

5157

Original

5157

Form 504
Ed. June, 1928

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

State: WASHINGTON

DESCRIPTIVE REPORT

<i>Topographic</i> <i>Hydrographic</i>	} Sheet No. 5157 Field No. 47.
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LOCALITY

STRAIT OF JUAN DE FUCA

Waadah I.,
~~SLIP POINT~~ TO PILLAR POINT

U. S. COAST & GEODETIC SURVEY
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CHIEF OF PARTY

K. T. Adams

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5157

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. 47

REGISTER NO. **5157**

State WASHINGTON

General locality Strait of Juan de Fuca

Locality Waadah I.,
~~Ship Point~~ to Pillar Point.

Scale 1:40,000 Date of survey June 27, Oct. 29, 1931

Vessel G.U.I.D.E.

Chief of Party K. T. Adams

Surveyed by K. T. Adams

Protracted by A. Newton Stewart

Soundings penciled by A. Newton Stewart

Soundings in fathoms ~~feet~~

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by *[Signature]*

Verified by *[Signature]*

Instructions dated April 16, 1930, May 7, 1931, 19

Remarks:

DESCRIPTIVE REPORT

to accompany
Hydrographic Sheet Field No. 47.

WASHINGTON COAST

Strait of Juan de Fuca

Slip Point to Pillar Point

1931

AUTHORITY:

The authority for this survey is contained in the Director's instructions dated April 16, 1930 and May 7, 1931.

SURVEY METHODS:

The work on this sheet was done using the U.S.C. & G.S.S. GUIDE. All soundings were taken with the Fathometer, using the red light method direct. Vertical wire soundings were taken at intervals for comparisons and to obtain temperatures and bottom characteristics.

The basic control was furnished by existing triangulation stations which were recovered, supplemented by additional triangulation stations, including Slip Point Lighthouse and Sherringham Lighthouse, which were located with third order accuracy. Topographic signals were necessarily used on the inshore sounding lines, and hydrographic signals located by a combination of triangulation and sextant cuts were used to a limited extent, usually when other signals could not be seen.

The control for the hydrography was entirely by visual fix,

the fixes being obtained from triangulation stations whenever possible. ✓

Except on the inshore lines, the ship was run at a speed of about ten knots and soundings recorded, in general, one each minute, but more often if the depth was changing rapidly. On the lines closer to shore, and particularly inside the fifty fathom curve, the speed was reduced and soundings recorded each half minute. ✓

DISCREPANCIES:

No discrepancies requiring adjustment were found, except for an occasional fix being obviously recorded in error. When sounding, any time the position of the ship was in doubt it was stopped immediately until signals could be identified, and any erroneous work recorded was rejected at once. ✓

The crossings on all check lines are very satisfactory. ✓

DANGERS:

No dangers to navigation were found within the limits of the sheet, and with the exception of that noted under Comparison With Previous Surveys, no indication of shoaling was found that required development. ✓

COMPARISON WITH PREVIOUS SURVEYS:

The previous hydrography in this area is covered by Sheet Field No. H - 2170, surveyed in 1893. A careful comparison of the old and new surveys reveals changes of but minor importance.

The small changes in the position of depth curves are due as much to the fact that the new survey is on a larger scale and the

soundings more numerous, as to any probably change in depth.

The two greatest single depth changes were: first, and indicated shoaling of eight fathoms in Latitude $48^{\circ}-18'$ and Longitude $124^{\circ}-10'$, where the old survey shows one hundred twenty-one fathoms; and second, in Latitude $48^{\circ}-15'$ and Longitude $124^{\circ}-05'$, where seventy-eight fathoms is shown on the old survey. This latter position falls between lines of the new survey. By comparison with soundings on each side, a depth ten fathoms greater would be indicated. However, this spot might easily be an extension of the shoaler water to the eastward, and further development should have been made in this area.

*no
additional
work is
considered
necessary
here.
A.C.S.*

REMARKS:

Cuts to certain of the hydrographic signals are contained in the records of both this sheet and Sheet Field No. 48. In the front of the sounding records accompanying this sheet reference has been made to those cuts in the records of Sheet Field No. 48. In plotting the cuts it was necessary to plot some on one sheet and transfer them to the other in order to locate the signal.

Hydrographic station Clallam is located mostly from angles in the front of sounding record No. 1 of this sheet. These angles, when taken, were not intended to locate this signal, Clallam being mistaken for the old station Edge. The error was discovered before it was used and Clallam plotted by using a different combination of angles for fix and cut than was intended at first. At the time the angles were taken there were several officers on the bridge and all angles were taken at once.

In the very northwest corner of this sheet the hundred fathom curve on the Vancouver Island side of the Strait was not completely developed, the instructions stating no work should be done within three miles of the Vancouver Island shore. ✓

Sheave No. 204-H, was used ^{throughout} throughout the season for wire soundings. This sheave was tested and found to be correct.

The entire hydrography on this sheet was done under the direct supervision of Lieutenant-Commander K. T. Adams. ✓

Tidal data and tables of Fathometer corrections and statistics are appended to this report. ✓

Respectfully submitted,

A. Newton Stewart
A. Newton Stewart,
Jr. H & G Engineer,
C. & G. Survey.

Respectfully forwarded,
approved:

Fred. L. Peacock
Fred. L. Peacock,
H & G Engineer, C & G S.,
Commanding Ship GUIDE.

LIST OF SIGNALS

Hydrographic Sheet Field No. 47.

TRIANGULATION STATION SIGNALS:

Tatoosh Lighthouse 1893.
Classet 1913.
Peak (3) 1893.
Waadah 1893.
Seal Rock 1893.
Sail Rock 1893.
Knob 1893
Brush 1931
Jetty 1931
Salal 1931
Slip Point Lighthous 1931.
Slip 1884.
Coalmine 1892
Pillar Point 1909.
Sherringham Lighthouse 1931
Arch Rock 1892.
Owen 1893

TOPOGRAPHIC SIGNALS:

Neah
Jump
Hook
Gal
Age
Opp
Tit
Steel
High
Trap
House

HYDROGRAPHIC SIGNALS:

Clallam
Spur
Cedar
Rock

FATHOMETER CORRECTIONS

to accompany

Hydrographic Sheet Field No. 47.

- VELOCITY CORRECTIONS -					
May 26 - July 22, 1931.			July 23 - END, 1931.		
DEPTH, FATHOMS		Correction Fathoms	DEPTH, FATHOMS		Correction Fathoms
From	To		From	To	
0	7.8	0.0	0.0	7.1	0.0
7.8	18.7	- 0.1	7.1	20.1	- 0.1
18.7	28.4	- 0.2	20.1	29.7	- 0.2
28.4	38.3	- 0.3	29.7	40.4	- 0.3
38.3	47.7	- 0.4	40.4	50.1	- 0.4
47.7	56.2	- 0.5	50.1	59.0	- 0.5
56.2	64.7	- 0.6	59.0	68.5	- 0.6
64.7	73.2	- 0.7	68.5	76.6	- 0.7
73.2	81.7	- 0.8	76.6	85.6	- 0.8
81.7	88.5	- 0.9	85.6	92.3	- 0.9
88.5	97.1	- 1.0	92.3	133.7	- 1.0
97.1	102.1	- 1.1	133.7	---	-2 .0
102.1	180.0	- 2.0			

The constant correction used throughout this Sheet is +0.2 fathoms.

STATISTICS

to accompany

Hydrographic Sheet Field No. 47.

DATE 1931	DAY	STAT. MIS. OF SOUNDING LINE	NO. OF POS.	SOUNDINGS	
				ECHO (RL)	WIRE
6-27	A	27.4	38	142	
6-28	B	29.5	38	141	
6-29	C	16.0	19	73	
6-30	D	117.1	116	446	
7-2	E	15.1	67	61	
7-9	F	86.5	209	969	1
7-14	G	29.5	58	192	1
7-17	H	13.8	30	113	1
7-23	J	20.1	31	100	1
7-25	K	56.9	74	294	
7-26	L	8.0	16	65	1
7-30	M	16.2	43	130	2
8-19	N	7.3	11	39	
9-17	P	35.9	59	194	1
9-28	Q	26.8	31	125	
10-1	R	49.5	72	268	2
10-7	S	7.7	11	36	
10-29	T	14.1	21	77	
TOTALS --		577.4	944	3,471	10

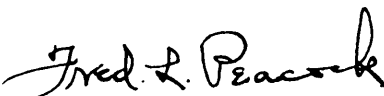
TOTAL AREA, SQUARE STATUTE MILES --- 308.0

STATEMENT TO ACCOMPANY
Hydrographic Sheet Field No. 47.
Coast of Washington
U.S.C. & G.S.S. GUIDE
Season 1931

This is to certify that I have exercised general supervision over the smooth plotting of said Hydrographic sheet and that I have inspected the sheet on completion and approve the smooth plotting thereof.

Oakland, Calif.,

March 15, 1932.


Fred. L. Peacock,
Lieutenant-Commander, C. & G. Survey,
Commanding Ship GUIDE.

Section of Field Records
Surveyed 1931

Report on H. 5157.

Chief of Party K. N. Adams.

Surveyed by K. N. A.

Retracted by A. N. Stewart

Soundings plotted by A. N. S.

Verified and Inked by R. S. Straw

1. The records conform to the requirements of the General Instructions

2. The plan and character of development fulfill the requirements of the General Instructions

3. The plan and extent of development satisfy the specific Instructions with the exception that bottom characteristics were not always obtained when vertical casts were made.

4. The sounding lines are adequate for this survey.

5. The field plotting was not very accurately executed, there being slightly more than the average number of positions in error. Several adjustments of the soundings in regard to time were also necessary.

6. No part of the drafting done by the field party had to be done over with the exception of that mentioned in #5.

#5157

7. The junctions of #5157 with sheets #5148; #5155; #5156; #5158 and #5159 are satisfactory. Attention is called to the fact that there is a slight disagreement in the soundings at the junction of #5157 with #5155 (Lat $48^{\circ}19'18''$ Long. $124^{\circ}25'36''$ approx) The launch soundings are slightly deeper than the Ship's fathometer soundings. Although this is not a serious disagreement it is noted that there is almost perfect agreement in the same spot at the junction between #5156 and #5157.

8. Further surveying is not necessary at this time to more fully develop the area within the limits of this sheet.

10. The penciled soundings on this sheet were very uniform and well made.

Respectfully Submitted

May, 27, 1932.

L. L. Straw

AND REFER TO No. 82-DRM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 5157

Waadah Island to Pillar Point, Strait of Juan de Fuca, Washington

Surveyed in 1931

Instructions dated April 16, 1930 and May 7, 1931 (GUIDE)

Chief of Party, K. T. Adams
Surveyed by K.T.A.
Protracted and soundings plotted by A. N. Stewart
Verified and inked by L. S. Straw

1. Records conform to the requirements of the Hydrographic Manual and the development satisfies the specific instructions except that there are too few wire soundings with bottom characteristics. In a few instances wire soundings were taken for fathometer comparisons without recording bottom characteristics.
2. Soundings were taken by the fathometer red light method. They are in good agreement both with vertical casts and on crossing lines. Depth curves can be drawn readily, the 50 and 100 fm. curves appear on the sheet.
3. Junctions with contemporary sheets, H. 5159, 5158, 5156, 5155 and 5148 are satisfactory.

Comparison with H. 2170 (surveyed 1893) shows very close agreement over the entire area. Bottom characteristics shown in red on H. 5157 have been transferred from this sheet (H. 2170).
4. Recommendation: It is recommended that H. 5157 supersede all former surveys for charting purposes of the area covered by the sheet. No further surveys are deemed necessary at this time.
5. Reviewed by R. J. Christman, June, 1932.

Sheet inspected and recommendations approved by A. L. Shalowitz.

Approved:

A. M. Sobczanski
Chief, Section of Field Records

J. S. Binder
Chief, Section of Field Work

April 26, 1932

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 5157

Locality Waadah Id. to Pillar Point, Strait of Juan de Fuca,
Washington Coast.

Chief of Party: K. T. Adams in 1931

Plane of reference is mean lower low water, reading

5.5 ft. on tide staff at Sekui

17.4 ft. below B. M. 1

4.1 ft. on tide staff at Neah Bay

22.3 ft. below B.M. 3

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time-meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Paul P. Whitney
Chief, Division of Tides and Currents.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. *H.5157*

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

Number of positions on sheet	<i>944</i>
Number of positions checked	<i>148</i>
Number of positions revised	<i>32</i>
Number of soundings recorded	<i>3,471</i>
Number of soundings revised	<i>51</i>
Number of signals erroneously plotted or transferred	<i>0</i>

Date: *May 27 1932*

Cartographer: *H. B. Brand*

Applied to chart 6266. Aug. 4, 1942. L.A.M.