

6615

U. S. COAST & GEODETIC SURVEY  
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Form 504  
Ed. June, 1928

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
L. O. Colbert, Director

State: WASHINGTON

**DESCRIPTIVE REPORT**

~~Topographic~~ } Sheet No. H-6615 & ~~H-6617~~  
Hydrographic }

LOCALITY  
Strait of Juan de Fuca  
~~ROGARIO STRAIT~~

West Coast of Whidbey Island

1940-41

CHIEF OF PARTY  
ROBERT W. KNOX

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO. H6615

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. 1240

REGISTER NO. H-6615

State Washington

General locality Strait of Juan de Fuca  
~~Rosario Strait~~

Locality West Coast of Whidbey Island

Scale 1:10,000 Date of survey Nov. 1940 - Jan., 1941

Vessel U.S.S. SURVEYOR

Chief of Party ROBERT W. KNOX

Surveyed by V.M. Gibbens and A.C. Thorson

Protracted by R. H. Woodcock

Soundings penciled by R. H. Woodcock

Soundings in fathoms ~~feet~~

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by John K. Hartsocks

Verified by John K. Hartsocks

Instructions dated Sept. 22, 1939

Remarks: Projection and smooth plotting by Seattle

Processing Office

DESCRIPTIVE REPORT

H6615

to accompany

Hydrographic Sheet H-6615 (Field No. 1240)

U.S.C. & G.S.S. SURVEYOR

Project HT-241

Robert W. Knox, Commanding  
Winter Season, 1940-41

AUTHORITY

This survey was executed under authority of the Director's instructions of September 22, 1939 and September 27, 1940. ✓

LOCALITY

This sheet covers the inshore area of the western shore of Whidbey Island from latitude 48°15' to 48°21', and extends from the shoreline an average of about 2-1/2 miles offshore. ✓

JUNCTION WITH OTHER SHEETS

This sheet joins H-6614 (1940) on the south, H-6617 (1940) on the north and H-6612 (1940) on the west to as far north as latitude 48°19', there being no recent surveys north of this point. EXPLORER's 1941 survey H-6747 fills the gap.

CONTROL

The shore line and signals are from contemporary topographic sheets, register numbers T-6768<sup>(1940)</sup> and T-6769<sup>(1940)</sup>. ✓

METHOD OF SURVEY

This is a combination of ship and launch work. Standard methods, sextant and protractor, were used for locating the vessel's position throughout. The Dorsey Fathometer was used on the ship and the 808 recording fathometer on the launch. Difficulty in keeping the initial constant was had with the 808 recorder. In shifting from fathoms to feet or vice versa a jump of about 4 feet was noticed in the initial.

On "c" day, Reg. No. 6615, a bar check in the morning, at the beginning of the afternoon, and at the end of the day's work checked the initial. When the soundings were plotted on the sheet a uniform discrepancy of 1 fathom was ✓

noted with previous adjacent work, for the morning's work only. Subsequent cross lines, carefully checked, showed the error to be in "c" day and the soundings were corrected accordingly. Subsequent work was constantly checked with the hand lead, a cast being taken on practically every position.

On "e" day a "creeping" tendency was noticed in the initial while it was recording in feet, starting from -1 foot correction at the beginning of the day's work it increased to -6 feet as noon approached. During the afternoon the recording was on the fathom scale and no trouble was experienced. All necessary corrections are itemized inside the cover of Volume No. 1 ~~of both sheets.~~

Initial appears to be O.K. Variable speed probable.

COMPARISON WITH PREVIOUS SURVEYS

H-405 (reconnaissance) surveyed in 1853, scale approximately 1:211,000. No copy of this survey was furnished the field party.

H-1886, surveyed in 1888, scale 1:20,000.

A great many of the soundings from this survey were transferred to the boat sheet. No important differences were noted during the course of the survey, although many discrepancies ranging from 1 foot to 6 feet in depths varying from 2-1/2 fms. to 27 fms. were noted. In the greater depth the present survey shows an average of somewhat less than 1 fathom more water than the previous survey, while the discrepancies in the shoaler areas are about evenly divided between more and less water. Attention is called to a 12-foot difference in 20 fms. in latitude 48°20.0', longitude 122°42.8'. Many of the soundings from H-1886 in the vicinity of latitude 48°19.0' and longitude 122°42.8' are 3 and 4 feet shoaler than the present survey.

Differences mostly inshore where changes are probable. See par. 4, Review.

Agreement good in both instances.

GENERAL DESCRIPTION

Bottom slopes are gradual and uniform with sand bottom predominating. Kelp is general along the few rocky sections of coast; these being near the southern end of H-6615 except for the one rocky outcrop at Station FINGER 1939 at latitude 48°19.7'.

OFFLYING DANGERS

There are none.

CROSS LINES

Slight discrepancy in the crossings run on "h" day (launch) were noted, but a critical investigation must await the smooth plotting of the sheet.

Summarized by Processing Office in attached "Notes"

DISCREPANCIES

Between position 115 - 116 "c" day, latitude  $48^{\circ}17.2'$ , longitude  $122^{\circ}44.5'$ , a sounding of 6 fathoms appears between soundings of  $6-4/6$  fathoms. This sounding appears on the fathometer roll as a detached flash. No investigation was made of this, as it was not discovered until the field season had been closed. Another 6, fairly authentic, 0.1 mi. NW between 7 and  $7\frac{1}{4}$  fms.

There are no other discrepancies in evidence.

original prepared and  
signed by G. A. Nelson,  
Jr. H. & G. Eng'r

*Approved & forwarded:  
Robert W. King  
Commanding U.S. Surveyor.*

H6615

STATISTICSRegister No. 6615

DATE	DAY	VESSEL	MILES (Stat.)			NO. SDGS.			POS.	VOLS.	AREA
			Fath.	V.C.	Total	Fath.	V.C.	Total			
1940											
Dec. 17	a	Launch No. 2	25.2		25.2	951		951	129		
19	b	"	37.5		37.5	1473	1	1474	191		
20	c	"	38.6		38.6	1577		1577	197		
21	d	"	28.0		28.0	1203	126	1329	167		
22	e	"	40.0		40.0	1597	71	1668	210		
23	f	"	22.7		22.7	1143	47	1190	139		
1941 Jan. 3	g	"	27.3		27.3	1122		1122	158		
4	h	"	26.6		26.6	1205		1205	160		
Sub total	8				245.9	10272	245	10517	1351	8	
1940 Nov. 28	A	Ship	43.5		43.5	986	2	988	168		
Dec. 18	B	"	23.5		23.5	460		460	80		
1941 Jan. 5	C	"	7.4		7.4	173		173	30		
7	D	"	68.7		68.7	1635	2	1637	230		
8	E	"	21.8		21.8	480	2	482	82		
Sub total	5				164.9	3734	6	3740	590	8.2	
TOTAL	13				410.8	14006	251	14257	1941	16.2	

LIST OF SIGNALS

Register No. H-6615

H6615

Low 1940  
Lake 1939  
Finger 1939

From T-6768

From T-6769

Bat  
Boy  
Brite  
Car  
Cow  
Drip  
Dog  
Dull  
~~Eva~~ *EVA*  
Foo  
Gus  
Ham  
He  
Ike  
Jig  
Lad  
Lu  
Moe  
Ole  
Pop  
Rat  
Rim  
Roof  
Sob  
Sow  
Try  
Up  
Use  
Zoo

At  
Bang  
Barn  
Bet  
Bug  
Gal  
Good  
Hit  
Kis  
Ner  
Nob  
Ox  
Pod  
Rain  
Ray  
Shed  
Silo  
Slat  
Slay  
Stein  
Tar

TIDAL NOTE

The reducers used in the reduction of sounding on sheet H-6615 were obtained from the records of the auto-portable gage at Fort Worden.

Latitude	48°08.25'
Longitude	122°45.53'
M.L.L.W. on staff	3.9 feet



H6615

APPROVAL OF CHIEF OF PARTY


Hydrographic sheet H-6615 and accompanying records have been inspected and approved by me. The work was accomplished under my immediate supervision. No additional work is considered necessary.

CURRENTS

The SURVEYOR anchored close to the western shore of Whidby Island, between latitude 48°18' and 48°22' on various nights. These anchorages were about one-half mile offshore. Current observations were taken with a current pole during the night watches.

It was found that the current near the shore seldom exceeded one-half knot even when currents of six or seven knots were predicted for Deception Pass, which is situated about three miles north of the anchorages. It was noted that the current set in a general southwesterly direction both when the current was flooding and when the current was ebbing in Deception Pass. The currents at the anchorages must therefore be eddy currents and not part of the main tidal stream.

Respectfully submitted,



Robert W. Knox  
H. & G. Engineer  
Commanding Ship SURVEYOR

H6615

ADDITIONAL NOTES BY SEATTLE PROCESSING OFFICE - Sheet H-6615

JUNCTIONS:

The junction between sheets H-6615 and H-6617 is good except for two 10 fm. soundings on H-6617 occurring among 7 and 8 fm. soundings on H-6615 in Lat. 48° 20.90', Long. 122° 41.35'. ✓

BAD CROSSINGS:

There seems to be a slight discrepancy in the soundings on the five crossings run on "h" day (launch). In each instance the soundings on the cross lines seemed to run a little shallow in comparison, ranging from 1 foot towards shore to 1 fathom farthest from shore. Crosslines by 808 Recorder. Others by Dorsey III

In each line beginning at the northernmost one and coming south in order, the differences extended from:

- (a) Pos. 117h to Pos. 123h - - - - 3 ft. to 1 fathom 15-34 fms.
- (b) " 124h " " 128h - - - - 1 fathom 26 fms.
- (c) " 142h " " 143h - - - - 1 fathom 26 fms.
- (d) " 147h " " 149h - - - - 1 fathom 29 fms.
- (e) " 158h " " 160h - - - - 2 ft. to 1 fathom 8-18 fms.

Lat. 48° 18.45'	Pos. 1e - 2e	Soundings and time are not right. Soundings too shallow; 1/6 fm. among 1-1/6 fm., etc.	Retain 1/6. Possible although on turn.
Long. 122° 43.30'			
Lat. 48° 18.35'	Pos. 56h	1-2/6 fm. ✓	
Long. 122° 43.38'	Pos. 3e	5/6 fm.	

*Philip C. Moran* Dec. 10, 1941  
Geo. L. Bean  
Officer in Charge  
Seattle Processing Office

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6615**

Records accompanying survey:

Boat sheets 97<sup>a</sup>.; sounding vols. (11).; wire drag vols. ....;  
bomb vols. ....; graphic recorder rolls (6)...;  
special reports, etc. Corrections to Fathometer Soundings filed with  
H. 6617, ... (3) overlay Tracings.....

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

Number of positions on sheet	.1941
Number of positions checked	..26.
Number of positions revised	...3.
Number of soundings recorded	.14,257
Number of soundings revised (refers to depth only)	...14.
Number of soundings erroneously spaced	...0.
Number of signals erroneously plotted or transferred	...0.
Topographic details	Time ..1 $\frac{1}{2}$ hrs.
Junctions	Time ..36.
Verification of soundings from graphic record	Time ..32.

Verification by *John K. Hartsock*..... Total time .278 Date .7/19/43

Review by *J. A. McCormick*..... Time 20 hrs. Date 7/28/43.

DIVISION OF CHARTS

REVIEW SECTION - SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY REGISTRY NO. 6615 (1940-41)

Field No. 1240

Washington; Strait of Juan de Fuca;  
West Coast of Whidbey Island  
Surveyed in November 1940 and January 1941;  
Scale 1:10,000  
Instructions dated September 22, 1939 and  
September 27, 1940 (SURVEYOR)

Soundings:

808 Fathometer  
Dorsey Fathometer

Control:

Three-point fix on shore signals

Chief of Party - R. W. Knox  
Surveyed by - V. M. Gibbens; A. C. Thorson  
Protracted by - R. H. Woodcock  
Soundings plotted by - R. H. Woodcock  
Verified and inked by - J. K. Hartsock  
Reviewed by - J. A. McCormick  
Inspected by - H. R. Edmonston, July 28, 1943

1. Shoreline and Signals

Shoreline and topographic signals are from T-6768  
and T-6769 of 1940.

2. Sounding Line Crossings

Difficulty in maintaining smooth operation of the  
808 recorder undoubtedly contributed to minor dif-  
ferences at crossings. For the same reason it is  
probable that depth curves were affected in the  
flat area inside 2 fathoms.

3. Adjoining Surveys

Excellent junctions were effected with H-6614 (1940  
-41) on the south, H-6612 (1940-41) on the west and  
with H-6617 (1940-41) on the north. H-6747 (1941),  
joining on the northwest, had not been verified at  
this writing.

4. Previous Surveys

H- 405 (1853), 1:212,000; H- 433 (1854), 1:100,000;  
H-1629 (1884), 1: 80,000; H-1886 (1888), 1: 20,000

Surveys of 1853-54 are reconnaissance with but very few soundings in this area. H-1629 is more detailed but overlaps only the southwestern corner of the area. H-1886 is a fairly detailed survey which for the most part is in fair to good agreement with the current work. Differences are mostly inside the 3-fathom curve where there is considerable evidence of change. North of Lat. 48°20.5' the present shoreline is about 200 meters outside that of 1888; elsewhere, changes are not so pronounced.

5. Comparison with Chart 6380 (Print of April 3, 1943)  
Chart 6450 (Print of June 12, 1943)

The present survey has been partially applied to the latest prints. Remaining information is from superseded surveys discussed in the preceding paragraph.

6. Condition of Survey

Good.

7. Compliance with Project Instructions

Excellent.

8. Additional Field Work Recommended

None.

9. Superseded Surveys

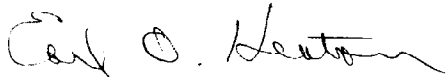
H-405 in part  
H-433 " "

H-1629 in part  
H-1886 " "

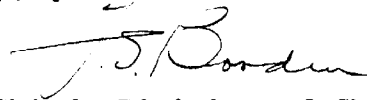
Examined and approved:



Chief, Surveys Branch



Chief, Section of Hydrography



Chief, Division of Charts



Chief, Division of  
Coastal Surveys

Remarks

Decisions

	Remarks	Decisions
1		U.S.G.B
2		482226
3		<del>482227 U.S.G.B</del>
4		
5		
6	Location of tide staff.	
7		
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27		

GEOGRAPHIC NAMES  
 Survey No. **H6615**

Name on Survey	A. On Chart No.	B. On previous survey No.	C. On U. S. Quadrangle Maps	D. From local information	E. On local Maps	F. P. O. Guide or Map	G. Rand McNally Atlas	H. U. S. Light List	K.
<u>Strait of Juan De Fuca</u>									1
<u>Whidbey Island</u>									2
<del>Reario Strait</del>									3
									4
									5
<u>Fort Worden</u>									6
									7
				L Heck	6/18/42				8
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## MEMORANDUM IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
~~PHOTOSTAT OF~~

No. H **H6615**  
~~No. X~~

received December 30, 1941  
registered January 20, 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			
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30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

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

*R.W.K.*



LCC  
RLL

TIDE NOTE FOR HYDROGRAPHIC SHEET

January 21, 1941

~~Division of Hydrography and Topography:~~

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

Plane of reference approved in  
11 volumes of sounding records for

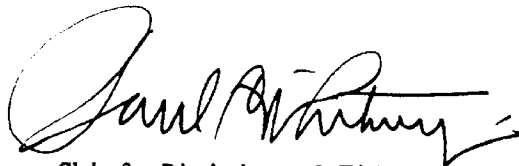
HYDROGRAPHIC SHEET 6615

Locality West Coast of Whidbey Island, Rosario Strait, Washington

Chief of Party: R. W. Knox in 1940-1941  
Plane of reference is mean lower low water reading  
3.9 ft. on tide staff at Fort Worden  
15.0 ft. below B. M. 1

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

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

Partially  
Applied to Chk. 6300 5/8/42 G.R.  
Not verified + not reviewed at this date.

Partially applied to Chk. 6380 5/21/42 G.R.  
Not verified + reviewed.

Chart 7002 10/20/42 G.R. No correction.  
" 5052 1/18/43 G.R. " "

Applied to chart 6450 Oct. 5, 1943 G.H.S.  
" " " 6380 After Review - Dec. 4, 1943 ~~L.H.S.~~  
" " " 6300 " " Jan. 24, 1944 L.A.M.  
" " " 6376 " " Oct. 4, 1944 J.W.

Fully applied to chart 18429 December 6, 1977 B. Hamilton <sup>R.H.</sup>