**U. S. COAST AND GEODETIC SURVEY**
**DEPARTMENT OF COMMERCE**

**DESCRIPTIVE REPORT**

**Type of Survey** Planimetric, Air Photographic
**T-8651, T-8652**

**Field No.**...
**Office No.**...

**Locality**
**State** OREGON AND WASHINGTON
**Columbia Co., Oregon**
**General locality** Clark & Cowen Co., Wash.
**Locality** St. Helens, Oregon
**Austin Point & Lewis River, Washington**

**CHIEF OF PARTY**
R. A. Earle

**DATE** Dec 16, 1847

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Diag'd. on diag. ch. No. 6153 & 6154
RECORD SHEET

GENERAL LOCALITY Columbia County, Oregon
LOCALITY St. Helens, Oregon
PHOTOS ORDERED: Aug. 1945 REC'D: 1-21-46
PHOTO ORDERED: June 1946 REC'D: 7-29-46

CONTROL:
COMPUTED: Harris VERIFIED: Bunce
PLOTTED: Bunce VERIFIED: Harris

PHOTO PREPARATION:
CONTROL: Harris, Bunce
AZIMUTHS: Jensen
PASS POINTS: Bunce, Davidson
TEMPLETS: Elrod, Bunce, VERIFIED: Davidson

RADIAL PLOT: Davidson
PLOTTED BY: Harris DATE: 11-18-46
VERIFIED: Deal DATE: 11-19-46

COMPILED:
DETAIL POINTS: Wiebe DATE: 2-10-46
DETAIL BY: Wiebe DATE: 2-19-47
VERIFIED BY: Barron DATE: 2-21-47

DATE OF PHOTOS: See reverse side
TIME OF PHOTOS:
STAGE OF TIDE:

COMPARISON WITH PREVIOUS SURVEYS; TOPO., HYDRO., AND CHARTS:
Due to a scale difference only a visual comparison was made with the U.S. St. Helens, Ore. - Wash. 15 min. quadrangle. In general, the planimetry which is common to the map manuscript and quadrangle map is in agreement. There have been many additions to the cultural features in the area since the quadrangle map was made. Comparison was made with a black line print on clear acetate of (over)

REMARKS:
All corrections and additions which were found during the field edit were applied to the map manuscript and a final compilation office review was then made.

FORWARDED TO: Washington Office DATE: 13 March 1947

R. A. Earle
Chief of 'arty
COMPARISONS (cont'd.)

Topographic Survey No. 6570a of October 1937, Scale: 1:10000 enlarged to a Scale: 1:8000. The shoreline of the Columbia River which is common to the survey and map manuscript is in agreement, except as follows:

Between Lat. 45° 52' 35" and Lat. 45° 52' 55" the west shoreline of the Columbia River has eroded from 0 to 25 meters since the Topographic Survey was made.

At Lat. 45° 53' the west shoreline has eroded and is of a different shape than at the time the topographic survey was made.

Comparison was made with nautical chart no. 6153, Scale: 1:40000, by use of the vertical projector. The following discrepancies were noted:

The west shoreline of the Columbia River from Columbia City south to the east limits of the map manuscript as shown on the chart does not agree with that on the map manuscript, or with that on the 1937 topographic survey. The street systems in Columbia City and St. Helens are in error on this chart. The size of a pond at Lat. 45° 52' 35" and Long. 128° 48' 10", as shown on the chart, is in error.

PHOTOGRAPH DATA

<table>
<thead>
<tr>
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<th>Stage of Tide</th>
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<td>3511 to 3513 &quot; 7-27-45</td>
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<td>&quot;</td>
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DATA RECORD
T-8651

(3 minute)

Field Office: Portland, Oregon Chief of Party: R. A. Earle


Instructions dated (II III): July 12, 1945
Supplemental Instructions: Aug. 29, Sept. 10,
Oct. 25, Nov. 30, and Dec. 6, 1945.

Completed survey received in office: 14 Mar. 1947

Reported to Nautical Chart Section: —

Reviewed: 27 May 1947 Applied to chart No. Date:

Redrafting Completed: 7 Aug. 1947

Registered: 2 Dec. 1947 Published: 1947

Compilation Scale: 1:8000 Published Scale: 1:3600

Scale Factor (III): None

Geographic Datum (III): N. A. 1927 Datum Plane (III): * See below

Reference Station (III): SAINT (OREG.), 1937 r 1946.

Lat.: 45° 52' 18.975" (585.8m) Long.: 122° 48' 56.942" (1228.1m) Adjusted X
Unadjusted

State Plane Coordinates (VI): Oregon - North Zone

x = 1,410,172.98 feet

y = 812,450.86 feet

Military Grid Zone (VI)

* (M.H.W. = 6.29 ft. above Mean Sea Level) (M.L.W. = 1.29 ft. above Mean Sea Level).
All elevations are on the Standard 1929 general adjustment of leveling in the U.S.A.
### PHOTOSHAPES (III)

<table>
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<td>545 to 547</td>
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<td>&quot;</td>
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<tr>
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<td>4.9 ft.</td>
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</table>

Daily readings of the U. S. Engineers tide gauge located at Government Moorings on the west shore of the Willamette River just south of St. Johns Bridge. The 0+00 of the gauge is Tide from (III): 1.29 ft. above Mean Sea Level.

Mean Range: Spring Range:

Camera: (Kind or source) K 17, focal length 12 inches

Field Inspection by: See remarks, page 3 date:

Field Edit by: F. H. Ejrodt, Prin. Photo. Aid date: Feb., 1947

Date of Mean High-Water Line Location (III): Nov. 21, 1945

Note: According to supplemental instructions dated 10 September 1945, a high-water line of 5.0 ft. above Mean Low-Water is to be shown on the map manuscripts. Photographs made on 21 November 1945, were taken when the water level was 4.9 ft. above M.L.W.

Projection and Grids ruled by (III) Washington Office date: June, 1946

" " " checked by: Washington Office date: June, 1946

Control plotted by: Eda H. Bunce date: October, 1946

Control checked by: James L. Harris date: October, 1946

Radial Plot by: James L. Harris and Roy A. Davidson date: 11-8-46

Detailed by: Carita C. Wiebe date: 2-19-47

Reviewed in compilation office by: Ree H. Barron date: 2-27-47

Corrections and changes after field edit by: Ree H. Barron date: 3-10-47

Review after changes due to field edit by: J. E. Deal date: 3-11-47

Elevations on Field Edit Sheet checked by: Charles Hanavich, Topo. Engr. date: Feb., 1947
STATISTICS (III)

Land Area (Sq. Statute Miles): 4.4

Shoreline (More than 200 meters to opposite shore): 1.5 statute miles

Shoreline (Less than 200 meters to opposite shore): None

Number of Recoverable Topographic Stations established: 3
(all fixed aids to navigation)

Number of Temporary Hydrographic Stations located by radial plot: None

Leveling (to control contours) - miles:

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

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

Remarks:
Field Inspection by: J. H. Winniford, Photo. Aid  date: June, 1946

Shoreline Inspection by: J. C. LaJoye, Prin. Photo. Aid  date: May, 1946

Recovery of Horizontal Control by: LaJoye, Winniford  date: July, 1946

Recovery of Vertical Control by: J. Winniford  date: Oct., 1945

Investigation of Geographic Names and Civil Boundaries by: L. E. Ervast, Photo. Aid  date: June, 1946
RECORD SHEET

GENERAL LOCALITY...Cowlitz County, Washington
LOCALITY...Austin Point, Washington.
PHOTOS ORDERED...Aug. 1945...REC'D...9-24, 26, 45
PHOTOS ORDERED...June 1946...REC'D...7-29-46

CONTROL:
COMPUTED...Bruce...VERIFIED...Harris
PLOTTED...Reese...VERIFIED...Davidson

PHOTO PREPARATION:
CONTROL...Harris
AZIMUTHS...Jensen
PASS POINTS...Harris, Davidson
TEMPLATES...Klrod...VERIFIED...Harris

RADIAL PLOT: Davidson
PLOTTED BY...Harris...DATE...11-13-46
VERIFIED...Deal...DATE...11-19-46

COMPILED:
DETAIL POINTS...Randall...DATE...1-15-47
DETAIL BY...Turner
VERIFIED...Deal...DATE...2-12-47

DATE OF PHOTOS...See reverse side
TIME OF PHOTOS...
STAGE OF TIDE...

COMPARISON WITH PREVIOUS SURVEYS; TOPO., HYDRO., AND CHARTS:
Due to a scale difference only a visual comparison was made with the USGS St. Helens, Greg, Wash., 15 min. quadrangle, Scale: 1:62500. In general the planimetry which is common to the map manuscript and quadrangle map is in agreement. A submerged area shown as St. Helens Bar on the quadrangle map is shown as a tree covered island on the map manuscript. The name "St. Helens Bar" is over

REMARKS:
All corrections and additions which were found during the field edit were applied to the map manuscript and a final compilation office review was then made.

FORWARDED TO...Washington Office...DATE...13 March 1947

R. A. Earle
Chief of Party
incorrectly indicated on the quadrangle map. This bar extends south to include the shoal area around an island to the south of the submerged area; however, a channel was dredged through the bar in 1945, and it now consists of two parts.

Comparison was made with black line prints on clear acetate of Topographic Surveys No's. 6570a and 6570b, October 1937, Scale: 1:10000 enlarged to a Scale: 1:3000. The map manuscript and surveys are in agreement except for the following:

The east shoreline of the Columbia River has eroded between Lat. 45° 52'15" and 45° 54'10" and between Lat. 45° 51'30" and 45° 52'00".

The shape of an island at Lat. 45° 53' has changed since the topographic surveys were made.

The shape of Austin Point has changed since the surveys were made.

A slough has cut through the southeast shoreline of the Lewis River at Lat. 45° 51'10" since the surveys were made.

Comparison was made with Nautical Charts No's. 6753 and 6754 Scale: 1:40000 by use of the vertical projector. In general, the planimetry which is common to the charts and map manuscript is in agreement; however, there were many minor differences noted, which were too numerous to list, and the planimetry as shown on the map manuscript should now supersede the planimetry shown on the charts.

**PHOTOGRAPH DATA**

<table>
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<tr>
<th>Number</th>
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<td>684 &amp; 685</td>
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<td>3546 to 3549</td>
<td>7-21-45</td>
<td>13:45</td>
<td>&quot;</td>
<td>4.9 ft. &quot;</td>
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<td>3552 to 3554</td>
<td>&quot;</td>
<td>14:15</td>
<td>&quot;</td>
<td>4.9 ft. &quot;</td>
</tr>
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</table>
DATA RECORD

T- 8652

Quadrangle (II): Austin Point, Gwaltz Co., WashProject No. (II): CS-322
(3 minute)

Field Office: Portland, Oregon Chief of Party: R. A. Earle


Instructions dated (II III): July 12, 1945 Copy filed in Descriptive
Supplemental Instructions: Aug. 29, Sept. 10, Report No. T-
Oct. 25, Nov. 30, & Dec. 6, 1945 Dw. Photogram Office Files

Completed survey received in office: 18 Mar. 1947

Reported to Nautical Chart Section:

Reviewed: 18 Nov. 1947 Applied to chart No. Date:

Redrafting Completed: 17 July, 1947

Registered: 3 Nov. 1947 Published: 1947

Compilation Scale: 1:8000 Published Scale: 1:9600

Scale Factor (III): None

Geographic Datum (III): N. A. 1927 Datum Plane (III): *See below
Reference Station (III): DALTON (OREG.), 1937 r 1946

Lat.: 45° 52' 28.618" (833.6m) Long.: 122° 47' 53.444" (1152.6m) Adjusted X
Unadjusted

State Plane Coordinates (VI): Oregon - North Zone

X = 1, 414, 691.94 feet Y = 813, 298.93 feet

* (M.H.W. = 6.29 ft. above Mean Sea Level)(M.L.W. = 1.29 ft. above Mean Sea Level).

All elevations are on the Standard 1929 general adjustment of leveling in the U.S.A.
### PHOTOS (III)

<table>
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<td>1:8000 ratio</td>
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<tr>
<td>3546 to 3549 &quot;</td>
<td>11-21-45</td>
<td>13:45</td>
<td>&quot;</td>
<td>4.9 ft. &quot;</td>
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<tr>
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<td>14:15</td>
<td>&quot;</td>
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Daily readings of the U.S. Engineers tide gauge located at Government Moorings on the west shore of the Willamette River just south of St. Johns Bridge. The 0+00 of the tide from (III): gauge is 1.29 ft. above Mean Sea Level.

**Mean Range:**

**Spring Range:**

**Camera:** (Kind or source) K 17, focal length 12 inches

**Field Inspection by:** See remarks, page 3

**Field Edit by:** F. H. Elrod, Prin. Photo. Aid

**Date of Mean High-Water Line Location (III):** 21 Nov. 1945

**Note:** According to supplementary instructions dated 10 September, 1945, a high-water line of 5.0 ft. above Mean Low-Water is to be shown on the map manuscripts. Photographs made on 21 November 1945, were taken when the water level was 4.9 ft. above M.L.W.

**Projection and Grids ruled by (III) Washington Office**

**" " **checked by: Washington Office

**Control plotted by:** Eda H. Bunce

**Control checked by:** Roy A. Davidson

**Radial Plot by:** James L. Harris & Roy A. Davidson

**Detailed by:** Clyde A. Randall, Albert C. Turner

Reviewed in compilation office by: J. E. Deak

Corrections and changes after field edit by: Roy H. Barron

Review after field edit by: J. E. Deak

Elevations on Field Edit Sheet checked by: Charles Hansvich, Topo. Engr.

**Date:**
- June, 1946
- June, 1946
- October, 1946
- October, 1946
- November, 1946
- 12 February 1947
- 12 February 1947
- 11 March 1947
- 12 March 1947
- Feb., 1947
STATISTICS (III)

Land Area (Sq. Statute Miles): 5.0

Shoreline (More than 200 meters to opposite shore): 15.0 statute miles

Shoreline (Less than 200 meters to opposite shore): 4.0 statute miles

Number of Recoverable Topographic Stations established: 11
(all fixed aids to navigation)

Number of Temporary Hydrographic Stations located by radial plot: None

Leveling (to control contours) - miles:

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

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

Remarks:

Field Inspection by: W. J. Bushme1, Photo. Aid    date: May, 1946

Shoreline Inspection by: J. C. LaJoye, Prin. Photo. Aid    date: May, 1946

Recovery of Horizontal Control by: J. C. LaJoye    date: July, 1946

Recovery of Vertical Control by: J. H. Winniford, Photo. Aid    date: Oct., 1945

Investigation of Geographic Names and Civil Boundaries by: L. E. Ervast, Photo. Aid    date: July, 1946
RECORD SHEET

GENERAL LOCALITY: Clark County, Washington

LOCALITY: Lewis River

PHOTOS ORDERED: Aug. 1945 REC'D: 1-21-46

PHOTO PREPARATION:

CONTROL: Harris Verified: Bunce

PHOTO PREPARATION:

CONTROL: Harris, Bunce

AZIMUTHS: Jensen

PASS POINTS: Harris

TEMPLETS: Davidson Verified: Bunce

RADIAL PLOT: Davidson

PLOTTED BY: Harris DATE: 11-18-46

VERIFIED: Deal DATE: 11-19-46

COMPILATION:

DETAIL POINTS: Foster DATE: 12-12-46

DETAIL BY: Foster DATE: 12-21-46

VERIFIED BY: Barron DATE: 1-28-47

DATE OF PHOTOS: See reverse side

TIME OF PHOTOS:

STAGE OF TIDE:

COMPARISON WITH PREVIOUS SURVEYS; TOPO., HYDRO., AND CHARTS:

Due to a scale difference only a visual comparison was made with the USGS La-
Center, Wash., 15 min. quadrangle. Scale: 1:62500. In general the planimetry,
which is common to the map manuscript and quadrangle map is in agreement. Com-
parison was made with Nautical Chart No. 6153 Sec's: 1:60000, by use of the ver-
tical projector. In general the shoreline of the map manuscript and chart is (over)

REMARKS:

All corrections and additions which were found during the field edit were applied
to the map manuscript and a final compilation office review was then made.

FORWARDED TO: Washington Office DATE: 12 March 1947

R. A. Earle
Chief of Party
in agreement. At a point beginning 0.5 mile southeast of Woodland, Wash., and running northwest for 0.5 mile, the Lewis River has been straightened by dredging a new channel and closing off a half circle turn in the river with the construction of a 15 foot riprapped bank. The planimetry on the map manuscript has been extended approximately 0.5 mile north of the project limits so that data will be available for chart corrections in this area. Roads inshore from the Lewis River, as shown on the chart, do not agree with existing conditions.

PHOTOGRAPH DATA

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<td>7-21-45</td>
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DATA RECORD
T- 8653

Quadrangle (II): Lewis River, Clark Co., Wash. Project No. (II): CS-322
(3 minutes)

Field Office: Portland, Oregon Chief of Party: R. A. Earle


Instructions dated (II III): July 12, 1945 Copy filed in Descriptive
Supplemental Instructions: Aug. 29, Sept. 10, Oct. Report No. T-
25, Nov. 30 & Dec. 6, 1945

Completed survey received in office: 14 Nov. 1947

Reported to Nautical Chart Section:

Reviewed: 13 May 1947 Applied to chart No. Date:

Redrafting Completed: 29 July 1947

Registered: 4 Nov. 1947 Published: 1947

Compilation Scale: 1:8000 Published Scale: 1:9600

Scale Factor (III): None

Geographic Datum (III): N.A. 1927 Datum Plane (III): * See below

Reference Station (III): LEWIS RIVER HILLS 2 (WASH.) 1937 r 1946.

Lat.: 45° 53' 06.412" (259.7m) Long.: 122° 43' 07.395" (159.5m) Adjusted X
Unadjusted

State Plane Coordinates (VI):
X =
Y =

Military Grid Zone (VI)
* (M.H.W. = 6.29 ft. above Mean Sea Level) (M.L.W. = 1.29 ft. above Mean Sea Level).
All elevations are on the Standard 1929 general adjustment of leveling in the U.S.A.
PHOTOGRAPHS (III)

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<td>14:15</td>
<td>&quot;</td>
<td>&quot; 4.9 ft... &quot;</td>
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</table>

Daily readings of the U. S. Engineer tide gauge located at Government Moorings on the west shore of the Willamette River just south of St. Johns Bridge. The 0+00 of the gauge is Tide from (III): M.L.W., Columbia River, which is 1.29 ft. above Mean Sea Level.

Mean Range: 
Spring Range: 

Camera: (Kind or source) K 17, focal length 12 inches

Field Inspection by: See remarks, page 3 date:
Field Edit by: J. H. Winniford, Photo. Aid date: Feb., 1947

Date of Mean High-Water Line Location (III): 21 November 1945

Note: According to supplemental instructions dated 10 September 1945, a high-water line of 5.0 ft. above Mean Low-Water is to be shown on the map manuscripts. Photographs made on 21 November 1945, were taken when the water level was at 4.9 ft. above M.L.W.

Projection and Grids ruled by (III) Washington Office date: July, 1946
"  "  " checked by: Washington Office date: July, 1946

Control plotted by: Roy A. Davidson date: Oct., 1946
Control checked by: Eda H. Bunce date: Oct., 1946
Radial Plot by: J. L. Harris and R. A. Davidson date: 18 Nov., 1946
Detailed by: Richard Foster date: 27 Dec., 1946

Reviewed in compilation office by: Ree H. Barron date: 28 Jan., 1947
Corrections and changes after field edit by: Ree H. Barron date: 17 March 1947
Review after changes due to field edit by: J. E. Deal date: 12 March 1947
Elevations on Field Edit Sheet checked by: Charles Hanavich, Topo. Engr. date: Feb., 1947
STATISTICS (III)

Land Area (Sq. Statute Miles): 5.5

Shoreline (More than 200 meters to opposite shore): 3.0 statute miles

Shoreline (Less than 200 meters to opposite shore): 6.5 statute miles

Number of Recoverable Topographic Stations established: 4
(1 section corner and 3 topographic stations)

Number of Temporary Hydrographic Stations located by radial plot: None

Leveling (to control contours) - miles:

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

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

Remarks:

Field Inspection by: W. J. Bushme17, Photo. Aid date: May, 1946

Shoreline Inspection by: J. C. LaJoye, Prin. Photo. Aid date: May, 1946

Recovery of Horizontal Control: J. C. LaJoye, date: July, 1945

Recovery of Vertical Control by: J. H. Winniford, Photo. Aid date: Oct., 1945

Investigation of Geographic Names and Civil Boundaries by: L. E. Ervast, Photo. Aid date: July, 1946
FIELD INSPECTION REPORT
T-8651 to T-8653 inclusive
Project CS-322

1 to 25: All the information that is applicable to these side headings is given in the "Field Inspection Report, Project CS-322, Area of the Fourth Radial Plot", which was enclosed with the Descriptive Report for Quadrangles T-8669 and T-8670. This Descriptive Report has been submitted.

Approved by: Robert A. Earle
Chief of Party

Respectfully submitted: Charles Hanavich
Topographic Engineer
Amendment to File Data

Since project CS-322 was reviewed and registered, it was decided that a Completion Report for each project would be written and filed in the Bureau of Archives. This Completion Report should include all special reports, correspondence of probable future interest or importance, a project layout, a photo index, and a copy of the initial and supplementary project instructions.

A special file has been set up in the library for Division of Photogrammetry projects. The Completion Report and other special reports will be filed under the project number, and these will be arranged in numerical order.

The following reports and records for project CS-322 are now filed in the Bureau Archives, rather than according to the red notes in the Descriptive Reports:

A. Special Reports:
   1. Investigation of Boundary Monuments and Land Lines for Radial Plots 1, 2, 3, and 4
   2. Radial Plots 1, 2, 3, and 4
   3. Legal descriptions of boundaries
   4. Field Inspection for plots 1, 2, 3, and 4

Access No. CS-322 Rept. 1

B. Computations: Triangulation and Traverse
   Access No. 943/972 0-6785

C. Field records:
   1. Horizontal Angles (form 250) 12 vol.
      Access No. 943/90 0-7082
   2. Traverse Measurements (form 590) 9 vol.
      Access No. 943/9B 0-7085
   3. Descriptions (form 525) and recoveries (form 526)
      Access No. 943/9A 0-6786
   4. Pricking cards (form M-982-1) for tri. and Trav.
      Div. of Photogrammetry General File
   5. Recoverable Topographic stations (form 525)
      Div. of Photogrammetry General File

D. Recovery of bench marks (form 505)
   Filed in Leveling Sec.

E. Supplemental data; maps, plans
   These were transferred to the Map Section (Mr. Stanley, Chief), Division of Charts, to be selectively filed or discarded.

January 1951
COMPILATION REPORT
T-8651, T-8652 and T-8653
Project CS-322

26. Control:

At the time this project was started there were sixty-seven horizontal control stations in the area of these three map manuscripts. Twenty were recovered and eighteen of these were identified for use in the radial plot.

In the area of Map Manuscript T-8653, the field unit established one temporary traverse station for use during the running of the radial plot.

A complete tabulation of the horizontal control stations which were originally in the area of these three map manuscripts is attached to the "Field Inspection Report, Project CS-322, Area of the Fourth Radial Plot". This report was included with the descriptive report for Map Manuscripts T-8651 and T-8670, which was forwarded on 9 January 1947.

The supplemental horizontal control stations which were established in this area are listed in a tabulation attached to a special report, "Third-Order Triangulation and Traverse, Project CS-322, Area of the Fourth Radial Plot", which has been forwarded.

27. Radial Plot:

The facts concerning the radial plot for the area of these three map manuscripts have been fully covered in the "Descriptive Report, Fourth Radial Plot, Project CS-322". This radial plot report was included with the descriptive report for Map Manuscripts T-8651 and T-8670, which was submitted to the Washington Office on 9 January 1947.

28. Detailing:

Compilation was done in accordance with instructions for Project CS-322 and special instructions applicable to planimetric mapping.

The photography was adequate. The re-flight photographs made on 21 November 1945, were helpful in determining the high-water line and other shoreline details. During the running of the radial plot, for this part of the project, it was found necessary to substitute re-flight photographs for many of the original photographs which were found to be tilted. Though the detail on these re-flight photographs was not as sharp and clear as that on the original photographs, it was possible to select and radially plot enough pass points, which were common to both sets of photographs to enable the compiler to satisfactorily detail the map manuscripts. Where the detail on the re-flight photographs was not clear the tilted photographs were used for interpreting the planimetry which has been shown on the map manuscripts.
In some cases it was difficult to delineate from the ratio print, the correct shape and size of buildings. This was attributed to the loss of sharpness when the contact prints were enlarged.

When any item relative to the field inspection data was doubtful, it could be clarified by consultation with the field man who had done the inspection work. It was, therefore, unnecessary to make discrepancy overlays for the field edit work.

The classification symbols for tree or brush areas are placed on the inside of the curved line which denotes the limits of said areas. These curved lines and the letter symbols are in green acid ink.

All boundary and claim lines are shown by appropriate symbols in red acid ink. A legend shown in the margin of each map manuscript identifies these lines.

Pertinent notes, relative to various items, have been lettered in the margins of the map manuscripts.

29. Supplemental Data:

True copies of the legal descriptions for the boundaries of the Cities of St. Helens and Columbia City, Oregon are being forwarded with the map manuscripts. *Filed in Div. Photogram General Files under Proj. OS:322.*

30. Mean High-Water Line:

The mean high-water line was detailed from information submitted by the field parties and from stereoscopic examination of the photographs. Most of the shoreline data is shown on field photographs taken on 27 November 1945. The mean high-water line, bordering firm ground, is shown by a continuous heavy-weight black acid ink line, at a plane five feet above the U. S. Engineers low-water datum, which is 1.29 feet above mean sea level. The mean high-water line bordering marsh or mud is shown with a continuous light-weight black acid ink line at the same plane.

31. Low-Water and Shoal Lines:

The field inspection unit indicated several small areas which bare at low-water. They have been shown incised in a dotted black acid ink line and appropriately noted. The field inspection unit did not indicate any shoal areas.

32. Details Offshore from the Mean High-Water Line:

There are no details offshore from the mean high-water line.

33. Wharves and Shoreline Structures:

Piers, wharves, dolphins, dikes, etc., have been shown.
34. **Landmarks and Aids to Navigation:**

In the area of Map Manuscript T-3651, copies of Forms 567 are being submitted for the following fixed aids to navigation:

- COLUMBIA CITY LIGHT
- COLUMBIA CITY RANGE REAR LIGHT
- COLUMBIA CITY RANGE FRONT LIGHT

In the area of Map Manuscript T-3652, copies of Forms 567 are being submitted for the following fixed aids to navigation and landmarks:

- LEMONIS LIGHT
- ST. HELENS JETTY 3 LIGHT
- ST. HELENS JUNCTION LIGHT
- ST. HELENS BAR DIKE 1 LIGHT
- ST. HELENS BAR DIKE 2 LIGHT
- ST. HELENS BAR DIKE 4 LIGHT
- ST. HELENS BAR DIKE 5 LIGHT
- ST. HELENS JETTY LOWER LIGHT
- ST. HELENS TANK (Tri. Sta.)
- WOODLAND AVIATION (Tri. Sta.)
- WARRIOR ROCK RANGE REAR LIGHT
- WARRIOR ROCK RANGE FRONT LIGHT
- ST. HELENS BAR RANGE FRONT
- ST. HELENS BAR RANGE REAR (Tri. Sta.)
- ST. HELENS COLUMBIA COUNTY COURT HOUSE CUPOLA (Tri. Sta.)

For deletion:

- ST. HELENS LUMBER CO. NORTH STACK, (Tri. Sta.)

35. **Hydrographic Control:**

No additional hydrographic stations were established along the Columbia River as a sufficient number of existing horizontal control stations and fixed aids to navigation had been recovered or located to comply with the instructions. Three recoverable topographic stations were established along the Lewis River for use during future hydrographic surveys.

36. **Landing Fields and Aeronautical Aids:**

There are no landing fields within the limits of these three map manuscripts. Forms 567 are being submitted for the retention of WOODLAND AVIATION BEACON as an aeronautical aid.

37. **Geographic Names:**

Only undisputed geographic names are shown on the map manuscripts. Geographic names are the subject of a special report, "Investigation of Geographic Names, Project GS-322, Area of the Fourth Radial Plot", which was forwarded on 8 January 1947.

38. **Recoverable Topographic Stations:**

In the area of Map Manuscript T-3651, copies of Forms 524 are being submitted for the three aids to navigation listed in Paragraph 34 of this report.

In the area of Map Manuscript T-3652, copies of Forms 524 are being submitted for the eleven aids to navigation and landmarks, which are not triangulation stations, listed in Paragraph 34 of this report.
In the area of Map Manuscript T-3653, copies of Forms 524 are being submitted for the following:

WEST OAKLE BARN, 1947  SOUTH ABUTMENT BRIDGE, 1946  SILO, 1946
WILLAMETTE MERIDIAN, T 5N  R 1E-1W, Sec. Corner 25-30-31-36, 1946

39. Junctions:

Complete and satisfactory junctions have been made between Map Manuscripts T-3651, T-3652 and T-3653 and with adjoining map manuscripts.

40. Bench Marks:

Bench marks have been detailed as identified by the field inspection units. Each bench mark is indicated by a black acid ink cross with the name and elevation to the nearest 1/10 ft. lettered nearby.

41. Donation Land Claim and Section Lines:

Donation land claim and section lines were located on ozealid prints of the map manuscripts after the initial compilation had been completed. These lines, with pertinent explanatory notes, were placed on the prints in red and purple ink respectively, by the field party, and were then traced on the map manuscripts by the compilers. The ozealid prints containing these lines are being forwarded.

44. Comparison with Existing Topographic Surveys:

See record sheet which accompanies each map manuscript.

45. Comparison with Nautical Charts:

See record sheet which accompanies each map manuscript.

Approved and forwarded:

Robert A. Earl
Chief of Party

Respectfully submitted:

10 March 1947

J. Edward Deal, Jr.
Photogrammetric Engineer
FIELD EDIT REPORT
T-3651 to T-3653 Inclusive
Project CS-322

46. Methods:

These map manuscripts were field edited in accordance with the Field Edit Instructions dated 24 August 1945. All corrections and additions have been made accurately on the field edit prints in colored ink, or the place where a correction or addition is to be made has been indicated by a note which refers to a field photograph. All features which are to be deleted have been crossed out in colored ink.

New buildings were located either by pacing or taping and are shown on the field edit prints. A legend on each of these prints will furnish a key to all the symbols and to the different colored inks used.

47. Adequacy of the Compilation:

The planimetry as delineated on the map manuscripts may be considered as complete and adequate with respect to the corresponding ground detail. Except for the deletions, corrections, additions, and notations made on the field edit prints, it is accurate, also in regard to relative position.

Any omissions or drafting of detail that seemed to be questionable was called to the attention of the Compilation Office by appropriate notes on the field edit sheets. Additional names of roads and public buildings were first obtained from signs and then verified by reliable authorities. Planetable methods were used in some instances to locate new cultural detail.

All shoreline and offshore detail was carefully checked. Several dol- phins and pile areas were added during the field edit and cross referenced between the field photographs and the field edit prints and supplemented by pertinent notes. The drainage features prevalent in this area are thoroughly discussed in the "Field Inspection Report, Area of the Fourth Radial Plot, Project CS-322". Any changes or corrections in the drainage are noted on the field edit control prints. Other minor changes, corrections, or omissions were noted and corrected.

In accordance with the Field Edit Instructions, these map manuscripts were examined for completeness and accuracy in regard to geographic names, boundaries, public land lines, and detail by Mr. D. C. Slaight, City and County Engineer, St. Helens, Oregon, and by Mr. Bernard Edorris, County Surveyor of Clark County, Vancouver, Washington. The geographic names in this area have been reviewed by Mr. Lewis A. McArthur, Collaborator for the U. S. Coast and Geodetic Survey.
Special Report: Investigation of Boundary Markings and land lines... Area at the Fourth Radical Plot

Filed in the Photogram General Files under "Special Reports."

[Handwritten notes and text cut off]
48. **Accuracy Tests:**

Results of the horizontal accuracy test on T-3651 are attached to the back of this report. For data on this traverse refer to "Special Report Third-Order Traverse, HEDGES, 1946 - WARREN, 1903, Quadrangles T-3651, T-3654, and T-3655, Project CS-322". These maps are believed to comply with the standard map accuracy requirements.

49. **Bench Mark Elevations:**

The elevations of the bench marks shown on these sheets have been checked. Some of the elevations at the USC & GS bench marks are unadjusted elevations and are subject to correction when adjusted.

50. **Donation Land Claims and Section Lines:**

Donation land claims and section lines were located on additional ozalid prints of the map manuscripts by a special field party after the initial compilation had been completed. These lines were indicated in red and purple ink, respectively, and supplemented, if necessary, by explanatory notes. These additional ozalid prints will be submitted with the field edit sheets.

Field Edit reviewed by:

Charles Hanovich
Topographic Engineer

Field Edit by:

Frank H. Eldad
Irin, Photo, Aid
(T-3651 & T-3652)

Approved by:

R. A. Earle
Chief of Party

J. H. Wmnniford
Photo, Aid
(T-3653)
HORIZONTAL ACCURACY TEST
Map Manuscript T-8651
Project CS-322

This test consists of a check traverse between triangulation stations HEDGES, 1946 and WARREN, 1903. The traverse is 6.0 statute miles in length and the probable error is one part in 9,400. There are 45 test points available and 16 of them are within the limits of this map manuscript.

In the tabulation, the geographic position from the traverse computations is referred to as T.P. No., and the scaled position from the map manuscript is referred to as M.M. No.

<table>
<thead>
<tr>
<th>Description</th>
<th>Test Point Number</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Displacement in mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bench Mark spotted B-204(USC&amp;GS)-T.P. 45 51 1520.5</td>
<td>T.P. 45 51 1520.5</td>
<td>122 50 434.2</td>
<td>M.M. 1523.1</td>
<td>432.8</td>
</tr>
<tr>
<td>Bench Mark spotted A-204(USC&amp;GS)-T.P. 45 51 862.4</td>
<td>T.P. 45 51 862.4</td>
<td>122 49 754.6</td>
<td>M.M. 865.9</td>
<td>758.1</td>
</tr>
<tr>
<td>Center of School Bldg.</td>
<td>T.P. No. 1</td>
<td>45 51 1361.0</td>
<td>122 50 846.2</td>
<td>M.M. 1360.0</td>
</tr>
<tr>
<td>Inter. of T-rd., 90 degrees</td>
<td>T.P. No. 1A</td>
<td>45 51 1454.2</td>
<td>122 50 631.2</td>
<td>M.M. 1455.2</td>
</tr>
<tr>
<td>Ditto</td>
<td>T.P. No. 1B</td>
<td>45 51 1547.4</td>
<td>122 50 314.1</td>
<td>M.M. 1546.8</td>
</tr>
<tr>
<td>Overhead Power line Crossing</td>
<td>T.P. No. 2</td>
<td>45 51 1332.2</td>
<td>122 50 192.0</td>
<td>M.M. 1335.0</td>
</tr>
<tr>
<td></td>
<td>T.P. No. 3</td>
<td>45 51 1286.8</td>
<td>122 50 166.3</td>
<td>M.M. 1286.8</td>
</tr>
<tr>
<td>Inter. of T-rd., 90 degrees</td>
<td>T.P. No. 4</td>
<td>45 51 1071.0</td>
<td>122 50 43.8</td>
<td>M.M. 1071.0</td>
</tr>
<tr>
<td></td>
<td>T.P. No. 5</td>
<td>45 51 1010.8</td>
<td>122 50 9.5</td>
<td>M.M. 1010.8</td>
</tr>
<tr>
<td></td>
<td>T.P. No. 5A</td>
<td>45 51 1152.2</td>
<td>122 49 956.7</td>
<td>M.M. 1154.1</td>
</tr>
<tr>
<td>Inter. of T-rd., 80 degrees</td>
<td>T.P. No. 6</td>
<td>45 51 1100.3</td>
<td>122 49 922.0</td>
<td>M.M. 1102.9</td>
</tr>
<tr>
<td></td>
<td>T.P. No. 6A</td>
<td>45 51 878.4</td>
<td>122 49 756.3</td>
<td>M.M. 879.1</td>
</tr>
<tr>
<td>Inter. of T-rd., 90 degrees</td>
<td>T.P. No. 6B</td>
<td>45 51 695.9</td>
<td>122 49 641.4</td>
<td>M.M. 697.5</td>
</tr>
<tr>
<td></td>
<td>T.P.No.</td>
<td>M.M.No.</td>
<td>50 degrees</td>
<td>90 degrees</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
<td>---------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>Inter. of T-rd.</td>
<td>7</td>
<td>7</td>
<td>45 51 875.8</td>
<td>122 49 563.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>577.8</td>
<td>565.0</td>
</tr>
<tr>
<td>Center of Church</td>
<td>8</td>
<td>8</td>
<td>45 51 356.9</td>
<td>122 49 750.8</td>
</tr>
<tr>
<td>Bldg.</td>
<td></td>
<td></td>
<td>358.7</td>
<td>752.3</td>
</tr>
<tr>
<td>Inter. of T-rd.</td>
<td>9</td>
<td>9</td>
<td>45 51 113.0</td>
<td>122 49 890.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>115.2</td>
<td>893.4</td>
</tr>
</tbody>
</table>

Bench marks B-204 (USC&GS) and A-204 (USC&GS) were established as marked traverse stations; they were used as test points and were scaled as such prior to submitting the geographic positions for them to the Compilation Office for plotting. These stations and test points 1, 2, and 8 are less well defined. The remaining points are well defined. The map manuscript is believed to be well within the accuracy requirements since none of the test points exceeded .5 mm.

Approved by:

R. A. Earle
Chief of Party

Respectfully submitted:

Charles Hanavich
Topo. Engr.
Division of Photogrammetry

Review Report of

Planimetric Map Manuscript T-8651

Subject numbers not used in this report have been adequately covered in other parts of the descriptive report.


Three triangulation stations shown on this map manuscript were not included in the Tabulation of Horizontal Control Stations - Area of the Fourth Radial Plot. They have been added to the tabulation by the reviewer.

Three lights, in the vicinity of Columbia City, have been deleted from the above tabulation as they have been rebuilt since they were located by triangulation. These stations are shown on the manuscript as recoverable topographic stations and descriptions of them on Form 524 cards are filed in the Division of Photogrammetry.


Corrects made to the manuscript during review are shown in brown acid ink.

The detailed area of this manuscript follows the irregular pattern indicated on the project layout. Donation Land Claims and Section Corners have been shown beyond the detail limits in order to complete the land line scheme of the area.

29. Supplemental Data.

Legal descriptions for the boundaries of the Cities of St. Helens and Columbia City, Oregon were used to verify the positions of these lines on the manuscript.

41. Donation Land Claim and Section Lines.

Major changes were made to four Donation Land Claims as evidenced on the manuscript. Two claims, which are questioned as original claims, are shown on an ozalid print in red crayon for verification by the Portland Office. -- Accepted. Correspondence attached here.
44. Comparison with Existing Topographic Surveys.

Comparisons were made with the following, (A) Previous Surveys and (B) Quadrangles, and the planimetry in all common areas is superseded by T-8651:

A. Previous Surveys

<table>
<thead>
<tr>
<th>Survey Number</th>
<th>Scale</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-1563</td>
<td>1:10,000</td>
<td>1880</td>
</tr>
<tr>
<td>T-6570</td>
<td>1:10,000</td>
<td>1937</td>
</tr>
</tbody>
</table>

B. Quadrangles

<table>
<thead>
<tr>
<th>Quadrangle Details</th>
<th>Scale</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.G.S., St. Helens, Oreg.-Wash. 15', 1:62,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S.E. St. Helens, Oreg.-Wash. 15', 1:62,500</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An adequate description of these comparisons appears on the Record Sheet attached to this Descriptive Report.

45. Comparison with Nautical Charts.

Comparison was made with the following nautical charts:

<table>
<thead>
<tr>
<th>Chart Number</th>
<th>Scale</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>6153</td>
<td>1:40,000</td>
<td>1947</td>
</tr>
<tr>
<td>6154</td>
<td>1:40,000</td>
<td>1945</td>
</tr>
</tbody>
</table>

This manuscript has not been applied to nautical charts.


The results of the horizontal accuracy test on this map manuscript have been checked, with all sixteen test points falling within the limits required. It is believed, therefore, that this map manuscript complies with the standard map accuracy requirements.

Reviewed by: Harold R. Brooks
Photogrammetrist
27 May 1947

Reviewed under direction of: S. V. Griffith
Chief, Review Section
APPROVED BY:

P.G. Jones 12/47
Technical Assistant to the Chief, Div. of Photogrammetry

K. T. Adams
Chief, Div. of Photogrammetry

Chief, Nautical Chart Br. Division of Charts

Chief, Div. of Coastal Surveys
Division of Photogrammetry

Review Report of

Planimetric Map Manuscript T-8652

Subject numbers not used in this report have been adequately covered in other parts of the descriptive report.


In the Tabulation of Horizontal Control Stations - Area of the Fourth Radial Plot, one triangulation station has been changed to a recoverable topographic station. A note appears on the manuscript that the station was radially plotted, since a geographic position was not available.


Corrections made to the manuscript, during review, are shown in brown acid ink.

Detail, shown on the manuscript, north of the project limits is to be used to correct nautical charts. A note has been added, by the reviewer, instructing the smooth draftsman to disregard this additional information.

41. Donation Land Claim and Section Lines.

Donation Land Claim No. 187 for W. H. Topham is questioned as an original claim. The claim has been indicated on an ozalid print so that the Portland Office might verify its status. Major changes were made to four Donation Land Claims, as evidenced on the manuscript.

Section lines were adjusted approximately to the positions they occupied on the General Land Office plats.

44. Comparison with Existing Topographic Surveys.

Comparisons were made with the following, (A) Previous Surveys and (B) Quadrangles, and the planimetry in all common areas is superseded by T-8652:
A. Previous Surveys
   T-1563  1:10,000  1880
   T-6570  1:10,000  1937

B. Quadrangles
   U.S.G.S., St. Helens, Oreg.-Wash.,
   15', 1:62,500
   U.S.E., St. Helens, Oreg.-Wash.,
   15', 1:62,500

An adequate description of these comparisons appears on the Record Sheet attached to this Descriptive Report.

45. Comparison with Nautical Charts.

Comparison was made with the following nautical charts:

6153  1:40,000  1947
6154  1:40,000  1945

This manuscript has not been applied to nautical charts, but when it is, the detail compiled on the manuscript, north of the project limits, should be utilized for chart correction.

Reviewed by:  Reviewed under direction of:

Harold R. Brooks  S. V. Griffith
Photogrammetrist 5/18/47  Chief, Review Section

APPROVED:

Technical Assistant to the Chief, Div. of Photogrammetry
Chief, Nautical Chart Br.
Division of Charts

Chief, Div. of Photogrammetry  Chief, Div. of Coastal Surveys
Division of Photogrammetry

Review Report of

Planimetric Map Manuscript T-8653

Subject numbers not used in this report have been adequately covered in other parts of the descriptive report.


Corrections made to the manuscript during review are shown in brown acid ink.

According to the project layout, the northern limit of the project follows the parallel 45° 54' N. Detailing on this manuscript has been extended approximately one half mile north of this line with an appended note indicating that it is to be used as an aid in the revision of nautical chart No. 6153. The reviewer has added a second note instructing the smooth draftsman to follow the original layout.

The offshore limits of wooded marsh have been changed from a dashed line to a solid line.

41. Donation Land Claim and Section Lines.

Corrections made to the section lines consisted of a relegation to a position approximating their original layout on the General Land Office plats.

Minor corrections only were made to the Donation Land Claims, excepting the Samuel Lishon Claim. The G.L.O. plat indicated his property as extending east of the Lewis River. The property to the west of the river, on the plat, bears no name. The reviewer has deleted this claim, west of the river, from the manuscript. South of the Lishon Claim, on the plat, is a claim under the name of C. H. Fairchild. This claim has been shown on an ozalid print for the purpose of verification as an original claim by the Portland Office.

42. Bridges.

Several discrepancies in bridge clearances were noted, as follows, during the comparison of the manuscript with the List of Bridges over the Navigable Waters of the United States and with nautical chart No. 6153:
Page 2
T-8653

<table>
<thead>
<tr>
<th>Bridge</th>
<th>H.C.</th>
<th>V.C.</th>
<th>H.C.</th>
<th>V.C.</th>
<th>H.C.</th>
<th>V.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ridgefield (RR)</td>
<td>100.0</td>
<td>18.0</td>
<td>100.0</td>
<td>16.0</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Lewis River, East Fork</td>
<td>145.0</td>
<td>35.8</td>
<td>145.0</td>
<td>18.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woodland (Lower)</td>
<td>214.6</td>
<td>24.8</td>
<td>214.6</td>
<td>11.6</td>
<td>214½</td>
<td>11½</td>
</tr>
<tr>
<td>Woodland (Upper)</td>
<td>214.0</td>
<td>33.0</td>
<td>155.75</td>
<td>32.33</td>
<td>155½</td>
<td>32</td>
</tr>
</tbody>
</table>

44. Comparison with Existing Topographic Surveys:

A. Comparison was made with the following previous survey and the planimetry in all common areas is superseded by T-8653:

T-1563 1:10,000 1880

B. Comparison was made with the following quadrangles and the planimetry in all common areas is superseded by T-8653:

U.S.G.S., La Center, Wash., 15', 1:62,500
U.S.E., La Center, Wash., 15', 1:62,500

45. Comparison with Nautical Charts.

Comparison was made with the following nautical charts:

6153 1:40,000 1947
6154 1:40,000 1945

This manuscript has not been applied to nautical charts, but when it is, the detail north of the project limits, as compiled on the manuscript, should be utilized for chart correction.

Reviewed by: Harold R. Brooks
Photogrammetrist 5/13/47

Reviewed under direction of: S. V. Griffith
Chief, Review Section
APPROVED BY:

Technical Assistant to the Chief, Div. of Photogrammetry

Chief, Nautical Chart Br. Division of Charts

Chief, Div. of Photogrammetry

Chief, Div. of Coastal Surveys
TO BE CHARTED
TO BE DELETED
The following aids to navigation have been inspected from forward to determine their value as landmarks.

The positions given have been checked after listing by

R. A. Earle
Chief of Party.

<table>
<thead>
<tr>
<th>STATE</th>
<th>OREGON</th>
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</thead>
<tbody>
<tr>
<td>CHARTING NAME</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>LIGHT</td>
<td>COLUMBIA CITY</td>
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<tr>
<td>LIGHT</td>
<td>COLUMBIA CITY RANGE FRONT</td>
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<tr>
<td>LIGHT</td>
<td>COLUMBIA CITY RANGE REAR</td>
</tr>
</tbody>
</table>

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.
## Nonfloating Aids or Landmarks for Charts

**Portland, Oregon**  
5 March 1947

The positions given have been checked after listing by [Signature]

---

### Oregon and Washington

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<tr>
<th>Charting Name</th>
<th>Description</th>
<th>Signal Name</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Datum</th>
<th>Method of Location and Survey No.</th>
<th>Date of Location</th>
<th>Chart Affected</th>
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<tbody>
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<td>LIGHT F. W.</td>
<td>Warrior Rock Range Front</td>
<td>LIGHT</td>
<td>45 51</td>
<td>(1538.2)</td>
<td>(222.8)</td>
<td>R.A. Radial</td>
<td>4-2-46</td>
<td>X 6154</td>
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<tr>
<td>LIGHT F. W.</td>
<td>Warrior Rock Range Rear</td>
<td>LIGHT</td>
<td>45 51</td>
<td>(1538.2)</td>
<td>(222.8)</td>
<td>R.A. Radial</td>
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<td>X 6154</td>
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<tr>
<td>LIGHT F. W.</td>
<td>St. Helens Bar Dike 5</td>
<td>LIGHT</td>
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<td>(629.6)</td>
<td>(352.8)</td>
<td>R.A. Radial</td>
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<td>X 6154</td>
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<td>(359.4)</td>
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<td>St. Helens Bar Range Rear</td>
<td>BEACON</td>
<td>45 53</td>
<td>(1526.8)</td>
<td>(1023.9)</td>
<td>Triangulation</td>
<td>1937</td>
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This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not individual field survey sheets. Information under each column heading should be given.
NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED

The following aids to navigation and landmarks have been inspected from seaward to determine their value as landmarks, be charted on the charts indicated.

The positions given have been checked after listing by

\[\text{Ideal}\]

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<th>STATE</th>
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<td>C H</td>
<td>ST. HELENS COLUMBIA COUNTY COURT HOUSE CUPOLA</td>
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The following landmark has been searched for and reported lost. It should be deleted from the chart indicated.

| CHARTING NAME | DESCRIPTION | SIGNAL NAME | LATITUDE | LONGITUDE | DATUM | METHOD OF LOCATION AND SURVEY NO. | CHARTS AFFECTED |
| ST. HELENS LUMBER CO. | NORTH STACK | STACK | 45 51 | 1136.0 | 122 47 | 830.9 | 1927 | Triangulation | 6153 |

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.
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**Survey No.**
T-8651-52-53
## Nautical Charts Branch

**Survey No. T8657-2-3**

**Record of Application to Charts**

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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.
In accordance with the above references, changes made in land line data on Map Manuscript T-8651 in the Washington Office, have been verified or disproved by this office and the results of our investigation have been applied to both the map manuscript and the finished drawing. Notes relative to these changes have also been placed on the ozalid prints.

Attention is called to the following points which were verified or changed:

The S. Frantz D.L.C. and the Kerno D.L.C., which were originally omitted, have been added as the Susan Frantz D.L.C. and the James A. Kerns D.L.C., to the map manuscript and on an ozalid print of T-8651. The names are to be added to the smooth draft sheet in the Washington Office by use of stick-up.

The west line of the Francis Lemont D.L.C. is correct as originally shown on the map manuscript. The line has been restored to its original position on the map manuscript and drafted in that location on the smooth draft sheet. Notes of explanation have been shown in green crayon on the ozalid print.

As the results of the reinvestigation, the Aaron Broyle D.L.C. was again revised. The lines have been slightly altered and are now in good agreement with the G.L.O. plats and records in the office of the assessor for Columbia County, Oregon. The changes have been made on the map manuscript and on the smooth draft map. They are also shown in green crayon on the ozalid print.

The south line of the Francis Perry D.L.C. is correct as originally shown on the map manuscript. The line has been restored on the map manuscript and drafted on the smooth draft sheet.
DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
 c/o Swan Island Postal Station
 Portland 18, Oregon

To: Chief, Division of Photogrammetry
U.S. Coast & Geodetic Survey
Washington 25, D.C.

From: Lt. Comdr. R. A. Earle

Subject: Review of Map Manuscript T-8652

Reference: Your Letter, 78-RCR, dated 23 May 1947

The land line changes, which were recommended in the above reference, were minor and in most cases a matter of choice between the data on the G.L.O. plats and that believed correct from the results of the field investigation. As the changes do not conflict with any of the planimetry of the published map they have been accepted and are shown on the smooth draft sheet as recommended by the Washington Office review.

This office has verified the fact that the W. H. Topham tract is a donation land claim. It has been added to the map manuscript and the limits placed on the smooth draft drawing. The name should be added to this drawing by using stick-up.

The ozalid print which you furnished is attached herewith. All other data is being forwarded under separate cover.

R. A. Earle
Chief of Party

RAE/gw
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
c/o Swan Island Postal Station
Portland 18, Oregon

TO: Chief, Division of Photogrammetry
U. S. Coast & Geodetic Survey
Washington 25, D. C.

FROM: Lt. Comdr. R. A. Earle

SUBJECT: Review of Map Manuscript T-8653

REFERENCE: Your Letter, 75-RCR, dated 23 May 1947 and Other Data

24 June 1947

It is noted that the Willamette Meridian was changed to agree with G.L.O. plat-data in the vicinity of the Lewis River. This Meridian had been fixed, by the Compilation Office, to agree with existing ground conditions, however, as the recommendations of your office are in accordance with G.L.O. plat data, and as this line is not mentioned in deeds in the area, the change is acceptable.

The minor changes, to the south and east lines of the Wm. Bratton, D.L.C., to the east line of the A. Lee Lewis D.L.C., and to the west line of the Allen Gilson, D.L.C., have been accepted and applied to the smooth draft sheet.

The C. H. Fairchild D.L.C. has been added to the map manuscript and to the smooth draft sheet. It has also been shown on an ozalid print of T-8653.

The east line of the O. W. Bozarth D.L.C. was correct as originally shown on the map manuscript. It has been restored to its original position on the map manuscript and so drafted on the smooth draft sheets. Notes of explanation have been shown on the ozalid print in green crayon pencil.

The width of the graded portion of U.S. Highway #99 and #830 along the east side of the road has been shown with a dashed line on the smooth draft sheet. This part of the road is graded but not used by vehicles. The paved part of the road has been shown by a Class I road symbol.

The ozalid print of the map manuscript are returned herewith. The map manuscript and smooth draft drawing are being forwarded under separate cover.

R. A. Earle
Chief of Party