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Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: *Oregon*

11-5613

DESCRIPTIVE REPORT.

D
Hydrographic Sheet No. **4614**

LOCALITY:
Tillamook Bay Approaches
~~Northern Oregon~~
Nehalem River - Bay Ocean
Launch Star

Sheet D

1926

CHIEF OF PARTY:
R. F. Luce

C. & G. SURVEY
L & A
APR 1 1927
Acc. No.

DESCRIPTIVE REPORT.

To accompany Launch Hydrographic Sheet D, Tillamook Bay Entrance.
(All directions are from true north and distances are in statute miles.)

INSTRUCTIONS

This work was called for under Instructions from the Director, dated April 17, 1926.

LIMITS

This sheet represents part of the inshore hydrography executed by the launch STAR during the season of 1926, and extends from the Nehalem River to latitude $45^{\circ} 31' 15''$, the latter also being the southern limit of the season's work.

CONTROL

Control for the hydrography consisted of Third Order Triangulation and traverse points, supplemented by plane table traverse locations of natural and artificial objects.

DESCRIPTION OF THE COAST

The coast from signal Mouth to Tillamook Bay is an unbroken sand beach backed by heavily timbered peaks and ridges. There is a low marshy country with several lakes between the beach and the hills. A few small streams flow into the ocean at various points. The sand ridge one hundred yards back of the high water line and about fifteen feet in height, is marked by an unbroken line of cottages from signal Last to signal Pole

except for that ~~last~~ section between signals Brown and Lyle. From signal Pole to the town of Bar View the narrow leaved trees become thicker and the sand dunes higher. A few houses in Watseco are the only ones along this part of the coast.

The Seattle, Spokane and Washington Railroad parallels the beach North of Tillamook Bay entrance, passing through the various beach towns.

The sand beach near Bar View becomes much wider and is covered with scattered drift logs. Low sand dunes occur all along this beach. They are often lightly covered with grass. Just north of the town of Bar View the hills rise to a height of 250 feet and are heavily timbered.

From Tillamook Bay entrance to signal Dark, a long, narrow strip of sand dunes known as Kincheloe Point separates the bay from the ocean. These dunes range from 100 to 200 feet in height and are covered with grass and narrow leaved shrubbery. The dunes rise abruptly from the high water line. BayOcean, a practically abandoned summer resort, is the only town between the entrance to the bay and the lower limit of the sheet. There are a few cottages at various intervals along the tops of these dunes.

The town of BayOcean is largely on the bay side of the peninsula. The BayOcean hotel, a large, square, white frame building on the highest part of the sand ridge is conspicuous from seaward. There is also a natatorium on the beach. These buildings are no longer in use and are gradually decaying.

Below signal Dark the sand dunes continue to signal End but are backed by heavy timber.

From seaward, Kincheloe Point appears as a long line of unbroken sand dunes. In the distance, across these dunes, can be seen the heavily wooded mountains east of Tillamook Bay. North of the bay these mountains approach close to the coast.

Tillamook Bay entrance and vicinity is thoroughly described in the new Coast Pilot.

The low water line at the entrance to Tillamook Bay was determined by the Corps of Engineers in June 1926, a blue print of which accompanies this report.

BOTTOM CHARACTERISTICS

The bottom is uniformly sandy and gently sloping to the beach throughout the limits of the sheet except at Twin Rocks and Tillamook Bar. South of the bar the 10 fathom curve is considerably farther offshore than it is north of this point. There is no indication of any shoals.

Deep water exists close up to Twin Rocks and there are no jutting reefs.

LANDMARKS AND DANGERS TO NAVIGATION

Twin Rocks, two miles north of Tillamook Bay entrance, lie 1/4 mile offshore. Previous surveys show them to be 88 feet in height. There is a large arch in the southernmost rock plainly visible from the southwest. These rocks are close together and of, ^{nearly} the same size and height. They make a good landmark from near the coast. The two miles of high, brushy sand dunes on Kincheloe Point are very noticeable from seaward.

CURRENTS

The currents of this section of the coast are southerly in calm weather during the summer, but flow north after a southerly storm. The currents are not as strong as they are farther north at Cape Falcon and Tillamook Head.

AIDS TO NAVIGATION

1. Whistling Buoy, vertically striped, 1.2 miles west of Coast Guard lookout station, Kincheloe Point, Twin Rocks and the sand dunes described elsewhere in this report are the most important landmarks on this sheet.

2. Black can buoy at the outer end of the submerged jetty.

3. Coast Guard Lookout Tower near the outer end of the jetty piling.

4. Inner channel buoys.

CHANNELS

The bar at the entrance to Tillamook Bay is carefully surveyed each summer by the U. S. Engineers. The least depth in June 1926 was 16 feet at mean lower low water. While the STAR did some work at this bar, no attempt was made to duplicate the detailed work of the Engineers. Their work was done in excellent weather with light swells. It is, therefore, recommended that the June 1926 survey of the U. S. Engineers be adopted where there is any discrepancy between the two results. A blueprint of their recent survey is attached to this descriptive report. The low water line is shown on this blueprint.

In entering the bay, vessels should approach the bar from a point 1/3 mile north of the whistling buoy to avoid running too close to

the south sand spit. After heading for the black can buoy, and leaving it closely on the port hand, vessels should closely parallel the jetty until the river channel buoys are reached.

The bar breaks in a moderate swell on the ebb tide. Considerable difficulty was experienced in the latter part of September as there were days when the heavy swells caused it to break even on a high flood tide. The bar is dangerous when breaking and should not be attempted at that time.

ANCHORAGES

The only protected anchorage or docking facilities within the limits of this sheet are those of Tillamook Bay, which are fully described in the Coast Pilot.

An extensive dredging operation by the U. S. Engineers is now going on in the inner channel near Garibaldi.

NEW NAMES

Twin Rocks. On the present charts, the rocks two miles north of Tillamook Bar are called "Double Headed Rocks". These are known locally as Twin Rocks only. Owing to this fact, and to the simpler and more appropriate descriptive name, it is suggested that their designation be changed to Twin Rocks.

TIDAL DATA

When available, tide reducers obtained from the Garibaldi gauge were used when these were not available, reducers obtained from the Fort Stephen or Tongue Point gauges were used. The proper time correction were made in each case.

The tide differences are as follows:

Open coast to Ft. Stephen - - - - - -35 minutes.

Open coast to Tongue Point - - - - - 75 minutes.

Open coast to Garibaldi- - - - - -45 minutes.

The tide differences between gauges were determined by simultaneous observations at the gauges.

Statistics for Launch Sheet "D"

Date, 1926	Letter	Volume	Positions	Soundings	Miles (Statute)	Vessel
September 20	A	1	187	466	25.0	"Star"
23	B	2	174	523	25.0	
24	C	2	177	344	19.7	
20	D	2	<u>99</u>	<u>286</u>	<u>17.5</u>	
			637'	1619'	87.2'	

Unit for soundings: Fathoms.

Plane of reference: Mean Lower Low Water.

Location of gauge:

Plane of reference, reading on gauge:

Lowest tide observed, " " " ;

Highest tide observed, " " " ;

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 11-DFM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

October 17, 1927.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4614

Tillamook Bay Approaches

Surveyed in 1926

Instructions dated April 17, 1926 (PIONEER)

Chief of Party, R. F. Luce.

Surveyed by F. W. Hough.

Protracted by F. W. Hough.

Soundings plotted by J. C. Bose.

Verified and inked by W. H. Sewell.

1. The records conform to the requirements of the General Instructions with the exception that but one bottom characteristic was noted in the records on the entire survey. Also many corrections were made to original entries by writing over the first entry instead of crossing out the first entry and making the second entry above or to the side.
2. The plan and character of the survey conform to the requirements of the General Instructions.
3. The plan and extent of development conform to the requirements of the specific instructions. The extreme inshore work was probably omitted on account of sea conditions.
4. The sounding line crossings are adequate.
5. The information is sufficient for drawing the usual depth curves except the 6 foot curve and in places the 12 and 18 foot curves.
6. The usual field plotting was done by the field party and was excellent.
7. The junction with H. 4613 is satisfactory. No other contemporary surveys border this sheet.
8. No further work is necessary within the limits of this survey. The work at the entrance to Tillamook Bay including the main channel

is superseded by the Army Engineers' survey of July, 1927
(blueprint 21316).

9. Character and scope of surveying - excellent.
Field drafting - excellent.
10. Reviewed by A. L. Shalowitz, October, 1927.

Approved:

Chief, Section of Field Records (Charts)

Chief, Section of Field Work (H. & T.)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

4614

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. ^D 4614

State Oregon

General locality *Tillamook Bay* ^{Approaches} ~~Entrance~~

Locality Nehalem River to Bay Ocean

Chief of party *R.F. Luce, H. & G. Engineer.*

Surveyed by *Floyd W. Hough, Jr. H. & G. Engineer.*

Date of survey *Sept. 20-30, 1926.*

Scale 1: 20,000

Soundings in Fathoms

Plane of reference *M. L. L. W.*

Protracted by *F. W. H.* Soundings in pencil by *[Signature]*

Inked by Verified by

Records accompanying sheet (check those forwarded):

Des. report, Tide books, Marigrams, Boat sheets,

Sounding books, Wire-drag books, Photographs.

Data from other sources affecting sheet *Alsea Creek - Tillamook Bar - U.S.E.D.*

Remarks:

Launch Star Hydrographic Sheet "D"