

4635

4635

Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: Oregon

11-5613

DESCRIPTIVE REPORT.

Hydrographic Sheet No. **B** 4635

LOCALITY:
Columbia River
~~North of Oregon~~
S. Approach to Columbia River
~~South of Columbia R~~

15-50 fms.

ships sheet B

1926

CHIEF OF PARTY:
R. F. Luce

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

17

11

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
15 volumes of sounding records for

HYDROGRAPHIC SHEET 4695

Locality: **NORTHERN OREGON.**

Chief of Party: **L. F. Lass**

Plane of reference is **M L L W**
-0.2 ft. on tide staff at Ft. Stevens
2.6 ft. do Tongue Point.

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks"
12. Legibility of record could be improved.
13. Remarks.

G. W. ...

Chief, Division of Tides and Currents.

DESCRIPTIVE REPORT

To accompany Ship Hydrographic Sheet "B" South of the Columbia River, Oregon.

INSTRUCTIONS

The work covered by this sheet was authorized by instructions from the Director dated April 17, 1926.

LIMITS

This sheet represents that section covered by pressure tube soundings Str. PIONEER, extending from the outer limits of the launch work on the east to the 50 fathom curve on the west and from Lat. $46^{\circ} -11' -30''$ on the north to Lat. $45^{\circ} -50' -45''$ on the south.

CONTROL

The control of the hydrographic lines was by visual fixes on signals and natural objects located by third order triangulation, by plane table traverse, or by cuts taken from the ship. The great number of signals and natural objects furnished excellent control for the entire sheet.

DESCRIPTION OF COASTLINE

A very accurate and detailed description of the character and appearance of the coast line within the limits of this sheet may be found in the report accompanying launch hydrographic sheets A and B and the corresponding Topographic sheets.

BOTTOM CHARACTERISTICS

The bottom is relatively flat and smooth sloping gradually outward and composed entirely of fine grey sand with slight indications of brown

silt, probably a deposit from the Columbia River.

DANGERS TO NAVIGATION

There are no dangers to navigation within the limits of this sheet. Such offlying rocks and reefs as there are along this section of coast are entirely within the area covered by the launch sheets to the eastward and are taken up in the reports accompanying those sheets.

ANCHORAGES

None offering protection worthy of note.

SPECIAL FEATURES

Because of the excellent control by visual fixes, simultaneous bomb and sextant fixes were taken at several points as a means of determining a value for sound velocity which could be applied to the area to the westward surveyed with R.A.R control. Following is a list of these simultaneous positions:

Volume Z, D day, positions 37, 41, 42, 62, 64, 66, 68, and 94.

Volume 5, J day, positions 99, 101, 103, and 105.

Volume 13, V Day, positions 71, 72, 77, 78, 80, 83, 105-6-7-8- and 9.

The control was entirely by visual fix and all the soundings were made with the standard Ryde-Fisher pressure tubes.

CURRENTS

The general set of current seemed to be southward and parallel to the beach varying somewhat with locality, wind, and tide. A prolonged southerly blow would decrease the force of this prevailing current and often reverse the direction.

TIDAL DATA

North of Tillamook Rock, tide reducers obtained from the Fort Stephens gauge were used. When these were not available reducers were obtained from the Tongue Point gauge, and when neither of these were available, Garibaldi reducers were used. The proper time corrections were made in each case.

The time differences are as follows:

Open coast to Jetty - - - - - - - - - -05 minutes.

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

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

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

The time differences between the Fort Stephens, Tongue Point, and Garibaldi gauges were determined by simultaneous observations at the gauges.

For the area south of an east and west line through the northern part of Tillamook Head, the tide arrives outside of the 30 fathom curve 10 minutes earlier than for points along the open coast. North of this east-west dividing line, the inside limit for this additional 10 minute time allowance was taken as a line drawn from the 30 fathom curve off Tillamook Head to the 10 fathom curve off the mouth of the Columbia River.

DATE	DAY	VOL	POSITIONS	SOUNDINGS	MILES	VESSEL
June 11	A	1	43	118	13.2	PIONEER
" 18	B	1	100	288	32.0	"
" 21	C	1-2	112	320	37.0	"
" 22	D	2-3	99	283	34.5	"
" 23	E	3	21	59	5.1	"
" 24	F	3	²⁶ 27	65	7.5	"
" 30	G	3-4	149	537	53.0	"
July 1	H	4-5	171	530	53.7	"
" 2	J	5-6	108	368	30.2	"
" 7	K	6-7	174	495	58.0	"
" 8	L	7-8	180	582	57.5	"
" 12	M	8	34	88	12.7	"
" 13	N	8	105	254	37.7	"
" 14	P	9	88	253	34.6	"
" 15	Q	9-10	189	606	67.9	"
" 16	R	10-11	105	297	39.1	"
" 19	S	11	146	415	48.7	"
" 22	T	12	30	81	9.6	"
" 23	U	12	120	356	42.2	"
" 30	V	13	109	294	40.4	"
Aug. 2	W	13-14	¹¹⁸ 117	340	44.9	"
" 3	X	14-15	169	506	65.1	"
" 4	Y	15	53	154	17.6	"
" 13	Z	15	9	20	2.1	"
" 27	A'	15-16	115	314	38.1	"
			2573	7623		

1 - 3 - 6 - 8

CUT IN OBJECTS ON SHEET

Signal	Lat	D.M.	Long.	D.P.	Remarks
Tree	46-17	445 M	123 53	994 M	Lone tree on peak just west of long saddle. Highest peak of near range.
Wood	46-04	268	123 48	914 M	Sharp vertical break in sky line of wooded hill N of Tillamook Head-South of Summit.
Slip	45-56	1298 M	123 59	247 M	Vertical slide of yellow clay on SW face of Tillamook Head.
Slide	45 57	183 M	123 58	615	Vertical slide of yellow clay on NW face of Tillamook Head
Camel	45 51	1140	123 51	481	2831 ft. higher of two peaks close together N. of High
High	45 48	1098	123 54	564	3095 ft. Highest summit between Tillamook Head and Neah-Kah-Nie Mt.
Near	45 49	708	123 53	95	Peak due north from Onion Peak.
Far	45 50	436	123 54	175	Peak NNW of Onion Peak.

KGAL	46 05.	1126.8	123 57	1287.2	North hydrophone - Computed position from sextant angles.
KGAM (before 8/25/26)	45 45	1784.3	123 59	440.6	South Hydrophone computed position for sextant
KGAM (after 8/25/26)	45 45	317.5	123 58	862.0	Plotted on topographic Sheet - three point fix and extra angles.

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

AND REFER TO No. 11-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

October 10, 1927.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4635

Surveyed in 1926

Instructions dated April 17, 1926.

Chief of Party, R. F. Luce.

Surveyed by party of Steamer PIONEER

Protracted by R. F. Pfau and F. W. Hough.

Soundings plotted by S. B. Grenell.

Verified and inked by J. D. Torrey.

1. The records conform to the requirements of the General Instructions except that a part of one day's work of this sheet is entered in the records for sheet No. 4637.
2. The plan and character of development conform to the requirements of the General Instructions.
3. The plan and extent of the development satisfy the specific instructions.
4. Only a small number of short lines cross on this sheet and these crossings are satisfactory.
5. Complete depth curves cannot be drawn until all adjacent sheets are completed.
6. The protracting was found correct, but the plotting developed numerous errors.
7. The junction with sheet No. 4637 on the south is satisfactory, but the junction with sheet No. 4611 on the east, where the junction is with tube soundings for this sheet and lead soundings on sheet No. 4611, is not satisfactory. Numerous tube soundings of 10 and 12 fathoms are shown on this sheet.
(See note below)
8. Although numerous open areas appear on this sheet which might have been covered by split lines there appears no indication of dangers in the adjacent lines.

9. No further survey work is necessary.
10. Reviewed by J. D. Torrey, August 17, 1927.

*Sheet inspected by
A. L. S.*

Note: The tube soundings on this sheet from approximately the 13 fathom curve to the inshore limits of the survey have been omitted from the smooth plotting on account of the conflict with the leadline soundings on H. 4611 and H. 4612. (Concurred in by Chief of Section of Field Work.)

A. L. Shalowitz

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

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.

4635

U. S. Coast and Geodetic Survey.

Register No. ^B 4635

State Oregon.

General locality . . . ~~Northern Oregon~~ Columbia River

Locality . . . ~~South of Columbia River~~ South Approach to Columbia R.

Chief of party . . R.F. Luce.

Surveyed by . . . R.F. Luce.

Date of survey . . June¹¹ August²⁷ 1926.

Scale 1: 40, 000.

Soundings in . . . Fathoms

Plane of reference . . MLLW

Protracted by ^{Pfau} R.L. P & ^{Hough} F.W.H. Soundings in pencil by ^{Scriell} S.B.G.

Inked by *J.D. Torrey*. . . Verified by *J.D. Torrey*

Records accompanying sheet (check those forwarded):

Des. report, Tide books, ^{88 Tube Graphs} Marigrams, Boat sheets,
¹⁵ Sounding books, Wire-drag books, Photographs.

Data from other sources affecting sheet

Vol. 1, of Sheet 4637 also contains soundings for this Sheet

*1 Vol. R.A.R.-Lags for Season-Registered 4636-applying to 4635, 4636, 4637, 4639
Bomb records (in envelopes) and 2 small vols.-Scaled Bomb distances-in bundle marked 4635 to 4639 incl.*

Remarks: *Ship's Hydrographic Sheet "B".
Boat Sheet, filed 4635, covers ^{also} 4636(C) and parts of 4637(D) and
4638 (E)~ see Trans. Lett. (R.F.L.) Mar. 25, 1927*