

6650

Form 504
Rev. April 1935

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 1140 (Field)
Hydrographic } H 6650

U.S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

OCT 2 1942

Acc. No. _____

State WASHINGTON

LOCALITY

GREEN POINT TO ~~SEA~~ DUNGENESS

STRAIT OF JUAN DE FUCA

1942

CHIEF OF PARTY

F. B. T. Siems

6650

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. H6650

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. 1140

REGISTER NO. H-6650 H6650

State WASHINGTON

General locality STRAIT OF JUAN DE FUCA

Locality GREEN POINT TO ~~NEW~~ DUNGENESS

Scale 1:10,000 Date of survey Nov. 15 - Dec. 18, 1940

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

Chief of Party F.B. T. Siems

Surveyed by E. B. Latham and C. J. Wagner

Protracted by R. M. Sylar

Soundings penciled by R. M. Sylar

Soundings in fathoms ~~xxx~~ Fathoms

Plane of reference Mean Lower Low Water

Subdivision of wire dragged areas by

Inked by A. R. STIRNI

Verified by A. R. STIRNI

Instructions dated Sept. 22, 1939 and Sept. 27, 1940, ~~xxx~~

Remarks: Smooth Sheet and Plotting by the
Seattle Processing Office.

U.S.C. & G.S. SHIP EXPLORER,

F. B. T. Simms, Commanding.

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SHEET NO. 1140

H-6650

Green Point to New Dungeness,

STRAIT OF JUAN DE FUCA, WASHINGTON.

INSTRUCTIONS: This sheet is a part of Project H-T-241, covered by Instructions dated Sept. 22, 1939, to Commanding Officers SURVEYOR, WESTDAHL and E. LESTER JONES, and supplemental Instructions dated Sept. 27, 1940 to Commanding Officer, EXPLORER.

LIMITS AND JUNCTIONS: Limits of Hydrography are from Lat. $48^{\circ} - 10.6'$, Long. $123^{\circ} - 08.6'$ southwestward along the outer shore of Dungeness Spit and the south shore of the Strait of Juan de Fuca to Lat. $48^{\circ} - 07.0'$, Long. $123^{\circ} - 16.6'$; thence Northward to Lat. $48^{\circ} - 09.2'$, Long. $123^{\circ} - 16.6'$; joining sheet No. 1040 to the westward; thence in an E x N direction to Lat. $48^{\circ} - 09.3'$, long. $123^{\circ} - 15.5'$; thence north to Lat. $48^{\circ} - 09.8'$, Long. $123^{\circ} - 15.5'$; thence E x N to Lat. $48^{\circ} - 12.3'$, Long. $123^{\circ} 08.6'$; joining sheet 4040 to the north; thence south to the point of beginning, joining sheet No. 1240 to the east.

Overlap with sheet ^{H-6649} 1040 is between Long.'s $123^{\circ} - 16.3'$ and $123^{\circ} - 16.6'$ Lat.'s $48^{\circ} - 07.0'$ and $48^{\circ} - 09.2'$ Overlap with sheet No. 4040 was from ^{H-6653} 0.4 to 0.6 miles along the northern limits. A considerable part of this

overlap was development of features disclosed by hydrography on sheet No. ^{H-6653} 4040. Overlap with sheet No. ^{H-6651} 1240 was between Long.'s $123^{\circ} - 08.6'$ and $123^{\circ} - 09.0'$, Lat.'s $48^{\circ} - 10.6'$ and $48^{\circ} - 11.3'$.

SURVEY METHODS: Control was from Topographic Sheets C-40 and D-40, ^{T6818 (1940) T6819 (1940)}

EXPLORER, 1940, a part of this Project. Sounding lines

H6650

were controlled by sextant fixes on shore objects. ✓

A small amount of the hydrography was done by the U. S. C. & G. S. S. EXPLORER, but the greater part was done by ship's launches equipped with the type 808 depth recorder. Hand lead and wire soundings were taken for bottom samples and fathometer comparisons. In this connection it may be remarked that several vertical casts, taken for an even distribution of bottom samples are in areas unsuitable for fathometer comparison due to irregular bottom. ✓

During the progress of this work, it became apparent that the 808 recorders were in need of servicing. Speed corrections were required in some instances, due to reduction in speed of the instruments. Speed variation is apparently due to burning or pitting of governor contactpoints and in part to lessened efficiency of the driving motor from dirty commutators, etc., Polishing of the contacts regulating the outgoing signal is also indicated. Servicing of the instruments was accomplished without difficulty by the radio operators. ✓

During the progress of the work, where speed corrections were found necessary, closer spacing of lines was provided. The area between Lat. $48^{\circ} 08.6'$, Long. $123^{\circ} 12.0'$; Lat. $48^{\circ} 07.7'$ Long. $123^{\circ} 16.5'$; Lat. $48^{\circ} 08.0'$, $123^{\circ} 16.5'$ and Lat. $48^{\circ} 09.0'$ Long. $123^{\circ} 12.0'$ is especially mentioned. ✓

Several cross lines, with crossings of speed corrected soundings and uncorrected soundings were reduced for speed correction and plotted on the boat sheet with satisfactory agreement. It is suggested that additional comparison and inspection be made after smooth plotting. ✓

Bar checks and speed counts were made at least three times daily. Bar checks were taken at 2, 4, 7 and 10 fathoms depth where depth of water and condition of sea were favorable

ORGANIZATION OF PARTY: Usual organization consisted of the hydrographer, in charge, one or two junior officers or Maritime Commission cadets for observing sextant angles, engineer, coxwain, recorder, and one seaman, who read the fathometer and assisted with vertical casts, bar checks, etc. The assignment of this extra man is recommended.

In general, errors in reading the fathometer were less than in the Alaska work, due, no doubt, to more regular bottom, and the comparative absence of kelp shadows. Graph scanning was done more quickly than in the Alaska work.

DISCREPANCIES: The junction with Sheet No. ^{H 6649 (1940)} 1040 is satisfactory. This junction is in an area of lumpy bottom, as indicated on each sheet separately.

A number of cross lines were run in this area in order to secure definite crossings and junction between the two sheets.

Junction with Sheet No. ^{H 6653 (1940-43)} 4040 is satisfactory, except as noted: Lat. 48 - 10.9 , Long. 123 - 10.0: 63 fathoms by the EXPLORER (first sounding before position 7 Z) in 61 fathoms by the launch (position 12 1). The positions were carefully re-plotted on Sheet No. ^{H 6652 (1940-41)} 2040 (Both on same sheet) but no change was obtained by the re plotting, and entering the reduced soundings. There are a number of 1 fathom crossings in this vicinity., Inspection of the graphic record of the 808 depth recorder reveals a saw toothed bottom, such as might be obtained over a bottom composed of fairly large boulders. It appears not unreasonable to attribute one fathom difference between the recording and indicating fathometers due to such a type of bottom. Extra lines were run by the launch in this area. Agreement between the several lines by the launch is satisfactory.

In Lat. 48 - 11.1, Long. 123 - 09.2 ^{H 6653} 64 fathoms (4040) in depths of 58 - ^{H 6650 (1940)} 59 fathoms (1140). It appears due to an error in reading the fathometer.

A line was run over this area by the EXPLORER which proves the depths shown on Sheet ^{H6650} 1140. It is recommended that the 64 fathom sounding be re-

jected. Sounding is second sounding after position 6 V.

Lat. 48 - 11.2, Long. 123 - 09.3. Sounding of 67 fathoms, Sheet ^{H6653} 4040, second sounding after position 54 V, in depths of 57 fathoms on sheet ^{H6650} 1140.

It is evident that the 67 fathom sounding is a result of ten fathoms error in recording. All indications are that this sounding should have been recorded as 57 fathoms instead of 67. The record has been corrected accordingly.

H6650

~~be rejected.~~

In Lat. $48^{\circ} 10.7'$, Long. $123^{\circ} 09.6'$, a reversal of depth trend at the steep outer slope of the terrace. A slight shift in position will rectify this condition, and may be accomplished in the smooth plotting.

OK
OK.

DANGERS: The deep water extends quite close to shore in Lat. $48^{\circ} 10.5'$, Long. $123^{\circ} 08.7'$, with very rapid shoaling and very small area of moderate depth between the 20 fathom curve and the low water line. The 20 fathom curve is but 0.2 mile from the high water line and but 0.1 mile from dangerous depths. Vessels navigating on soundings alone in thick weather should exercise caution in this area.

There is a sunken rock, marked by a light growth of kelp in Lat. $48^{\circ} 07.3'$, Long. $123^{\circ} 15.3'$, with a least depth of 13 feet. The rock is 0.3 mile offshore. Least depth, first sounding after Position 149 "f" day. There is a reef, extending 0.1 mile offshore off the point in Lat. $48^{\circ} 07.0'$, Long. $123^{\circ} 15.2'$.

83

CHANNELS: No channels are covered by this hydrography.

ANCHORAGES: Anchorage for all sizes of vessels is available in suitable depths west of Long. $123^{\circ} 10'$. Steep slopes and limited area of anchorage depths east of this point make the area unsuitable for anchorage. shelter from southerly weather in this area.

COMPARISON WITH PREVIOUS SURVEYS: A rock awash, Lat. 48 - 07.15, Lon.

123 - 15.2 is shown on Chart No. 6382. When this rock is plotted by reference to the shore line as shown on the chart, it is in satisfactory agreement with the rock awash shown on topographic sheet No. C-40. There is a sunken rock with a least depth of thirteen feet in Lat. 48 - 07.3, Long. 123 - 15.3 See under DANGERS. ✓

Several
rocks
carried
forward to
T-6818 (1940)
from
T-4193 (1926).

Several rocks awash, close inshore are in this locality, have been located by topography. ✓

Comparison of depth curves and soundings transferred from the chart are satisfactory. ✓

GEOGRAPHIC NAMES: No comment. ✓

GENERAL DISCUSSION: Work was commenced on November 15, 1940, and ended on December 18, 1940. During much of this time difficulty was experienced from poor visibility. On all days of comparatively clear weather, work was carried on at or near the limit of visibility. ✓

General conformation of the bottom is a wave built terrace, extending, with gradual deepening, to the northern limit of the work at the western end of the sheet. To the eastward the outer break of the terrace becomes more pronounced and approaches the shore, approaching to within 0.2 mile of the beach at the eastern end of the sheet. There is no continuation of topographic features across this terrace. ✓

Vessels towing logs usually pass close to shore when east bound, especially during the ebb of the current. ✓

While work was being done on this sheet, a crew of log salvagers was salvaging logs from the beach. Some signals were lost due to this activity, and some were washed away by storms. ✓

H6650

part to storms.

TIDAL NOTE: Auto-portable tide gages were maintained at Port Angeles and Dungeness Bay. The former was maintained from October 23 to December 17th, 1940 and the latter from December 10th, 1940 to January 12th, 1941. Tide reducers for this sheet are applied on the basis of Port Angeles plus 15 minutes and/or Dungeness minus 15 minutes.

STATISTICS:

	EXPLORER	LAUNCHES	TOTAL
Statute miles sounding line	15.6	442.1	457.7
Soundings with Fathometer	311	7230	7541
Soundings with handlead	0	22	22
Soundings with wire	1	6	7
Positions	55	1940	1995
Area in Square statute miles			17.7

Speed corrections were applied on "b", "g", and "h" days.

Respectfully submitted,

Ector B. Latham
 Ector B. Latham, Jr. H. & G. E.

Forwarded:

F. B. T. Siems
 F. B. T. Siems,
 Comdg. EXPLORER

5

APPROVAL SHEET

to accompany

SHEET NO. 1140

A-6650

The boat sheet and the accompanying records have been
inspected and are approved. The smooth sheet is yet to
be plotted. ✓

F. B. T. Siens

F. B. T. Siens,
Comdr. C. & G. S.
Commanding Officer.

Hydrographic Sheet
H-6650

TIDAL DATA

Washington

Green Point to Dungeness

Port Angeles Portable Automatic Gage

These tides, plus 15 minutes time correction, used for
reducers from Nov. 15 "a" day through Dec. 14, 1940
"n" day.

- Latitude
- Longitude
- Staff reading of MLLW 1.8 feet
- Highest tide observed
- Lowest tide observed

Dungeness Bay Portable Automatic Gage

These tides minus time correction of 15 minutes, were
used for reducers from Dec. 17 "A" day to Dec. 18, 1940
"p" day.

- Latitude48° 09'.6
- Longitude 123° 06'.9
- Staff reading of MLLW 1.4 feet
- Highest tide observed
- Lowest tide observed

H-6650

ADDITIONAL NOTES BY THE SEATTLE PROCESSING OFFICEDiscrepancies --

Lat. & Long.	Position No.	Depth Fathoms	Remarks
48° 09'.9 123° 11'.5	81m to 82m 44g to 45g	6 4/6 7 1/4	O.K.
48° 09'.8 123° 15'.0	21p to 25p	21 to 20 fms.	Line appears 1 to 2 fms. shoal. Average diff. 1/2 fm.
48° 07'.9 123° 16'.25	11p to 12p 12f to 13f	8 1/4 to 8 3/4 9 to 9 1/4	O.K.
48° 08'.05 123° 14'.5	95d to 96d 70p to 71p	6 5/6 7 1/4	O.K.
48° 08'.85 123° 11'.3	184f to 186f	No.	4 Soundings over 5 fms. appear about 1 fm. too deep.
48° 09'.8 123° 12'.1	62g to 66g Plotted and retained.		Soundings omitted along this line due to confusion as to just where positions occur in record book, and bad crossings.

Additional Dangers

48° 07'.65 123° 14'.54	81f to 82f	3 1/6 fms.	Possibly needs additional development. ✓
---------------------------	------------	------------	--

Corrections on "b" day. H-6650.

Throughout "b" day the fathometer operation was not satisfactory. The bar test was good on the beginning work. At noon the bar test showed errors of 4 ft., 2 ft., and 1 ft. at depths of 2, 4, and 7 fathoms. The Ship's officers prepared and inserted the reducers, applying values for index and speed corrections to the fathometer, and the tide correction of course. ✓

Before lettering the soundings on the smooth sheet they were placed upon an overlay. They show depths from 1/4 to 3/4 fathoms deeper than soundings of adjacent days' work, the prevailing differences being ✓

H6650

W. L. P.
8

1/4 to 1/2 of a fathom. The soundings were then entered on the smooth sheet. The increased depth did not seem to make any important difference in the curves. The overlay is forwarded with the Smooth Sheet. Overlay destroyed. ✓

Roy M. Sylar
Roy M. Sylar
Sr. Triangulation Observer

Approved and forwarded:

F. H. Hardy

F. H. Hardy
Captain, U.S.C. & G.S.
Officer in Charge,
Seattle Processing Office

R.a.e.
HRL

TIDE NOTE FOR HYDROGRAPHIC SHEET

October 15, 1942.

~~Division of Hydrography and Topography:~~

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

Plane of reference approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 6650

Locality Green Point to Dungeness, Strait of Juan de Fuca, Washington

Chief of Party: F. B. T. Siems in 1940
Plane of reference is mean lower low water reading
1.9 ft. on tide staff at Port Angeles
24.9 ft. below B. M. 6
1.4 ft. on tide staff at ~~New~~ Dungeness
14.4 ft. below B. M. 3 (1926)

Height of mean high water above plane of reference is 6.5 feet
at Port Angeles; 6.9 feet at ~~New~~ Dungeness.

Condition of records satisfactory except as noted below:

E. H. Green

Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES

Survey No.
H6650

Name on Survey

On Chart No. On previous survey No. On U. S. Quadrangle Maps From local information On local Maps P. O. Guide or Map Rand McNally Atlas U. S. Light List

Name on Survey	A	B	C	D	E	F	G	H	K	
<u>Dungeness</u>										1
<u>Green Point</u>										2
<u>Strait of Juan de Fuca</u>										3
										4
<u>Dungeness Spit.</u>										5
										6
										7
										8
										9
										10
<u>Port Angeles</u>										11
<u>Dungeness</u>										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Names underlined in red approved
by L. Heck on 6/1/42

Remarks

Decisions

1		481231 U.S.G.B.
2		481232
3		U.S.G.B.
4		
5		481231 U.S.G.B.
6		
7		
8		
9		
10		
11	Location of tide staff	
12	" " " "	
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6650**

Records accompanying survey:

Boat sheets ^{one}.; sounding vols. (8)..; wire drag vols.;
 bomb vols.; graphic recorder rolls (3)..;
 special reports, etc.

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

Number of positions on sheet	.199.5
Number of positions checked	..20..
Number of positions revised	..00..
Number of soundings recorded	..7570 + { intermediate sndgs inside 5 fm curve
Number of soundings revised (refers to depth only)	..54..
Number of soundings erroneously spaced	..10..
Number of signals erroneously plotted or transferred
Topographic details	Time ..8..
Junctions	Time ..8..
Verification of soundings from graphic record	Time ..32..

Verification by...*A. P. STIRNI*..... Total time .120. Date *June 8, 1943*

Review by ...*J. A. M^c Cormick*..... Time ..5 hrs. Date *June 10, 1943.*

6-19
1170

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
~~PHOTOSTAT OF~~

No. H **H6650**
~~No. T~~

received Oct. 12, 1942
registered Oct, 12, 1942
verified
reviewed
approved

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

ROUTE		Initial	Attention called to
20			
22			
24			
25			
26			
30			
40			
62			
63			
82			
✓ 83	Pg 4 & 7		
88			
90			

RETURN TO

82	R. W. Knox
----	------------

DIVISION OF CHARTS

REVIEW SECTION - SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6650 (1940)

Field No. 1140

Washington; Strait of Juan de Fuca; Green Point to Dungeness
Surveyed in Nov. - Dec. 1940, Scale 1:10,000
Instructions dated Sept.22, 1939(Surveyor)and Sept.27, 1940(Explorer)

Soundings:

808 Fathometer
Dorsey Fathometer

Control:

Three-point fix on shore signals

Chief of Party - F.B.T. Siems
Surveyed by - E.B.Latham; C.J.Wagner
Protracted by - R. M. Sylar
Soundings plotted by - R. M. Sylar
Verified and inked by - A.R. Stirni
Reviewed by - J. A. McCormick
Inspected by - H. R. Edmonston Date - June 10, 1943

1. Shoreline and Signals

Shoreline and topographic signals are from T-6818 and T-6819 of 1940.

2. Sounding Line Crossings

The Processing Office notes several apparent discrepancies of 3 to 4 ft. at crossings, but none is more serious than the usual run of discrepancies in any, but the most uniform bottom.

3. Depth Curves

Satisfactory.

4. Adjoining Surveys

Satisfactory junctions were effected with H-6649 (1940) on the west and H-6651 (1940) on the east. H-6652 (1940-41) on the north has only a few lines of soundings, but those which overlap the present survey are in good agreement with the latter. H-6653 (1940-43) is a comprehensive survey of the area to the north, but it had not been verified at the date of this review. It also covers the gap at the northwest corner of the present survey.

5. Previous Surveys

H-333(1852), 1-215,000; H-1629 (1884), 1-80,000; H-2211 (1894), 1-40,000.

H-1629 is authority for most of the information previously available in this area. For the small scales on which it was made (1-80,000), it agrees fairly well with the present survey. The other two surveys are of little consequence in this particular area.

6. Comparison with Chart 6382 (New Print of Dec. 23, 1942)

Critical depths on the present survey have already been applied to the chart. Other information in the area is from superseded surveys mentioned in the preceding paragraph.

7. Condition of Survey

Satisfactory.

8. Compliance with Project Instructions

Satisfactory.

9. Additional Field Work Recommended

Development of the 3 1/6 fathom pinnacle in lat. 48° 07.6', long. 123° 14.5' might disclose slightly shoaler depths. Otherwise, the survey is complete.

10. Superseded Surveys

H- 333 in part
H-1629 " "
H-2211 " "

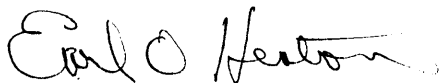
Examined and approved:



Chief, Surveys Branch



Chief, Division of Charts



Chief, Section of Hydrography



Chief, Division of Coastal Surveys

Applied only the most critical depths to Chs. 6300 GR. 12/7/42
" " " " " " " " 6382 GR. 12/14/42

Applied to chart 6382 (after review) June 16, 1943. L.A.M.
" " " 6300 (after review) June 19, 1943. L.A.M.

6382 Revised rock symbolization on chart through 1968
memo.