

9637N  
9637S  
COMBINED

Diag. Cht. No. 6002-2.

Form 504
U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE
DESCRIPTIVE REPORT
Type of Survey <u>Topographic</u>
Field No. <u>Ph-62(49)</u> Office No. <u>T-9637</u>
LOCALITY
State <u>Washington</u>
General locality <u>Willapa Bay</u>
Locality <u>Oysterville</u>
<u>1945-57</u>
CHIEF OF PARTY F. Natella, Chief of Field Party E. H. Kirsch, Balto. Photo. Office
LIBRARY & ARCHIVES
DATE <u>June 5, 1958</u>

B-1870-1 (1)

9637N  
9637S  
COMBINED

SUMMARY  
TO ACCOMPANY DESCRIPTIVE REPORT T-9637

Topographic map T-9637 is one of 14 similar maps in Project PH-62. It covers the major portion of Beach Peninsular, west of Willapa Bay.

This is multiplex project in advance of hydrographic surveys to be made in the area.

The field operations preceding compilation included complete field inspection. The establishment of some additional horizontal control and the determination of sufficient elevations to control multiplex models.

The multiplex compilation was at a scale of 1:10,000. The manuscripts consists of two sheets, each  $7\frac{1}{2}$  minutes in Longitude by  $3\frac{3}{4}$  minutes in Latitude.

The entire map was field edited. It meets the National Standards of Map Accuracy. It is to be published by the Geological Survey at a scale of 1:62,500.

The registered copies under T-9637 will include a cronar film positive of each manuscript.

# DATA RECORD

T-9637

Project No. (II): Ph-62(49)

Quadrangle Name (IV):

*NORTH BEACH PENINSULA*

Field Office (II): Raymond, Washington

Chief of Party: Fred Natella

Photogrammetric Office (III): Baltimore, Maryland

Officer-in-Charge: E. H. Kirsch

Instructions dated (II) (III): 20 March 1951  
3 August 1951  
15 February 1952  
13 May 1952

Copy filed in Division of  
Photogrammetry (IV)

Method of Compilation (III): Air Photographic (Multiplex & Kelsh)

Manuscript Scale (III): 1:10,000

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

Scale Factor (III): 1.000

Date received in Washington Office (IV):

Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV): 5-19-58

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): N.A. 1927

Vertical Datum (III):

Mean sea level except as follows:  
Elevations shown as (25) refer to mean high water  
Elevations shown as (5) refer to sounding datum  
i.e., mean low water or mean lower low water

Reference Station (III): OYSTER 2, 1926

Lat.: 46° 32' 53.536"

Long.: 124° 03' 27.701"

Adjusted

~~Unadjusted~~

Plane Coordinates (IV):

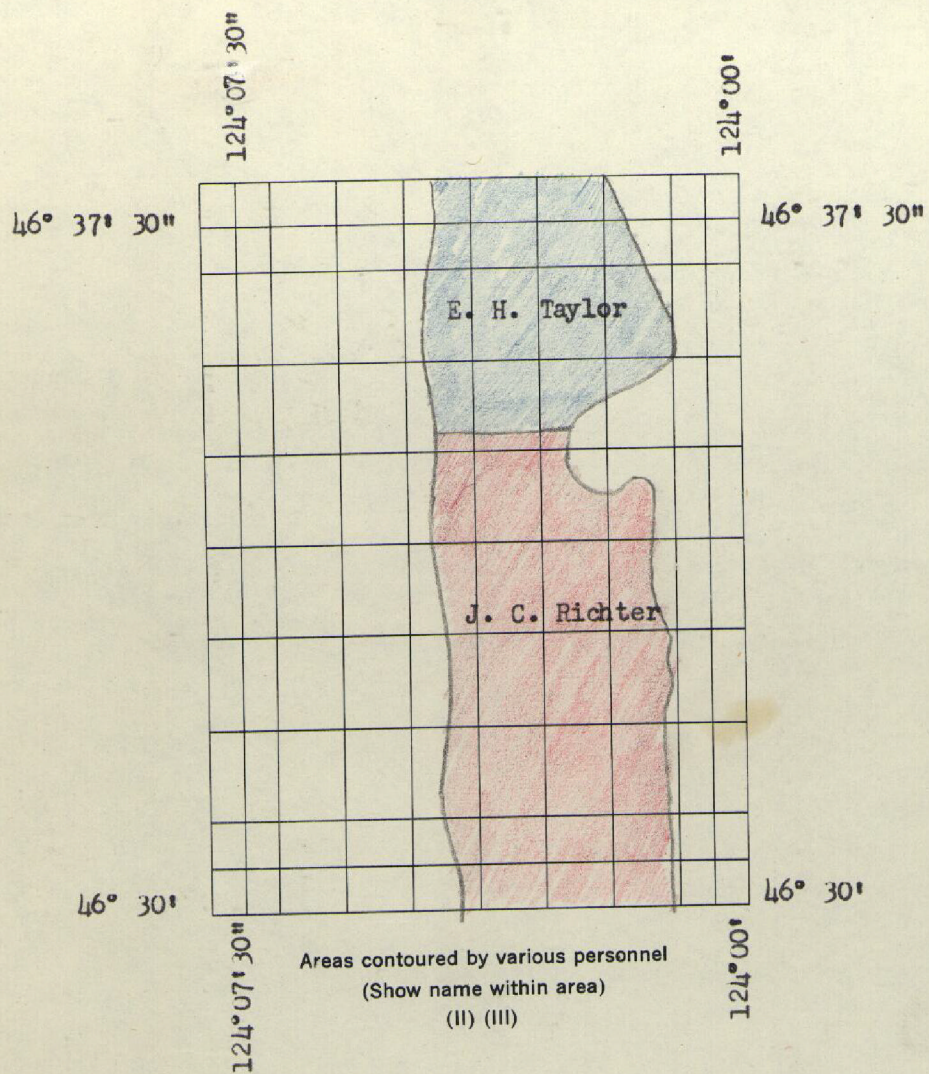
State: Washington Zone: south

Y=

X=

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

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



DATA RECORD

Field Inspection by (II): Charles H. Bishop

Date: June-July 1953

Planetable contouring by (II):

Date:

Completion Surveys by (II):

CHARLES H BISHOP

Date: OCT. 2, 1957

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

July 11, 1950 - Photogrammetric

Projection and Grids ruled by (IV): Jack Allan

Date: Nov. 21, 1951

Projection and Grids checked by (IV): H. D. Wolfe

Date: Nov. 27, 1951

Control plotted by (III): A. K. Heywood

Date: Oct. 12, 1953

Control checked by (III): E. H. Taylor

Date: Oct. 13, 1953

Radial Plot or Stereoscopic

Date: Oct. 22, 1953

Control extension by (III): E. H. Taylor

Stereoscopic Instrument compilation (III):  
(Planimetry E. H. Taylor  
(Contours J. C. Richter

Date: Oct. 27, 1953

Date: Nov. 18, 1953

Manuscript delineated by (III): D. M. Brant N/2  
C. A. Lipscomb S/2

Date: March 15, 1954  
Oct. 1, 1954

Photogrammetric Office Review by (III): A. K. Heywood N/2/2

Date: Oct. 22, 1954

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

A. K. Heywood S/2

Date: Oct. 22, 1954

Camera (kind or source) (III): U. S. C. & G. S. Type O, 6" focal length.

Number Date Time (P.S.T.) Scale Stage of Tide  
50-01614 - 1622 7/11/50 14:00 1:24,000 5.1 above MLLW

Tide (III)  
From Predicted Tide Tables

Reference Station: ABERDEEN, WASHINGTON  
Subordinate Station: NAHCOTTA, WILLAPA BAY  
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range
	7.8	9.9
1.0	8.0	10.2

Washington Office Review by (IV):

A.K. Heywood

Date:

APRIL, 1958

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): 15  
Shoreline (More than 200 meters to opposite shore) (III): 18  
Shoreline (Less than 200 meters to opposite shore) (III): None  
Control Leveling - Miles (II): 11.7  
Number of Triangulation Stations searched for (II): 19  
Number of BMs searched for (II): 4  
Number of Recoverable Photo Stations established (III): 5  
Number of Temporary Photo Hydro Stations established (III): None

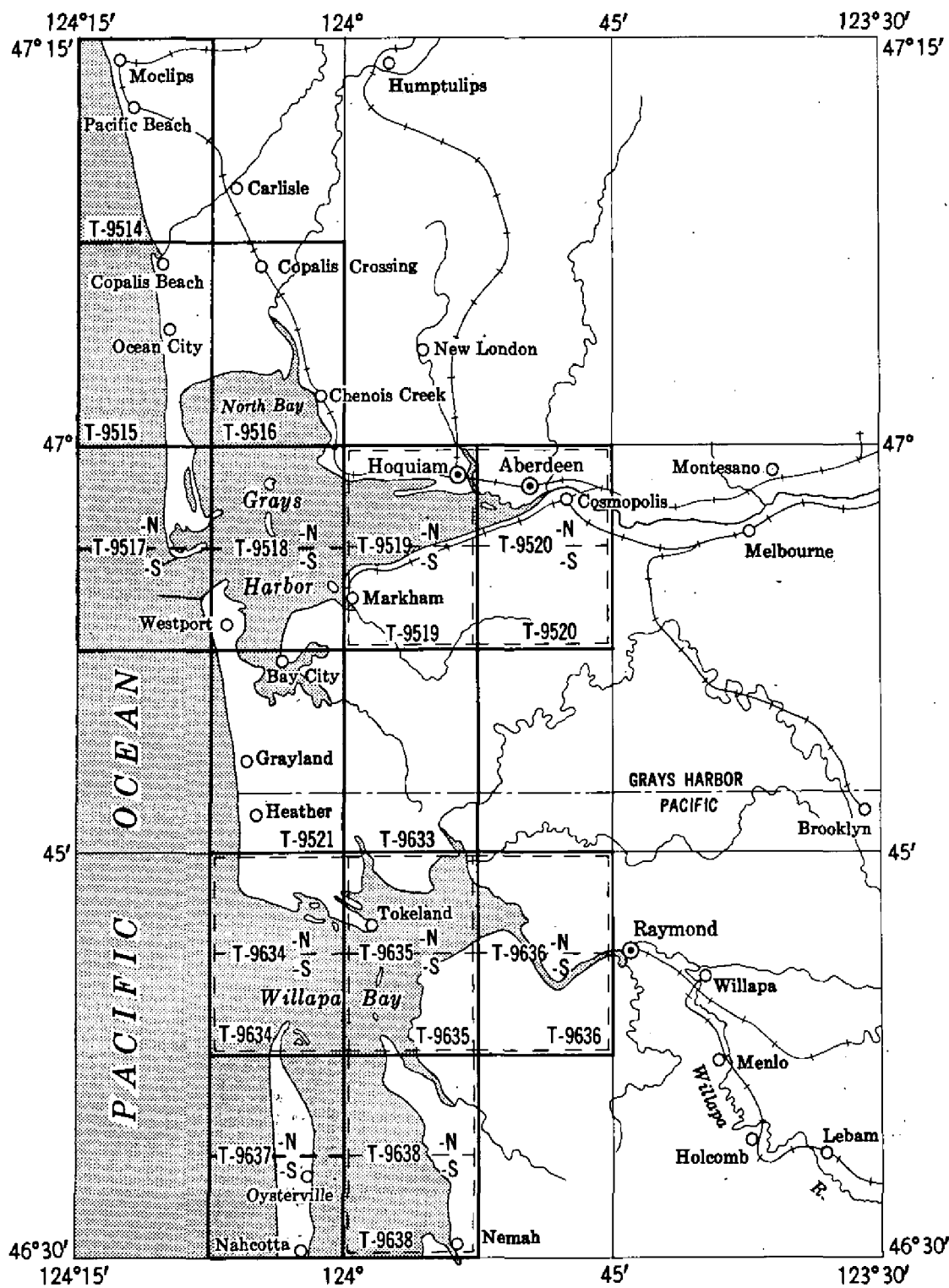
Recovered: 13 Identified: 6  
Recovered: 3 Identified: 3

Remarks:

# TOPOGRAPHIC AND SHORELINE MAPPING PROJECT PH-62 (49)

## WASHINGTON, Grays Harbor - Willapa Bay

Compilation scales 1:10,000 and 1:20,000



TOPOGRAPHIC MAPS: T-9514, T-9515, T-9516 T-9519, T-9520, T-9521, T-9633 to T-9636 and T-9638, (scale 1:20,000),  
T-9517-N, T-9517-S, T-9518-N, T-9518-S, T-9637-N, T-9637-S, (scale 1:10,000).

FIELD INSPECTION REPORT  
for  
QUADRANGLES T-9634 and T-9637  
North Beach Peninsula, Washington  
Project Ph-62(49)

2. Areal Field Inspection

This report covers that part of the North Beach Peninsula extending northward from the pier at Nahcotta, Washington to Leadbetter Point, and the islands two miles north of Leadbetter Point in the Willapa Bay entrance. The peninsula is about one and a half miles wide and extends about ten miles north from the south edge of the project at Nahcotta. Only about two square miles at the north end of the peninsula are in Quadrangle T-9634. That portion of Quadrangle T-9634 lying east and north of Cape Shoalwater was covered in the Field Inspection Report on Quadrangles T-9633 to T-9636 inclusive, submitted by Lt.-Comdr. Charles W. Clark in January 1953.

The beach along the west side of the peninsula is fine sand and is several hundred feet wide at low tide. The foreshore area near the mean high water line is used as a highway except when the tide is high. Except for about four miles at the north end of the ocean beach a vertical sand bank from five to ten feet high is on the inshore side of the beach. The reverse slope of the bank is a grass-covered strip averaging about three hundred feet in width. Inshore from the grass is a rather flat area, mostly of bare sand, and of about the same width as the grassy strip. On the east side of the sand is a line of dunes, partly covered with grass. These dunes are from thirty to fifty feet in height. The dunes drop sharply on the east to the wooded area of the peninsula. The woods extend to the east shore of the peninsula and north to a point about three miles south of Leadbetter Point. From the tree line north to the end of the peninsula the area is composed of low, shifting sand dunes with only sparse grass cover. Shoreline in the vicinity of Leadbetter Point and Grassy Island is very unstable.

There are no extensive beaches on the Willapa Bay side of the peninsula except from Stackpole Slough northward. There is a fringe of marsh along much of the shoreline from Stackpole Slough southward.

The entire area is sparsely settled. Oysterville is the only settlement within the area, though Ocean Park and Nahcotta border the south edge of Quadrangle T-9637. There are a post office, store, school, and oyster cannery at Oysterville, which has a population of 140. Oysterville was founded in 1854, and was the county seat before the South Bend and Raymond communities developed on the Willapa River.

The main industry in the area is oystering. There are extensive oyster beds in Willapa Bay and canneries in Oyster-ville and Nahcotta. There are two cranberry bogs in the area. Tourists also add to the income, although most of the tourist accomodations are south of the project area in Ocean Park and Long Beach. Clam digging and swimming are the main attractions for tourists.

Access to the area is by the Peninsula Highway, which is close to the east side of the peninsula, and by the ocean beach.

Photograph coverage is complete and adequate. Identification of horizontal control, delineation of shoreline, and interior inspection were done on the 1/10,000 scale prints of the 1/24,000 contact scale photography. Vertical control was identified on the contact prints.

### 3. Horizontal Control

All horizontal control within the area was searched for. All monumented stations on the east side of the peninsula were recovered. Difficulty was encountered in recovery of stations along the ocean beach because the area is quite unstable due to storm action and shifting sand. However, a sufficient number of stations to control the photographs was recovered and identified.

(a) No supplemental stations were established during the field inspection.

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

(c) There are no stations in the area covered by this report that were not established by the Coast and Geodetic Survey, with the single exception of station PARK 2. PARK 2 was established by this bureau. The station was destroyed by grading. The Washington Department of Public Lands later reset the old mark and established a new position by traverse. This position is given in the 1948 recovery note for PARK 2.

(d) A sufficient number of stations to control the photographs were recovered and identified. Stations identified were in compliance with the sketch furnished the field. PARK 2 was not identified.

(e) All Coast and Geodetic Survey stations were searched for and Form 526 submitted. The following listed stations were not recovered:

T-9637

BEACH 2

DIG 2

DUNE (USE)

SAND

Metal Stack, Oystershell Reduction Plant,

Nahcotta, Washington

Willapa Bay, North Gable of Large Red Barn

Other stations in the area not recovered have been reported lost or destroyed as long as thirty years ago, and no further search was made.

#### 4. Vertical Control

(a) Tidal Bench Marks 2, 3, and 4, Nahcotta, Willapa Bay, Washington were recovered and identified. There is no other vertical control in the area.

(b) Additional elevations in the area were established by trigonometric leveling, using a plane table and alidade. All leveling was run in closed loops or double-run. Except for the section between V-points 3713 and 3713 A the maximum closure was 1.07 feet. One the back running between 3713 and 3713 A there is an erroneously recorded stadia distance. The maximum effect of the error is about 1.5 feet, well within the two foot closure limit, and should be adequate as a check. The forward running appeared satisfactory. Additional elevations were established as follows:

Point	Elevation in feet	Identified on photo no. (1/24,000)
3701	9.8	1622
3702	10.7	1622
3703	29.0	1622
3704	21.2	1622
3705	21.4	1622
3706	20.0	1622
3707	18.8	1622
3708	20.8	1621
3709	14.1	1621
3710	10.7	1621
3711	16.5	1620
3712	23.1	1620
3713	10.3	1619
3713 A	16.8	1619
3714	16.8	1618
3715	14.6	1618
3716	12.8	1617
3717	10.6	1616

Point	Elevation in feet	Identified on photo no. (1/24,000)
3718	11.3	1616
3719	18.5	1616
3720	29.6	1616
3721	6.8	1614
3722	17.5	1619
3723	13.3	1619

## T-9634

3431	7.5	1614
3432	6.1	1614
3433	10.3	1614

Vertical control points established during the current season in Quadrangle T-9634 are numbered from 3431 to 3433 inclusive. Vertical control points established in Quadrangle T-9637 are numbered from 3701 to 3723 inclusive.

5. Contours and Drainage

Contours not applicable.

New drainage ditches beginning about 2300 feet south of triangulation station MESS were located on 1/10,000 scale photograph by plane table.

No attempt was made to complete drainage through heavily wooded areas.

6. Woodland cover

Most of the area is covered by second growth woodland. A large amount of this has been logged off, leaving dead brush and dense undergrowth through which travel is very difficult. In compliance with planimetric rather than topographic procedure, the inspector has classified cover as deciduous (TH) or coniferous (TS), and approximate tree heights have been noted in representative areas

7. Shoreline and Alongshore Features

(a) The mean high water line was inspected and indicated on the photographs with established procedure. In the vicinity of Leadbetter Point and Grassy Island it was located by plane table on 1/10,000 scale photograph number 1613. At the date of location, 6 June 1953, there was no break in the mean high water line between the island and the point. However, the shoreline in this area is subject to considerable change, and at times there is a channel at this point.

The mean high water line on the islands two miles north of Leadbetter Point was established by plane table resections and traverse. The height of mean high water was determined with reference to predicted tides. The shoreline from that portion of the tin sheet falling within the limits of Quadrangle T-9634 is furnished on a tracing. The east portion of the tin sheet is still in use, and the tin sheet will be forwarded with the field records for Quadrangle T-9635.

(b) No attempt was made to delineate the mean lower low water line. It is not practicable to locate the mean lower low water line in this area without using hydrographic survey procedures.

(c) The foreshore on the west side and north end of the peninsula is hard sand. On the east side it is sand and mud. There are extensive oyster beds along the east side of the peninsula.

(d) There are no cliffs in the area. A five to ten foot bluff is immediately inshore from the ocean beach. There is a short earth bluff about thirty feet high immediately south of triangulation station DOANE 2.

(e) The only alongshore structures are a short log bulkhead about 3.3 miles north of Oysterville and a pier at Nahcotta. The pier is just outside the south limit of the project.

(f) The shore ends of two submarine cable crossings were identified on 1/10,000 scale photographs 1614 and 1616. The cable indicated on photo 1614 is no longer in use, but it is still in place. That indicated on photo 1616 is in use at the date of field inspection in July 1953.

(g) There are no other shoreline structures.

## 8. Offshore features

Offshore features in the area are remains of wrecks on the west side of the peninsula and piling and dolphins on the east side. Wreckage that was not visible on the photographs was located by plane table and sextant cuts. The time of inspection, date, and height above water at time of inspection were noted on the photographs. Piling and dolphins were located by sextant fixes, which are recorded on the backs of the 1/10,000 scale photographs. Where triangulation stations could not be used as objects photo points were identified. Heights above mean high water of dolphins and piling were estimated.

p. 654 Lead 4 46°38' 893.3 m.  
1939 124°03' 19.1 m.

Shell (USE) 46°36' 827.9 m.  
1939 124°02' 653.2 m.

9. Landmarks and Aids

Charted landmarks have been verified. One, the stack at Nahcotta, is recommended for deletion, as it no longer exists. Two new landmarks were selected. These are the white tripods about twenty feet high over triangulation stations LEAD 4 1939 and SHELL (USE) 1939. None of these landmarks are useful from seaward, but serve as landmarks in Willapa Bay.

\* The only aid in the area is the navigation light on the end of the pier at Nahcotta. This light was located by theodolite cuts from triangulation stations DOANE 2 1939, COTTA 1939, and POINT 2 1939. The triangulation designation is Nahcotta Wharf Light 1953.

\* THIS AID REPORTED DESTROYED 1957

Another cut on Willapa Bay Light 1953 was observed from ~~SHELL (USE) 1939~~, as recommended by Comdr. Clark in his report on the work to the north.

FIELD 2011

ASL

10. Boundaries, monuments, and lines

There are no municipal corporations within the limits of the area.

No section corners were recovered in quadrangle T-9634.

Five section corners and two meander corners were recovered in quadrangle T-9637. No mark was found for section corner 9,10,15,16, T 12 N, R 11 W. The owner of the property adjoining the corner pointed out a spot which he stated was within ten feet of the location of the old corner. Since the difference in disputed locations is hardly plottable, this spot was identified. This is a much disputed corner, but the disputed locations cover only a very small area. Pipes or stakes were found for the other corners recovered.

Brief descriptions of the recovered corners follow:

Section Corner 21,22,27,28, T 12 N, R 11 W. 0.5 mile north of the post office at Nahcotta, 8.3 meters east of the center line of the Peninsula Highway, on the north side of a drainage ditch and in a fence line, 20.3 meters west of a tree 20 feet high which is on the fence line, and 1.75 meters east of the fence corner, a 1½-inch iron pipe with a wooden peg set in the top projecting about 18 inches above the ground. This is a disputed corner.

Section Corner 16,15,22,21, T 12 N, R 11 W. 0.5 mile north northwest of the intersection of Joe John Road with the Peninsula Highway in a fence line 175.8 meters (607 feet) from the centerline of the highway and 3.2 meters (10.5 feet) east of a fence corner in dense brush, a wooden stake. This is an accepted corner.

✓ Meander Corner 15,22, T 12 N, R 11 W (PRO 1939), 1.7 miles north of the long pier at Nahcotta, about 200 meters north of an unpainted barn, on an east-west fence line, 18.7 meters south of the southwest corner of an old barge, 9 meters west of bank, 3.0 meters west of a fence corner, at base of post 4 inches in diameter and 4 feet high, a Biological Survey disk on top of a 2-inch pipe set in concrete, and projecting 6 inches.

✓ Section Corner 9,10,15,16, T 12 N, R 11 W, 1 mile south of Oysterville, about 160 meters west of the Peninsula Highway on the property of B. B. Saunders, about 150 meters north of Mr. Saunders house, 33.4 meters east of the north gable of a white house in the edge of the woods. No mark was found for this corner. Mr. Saunders indicated a point which he said should be within 10 feet of the corner. This is a disputed corner.

✓ Section Corner 4,3,10,9, T 12 N, R 11 W, in the swamp about 130 meters south of the Post Office at Oysterville, 149 feet east of the east fence of the Oysterville Cemetery, 138 feet west of a fence corner, 70 feet east of a leaning spruce tree, 98.8 feet east of a  $1\frac{1}{2}$ -inch iron pipe buried 6 inches (witness mark) and 4.2 feet southeast of a blue cross in a blaze on a 5-inch alder, a  $1\frac{1}{2}$ -inch iron pipe, surrounded by rocks and projecting about 1.2 feet, with a wooden peg in the top of the pipe. This is a reestablished and accepted corner. Information from an old resident who helped reestablish the corner.

✓ Meander Corner 3,10, T 12 N, R 11 W, in Oysterville, about 220 meters south of the Northern Oyster Company oyster house, 82 meters south of the south end of a prominent line of brush, 45 meters west of the east edge of a rounding grassy point, 36 meters north of the east tip of a brushy bank, and 32 meters east of a north south fence, a stone with a chiseled cross and the numerals "3" and "10" inscribed, and slightly below the general level of the ground. This is apparently an original meander corner.

✓ Section Corner 21,22,27,28, T 13 N, R 11 W, 3.4 miles north of Oysterville along the Stackpole Road, 19.3 meters southeast of telephone pole no. 6075, 9.4 meters east of the center line of the road, in brush on the east side of the drain along the road, a  $1\frac{1}{2}$ -inch pipe with a peg in the top. No local information concerning this corner could be obtained, but ties between the road and the corner are recorded in the County Engineers office.

11. Other Control

No photo-hydro control was required and none was located.

One Washington State Department of Public Lands marker, (AZ-1) was recovered and identified in lieu of a topographic station.

Eight monumented topographic stations were established, six along the ocean beach, and two along the west shore of Willapa Bay. These are as follows:

Station	Identified on photo:
Bank 1953	1616
Fore 1953	1615
Glen 1953	1618
Hint 1953	1616
Sher 1953	1617
Stak 1953	1614
Vern 1953	1621

12. Other Interior Features

Roads and buildings have been classified and indicated on the photographs. There are no bridges, cables over navigable waters, or landing fields in the area.

13. Geographic Names

Geographic place names were investigated and will be the subject of a special report.

Respectfully submitted,

*Charles H. Bishop by Ray H. Stalton*

Charles H. Bishop  
Cartographer

Approved:

*Fred Natella*

Fred Natella  
Comdr., USC&GS  
Chief of Party

MAP T- 9637

PROJECT NO. Ph-62(49).

SCALE OF MAP 1:10,000

SCALE FACTOR .....1.000...

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR $y$ -COORDINATE LONGITUDE OR $x$ -COORDINATE		DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS	
			°	'	°	'		FORWARD	(BACK)	FORWARD	(BACK)
<del>ALICE 2, 1926</del>	<del>G-6687</del> <del>p. 1023</del>	<del>N.A.</del> <del>1927</del>	<del>46</del> <del>124</del>	<del>31</del> <del>03</del>	<del>07.236</del> <del>23.198</del>	<del>223.4</del> <del>494.5</del>	<del>(1629.3)</del> <del>(784.5)</del>	<del>STATION DESTROYED</del>			
BETTER, 1911	G-6579 p. 1015	"	46 124	36 02	27.377 31.491	854.4 670.2	(1007.3) (606.7)				
DOANE 2, 1939	G-P's p. 749	"	46 124	30 01	44.818 26.875	1383.9 572.9	(468.8) (706.2)				
GOULTER 2, 1939	G-P's p. 749	"	46 124	33 01	09.308 26.567	287.4 566.0	(1565.3) (712.1)				
OYSTER 2, 1926	G-6687 p. 1023	"	46 124	32 03	53.536 27.701	1653.1 590.2	(199.6) (688.0)	<del>STATION DESTROYED</del>			
OYSTERVILLE BARD HEIM DAIRY BARN NORTH GABLE (BARN), 1939	GP List p. 756	"	46 124	33 01	03.646 35.813	112.6 763.0	(1740.1) (515.2)				
NAHOGOTTA WHARF LIGHT, 1953	<del>Form</del> <del>28B</del>	"	<del>46</del> <del>124</del>	<del>29</del> <del>01</del>	<del>59.628</del> <del>23.953</del>	<del>1841.2</del> <del>510.8</del>	<del>(11.5)</del> <del>(768.7)</del>				
MESS, 1939	GP List p. 750	"	46 124	34 01	58.672 23.206	1811.77 494.1	(441.0) (783.4)				
OYSTERVILLE, HOLWAY OYSTER HOUSE, SMALL METAL STACK, 1939	GP LIST p. 757	"	46 124	33 01	00.451 28.251	13.9 601.9	(1838.8) (676.4)	15			
SHELL(USE), 1939	GP List p. 755	"	46 124	36 02	26.811 30.696	827.9 653.2	(1024.7) (623.6)				

1 FT. = .3048006 METER

COMPUTED BY: E. H. Taylor

DATE 5 October 1953

CHECKED BY: A. K. Heywood

DATE 5 Oct. 1953

COMM-DC-57843

MAP T- 9637

PROJECT NO. Ph-62(49)

SCALE OF MAP 1:10,000

SCALE FACTOR 1.000

[illegible]

## PHOTOGRAMMETRIC PLOT REPORT

Project Ph-62

### 21. AREA COVERED

T-9521, T-9633 thru T-9638.

### 22. METHOD

Bridging was done by multiplex with both the 1:40,000 and the 1:24,000 scale photography. The 1:40,000 scale photography was used for bridging at a scale of 1:17,000 on all quadrangles except T-9637 and the south half of T-9634, where bridging was at 1:10,000 using the 1:24,000 scale photography.

In quads T-9638 and the south half of T-9635, we found it feasible to run a bridge at 1:10,000 for the shoreline manuscripts as well as a bridge at 1:17,000 for the topographic quads. The bridging at 1:10,000 was done first in two strips (1725 thru 1729 and 1729 thru 1736) as indicated on the sketch of control. The 1:10,000 and 1:17,000 scale bridges were tied by common pass points.

In the remainder of the area covered, the 1:17,000 scale bridging was done first and pass points transferred to the 1:10,000 shoreline manuscripts by graphic intersections. Then, the 1:10,000 shoreline models were set individually holding to these pass points and available control points. Except for the photographs used in bridging, the photo-centers for the 1:24,000 scale photography set by individual models, are not shown on the sketch of control.

### 23. ADEQUACY OF CONTROL

Sketch of control, attached, shows flights bridged and identified horizontal control points used. All horizontal points (either triangulation or sub. points) which could be positively identified in the multiplex models were either held on or well within 0.5 mm. The field party usually furnished more than one sub station for each horizontal control station identified by this method. If we could positively identify and hold one sub. point for a station we considered the station as held. We, also, considered a point held if it could be positively identified and held in one model but not necessarily in the model of an adjoining flight. The number of points which could be positively identified was adequate.

It was fortunate that a liberal number of points were identified in the field, as we were unable to positively identify so many. Many of the points either could not be seen at all or images were so indefinite that we could not be certain that we were holding them within 0.5 mm. Apparently, there were two principle reasons for this; the poor quality of the photography and the relatively small images at the 1:17,000 scale. In several cases a point could be seen in the model of one strip but not in the adjoining strip or clouds obscured images on one of the photographs of a stereoscopic pair.

24. SUPPLEMENTAL DATA

None.

25. PHOTOGRAPHY

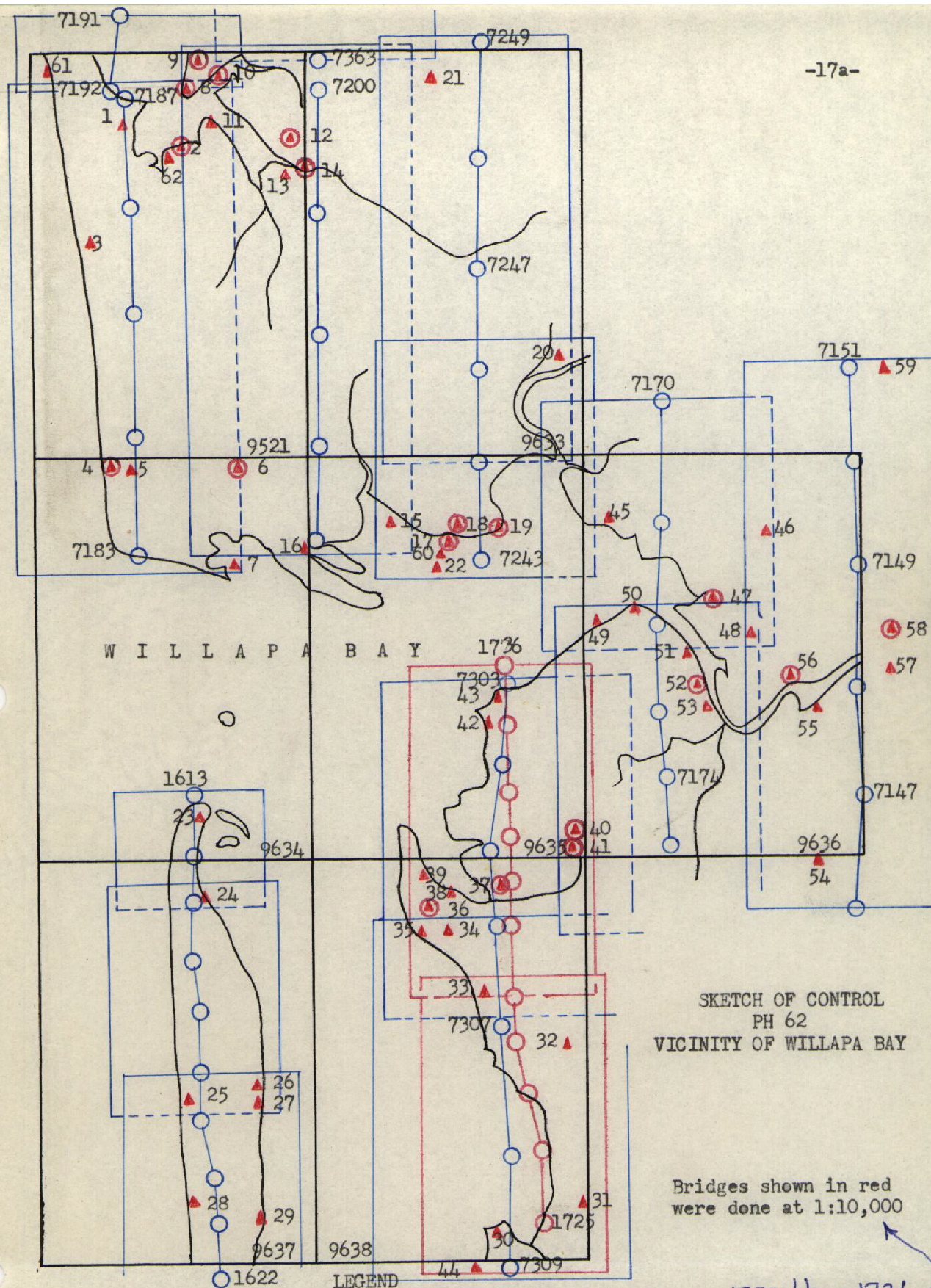
Refer to item 25 of the Photogrammetric Plot Report, para. 1, bound with Descriptive Report for T-9519.

The quality of the diapositives was poor. Examination of the contact prints reveals that this fault is in the photography itself. In almost all the photographs there is some portion where the images are indistinct and washed out because of glare. The corresponding area from the adjoining photograph is often sharp.

Respectfully submitted  
1 November 1954

  
Henry P. Eichert  
Super. Carto.

-17a-



▲ Control points identified and held in the models.  
 ● Control points identified in the field but could not be positively identified in the the models.

SKETCH OF CONTROL  
 PH 62  
 VICINITY OF WILLAPA BAY

Bridges shown in red  
 were done at 1:10,000

1752 thru 1736  
 are "red"  
 M<sup>2</sup> 8/96

LEGEND

1. DIKE, 1940
2. ROBIN, 1940
3. GRAY, 1926
4. STING (USE), 1952
5. BEACH 2, 1922
6. LARKIN, 1939
7. WILLAPA BAY C. G.  
STA. FLAGSTAFF, 1939
8. ISLAND, 1940
9. BEARDS, 1940
10. SWAMP, 1940
11. MUDDEN, 1940
12. ELK, 1940
13. ANDREWS, 1940
14. CEDAR, 1940
15. KINDRED, 1952
16. JIM( USE), 1939
17. CAMEO, 1952
18. BUSH, 1952
19. HAWKS 2, 1939
20. TS-7 (USE), 1935
21. TTS-5 (USE), 1935
22. TOKELAND, 1952
23. LEAD 4, 1939
24. BETTER, 1911 ✓
25. OYSTER 2, 1926
26. GOULTER 2, 1939
27. OYSTERVILLE BARD-HEIM DAIRY  
BARN N. GAB. (BARN), 1939
28. ALICE 2, 1926
29. DOANE 2, 1939
30. NEEDLE 2, 1939
31. BM L 62, 1939
32. CURVE, 1953
33. COUGAR 3, 1933
34. RANK, 1953
35. WILL, 1953
36. TJ-1, 1953
37. TN-16, 1953
38. TN-28, 1953
39. MISSION AZ., 1953
40. PALE, 1953
41. LICK, 1953
42. STONY PT., 1939
43. BRUCE 2, 1922
44. LEAR, 1953
45. KELLOGG, 1953
46. LOGGER, 1939
47. COOP, 1939
48. PONY 2, 1953
49. HERON, 1939
50. SANDY 2 (USE), 1939
51. POTTER, 1939
52. KNOB 2 (USE), 1939
53. SO. BEND PACIFIC CO. COURT  
HO. DOME FINIAL, 1939
54. MINNIE, 1953
55. SOUTH (USE), 1939
56. CUT (USE), 1939
57. RAYMOND ELEV. TANK BET. CASE MILL  
AND CASE MILL NO. 2, 1939
58. HENDERSON, 1939
59. Y-61 (USE), 1937
60. TOKE PT. C. G. BOAT HO. S. E.  
GAB. (BOAT), 1939
61. LAST, 1926
62. GUNVILLE, 1940

COMPILATION REPORT  
Survey T-9637

31. DELINEATION

All topography was compiled by the Kelsh instrument. Detail points were plotted at the time of instrument compilation for use in delineating shoreline detail graphically.

Refer to comment on quality of photographs in Item No. 25 of the Photogrammetric Plot Report.

32. CONTROL

Refer to Item No. 23 of the Photogrammetric Plot Report.

Vertical control was adequate.

33. SUPPLEMENTAL DATA

Land Flats.

Township No. 12 N R 11 W Willamette Meridian.

Township No. 13 N R 11 W Willamette Meridian.

34. CONTOURS AND DRAINAGE

Refer to Item No. 25 of the Photogrammetric Plot Report for comment on the photography and diapositives.

The combination of dense woods with little relief made the contouring difficult. Refer to Item No. 34 of the Compilation Report for Survey T-9516.

Sand dune areas along the coast with their characteristic lack of contrast added to the difficulty. This lack of contrast hindered the operators ability to "feel" the ground with the floating mark.

35. SHORELINE AND ALONGSHORE DETAILS

No low water line was shown.

Shoreline inspection was adequate.

36. OFFSHORE DETAILS

Questionable items have been referred to Field Edit.

37. LANDMARKS AND AIDS

One aid and two landmarks are within the limits of this survey.

### 38. CONTROL FOR FUTURE SURVEYS

Paragraph No. 11 of the Field Inspection Report should list twelve Forms 524 submitted.

One station "CHIM" is not listed in Paragraph No. 49 because it is off the project limits and was not located on this survey. Form 524 was submitted and is included with those submitted with this report.

The positions of all eleven topographic stations were determined by the Kelsh instrument.

A list of recoverable topographic stations has been prepared and included in paragraph No. 49 of this report. Forms 524 were submitted as noted in "Notes For The Hydrographer".

### 39. JUNCTIONS

To the south there is no contemporary survey. To the east and west is water and to the north junction has been made with Survey T-9634.

### 40. HORIZONTAL AND VERTICAL ACCURACY

Refer to paragraph No. 34 of this report.

The multiplex bridge was somewhat difficult because most of the models in this strip were half models, i.e., not a full land area, which afforded difficult parallax solutions. Since the horizontal control was fairly close together, short bridges were run to decrease chances of horizontal error in azimuth and cross-tilt.

It is recommended that a considerable amount of "spot" checking of contours be done on this sheet to assure standard accuracy.

### 41. BOUNDARIES

Section lines are poor particularly along the west edge since no corners were identified by field inspection and there are no natural features to aid the placement of the lines.

### 46. COMPARISON WITH EXISTING MAPS

Comparison has been made with A.M.S. Sheet 117711 Series V 791 scale 1:50,000 first edition 1936, reprinted 1947.

### 47. COMPARISON WITH NAUTICAL CHARTS

Chart No. 6185, scale 1:40,000 published Sept. 1952 ( 36 Edition) 9/1/52 and Chart 6002, scale 180,789 at Latitude 47° 00' published July 1942, 10 edition, 4/21/52.

Items to be applied to Nautical Charts immediately:  
None.

47. COMPARISON WITH NAUTICAL CHARTS (cont'd)

Items to be carried forward:

None.

Approved and forwarded

*E. H. Kirsch*

E. H. Kirsch,  
Comdr. USCGS  
Officer in Charge  
Balto. Photo. Office

Respectfully submitted  
12 November 1954

*A. K. Heywood*

A. K. Heywood,  
Carto. (Photo)

## PHOTOGRAMMETRIC OFFICE REVIEW

T. 9637

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

## CONTROL STATIONS

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

## ALONGSHORE AREAS

(Nautical Chart Data)

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

## PHYSICAL FEATURES

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

## CULTURAL FEATURES

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

## BOUNDARIES

31. Boundary lines ✓ 32. Public land lines ✓

## MISCELLANEOUS

33. Geographic names ✓ 34. Junctions ✓ 35. Legibility of the manuscript ✓ 36. Discrepancy overlay ✓ 37. Descriptive Report ✓ 38. Field inspection photographs ✓ 39. Forms ✓  
40. 214-1720000 Henry H. Eichen  
Reviewer Supervisor, Review Section or Unit

41. Remarks (see attached sheet)

## FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

\_\_\_\_\_  
Compiler\_\_\_\_\_  
Supervisor

43. Remarks:

T-9637.

Geographic Names

Alice (remnants of a wreck)

Cacha (wreck)

Elliot Boys Camp  
Elliot Trail

Glen Moray (wreck)  
Goulters Slough

Joe Johns Road

Morehead Boys Camp

Naheotta  
North Beach Peninsula  
Ocean Park  
Oysterville  
Oysterville Cemetery

Pacific Ocean  
Peninsula Highway

Salande (wreck)  
Sherwood Forest (area, not settlement)  
Skating Lake  
Stackpole Harbor  
Stackpole Road  
Stackpole Slough

Vernon Avenue

Washington  
Willapa Bay  
Willapa Girls Camp

Names approved June 10, 1957, on  
basis of project names report.

L. Hecy

48. GEOGRAPHIC NAME LIST

Alice

Caoba

Elliot Boys Camp

Elliot Trail

Glen Moray

Goulters Slough-

Grace Roberts

Joe Johns Road

Morehead Boys Camp

Nahcotta

North Beach Peninsula

Ocean Park

Oysterville

Pacific Ocean

Peninsula Highway

Salando

Sherwood Forest

Skating Lake

Stackpole Harbor

Stackpole Road

Stackpole Slough

Vernon Ave

Willapa Bay

Willapa Girls Camp

Project Ph-62  
Survey T-9637

49. NOTES FOR THE HYDROGRAPHER

The following recoverable topographic stations are located on this survey:

AZ-1, 1953	FORE, 1953
VERN, 1953	BOAT, 1953
STAK, 1953	BANK, 1953
SHER, 1953	ALAN, 1953
HINT, 1953	MC $\frac{S15}{S22}$ T12N, R11W, 1953
GLEN, 1953	

Forms 524 were submitted for AX-1, STAK, SHER, HINT, FORE and BANK on 5 April 1954. Included, also, was an especially prepared set of photographs (scale 1:10,000) for use in locating hydrographic signals by radial intersection and a chart section on which was indicated details to be proved disproved, or located in position. Forms for the remaining stations are submitted herewith.

## MONITORING AND/OR LANDMARKS FOR CHARTS

**STRIKE OUT ONE**

**Baltimore, Maryland**

25 Feb. 1954

I recommend that the following objects which ~~have~~ *(have not)* been inspected from seaward to determine their value as landmarks be charted on ~~(detached pages)~~ the charts indicated.

The positions given have been checked after listing by

**Henry P. Eichert**

**E. H. Kirsch,** *Chief of Party.*

[illegible]

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating*



SURVEY NO. I-963/

## Record of Application to Charts

[illegible]

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

# FIELD EDIT REPORT

Project Ph-62

Quadrangle T-9637

2 October 1957

## 51. Methods:

Field edit was done in accordance with Instructions for Field Edit, Project Ph-62, dated 1 June 1955, and notes to the field editor on the discrepancy prints for Sheet T-9637.

All planimetric detail was visually inspected. Additional cultural features have been added with red ink. Deletions have been made with green ink.

Contours have been edited and corrected by planetable methods and use of Wallace and Tiernan surveying altimeters.

Field edit information is shown on the discrepancy prints, Field Edit Sheets 1 and 2, and on the following field photographs.

<u>Photo</u>	<u>Type of Information</u>
50-0-1617	swamp limits
50-0-1618	" "
50-0-1619	" "
50-0-1621	drain

A legend showing symbols and colored inks used during field edit is on Field Edit Sheet No. 2.

The following section corners were recovered and located on the map by planetable methods:

<u>Section Corner</u>	<u>Field Edit Sheet</u>
29,28,32,33 T13N, R11W	1
28,27,33,34 T13N, R11W	1
16,15,21,22 T12N, R11W	2

No section corners were identified on the photographs.

## 52. Adequacy of compilation:

No inadequacies in compilation were noted.

53. Map Accuracy:

No inaccuracies in horizontal position were noted while using the planetable to check contours.

Considerable checking by planetable methods was done in order to bring this map up to National Standards for Map Accuracy. Of 450 points tested, 375 of them or 83.5 percent were within one half of one contour interval. It is believed that when the field edit corrections are applied to the map, it will be well within the National Standards for Map Accuracy.

54. Recommendations:

None.

55. Examination of Proof Copy:

The following named person has agreed to examine a proof copy of this map for possible errors:

Mr. I. W. Pouttu  
Pacific County Engineer  
South Bend, Washington

Mr. Pouttu is familiar with the area and is believed to be well qualified to examine the proof copy.

The following corrections to geographic names are noted:

1. Delete "Elliot Boys Camp", Sheet T-9637 N. There is no boys camp at this location.
2. Delete "Girls" from Willapa Girls Camp at the east end of Joe Johns Road, T-9637 S.

Approved:

*Ralph Sobieralski*  
V. Ralph Sobieralski  
LCDR C&G Survey  
Officer-in-Charge

Respectfully submitted:

*Charles H. Bishop*  
Charles H. Bishop  
Cartographer  
C&GS

REVIEW REPORT T-9637  
TOPOGRAPHIC  
April 10, 1958

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

H-334	1:221,360	1852	4252	L;20,000
1261	1:10,000	1871	6727a	1:10,000
1293	1:10,000	1872	6727b	1:10,000

Manuscript T-9637 supercedes all of the above surveys in common areas for nautical charting.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

AMS Cape Shoalwater copied in 1947 from 1936 survey.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

None

65. COMPARISON WITH NAUTICAL CHARTS

Chart 6185      38 edition      11/25/57

The delineation of Dolphins immediately south of Stackpole Harbor differs somewhat from that of the chart.

A landmark "Tripod", shown on the chart, at approximate Latitude  $46^{\circ}36'26''$  and approximate Longitude  $124^{\circ}03'00''$  was not located by the field editor. No mention was made of this landmark by the field inspector in item 9 of the field inspection report.

*Tripod removed from chart.  
Erroneously plotted in wrong position*

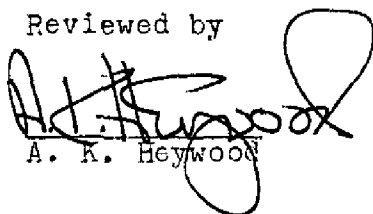
J. H. E.  
10-31-58

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

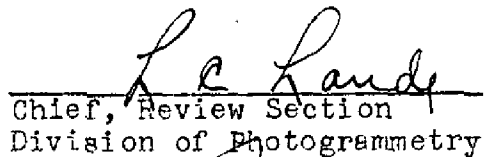
This manuscript complies with instructions  
and meets the National Standards of Map Accuracy.

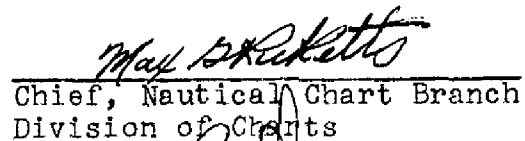
Extensive field check of the contours was  
made.

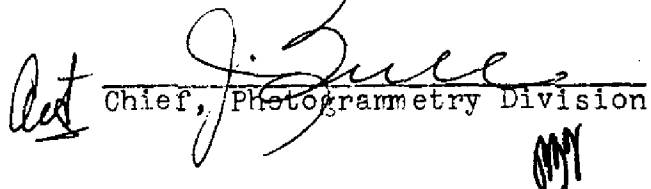
Reviewed by

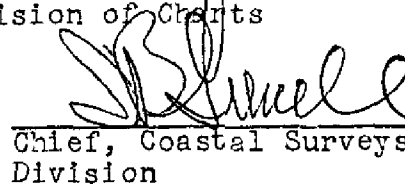
  
A. K. Heywood

Approved

  
Chief, Review Section  
Division of Photogrammetry

  
Chief, Nautical Chart Branch  
Division of Charts

  
Chief, Photogrammetry Division

  
Chief, Coastal Surveys  
Division