

6243

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Form 504
Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

~~Hydrographic~~ } Sheet No. OW-17
Hydrographic }

Additional information in
Descriptive Report of H-6242

State Oregon-Washington

LOCALITY

Columbia River

Cooper Point to Stella

1937

CHIEF OF PARTY

Robert W. Knox

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1-2

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. OW-17

REGISTER NO. 6243

State OREGON - WASHINGTON

General locality Columbia River

Locality Cooper Point to Stella

Scale 1:10,000 Date of survey Aug. 26 to Nov. 11, 19 37

Vessel chartered launch 29J295

Chief of Party Robert W. Knox

Surveyed by R W K

Protracted by T. A. Renton

Soundings penciled by C. J. Wagner

Soundings in ~~fathoms~~ feet

Plane of reference Columbia River datum

Subdivision of wire dragged areas by

Inked by G. H. Everett

Verified by G. H. Everett

Instructions dated February 26, 1935, 19

Remarks:

SHEET OW-17

Surveyed by R. W. Knox.

This sheet is a survey of the Columbia River from Cooper Point to Stella and includes a development of the east portion of Wallace Slough. It joins sheet OW-16 on the west and sheet OW-18 on the east.

SHORE LINE AND SIGNALS: The shore line and signals (topographic) originate from topographic sheet C of the 1936 season and sheet A of the 1937 season. All triangulation stations with the exception of Seine (USE) are from this party's triangulation scheme of 1936.

DANGERS: There are no dangers in the area covered by this sheet aside from the charted rock, awash at mean low water, about 60 meters east of Cooper Point Front, in $\phi 46^{\circ} 09.65'$, $\lambda 123^{\circ} 14.8'$. Attention is respectfully called to the fact that this rock is charted as under water rather than awash at some stage of the tide.

ANCHORAGES: There are no designated anchorages in this area.

CHANNELS: 1) Thirty-one feet may be carried up the main ship channel.

2) Wallace Slough - used by cannery tenders and small craft fishermen. Four or five feet may be carried through this slough.

3) Bradbury Slough - used by cannery tenders and small craft fishermen. Seven or eight feet may be carried well into Bradbury Slough, but only 5 feet may be carried throughout it.

DISCREPANCIES: No discrepancies were noted in the plotting and reviewing of this sheet aside from the changes to objects and angles noted and explained in the sounding volumes.

COMPARISION WITH PREVIOUS SURVEYS:

1) USE survey of April 23, 1937, B-6-22/25, a bank-to-bank survey is in good agreement with the present survey. Differences of several feet, in the greater depths were noted, but as there are about an equal number in opposite directions it can be assumed such differences are due to lumpy bottom. In the extremely uneven bottom north of the Eureka Bar dike, in $\phi 46^{\circ} 10.2'$, $\lambda 123^{\circ} 13.5'$, the differences reach a maximum of 6 feet, with the present survey showing less water, generally, than the Engineers. All the lines in this area have been split. In the shoal area south of the Eureka Bar dikes there is practically a sounding for sounding agreement between the surveys.

2) USE survey of October 17, 1935, B-7-20/2, a survey from Abernethy Point to Midway (USE) is in good general agreement with the present survey, although a few differences of as much as 3 feet and one of 5 feet were noted in the lumpy bottom

This survey not in office file. Area now charted from B.P. 28658 of May, 1935. See par. 8a. review.

SHEET OW-17, continued.

in about the middle of this survey.

Despite the agreement of the surveys, it had been the plan to resurvey at least a portion of the above area until it was learned it was also the intention of the of the U. S. Engineers to do likewise. A copy of such a survey has not been received by this party, and it may be that the executing of this survey has been postponed.

2) USE survey of December, 1936 and February 1937, B-7-19/16, is in good agreement with the present survey, the one difference of importance noted is a 31 foot sounding falling in about 20 feet, in ϕ $46^{\circ} 11.05'$, λ $123^{\circ} 07.2'$, and probably due to the fact that the 31 is near the turn of the Engineers cross line, and the interval was probably irregular. The greater depths cannot be checked as they appear on the USE survey as no-bottom soundings.

B.P. 30314

Steep slope.
Present survey is later and should control for charting.

CHART 6152, issue of May, 1937.

1) Main channel: The chart is in good agreement with the present survey, with the following depths excepted, several of which are apparently slightly misplaced in position:

ϕ	λ	depths			
		charted	present		
a) $46^{\circ} 09.4'$	$123^{\circ} 14.8$	19ft	28ft	Charted position about 50 m north of shoal on present survey	Present survey more accurate
b)	09.6	14.5	19	30	As above ditto
c)	10.2	13.4	31	36	Charted 31 is 100m. from 30 on present survey.
d)	10.35	12.9	31	35-39	50m. from 31 on present survey.
e)	10.95	11.5	84	70	✓
f)	10.95	10.5	15	hw line	✓
g)	11.3	10.35	77	66-69	✓
h)	11.2	10.05	25	32	25 is from B.P. 28658 of May 1935. Present survey adequately covers this changeable area.
i)	11.25	9.95	28	32-42	50m. from 28 on present survey
j)	11.4	8.7	58	68	Steep slope.

2) Wallace Slough: A comparison of the charted soundings and those on the present survey indicate that the slough has shoaled an average of about 5 feet. The low water line off the south end of the small islet in the center of the eastern entrance of the slough has extended southward, and the charted 20 foot sounding now falls in about 6 feet of water. No evidence of the charted 32, in the mouth of Beaver Slough, was found.

3) Bradbury Sough: The chart is in very poor agreement with the present survey, practically none of the depths checking, and differences up to 22 feet being noted. The average shoaling is about 14 feet.

SHEET OW-17 (T 6243)

STATISTICS

Boat - 29J295

Date 1937	Day letter	Volume	Number of soundings	Number of Positions	Statute miles of soundings
Aug					
26	a	1	335	63	7.2
27	b	1	420	86	11.8
Sept					
1	c	1	259	51	9.4
2	d	1	549	124	17.8
7	e	1&2	695	155	19.8
8	f	2	1097	230	29.4
9	g	2&3	931	202	25.1
10	h	3	540	152	16.9
13	j	3	669	144	14.9
14	k	3	612	143	15.2
15	l	4	151	46	4.4
20	m	4	142	31	3.6
23	n	4	306	63	7.7
Nov					
11	q	4	27	13	1.0
totals			6,732	1,503	184.2

Area = 7.2 square statute miles.

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6243**

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	.1503.
Number of positions checked	..63..
Number of positions revised5.....
Number of soundings recorded6732.....
Number of soundings revised22.....
Number of signals erroneously plotted or transferred/.....

Date:

Verification by *G.H. Everett*

Time: *50 3/4 hrs*

Review by *J.A. Mc Cormick, June 8, 1938.* Time: *28 hrs.*

HYDROGRAPHIC SURVEY NO. H-6243

Smooth Sheet Yes

Boat Sheet Yes

Sounding Records 4 Vols. _____

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol. #1

Landmarks for Charts (Form 567) Yes

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) None

Special Chart for Lighthouse Service None
(Circular Nov, 30, 1933)

Remarks _____

HYDROGRAPHY

Total Days 14

Last Date Nov 11, 1938

Remarks

Decisions

1		see T-6524
2		" "
3		see T-6567
4		" "
5		" "
6		USGB decision
7		" "
8		See T-6567
9		USGB decision
10		
11		see T-6524
12		see T-6567
13	For Title Only	USGB decision
14		"
15		"
16	A small settlement - No P.O. listed in Rand McNally but not shown on map. Location see Δ Locoda, 1936	46-10.2; 123-08.8
17	Name of buoy in US Light List - No feature which is a ledge	
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
M 234		

GEOGRAPHIC NAMES
 Survey No. **H6243**

Name on Survey	<div style="display: flex; justify-content: space-between; font-size: small;"> On Chart No. 6152, 6153 On previous survey No. H-1336 On U. S. quadrangle Maps From local information Encl. Maps B.P. (USPD) P. O. Guide or Map Rand McNally Atlas U. S. Light List </div>										
	A	B	C	D	E	F	G	H	K		
<u>Cooper Point</u>	✓ GNS										1
<u>Eagle Cliff</u>	✓										2
<u>Oak Point</u>	✓										3
Abernethy <u>Abernethy Point</u>	GNS		<u>Abernethy</u>		<u>Pt.</u>		(Revised USGB decision)				4
<u>Stella</u>	✓										5
<u>Wallace Island</u>	✓										6
<u>Wallace Slough</u>	✓										7
<u>Bradbury Slough</u>	✓										8
<u>Crims Island</u>	✓										9
<u>Eureka Bar</u>	✓					B.P. 30464					10
<u>Beaver Slough</u>	✓										11
<u>Gull Island</u>	✓										12
<u>Columbia River</u>	✓										13
<u>Washington</u>	✓										14
<u>Oregon</u>	✓										15
<u>Apple</u>											16
<u>Eureka ledge</u>											17
<u>Abernethy Cr.</u>								✓			18
											19
											20
											21
											22
											23
											24
											25
Names underlined in red approved											26
by <u>JAE</u> on 4/1/38											27

VERIFICATION REPORT ON H-6243 (1937)

The records conform to the requirements of the General Instructions, with the exception that the beginning of lines were seldom given, which omission slowed up the verifying.

The minus soundings and $\frac{1}{2}$ foot soundings were not plotted according to the general practice in that the $\frac{1}{2}$ ft. soundings were plotted as zeros and $-\frac{1}{2}$ ft as -1 etc.

The plotting and drafting work was very good.

The topographic detail transferred to sheet is from T-6524 (1936) Plane Table Survey, and T-6567a (1937) Plane Table Survey.

Additional topo detail supplied by hydro survey are:

(a) Piles at 46-08.6; 123-14.4 (see 35 c) The distance to these piles was not noted in passing, hence they were considered to be less than 5 meters from position of sounding. Not on B.S.

(b) Old piers (on B.S. & in Vol.)

(c) Fish Traps (on B.S. & in Vol.) Note: The fish trap at Lat. 46-11; Long. 123-10.3 is not clearly described as to its limits (see 193-194 f) The B.S. and the fact that certain other lines are broken are the authority for the limits of this fish trap.

Curves. The dashed yellow line is either from the B.S. notes in Sdg. Vols. or approximation of the general trend of the zero curve.

The 1-2-3 fathom curves are not complete because of the deep soundings, especially on the north shore which are close to the shore.

Junctions. Adjoining sheets are not verified to date and junctions have not been made.

See par. 3, review.

Remarks

Lat. 46-10.1; 123-07.9 T-6567a shows a dock connecting signal SIX to shore. Pos. 6272 gives a distance to the signal in passing but does not state which side. The B.S. shows the position on the shore side of the signal and it was so plotted on the smooth sheet. There is a possibility that \odot Six which is a pile is out from the face of the dock.

The names of the \triangle Stations on Eureka Bar are listed on the smooth sheet in a group.

Signal Hug, outside of the H.W. line is a temporary signal (see T-6524)

The Tide Gages were spotted on the B.S. and transferred to this sheet. The location of T.G. in Bradbury Slough (see \odot Pil) is not definite but appears to be a signal Pil.

A rock (Bare according to T-6524) at Lat. 46-09.67; Long. 123-14.82 although passed close was not mentioned in the Sdg. Record or shown on B.S.

Also the rock at 46-09.7; 123-14.6 was not mentioned in the records.

The hydro location of the only buoy on sheet checks very well with topo location.

Submitted 5/16/38

A. Everett

TIDE NOTE FOR HYDROGRAPHIC SHEET

March 15, 1938

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. E. P. Ellis

Plane of reference

~~Tide Reducers~~ approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 6243

Locality Cooper Point to Stella, Columbia River.

Chief of Party: R. W. Knox in 1937

Plane of reference is Columbia River Datum, reading

- 0.0 ft. on tide staff at Eagle Cliff
- 4.8 ft. below B.M. 1
- 2.1 ft. on tide staff at Oak Point
- 6.0 ft. below B.M. 2
- 0.0 ft. on tide staff at Stella
- 22.3 ft. below B.M. 1
- 1.6 ft. on tide staff at ~~Lacoda~~ (Locoda - see name list)
- 13.0 ft. below B.M. 1

Height of mean high water above plane of reference is approximately 5 feet.

Condition of records satisfactory except as noted below:

Tide reducers entered in whole feet. Nearest 1/2 foot can be furnished if needed.

Chief, Division of Tides and Currents.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6243 (1937) FIELD NO. OW 17

Cooper Point to Stella, Columbia River, Oregon - Washington
Surveyed in August - November 1937, Scale 1:10,000
Instructions dated February 26, 1935 (R. W. Knox)

Hand Lead Soundings.

3 Point fixes on shore signals.

Chief of Party - R. W. Knox.
Surveyed by - R. W. Knox.
Protracted by - T. A. Renton.
Soundings plotted by - C. J. Wagner.
Verified and inked by - G. H. Everett.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual except as follows:

- a. Notes were omitted in the "Remarks" column of the sounding records in many cases, at the beginning of lines and when passing close to rocks or other features from the topographic surveys.

The Descriptive Report satisfactorily covers all items of importance. Statements applicable to the season's work as a whole are contained in the descriptive report for H-6242 (1937).

2. Compliance with Instructions for the Project.

The survey satisfies the instructions for the project except that the special chart of the area for use of the Lighthouse Service in locating aids was not furnished (Circular Nov. 30, 1933).

3. Shoreline and Signals.

- a. Shoreline and topographic signals originate with T-6524 (1936) and T-6567a (1937).
- b. Hydrographic signal "Zid" in lat. $46^{\circ} 08.6'$, long. $123^{\circ} 13. 6'$ originates with the present survey, the fix being recorded in volume 3, page 64, of the sounding records.

4. Sounding Line Crossings.

Agreement of depths at sounding line crossings is satisfactory.

5. Depth Curves.

Depth curves may be satisfactorily drawn.

6. Junctions with Contemporary Surveys.

- a. The junction with H-6242 (1937) on the west is satisfactory.
- b. The junction with H-6244 (1937) on the east will be considered in the review of that survey.

7. Comparison with Prior Surveys.

- a. H-1336 (1876), 1:10,000; H-1368 (1877), 1:10,000.

The present survey falls entirely within the combined area of the above surveys. Natural and artificial changes have been extensive in the common area. Erosion and accretion have altered the outlines of the low islands. Depths on the present survey are in general much shoaler than those on the old surveys. Eureka Bar, bare at M. L. W. and approximately 0.15 by 0.8 miles in dimension, now exists in lat. $46^{\circ} 09.7'$, long. $123^{\circ} 14.0'$, where depths of 18 to 30 feet prevailed in 1876. A brush covered island, a mile in length by 0.1 mile in width, has built up in lat. $46^{\circ} 11'$, long. $123^{\circ} 08'$, off the east end of Crims Island, where depths of 2 to 10 feet are shown on the old surveys. The present survey, because of its more recent information, should supersede the above surveys in future charting.

8. Comparison with Chart 6152 (New Print dated Dec. 10, 1937)
Chart 6153 (New Print dated Sept. 27, 1937).

- a. Hydrography.

None of the information charted within the area of the present survey originates with surveys discussed in the foregoing paragraphs. Depths in Bradbury Slough are from sources not readily ascertained but believed to be U. S. Engineers' surveys of a date definitely established as prior to 1913. All other depths are from various Engineers' surveys of 1919 to 1937. The earlier surveys cover the relatively unimportant sloughs and the areas of least change. Those of most recent date cover the dredged portions of the main channel which are sounded out with such frequency that surveys post-dating the present survey by 2 to 6 months have already been received in the office.

The 29 foot sounding in lat. $46^{\circ} 10.3'$, long. $123^{\circ} 13.3'$ is corroborated by U. S. Engineers blueprints 30464 (July 1937) and 31520 (Jan. 1938).

Every sounding charted in the area under consideration has been compared with the present survey. Depths from the earlier blueprints differ widely from those on the survey, particularly in the sloughs. Differences are noted in the main channel

and vicinity but these are no more pronounced than those between successive blueprints.

Those portions of the main channel north of Gull Island and northwest of Eureka Bar were not developed on the present survey, the field party recommending that they be charted from Engineers' surveys. The area north of Gull Island is now charted from blueprint 28658 of May, 1935. A later survey (blueprint 31521 of January 1938) is now available but does not entirely cover the omitted portion. Blueprint 28658 should be used only in the charting of the holiday between the present survey and the latest Engineers' survey. Charted information in the omitted portion northwest of Eureka Bar has been superseded by later Engineers' surveys (blueprints 30464 of April 1937 and 31520 of January 1938).

The present survey adequately covers all other information and should supersede all Engineers' surveys in this area up to and including blueprint 30314 of February 1937 except 28658 as noted above.

b. Aids to Navigation.

The charted positions of all fixed and floating aids in this area are in substantial agreement with the positions on the survey. The post light charted in lat. $46^{\circ} 09.0'$, long. $123^{\circ} 13.7'$, has been moved 35 yards downstream subsequent to the date of the latest print of Chart 6152 (Local Notice to Mariners 33 of 1938). The aids adequately mark the features intended.

9. Field Plotting.

The field plotting was, in general, satisfactory. Many minus soundings were incorrectly penciled, however, soundings of minus 1-1/2 feet, for example, being plotted as minus 2 feet instead of minus 1 foot as specified in par. 155 of the Hydrographic Manual.

10. Additional Field Work Recommended.

In view of the highly changeable nature of the area and the frequency with which the important portions of it are surveyed by the U. S. Engineers, additional field work is not considered advisable.

11. Superseded Old Surveys.

Within the area covered the present survey supersedes the following old surveys for charting purposes:

H-1336 (1876) in part
H-1368 (1877) in part

12. Reviewed by - J. A. McCormick, June 8, 1938.

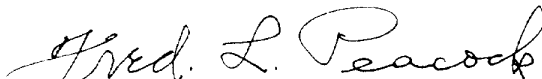
Inspected by - E. P. Ellis.

Examined and approved:

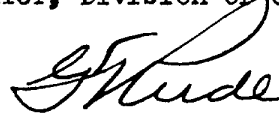


T. B. Reed,
Chief, Section of Field Records.

K.T. Adams
Chief, Division of Charts.



Fred. L. Peacock
Chief, Section of Field Work.



G. H. Hude
Chief, Division of H. & T.

Applied to chart 6153. Sept. 26, 1938 G.H.S.
" " Drawing of chart 6152, March 6, 1939 J.G.L.