

5928

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

DESCRIPTIVE REPORT

Topographic } Sheet No. 0-13
Hydrographic }

State OREGON

LOCALITY

COLUMBIA RIVER

Tongue Point to Marsh Island

1935

CHIEF OF PARTY

Robert W. Knox

U. S. GOVERNMENT PRINTING OFFICE: 1934

5928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES
DEC 30 1935
REG. NO.
Acc. 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. 0-13

REGISTER NO. **H5928**

State..... OREGON

General locality..... Columbia River

Locality..... Tongue Point to Marsh Island

Scale..... 1:10,000 Date of survey April 24 to July 30, 1935

Vessel..... Chartered launch SUSAN

Chief of Party..... Robert W. Knox

Surveyed by..... R. W. Knox and Kelly McBean

Protracted by..... A. J. Vollmar, F. W. Gavin and K. McBean

Soundings penciled by..... K. McBean

Soundings in ~~fathoms~~ feet

Plane of reference..... mean lower low water

Subdivision of wire dragged areas by.....

Inked by..... G. H. Everett

Verified by..... " " " "

Instructions dated..... February 26, 1935, 19

Remarks:.....

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET

NO. 0-13

Scale 1:10,000

COLUMBIA RIVER

OREGON

TONGUE PT. TO MARSH ISLAND

Instructions dated Feb. 26, 1935

Surveyed by R. W. Knox &
K. McBean

AREA, LIMITS, ETC. The hydrography of sheet 0-13 covers the area between Tongue Point and Marsh Island and from latitude $46^{\circ} 14'$ southward to the Oregon Bank of the Columbia River.

Junction with sheet W-13 was made along latitude $46^{\circ} 14'$, the northern limit of the sheet. No recent hydrography has been accomplished either to the east or west of this sheet.

SURVEY METHODS: Standard survey methods were used. With the exception of a days' work in the vicinity of Tongue Point, where the depths required that a hand sounding machine be used, all soundings were taken with a 12 pound hand lead. The usual type bronze centered mahogany tiller rope (Samson Cordage Co.) was used. The lines were carefully prepared and made and at no time were the errors of such a magnitude as to require corrections to the recorded soundings. When errors threatened to become large enough as to require such corrections, the lines were re-marked.

DISCREPANCIES: This was a particularly difficult area to survey; because of excessive speed of the river current the critical channel lines could be run in but one direction - with the current; a large portion of the area bares at low water and in order to obtain a true low water line it was necessary to develop those areas rather fully, and this could be done only on a higher high tide; the discolored water made it impossible to see bottom even in a few inches of water.

Course changes by compass as noted in the sounding volumes will not always agree with the actual movement of the launch over the ground because of the effects of currents.

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

- a) The area from Δ Gra to \odot Pol does not check the boat sheet. The recorded angles fit the fixes of both the boat and smooth sheets; the discrepancy is evidently due to distortion of the boat sheet.
- b) The same difficulty as noted in a) appears in connection with positions 39, 40, etc., on ee day.
- c) The system of cross lines between positions 23 and 87 on

ff day and in the vicinity of O Rot were run primarily to check apparent inconsistencies in previous soundings in that area. Because of stronger control due to the availability of additional signals, this work is considered more accurate than that on a, b and c days.

d) Latitude $46^{\circ} 12.2'$, longitude $123^{\circ} 41.7'$; the 21 foot sounding immediately before position 118b is inconsistent with the first sounding after 59ff, a 51 foot east. For reasons as stated in c) the preference should be given to the sounding on the latter day. *line with the 21; not plotted due to very weak control*

e) Latitude $46^{\circ} 12.05'$, longitude $123^{\circ} 41.2'$; a 34 foot sounding between 69 and 70 ff falls on a 24 foot sounding between positions 87 and 88 c. The slope at this point is steep and it is believed the 34 foot sounding should be retained as better controlled. *24 not plotted*

f) At a distance 0.2 miles southwest of O Rot an 8 foot sounding appears on the deep side of a 12 foot sounding. *110c changed by replottting*

g) Latitude $46^{\circ} 12.15'$, longitude $123^{\circ} 42.05'$; There is an 8 foot sounding between positions 76 and 77h while a 12 appears between positions 136 and 137 c. The 8 should be retained. *8 retained*

h) Latitude $46^{\circ} 12.85'$, longitude $123^{\circ} 42.5'$; an 18 foot sounding between positions 6 and 7g is in conflict with an 11 between positions 58 and 59e. It appears as if the latter sounding should be plotted a trifle to the north in order to better the crossing although there is apparently no justification in moving the positions. *11 only plotted*

i) Latitude $46^{\circ} 12.0'$, longitude $123^{\circ} 41.2'$. In the vicinity of positions 198 to 200n five soundings were not plotted as they are obviously out of place. As the area is well developed the fixes were not changed in an effort to fit the soundings into their proper places.

j) Latitude $46^{\circ} 11.65'$, longitude $123^{\circ} 40.3'$; a 13 foot sounding appears near a -1. The bank is actually cut very steeply here, and both soundings are good.

k) Positions 99 and 100c apparently should be about 25 meters north of where they are plotted. As subsequent work on q and w days effectually cover the area involved, and with stronger fixes, those soundings on c day were not plotted.

l) Latitude $46^{\circ} 11.95'$, longitude $123^{\circ} 41.25'$; a 13 foot sounding on position 106 u falls on a 19 foot sounding between 93 and 94t, with adjacent soundings checking. The 13 was retained. It is possible that the leadline was mis-read and the 19 is correct. *error in plotting - corrected*

m) Latitude $46^{\circ} 12.8'$, longitude $123^{\circ} 39.1'$, south of O Sev; the soundings from position 99 to 104q do not agree with subsequent work and the positions are obviously badly in error. The fix used was rather weak but not excessively so. It was found that no combination of changes to the recorded angles or objects would result in placing

the line where it probably belongs but that if a point about 20 meters west of \odot Ex, the left object, was taken for that signal the line could be more or less satisfactorily plotted. Subsequent work on t and x days was controlled by stronger fixes with nearer objects. The line from 29 to 34t was run alongside the bank, and it is probably impossible to obtain soundings a hundred or so meters north of that line as is shown by positions 103 and 104t as now plotted.

Pos 99-
102g not plotted.
JGL

n) Latitude $46^{\circ} 12.3'$, longitude $123^{\circ} 44.3'$; the first sounding after position 103w is a 24 - all other soundings in the vicinity indicate that the leadline must have been read a foot in error. It was therefore not plotted.

o) Latitude $46^{\circ} 11.3'$ longitude $123^{\circ} 44.5'$; two positions of spar buoy No. 5 are recorded, the latter one on position 143x was retained.

p) Latitude $46^{\circ} 10.7'$, longitude $123^{\circ} 40.8'$; a 0 foot sounding between positions 183 and 184k falls very close to a 4 foot sounding between 138 and 139y. No explanation for this.

Both zero and 4 plotted

q) Latitude $46^{\circ} 10.8'$, longitude $123^{\circ} 40.2'$; * the 1 foot sounding on position 88ee probably should be a 7 as the controlling depth is 6 to 8 feet and nearby soundings show no indication of a shoal. It is recommended this sounding of 1 foot be rejected.

not plotted ✓

DANGERS:

With the exception of the few rocks off Tongue Point which are close ashore, there are no natural dangers to navigation in the area covered by this sheet. There are, however, other dangers in the form of what are known among the logging fraternity as "sinkers", logs which 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. As they are extremely difficult to pick up in the muddy waters of the River, they present a grave menace to small craft navigation of the channels. From time to time these sinkers are removed by employees of the several logging companies operating in the locality.

A second menace to navigation - but to a lesser extent - exists in the presence of so-called "snags", generally stumps or roots of trees brought down the River by the freshets and deposited, as they become water-logged, on the river bottom. These snags are destructive to fish nets and the seining ground areas are dragged after each freshlet, the snags located and with the aid of a diver, secured and carried away.

Note was made in the sounding volumes of the location of several sinkers, but as they are a temporary menace to navigation their positions were not transferred to the topographic sheets.

Although the main channels are marked, local knowledge is necessary for strangers to safely navigate the waters.

* This shoal was investigated and found to be non-existent.
see page 71, vol. 11.

The depths change and what is more important, buoys are occasionally dragged out of position by log rafts, etc. Fisherman have been reported to change the location of buoys when they interfere with seining operations.

CHANNELS: In addition to the main ship channel, of which but a small portion appears on this survey, there are the following channels, navigable for small craft and/or moderate draft tugs:

1. A dredged channel extending from Tongue Point to the Submarine and Destroyer Base; the chart shows a depth of 27 feet, but the present survey shows a least depth of 21 feet.
2. Small craft may continue along the shore to John Day Point, where the depths shoal to 5 feet at the junction of this and the channel usually used. (below)
3. A marked channel, locally known as John Day Channel, extending from Tongue Point along the eastern side of the shoals lying off the beach to John Day Point, thence along the beach to a junction with Prairie Channel, off Settlers Point. The eastern portion of this channel is sometimes known as Burnside Slough. This channel is ^{used by} small craft, principally fishing, under certain tidal conditions. A minimum depth of 5 feet exists in the vicinity of Settlers Point.
4. Prairie Channel is extensively used in towing logs and some gravel barges. It is a shorter and more protected route from up river than the main ship channel, and the many dolphins, rows of piling, etc., offer ample opportunity to tie up log rafts while awaiting favorable tides. The channel on either side of the shoals may be used, but that to the southward is almost exclusively navigated. A minimum depth of 8 feet exists between buoys S4 and S6. Tows generally take the channel to the south of the island northeast of Svenson Island, although this depends somewhat upon tidal conditions. The channel to the south of this island is more narrow than that to the north and has a least depth of 8 feet against 10 feet in the latter.
5. The channel leading north-northwest ^{EAST} from Svenson Island to Snag Island, with a minimum depth of about 11 feet, is but little used.

Several narrow unimportant channels were sounded out at a considerable expenditure of time and energy. These are of no importance to navigation but their delineation was necessary to make the sheet complete.

ANCHORAGES: There are no anchorages included in the area covered by this sheet.

COMPARISION WITH PREVIOUS SURVEYS: In preparing the boat sheet for this survey many soundings were transferred to it from 1) the latest edition of charts 6151 and 6152 (which had been enlarged to a scale of 1:10,000 in the Office) and 2) from the blueprints of the latest hydrographic surveys of the U. S. Engineers. Considerable difficulty

was experienced in the latter case to satisfactorily plot the soundings because of excessive distortion of the blueprints, confusion of datums and differences of scale. These transferred soundings proved of little value in comparing the hydrography with previous surveys due to 1) uncertainty of the exact position of the transferred soundings, 2) recent changes in bottom, both natural and by dredging, in the areas covered by recent surveys and 3) the fact that the remaining areas had not been surveyed for so many years as to render them useless. ✓

Several islands shown on the current charts as above high water were found to be entirely covered at the higher tides. This condition is apparent, however, only during the winter and early spring months; at other times the rank and high growth of tules, or bulrushes, give the mud flats and marshes the appearance - at least from a distance - of being islands. As the river water is fresh, or nearly so, the same sort of vegetation appears both below and above the high water line, making its delineation a trying and difficult matter. ✓

The shoaling of the channel leading from Tongue Point to the Naval Base has previously been mentioned. ✓

The deepest water obtained off Tongue Point is 196 feet, whereas the chart shows 192 feet. ✓

GEOGRAPHIC NAMES:

Tongue Point is a well established name, in fact the point was so named in 1792.

John Day Channel is the local, but not particularly well established name for ^{that} discussed under CHANNELS, paragraph 3.

Burnside Slough a continuation of John Bay Channel, a name not well established.

John Day River and Point are well established names

Prairie Channel is a well established name.

McGregor Island is a fairly well established local name; this small island at least is not known by another name

Settlers Point is a well established name.

Svensen Island is a well established local name

Green Island is a well established local name

Russian Island is name by which the island appearing as Seal Island on the charts is locally known; this name is well established.

Seal Island is the name applied to the island north of Russian Island. The name is not well established, nor are the limits of the island, as several passages bare at low water and the whole is covered at the higher high tides.

North Island is a well established local name for the island north of Seal and Russian Islands

SNag Island, Marsh Island and Carlson Island are well established local names, the first two appearing upon the charts, the third is, however, equally well established.

PLOTTING: The smooth plotting was started during the field season and positions protracted as opportunity offered. The greater part of the work, however, was done by Mr. Kelly McBean, Surveyor and afterwards Draftsman, who had been in charge of the launch Susan after the first several weeks of work.

The low water line as transferred from the topographic sheets to the smooth sheet does not always agree with the 0 foot curve as determined by hydrography. In order to make the topographic sheets complete and correct the 0 foot curve as determined by the soundings was transferred to the topographic sheets and inked thereon. The pencilled low water curve transferred from the topographic sheets to the smooth sheet was not erased from the latter.

changed
see note
by Tide
Section
64E

Respectfully submitted:

Robert W. Knox
Robert W. Knox,
H. & G. Eng'r,
Chief of Party.

STATISTICS

SHEET 0-13


Date 1935	Day letter	Volume	Number of soundings	Number of Positions	Statute miles of sounding	Boat
Apr 24	a	1	708	176	19.8	Susan
26	b	1	664	166	17.8	do
29	c	1 & 2	549	154	16.3	do
30	d	2	641	185	19.8	do
May 1	e	2 & 3	794	195	18.4	do
3	f	3	669	143	15.5	do
6	g	3	748	204	21.2	do
7	h	4	529	151	13.6	do
8	j	4	525	147	13.1	do
9	k	4	654	190	17.4	do
10	m	5	789	182	19.2	do
13	n	5	759	204	20.0	do
14	p	5 & 6	833	216	20.5	do
15	q	6	675	177	17.4	do
16	r	6	379	93	8.8	do
17	s	6 & 7	640	166	19.3	do
20	t	7	329	97	9.1	do
21	u	7	554	165	16.0	do
22	v	7	617	164	19.4	do
23	w	8	542	164	13.6	do
24	x	8	498	151	14.1	do
27	y	8	604	169	19.3	do
28	z	9	636	183	20.2	do
29	aa	9	575	160	16.2	do
30	bb	9 & 10	555	156	16.1	do
31	cc	10	50	17	2.0	do
June 3	dd	10	619	181	17.2	do
4	ee	10	413	122	11.6	do
5	ff	10 & 11	585	173	17.3	do
6	gg	11	441	141	11.6	do
7	hh	11	326	97	9.5	do
Sub-total fiscal year 1935			17,860	4,853	491.3	
July 29	jj	11	207	107	8.0	do
30	kk	11	87	42	2.9	do
Sub-total fiscal year 1936			294	149	10.9	
TOTAL			18,154	5,002	502.2	

Area in square statute miles = 23.4

APPROVAL OF CHIEF OF PARTY

Hydrographic sheet number 0-13 and accompanying records have been inspected and approved by me. The field work was done in part under my direct supervision and in part under my occasional supervision, and the office work under my direct supervision.

It was the intention of the writer to survey the area in the vicinity of the development at the Submarine and Destroyer Base on a scale of 1:5000 but the suspension of work due to lack of funds prevented its accomplishment. That portion of the sheet, therefore, is not fully developed and it is respectfully recommended that further work in that area be authorized when and if surveys are resumed.


Robert W. Knox,
H. & G. Eng'r,
Chief of Party.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Astoria, Oregon,

December 18, 1935, 19

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			
(Stack Knappton 1935) STACK	46	16	691	123	48	1157	NA 1927 tri	6151	
cavation QUARRY (center top of ex-	46	16	900	123	46	0	do topo	do	
center of HOUSE, fish, on piling, /	46	15	17	123	42	18	do hydro	do	
(Mill) north gable HOUSE, fish, on piling,	46	15	730	123	38	977	do topo	6152	
(W T) TANK	46	10	1011	123	40	323	do do	6151	
(North gable Green I. HOUSE fishhouse 1935)	46	13	137	123	39	418	do tri	6152	
(Barnable Miller Gable HOUSE, fish barn 1935)	46	15	590	123	38	941	do do	6152	
(Slo) tion HOUSE, n. gable east por-	46	13	1193	123	36	1100	do topo	do	
(Elliott School Flag- FLAGPOLE pole 1935)	46	15	1286	123	36	695	do tri	do	
HOUSE, center	46	15	100	123	35	790	do topo	do	
HOUSE, center	46	15	93	123	35	750	do do	do	
			(over)						
<p>The above positions have been verified in accordance with paragraph 4 of instructions for preparation and submission of form 567</p>									
								Robert W. Knox.	

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, 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 of primary importance.

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaves and like objects are not sufficiently permanent to chart.

Note:

The HOUSE landmarks noted on the reverse are all prominent so-called "fish houses" or "fish barns" and are built on piling so as to be clear of the water at all river stages. Whether or not the standard topographic symbol for a house or building should be supplemented with the landmark for charts term "house" is questioned by the writer.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Astoria, Oregon,

December 18, 1935, 19

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			
<p>The following aids to navigation (lights) were determined by topography and these, combined with those determined by triangulation comprise a complete list of such objects in the area covered by hydrography sheets O-13 and W-13</p>									
Megler Rear Range	46	15	308	123	51	443	NA1927	topo	6151
Quarantine	46	16	166	123	49	898	do	do	6151
Knappton	46	16	652	123	48	1058	do	do	do
Tongue Point	46	12	880	123	46	102	do	do	do
Grays Point	46	16	766	123	45	1240	do	do	do
(Gun) Miller Sands Channel 2	46	15	71	123	40	976	do	hydro	do
(01v) Miller Sands Channel 1	46	15	624	123	40	173	do	topo	do
(Lou) Miller Sands Channel 3	46	15	621	123	39	535	do	do	6152
(Ban) Harrington Pt. Rear	46	16	63	123	39	250	do	do	do
<p>The above positions have been verified in accordance with paragraph 4 of the instructions for preparation and submission of form 567</p>									
								Robert W. Knox	

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, 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 of primary importance.

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaves and like objects are not sufficiently permanent to chart.

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H5928**

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

Number of positions on sheet	5002
Number of positions checked	487
Number of positions revised	12
Number of soundings recorded	18154
Number of soundings revised	21
Number of signals erroneously plotted or transferred	1

Date: 6/19/36

Verification by G.H. Everett

Time: 127½ hrs.

Review by John G. Ladd

Time: 22 hrs

VERIFIERS REPORT ON H-5928

Topo sheets covering this area are T-6385 a, b; T-6386; T-6387 a, b. all of 1935. Topography was done by the Plane Table method.

Junction has been made with H-5927 (1935) to the north. There are no other adjoining sheets to date.

Certain positions were rejected for reasons stated in the records.

Δ Prairie Channel E. It appears as "Grassy Is. It" on both topo sheet. It is noted on "Description of Station Card" that Prairie Channel E. It has been removed but the existing station "Grassy Is. It" was called "Prairie Channel E. It" in the records. Both names have been retained for the triangulation. *since they are both used in the records - Geodetic*

Discrepancies as noted in the D.R. have been verified and some eliminated by correcting the plotting as noted in the records.

Area of strong Tidal Currents have been noted
Lat 46-12.2; Long 123-41.7 Lat 46-13.5; Long 123-38.9
Lat. 46-12.9; Long 123-37.4.

The B.S. indicates the direction of flooding and ebbing of tides.

Vol. III pg. 38. Lat 46-10.4; long 123-43.65. The field party arbitrarily changed 139 f to improve soundings. As recorded a 0 sounding would have plotted in the channel east of Red spar. The field party's solution was accepted as the zero sounding appears to be either an error in leading or a misplaced sounding.

Lat 46-11.6; Long 123-41.2 Ps. 557. Fine run around "Island" noted in records but not shown as bare island on Topo sheet. *likely covered at H.W.*

Lat 46-12.8; Long. 123-41.9 Shoal 5 ft obtained on line 25-26 a. * This line 18a-28a is doubtful because of the weak fix used. Line was run on range. Course plotted does not check. Time also does not check good. A slight change in left angle would move the position more than 100 meters. However since this shoal was not developed by later lines it was retained.

* soundings from Pos. 26a (except the two 5 ft soundings at pos 26) to pos. 31a rejected, as fixes are very weak.

Sunkens and dead heads noted in the records were generally not plotted as they were noted in the D.R. and in the records as being temporary obstructions.

All rocks are transferred from topo sheets and were not mentioned in the records.

L.W. Line. (See D.R.)

A solid yellow curve was used where information was obtained from the records. Shaded yellow curve came from B.S. Dotted black line where information was evidently obtained by Topo. Although it appears that the topo sheets were changed to fit the hydro sheet after the hydro sheet was plotted.

~~Topo signal "Jet" Lat. 46-10.2, Long 123-36.9 is not shown on T-6386.~~

"Russian Id." on Hydro Sheet is called "Seal Id." in T-6387b. The slough separating Russian Id. from the island to the north is not shown on Topo sheet.

There is no information in the records or D.R. as to the ^{or location of} nature of Hydro signal "Ump". It may be referred to in ^{10, 11} review adjoining sheet H-5927.

Hydro signal "Fin" is called a "3 pile dolphin suffuting lantern" on the B.S. No other description given.

Topo signal "Older" Lat 46-10.6; Long 123-40.2 is shown as a dock on topo and hydro sheets. The B.S. describes this signal as "slate on sunken wreck". The symbol was not changed on Hydro sheet. It may be ^{work} is alongside of dock.

Topo signal Od Lat 46-10.8; Long 123-39.0 described as dolphin at end of row of piling on B.S. Piling not shown on Topo sheet.

For several topo signals which are evidently piles or dolphins there were no references in the list of descriptions to indicate the nature of these signals. (See Topo D.R.)

B.S. also indicates signal as old dolphin suffuting lantern with Topo T-61.

Buoys.

- 53 Lat. 46-12.5; Long 123-42.9 PR 103a was rejected in favor of 151b. This plotting however does not exactly agree with topo. ✓
- 55 Lat. 46-11.3; Long 123-44.5 PR 93d rejected in favor of 143x which agrees with topo plotting. ✓
- 5 Lat. 46-10.98; Long 123-44.35 PR 135d rejected in favor of 9bb. This checks topo plotting. ✓
- 5 Lat. 46-12.7; Long 123-41.8 not shown on topo sheet. ✓
- 54 Lat. 46-11.5; Long 123-42.7 PR 128h rejected in favor of 40aa. ✓
- Channel marker Vol II pg. 40. One cut only taken. Not definitely located. ✓
- 56 Lat. 46-10.4; Long 123-43.7 PR 29k disagrees with topo location by about 10m. ✓
- 58 Lat. 46-10.5; Long 123-43.5 PR 32k disagrees with topo location by about 10m. ✓

Submitted June 19, 1936

H. Everett.

HYDROGRAPHIC SURVEY NO. H5928

Smooth Sheet yes

Boat Sheet yes

Sounding Records 11 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 no
(Circular Nov. 30, 1933)

Remarks _____

Remarks

Decisions

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4	USFD	Karlson EX 12-4-4
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GEOGRAPHIC NAMES

Survey No. H5928

Name on Survey	Source											No.
	A	B	C	D	E	F	G	H	K			
<u>Snag Island</u> ✓				✓								1
<u>Marsh Island</u> ✓	6152											2
<u>Carlson Island</u> ✓				✓								3
<u>North Island</u> ✓	This is channel I on chart 6152										4	
<u>Seal Island</u> SEAL ISLAND	do not ink										5	
<u>Green Island</u> ✓				✓								6
<u>McGregor Island</u> McGREGOR ISLAND	do not ink										7	
<u>Tongue Point</u> ✓	6152											8
<u>Russian Island</u> ✓				✓								9
<u>Svensen Island</u> ✓				✓								10
<u>Settler Point</u> ✓	6152											11
<u>Burnside Slough</u> BURNSIDE SLOUGH	do not ink										12	
<u>John Day River</u> ✓	6152											13
<u>JOHN DAY PT.</u> ✓	6152											14
<u>CATHLAMET BAY</u> ✓	6152											15
<u>SVENSEN</u>	6152											16
												17
Undelined names approved Jan. 18 1926											18	
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O'Keefe											20	
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MEMORANDUM

IMMEDIATE ATTENTION

~~SURVEY~~
 DESCRIPTIVE REPORT } No. H 5928
~~PHOTOSTAT # OF~~ } ~~No. #T#~~

{ received Dec. 30, 1935
 { registered Jan. 9, 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	<i>W.D.</i>	<i>"Channels" - page 4 D. R. "Dauphin" page 1</i>
30		
40		
62		
63		
82		
83		
88		
90		

RETURN TO

82	
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G. K. Green *Jan 9, '36*

TIDE NOTE FOR HYDROGRAPHIC SHEET

April 28, 1936

✓ Division of Hydrography and Topography:

Division of Charts: **Attention: Mr. E. F. Ellis**

Tide Reducers are approved in
11 volumes of sounding records for

HYDROGRAPHIC SHEET **5928**

Locality **Tongue Point to Marsh Island Columbia River.**

Chief of Party: **Robert W. Knox in 1935**

Plane of reference is **mean lower low water reading**

2.5 ft. on tide staff at **Tongue Point**

11.7 ft. below B.M. 4

1.2 ft. on tide staff at **Settlers Point**

13.1 ft. below Bench Mark 1

2.5 ft. on tide staff at **Knappa**

6.3 ft. below Bench Mark 1

3.1 ft. on tide staff at **Altoona**

11.6 ft. below Bench Mark 1

Height of mean high water above plane of reference is **7.5** ft. at **Tongue Point**; **7.1** ft. at **Settlers Point**; **6.5** ft. at **Knappa** and **6.6** ft. at **Altoona**.

Condition of records satisfactory except as noted below: **It was found necessary to revise a great many of the tide reducers due to an erroneous interpretation of the tide data for Tongue Point.**

Paul C. Winney

Chief, Division of Tides and Currents.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY No. 5928 (1935) FIELD NO. 0-13

Tongue Point to Marsh Island, Columbia River, Oregon

Surveyed in 1935

Instructions dated Feb. 26, 1935.

Hand Lead and Machine Soundings. 3 Point fixes on shore signals.

Chief of Party - R. W. Knox

Surveyed by - " " " and K. McBean

Protracted by - A. J. Vollmar, F. W. Gavin and K. McBean

Soundings penciled by - K. McBean

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. Hydrographic signal "Ump" at Lat. $46^{\circ} 14.23'$, Long. $123^{\circ} 36.4'$ was not listed on any of the index pages of the sounding volumes. Consequently the location of the cuts for its location, if recorded, is unknown.
- b. The inked lines on the smooth sheet showing the tide zone division are unnecessary as this information on the boat sheet is considered sufficient.

The Descriptive Report is complete and satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The survey satisfies the instructions for the project.

3. Shoreline and Signals.

The shoreline and topographic signals originate with T-6385 a and b (1935), T-6386 (1935), T-6387 a and b (1935).

Hydrographic signals originate with this survey and cuts locating same are recorded in the sounding volumes with the exception of those for signal "Ump" as mentioned in par. 1a.

4. Sounding Line Crossings.

No regular system of cross lines was run, however cross-lines that occur in the normal development of the work together with the parallel adjacent lines are in good agreement.

5. Depth Curves.

The usual depth curves may be satisfactorily drawn including most of the 6 ft. and low water curves.

6. Junctions with Contemporary Surveys.

A satisfactory junction is made with H-5927 (1935) on the north. There are no contemporary adjoining surveys on the east and west.

7. Comparison with Prior Surveys.

a. H-1015 (1867-'8), H-1016 (1868), H-1017 (1868) and H-1725 (1885).

These surveys all on a 1:10,000 scale together cover the entire area of the present survey. A comparison between them and the present survey reveals numerous and extensive changes in location and depths of shoals, bars, channels, etc., as well as some changes in shoreline. Considering the time elapsed between the above surveys and the present survey, the character of the bottom which is consistently sand and mud, and the subsequent dredging and maintenance of a ship channel along the northwestern edge of the present survey, a discussion of the changes noted would serve no useful navigational purpose. The above surveys should be superseded by the present survey for charting purposes.

8. Comparison with Charts No. 6151 and 6152 (new print dates April 16, 1936 and December 30, 1935).

A. Hydrography.

The chart is based on surveys discussed in the foregoing paragraphs together with numerous surveys by the U. S. Engineers and a few by the Navy at Tongue Point. The latest of these are blueprints No. 28043 (1934) and No. 26617 (1932). Although these more recent Engineers and Navy surveys are in fair agreement with the present survey, a comparison shows that the area is still a changeable one. Earlier Engineers' surveys covering other portions of the present survey are clearly not in agreement with the present survey. This bears out the fact, as also mentioned in notes on the chart itself, that the area is subject to very frequent changes. Therefore, in view of the more recent date and more extensive development on the present survey, the U. S. Engineers' surveys and the Navy's Survey (B.P. 28043) should be superseded by the present survey for charting purposes.

b. Aids to Navigation.

Numerous buoys are found to be charted in slightly different positions as shown on the present survey. However, considering the nature of the area, in that it is subject to frequent changes along channels, etc., causing continued changes in buoy positions as brought out by note on chart ("channel changed follow buoys as found") a discussion of the changes noted is omitted.

9. Field Plotting.

The field plotting was satisfactory.

10. Additional Field Works Recommended.

Attention is called to the recommendation by the Chief of Party in his approval note filed in the Descriptive Report, that a 1:5,000 scale development be made of the area off the Submarine and Destroyer Base at Lat. 46° 12.3', Long. 123° 45.6'.

11. Superseding Old Surveys.

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

H-1015 (1867-'8)	in part
H-1016 (1868)	" "
H-1017 (1868)	" "
H-1725 (1885)	" "

12. Reviewed by - John G. Ladd, July 18, 1936.

Inspected by - R. J. Christman, Aug. 11, 1936.

Examined and approved:

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

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

L. O. Robert
Chief, Division of Charts.

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

25 Jan 11, 1936

Applied to charts 6151 + 5902 - Dec 1936

P.B.C.

Applied to chart 6152 Jan. 1937 2.m.a.