

6557

6557

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

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic } Sheet No. 1139

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

AUG 5 1940

Acc. No.

State WASHINGTON

LOCALITY
Georgia Strait
Semiahmoo Bay & Drayton Harbor

1939-40

CHIEF OF PARTY

Benjamin A. Sigsbee, U.S.N.

U. S. GOVERNMENT PRINTING OFFICE

CP

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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. 1139

REGISTER NO. 116557

State Washington

General locality Georgia Strait
~~Plaine, Washington~~

Locality Semishmoo Bay & Drayton Harbor

Scale 1:10 000 Date of survey December-January, 1939-40

Vessel WESTDAHL

Chief of Party Benjamin H. Rigg

Surveyed by William F. Deane

Protracted by R. H. Woodcock

Soundings penciled by R. H. Woodcock

Soundings in ~~fathoms~~ feet

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by J. A. McCormick

Verified by do

Instructions dated September 22, 1939

Remarks: Written from boat sheet

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET No. 1139, REG. No. 6557

MOTOR VESSEL WESTDAHL

BENJAMIN H. RIGG, COMMANDING

PROJECT HT-241

1939 - 1940

INSTRUCTIONS:

This survey was made in accordance with the Director's Instructions dated September 22, 1939.

SURVEY METHODS:

Standard survey methods were used throughout. The lines were controlled by sextant fixes; the soundings were taken with hand lead and shoal water fathometer. Specific gravities were taken to determine salinities for fathometer corrections.

CONTROL:

A second order scheme of triangulation formed the control for the topographic party. All signals used were either triangulation or topographic signals.

DISCREPANCIES:

No discrepancies were noted on the boat sheet except at the edges of the channel from Semiahmoo Bay to Drayton Harbor. Since the slope was acute at these places it was quite possible to get different soundings within a few meters of one another.

DANGERS:

A shoal with least depth of 21 feet was found in Lat. $48^{\circ}59.58'$, Long. $122^{\circ} - 46.20'$. This depth is in the deep channel leading to Drayton Harbor.

In Semiahmoo Bay the water is shoal a long distance from shore. The low water line extends out almost to Semiahmoo Light on the southern section of the survey and almost to a large dolphin (DOL) and the Offshore Range Mark in the northern section. The northerly part is particularly foul with piling and dumped refuse. Navigators are safe if they stay west of a line running between the large dolphin (DOL) and the Offshore Range Mark.

In Drayton Harbor there is an enormous low water area which is to be avoided even at high tide. Numerous piles, wreckage, and dumps make high water navigation hazardous even with a shallow draft boat. In Lat. $48^{\circ}58.73'$, Long. $122^{\circ} - 45.24'$ the hydrographic party crossed over a concrete structure, probably piles for a foundation, at high water immediately after obtaining a sounding of 11 feet. This obstruction shows at low water and local knowledge provided us with the information that the spot marked the site of a now defunct mill. Large numbers of boulders exist in the south-

east end of Drayton Harbor but all are inside the low water line. Piles "Submerged" are to be found in all parts of the harbor but are visible at any stage of the tide as far as the hydrographic party was able to determine. All wreckage should be given a wide berth for there is evidence of shoaling in these localities in addition to the ever present submerged foundations, etc.

pile in
lat. 48° 58.4'
long. 122° 45.6'

ADDITIONAL WORK:

No additional work is considered necessary. ✓

CHANNELS:

In entering Drayton Harbor from Semiahmoo Bay a deep channel with a controlling depth of ~~30~~²⁸ feet may be had by passing about 300 meters north of Semiahmoo Light and steering a course that lies about midway between the cannery wharves and the yacht basin. After reaching the cannery wharves it is best to favor the north side of the channel in order to avoid a spit that puts out east-southeast of the cannery. This channel continues at varying depths of ~~from 30~~³⁸ to 72 feet in a general southeasterly direction. A boat may carry 20 feet about 0.8 miles after passing between the cannery and the yacht basin. ✓ ✓

No other low water channels are well enough marked to follow without local knowledge. A channel leads to the concrete foundation (submerged at high water) in lat. 48° 58.73', Long. 122° 45.24' with a least depth of 10 feet. Also from the entrance a channel with a least depth of 7 feet may be steered from lat. 48° 58.25', Long 122° 46.15' to lat. 48° 57.54', Long. 122° 45.47'. A channel to the northward of this, hazardous without local knowledge because of its tortuous course and frequent shoalings. High water passage with a boat drawing not more than 3 feet may be had of Dakota Creek as far as the second bridge. California Creek has its entrance barred by a highway bridge that has no provision for passage of boats; the entrance to this creek may be reached only at high tide with a shallow draft boat. ✓ ✓

ANCHORAGES:

This harbor offers little shelter to any vessels in heavy weather. A decked-over boat may anchor in 2 fathoms of water, mud bottom, in the west central portion of the harbor but may drag anchor if subjected to a blow from the southeast. While engaged in this survey the field party experienced several high winds that whipped up a heavy chop in the harbor and endangered anchored and berthed boats. The safest places for boats in heavy weather are to be found in berths alongside the cannery wharves and alongside the floats in the yacht basin. This latter, place, though deep, is accessible to only ^{small} boats because of the narrow entrance and lack of maneuvering room. The WESTDAHL had some difficulty in tying up in the yacht basin and probably would have found it impossible in a high wind. A sub-plan of the yacht basin, enlarged five times from the 10,000 scale of the sheet, was inked on the ~~boat~~ sheet and a few depths given to show the layout of the haven. ✓ ✓

COMPARISON WITH PREVIOUS SURVEYS:

This sheet was compared with Sheet H 1954, a survey by J. N. Jordan in 1889, and agreements and discrepancies noted. Since a note was appended to the 1889 survey in 1901 stating that all soundings were too deep by 2 feet this addenda was taken into account in the comparison. In Semiahmoo Bay just west of the spit separating the bay from Drayton Harbor the low water

line and the depth curves are in fair agreement. Further to the westward the depth curves of the old survey are inside those of this sheet. Since this report is written from the boat sheet a tidal difference may bring the curves to a closer agreement. In Drayton Harbor the depth curves agree in general. Both surveys show indentations and shallow channels in the same localities. Since the interval between sounding lines of the 1889 survey was greater this would contribute in a measure to the difference. The two rows of piling north of Trap No. 2 shown in the 1889 survey are no longer in existence. A row of piling shown in 1889 as running out from Blaine toward the cannery on the opposite shore is now a breakwater composed of rows of piling forming the core and retaining walls of an earth and stone fill. A row of piling between the Offshore Range Mark and the outer end of the yacht basin was shown in 1889 and is now non-existent. Agreement of curves good.

This sheet was also compared with Sheet 4466a by H. B. Campbell in 1925. The sheets are in fair agreement; most differences occurring on the steep slope of the channel edge. One difference is noteworthy. This party was unable to get a sounding as shoal as the 16 feet in lat. $48^{\circ} 59.58'$, Long. $122^{\circ} 46.23'$ shown on the 1925 survey. The shoaler soundings shown immediately to the north-northwestward of the 16 feet spot in the 1925 survey were not found by this party. This shoal was searched for with a hand lead but not soundings less than 21 feet were obtained. This shoal sounding was obtained about 40 meters ^{north} east of the charted location of the depth of 16 feet. See "Note" attached to this report. *ams*

GEOGRAPHIC NAMES:

No new names are known to exist for any features in this locality. ✓

COAST PILOT NOTES:

All notes to be included in the Coast Pilot will be submitted in a separate report. ✓

LANDMARKS FOR CHARTS:

Landmarks for charts will be submitted on Form 567. ✓

TIDAL DATA:

A portable automatic tide gage was maintained in the yacht basin and the location is shown on the boat sheet. This gage was used for the reduction of all soundings on this sheet. ✓

FATHOMETER CORRECTIONS:

Fathometer corrections will be included in a separate report. Specific gravities were taken every day the fathometer was used. No serial temperatures were necessary because of the shoal water contributing to a lack of change between the surface and bottom readings. ✓

LIST OF SIGNALS:

Triangulation stations;
 Offshore Range Mark
 Boundary Monument No. 5
 Drayton Id. No. 2, 1939
 Sea Bird, 1858

Trap No. 2, 1939
 Farm, 1939
 Play, 1939
 Bluff, 1939

Topographic Stations:

Adam	Dal	Han	Pal
Ale	Der	High	Peace
Am	Dol	How	Peg
Awl	Don	Howl	Pete
Ban	Dray	In	Pole
Bar	Eat	Jig	Red
Ben	Ed	Jim	Reg
Bess	Edge	Ken	Sid
Bil	Eel	Kit	Sin
Bit	El	Lin	Son
Bob	Ex	Low	Tank
Boo	Fin	Lum	Tel
Bow	Flat	Mast	Tie
Burn	Fritz	Nel	Top
Car	Gab	Nix	Tree
Chet	Gag	Nor	Vent
City	Gal	Oh	Yes
Cur	Got	Out	Zim
	Gum		

STATISTICS:

Statute Miles of Sounding Lines.....68.4 fm. - 187.5 H.L.
 Total..255.9

Number of Soundings.....1807 fm. - 7652 H.L.
 Total..9459

Number of Positions.....1966

Area in square statute miles.....9.0

COMMENTS:

Almost half of Drayton Harbor is bare at low water which restricts boat movements to the west central portion. The mid flats that compose almost all the low water area are foul with wreckage of boats and of former industrial enterprises. In the southeast portion of the harbor there are numerous boulders imbedded in the low water mud. The portion of Semiahmoo Bay northerly adjacent to the breakwater leading to the yacht basin is foul with piling and refuse dumpings. No attempts was made to sound east of the breakwater for it was observed to bare at low water and also offered hazards in the way of wreckage to any boat attempting a reconnaissance. Semiahmoo Bay and a small portion of Drayton Harbor has a large amount of eel grass on the bottom.

Only two industries of a major nature are in operation in this vicinity. The Alaska Packing Corporation operates a salmon cannery on the spit between Semiahmoo Bay and Drayton Harbor. A co-operative saw mill is in operation on the north side of the breakwater. Independent fishing is the only other industry connected with the water and this is of a minor nature. Most of the fishermen sell their catch in Bellingham unless the boat load is contracted for by the Alaska Packing Corporation during the salmon run.

Independent commercial fishermen and sportsmen evidenced an interest in the present survey and numerous inquiries were made regarding the date a new chart of this area would be issued. Several requests were made to the field party for a large scale chart in the vicinity of Point Roberts; fishermen insist that this chart is a necessity because of the amount of fishing done in the waters adjacent to the point.

Respectfully submitted,

William F. Deane
William F. Deane
Aid, C. & G. Survey

Approved:

Benjamin H. Rigg
H. & G. E., Chief of Party.

NOTE

While it was felt that at the time of the survey that adequate development of the charted 16 foot spot in Lat. $48^{\circ} 59.59'$, Long. $122^{\circ} 46.22'$ had been accomplished. I now feel that from information contained in the Director's letter dated February 28, 1940, Ref. 80 - DRM that the spot should not be expunged from the chart.

16 retained.

William F. Deane

William F. Deane, Aid

DISCREPANCIES AT CROSSINGS NOTED IN PLOTTING

SMOOTH SHEET

Latitude & Longitude		Position Numbers	Soundings Feet
48	58.48	103b-104b	7
122	47.88	54b	13
48	58.87	115b-116b	9 $\frac{1}{2}$
122	47.62	5b-6b	1 $\frac{1}{2}$
48	58.65	107b-110b	About 2' deeper than the seven crossing lines.
122	48.2		
48	58.65	106b	4
122	47.75	20b	8-9
48	59.58	61c-62c	21' falls among 3', 15', 17' & 19'
122	46.9		
48	59.43	29e-30e	31
122	46.00	106d	7
48	59.44	83d-84d	29
122	45.97		35-44
48	59.33	132e	45
122	45.75	135e	63
		15j-16j	65
48	58.35	138-1--139-1	Line seems 2' too deep
122	46.6		
48	59.57	39e	32' occurs among 37, 38, 39, 41'.
122	46.4		

RCC
MC

TIDE NOTE FOR HYDROGRAPHIC SHEET

September 18, 1940

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. H. R. Edmonston

Plane of reference approved in
6 volumes of sounding records for

HYDROGRAPHIC SHEET 6557

Locality Semiahmoo Bay and Drayton Harbor, Blaine, Washington

Chief of Party: B. H. Rigg in 1939-1940
Plane of reference is mean lower low water reading
2.7 ft. on tide staff at Blaine
18.3 ft. below B. M. 2

Height of mean high water above plane of reference is 8.6 feet.

Condition of records satisfactory except as noted below:



Acting Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES

Survey No. **H6557**

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
<u>Blaine</u>												1
<u>California Creek</u>												2
<u>Dakota Creek</u>												3
<u>Drayton Harbor</u>												4
<u>Semiahmoo Bay</u>												5
<u>Semiahmoo Spit</u>												6
<u>Whatcom County</u>												7
<u>Point Roberts</u>												8
												9
												10
												11
												12
												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25
												26
												27

Names underlined in red approved
by L. H. Cox on 2/27/41

Remarks

Decisions

	Remarks	Decisions
1		489227
2		"
3		"
4		"
5		489228 U.S.G.B
6		489227
7		O.K.
8	Mentioned p. 5.; off limits of sheet.	489230
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6557**

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

Number of positions on sheet	..1966
Number of positions checked14
Number of positions revised	...2
Number of soundings recorded	..9459
Number of soundings revised27
Number of soundings erroneously spaced16
Number of signals erroneously plotted or transferred0

Date: June 10, 1941

Verification by J. A. McCormick Time: 70 hrs.

Review by do 6/12/41 Time: 14 hrs.

HYDROGRAPHIC SURVEY NO. H6557

Smooth Sheet One

Boat Sheet One

Records; Sounding 6 Vols., Wire Drag Vols., Bomb Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes

Landmarks for Charts (Form 567) Yes

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) -----

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

Hydrography: Total Days ; Last Date

Remarks _____

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
PHOTOSTAT OF

No. H H6557
~~XXXXX~~

received Aug. 5, 1940
registered Aug. 5, 1940
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>MBR</i>	Pages 1 to 5
26			
30			
40			
62			
63			
82			
83	✓ <i>CRG</i>		Page 5 ✓
88			
90			

RETURN TO

82	T. B. Reed
----	------------

✓ MBR

DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF HYDROGRAPHIC SURVEY NO. 6557 (1939-40) FIELD NO. 1139

Washington; Georgia Strait; Semiahmoo Bay and Drayton Harbor
Surveyed in December 1939 - January 1940, Scale 1:10,000
Instructions dated September 22, 1939 (WESTDAHL)

Soundings: Hand Lead
Dorsey III Fathometer

Control: Sextant Fixes on
Shore Signals

Chief of Party - B. H. Rigg
Surveyed by - W. F. Deane
Protracted by - R. H. Woodcock
Soundings plotted by - R. H. Woodcock
Verified and inked by - J. A. McCormick
Reviewed by - J. A. McCormick, June 12, 1941
Inspected by - H. R. Edmonston

1. Shoreline and Signals

Shoreline and topographic signals are from T-6738
(1939-40).

2. Sounding Line Crossings

Discrepancies at crossings were mostly on steep slopes.
A few glaring differences obviously resulted from errors
in observing or recording angles and were adjusted in
this office.

3. Depth Curves

Satisfactory.

4. Junctions with Contemporary Surveys

Adjoining surveys were planned but not accomplished
during the 1939-40 field season. Overlaps with older
surveys are satisfactory.

5. Comparison with Prior Surveys

H-405 (1855), 1:212,000; H-603 (1857), 1:20,000;
H-709 (1858-59), 1:100,000; H-1954 (1889-1924), 1:10,000;
H-4466a and b (1925), 1:10,000

H-405 and H-709 are small scale reconnaissance surveys which give fair generalizations of the area. H-603 and H-1954 are fairly detailed surveys agreeing quite closely with the present survey. Additional work was done on H-1954 in 1924 in order to investigate the reported grounding of the S.S. BAXTER on April 23, 1923. Least depth found was 20-1/2 feet in Lat. 48° 59.6', Long. 122° 46.2'. On March 31, 1925, the S.S. DOROTHY ALEXANDER broke her propeller and damaged her hull plating on an obstruction believed to be either a wreck or a large boiler. Investigation on H-4466a (1925) found 16 feet, hard bottom, at the position of the previously determined 20. Drag strips at effective depths of 21 feet on H-4466b passed over the 16-foot spot without hanging. The drag work was rejected. The 16 was investigated on the present survey but least depth found was 21 feet. The 16 is being retained. Other material on the old surveys is superseded.

6. Comparison with Chart 6399 (New print of March 25, 1941)

The new edition of chart 6399 was compiled principally from the present survey in advance of verification.

7. Condition of Survey

Satisfactory.

8. Compliance with Instructions for the Project

Satisfactory.

9. Additional Field Work Recommended

None.

10. Superseded Surveys

H- 405	in part
H- 603	" "
H- 709	" "
H-1954	" "
H-4466a	entirely

Examined and approved:

Thos O. Reid
Chief, Surveys Section

J. S. Borden
Chief, Division of Charts

C. J. Green
Chief, Section of Hydrography

G. H. Hude
Chief, Division of Coastal Surveys

Applied to Chart drawing No. 6399 before verification and
review. - Review read - JTW 10/7/41

B.P. Feb. 4/41

Applied to Chart drawing No. 6300 }
Three Chs. Drawing No. 6399 . }

B.P. Mar. 18/41