

8812

Diag'd. on diag.ch. No. 6154

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Planimetric Air Photographic

Field No. Office No. T-8812

LOCALITY

State Oregon

General locality Willamette River

Locality Dayton

1947

CHIEF OF PARTY

R.A. Earle

LIBRARY & ARCHIVES

DATE January 8, 1948

2188

RECORD SHEET

Div. of Photogrammetry
Graphic Compilation Sect.

GENERAL LOCALITY Willamette River, Oregon

SHEET NO. T-8812

LOCALITY Dayton, Oregon

PROJECT NO. Ph-13(46)

PHOTOS ORDERED Dec., 1946 REC'D 14 Jan., 1947

SCALE 1:1000

PROJECTION ORDERED Dec. 1946 REC'D 13 Jan. 1947

CONTROL:

COMPUTED Harris VERIFIED Davidson

PLOTTED Harris VERIFIED Barron

PHOTO PREPARATION:

CONTROL Harris

AZIMUTHS Davidson

PASS POINTS Letson

Harris

TEMPLATES Barron VERIFIED Harris

RADIAL PLOT:

PLOTTED BY Harris DATE 5-9-47

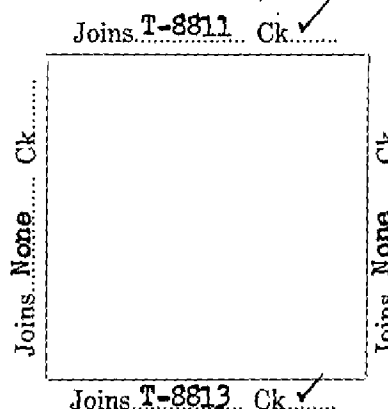
VERIFIED Deal DATE 5-12-47

COMPILATION:

DETAIL POINTS M.B. Elrod DATE 5-19-47

DETAIL BY M. B. Elrod DATE 6-24-47

VERIFIED BY J. E. Deal DATE 7-7-47



DATE OF PHOTOS 8-9-46

TIME OF PHOTOS 12:26 to 13:04

Pacific Standard Time

STAGE OF TIDE Water level is a gradient between the elevations of the U.S.E. river gages.

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

Due to a scale difference, only a visual comparison was made with the USGS Mt. Angel, Oregon and McMinnville, Oregon 15 min. quadrangles, Scale 1:62500. The planimetry which is common to the map manuscript and quadrangle maps is in good agreement. The drainage pattern of the area as shown on the map manuscript is more complete than that shown on the quadrangle maps. The water level of (over)

REMARKS Complete planimetric detail along both shores of the Willamette River and within a zone averaging 300 meters on each side of the river has been compiled. Inshore from this area only skeleton planimetric details are shown.

FORWARDED TO Washington Office DATE 7 August 1947

R. A. Earle
R. A. Earle
Chief of Party

940

COMPARISON (continued)

the quadrangle maps is higher than that of the map manuscript.

DATA RECORD

T- 8812

Mt. Angel, Oregon
 Quadrangle (II): McMinnville "
 (USGS) 15 minute

Project No. (II): Ph-13(46)

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

Compilation Office: Portland, Ore. Chief of Party: R. A. Earle

Instructions dated (II III): 8 October 1946 Copy filed in Descriptive Div & Photo-
 Supplemental Instructions: 4 November 1946 Report No. T- (VI)
 Grammar by Office Files

Completed survey received in office: 8/12/47

Reported to Nautical Chart Section: 8/15/47

Reviewed: 10/31/47 Applied to chart No. _____ Date: _____

Redrafting Completed:

Registered: 12/26/47 Published:

Compilation Scale: 1:10000 Published Scale:

Scale Factor (III): None

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

Reference Station (III): ST PAUL, 1940 r 1946

Lat.: 45° 11' 09.985" (308.2m) Long.: 122° 59' 07.838" (171.1m) Adjusted x
 Unadjusted

State Plane Coordinates (VI): OREGON NORTH ZONE (ruled in red on the
 manuscript)

X =

Y =

Military Grid Zone (VI)

The adopted plane south of Newberg is gradient between elevations above M.S.L. of the U. S. Engineer's river gages. All bench mark elevations are referenced to M.S.L. and are on the Standard 1929 general adjustment of leveling in the U.S.A.

See remarks- page 3

PHOTOGRAPHS (III)

<u>Number</u> <u>Nine Lens</u>	<u>Date</u>	<u>Time</u> <u>Pacific Standard</u>	<u>Scale</u>	<u>Stage or Tide</u> <u>Water Level</u>
17280 and 17281	8-9-46	12:26	1:10000	52.78 ft. above M.S.L.
172302a to 17304 Inc.	"	12:51	"	52.78 ft. " "
17307 and 17308	"	13:04	"	52.78 ft. " "

Tide from (III): None

Mean Range: None

Spring Range: None

Camera: (Kind or source) USC&GS 9 lens, focal length 8.25 inches

	J. C. LaJoye (Shoreline)	March, 1947
Field Inspection by:	J. H. Winniford (Interior)	date: Jan., 1947
	J. H. Winniford (Geographic Names)	Jan., 1947

Field Edit by: None

date:

Date of Mean High-Water Line Location (III): March, 1947

Projection and Grids ruled by (III) Washington Office date: Jan., 1947

" " " checked by: Washington Office date: Jan., 1947

Control plotted by: James L. Harris date: April, 1947

Control checked by: Ree H. Barron date: April, 1947

Radial Plot by: J. L. Harris & J. E. Deal date: May 9, 1947

Detailed by: Marie B. Elrod date: May 19 to June 24, 1947

Reviewed in compilation office by: J. E. Deal date: July 7, 1947

Elevations on Field Edit Sheet
checked by: None

date:

STATISTICS (III)

Land Area (Sq. Statute Miles): 7.0 sq. mi. (complete detail)
19.7 sq. mi. (skeleton detail)

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

Shoreline (Less than 200 meters to opposite shore): 17.6 statute mi.
(measured along centerline of rivers)

Number of Recoverable Topographic Stations established: 17

Number of Temporary Hydrographic Stations located by radial
plot: 64

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:

The adopted Water Plane is a gradient
between 53.3 ft. above Mean Sea Level (the
zero of the river gage at Ray Bar) and 64.3 ft.
above Mean Sea Level. (the zero of the river gage
at Upper Five Islands, Oregon)

MAP T. 8812

PROJECT NO. Ph-13(46)

SCALE OF MAP 1:10,000

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 FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	REMARKS FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
BARR (USE, 1935-41)							Not searched for
IFS (USE, 1935-36)							Not searched for
HOG (USE, 1935-36)							Not searched for
CAX (USE, 1935-41)	USE Adj. at Comp. Office	N. A. 1927	45° 13' 20.039" 123 04 18.729	618.6 (1233.6) 408.6 (900.5)			Used in Rad. Pl.
PTS 7 (USGS, 1924)							Not searched for
EGO (USE, 1935-41)							Not used in Rad. Pl. Az. Mks. for FUS3 shown as topo. sta.
RON (USE, 1935-41)	USE Adj. at Comp. Office	N. A. 1927	45° 11' 54.999" 123 03 27.279	1697.9 (154.4) 595.4 (714.2)			Used in Rad. Pl.
PTS 6 (USGS, 1946)	G 6734 page 880	"	45° 10' 48.169" 123 03 28.349	1487.0 (365.2) 619.0 (691.2)			Used in Rad. Pl.
ST. PAUL, 1940	G 4774 page 536	"	45° 11' 09.985" 122 59 07.838	308.2 (1544.0) 171.1 (1138.8)			Used in Rad. Pl.
ST. PAUL CATHOLIC CHURCH SPIRE, 1946	G 6734 page 880	"	45° 12' 42.521" 122 58 36.875	1312.7 (539.6) 804.7 (504.6)			Used in Rad. Pl.
FUSS (USE, 1935-41)	USE Adj. at Comp. Office	"	45° 12' 18.739" 123 06 10.069	578.5 (1273.8) 219.7 (1089.7)			Used in Rad. Pl.

1 FT. = 3048006 METER

COMPUTED BY: J. L. Harris

DATE March, 1947

CHECKED BY: R. A. Davidson

DATE March, 1947

M-2388-12

[illegible]

FIELD INSPECTION REPORT
Sheets 8812 to 8816 inclusive
Project Ph-13(46)

R. A. Earle
Chief of Party

FIELD INSPECTION REPORT
Sheets 8812 to 8816 inclusive
Project Ph-13(46)

1. Description of the Area:

This report pertains to the area encompassed by the five shoreline surveys numbered 8812 to 8816 inclusive along the upper Willamette River from Dayton to Salem, Oregon.

The Willamette River and adjacent territory have certain marked characteristics. These are the flood plain, the pronounced river terraces that enclose the flood plain, the plains atop the terraces, which are extensively developed agricultural regions, and the hilly areas.

The flood plain is traversed by the meandering Willamette River. Inland from the Willamette River, the wooded marsh areas, ponds, lakes, and sloughs on both sides of the river roughly mark the paralleling limits of this flood plain. The bulk of this area, which is subject to periodic flooding during the winter and early spring months (December to May) serves as a drainage basin.

During the time that the Willamette River has traversed this area, it has left crescent shaped lakes or ponds, sloughs or dry washes, wooded marsh areas, et cetera, which have become silted. They are the abandoned river beds and their pattern of continuity is discernible on the photographs. They now serve as run-off channels during the flood stages. The large river terraces and their companion plains or shelves are adjacent to and more or less parallel these old river beds. In many places the erosive forces of the river, particularly during the flood periods, have formed connecting sloughs or cut-offs by cutting through the flat land necks. Many of the high-water sloughs will eventually fall in this category.

In general, the banks of the Willamette River are variable in height. At some places, where the river is now impinging laterally against the large confining river terraces, the river banks are 80 feet in height. The direct result of the meanders in the river are the formation of numerous gravel bars along which the banks slope toward the river. Opposite and across the river from these gravel bars where the river current has a cutting force, the banks are well defined and very steep in some places. The larger islands found along the river consist of gravel bars that have been built by the deposition of sediments. These are covered, for the most part with brush and low willows and are interlaced with high-water sloughs. The small islands are gravel in composition, while the banks along the river are of gravel, clay loam or hardpan. On the whole, the main banks are covered with brush and low willows. Predominant as a conservation measure are the heavily wooded zones of large trees that have been left along the tops of the river banks to combat the inroads of erosion.

Very few shoreline or offshore structures such as piles, dolphins, piers, et cetera, are to be found along the Willamette River in this area. Except for a few isolated cases the ones that were located were found along the waterfront area in the vicinity of Salem and Grand Island. In a few cases the banks have been rip-rapped to prevent extensive erosion. At the south end of Lambert Slough in the vicinity of Grand Island a rock jetty has been constructed by the U. S. Corps of Engineers. The chief traffic in the river consists of log rafts and tugboats engaged in towing these rafts.

The Yamhill River, which is located about 5 miles south of Newberg, is the largest tributary of the Willamette River and is navigable by shallow draft boats. The traffic in this river consists of log rafts and tugboats. Except for a log dump and a dam and lock installation (Yamhill Locks), there are no shoreline or offshore structures.

The drainage in this area consists of numerous sloughs, ponds, small lakes, wooded marsh areas, ditches, and streams. The more important ones are Lambert Slough in the vicinity of Grand Island, Mill Creek in Salem, Palmer Creek on the west side of the Willamette River and northwest of Grand Island, Spring Valley Creek west of Windsor Island, and Glenn Creek north of West Salem. They all flow toward the Willamette River. The drainage is well defined in areas of pronounced relief. In the flat plains, the drainage becomes sluggish. Considerable seepage is found in the flood plain area.

Broad agricultural plains atop the river terraces are found on both sides of the Willamette River. The large plain west of the river is bounded on the west by the Eola Hills and on the east by a readily defined river terrace which can be traced at varying distances from the river, from Carey Bend northeast of Dayton southward to the hills north of West Salem. East of the Willamette River, a similar plain is bounded on the west by another river terrace which can be traced from north of St. Paul in 8812 southward to the north part of Salem, and on the east this plain extends indefinitely to the Cascade Mountains. The plains are predominantly rural with a considerable section of the land under cultivation. There are numerous hop yards, apple and peach orchards, and nut groves, in these areas.

Although Mission Bottom and Grand Island comprise a part of the flood plain, they are fertile agricultural areas that have been developed to produce crops.

West of the Willamette River are the Eola Hills. This high range of hills extends in a north and south direction along the approximate west limits of this project. Much of the land is cultivated with wooded areas, orchards and groves interspersed throughout. The drainage is well defined with the heavily wooded areas found chiefly in the ravines and along the steep slopes.

Salem is the principal city in this vicinity. It is the Capitol of the State of Oregon and the county seat of Marion County. It has many state, county, and municipal buildings. The chief industries are canneries, and pulp and lumber mills. Other smaller communities are West Salem, a semi-urban district; Dayton on the south bank of the Yamhill River; and St. Paul about 5 miles east of Dayton.

The main highways and transportation lines are:

1. State Highway 221 - This highway runs north and south on the west side of the Willamette River.
2. State Highways 219, 211 and 222 - These highways run north, northeast and southeast out of the City of Salem.
3. U. S. Highway 99E - This highway runs northeast and south from Salem.
4. State Highway 22 - This highway runs west from Salem along the north side of the Willamette River.
5. The Oregon Electric and the Southern Pacific Railroads.- These railroads are parallel to one another northeast of Salem. The latter railroad line continues through the city and runs south.
6. The Willamette River.
7. The Yamhill River.

2. Completeness of Field Inspection:

The field inspection for the clarification of details on the photographs, and for the classification and identification of roads, drainage, buildings, wooded areas, et cetera, has been completed in accordance with the instructions for this project dated 8 October 1946, and the supplemental instructions dated 4 November 1946. *Copies filed in Division of Photogrammetry Office Files*

A city map of Salem has been submitted as a supplement to the field inspection work in this area. *Photogrammetry Files*

3. Interpretation of the Photographs:

A dense wooded zone of hardwood has a lighter tint and greater uniformity of tone than a corresponding area of dense softwood. Hardwoods are generally confined to the low flat areas and softwoods predominate in the hilly areas.

A mottled color of greys is generally indicative of a mixture of hard- and softwoods. Solid light grey tones usually indicate brush areas.

In the lower areas along the river and on the islands, a light pebbled effect indicates a mixture of brush and small willow trees. The dark areas in the flat plains usually indicate intermittent ponds, high-water sloughs, marsh or low spots; however, their correct interpretation requires field investigation. White tone areas along the river are indicative of gravel bars. Scattered willows often give these areas a speckled appearance.

4. Horizontal Control:

The subject of additional horizontal control established in this area is discussed in a special report, "Third-Order Triangulation, Project Ph-13(46)".

Photogrammetry File

Recovery notes on Form 526 have been prepared for all old USC&GS stations that were recovered or searched for in this area. Recovery notes were not submitted for 1946 stations unless the original descriptions were found to be inadequate or subject to correction. This is in accordance with the supplemental instructions dated 4 November 1946.

Recovery notes were prepared for stations of other agencies only when they were recovered, identified, and used to control the radial plot.

5. Vertical Control:

In accordance with the instructions a search was made for all USC&GS bench marks. Within the area of complete detailing, all the recovered bench marks have been "spotted" as specified in the supplemental instructions.

Recovery notes on Form 685 have been prepared for all USC&GS bench marks in the area.

6. Contours and Drainage:

No contouring is involved in the area.

In the area of complete detailing, all drainage except for minor ditches was located and classified in the field. Only major drainage was located and classified in the area of skeleton detail.

In cases where it was doubtful whether the drainage was perennial or intermittent, the classification was verified by local inquiry.

For additional information refer to side headings 1 and 7.

7. Shoreline Plane of Reference:

Inasmuch as the upper part of the Willamette River is not influenced by tidal action, the term "Shoreline Plane of Reference" was used in place of "Mean High-Water Line" as a side heading.

The river level in this area is variable. Where the shoreline identified in the field is not to some extent coincident with and defined by an appreciable bank or bluff, the changes in the shoreline are affected at various increasing stages of the water level above the datum plane. During flood stages the river and its connecting sloughs will spill over the lower banks to flood the low-lying areas.

In many places where the shoreline was obscured by trees on the photographs, field measurements were obtained to the shoreline at the adopted plane from hydrographic signal sites and marked topographic stations. The distances from the hydrographic signal sites were recorded in a sketch book which contain the descriptions of these sites. The distances from the marked topographic stations to the shoreline were noted on Form 524 submitted for each of these stations. In some instances, it was found to be necessary or more convenient, because of terrain conditions, to determine these distances by sextant triangulation with a measured base along the inshore edge of the top of the bank or bluff. In many instances, it was possible to see the shoreline between the overhanging trees on the photographs and with the additional aid of the stereoscope it was possible to identify the remaining shoreline between these gaps.

To fully understand the different datums adopted in the different parts of this project, this phase of the work will be discussed for the entire project. The U. S. Corps of Engineers of the Portland District were consulted and the following facts and data were ascertained:

- 1) The water level in the Willamette River between the Willamette Falls and Newberg, Oregon, is controlled directly by this dam and the first tier of sluice boards installed on top of it at an elevation of 51.6 feet above M. S. L.

Although this first tier of sluice boards are removable, they are considered as a fixture and the normal water table is maintained by the USE at this elevation which is 1.6 ft. above the 0+00' (USE Low-Water Plane) of the USE gage at the upper lock in Oregon City. The zero of this gage is 49.98 ft. above M.S.L. Additional tiers of removable sluice boards can be added; however, their utilization is only temporary.

Pool Level considered at 52.0 ft. throughout

- 2) In view of the above paragraph the Willamette River is a pool for a distance of about 29.5 miles between the dam at Oregon City and the zero of the USE gage at Newberg, Oregon, which is 52.0 ft. above M. S. L. This makes a difference in elevation of only 0.4 ft. between these two points.
- 3) The zero of each USE gage established along the Willamette River denotes the USE Low-Water Plane. The elevation of the zero of each gage above M. S. L. has been determined and is available.
- 4) The Low-Water Plane at any one point between any two successive USE gages is determined by prorating the difference in elevation above M. S. L. between the zero of the gages.

- 5) The elevation of the zero of the gage at the upper lock in Oregon City, of the gage in Newberg, and of the remaining gages upstream from Newberg to Salem are on the Standard 1929 general adjustment of leveling; however, there are several gages between the gage at the upper lock in Oregon City and the one in Newberg, which are on the 1924 adjustment of leveling.
- 6) A minimum depth of 3.5 ft. below the USE Low-Water Plane is maintained in the Willamette River upstream from the Willamette Falls area to the limits of navigation beyond Salem.
- 7) An ozalid sketch, which shows the USE Low-Water Plane in the Willamette River pool between Oregon City and Newberg, is attached to the back of this report.
- 8) A list of the elevations of the zeros of all the gages above M.S.L. is attached to the back of this report. This list is for the gages established by the U. S. Corps of Engineers along the Willamette River from Newberg to Salem, Oregon. Some of these gages have been dismantled.

(20) In view of the aforesaid information, the determined plane for the shoreline is 51.6 feet above M.S.L. from the Willamette Falls at Oregon City to the gage in Newberg, which is the extent of the Willamette River Pool. The shoreline as indicated in the pool by the field inspector represents the water level at the stage as controlled by the dam and the first tier of sluice boards at Willamette Falls.

South of the gage in Newberg to Salem (to the south project limits) the determined plane is the U. S. Corps of Engineers Low-Water Plane; see item 4 above. This datum represents the shoreline identified by the field inspector in the remainder of the project and is the plane of reference applicable to the area covered by this report.

All existing gages in the Willamette River were either identified on the photographs or located by sextant fixes.

The water level at the time the nine lens photographs were flown was at or close to the adopted planes used to identify the shoreline for this project. For additional information refer to side heading 1.

8.. Low-Water Line:

Since there is no tidal action in the Willamette River upstream from the Willamette Falls, this item is inapplicable. In general, only the approximate limits of shoal areas were indicated during the shoreline inspection, supplemented by a close study in the field of any under-water discolorations or lines that may have been visible on the photographs.

9. Wharves and Shoreline Structures:

There were no wharves. A few shoreline structures were found such as log dumps, rip-raps, rock and pile jetties, ferry landings and floating docks and boathouses. A large rock jetty (Wheatland Dam) is located across the upstream end of Lambert Slough. These shoreline features were inspected and identified on the photographs.

10. Details Offshore from the Shoreline Plane of Reference:

There were few piles and dolphins in this area. These and other offshore obstructions such as pile dikes or jetties, floats and rafts have been noted as such. All existing river gages, which are attached to piling, were located as hydrographic signal sites or topographic stations.

Hard pan ledges are usually found in those areas where the banks are high and steep. A few scattered rock areas and ledges were noted along the river.

11. Landmarks and Aids to Navigation:

Since there is no chart of this area, there were no landmarks to be investigated; however, a selection was made of the most prominent objects along the shore and these were recommended for future charting. Objects of lesser prominence were recommended because of a paucity of landmarks.

There were no fixed aids to navigation to be investigated. Landmarks recommended for charting have been reported on Form 567 as well as on Forms 524 or 526.

12. Hydrographic Control:

Hydrographic signal sites were established in accordance with the instructions and the supplemental instructions dated 4 November 1946. To satisfy as much as possible the minimum requirements of hydrographic control as stipulated in the Hydrographic Manual, this party had to resort to a certain amount of ground instrumental work. This was necessary since it was impossible to identify natural objects on the photographs which would be visible from the river in those areas where the river banks were heavily wooded. In such cases, it was necessary to establish a minimum of hydrographic sites by the substitute station or photogrammetric station method.

Hydrographic signal sites were designated, identified on the photographs, and described briefly, in a sketch book. This is in accordance with the instructions.

Topographic stations were established at the required intervals of about one a mile. They were identified on the photographs and Form 524 was submitted for each station.

A list of the hydrographic signal sites established and a "Report for the Hydrographic Party" are attached to the back of this report.

13. Landing Fields and Aeronautical Aids:

The following landing field is located in this area:

1) Salem Municipal Airport (McNary Field)

A municipal airport which was utilized by the Army during the last war and is located in the southeast part of Salem.

All aeronautical aids in this area have been investigated and reported on Forms 524 or 526. *or 567*

14. Road Classification:

All through or connecting public highways, and roads leading from such highways which provide access to the water, have been classified by the symbol "dfl" (double full lines). In cases where it was felt that there was a lack of roads leading to the shore, minor access roads were classified as "ddl" (double dashed lines). All other roads such as private drives, dead end roads and field roads were not classified and should not be shown.

The names and numbers of important through roads such as U. S. and State Highways were obtained from posted road or street signs or from official local sources and noted on the photographs.

15. Bridges:

There are two bridges (one highway and one railroad) spanning the Willamette River at Salem, and a highway bridge at Dayton over the Yamhill River. The vertical and horizontal clearances have been noted on the photographs. The indicated vertical clearances are at the adopted datum.

16. Buildings and Structures:

A complete field investigation was made of all buildings and structures along the waterfront and within a zone averaging 300 meters in width on each side of the river. Inshore from this zone only skeleton details were noted. These included public buildings, schools, churches, railroads, and other landmarks. All other buildings and structures should not be shown.

In the urban area of Salem, however, the complete field inspection of buildings and structures within the 300 meter zone was modified. In this area, all the buildings have been circled, outlined, or adequately noted, and large buildings and structures which were located along the waterfront and along both sides of the first through street paralleling the Willamette River, were named. In the remaining urban area, only skeleton details were noted. These included schools, important public buildings and churches, railroads, and other landmarks.

For additional information refer to side heading 2.

17. Boundary Monuments and Lines:

This side heading is not applicable to this Project.

18. Geographic Names: 814 ✓

The investigation of geographic names was accomplished by a special field party and is the subject of a special report "Investigation of Geographic Names, Sheets 8812 to 8816 inclusive, Project Ph-13(46)", which will be submitted. *Geographic Names Section, Division of Charts*

The local names of important through roads and highways, parks and cemeteries, schools, railroads, and other important landmarks, were obtained during the field inspection. The names of rural schools are important since in most cases they are locality names.

A city map of Salem has been submitted to supplement the field work in that vicinity.

Photogrammetry Files

19. Power Transmission, Telephone and Telegraph Lines:

The field inspection of this phase of the work was done in accordance with the supplemental instructions dated 4 February 1946.

Any submarine and overhead cable crossings across the Willamette River (including the vertical clearances above the plane of reference for this area) have been indicated on the field photographs.

The vertical clearances of all overhead cable crossings at the project datum were either obtained in the field or ascertained from and verified by the qualified officials of the various agencies which were responsible for their maintenance.

20. Ferries:

One ferry crossing, the Wheatland Ferry, was investigated and noted on the field photograph.

21. Field Photographs:

The junctions between field photographs and the legibility of the inked notes as well as for the completeness of the field inspection work have been checked by the field inspectors.

No attempt was made to indicate the limits of each sheet on the photographs. For the photographs used for field and shoreline inspection refer to the Data Record, Form No. T-1.

Approved by:

R. A. Earle

R. A. Earle
Chief of Party

Respectfully submitted:

Charles Hanavich

Charles Hanavich
Topographic Engineer

PROJECT Ph-13 (46)

SYMBOL & COLOR SCHEME

Triangulation and Traverse Stations

Pricked direct

Substitute station

Reference ties (not recommended)

Topographic Stations

Pricked direct

Substitute station

Reference ties (not recommended)

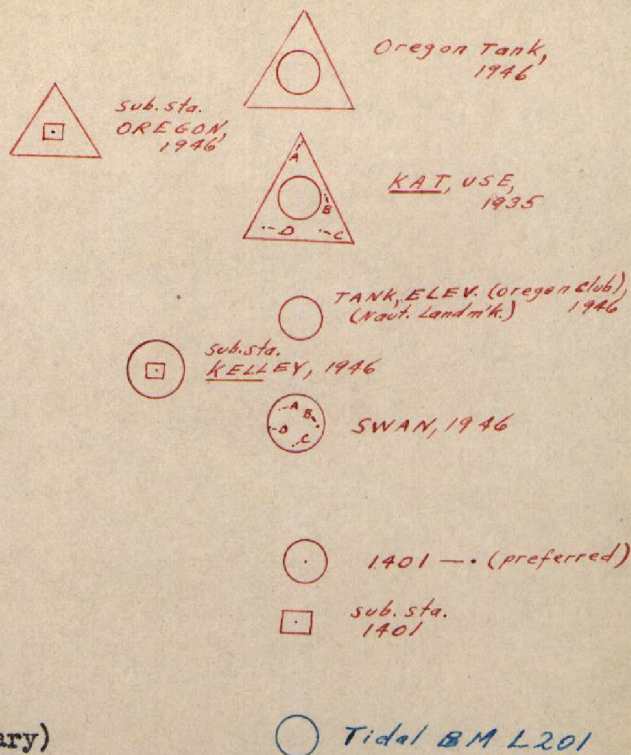
Hydrographic Stations

Pricked direct (ties, if necessary)

Substitute station

Bench Marks - not used as a control station

Pricked direct or spotted (ties, if necessary)



STATION NAMES

Triangulation and Traverse

Landmark Stations ----- TANK, ELEV (Oregon Tank, 1946)
(Naut., Aero., or Int. Landmark)

Fixed Aids to Navigation ----- Reeder Lt (Reed Lt., 1935) - Light list name
(unused) - if abandoned.
Front Beacon, 1935
(R Bn No. 4) - indicate color of beacon.

Shoreline Control for Ship

Hydrography ----- OREGON, 1946 - underline the first four letters
or all if less than four.

Topographic

Landmark Stations ----- CUPOIA (Hunt Club), 1946
(Naut., Aero., or Int. Landmark)

Fixed Aids to Navigation ----- Reeder Lt. - Light list name
Reeder Lt. (unused) - if abandoned
B Bn No. 4 - indicate color of beacon

N.B.: Indicate a permanent (steel or masonry) and an abandoned light structure as a nautical landmark.

Shoreline Control for Ship

Hydrography ----- Swan, 1946 - a marked station
Kelley (Tidal BM 4), 1946
Swan (BM 53, USGS), 1946

Interior Marked Stations ----- Oregon Az. Mk, 1946; BM L 104, 1946
PTS 11 (USGS, 1910), 1946 - control less than
third-order.

Hydrographic Station

Shoreline Control ----- 1401 - first signal site in T-8814; describe
in sketchbook

N.B.: New triangulation stations are given names of 5 or more letters; topo. stations 4 letters; however, descriptive, geographic, or personal names are preferred to arbitrary ones.

SYMBOLS AND COLORS

DRAINAGE

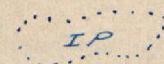
Perennial stream



Intermittent stream



Intermittent pond



SHORELINE

Mean highwater line - fast land



Definite low water line



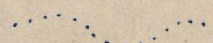
Indefinite low water line



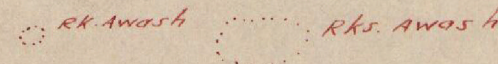
Definite off-shore limits of marsh



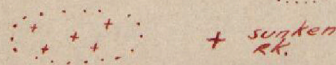
Inshore limits or scattered offshore
(indefinite) limits of marsh



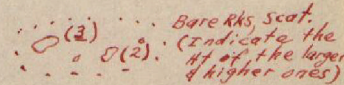
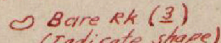
Rock(s) awash (± 1 ft. at Proj. Dat.)



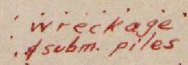
Sunken Rock(s) (at Proj. Dat.)



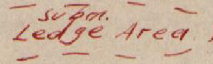
Bare Rock(s) (1^+ ft. above Proj. Dat.)



Foul, wreckage, pile, obstr., etc. area



Indefinite limits of shoal or submerged
ledge or reef area



BUILDINGS

Circle buildings not obscured

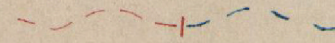


Obscured buildings inked as shaped and
circled, if necessary



TICK MARK

To denote change in stream or shoreline
classification, etc.



Deletions



NOTES ON PHOTOGRAPHS

All notes are to be in red unless indicated otherwise.

N. B.: The photogrammetric party should establish at least 75% of the required hydrographic signals spaced so that additional hydrographic sites may be conveniently located.

ABBREVIATIONS FOR FIELD INSPECTION

SHORELINE

HWL - Mean high water; fast land
LWL - Low water line
M - Marsh inshore limits
MW - Marshgrass in water
Wo.M - Wooded marsh
Dk - Dock
Pier - Pier
SeaW - Seawall
Bkhd - Bulkhead
Hbr - Harbor
Anch - Anchorage
Ldg - Landing
Wk - Wreck
Wks - Wreckage
Obstr - Obstruction
Jet - Jetty
Dol - Dolphin
Pile - Pile
Pt - Point
I - Island
Mt - Mount or mountain
Blf - Bluff
Dune - Dune
Mud - Mud
Rk - Rock
Sty - Stony
Conc - Concrete
S - Sand
Rky - Rocky
Lrg - Large
Mon - Monument

VEGETATION

C - Cultivation
Gr - Grass

ROADS

Pr - Private
Rd - Road
St - Street
Ave - Avenue
Blvd - Boulevard
Hwy - Highway
RR - Railroad
OP - Overpass
UP - Underpass
X - Deletion mark(always in green ink)

STREAMS, PONDS, AND BRIDGES

D - Largest ditches only(delete small ones)
Ca - Canal
IP - Intermittent pond
Res - Reservoir(give name if any)
Slu - Slough
Dam - Dam
Brg - Bridge
Fy - Ferry

BUILDINGS

Ho - House
B - Barn
Sh - Shed
Gar - Garage
Bldg. - Building
Bo Ho - Boat House
Ct Ho - Courthouse (give name)
Ch - Church (give name)
PO - Post Office (give name)
Sch - School (give name)
Hos - Hospital (give name)
RR Sta - Railroad Station (give name)
Ste - Country store
P Sta - Power Station
Pav - Pavillion
Hdqrs - Headquarters
Chk Ho - Chicken house
Gas Sta - Gas Station

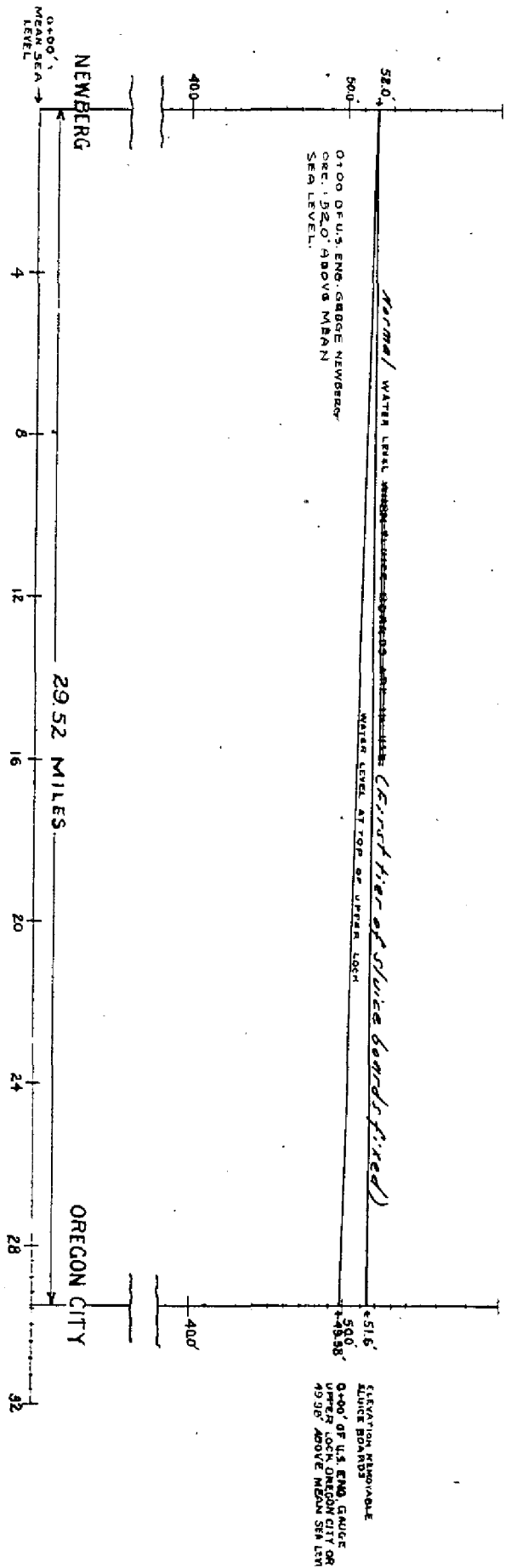
BOUNDARIES

F - Fence
Hdg - Hedge
FB - Fire break
Park - Park
Cem - Cemetery
Co - County
Ore. - Oregon
Wash - Washington
Bdy - Boundary
Sec - Section
Cor - Corner
S C - Section corner
T - Township
R - Range
Div - Division
Dist - District

LAND MARKS

Air Bn - Airway Beacon
Bn - Beacon(non-lighted aid to navigation)
Lt - Light(lighted aid to navigation)
C G - Coast Guard
Pil Sta - Pilot station
Look Tr - Lookout tower
S Pipe - Stand Pipe
Tk - Tank
Tr - Tower
Stk - Stack
Elev Tk - Elevated tank

Cr - Creek
P - Pond
Spr - Spring
L - Lake
Lev - Levee
Cu - Culvert



PROJECT CS 322
ROBERT A. EARLE
CHIEF OF PARTY

SKETCH SHOWING U.S. ENGINEERS LOW WATER PLANE
IN WILLAMETTE RIVER POOL BETWEEN
UPPER LOCK OREGON CITY, ORE. & NEWBERG ORE.

SCALE
1 inch = 4.0 miles Horizontal
1 inch = 10.0 feet Vertical

DATE: JAN. 20, 1947

WILLAMETTE RIVER OREGON
SALEM - NEWBERG

River Mile	Gate	Low Water	River Mile	Gate	Low Water
84.56	SALEM	109.2	69.86	Ashers	80.0
83.74	Salem Bar	109.1	69.16	Teskins	77.5
82.99	Isler -- Exchange	106.0	68.86	Ditmars	77.0
82.27	Mosquito, U.	105.2 -	68.39	Snaggy Bend, U.	75.8
81.97	Mosquito, I.	104.5	67.99	Snaggy Bend, I.	74.7
81.10	Kaiser, U.	103.7	67.66	Fairfield	74.6
80.62	Kaiser, I.	103.3	66.36	Dukes	73.6
80.00	Rice	101.6	65.82	Lambert, U.	71.7
79.36	Darrows, U.	101.4	65.05	Lambert, Slough	68.6
78.75	Darrows, I.	100.4	64.79	Lambert Bend	68.5
78.00	Spongs	99.6	63.92	Jackson Bend	66.2
77.30	Lincoln	97.6 -	63.30	Peaster Rocks	66.0
76.84	Windsor, U.	96.8	62.10	Five Islands, U.	64.3 -
76.31	Windsor, M.	95.5	61.89	Five Islands, I.	64.1
76.09	Windsor, # 6	95.2	61.10	Coffee Chute	61.8
75.74	Windsor, # 5	93.4	60.70	Weston Bend, U.	61.3
75.49	Windsor, # 4	91.9	59.35	Weston Bend, I.	59.9
75.05	Windsor, # 3	89.7	58.90	Candiani, U.	59.7
74.74	Windsor, # 2	89.1	58.19	Candiani, M.	58.2
74.12	Ionetree	87.3	57.71	Candiani, I.	56.1
72.40	Wheatland	86.9	57.50	Carey Bend	56.0
72.20	Wheatland, U.	86.8	56.84	Brentano	55.6
71.56	Wheatland, # 3	84.7	56.06	Mission, U.	55.2
71.10	Wheatland, # 2	83.6	55.45	Mission Landing	53.9
70.85	Wheatland, I.	82.5	54.95	Yamhill River	53.8
70.46	Matheney	81.9	54.15	Rays	53.3 -
70.22	Eldridge	81.2 -	52.34	Ash Island, U.	52.9
			51.60	Ash Island, I.	52.1
			50.12	NEWBERG	52.0 -

WILLAMETTE RIVER OREGON

INDEPENDENCE - SALEM

River Mile	Gage	Low Water
96.48	INDEPENDENCE	127.8
96.16	Independence Bend, U.	127.0
94.97	Independence Bend, L.	126.4
94.37	Uncle Billie	125.9
93.78	East Independence	125.7
93.18	Budds Chute, U.	125.2
92.60	Budds Chute, M.	123.1
92.00	Budds Chute, L.	120.5
90.76	Doves, U.	119.7
90.14	Doves, L.	118.3
89.61	Gray Eagle	116.9
88.96	Eola, U.	115.3
88.38	Eola, L.	113.5
87.36	Duraft	112.4
86.60	Traglio, U.	112.3
85.82	Traglio, L.	110.1
85.09	West Salem	109.4
84.56	SALEM	109.2

REPORT TO HYDROGRAPHIC PARTY
Sheets 8812 to 8816 inclusive
Project Ph-13(46)

A complete field investigation was made during shoreline operations of alongshore and offshore features at and above the adopted shoreline plane of reference. No identification of the low-water line was made since it is inapplicable in this area.

Where evidence of shoal areas was found, their approximate limits were noted; however, additional areas of shoals, submerged gravel bars, and other dangers are suspected. The numerous detached and alongshore gravel bars found above the adopted plane give evidence of the existence of shoals and shallow areas. Contributing sources are the meanders in the river and the deposits of sediment.

The current in the river is strong during periods of high water but becomes relatively gentle as the high water recedes.

Hydrographic signal sites and recoverable topographic stations have been designated and established in accordance with the instructions for this project. Inasmuch as ground instrumental work was necessary along those areas where the river banks were heavily wooded, only a minimum of hydrographic signal sites were established in these places.

At the north central section of Windsor Island, where dredging was in operation, no hydrographic signal sites were established since it was felt that they would be destroyed or confused with the numerous temporary ranges and signals built by the dredging crew.

A tabulation of these signal sites with brief descriptions was submitted with the Field Inspection Report. Recoverable topographic stations have been reported on Form 524. *Photogrammetry Files*

For additional information, refer to side headings 1 and 7 to 12 inclusive of the Field Inspection Report for the area of these sheets and to the side heading on "River Navigation and Hazards" of the Coast Pilot Report for this project.

Division of Charts - Coast Pilot Section

*See Descriptive
Report for T-8812*

Approved by:

R. A. Earle

R. A. Earle
Chief of Party

Submitted by:

Charles Hanavich
Charles Hanavich
Topographic Engineer

HYDROGRAPHIC SIGNALS - 8812
Project Ph-13 (46)

- 1201 Small power pole near MLWL.
- 1202 Black flag on end of brush pile.
- 1203 Black flag on water bush.
- 1204 Signal cloth on water bush.
- 1205 Blazed and Kalsomined tree, U/S end of clump.
- 1206 Black rag on water bush.
- 1207 Blazed and Kalsomined lone fir.
- 1208 Cupola on red barn. ——— ✓
- 1209 Blazed and Kalsomined Deciduous tree.
- 1210 Black rag on water bush.
- 1211 Signal cloth on water bush.
- 1212 Rag on D/S point of brush, offshore from jetty.
- 1213 Rag on rose bush near road.
- 1214 Crossed white boards on double cottonwood.
- 1215 Kalsomined dead snag.
- 1216 Blazed and Kalsomined fir.
- 1217 Stake at edge of cultivation and cut road.
- 1218 Blazed tree at M.L.W.L.
- 1219 Triangle of white boards on tree.
- 1220 Black flag on water bush.
- 1221 Signal cloth on lone small willow.
- 1222 D/S end of brush on bar.
- 1223 Black rag on water bush.
- 1224 White boards on tree.
- 1225 2" iron pipe bearing tab stamped "V 319 - 14".

- 1226 Rag on water bush, offshore of two in clearing
- 1227 Blazed and kalsomined lone willow.
- 1228 Topped and kalsomined willow trunk.
- 1229 Lone fence post in middle of field road.
- 1230 Blazed and kalsomined willow.
- 1231 2" iron pipe bearing tab stamped "V-319 - 5".
- 1232 Tree marked with double crossed boards.
- 1233 2" iron pipe bearing tab stamped "V-319 - 4".
- 1234 Water gable of unpainted barn. — ✓
- 1235 Base of large tree, blazed and kalsomined.
- 1236 Leaning tree at edge of bluff marked with "X".
- 1237 Corner of brush and bank line.
- 1238 Bush on riprap marked with white rag.
- 1239 White rag on bush near top of riprap.
- 1240 Smaller of two bushes marked by white rag.
- 1241 D/S end of long bulkhead.
- 1242 U/S end of short bulkhead.
- 1243 Double trunked bush marked by white rag.
- 1244 U/S bush of two marked with white cloth.
- 1245 Upper bush on riprap marked with white rag.
- 1246 Tree marked with white signal cloth.
- 1247 Willow bush with white rag.
- 1248 Center vent on hophouse. — ✓
- 1249 D/S bush of four marked with black signal cloth.
- 1250 Rag on water bush, U/S from point of brush.

- 1251 Large lone cottonwood at side of road, marked with white board.
- 1252 Black rag on small water bush, 7m E of road across bar.
- 1253 Trimmed and flagged leaning willow.
- 1254 Crossed boards on cottonwood.
- 1255 Inshore end of wing dam.
- 1256 Dead fir, south side of road to gravel bar.
- 1257 Center of small willow on pile jetty.
- 1258 Offshore end of pile jetty.
- 1259 Signal cloth on willow.
- 1260 Offshore end of pile jetty.
- 1261 D/S end of pile jetty.
- 1262 Offshore end of high jetty.
- 1263 White signal cloth on trimmed willow.
- 1264 Blazed and kalsomined deciduous tree on bluff.

HYDROGRAPHIC SIGNALS - 8813

- 1301 End bush on brush point, D/S side of road down bluff.
- 1302 Lone fir on fence line.
- 1303 D/S gable of large old barn. — ✓
- 1304 Signal cloth on water bush.
- 1305 White cloth on bush.
- 1306 Black cloth on bush.
- * 1307 Cottonwood tree marked with crossed boards.
- 1308 Willow bush marked with white rag.
- 1309 Rag on point of brush.
- * 1310 Triangle of white boards on tree.
- 1311 Blazed and kalsomined deciduous tree.

- 1312 Base of dead snag.
- * 1313 Single pile on bar.
- * 1314 Crossed white boards on tree.
- * 1315 Lone pile.
- 1316 White rag on bush.
- 1317 Center of pear tree on bar.
- 1318 White rag on bush.
- * 1319 Lone pile.
- * 1320 White signal cloth on water bush.
- 1321 White rag on Willow.
- 1322 D/S gable of unpainted barn. — ✓
- 1323 E gable of large tin roofed barn, inshore from LWL. — ✓
- 1324 Rag on bush near road.
- 1325 Rag on U/S bush on bar.
- 1326 Top of leaning red silo. — ✓
- 1327 Electric pole at edge of bank.
- 1328 Offshore end of leaning tree.
- 1329 White signal cloth on tree.
- 1330 White rag on D/S end of brush.
- 1331 Blazed and kaslomed double tree.
- 1332 Dolphin at end of Dike 67.40.
- 1333 Single pile at end of Dike 67.59.
- 1334 Five pile dolphin at end of Dike 67.68.
- 1335 Five pile dolphin at end of Dike 67.79.
- 1336 Rag on trimmed bush.
- 1337 Light standard on dolphin at end of Dike 68.02.
- 1338 Offshore end of Dike 68.12.

- * 1339 2" iron pipe with unstamped tab.
 - 1340 Black and white rag on bush.
 - 1341 Burned snag.
 - 1342 Lone pile on bar.
 - * 1343 Iron pipe and witness post.
 - 1344 Base of lone tree.
 - * 1345 Lone piling.
 - 1346 White rag on bush.
 - 1347 U/S of three bushes.
 - * 1348 Stub pile on gravel bar.
 - 1349 U/S of two dead fir trees.
 - 1350 White rag on water bush.
 - 1351 Tree top of riprap.
 - 1352 Deciduous sapling at turn in road.
- * = Location doubtful. Have been deleted from map manuscript.
See Descriptive Report.
- HYDROGRAPHIC SIGNALS - 8814
- 1401 Rag on point of brush patch.
 - 1402 Base of tall fir.
 - 1403 Burned snag on fence line.
 - 1404 Gin pole at gravel plant.
 - 1405 Blazed deciduous tree on bluff.
 - 1406 Black and white rag on bush, S end of bar.
 - * 1407 Lone pile on bar near gravel plant.
 - 1408 Iron pipe with witness post.
 - 1409 Iron pipe stamped "N 319-2-D" with witness post.
 - 1410 Rag on branch of tree.
 - 1411 Base of leaning snag.
 - 1412 Form 51 on large fir.

- 1413 Center of transmission poles, E side of river.
- 1414 Pole supporting ferry cable, W side of river.
- 1415 Pole supporting ferry cable, E side of river.
- 1416 Telephone pole bearing "No Trespassing" sign on line of poles through orchard, and 3m W of centerline of road.
- 1417 White cloth on bush on bank.
- 1418 Large stump on bank.
- 1419 Dolphin at old log dump.
- 1420 Outer U/S pile at old log dump.
- 1421 Ticking on water bush in clearing.
- 1422 White rag on water bush in clearing.
- 1423 Form 51 on large cottonwood tree.
- 1424 Iron pipe.
- 1425 Rag on water bush.
- 1426 Ticking on D/S end of brush patch.
- 1427 Double tree, N end of Windsor Island.
- 1428 White signal cloth on small fir.
- 1429 Ticking on water bush.
- 1430 Rag on water bush near road.
- 1431 Ticking on water bush between two leaning trees.
- 1432 Ticking on lone tree.
- 1433 Ticking on water bush.
- 1434 Black signal cloth on outer of four diamond shaped water bushes.
- 1435 Ticking on small sapling.
- ~~1436 Lone tree marked with triangular blaze. On 8815~~
- ~~1437 Burned snag marked by Form 51. On 8815~~

- 1501 Ticking on willow sapling.
1501A Lone tree marked with triangular blaze (was 1436 on 8814)
1502 U/S tree on gravel bar, marked by blazed cross and Form 51.
1501B Burned snag marked by Form 51 (was 1437 on 8814)
1503 Strip of ticking on rose bush.

1504 White washed iron pipe.

1505 Lone piling.

1506 Ticking on small tree at end of bar.

1507 Ticking on Scotch Broom bush near fence corner.

1508 Ticking on water bush.

~~1509 River gage, Lincoln Rocks. (Void)~~

1510 Ticking on D/S tree at D/S end of bar.

1511 Trimmed and flagged bush.

1512 Ticking on dead sapling.

1513 Ticking on water bush.

1514 Ticking on water bush on sand beach.

1515 Ticking on water bush, D/S from spoil bank.

1516 Ticking on point of brush.

1517 Cupola on barn. ✓

1518 Ticking on small cottonwood.

1519 Blazed cross on large cottonwood.

1520 Fifth tree U/S from D/S edge of filbert grove, first row.

1521 Outer of two snags.

1522 Rag on water bush.

1523 Ticking on water bush.

1524 Black signal cloth on bush, D/S edge of gravel pit.

1525 Tallest part of dead snag.

1526 Ticking on water bush.

1527 Black singal cloth on water bush.

- 1528 Chimney, white house. — ✓
- 1529 Lone fir.
- 1530 Cupola, red barn. — ✓
- 1531 Ticking on bush in clearing, W side of road.
- 1532 Chimney on white house, green roof. — ✓
- 1533 Blazed and kalsomined cottonwood tree.
- 1534 Base of leaning tree.

HYDROGRAPHIC SIGNALS - 8816

- 1601 Ticking on bush at pumping plant.
- 1602 Blazed and kalsomined cottonwood tree.
- 1603 Most westerly of three hop house vents.
- 1604 Black signal cloth on point of brush.
- 1605 Black signal cloth on tallest bush.
- 1606 U.S.E. pipe and witness post.
- 1607 "A" frame at log dump.
- 1608 Tall black stack, Monarch Foods.
- 1609 Blazed and kalsomined tree.
- 1610 Tank, Western refining (may be triangulation).
- 1611 E tower, railroad bridge draw.
- 1612 W tower, railroad bridge draw.
- 1613 B.M. ²⁻⁵¹251, U.S.G.S.
- 1614 Pier, west side of channel under Highway Bridge.
- 1615 Pier, east side of channel under Highway Bridge.
- 1616 Transmission tower apex, west side.
- 1617 Transmission tower apex, east side.
- 1618 Center of large gas tank.

- 1619 Water tower on concrete building.
- 1620 D/S gable of white house.
- 1621 Black signal cloth on bush.
- 1622 Chimney, east gable, red roofed house.
- 1623 Black signal cloth on lone bush.
- 1624 Water gable, main section red barn.
- 1625 Hop house vent, S.W. of two.
- 1626 D/S "A" frame at log dump.
- 1627 D/S point of brush.
- 1628 Black signal cloth on bush.
- 1629 Base of center pole of power line crossing, N side of river.
- 1630 Base of center pole of power line crossing, S side of river.
- 1631 D/S dolphin at log dump.
- 1632 Top of center pole of power line crossing, N side of river.
- 1633 Top of center pole of power line crossing, S side of river.

See Page 5 *1633

COMPILATION REPORT
Map Manuscript T-8812
Project Ph-13(46)

26. Control:

Seven horizontal control stations were recovered and satisfactorily identified by the field unit in the area of this map manuscript. They were well spaced and were adequate for use in controlling the photographs during the running of the radial plot.

In 1946, a geodetic party had relocated Primary Traverse Station 6 USGS, which had previously been included in a U. S. Engineer traverse in 1936. The new position differed from the position as published by the U. S. Engineers as follows:

	<u>Latitude</u>	<u>Longitude</u>
USC&GS Position	45° 10' 48.169"	123° 03' 28.349"
USE "	<u>45° 10' 48.11 "</u>	<u>123° 03' 28.15 "</u>
Difference	Plus 00.059"	Plus 00.199"

As there were no other traverse stations located north of PTS 6 USGS (USE 1935-36) on this line by the geodetic party, the differences listed above were applied to all other U. S. Engineer traverse stations which were recovered and identified for this map manuscript.

Attached to this descriptive report are two sheets of Form M-2388-12 on which is tabulated the horizontal control stations, of all federal agencies, which fall in the area of this map manuscript. A special column headed "Remarks", has been added to the form. In this column a short note has been entered which explains the manner in which the station was used.

The published positions of the U. S. Engineer and U.S. Geological Survey stations, which were not searched for by the field unit, have not been shown in the tabulation. These stations were not plotted on the map manuscript.

Station "EGO (USE, 1935-41)", has been identified and radially plotted as the azimuth mark for station "FUSS (USE, 1935-41)".

27. Radial Plot:

This map manuscript is part of Radial Plot No. 2, Project Ph-13(46), which includes Map Manuscripts T-8812 to T-8816 inclusive.

The radial plot was completed in the same manner as described for Radial Plot No. 1 of this project. The methods and a complete discussion of the various operations relative to work on the photographs, templates, and map manuscripts may be found in Paragraph 27 of the Descriptive Report for Map Manuscript T-8809.

Photograph No. 17302A, could not be used in the radial plot as the fiducial marks were not indicated for any of the chambers. Its center, which was fixed after the radial plot was completed, was not accurately located.

28. Detailing:

Compilation was done in accordance with instructions for Project Ph-13(46). Special care was taken to see that the requirements of paragraph 34 of the instructions were met.

The transforming printer at the Washington Office was not in proper adjustment at the time the photographs were printed and they could not be oriented in their entirety at the compilation table when radially plotting various types of pass points. Enough pass points had, however, been established during the radial plot so that each chamber of each photograph could be separately oriented. For at least two of the chambers on each photograph, it was found necessary to de-center the photograph radially, to or from the chamber being oriented, so that the radials to the pass points and horizontal control stations in the chamber would pass through their positions on the map manuscript.

Due to shadows and overhanging trees along the banks of the rivers, it was often impossible to get more than a two radial intersection, on some of the detail pass points which were used to compile the shorelines. These two radial intersection points have been shown with a small circle in green ink on the reverse side of the map manuscript.

The photograph coverage was adequate and very little trouble was encountered in interpreting the planimetric details.

All planimetric features have been compiled, within a zone averaging 300 meters in width, along both shores of the Willamette River. Inshore from this zone only skeleton planimetric details have been shown. The detailing limits of the map manuscript were taken from the index map furnished the compilation office and are shown with a light full line in green acid ink.

This map manuscript is relatively a smooth drawing and all symbols have been drafted to conform with samples furnished the compilation office or with symbols shown on similar planimetric maps which have recently been published by the U. S. Coast & Geodetic Survey.

The heights of bluffs were indicated by the field inspector. Their location was interpreted by the compiler with the aid of the stereoscope. Shoreline features and drainage were also delineated by extensive use of the stereoscope, however, it was often necessary to detail the field inspector's interpretation of drainage through thickly wooded areas. This was done only when it was impossible to determine the location of drainage by stereoscopic examination of the photographs.

29. Supplemental Data:

No supplemental data was used in the area of this map manuscript.

30. Mean High-Water Line: (River shoreline at the adopted plane of reference)

A complete discussion of this feature can be found in paragraph 7 of the Field Inspection Report, Sheets T-8812 to T-8816 inclusive. (T-8812)

The mean high-water line (River shoreline at the adopted plane of reference) is shown by a continuous black acid ink line .008" in thickness at a plane that is a gradient between 53.9 ft. above M.S.L. (the elevation of the 0 + 00 of the U.S.E. river gage on the dike at the south end of Ash Ray Bar Island) and ~~66.72~~ ft. above M.S.L. (the elevation of the 0 + 00 of the U. S.E. river gage at Peasters Rocks. Upper Five Islands, Oregon)

There are no marsh areas immediately bordering the shoreline.

31. Low-Water and Shoal Lines:

The approximate limits of several small shoal areas have been detailed as indicated by the field inspection unit.

The field inspection unit did not indicate any low-water lines within the area of this map manuscript.

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

There are no details offshore from the mean high-water line within the limits of this map manuscript.

33. Wharves and Shoreline Structures:

Several pile jetties, a bulkhead, two dams, and a log dump have been shown as indicated by the field inspection unit.

34. Landmarks and Aids to Navigation:

There are no aids to navigation within the area of this map manuscript. Form 567 is being submitted recommending the charting of "CEMENT CHIMNEY" (south of 3) as a nautical landmark.

35. Hydrographic Control:

A complete discussion of this subject can be found in the Field Inspection Report, Sheets 8812 to 8816 inclusive, Project Ph-13(46), paragraph 12. (T-8812)

It is believed that the field unit, in an attempt to satisfy the minimum hydrographic control requirements for this project, may have selected a few temporary signals that were of doubtful identity on the photographs or located them by methods which were not too strong. The compiler has radially plotted or otherwise located all of the signals recommended for hydrographic control, by the field unit, for this map manuscript. The compilation office is confident that the signals, which were easily identified on the photographs, are accurately located but, should the hydrographic party encounter some difficulty with a particular signal it should be discarded. In any event, there has been a sufficient number of well located signals established, which may be used by the hydrographic party for establishing additional signals at the time the hydrographic survey is made.

A list of sixty-four hydrographic signal sites, which fall in the area of this map manuscript, is attached to the Field Inspection Report, Sheets 8812 to 8816 inclusive, Project Ph-13(46). Geographic Names Sect. Division of Charts
(T-8812)

36. Landing Fields and Aeronautical Aids:

There are no landing fields or aeronautical aids within the limits of this map manuscript.

37. Geographic Names:

Geographic names are the subject of a special report, Investigation of Geographic Names Sheets 8812 to 8816 inclusive, Project Ph-13(46) which has been submitted. All undisputed and recommended geographic names have been shown on the map manuscript.

The geographic name "HIGH LINE ROAD" was not included in the special report, "Investigation of Geographic Names" and is to be added to the list of geographic names for this map manuscript. Its source is: In undisputed local usage and the McMinnville Quadrangle (USGS). Reported

38. Recoverable Topographic Stations:

Photogrammetry Files

Copies of Forms 524 are being submitted for the following:

ARMY, 1947	DORE, 1947
HILL, 1947	RATE, 1947
YEOW, 1947	UNIT (V-319-8 USE), 1947
QUED (BM 6 USE), 1947	VERY (V-319-3 USE), 1947
CEMENT CHIMNEY, 1947	TURK (V-319-11 USE), 1947
XTRA (Q-325, USE), 1947	STUN (V-319-12 USE), 1947
WART (W-319, USE), 1947	RIVER GAGE, WESTON LANDING, 1947
PAIN (X-325, USE, 1939), 1947	RIVER GAGE, LOWER FIVE ISLANDS, 1947
LOCK (BM YAMHILL LOCKS), 1947	

39. Junctions:

Complete and satisfactory junctions have been made between map manuscripts T-8811 and T-8812 and between map manuscripts T-8812 and T-8813.

40. Bench Marks:

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

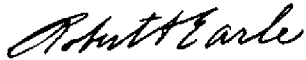
44. Comparison with Existing Topographic Surveys: Quadrangles

See record sheet which accompanies each map manuscript.

45. Comparison with Nautical Charts:

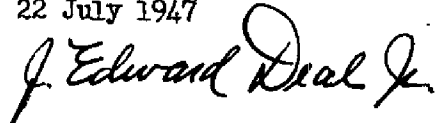
There are no nautical charts of the area.

Approved and forwarded:



Robert A. Earle
Chief of Party

Respectfully submitted:
22 July 1947



J. Edward Deal, Jr.
Photogrammetric Engineer

Division of Photogrammetry
Review Report of
Shoreline Map Manuscript T-8812

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

28. Detailing.--

Corrections, made by the reviewer, were limited to the shoreline with a few exceptions. Inshore planimetry was in good agreement.

Numerous detail points on the manuscript, along the shoreline, were checked and in all instances the cuts made by the reviewer held within the prescribed limits of accuracy. No new detail points were cut in by the reviewer as the original detail points were sufficient for compilation when using the vertical projector.

A number of field inspection notes that were omitted on the manuscript have been added by the reviewer.

35. Hydrographic Control.--

A number of the temporary hydrographic stations were recut and all of them held within the prescribed limits of accuracy. In the vicinity of Coffee Island there are two points shown as either Hydrographic or Topographic Stations. Since no record of either could be found by the reviewer, it is assumed that they are merely detail points, inadvertently shown in error.

44. Comparison with Existing Topographic Quadrangles.--

A visual comparison was made with the following quadrangles:

USGS, Mount Angel, Ore., 15' Quadrangle, 1921,
Scale 1:62,500

USE, Mount Angel, Ore., 15' Quadrangle, 1947,
Scale 1:50,000

USGS, McMinnville, Ore., 15' Quadrangle, 1924,
Scale 1:62,500

USE, McMinnville, Ore., 15' Quadrangle, 1947,
Scale 1:50,000

For further information see Record Sheet.

45. Comparison with Nautical Charts.--

There are no nautical charts in this area.

Reviewed by:

Under direction of

B. Thomas Hynson
B. Thomas Hynson
Photogrammetrist
10-31-47

S. V. Griffith
S. V. Griffith
Chief, Review Section

APPROVED BY:

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

E. Steadman
Chief, Nautical Chart Br.
Division of Charts.

K. T. Adams
Chief, Div. of Photogrammetry

C. K. Green
Chief, Div. of Coastal Surveys

GEOGRAPHIC NAMES.

Survey No. **T-8812**

DAYTON, , Oregon:

[illegible]

GEOGRAPHIC NAMES

Survey No. T-8812

GEOGRAPHIC NAMES											
Survey No. T-8812											
2	Name on Survey	<div>On Chart No.</div> <div>On previous survey No.</div> <div>On U. S. quadrangle Maps</div> <div>From local information</div> <div>On local Maps</div> <div>P. O. Guide or Map</div> <div>Rand McNally Atlas</div> <div>U. S. Light List</div>									
		A	B	C	D	E	F	G	H	K	
✓	Candiani Bar										1
✓	Carey Bend										2
✓	Brentano Bar										3
	St. Paul Catholic Church	?									4
✓	Bottom Road										5
✓	Ray Bar										6
✓	Neck Road										7
✓	Golf Course										8
✓	Dayton Station										9
✓	Alderman Farms Warehouse										10
✓	Oaklawn										11
✓	Yamhill Locks U.S.E. Reservation										12
✓	Dayton										13
✓	Union High School Dist. No. 1										14
✓	Palmer Creek										15
✓	Webfoot Grange Hall										16
✓	Pleasantdale										17
✓	Pleasantdale School										18
											19
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											21
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											23
											24
											25
											26
											27

Names underlined in red are approved.
2/10/48. L. Heck

M 234

Names underlined in red are approved.

2/10/48.

L. Heck