

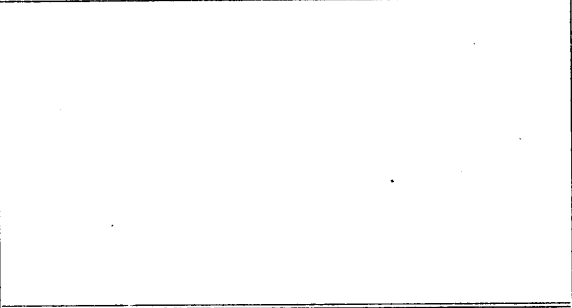
5975
5976

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES
APR 13 1936
Acc. No. _____

Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Topographic }
Hydrographic } Sheet No. 0-11 and 0-12



State OREGON

LOCALITY

COLUMBIA RIVER

Lewis and Clark River

Youngs Bay

1935

CHIEF OF PARTY

Robert W. Knox

5976
5975

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

APR 13 1936

Acc. No. _____

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. 0-12

REGISTER NO. ⁵⁹⁵ **15975**

State OREGON

General locality Columbia River¹²

Locality Youngs Bay¹⁰

Scale 1:10,000 Date of survey July 7 to 31, 193~~6~~⁵ 19

Vessel chartered launch J-372

Chief of Party Robert M. Knox

Surveyed by R. J. Sipe

Protracted by K. McBean

Soundings penciled by KMcB

Soundings in ~~bottoms~~ feet

Plane of reference mean lower low water

Subdivision of wire dragged areas by _____

Inked by F.C. McKenney

Verified by D. Bloom, J.A.Mc Cormick

Instructions dated February 26, 1935, 19

Remarks: _____

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. 0-11

REGISTER NO. **H5976**

5976

State OREGON

General locality Columbia River

Locality Youngs River and Lewis & Clark Rivers³¹

Scale 1:10,000 Date of survey July 9 to 22, 193⁵19

Vessel chartered launch J-372

Chief of Party Robert W. Knox

Surveyed by R. J. Sipe

Protracted by K. McBean

Soundings penciled by KMcB

Soundings in ~~fathoms~~ feet

Plane of reference mean lower low water

Subdivision of wire dragged areas by _____

Inked by George F. Jordan

Verified by George F. Jordan

Instructions dated February 26, 1935, 19

Remarks: _____

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEETS

NOS. 0-11 & 0-12

Scale 1:10,000

COLUMBIA RIVER

OREGON

YOUNGS BAY AND YOUNGS
AND LEWIS & CLARK RIVERS

Instructions dated Feb. 26, 1935

Surveyed by R. J. Sipe

AREA, LIMITS, ETC. The hydrography of sheets 0-11 and 0-12 is a survey of the southern portion of Desdemona Sands, Youngs Bay and the Youngs and Lewis & Clark Rivers. The area sounded by the U. S. Engineers - the main ship channel - is excluded.

Both the Youngs and Lewis & Clark Rivers are navigable south of the limits of sheet 0-11. The former is used quite extensively all the way to the town of Olney, a distance of about 10 miles beyond the present limits. Tugs of 5 or 6 foot draft are said to navigate this portion of the river at half-tide. The Lewis & Clark River is not used as a means of navigation beyond the highway bridge at Δ Peter.

Tucker Creek is diked off at \circ Bar

The Walluski River is navigable for small tugs west of the limits of the sheet but is seldom used at the present time because of the absence of logging operations in that vicinity.

SURVEY METHODS: Standard survey methods were used. All soundings were taken with a 12 pound hand lead, and the usual type bronze centered mahogany tiller rope (Samson Cordage Co.) was used. The lines were carefully prepared and made and were re-marked when corrections threatened to become of such magnitude as to require corrections to the recorded soundings.

DANGERS: The dangers in the area covered by these sheets are of a temporary nature; so-called "snags" and "sinkers", which are logs that have come adrift from rafts or booms. One end of a sinker settles to the bottom, while the other floats, just awash, rising and falling with the tide. From time to time these obstructions are removed by the logging companies.

Local knowledge is absolutely necessary to navigate all but the main ship channel.

CHANNELS: Sheet O-11^{H-5916} - Youngs River - The channel up the Youngs River is limited to a depth of about 7 feet at mean lower low water by the shoals between the railroad bridge over Youngs Bay and the highway bridge near Δ stack PP&L, although 11 or 12 feet could be carried from the latter bridge to the Walluski River and about 6 feet to somewhat south of Δ Lundman ^{14'} ← 11' to Δ Lundman, 7' to southward ~~river~~.

Lewis & Clark River - Seven feet may be safely be carried to the highway bridge, from there south 6 feet is the limiting depth to about Δ Hansen. From this point to the highway bridge near Δ Peter the channel jumps from bank to bank with rapidly diminishing depths.

Sheet O-12 - The main ship channel was not surveyed, as the U. S. Engineers sound out this portion of the river about twice a year.

ANCHORAGES: None.

COMPARISION WITH PREVIOUS SURVEYS: Sheet O-11^{H-5976}: Lewis & Clark River: The previous survey of this area was made in 1889, register No. 1931. This survey extends southward to signals Gur and Hod and a comparision of soundings shows the channel depths to be about the same, although there have been great changes inthe shoaler depths, particularly on the west side of the river. Here the original survey shows depths of 6 or so feet, but the present survey party obtained soundings of -2 and -3 feet.

Youngs River: The previous survey, as noted above, extends to the vicinity of Δ Nurnberg. A comparision of the two surveys reveals that the channel depths have changes but little to about \circ Mid, and have shoaled an average of about 3 feet south of this point. The original survey shows relatively deep water from the center of the channel to the west bank of the river, whereas the present survey shows considerable shoaling in this area.

Sheet O-12^{H-5975}: The previous survey in this area was executed in 1889, register No. 1930. A comparision of the two surveys shows many changes in the contour of the bottom, there are, in fact, few points of similarity.

- a) The main ship channel has shifted northward
- b) The area between Δ Youngs Bay Entrance Light and \circ Gal has shoaled an average of about 3 feet.
- c) Practically the entire area southeast of the railroad bridge has shoaled in varying amounts. The mud flats in latitude $46^{\circ} 10.2'$, longitude $123^{\circ} 51'$ now being 5 or 6 times their former size.
- d) Between the railroad bridge and the Skipanon Waterway the 1 foot curve is about 400 ot 500 meters farther off-shore than formerly, and the 2 foot curve a like amount.

Comparison with previous surveys, continued -

e) There is an area of fair agreement north of \odot Two

f) North of the main ship channel the changes are even more pronounced; the former 30 foot curve falls in 10 - 12 feet of water; the 24 foot curve in 10 to 20; the 18 in 1 to 17 feet; the 12 in as little as -2 feet and the 6 foot curve in an average of 2 feet.

DISCREPANCIES: The following discrepancies were noted in the plotting and reviewing of the sheets:

Sheet 0-11 ← H-5974

a) Positions 1a to 122b were erroneously inked in red rather than blue. *Rec'd changed to agree with*

b) Stations Mark and Stik, in latitude $46^{\circ} 07.5'$, longitude $123^{\circ} 48.0'$, appear as topographic locations, but no such positions could be found on the topographic sheet (Y). Correspondence with the hydrographer, Lieut. R. J. Sipe, revealed the fact that he had requested additional signals in this arm of the river of the topographer. The two aboved named were afterwards furnished him. As the sounding lines show that the locations are reasonable accurate, no further investigation was made. The signals as appearing on the smooth sheet were scaled from the boat sheet. *these signals were shown on the top sheet when received from the field.*

c) Position 38g, latitude $46^{\circ} 08.8'$, longitude $123^{\circ} 48.8'$, a sounding of 16 feet appears between two 11's. This position cannot be satisfactorily moved offshore, and the discrepancy is apparently due to a 1 fathom error in reading the leadline. It is recommended the 16 foot sounding be rejected. *sdg accepted - probably on steep slope just westward*

d) Position 106d, latitude $46^{\circ} 10.3'$, longitude $123^{\circ} 49.6'$, a sounding of 17 feet appears between a 25 and a 31. Apparently no explanation for this except as an error in reading or recording the sounding. *accepted with review*

e) Position 69f, latitude $46^{\circ} 08.3'$, longitude $123^{\circ} 52.1'$, a 6 foot sounding appears between a 9 and an 11; the hydrographic party was apparently having a little difficulty in running this line, as laid down on the boat sheet, and it is possible that this position should be moved slightly eastward. *accepted - probably on top of slope. line replotted in this.*

f) Positions 12 to 17^h, latitude $46^{\circ} 08.9'$, longitude $123^{\circ} 51.7'$: these soundings appear to cross other lines about 2 feet too shoal. The fixes are apparently correct, as are the tides. *Change of signal in left angle of pos 166c (cross line 165-167e) considerably improved agreement with tides, curves and nearby soundings*

g) Positions 22 to 25h, latitude $46^{\circ} 08.3'$, longitude $123^{\circ} 52.1'$: as above. *Smooth plotting accepted - vicinity of rapidly changing bottom.*

STATISTICS

Sheet - 0 11 H 5976

Date 1935	Day letter	Volume	Number of soundings	Number of positions	Statute miles of sounding
July 9	a	1	918	236	20.2
10	b	1 & 2	765	207	16.8
11	c	2	576	153	14.9
12	d	2 & 3	883	235	20.0
15	e	3	692	184	16.0
16	f	3	361	103	7.1
17	g	3	151	40	3.4
22	h	4	99	35	2.0
TOTALS			4 445	1 193	100.4

Area in square statute miles - 3.45

STATISTICS

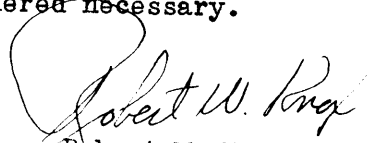
Sheet 0-12 H 5975

Date 1935	Day letter	Volume	Number of soundings	Number of positions	Statute miles of sounding
Jul 7	a	1	577	156	12.6
18	b	1 & 2	1007	265	24.0
19	c	2	1030	271	24.7
22	d	2 & 3	524	148	13.6
23	e	3	927	251	22.8
24	f	3 & 4	901	241	20.7
25	g	4	825	222	21.3
26	h	4 & 5	664	185	18.5
31	j	5	415	108	9.0
TOTALS			6 870	1 847	167.2

Area in square statute miles - 8.0

APPROVAL OF CHIEF OF PARTY

Hydrographic sheets nos. 0-11 and 0-12 and accompanying records have been inspected and approved by me. The field work was done under my occasional supervision; the office work under my direct supervision. No additional work is considered necessary.

A handwritten signature in cursive script, reading "Robert W. Knox". The signature is written in dark ink and is positioned above the printed name and title.

Robert W. Knox,
Chief of Party.

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Astoria, Oregon.

March 27, 1936, 193

DIRECTOR, U.S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Robert W. Knox, Chief of Party.

DESCRIPTION	POSITION					METHOD OF DETERMINATION	CHARTS AFFECTED		
	LATITUDE		LONGITUDE		DATUM				
	°	'	°	'					
		D.M. METERS		D.P. METERS					
	To accompany chart section No. 1								
(Δ Tank USE) *TOWER BN	46	13	966	124	00	600	NA27	tri	6151, 5902
(Δ Coast Guard L.O. Tow) LOOKOUT TOWER	46	12	754	123	58	118	do	do	6151, 5902
(Δ Water Tank Ft Stew) TANK (ELEVATED)	46	11	1570	123	57	778	do	do	6151
(Δ Naval Radio Compas) N. R. C.	46	11	1478	123	58	606	do	do	6151, 5902
(Δ N & S Radio Poles) RADIO MASTS	46	11	1131 & 1103	123	58	607 & 583	do	do	6151, 5902
(wreck)	46	14	887	124	01	632	do	topo	6151, 5902
(wreck)	46	10	1318	123	58	1021	do	do	6151, 5902.
	delete								
RADIO TOWERS	46	11.4		123	58.4		dismantled		
RADIO TOWERS	46	12.4		123	58.0		dismantled.		
	To accompany chart section No. 2								
(Δ Tank Warrenton) TANK (ELEVATED)	46	10	603	123	54	1121	NA27	tri	6151
DRUM	46	09	190	123	51	674	do	topo	6151
(Δ Radio Towers Nos. 1, 2, 3 & 4) RADIO TOWERS	46	09	297	123	49	844	do	tri	6151, 5902

A list of objects carefully selected because of their value as landmarks as determined from seaward, together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive identification. A group so selected should be indicated.

The description of each object should be short, but such as will clearly identify it; for example, a standpipe, elevated tank, gas tank, church spire, tall stack, red chimney, radio mast, etc. Assign numerals to landmarks to indicate: (1) Offshore, (2) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

193

DIRECTOR, U.S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Chief of Party.

DESCRIPTION	POSITION					METHOD OF DETERMINATION	CHARTS AFFECTED	
	LATITUDE		LONGITUDE		DATUM			
	°	'	°	'				
*RADIO TOWERS	46	09	127	123 49	774	MA27	tri	6151, 5902
	46	09	177	123 49	688	do	do	6151, 5902
	46	09	328	123 49	792	do	do	6151, 5902
(Δ Stack, PP&L) *STACK	46	10	564	123 50	717	do	do	6151
(Δ Black Tank Port Dks) *TANK (ELEVATED)	46	11	448	123 51	536	do	do	6151
(Δ Cross StMary Hosp) CROSS	46	11	570	123 49	690	do	do	6151
HOUSE (Δ US Weather Br Tower)	46	10	1553	123 53	884	do	tops	6151
FLAG TOWER (Δ Steeple Russian Ch)*	46	11	602	123 50	314	do	tri	6151
SPIRE	46	11.3		123 50.8				
STEEPLE (Δ Astor Column)	46	11.2		123 48.6				
*ASTOR COLUMN	46	10	1644	123 48	1260	do	tri	6151, 5902
				delete				
TANK	46	11.5		123 55.5			not conspicuous	6151
H STACK	46	10.9		123 53.7			stacks gone	6151
* this position not computed in 1935								

A list of objects carefully selected because of their value as landmarks as determined from seaward, together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive identification. A group so selected should be indicated.

The description of each object should be short, but such as will clearly identify it; for example, a standpipe, elevated tank, gas tank, church spire, tall stack, red chimney, radio mast, etc. Assign numerals to landmarks to indicate: (1) Offshore, (2) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

_____, 193

DIRECTOR, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Chief of Party.

DESCRIPTION	POSITION					METHOD OF DETERMINATION	CHARTS AFFECTED	
	LATITUDE		LONGITUDE					DATUM
	°	'	D. M. METERS	°	'			
DOLPHIN	46	09.1		123	51.6	gone	6151	
DOLPHIN	46	09.7		123	48.8	gone	6151	
CROSS	46	11.3		123	49.5	moved to new location	6151	
TANK	46	11.4		123	48.8	gone	6151	
CUP	46	11.5		123	48.2	gone	6151	
To accompany chart section No. 3								
delete								
CUP	46	11.7		123	46.8	gone		
The above position, on pages 1, 2 & 3, have been verified in accordance with paragraph 4 of the instructions for preparation and submission of form 567								
						Robert W. Knox, Chief of Party.		

A list of objects carefully selected because of their value as landmarks as determined from seaward, together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive identification. A group so selected should be indicated.

The description of each object should be short, but such as will clearly identify it; for example, a standpipe, elevated tank, gas tank, church spire, tall stack, red chimney, radio mast, etc. Assign numerals to landmarks to indicate: (1) Offshore, (2) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaves and like objects are not sufficiently permanent to chart.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Astoria, Oregon,

March 27, 1936, 193

DIRECTOR, U.S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Robert W. Knox, Chief of Party.

DESCRIPTION	POSITION					METHOD OF DETERMINATION	CHARTS AFFECTED
	LATITUDE		LONGITUDE		DATUM		
	° ' "	D. M. METERS	° ' "	D. P. METERS			
Permanent aids to navigation							
JETTY SANDS LT	46 13	1449	124 00	82	NA27	tri	6151, 5902
DESDEMONA SANDS LT	46 13	963	123 57	298	do	do	6151, 5902
FORT STEVENS WHARF LT	46 12	936	123 57	71	do	do	6151, 5902
FLAVEL FRONT RANGE	46 11	1159	123 55	684	do	topo	6151, 5902
FLAVEL REAR RANGE	46 11	1209	123 55	1265	do	do	6151, 5902
TANSY PT. FRONT RANGE	46 11	585	123 55	456	do	do	6151, 5902
TANSY PT. REAR RANGE	46 11	533	123 55	874	do	do	6151, 5902
SKIPANON WATERWAY LT	46 11	78	123 54	359	do	tri do	6151, 5902
SKIPANON WATERWAY WEST LT	46 11	119	123 54	540	do	topo	6151, 5902
SKIPANON WATERWAY FRONT BEACON	46 10	33	123 54	1100	do	topo	6151
SKIPANON WATERWAY REAR BEACON	46 09	1660	123 54	1177	do	tri	6151
LOWER SANDS LIGHT	46 11	1087	123 53	692	do	do	6151, 5902
YOUNGS BAY ENTRANCE LT	46 10	1668	123 52	947	do	do	6151
YOUNGS BAY LT	46 10	112	123 51	495	do	do	6151

A list of objects carefully selected because of their value as landmarks as determined from seaward, together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive identification. A group so selected should be indicated.

The description of each object should be short, but such as will clearly identify it; for example, a standpipe, elevated tank, gas tank, church spire, tall stack, red chimney, radio mast, etc. Assign numerals to landmarks to indicate: (1) Offshore, (2) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaves and like objects are not sufficiently permanent to chart.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

_____, 193

DIRECTOR, U. S. COAST AND GEODETIC SURVEY :

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Chief of Party.

DESCRIPTION	POSITION					METHOD OF DETERMINATION	CHARTS AFFECTED
	LATITUDE		LONGITUDE		DATUM		
	°	'	°	'			
		D. M. METERS		D. P. METERS			
Permanent aids to navigation, continued							
UPPER SANDS LT	46	12	1162	123	52	516	NA27 tri 6151, 5902
TONGUE PT LT	46	12	880	123	46	102	do topo
The above positions, on pages 1 & 2, have been verified in accordance with paragraph 4 of the instructions for preparation and submission of form 567							
						Robert W. Knox, Chief of Party.	

A list of objects carefully selected because of their value as landmarks as determined from seaward, together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive identification. A group so selected should be indicated.

The description of each object should be short, but such as will clearly identify it; for example, a standpipe, elevated tank, gas tank, church spire, tall stack, red chimney, radio mast, etc. Assign numerals to landmarks to indicate: (1) Offshore, (2) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaves and like objects are not sufficiently permanent to chart.

Verifier's Report on H-5975.

Records: Records are satisfactory except that reduced soundings are entered in cold pencil by field party.

Drafting: Drafting is excellent. Field draftsman was over ambitious, however, when he transferred low water line and bays from the hydro sheet to the topo sheet.

Control: Shoreline and topographic signals are from T-6481.

Junctions: This sheet is joined on the south by H-5976. Junction is satisfactory.

Channels were surveyed by the U. S. Engineers.

Remarks:

attention is called to the fact that tide reducers are in even feet. Better delineations of depth curves might have been obtained in places by ~~using~~ using $\frac{1}{2}$ foot reducers.

June 6, 1936.

Submitted,
J. A. McCormick.

Field Records Section (Charts).

HYDROGRAPHIC SHEET NO. **H.5.975**

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

Number of positions on sheet ¹⁸⁴⁷
Number of positions checked ⁹
Number of positions revised ⁰
Number of soundings recorded ⁶⁸⁷⁰
Number of soundings revised ¹³
Number of signals erroneously plotted or transferred ⁰

Date: June 6, 1936

Verification by

J. A. Mc Cormick _____ 12 hr.
D. Bloom _____ 10 1/2 hr.
F. C. Mc Kenney _____ Time: 20 1/2 hr.

Review by

R. J. Christman _____ Time: 14 hr.

HYDROGRAPHIC SURVEY NO. H5976

Smooth Sheet yes

Boat Sheet 1

Sounding Records 4 Vols. _____

Descriptive Report one report for H5975 & H5976

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 no
(Circular Nov. 30, 1933)

Remarks _____

Remarks

Decisions

	Remarks	Decisions
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		

GEOGRAPHIC NAMES

Survey No. 5975
5976

On Chart No. 5902
On previous survey Chart No. 6151
On U.S. Quadrangle G.S. Maps 14d67
From local information
On local Maps
P. O. Guide or Map
Rand McNally Atlas
U. S. Light List
K DESC. REPT. H 5975-6

Name on Survey

	A	B	C	D	E	F	G	H	
H5975							*		1
<u>Youngs Bay</u> ✓	✓	*					✓		2
<u>Desdemona Sands</u> ✓	✓	*		✓					3
Desdemona Sands									4
									5
									6
									7
									8
									9
									10
H5976									11
<u>Youngs Bay</u> ✓	*	✓					✓		12
<u>Daggett Pt.</u> ✓								*	13
<u>Lewis & Clark River</u> ✓	*	✓	✓				✓		14
<u>Youngs River</u> ✓	*	✓	✓				✓		15
<u>Walluski River</u> ✓	*								16
<u>Tucker Creek</u> ✓				✓				*	17
									18
									19
									20
									21
									22
									23
									24
									25
									26
									27

Names underlined in red approved
by [Signature] on 4/28/36

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT } No. H 5975
~~PHOTOCOPY OF~~ } No. T 5976

{ received April 13, 1936
 { registered April 23, 1936
 { verified
 { reviewed
 { approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25			
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	
----	--

S. K. Green *Apr. 23 '36*

pu@

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography:

May 20, 1936.

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

Tide Reducers are approved in
5 volumes of sounding records for

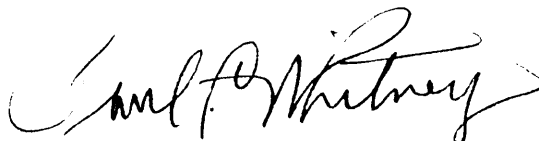
HYDROGRAPHIC SHEET 5975

Locality Youngs Bay, Columbia River, Oregon.

Chief of Party: Robert W. Knox in 1935
Plane of reference is mean lower low water reading
-0.2ft. on tide staff at Youngs Bay
16.5ft. below B.M.p-1

Height of mean high water above plane of reference is 7.9 feet.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography:

May 20, 1936.

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

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 5976

Locality Youngs and Lewis and Clark Rivers, Columbia River, Oregon.

Chief of Party: Robert W. Knox in 1935
Plane of reference is mean lower low water reading
-0.2 ft. on tide staff at Youngs Bay
16.5 ft. below B.M. P-1
3.2 ft. on tide staff at Youngs River
23.9 ft. below B.M. 1
2.4 ft. on tide staff at Lewis & Clark River
11.0 ft. below B.M. 1

Height of mean high water above plane of reference is 7.9 feet at
Youngs Bay; 8.0 feet at Youngs River and Lewis and Clark Rivers.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

C.K.G.
KTA

82-LEF

September 1, 1936.

To: Lieutenant R. W. Knox,
U. S. Coast and Geodetic Survey,
P. O. 805,
Astoria, Oregon.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Hydrographic Survey H-5976.

Enclosed are three tracings of sections of your hydrographic survey H-5976 (1935), Field No. "O-11". Indicated in blue on the tracings are several signals which fall in the water area.

Indicated in blue on tracing No. 1 are two charted features (an abandoned trestle and old hull), which are not shown on your survey.

Please furnish such information as will permit the proper charting of these objects.

(Signed) PAUL C. WHITNEY

Acting Director.

Enclosures.

Verifier's Report on H-5976 (1935)

1. This survey makes a junction with H-5975 (1935). A triangular ^{note} hole in the junction is left unexplained at Lat $54^{\circ}10.2'$, Long $123^{\circ}52.3'$. ✓
2. Control is obtained from T-6481a, T-6482b and T-6482 (1935). Comparison was made and detail transferred to this survey. Explanatory information in ink on the topographic sheet was grossly omitted. ✓
3. The following notes regarding the sounding records:
 - a. KMcB checked himself on tide reducers and soundings - see #4 stamp. ^{accepted} ✓
may have been accomplished at different periods
 - b. Soundings reduced in colored pencil
 - c. Tidal data - #14 stamp - not completed. ^{Essential information noted elsewhere in records and on smooth sheet.}
 - d. Reducers entered in even feet - better contours would have resulted in ^{accepted as recorded} ✓
 $\frac{1}{2}$ ft reducers. transfer from
4. Except for omission of practically all detail ~~on~~ topographic and boat sheets, no other changes were made. Soundings were well executed. ✓
5. Remarks.
 - a. No check fixes were obtained for the four buoys in Youngs Bay. ^{however, the pos. as recorded agree with the positions shown on the topo.} ✓
 - b. Hydrographic signal "Pile" has been assumed by the verifier to be a pile, although no description of the signal is given. Lat $46^{\circ}09.2'$, Long $123^{\circ}51.5'$ ✓
No check fix was obtained on this signal. ^{accepted}
 - c. No notes were made to passing features. Especial attention is called to Pos 98e at Lat $46^{\circ}09.1'$, Long $123^{\circ}51.5'$. The line running south from this position diagonally crosses the row of piling. ^{this probably may have opening - noted in review. slight height in position would place entire line on one side of piling} ✓
 - d. A system of sounding lines rather than development of deep water and shoal areas is evident from numerous broken contours. Explanatory remarks in the records would also have assisted in more clearly delineating the extent of these features. ^{Broken depth curves are supplemented by marked limits on topo sheets in most cases.} ✓
 - e. No description of bridges is to be found on the Hydrographic and topographic sheets or in the reports for the same. ^{Noted in Rev. of Topos.} ✓
 - f. The following is a list of unexplained hydrographic features ^{+ mud flats} and topo signals "A5", "Sad", "6m", "Egg", "Nun", "Nan", and Hydro sig "tste". ✓
 - g. Descriptive Report, Page 3, A(c). The 16ft sounding falls outside the line of (11's) and is considered to be on a steep slope. ✓
 - h. Descriptive Report, Page 3, A(e). The presence of 11ft soundings eastward is in opposition to moving the 6ft sounding and position eastward. The 6ft sounding is believed to be on the west bank. Replotting of Pos 159e places the line 159-160e running northerly on line 23-24h ^{accepted partially on topo} ✓
running southerly. Starboard sounding on each line may account for the 2ft difference in depth on a steep slope.
 - i. Descriptive Report, Page 3, A(g). See explanation under (h). ✓

Respectfully Submitted
George F. Jordan

June 6, 1936

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H5976**

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

Number of positions on sheet	1193
Number of positions checked	35
Number of positions revised	3
Number of soundings recorded	4445
Number of soundings revised	40
Number of signals erroneously plotted or transferred	0

Date: *June 6, 1936*

Verification by *George F. Jordan*

Time: *36 Hrs.*

Review by *Harold W. Murray*

Time: *20 "*

POST-OFFICE ADDRESS: Box 805, Astoria, Oregon.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

September 11, 1936.

To: The Director,
U. S. Coast and Geodetic Survey,
Washington, D. C.

From: Lieut. Robert W. Knox,
U. S. Coast and Geodetic Survey.

Subject: Hydrographic Survey H-5976

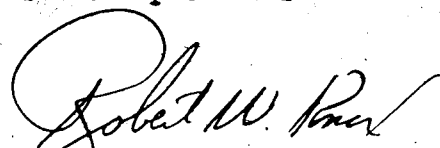
Reference: Director's letter of September 1st; 82-LEF

There is returned herewith three tracings of sections of the above mentioned survey with notes thereon relative to the character of several signals falling in the water area.

A field inspection showed that the old hull and abandoned trestle - as sketched in blue ink on section 1 - are extant. The trestle is now in total ruins, a few piling marking its location. The second hull, shown normal to the beach on sheet T-4263, has been converted into a gravel pier and is now attached to the shore line, as indicated on the 1935 survey. From a close inspection, but without actually recovering signals and plotting fixes, it is believed the trestle and hull are shown very near their correct positions.

Carried forward on H-5976 (1935) and T-4263 (1935)

H. W. M. 10/1/36


Robert W. Knox,
Chief of Party.

Note: Features of topo signals As, Hic and Egg referred to in Rev. of H-5976 (1935) (par. 1c) and as indicated on the tracings are pile, dolphin and pile respectively. These have been noted on the affected hydro and topo sheets and the tracings destroyed. H. W. M. 10/1/36.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5975 (1935) FIELD NO. 12

Youngs Bay, Columbia River, Oregon

Surveyed in July 1935

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. J. Sipe

Protracted by - K. McBean

Soundings penciled by - K. McBean

Verified and inked by - D. Bloom, J. A. McCormick, F. C. McKenney

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual except that no reference triangulation station was shown on the smooth sheet. This has been added in the office.

The Descriptive Report is complete except that it does not "explain in detail all junctions made with surveys of the U. S. Engineers" (par. 8 of the Instructions); but satisfactorily covers other items of importance.

2. Compliance with Instructions for the Project.

The plan, character and extent of the development are in accordance with the instructions for the project.

3. Shoreline and Signals.

The shoreline and the topographic signals are derived from plane table survey T-6481 a and b (1935). A comparison of the topographic survey with H-5975 (1935) and H-5976 (1935) shows that the low water lines and buoys were, contrary to standard practice, transferred from the hydrographic to the topographic survey.

4. Sounding Line Crossings.

The sounding line crossings are satisfactory, the depths agreeing generally within 1 foot. Some of the larger differences are probably due to the use of 1 foot tide reducers instead of the usual 1/2 foot reducers.

5. Depth Curves.

Within the area covered by the survey the usual depth curves can be satisfactorily drawn.

6. Junction with Contemporary Surveys.

- a. The junction with H-5976 (1935) to the south is satisfactory.
- b. There are no contemporary surveys to the north, east and west.
- c. A tracing showing satisfactory junction with U. S. Engineers' survey B-4-37/21 of Feb. 1936 was submitted by the field party. A copy of this survey has not yet been received in the office.

7. Comparison with Prior Surveys.

- a. H-250 (1851), H-273 (1851), H-402 (1853).

These surveys on scale 1:20,000, 1:20,000 and 1:375,000, respectively, are in the nature of reconnaissances showing both hydrography and topography. They contain no information that has not been adequately covered by later surveys and they need not be considered in future charting.

- b. H-1018 (1868).

This survey on a scale of 1:20,000 embraces the entire area of the present survey. A general comparison shows that many changes have taken place since the 1868 survey was made, but a detailed listing of the changes would serve no useful cartographic purpose. Because of the many changes that have taken place during the years since the survey was made and because the present survey is on a larger scale and adequately covers the area, H-5975 (1935) should supersede the above survey for charting purposes.

- c. H-1930 (1889).

This survey on a scale of 1:10,000 covers the larger part of the area of the present survey. The area is very changeable and a considerable shifting in the relative positions of the shoal areas is noted. Because of the changeable nature of the area, the lapse of time since the survey was made and the close development on the present survey, H-5975 (1935) should supersede the above survey for charting.

8. Comparison with Chart 6151 (New Print dated April 16, 1936).

- a. Hydrography.

Within the area of the present survey the chart is based mainly on U. S. Engineer' surveys. The area northward of the railway bridge being taken from BP 26,617 (1932) and the area south of the railway bridge from BP 16,144 (1916). Later U. S. Engineer surveys of the improved channels slightly overlap the area developed on the present survey.

A comparison of all these surveys with the present survey shows that a continual change is taking place and only the latest survey should be used in charting and all blue-prints with date prior to that of H-5975 (1935) should be superseded. Note that BP 29,469 (1936) and the survey mentioned in par. 6c of this review are subsequent to the present survey.

b. Aids to Navigation.

The charted aids to navigation are in agreement with the positions on the present survey.

9. Field Plotting.

The field plotting was very satisfactory.

10. Additional Field Work Recommended.

The survey is satisfactory and no further work is required. Attention is directed to the statement that the U. S. Engineers sound the main ship channel about twice a year (Desc. Rep. page 2, par. 3).

11. Superseding Old Surveys.


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

H - 250 (1851) in part
H - 273 (1851) " "
H - 402 (1853) " "
H -1018 (1868) " "
H -1930 (1889) " "

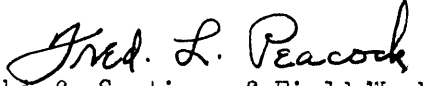
12. Reviewed by - R. J. Christman, August 17, 1936.


Inspected by - E. P. Ellis, August 25, 1936.

Examined and approved:


C. K. Green,
Chief, Section of Field Records.


L. O. Robert,
Chief, Division of Charts.


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


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

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5976 (1935) FIELD NO. 0-11

Youngs and Lewis & Clark Rivers, Columbia River, Oregon
Surveyed in 1935
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. J. Sipe.
Protracted by - K. McBean.
Soundings plotted by - K. McBean.
Verified and inked by - G. F. Jordan.

1. Condition of Records.

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

- a. The duplicate of the chart forwarded to the Lighthouse Bureau containing objects for locating Aids to Navigation was not received by this office.
- b. Topographic detail such as docks, piles, small islands, etc., were not consistently shown on the smooth sheet. This was accomplished in the office.
- c. Reduced soundings were entered in the records in colored pencil. The usual practice is to make such entries with a reasonably hard graphite pencil. In addition, corrections to reduced soundings due to changes in tide reducers were made directly over the original reductions, the result being illegibility of both reductions.
- d. Descriptive notes describing docks, piles, etc., were not consistently entered in the records when sounding lines were run close by these features. (Par. 75b).
- e. Topographic signals "AS" (Lat. $46^{\circ} 07.1'$, Long. $123^{\circ} 52.5'$) "HIC" (Lat. $46^{\circ} 10.3'$, Long. $123^{\circ} 50.1'$) and "EGG" (Lat. $46^{\circ} 08.8'$, Long. $123^{\circ} 48.4'$) fall outside the high water line. The features on which these signals are located are not indicated on the present survey. This matter has been referred to the field party.
- f. Dates of establishment of triangulation stations were not consistently shown. These were added in the office.

Features are pile,
dolphin and pile
respectively.
(See letter attached
to D.R.)
10/1/36 H.W.M.

The Descriptive Report is clear and comprehensive and satisfactorily covers all items of importance, except that the span and clearances of bridges were not listed in the report of this survey nor in that of the contemporary topographic surveys.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey conform to the instructions for the project except as follows:

- a. An adequate examination should have been made of the 17 foot sounding discussed in the Descriptive Report (page 3, par.d). (See paragraph 10 of this review.).
- b. The small gap existing between the present survey and H-5975 (1935) in Lat. $46^{\circ} 10.2'$, Long. $123^{\circ} 52.3'$ should have been covered. However, this area probably bares at low water and no further consideration is necessary.

3. Shoreline and Signals.

Shoreline and signals are from plane table surveys T-6481a (1935), T-6481b (1935) and T-6482 (1935). Several signals located by sextant cuts were also used. These are recorded in the sounding records.

4. Sounding Line Crossings.

Such cross lines as were run or result from the work are satisfactory. Several discrepancies were noted by the field party in the Descriptive Report (page 3). These were smoothed out in the office, the more important being the 17 foot sounding (par. d) in Lat. $46^{\circ} 10.3'$, Long. $123^{\circ} 49.6'$ which has been retained.

5. Depth Curves.

Within the limits of the survey the usual depth curves may be satisfactorily drawn, including portions of the low water, 6, 12, 18 and 30 foot curves.

6. Junctions with Contemporary Surveys.

- a. The junction on the north with H-5975 (1935) is satisfactory except that the small gap existing between the two surveys in Lat. $46^{\circ} 10.2'$, Long. $123^{\circ} 52.3'$ should have been covered.
- b. The southern and eastern limits of the present survey represent the limit of hydrography in this area.

7. Comparison with Prior Surveys.a. H-250 (1851), H-273 (1851) and H-402 (1853).

These are reconnaissance surveys containing both hydrography and topography. The 1851 surveys are on a scale of 1 to 20,000 and the 1853 survey is on a scale of 1 to 375,000. They contain no hydrographic information not adequately covered by H-5976 (1935) and within the area covered should be completely superseded by the present survey for charting purposes.

b. H-1018 (1868).

A small portion of this 1 to 20,000 scale survey falls within the limits of the present survey in the vicinity of Youngs Bay. Depths in a few areas are in close agreement, however, considerable changes are noted in others and a detailed comparison will serve no useful cartographic purpose. The close development on the present survey should within the area covered, completely supersede the 1868 survey for charting purposes.

c. H-1930 (1889) contains topography, and H-1931 (1889).

These surveys are on a scale of 1 to 10,000. The former overlaps the present survey in the area north of Lat. $46^{\circ} 09.5'$ and the latter falls entirely within the limits of the present survey in the area between Lat. $46^{\circ} 08.3'$ and Lat. $46^{\circ} 09.8'$. Comparison of soundings indicates close agreement in some areas but considerable changes in depths in others, depths on the present survey being 1 to 12 feet shoaler in some cases and 6 to 18 feet deeper in others. These differences are probably due to alluvial deposits and shifting in position of main channels.

8. Comparison with Chart 6151 (New Print dated April 16, 1936) and Chart 5902 (New Print dated Nov. 7, 1935).a. Hydrography.

Information shown on the chart originates with surveys discussed in preceding paragraphs of this review and several U. S. Army Engineers' surveys, the more important being a survey of 1916 (Bp. 16145) which covers a small portion of the present survey in the vicinity of Lat. $46^{\circ} 10.2'$, Long. $123^{\circ} 50.1'$. Comparison of soundings indicates considerable changes in depths and a detailed comparison will serve no useful cartographic purpose. Within the area covered, the present survey should completely supersede the Engineers' survey for charting purposes.

The sunken wreck and abandoned trestle (both charted) in the vicinity of Lat. $46^{\circ} 10.4'$, Long. $123^{\circ} 49.7'$ are not shown on the present survey. These have been discussed in paragraph 9 of the review of T-6481b (1935). Information regarding these features has been requested from the field party.

These features extant. (See letter attached to D.R. of this survey).
10/1/36 H.W.M.

b. Aids to Navigation.

In Youngs Bay, red buoys S4, S6 and the lighted beacon were located on the present survey in substantially the same positions as charted. Red buoy S8 and black buoys S1 and S3 were located on the present survey in positions varying 50 to 150 m. eastward of their charted positions. The charted position of S3 originates with N. to M. 47 (1927) and S1 and S8 originate with N. to M. 21 (1923). These positions are probably based in relation to the charted channel which channel as shown on the present survey has shifted as much as 110 m. to the eastward.

The positions as located on the present survey satisfactorily mark the features intended except black buoys S1 and S3 which are in the middle of the channel. Better locations would be approximately 35 m. northeast and eastward, respectively. This matter has been referred to the Lighthouse Bureau.

9. Field Plotting.

Field protracting and plotting were accurate and conform to the requirements of the Hydrographic Manual.

10. Additional Field Work Recommended.

This survey is complete and no additional work is required. However, an adequate examination should have been made of the 17 foot sounding discussed in the Descriptive Report (page 3, par. d.). (See par. 2a of this review.).

11. Note to Compiler.

Attention is called to an overhead cable shown on the smooth sheet in Lat. $46^{\circ} 07.6'$, Long. $123^{\circ} 52.5'$ which has been plotted from information contained in the sounding records. This feature is not shown on T-6482 (1935).

12. Superseding Previous Surveys.

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

H-250 (1851)	contains topography	In part
H-273 (1851)	" "	" "
H-402 (1853)	" "	" "
H-1018 (1868)		" "
H-1930 (1889)	contains topography	" "
H-1931 (1889)		Entirely

13. reviewed by - Harold W. Murray, June 25, 1936.

Inspected by - E. P. Ellis, August 25, 1936.

Examined and approved:

C. K. Green, *C. K. Green*
Chief, Section of Field Records.

L. O. Robert
Chief, Division of Charts.

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

Stude
Chief, Division of H. & T.

Applied to chgs 6151 + 5902 - DEC 1936 P.B.C.