{were} furnished by the Corps of U.S. Engineers, Portland District and the above water plane above M.S.L. is based on ^{*} -0.15 ft. M.S.L. @ 1.6 miles south of Kalama, Washington and -1.55 ft. M.S.L. at Oak Point, Washington (Columbia River Datum). It is suggested that the high-water line for surveys in the Columbia River, downstream from Oak Point, Washington, be based on the mean high-water line at the outer end of jetties at the mouth of the Columbia River which is $\frac{1}{2}$ 7.4 ft. above M.L.L.W. or $\frac{1}{2}$ 3.2 ft. above M.S.L. When this mean high-water line is extended upstream in the Columbia River it converges with the high-water plane of these map manuscripts at about the west limits of T-9254 or at about Oak Point, Washington. See attached sketch.

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

Alongshore details were excellently delineated by the field inspection party.

36: OFFSHORE DETAILS:

Since the hydrographic work was done prior to the final compilation of the shoreline surveys it is assumed that any offshore feature not delineated by field inspection or which cannot be easily seen on the photographs has been located by the Ship "HODGSON".

37: LANDMARKS AND AIDS:

The Ship "HODGSON" has been furnished Forms 524 for all aids to navigation, in the area, for which geographic positions of at least

3rd order accuracy are not available. It is understood, by this office, that Forms 567, "Landmarks and Aids to Navigation" will be executed and submitted by the Ship "HODGSON" for this area.

Chart Letter No 983(1950)

" " " 678(1951) Longview - St. Helens

7 fms 567 in D.A for H-7248 Crims Id - Longview = C. Leb. 859(49)

38: CONTROL FOR FUTURE SURVEYS:

For facts relative to former triangulation stations which are now classified as Recoverable Topographic Stations refer to the Photogrammetric Plot Report, Item 23: "Adequacy of Control".

Sixty-two Forms 524 have been submitted to the Ship "HODGSON". A list of these stations is attached to this descriptive report.

*23 objects
39 aids
62*

Ninety-one photo-hydro stations were radially plotted and submitted to the Ship "HODGSON". A list giving the station numbers and descriptions according to map manuscripts is attached to this descriptive report.

pp. 39-42

39: JUNCTIONS:

Satisfactory junctions have been made between all map manuscripts covered by this descriptive report.

40: HORIZONTAL AND VERTICAL ACCURACY:

There are no subnormal areas of horizontal accuracy. Vertical accuracy is not applicable.

46: COMPARISON WITH EXISTING MAPS:

A visual comparison was made with the 15 min. topographic quadrangles St. Helens, Oregon-Washington, Kalama, Washington-Oregon, Clatskanie, Washington-Oregon, Scale: 1:62,500 Published 1943. In general the shorelines along the bluffs are in good agreement. The quadrangles appear to be at a higher water plane and therefore do not show the offshore features as detailed as the map manuscripts.

Comparison was made with enlargements printed on clear acetate Scale: 1:5,000 of the 1938 topographic surveys. T-6567a and b, T-6568a and b, and T-6569a and b, original scale, 1:10,000.

There are numerous and drastic changes in the shorelines of the Columbia River since this survey was made. The most important are:

T-9254 The north shorelines of Gull Island and Crims Island have built up. Also new islands which did not exist in 1938 are evident in this vicinity.

There are numerous changes in the shorelines of Bradbury Slough.

- T-9255 The shoreline and along shore details at Mayger have changed considerably since 1938. The north shore of the Columbia River between Cleaveland Light and the downstream end of Fisher Island has changed.
- T-9256 Numerous minor changes in the shorelines.
- T-9257 The downstream end of Walker Island has built up.
Additional islands are now existing off the upstream end of Fisher Island.
The shoreline has eroded in some places and built up in other places along the northeast shore of the Columbia River between Lat. $46^{\circ} 09'$ and $46^{\circ} 09' 40''$.
Numerous changes along the northeast shoreline of Fisher Island.
- T-9258 Drastic changes in a group of islands upstream from Walker Island.
The upstream end of Walker Island has built up.
Numerous minor changes in shoreline throughout map manuscript.
- T-9259 Changes in the northeast shoreline of the Columbia River from Mt. Coffin downstream to Dike 49.4.
- T-9260 Drastic changes in the southwest shoreline of the Columbia River from Longview Bridge to Dike 48.3.
- T-9261 Changes in alongshore details on north shore Columbia just upstream from Longview Bridge.
Upstream end of island on which Dike 44.6 is located is changed considerably.
Changes in the shoreline Columbia River between Long. $122^{\circ} 55'$ and Long. $122^{\circ} 57'$.
- T-9263 Drastic changes in shapes of islands in vicinity of Dike 44.2.
Numerous changes in the shorelines of Cottonwood Island.

T-9264 Drastic changes in shoreline vicinity of Dike 42.2.

Changes in the north end of Sandy Island.

T-9265 Changes in the shoreline of Sandy Island.

Numerous changes in southwest shoreline of Columbia River upstream from Dike 36.5 to end of project.

Changes in northeast shoreline Columbia River between Lat. $45^{\circ} 59'$ and Lat. $45^{\circ} 59' 40''$.

47: COMPARISON WITH NAUTICAL CHARTS:

Since the source of the shorelines shown on nautical chart 6153, Scale 1:40,000 appears to be from the 1938 topographic survey, the same differences as mentioned in paragraph 46 are applicable.

48: GEOGRAPHIC NAMES:

There was no geographic names inspection furnished this office for the area. Names shown on the map manuscripts were obtained from nautical charts and topographic quadrangles of this area. *None requested*

49: NOTES TO THE HYDROGRAPHER:

There were many conferences between the officers of the Ship "HODGSON" and the Chief of Party and personnel of this office. All phases of the work were completely discussed and all information needed for the hydrographic work has been furnished to the Ship "HODGSON". The map manuscripts have been forwarded to the Seattle Processing Office for use in processing the hydrographic survey.

A tabulation of recoverable topographic stations and photo-hydro stations is attached for the purposes of a permanent record.

Approved:

Charles W. Clark
Charles W. Clark
Chief of Party

Respectfully submitted:

J. Edward Deal Jr
J. Edward Deal, Jr.
Cartographer

All manuscripts inspected by [initials] 1/5-1/50

50

PHOTOGRAMMETRIC OFFICE REVIEW

T-9254 - T-9265

- 1. Projection and grids
- 2. Title
- 3. Manuscript numbers
- 4. Manuscript size

CONTROL STATIONS

- 5. Horizontal control stations of third-order or higher accuracy
- 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations)
- 7. Photo hydro stations
- 8. Bench marks
- 9. Plotting of sextant fixes
- 10. Photogrammetric plot report
- 11. Detail points

ALONGSHORE AREAS

(Nautical Chart Data)

- 12. Shoreline
- 13. Low-water line
- 14. Rocks, shoals, etc.
- 15. Bridges
- 16. Aids to navigation
- 17. Landmarks
- 18. Other alongshore physical features
- 19. Other along-shore cultural features

PHYSICAL FEATURES

- 20. Water features
- 21. Natural ground cover
- 22. Planetable contours
- 23. Stereoscopic instrument contours
- 24. Contours in general
- 25. Spot elevations
- 26. Other physical features

CULTURAL FEATURES

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

BOUNDARIES

- 31. Boundary lines
- 32. Public land lines

MISCELLANEOUS

- 33. Geographic names
- 34. Junctions
- 35. Legibility of the manuscript
- 36. Discrepancy overlay
- 37. Descriptive Report
- 38. Field inspection photographs
- 39. Forms

40. Rec. H. Barron
Reviewer

J. Edward Deal Jr
Supervisor, Review Section or Unit

41. Remarks (see attached sheet)

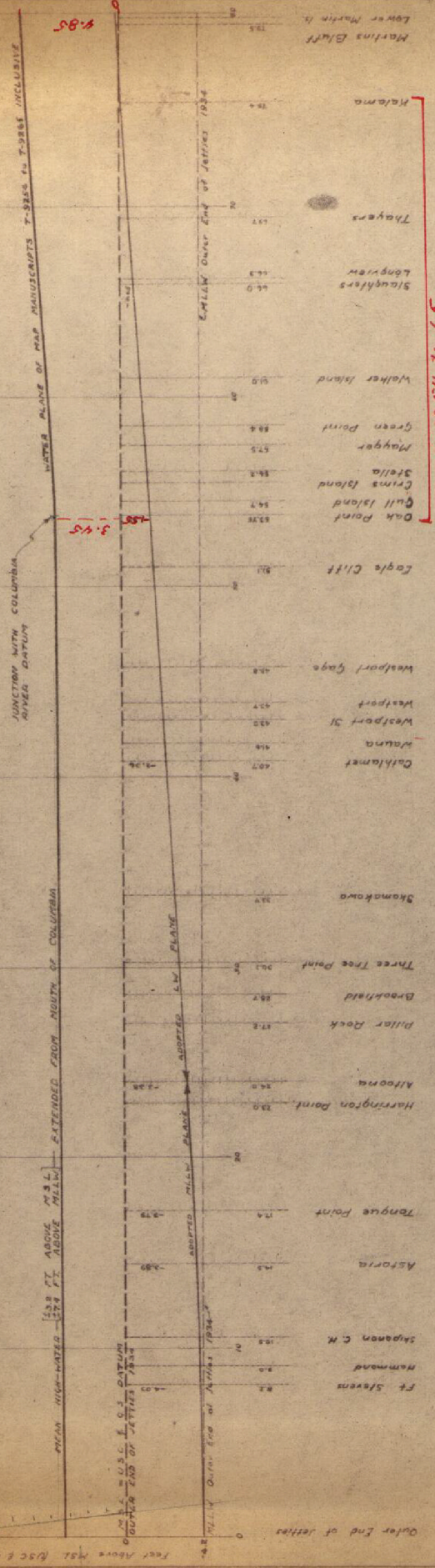
FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

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:



**COLUMBIA RIVER WATER PROFILES
MOUTH TO LOWER MARIN ISLAND**

ABOVE INFORMATION FROM COLUMBIA RIVER WATER
PROFILES - MOUTH TO DONNEVILLE
U.S. ENGINEERS OFFICE - PORTLAND OREGON

Vertical 1" = 5 Feet
Horizontal 1" = 5 Miles

NOTE: SHEET NO. 19, SPECIAL PUBLICATION 163
TIDAL BENCH MARKS, STATE OF OREGON

Ph-50(19)

List of Recoverable Topographic Stations for which Forms 524
have been furnished the Ship "HODGSON" in the areas of T-9254 to T-9265
inclusive.

T-9254

- ✓ TANK ELEVATED, 1949
- ✓ TANK ELEVATED AND UPSTREAM, 1949
- ✓ BUNKER HILL LIGHT, 1949 ✓

T-9255

- ✓ STELLA RANGE FRONT LIGHT, 1949 ✓
- ✓ CLEVELAND LIGHT, 1949
- ✓ SIL, 1949 = Hy Sta 5615 X
- ✓ WASP, 1949 = Hy Sta 5621
- ✓ BIL, 1949 = Hy Sta 5702
- ✓ NEW, 1949 = Hy Sta 5704
- ✓ TED, 1949 = Hy Sta 5709

T-9256

NONE

T-9257

- ✓ FISHER ISLAND DIKE 1 LIGHT, 1949 ✓
- ✓ FISHER ISLAND LIGHT, 1949
- Marker ✓ RED REFLECTOR, 1949
- ✓ END, 1949 = Hy Sta 5602

T-9258

- ✓ J.W. (USE), 1949
- TOWER #2, 1949
- TOWER #3, 1949
- TOWER #4, 1949
- TOWER #5, 1949
- ✓ WALKER ISLAND SOUTHEAST LIGHT, 1949
- ✓ BARLOW POINT LIGHT, 1949
- ✓ SLAUGHTERS LOWER RANGE REAR LIGHT, 1949
- ✓ SLAUGHTERS LOWER RANGE FRONT LIGHT, 1949
- ✓ OUT, 1949 = Hy Sta 4907 B
- ✓ SIR, 1949 = " " 4911
- ✓ NUT, 1949 = " " 4909 B
- ✓ KER, 1949 =
- ✓ RED, 1949 = " " 4909

T-9259

- ✓ MOUNT COFFIN LIGHT, 1949
- ✓ LONGVIEW RANGE REAR LIGHT, 1949
- LONGVIEW RANGE FRONT LIGHT, 1949
- ✓ ALUMINUM TANK, 1949
- ✓ WALKER ISLAND DIKE 8 LIGHT, 1949
- ✓ DIBBLEE DIKE LIGHT, 1949
- ✓ NOT, 1949 = Hy Sta 4907
- ✓ TAN, 1949 = " " 4903

T-9260

- ✓ DIKE, 1949 = Hy Sta 4902
- LONGVIEW BRIDGE FOG SIGNAL SIREN, 1949
- LONGVIEW BRIDGE CHANNEL LIGHT, 1949
- ✓ SLAUGHTERS DIKE LIGHT, 1949
- ✓ SLAUGHTERS DIKE 2 LIGHT, 1949
- LONGVIEW BRIDGE FOG SIGNAL GONG, 1949

T-9261

- LONGVIEW, LONG-BELL LUMBER CO. (Center Tank), 1949
- ✓ DOBELBOWER LIGHT, 1949

T-9262

- COWLITZ RIVER ENTRANCE 2, LIGHT, 1949

T-9263

- ✓ COTTONWOOD ISLAND UPPER RANGE REAR LIGHT, 1949
 - PHIN, 1949
 - ✓ COTTONWOOD ISLAND UPPER DIKE LIGHT, 1949
 - ✓ COTTONWOOD ISLAND LOWER RANGE REAR LIGHT, 1949
 - ✓ CARROLLS DIKE LIGHT, 1949
 - ✓ COTTONWOOD ISLAND UPPER RANGE FRONT LIGHT, 1949
 - ✓ COTTONWOOD ISLAND LOWER RANGE FRONT LIGHT, 1949
- } Common Structure

T-9264

- ✓ COFFIN ROCK LIGHT, 1949
- ✓ KALAMA RIVER LIGHT, 1949

T-9265

- ✓ KALAMA LOWER RANGE REAR LIGHT, 1949
- ✓ HOFFMAN LIGHT, 1949
- HUNTER BAR DIKE 4 LIGHT, 1949
- ✓ HUNTER BAR DIKE DAYBEACON, 2, 1949
- ✓ KALAMA LOWER RANGE FRONT LIGHT, 1949
- ✓ HUNTER BAR DIKE 1 LIGHT, 1949
- HUNTER BAR UPPER DIKE LIGHT, 1949
- ✓ AHLE POINT LIGHT, 1949
- ✓ KALAMA PORT DOCK LIGHT, 1949
- Sandy Island Dolphin, 1949

✓ = 30 Lts (former A)
 ○ = 8 other aids
 □ = 3 Lts (USE)
39 Aids
 E = 1 tank (USE)
 □ = 1 tank (former A)
41
 + 21 other objects
 + 62
 + 1 Dolphin

Twenty-four forms 524 were originally filed under T-sheet numbers but have been transferred to H-sheet numbers because they appeared as topographic stations on H-sheets only.

<u>Stations</u>	<u>Filed Under</u>	<u>Transferred To</u>
KEN (USE, 1941) 1949	T-9258	H-7746
POINT (USE, 1926) "	"	"
CAN "	T-9261	H-7744
WIP "	"	"
WAY "	"	"
BEL "	"	"
IRON "	"	"
IRE "	"	"
MET "	"	H-7745(Ld Mk Stack)
SAW "	"	"
PIE "	"	H-7744
BUR "	"	H-7892
WIT "	"	H-7745
LUMBER "	"	"
PIN (Dike 42.4 Outer Dol) 1949	T-9263	H-7892
DOBEL 1949	"	"
Carrols Dike Lt(USE) 1949	"	"
END "	"	"
KAL (Kalama River Lt.) "	T-9264	"
POL "	"	"
TAL "	"	"
SIGN "	"	"
MIL (Stack) "	"	"
DOL (Dike 36.3 Dol N.E. End) 1949	T-9265	H-7742

List of Photo Hydrographic Stations in the area of T-9254 to T-9260 inclusive.

	<u>Number</u>	<u>Photo.</u>	<u>Description</u>
T-9254	✓5702B	4254	Tall pile roughly on line with cabin gable (Doubtful).
	✓5704A	4255	Upstream gable, white house.
	✓5704B	4254	Downstream gable on barn.
	✓5706A	4255	Dolphin, white flag (also Sub. Pt. for SCOTT R.M. #1).
	✓5706B	4252	Dolphin inshore of 3.
	✓5708A	4255	Dolphin #3.
	✓5708B	4252	Dolphin, inshore of 3.
	✓5710A	4375	Red flag on dolphin #4.
	✓5710B	4252	Dolphin, inshore of 2.
	✓5711	4253	Whitewashed boards on dolphin stub.
	✓5712	4255	Downstream gable, barn.
	✓5712A	4388	Dolphin #5.
	✓5712B	4252	Whitewash on dolphin offshore of 2.*
	✓5713	4253	White flag on 3 piling nailed together.
	✓5714	4255	Downstream corner, loading chute. (Doubtful).
	✓5714A	4388	Dolphin offshore from #6.
	✓5716	4255	Downstream gable, grey boat house.
	✓5716A	4388	Dolphin #7, whitewashed.
	✓5718	4375	Downstream gable of tin roofed fish house. (Note: unpainted strip of tin on end of house.)
	✓5720	4388	Cannery river gable.
T-9255	✓5603A	4292	Yellow flag on inshore dolphin.
	✓5604A	4292	White wrap on pile inshore of 2 leaning dolphins.
	✓5605A	4292	Dolphin #5, white wrap.
	✓5610	4291	White banner on stub of dolphin.
	✓5613	4292	Downstream gable large shed on piling.
	✓5615	4292	Downstream gable, tin roofed barn.
	✓5615X	4292	Silo at upstream end of tin roofed barn. <i>Topo. SIL</i>
	✓5617	4292	Large barn, upstream gable.
	✓5619	4292	Downstream gable, white house.
	✓5621	4292	River gable on tan house. <i>Topo. WASP</i>

* FI Photo 4252 says "destroyed". The inshore dolphin is used on T-9510 as "303"

T-9255 (continued)

	<u>Number</u>	<u>Photo.</u>	<u>Description</u>
	✓5701	4293	White banner on trunk large tree.
	✓5702	4257	River gable, cannery. <i>Topo. Bill</i>
	✓5702A	4255	Dolphin #1, whitewashed.
	✓5703	4294	Upstream river corner of old structure.
	✓5704	4257	Downstream NW corner, false front yellow house. <i>Topo. New</i>
	✓5705	4295	White flag on river end of dike ruins.
	✓5706	4257	Downstream gable, shed.
	✓5707 ⁹	4295	River gable on downstream, yellow house. <i>Topo. Ted</i>
	✓5709 ⁷	19 4296	Dolphin at upstream end of line of piling.
T-9256	✓5608	4291	White and black flag over white wrap on center of highest pile.
	5708	4256	Flag on inshore of 4 old broken piling.
	✓5710	3 4255	Downstream gable, barn.
T-9257	✓4913	4263	White banner on tripod located by sextant fix.
	✓5601	4290	Sign "5 miles per hour speed limit" on pile.
	✓5601A	4291	Black flag on inshore one of 2 dolphin stubs.
	✓5602	4290	Red white red wrap on new dolphin. <i>Topo. End</i>
	✓5602A	4291	Black and yellow flag on dolphin stub.
	✓5603	4291	Cupola on large barn.
	✓5604	4290	Red flag over white wrap on highest pile of inshore dolphin.
	✓5605	4291	White banner on piling beside corner of float - HO.
	5606	4291	Red flag on dolphin (Hydro "FOG U.S.E.").
	✓5607 ⁹	4291	River Gable, shed, inshore and upstream from large white boat-house.
	✓5609 ⁷	4291	Downstream gable large barn.
	✓5611	12 4291	River gable, white house.
T-9258	✓4901B	4266	Signal is white flag over white wrap on tripod (Position computed).
	✓4902A	4267	S.E. corner of old structure white crossed banners.
	✓4903B	4265	White flag over white wrap on dolphin. (Located graphically by angle and distance.)

T-9258 (continued)

	<u>Number</u>	<u>Photo.</u>	<u>Description</u>
S. shore Walker Id	4904A	4264	Dolphin #1, white flag.
	4905B	4264	White crossed banners, located by sextant fix.
" "	4906A	4263	Dolphin #2.
	4907B	4264	New dolphin with white wrap. <i>Tapo OUT</i>
" "	4908A	4262	Dolphin #3.
	4909	4266	Red flag over white banner on dolphin. <i>Tapo RED</i>
	4909B	4264	New dolphin with red white red wrap. <i>Tapo NOT</i>
S shore, mainland	4910	4267	Dolphin #4, whitewashed.
" " Walker	4910A	4262	Dolphin #4.
N " mainland	4911	4265	Station is new dolphin with red wrap with white cross. <i>Tapo SIR</i>
S " "	4912	4267	Dolphin #5.
" " Walker	4912A	4262	Outer dolphin of 3 in range.
" " mainland	4914	4266	Dolphin #6, yellow wrap.
" "	4916	4266	Dolphin "A". (Position computed, sub-station J.W. (USE)).
" "	4918	4266	Dolphin "B", whitewashed.
" "	4920	4266	Dolphin "C".
" "	4922	4266	Dolphin "D", black wrap.
" "	4924	4265	Dolphin "F", whitewashed.
" "	4926	4265	Dolphin "G", yellow wrap.
" "	4928	4264	Dolphin "H".
" "	4930	4264	Whitewashed dolphin.
" "	4932	4262	R.R. Shed River Gable (rejected). <i>Photo 4291 "C" in Sect. Fix for del. on T-9205</i>
" "	4934	4263	Small bush on southwest corner of small point.
26			
T-9259	4901A		Dolphin south end Dike 49.1.
	4903	4270	R.R. Water Tank, black, elevated. <i>Tapo TAN</i>
	4905	4267	Yellow & white wrap on dolphin.
	4907	4267	White and red wrap on Dolphin "49.4". <i>Tapo NOT</i>
27			
T-9260	4900	4270	Dolphin at offshore end of first dike extending from southwest shoreline, upstream from Longview Bridge.
	4901	4270	Yellow wrap on upstream end dolphin offshore from large white shed.
	4902	4270	New dolphin, not flagged. <i>Tapo DIKE</i>
	4904	4267	Dolphin #1, tallest of 4.
	4904B	4269	Dolphin or pile used for log boom mooring located midway in slough that lies between Slaughter's Dike Light and Dibblee Dike.

T-9260 (continued)

<u>Number</u>	<u>Photo.</u>	<u>Description</u>
✓4904C	4269	Bush on sand area southeast of Slaughter's Dike entrance to slough and about opposite lumber company dock. ✓
✓4906	4267	Dolphin #2.
✓4908	4267	Dolphin #3.

20
19
3
12
26
4
8

92 (No 4932 rejected)
- 1

91

Geographic Names.

T-9254:

Columbia River
Crims Island
Gull Island
Bradbury Slough
Abernethy Creek

Abernethy Point Light

Bunker Hill Light

Stella Range Rear Light

T-9255:

Columbia River
Coal Creek Slough
Crims Island
Green Point
Fisher Island
Fisher Island Slough
Bradbury Slough
Stella

Stella Range Front Light
Cleveland Light

T-9256:

Columbia River
Mayger

T-9257:

Columbia River
Walker Island
Fisher Island
Fisher Island Slough

T-9258:

- Columbia River
- Walker Island
- Dibblee Point
- Rinearson Slough

T-9259:

- Columbia River
- Mt. Coffin
- Longview

T-9260:

- Columbia River
- Longview Bridge

T-9261:

- Columbia River
- Longview
- Rainier
- Rainier Bar

T-9262:

- Columbia River
- Cowlitz River
- Cottonwood Island
- Carroll Channel

Barlow Point Light
Slaughters lower Range
Front and Rear lights

Dibblee Dike Light
Mt. Coffin Light

Slaughters Dike Light

Dobelbower Light

Rainier Bar lower
Dike East End Light

T-9263:

- Columbia River ✓
- Carroll Channel ✓
- Cottonwood Island ✓
- Carr Slough ✓
- Carroll Bluff ✓

T-9264:

- Columbia River ✓
- Kalama River ✓
- Coffin Rock ✓
- Sandy Island ✓
- Goble Creek ✓

T-9265:

- Columbia River ✓
- Kalama ✓
- Kalama Channel ✓
- Sandy Island ✓
- Sandy Island West Channel ✓
- Elder Rocks ✓
- Ahle Point ~~Island~~ ✓
- Hunter Bar ~~Island~~ ✓

REVIEW REPORT
Shoreline Manuscripts T-9254 to T-9265
21 August 1952

62. Comparison with Registered Surveys:

T-1401b	1:10,000	1874	E $\frac{1}{2}$ Wallace Id.-W $\frac{1}{2}$ Crims Id.	T-9254
T-1431a	"	1876	Crims Id.-Barlow Pt.	T-9255 to 58
T-1454	"	1876-7	Barlow Pt.-Longview Wharf	T-9258 to 61
T-1455	"	1877	Longview-Cottonwood Id. - Kalama	T-9261 to 65
T-6567	"	1938	Crims Id. - Walker Id.	T-9257-58
T-6568	"	"	Walker Id.-Cottonwood Id.	T-9258 to 62
T-6569	"	"	Cottonwood Id.-Martin Id.	T-9262 to 65

See Compilation Report, Headings 33 and 46 for comparisons with T-6567-69.

64. Comparison with Maps of Other Agencies:

- USE Clatskanie, Oreg. Wash. 1:50,000 1947 (1937 photos)
Area of T-9254 to 58 and T-9260.
- USE Kalama, Wash. Oreg. 1:50,000 1947 (1937 photos)
Area of T-9259 to 65.
- USE St. Helens, Oreg. Wash. 1:50,000 1947 (1937 photos)
Area of T-9265.

64. Comparison with Contemporary Hydrographic Surveys:

H-7742	1:5,000	1949	Sandy Id., west channel	T-9264-65
H-7743	"	"	Carroll Channel	T-9263
H-7744	"	"	Cottonwood Id.-Rainier	T-9261-63
H-7745	"	"	Longview	T-9259-61
H-7746	"	"	Longview-Walker Id.	T-9258-59
H-7747	"	"	Fisher Island	T-9256-58
H-7748	"	"	Fisher Id.-Crims Id.	T-9254-56
H-7892	1:10,000	1951	Rainier-Coffin Rock (west chan.)	T-9261-64
H-7862	"	1950	Wallace Id. - Crims Id.	T-9254

* * * * *

T-9254

*H-7748: Shoreline changes made during review: Chart 6152
a sandspit (46°10'47"/123°08'45") upon which
willows grow; two areas on the south shore of
Bradbury Slough.

Other additions are: Several dolphins; piling
areas; notes about bank character; the dike
following the southern shore of Bradbury Slough;
and a small tank, for which no form 524 was

* The hydrographic surveys were brought
into agreement with manuscripts 6/30/53
B.F.V.

*H-7862: This survey overlaps H-7748 about three minutes. The base for H-7862 was made from T-9510. In the area of overlap positions of dolphin hydrographic stations and the neighboring dolphins were not in agreement in some cases on the two surveys.

Using the larger scale map manuscript, T-9254, radial intersections for the dolphins were tested and found to be within the limits of accuracy.

In the area of overlap on T-9510 and T-9254, hydrographic data on H-7862 should be altered to conform to that delineated on T-9254.

Three snags delineated on H-7862, - one between Gull and Crims Islands, one just off the west point of Crims Island, and one just east of Hydro. Sig. 5708B were not transferred to the map manuscript T-9254.

T-9255

*H-7748. No major changes were made to the shoreline during review, but a few additions or alterations were made to snags and piling. These have been made in red, so that they are readily apparent.

The dike along the northern shore was added because it differs from that on the 1938 survey and it is incomplete on the current chart.

Items on the hydrographic survey but not on T-9255:

1. Snag at $46^{\circ}10'53''/123^{\circ}07'25''$ (3) *Charted on 6153*
2. Stub piling group at $46^{\circ}10'25''/123^{\circ}05'10''$ " " "
3. *(Islet)* at $46^{\circ}10'10''/123^{\circ}04'43''$. Field inspection made no note of it and it is not evident on photo 4292, which was taken at approximate low water.

Geographic names:

Fisher Island Channel changed to Fisher Island Slough.

"Cleveland" Light on H-7748 is spelled "Cleveland" on T-9255 and in Light List.

T-9256

*H-7747 and H-7748. No changes in shoreline or hydrographic data were made during review.

Two bluff symbols and notes regarding shore character were added from field inspection information.

H-7747 Several map

* See note page 1

T-9257

*H-7747 - Several snags on H-7747 west of dike 53.0 were not transferred to the map manuscript.

Additions (in red) during review include:

1. Dike following the north shore of Fisher Island Slough.
2. Notes describing bank character
3. Piles and snags
4. Railroad shed (rejected Hy.Sig. 4932) which is point "C" for a sextant fix point recorded on photo 4291.

T-9258

*H-7746 - Portions of the shoreline of the mainland along the south channel were re-drawn to conform to field inspection drawing.

The 25+ ft. dike having a road 7 on top was delineated along the north shore of the north channel. This dike is not shown on the chart.

*H-7747: At $46^{\circ}09'09''$ ^{08' 54"?}/ $123^{\circ}03'30''$ an area with piling is shown on H-7747. They are not visible in the deep shadows of the photographs and no field information was given. The piling was not delineated on T-9258 during review.

T-9259

*H-7746: The 30-35 ft. dike inland along the north shore of Columbia River was delineated as far as Mt. Coffin during review. A road 7 tops the dike in the western end, but the road has been improved in the Mt. Coffin area. No attempt was made to complete the dike south of Mt. Coffin because the complexity of this area makes field inspection notes essential.

T-9260

*H-7745: Longview Bridge Fog Signal, Siren. Both T-9260 and H-7745 have this siren located on the north pier (near the Gong), though the description in the Light List, field inspection (photo 4271) and form 524 say it is on the south pier.

T-9260, form 524, and Chart Letter 859 (1949) p.1 have been revised to meet the specifications.

H-7745 needs revision for this item. The siren is correctly placed on chart 6153.

T-9262

*H-7744: The shoreline on T-9262 northwest of dike 44.2 was altered to conform to that on H-7744.

T-9263

*H-7743 and ^{unverified}H-7892: The lights for Cottonwood Island Lower Range were rebuilt in 1951 in entirely new positions so that this range data is obsolete on T-9263.

The 1952 Light List p.98, No. 1148 still says that Cottonwood Island Upper Range Front and Lower Range Front are a common structure. This part of the descriptive note should be deleted.

T-9264

*H-7742 and ^{unverified}H-7892: Minor changes to shoreline were made on the west side of the river between the Pacific Tel. and Tel. crossing and the northern map limit. A stack and four dolphins were added.

T-9265

*H-7742: A dolphin on H-7742 (Hydro. Station WIN) is not entered on T-9265. The field inspector did not mark it, and the photographs give no evidence that a dolphin is there.

The off-shore rock at Elder Rocks was not transferred from H-7742 to T-9265 during review.

A 20-foot dike with a road 7 on top and a portion of the railroad on fill were delineated during review. ?

Shoreline changes were made at $45^{\circ}59\frac{1}{2}'/122^{\circ}51\frac{1}{2}'$ to $52'$. ?

Topographic station Dolphin, 1949, was labeled. The dolphin had been cut in during compilation. It was formerly Sandy Island Light dolphin and was a triangulation station whose plotted position is the same as the radially cut position.

65. Comparison with Nautical Charts:

6152	1:40,000	July 1944	rev. Jan. 1951
6153	1:40,000	May 1952	(1st ed.)

This group of map manuscripts were applied to charts prior to review. For changes made during review see 64 above.

T-9257 Charted light "3" at the east end of dike 52.6 south of Fisher Island is not on T-9257. The light was built in 1950.

T-9258 Light List data not in agreement with map manuscript:
1. Walker Island Southeast Light is 15 feet west of Dike 52.1.
2. Slaughters Lower Range Rear Light is 387 yds, 326° from front light.

T-9259 Longview wharf is not well represented on the chart. Roads and railroad spurs have been added or altered and large mills erected. Additional inspection or information is desirable for the area between Mt. Solo and Cowelitz River entrance.

Mt. Coffin is being quarried. Only its rim remains.

Charted but not named on T-9259:

1. Privately maintained light in the boom area opposite Longview Range lights. The most westerly of the outer line of dolphins was cut in during review. This dolphin occupies the position of the charted light. No field note labeled it as a light, therefore no name has been put on the manuscript.

T-9260 Two islets between Slaughters Dike and Longview Bridge are not charted.

T-9261 The dike near the north shore of Columbia River and the log pond entrance near Cowelitz River entrance was added.

The light charted at Cowelitz River entrance was not built until 1950 and is not on the map manuscript. Triangulation Red.1949 is on the old platform.

T-9262 Charted light "31" at the end of dike 43.8 was not built until 1951 and is not on the map manuscript.

The 30-foot dikes at Cowelitz River entrance were continued from T-9261.

Shoreline on the north side of Cowelitz River was added a little east of 122°54' and two wooded islands were added. These islands do not appear on chart 6153.

T-9263 A rock was added at 46°04.8⁵'/122°54.4⁵'. Minor shore-line changes were made to the east shore of Cottonwood Island and some piling was added.

67. Recoverable Topographic Stations:

Forms 524 for twenty-four topographic stations recorded on the hydrographic surveys had been filed under T-sheet numbers. The forms were transferred to the proper H-sheet number. They are listed on page 38a.

68. Accuracy:

These map manuscripts comply with project instructions and conform to field inspection notes. The radial plots were good and the compilation accurately performed. These maps comply with the National Standards of Map Accuracy.

Reviewed by:

Lena T. Stevens
Lena T. Stevens
21 August 1952

Approved by:

S. D. Giffith
Chief, Review Section
Division of Photogrammetry

H. Edmister
Chief, Nautical Chart Branch
Division of Charts

O. S. Reading
Chief, Div. Photogrammetry

Carl O. Hester
Chief, Div. Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. T-9254

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
5/10/50	3361	Goodrich	Before After Verification and Review Completely applied
			Before After Verification and Review
			Before After Verification and Review
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			Before After Verification and Review

M-2168-1

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.

NAUTICAL CHARTS BRANCH

T-9254 to
SURVEY NO. T-9265, incl.

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
28 Feb 50	6153	<i>Nichols</i>	Before After Verification and Review <i>Examined for critical changes only</i>
5 May 50	3362-A	<i>H. E. Mac Ewen</i>	Before After Verification and Review
5/5/50	3362.B	<i>S. M. Sauer</i>	Before After Verification and Review
5/10/50	3361	<i>Goodrich</i>	Before After Verification and Review <i>Completely (19254)</i>
10-11-51	6153	<i>Chas. R. Witman</i>	Before After Verification and Review
3/21/52	^{Reconst} 6152	<i>G. H. E.</i>	Before After Verification and Review
8/14/62	6153	<i>D. S.</i>	Before After [✓] Verification and Review
			Before After Verification and Review
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			Before After Verification and Review
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			Before After Verification and Review

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.