

6105

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. 11. 6105
Hydrographic }

LOCALITY

N. End Carr Inlet, Puget Sound

1935.

CHIEF OF PARTY

Jack Senior.

6105

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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY LIBRARY AND ARCHIVES APR 16 1936 Acc. No. _____	REG. NO.
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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. 11

REGISTER NO. **H6105**

State Washington

General locality Puget Sound

Locality North End Carr Inlet

Scale 1:20,000 Date of survey August, 19 35.

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

Chief of Party Jack Senior

Surveyed by L. C. Wilder & W. Weidlich

Protracted by R. J. Sipe

Soundings penciled by R. J. Sipe

Soundings in fathoms ~~feet~~

Plane of reference Mean Lower Low Water

Subdivision of wire dragged areas by _____

Inked by L. S. Straw

Verified by "

Instructions dated March 29, 19 34.

Remarks: _____

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 11,

PUGET SOUND, WASHINGTON,

1935.

AUTHORITY:

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

LIMITS:

This is a survey of the north part of Carr Inlet to a southern limit of Latitude $47^{\circ}17'$. The sheet makes a junction with Sheet No. 9 at this latitude. Horsehead Bay and the hydrography close inshore from this bay to Latitude $47^{\circ}17'$ was executed on Sheet No. 8, scale 1:10,000.

SCALE:

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

OFFICERS MAKING THE SURVEY:

From Latitude $47^{\circ}20.5'$, North, the hydrography was done by L. C. Wilder, H. & G. Engr., in Tender No. 1, south of this latitude, by W. Weidlich, Mate, in the launch Delta. ✓

This report has been written by L. C. Wilder in collaboration with W. Weidlich. ✓

CONTROL:

The usual control of triangulation stations and signals located by topography, scale 1:20,000, was used. ✓

METHODS:

Standard methods of the Service for launch hydrography were used, as follows: ten pound hand lead in fifteen fathoms and less, machine and eighteen pound lead in deeper water, ranges on natural objects in lieu of compass courses. ✓

The new types of registering sheaves were used on both launches, the fixed type (No. 340) on Tender No. 1 and the swivel type (No. 358) on the launch Delta. They gave excellent service. The speedometer counters registered accurately both out and in. ✓

24 ✓

GENERAL CHARACTERISTICS OF SHORELINE AND BOTTOM:

With few exceptions the consistency of the shore line at, and just below the high water line is gravel or sand. There is mud in places near the high water line on the southeast shore from signal "RYE" to signal "PUS", and also in the lagoons making in from both the northwest and southeast shores.

The bottom is sand or gravel out to the ten or twenty fathom curve and mud in deeper water except north of Latitude $47^{\circ}21'$, where mud continues up into shoaler water, to five fathoms and in places less.

There are scattered boulders below the high water line off the shore of Cutts Island, the southwest shore of Raft Island, the most westerly point on the southeast shore (north of Raft Island) and in the vicinity of signals "AND" and "CAR". Few of these boulders are over five feet in diameter.

DANGERS, OBSTRUCTIONS AND SHOALS:

There are few important dangers or shoals within the area covered by this sheet.

1. The burned hulks, Latitude $47^{\circ}21.3'$, Longitude $122^{\circ}41.5'$, which are beached and extend up to 160 yards off the high water line off the spit at the south end of Huge Creek. The two fathom curve, at this place, is 300 yards off the high water line. These hulks are all entirely covered at higher high water; some are higher than others. They consist of rotting wooden ribs, planking and upright iron bolts which will remain for many years, constituting a menace to small boats when their existence is not known. Positions 1-2-3-4-5c were taken at the offshore limits of the hulks. 83 ✓

2. The shoal in Latitude $47^{\circ}20.2'$, Longitude $122^{\circ}40.8'$, least depth six fathoms, positions 17 and 20g, sand bottom. A careful examination was made for least water.

3. The long narrow low water sand spit in Latitude $47^{\circ}19.4'$, Longitude $122^{\circ}41.0'$, which has built out in a northeasterly direction from Cutts Island. This spit bares to a distance of 570 yards from the nearest highwater point on Cutts Island. See Remarks on page 5 (item 4), 83 ✓

The low water line at several other points makes out 100 yards or more but is not considered of sufficient importance for mention here. ✓

✓ CKG

CHANNELS, AIDS AND RANGES:

There are no structures placed within the area of this sheet as aids to navigation. No ranges are in place or required for piloting in these waters.

Three feet ^{to bridge only. 1/2 m} at mean lower low water can be carried into Burley Lagoon from Carr Inlet. This limiting depth is 300 yards south of the bridge. Channel follows the east shore at a distance of approximately 100 yards. As the bridge is approached the water deepens slightly. About 300 yards above the bridge, Burley Lagoon bares from the east to west shore; about one foot at M.L. L.W., can be carried that far through the south end of this lagoon by hauling left when through the bridge and paralleling the highway embankment at a distance of about 200 yards, to the west shore. Then up the west shore.

Position 73 b, locates the east side of the fixed span under the bridge. Clearance is 33 feet at M.L.L.W. or 18 feet at M.H.H.W.

The channel north of Raft Island into an anchorage in about 3 fathoms off Rosedale (on the small peninsula east of the east end of Raft Island) is clear. The end of the dock at Rosedale bares at low water. The lagoon north of, and also the lagoon east of Rosedale bares at M.L.L.W., to within 250 to 300 yards of their entrances. There is no through channel south of Raft Island. There is a good anchorage south of the west half of Raft Island in from one to two fathoms.

One foot can be carried into the dock in Glen Cove through a crooked channel. This is not of sufficient importance for definition here.

The entrance to Huge Creek bares at low water.

ANCHORAGES:

There are good anchorages to the north, northeast, east and southeast of Raft Island for all but large ships. The bottom is mud. The depth shoals to two fathoms and less, east and southeast, of the island but small boats may anchor here.

Small boats may anchor in Glen Cove and the south part of Burley Lagoon if acquainted with the entering channels.

CURRENTS AND TIDE RIPS:

No appreciable currents or tide rips were experienced during the period of this survey.

DISCREPANCIES:

1. A number of rocks located by the topographer all of which are within the low water line have been transferred to the hydrographic sheet in ink. They are as follows: two rocks near triangulation station "HORSEHEAD", rocks near signal "FLEA", a rock north of triangulation station "RAFT", a number of rocks between signals "CAR" and "CHIC", a rock northwest of signal "NONE", a rock east of signal "MIM". These rocks are boulders, none of which are greater in diameter than six feet and as they lie inside the low water line were not considered of sufficient importance to be relocated by the hydrographers.

2. Two boulders, positions 1d and 2d, one 43 meters west of triangulation station "ROSE" and the other 153 meters south of that station are shown by the rock awash symbol in pencil. These positions are about 10 meters southeast of the topographic location in each case.

Use Topo location center objts very close.

L.S.S.

3. The hydrographic location of a rock, position 74d, off signal "BAY" plots 15 meters southeast of the topographic location. Another rock, just east of here, located by the topographer, was not found by the hydrographer. It was covered when this place was visited. Both rocks are well within the low water line and not important.

4. Positions 78 - 79 c. Judging by the twenty fathom curve in this vicinity it appears that the 27 fathoms sounding is incorrect. It is possible that the sheave was misread by 5 fathoms and the sounding should have read 32 fathoms. Lat. $47^{\circ}17.8$, Long. $122^{\circ}43.9$

soundings inked as recorded L.S.S.

5. A very doubtful sounding of 21 fathoms lies west-north-west of Cutt Island. Positions 5-6d, red. The officer in charge has no explanation to offer except that 21 fathoms should read 23 and vice versa, assuming that the soundings were not recorded immediately after given by the leadsman. Lat. $47^{\circ}19.4$, Long. $122^{\circ}41.7$

soundings inked as recorded L.S.S.

COMPARISON WITH EXISTING SURVEYS:

A comparison with Chart No. ⁶⁰6444, only, can be made, as photostats of previous surveys are not at hand.

1. The present survey shows some water on the west side of Burléy Lagoon and a shallow channel from the east to the west side just north of the highway fill. Old surveys show this area as bare at low water. *Single line of sdg's run here on old surveys. N.Y.M.*

2. There is little change in the waters to the north, east and south of Raft Island except that there is, at present, more water in the two large lagoons to the east of this island. *No sdg's lines run here on old survey. N.Y.M.*

3. The least depth found on the shoal in Latitude $47^{\circ}20.2'$, Longitude $122^{\circ}40.9'$ by the 1935 survey was six fathoms. The chart shows $5\text{-}3/4$ fathoms. A thorough search was made here. *Least depth accepted. No sdg's carried forward. N.Y.M.*

4. The sandy reef making out to the northeast of Cutts Island now bares for a distance of 550 meters from this island. The old surveys do not show a long bare sand spit here.

5. The 15 fathom shoal in Latitude $47^{\circ}18.2'$, Longitude $122^{\circ}42.2'$ is not shown on Chart No. 6444, nor is the 13 fathoms shoal in Latitude $47^{\circ}17.1'$, Longitude $122^{\circ}44.0'$.

6. The old hulks south of the entrance of Huge Creek have tended to build out the low water line.

LANDMARKS:

The two power transmission towers, one in Latitude $47^{\circ}23'$ Longitude $122^{\circ}37.7'$, the other, in Latitude $47^{\circ}23.2'$, Longitude $122^{\circ}38'$. There are other towers east and west of these on the same transmission line but they fade into the trees from different directions.

The sunken hulks at the south entrance to Huge Creek, although they are practically covered at spring high water, are prominent land marks.

GEOGRAPHIC NAMES:

A complete report on this subject will be made in the topographic descriptive report for the sheet covering this area. See that descriptive report.

Huge Creek is locally known as Minter Creek. Cutts Island as Deadman's Island.

Respectfully submitted,
L. C. Wilder
L. C. Wilder, H. & G. Engr.,
U.S.C. & G.S.S. EXPLORER.
W. Weidlich
W. Weidlich, Mate,
U.S.C. & G.S.S. EXPLORER.

Approved & forwarded
Jack Jones

TIDAL NOTE

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 11, **H6105**

PUGET SOUND, WASHINGTON,

1935.

A portable automatic gauge was in operation on the dock at Arletta, Latitude $47^{\circ}17.2'$, Longitude $122^{\circ}40.0'$, from June 20, to August 28, 1935.

A portable automatic gauge was in operation on the dock at Wauna, Latitude $47^{\circ}22.7'$, Longitude $122^{\circ}38.4'$, from August 20, to August 28, 1935.

The tide at Wauna is 18 minutes earlier and the mean range 0.14' greater than at Arletta, as computed by comparison with Seattle.

Since observations at Arletta were over a longer period and a number of the low waters could not be obtained at Wauna (because of insufficient depth at the end of the dock) all sounding on Sheet No. 11 were reduced from readings at the Arletta gauge.

AT ARLETTA, WASHINGTON

Reference Plane M.L.L.W.	4.0 on staff
Highest tide, June 20 - Aug. 28	18.8 on staff
Lowest tide, June 20 - Aug. 28	1.0 on staff

STATISTICS

	Delta	Tender #1	Total
Number of Positions	1058	602	1660
Number of soundings, (handlead)	3095	1671	4766
Number of soundings, (machine)	1235	375	1610
Number of miles of sounding lines	152.5	91.3	243.8

Field Records Section
Hydrographic Survey 6105 Field No. 11 (1935)
North End Carr Inlet - Puget Sound - Washington
Chief of party - L.C. Wilder.
Verification Report.

1. Condition of Records.

The records conform to the requirements of the Hydrographic Manual. ✓

2. Shoreline and Control.

The shoreline and control originate with T-6452(1935) and T-6448(1935). *See P. Remarks* ✓

3. Sounding Line Crossings.

No regular system of cross-lines was run, 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 ~~any~~ aids to navigation within the limits of this sheet. ✓

6. Junctions With Contemporary Surveys.

The junction on the south with H-6103(1935) is satisfactory. ✓
The junction on the southeast with H-6102(1935) will be made when that sheet is verified and inked.

7. Field Plotting.

The field protracting was excellent. Several pencilled soundings were revised since they were plotted in sixths beyond 6 fathoms. ✓

8. Remarks.

The burnt hulls near the mouth of Huge Creek, as well as a few elsewhere, were shown "○". The symbol according to the Hydrographic Manual should be "x" in this case. *accepted ✓*

The shoreline from Δ Horsehead southward to the limits of the sheet was transferred from T-6448(1935) by the undersigned. ✓

Verified and inked by



Oct. 15, 1936.

Leo S. Straw

RAC

TIDE NOTE FOR HYDROGRAPHIC SHEET

August 29, 1936.

Division of Hydrography and Topography:

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

Plane of Reference
~~Tide Reductions~~ approved in
6 volumes of sounding records for

HYDROGRAPHIC SHEET 6105

Locality North End Carr Inlet, Puget Sound, Wash.

Chief of Party: Jack Senior in 1935
Plane of reference is mean lower low water reading
4.0 ft. on tide staff at Arletta
26.4 ft. below B.M. 1

Height of mean high water above plane of reference is 12.4 ft.

Condition of records satisfactory except as noted below:

Chief, Division of Tides and Currents.

Remarks

Decisions

	Remarks	Decisions
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GEOGRAPHIC NAMES

Survey No. H6105

On Chart No. 6460
 On previous survey No. 1674
 On U. S. Quadrangle Maps INDEX
 From local information
 On local Maps
 P. O. Guide or Map
 Rand McNally Atlas
 Orig. Wash. Geog. Light List
 Geog. Names of Wash.

Name on Survey

	A	B	C	D	E	F	G	H	
<u>Burley Lagoon</u> ✓	*	✓		—				✓	1
<u>Huge Creek</u> ✓	*	✓		—					2
<u>Glen Cove</u> (water) ✓	*	✓		—				✓	3
<u>Carr Inlet</u> ✓	*	✓	✓	—			—	✓	4
<u>Raft I</u> ✓	*			—				✓	5
<u>Cutts I</u> ✓	*			✓				✓	6
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Names listed by R.P.K. on 6/12/36

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6105**

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

Number of positions on sheet	1660
Number of positions checked	15
Number of positions revised	0
Number of soundings recorded	6436
Number of soundings revised	25
Number of signals erroneously plotted or transferred	0

Date: Oct. 15, 1936.

Verification by *[Signature]*

Time: 53 min.

Review by Harold W. Murray

Time: 64 "

Ver. Cor. by "

1

✓

HYDROGRAPHIC SURVEY NO. H6105

Smooth Sheet Yes

Boat Sheet 2

Sounding Records 6 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~~ YES

Recoverable Station Cards (Form 524) No

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

Remarks _____

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
PHOTOSTAT OF

No. H **6105**
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	799	DR - 1 Capt Engle
✓ 25	1011	DR - 2-5
26		
30		
40		
62		
63		
82		
✓ 83		Chart shows 1/4 fms where there is ^{now} a sand spit see p. 2 and H6105
88		
90		

RETURN TO

✓ 82	
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C. K. Green *May 13-36*

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6105 (1935) FIELD NO. 11

North End Carr 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 and W. Weidlich
Protracted by - R. J. Sipe
Soundings plotted by R. J. Sipe
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.

The Descriptive Report is clear and comprehensive and satisfactorily covers all items of importance. It is suggested, however, that references to specific items such as soundings (see Descriptive Report, page 4, "Discrepancies") be accompanied by the geographic positions to facilitate spotting on the smooth sheet.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the Instructions for the Project.

3. Shoreline and Signals.

The shoreline and signals are from plane table surveys: T-6452 (1935) and T-6448 (1935).

4. Sounding Line Crossings.

No regular system of cross lines was run, however, the depths on adjacent parallel lines and on the cross lines resulting from the development is satisfactory.

5. Depth Curves.

The usual depth curves may be completely drawn within the limits of the survey.

6. Junctions with Contemporary Surveys.

a. The junctions on the south with H-6103 (1935) is satisfactory.

- b. The junction on the east between lat. $47^{\circ}17'$ and lat. $47^{\circ}18.4'$ with H-6102 (1935) will be considered in the review of that survey.

7. Comparison with Prior Surveys.

H-1445a (1879).

This 1 to 20,000 scale survey covers the entire area of the present survey. The development is fairly close inside the 10 fm. curve but is quite sparse outside of the curve. Allowing for the fact that 3.2 feet must be added to soundings of the old survey to coordinate the planes of reference, depths are generally in good agreement. Several items of interest pertaining to this survey have already been noted in the Descriptive Report (page 5).

8. Comparison with Chart 6460 (New Print dated July 20, 1936).

Within the area of the present survey, the chart is based on surveys discussed in preceding paragraphs and contains no additional information that needs consideration in this review.

9. Field Plotting.

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

10. Additional Field Work Recommended.

Aside from two doubtful soundings discussed in the Descriptive Report (page 4, "Discrepancies", items 4 and 5) which were not investigated in the field and may possibly be a recorder's or leadsmen's error, this survey is complete and no additional field work is required.

11. Superseding Previous Surveys.

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

H-1445a (1879) in part.

12. Reviewed by - Harold W. Murray, Oct. 19, 1936.

Inspected by - A. L. Shalowitz.

C. K. Green Examined and approved:
C. K. Green,
Chief, Section of Field Records.
Ired. L. Peacock
Chief, Section of Field Work.

L. O. Tolbert
Chief, Division of Charts.
Stude
Chief, Division of H. & T.

Applied to Cht. 6460 June 10, 1938 X. ~~W.~~