

6107

U. S. COAST & GEODETIC SURVEY
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Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

State: Washington

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 13 6107
Hydrographic }

LOCALITY

Puget Sound

Case Inlet

193 5.

CHIEF OF PARTY

Jack Senior

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. 13

REGISTER NO. **H6107**

State Washington

General locality Puget Sound

Locality Case Inlet

Scale 1:20,000 Date of survey Aug. 23 to Sept. 20, 1935.

Vessel U.S.C. & G.S.S. EXPLORER

Chief of Party Jack Senior

Surveyed by L. C. Wilder

Protracted by R. J. Sipe

Soundings penciled by R. J. Sipe & H. F. Garber

Soundings in fathoms ~~feet~~

Plane of reference Mean lower low water

Subdivision of wire dragged areas by

Inked by *L. C. Wilder*

Verified by *L. C. Wilder*

Instructions dated March 29, 19 34.

Remarks:

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 13,

CASE INLET - PUGET SOUND.

AUTHORITY:

This survey was made under instructions to the Commanding Officer, Ship EXPLORER, dated March 29, 1934. ✓

LIMITS:

It covers the waters in Case Inlet from Latitude $47^{\circ}12'$ to the head of the Inlet. ✓

SCALE:

The scale of the survey is 1:20,000. ✓

CONTROL:

Usual control of three point fixes on triangulation and topographic stations was used. ✓

METHODS:

Standard Coast Survey methods for hydrography were used, three point fixes, a ten pound hand lead to fifteen fathoms and machine and eighteen pound lead in deeper water. ✓

GENERAL CHARACTERISTICS OF SHORELINE AND BOTTOM:

The shoreline from the high water line out to the 10 or 20 fathom curve is sand or gravel or both except at the head of the inlet, where the shoreline is mud above Latitude $47^{\circ}22.5'$. There are scattered boulders along most of the beaches. ✓

The small inlets have sand or gravel shores over half their length and usually mud and marsh at the heads. ✓

The bottom outside the 10 or 20 fathom curve is mud. At the head of Case Inlet it is mud into the beaches. ✓

DANGERS, OBSTRUCTIONS AND SHOALS:

1. Shoal across the north end of the channel east of Herron Island. This shoal crosses to the mainland from the northeast tip of Herron Island. Not over 25 feet at mean lower low water can be carried across this shoal by keeping about 300 yards off the point of Herron Island. Depths are less inshore on either side from this

crossing. Least depths where a large vessel should attempt to cross vary from 16 to 18 feet, sand bottom. ✓

2. The five fathom curve makes out 450 yards northeast of Dougall Point, north tip of Harstine Island. A 14 foot sounding was obtained about 300 yards off the point, between positions 36 and 37 "s", sand bottom. ✓

3. Shoal water makes well out from the west shore, 0.4 mile south of the dock at Allyn. Many small boats get aground here. The bottom is mud and there are oyster beds inside the low water line. ✓

4. Position 15 "l", is a boulder and small shoal in back of Reach Island bare ~~1/2~~ ⁵ fathom. ✓

5. Position 162 "m" is an anchored log boom to protect oyster beds. ✓

6. The low water line makes well out and rocks are located off the point at triangulation station "WASH 2". ✓

7. There is no water between the small island at topographic signal "MALE", and the spit to the south. ✓

8. There is 2 feet of water at the end of the dock at Herron, low water line should be drawn just inside the offshore end. Could not be shown on the sheet. ✓

All shores were inspected at low water for the existence of off-lying dangers. The practice was made of running all shorelines at low water. ✓

CHANNELS, AIDS AND RANGES:

There are no aids to navigation within the area of this sheet. ✓

The channel east of Herron Island is ²¹ clear except for crossing the bar across the north end where ~~15~~ feet can be carried at mean lower low water by rounding the northeast tip of Herron Island at a distance of 300 to 500 yards. It is shoaler inshore on either side. The two fathom curve extends about 300 yards off the east shore and there is a narrow low water spit off the northeast tip of Herron Island which bares 200 yards off-shore. ✓

There is no through channel back of Stretch Island. One fathom can be carried into the dock on the west shore, west of Stretch Island. There is a clearance of 25 feet at mean lower low ✓

water under the main span of bridge from Stretch Island to the mainland. ✓

The channel from the south into the small boat anchorage west of Reach Island is clear except for a rock bare 3 feet at mean lower low water, 60 yards off the east side. One foot can be carried through the channel back of the island. Position 14 "l" locates the mid channel controlling depth. Just east of here it bares and also position 25 "l", locates a rock. ✓

Two feet can be carried into the middle of Vaughn Bay off the dock at Vaughn by coming mid-channel between the end of the long spit at the entrance and the left hand shore (2 fathoms here) and hauling left when 200 yards in from the spit and steering about southwest or parallel to the spit and 200 yards off the spit. Then haul left and come along the south shore at about a distance of 200 yards. There is considerably deeper water, 2 to 4 fathoms, mid bay about half way between the entrance spit and the head of the bay. There is but 2 feet of water at the off-shore face of the dock at Vaughn. ✓

The entrance to the small lagoon in Latitude $47^{\circ}21.3$, Longitude $122^{\circ}49.7'$, bares at mean lower low water, but there is $1/2$ fathom or more inside the lagoon. ✓

Seven feet at mean lower low water can be carried to the dock at Allyn by following the east shore at a distance of 125 to 150 yards when past the oyster beds on the east side of the inlet. Local information is necessary. There are no land marks here for writing directions. ✓

There are oyster beds at the head of Case Inlet, on the west shore $1/2$ mile below the dock at Allyn, and on the east shore 1 mile below this dock and also in Rocky Bay. ✓

The dashed pencil line positions 6,7,8, and 9 "n", shows the off-lying limits of boulders bordering oyster beds. They are lines of 2 foot boulders. ✓

ANCHORAGES:

Anchorage for large vessels need not be defined as Case Inlet is not over two miles wide at any point. ✓

Small boats may anchor wherever they can get a good lee, off most any shore of the several islands or along the main shores of the inlet. Particularly secure inside small boat anchorages are to

be had off the north or east shores of Herron Island, off the west or north shores of Stretch Island, off the west shore of Reach Island and in Vaughn Bay. The prevailing storms come from a southerly direction.

CURRENTS AND TIDE RIPS:

No unusual currents or tide rips were experienced.

DISCREPANCIES:

No discrepancies were discovered on this sheet.

COMPARISON WITH EXISTING SURVEYS:

A comparison with chart No. 6460 only can be made. Photostats of old surveys are not available. ✓

The ten fathom curve off the point at triangulation station "RENO", is not correct on old surveys. ✓

There is less water, over the shoal at the north end of the channel east of Herron Island, than the chart shows. ✓

Vaughn Bay has shoaled in the north middle of the bay. ✓

The west side of the bay south of the dock at Allyn has shoaled. ✓

LANDMARKS:

The land marks for this area were submitted in 1934. The eastern transmission tower at the head of Case Inlet was plotted in error one minute in longitude in the May 1935 edition of chart No. 6460.) 83 - correct ✓

I would recommend topographic signal "ENO", off the south shore of McMicken Island, a large boulder, bare at all stages of tide, as a land mark.

GEOGRAPHIC NAMES:

The following names are chart as well as locally known names, Case Inlet, Vaughn Bay, Rocky Bay, Allyn, Vaughn, Reach Island, Stretch Island, Herron Island, McMicken Island, Point Wilson, and Dougall Point.

Whitmans Cove is the local name for the cove on the east side
in Latitude 47°13.2'

Reynolds Bay is the local name for the lagoon on the east side
in Latitude 47°18.6'.

Respectfully submitted,



L. C. Wilder,
H. & G. Engr., C. & G. S.,
U.S.C. & G.S.S. EXPLORER.

APPROVED AND FORWARDED:



Jack Senior,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

TIDAL REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 13. H6107

A portable automatic tide gauge was in operation at:

- Longbranch, from August 24 to October 5, 1935
- Vaughn, from September 4 to September 21, 1935
- Allyn, from September 4 to September 21, 1935

Longbranch, Washington - Latitude 47°13', Longitude 122°45'

Plane of reference, mean lower low water..... 4.6 on staff
 Highest tide, Sept. 15, 1935.....20.2 on staff
 Lowest tide, Sept. 10, 1935..... 3.5 on staff

Vaughn, Washington - Latitude 47°20.5', Longitude 122°46.5'

Plane of reference, mean lower low water..... 1.4 on staff
 Highest tide, Sept. 14, 1935.....17.6 on staff
 Lowest tide, Sept. 10, 1935..... 0.2 on staff

Allyn, Washington - Latitude 47°23', Longitude 122°49'

Plane of reference, mean lower low water..... 3.1 on staff
 Highest tide, Sept. 15, 1935.....19.4 on staff
 Lowest tide, Sept. 10, 1935..... 1.8 on staff

The following comparisons with Seattle, Washington were determined:

	<u>RATIO OF RANGES</u>	<u>H.W.I.</u>	<u>L.W.I.</u>
Longbranch	1.25	4.95	11.33
Vaughn	1.32	5.02	11.43
Allyn	1.31	5.10	11.45

Reducers were obtained from the Longbranch gauge through "f" day, September 4 (from the south end of the sheet to about Latitude 47°16.5') and there after from the Allyn gauge.

STATISTICS

Statute miles of sounding lines.....	371.8
Number of positions.....	2530
Number of soundings, hand lead.....	5500
Number of soundings, machine.....	1978

Field Records Section
Hydrographic Survey 6107(1935) Field Number 13.
Case Inlet, Puget Sound, Washington.
Chief of Party Jack Senior.
Verification Report.

1. Condition of Records.
The records are neat legible and conform to the requirements of the Hydrographic Manual. ✓
2. Shoreline and Control.
The shoreline and control originate with T6436(1935) and T-6437(1935). ✓
3. Sounding Line Crossings.
No system of crosslines was employed, however the agreement of soundings on adjacent parallel lines is satisfactory. ✓
4. Depth Curves.
The usual depth curves can be satisfactorily drawn. ✓
5. Aids to Navigation.
There are no floating aids to navigation within the limits of this survey. ✓
6. Junctions with contemporary surveys.
No contemporary surveys have been received which join this survey to date. Junctions with the old surveys have not been made. ✓
7. Field Plotting.
The Field Plotting was well executed. ✓

Verified and Inked by



Oct. 30.1936.

Leo S. Straw.

HYDROGRAPHIC SURVEY NO. H6107

Smooth Sheet Yes

Boat Sheet 1

Sounding Records 7 Vols. _____

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes

Landmarks for Charts (Form 567) Yes

Statistics Yes

Approved by Chief of Party No

Recoverable Station Cards (Form 524) No

Special Chart for Lighthouse Service _____
(Circular Nov. 30, 1933)

Remarks _____

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6107**

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

Number of positions on sheet	2530
Number of positions checked	42
Number of positions revised	2
Number of soundings recorded	7478
Number of soundings revised	90
Number of signals erroneously plotted or transferred	0

Date: Oct. 30, 1936.

Verification by *Leob Strauss*

Time: 74 1/2 hr.

Review by John G. Ladd.

Time: 15 hrs.

Remarks

Decisions

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8	<i>bid survey (T1528) has one "I" only</i>	<u>Dougall</u>
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GEOGRAPHIC NAMES

Survey No. H6107

Name on Survey	<div style="display: flex; justify-content: space-between; font-size: small;"> On Chart No. 6460 On previous survey No. On U. S. Geographical Maps From local information On local Maps P. O. Guide or Map Rand McNally Atlas Orig. Wash. Geog. Names of Wash. Dict. T-525 </div>									
	A	B	C INDEX	D	E	F	G	H	I	J
<u>Case Inlet</u> ✓	*		✓				✓	✓	✓	1
<u>Rocky Bay</u> ✓	*			✓					✓	2
<u>Vaughn Bay</u> ✓	*			✓				✓	✓	3
<u>Whitmans Cove</u> ✓	*	T-6930		✓						4
<u>Wilson Pt</u> ✓	*		✓							5
<u>Herron Island</u> ✓	*			✓				✓	✓	6
<u>Stretch Island</u> ✓	*			✓				✓	✓	7
<u>Dougall Pt</u> ✓	*							✓	✓	8
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Names underlined in red approved
 by *[Signature]* on 6/13/36

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
PHOTOSTAT OF

No. H **6107**
No. T

received APR 16 1936
registered MAY 12 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	<i>[initials]</i>	<i>D.R. - pages 2-4</i>
26		
30		
40		
62		
63		
82		
✓ 83		<i>Error on chart 6460 (may 1935) page 4 - D.R.</i>
88		
90		

RETURN TO

82	
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C. K. Green

May 13 - '36

T

222

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography:

August 29, 1936.

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

Plane of reference

~~Tide Reductions~~ approved in

7 volumes of sounding records for

HYDROGRAPHIC SHEET 6107

Locality Case Inlet, Puget Sound, Wash.

Chief of Party: Jack Senior in 1935

Plane of reference is mean lower low water reading

4.6 ft. on tide staff at Longbranch

26.2 ft. below B.M. 1

3.1 ft. on tide staff at Allyn

34.0 ft. below B. M. 1

The height of mean high water above plane of reference is 12.8 feet at Longbranch and 13.3 feet at Allyn.

Condition of records satisfactory except as noted below:

Chief, Division of Tides and Currents.

. Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6107 (1935) FIELD NO. 13

Case Inlet, Puget Sound, Washington

Surveyed in 1935 - Scale, 1-20,000

Instructions dated March 29, 1934 (EXPLORER)

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

Chief of Party - Jack Senior

Surveyed by - L. C. Wilder

Protracted by - R. J. Sipe

Soundings penciled by - R. J. Sipe and H. F. Garber

Verified and inked by - Leo S. Straw

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual except that no approval note by the Chief of Party was contained in the records.

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. The use of a larger scale for this inlet would have permitted the showing of more detailed hydrography in some of the critical areas such as the bar connecting Herron I. with the mainland.

3. Shoreline and Signals.

The shoreline and topographic signals originate with T-6436 (1935) and T-6437 (1935).

4. Sounding Line Crossings.

No regular system of cross lines was run, however those 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.

6. Junctions with Contemporary Surveys.

There are no adjoining contemporary surveys.

7. Comparison with Prior Surveys.

a. H-1445 b (1879) and H-1446a (1879)

These surveys on a 1-20,000 scale together cover the area of the present survey although rather sparsely developed outside the 10 fathom curve. The soundings on these surveys were found to be 4.3 feet below mean lower low water. (See letter from Division of Tides, filed in Descriptive Report for H-1446a and b). With this correction applied the agreement with the present survey is excellent. Because of the adequate development of the area on the present survey, the above surveys need not be used in future charting.

8. Comparison with Chart No. 6460 (New Print dated July 20, 1936).

a. Hydrography.

Within the limit of the present survey the chart is based on surveys discussed in the foregoing paragraphs and contain no additional information that needs consideration in this review except as follows:

- (1) It is noted that a number of soundings, particularly the 1 3/4 fathom at Lat. 47° 18.04', Long. 122° 50.54' and the 2 3/4 fathom at Lat. 47° 16.42', Long. 122° 49.2' appear on the chart, apparently uncorrected to the plane of reference (M. E. L. W.) to which the chart is now referred. These soundings are charted with the identical values as shown on the original survey (H-1445 b-1879) which is 4.3 feet below the present plane of reference. (See par. 7a this review).

b. Aids to Navigation.

There are no charted aids to navigation within the limits of the present survey.

9. Field Plotting.

The field plotting was excellent.

10. Additional Field Work Recommended.

No additional work is needed within the limits of the present survey. This sheet is a fine example of a well planned and well executed survey.

11. Superseding Old Surveys.

Within its limits the present survey supersedes the following surveys for charting purposes:

H-1445b (1879)	in part.
H-1446a (1879)	" "

12. Reviewed by - John G. Ladd, Nov. 4, 1936.

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green

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

L. O. Robert
Chief, Division of Charts.

Frederic R. Peacock
Chief, Section of Field Work.

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

Applied to Ont. 6460 June 18, 1938 K.R.