

8543

Diag. Cht. No. 6450-2.

8543

FORM C&GS-504	
U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey	Hydrographic
Field No.	LJ-10-5-60
Office No.	H-8543
LOCALITY	
State	Washington
General locality	Whidbey Island
Locality	Penn Cove
<u>19 60</u>	
CHIEF OF PARTY	
N. E. Tayler	
LIBRARY & ARCHIVES	
DATE	Nov. 15, 1962

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.

REGISTER No. H-8543

Field No. LJ-10-5-60

State WASHINGTON

General locality HIDDEY ISLAND

Locality BEEM COVE and ~~SANDY POINT~~ **APPROACHES**

Scale 1:10,000 Date of survey August & September 1960

Instructions dated 22 April 1960

Vessel LESTER JONES

Chief of party N. E. Taylor

Surveyed by D. Currings and L. Wilkerson

Soundings taken by fathometer, graphic recorder/hand lead/wire/

Fathograms scaled by Ship Personnel

Fathograms checked by Ship Personnel

Protracted by A. E. Eichelberger

Soundings penciled by A. E. Eichelberger

Soundings in fathoms 1 det/ at MLW/ MLLW and are true depths

REMARKS:

DESCRIPTIVE REPORT
To Accompany
HYDROGRAPHIC SURVEY H-8543
Field No. LJ-10-5-60
Penn Cove, Washington

Scale 1:10,000
USC&GS Ship LESTER JONES

1960
Chief of Party N. E. Taylor

A. PROJECT

This survey is part of project OPR-412, instructions dated 22 April 1960.

B. AREA SURVEYED

This survey covers Penn Cove and that part of Saratoga Passage adjacent to Penn Cove which lies inside a line which starts on Whidbey Island at Lat. $48^{\circ} 11'.5$, thence easterly to Longitude $122^{\circ} 34'.5$, thence northerly to Latitude $48^{\circ} 14'.0$, thence westerly to Longitude $122^{\circ} 35'.5$, thence northerly to Latitude $48^{\circ} 15'.25$, and thence westerly to the shore of Whidbey Island. The dates covered by the survey are between August 14, 1960 and September 21, 1960.

Overlap was
~~Junctions were~~ made with prior surveys H-1884 (1888) scale 1:20,000; H-1885 (1888) scale 1:20,000; H-7045 (1945) scale 1:20,000; H-7809 (1951) scale 1:10,000; and contemporary survey H-8544, scale 1:10,000.

C. SOUNDING VESSEL

Hydrography was accomplished by the Ship LESTER JONES, identified in red, and Launch No. 88, identified in blue.

D. SOUNDING EQUIPMENT

Soundings were obtained by 808 fathometer No. 125s on the Ship LESTER JONES and 808 fathometer No. 148s on Launch No. 88. All depths were on "A" scale and ranged from 0 to 35 fathoms. A predetermined draft correction was used to set the initial on the Ship and bar checks were taken daily for Launch No. 88. Temperature and salinity observations were made to determine the velocity corrections.

Soundings between 103 and 196 b day appear too deep, as compared with crosslines and adjacent lines, by about 3 or 4 tenths of a fathom. The fathograms have been examined and those corrections that could be found have been applied but appear not to be enough to get good agreement with other days. A note by the hydrographer on the b day fathogram between positions 104 and 122 says that the "Recorder not working properly--soundings do not agree with contemporary lines." The same condition, whatever it was, may have existed for the rest of the day, to a lesser degree.

Differences do not show up significantly on inked smooth sheet.

E. SMOOTH SHEET

The smooth sheet was hand constructed and checked by personnel of the Seattle Hydrographic Processing Unit, using standard methods of construction. Approximately one-third of the positions were transferred from a film positive of the boat sheet. All positions by the Ship from Longitude 122° 38' to the eastern limits of the sheet and from Latitude 48° 14'.5 to the northern limit of the sheet were protracted because check plotted positions did not give agreement with the film positive. Most of the launch positions in the same area were also protracted and for the same reason. Only those positions which were protracted were checked in the record books. ✓

F. CONTROL

The control for this survey consists of triangulation stations plotted on the smooth sheet, topographic stations transferred from Advanced Manuscripts T-11595, T-11602, T-11603 and T-11604 (1960-1961) and hydrographic signals located by sextant cuts recorded in the sounding records. Topographic signal LUX and hydrographic signals DOG and LAD were transferred from the boat sheet. No other source for these signals could be found. ✓

G. SHORELINE

The shoreline was transferred from blueline manuscripts listed in section F. The low-water line is defined by soundings. ✓

H. CROSSLINES

Crosslines consist of approximately 5% of the soundinglines run. Except for the difference noted under section "D", the agreement is generally good. ✓

I. JUNCTIONS

Junctions with H-1885 (1888) scale 1:20,000; H-7045 (1945) scale 1:20,000; H-7809 (1951) scale 1:10,000; and contemporary survey H-8544 scale 1:10,000 have been compared and the soundings on this survey appear generally about a fathom shoaler than the surveys mentioned above. This may be due to the 0.4 fathom that was added to the Ship soundings on H-8544 and ~~H-8609~~, to get agreement with launch soundings, but not added on this survey. Crosslines between the Ship and launch appeared to agree better without the 0.4 fathom correction on this survey. ✓

*Junction
with H-8544
in good
agreement*

J. COMPARISON WITH PRIOR SURVEYS

No copy of presurvey review is available in Processing Office. Other ✓

considerations covered in preceding paragraph.

K. COMPARISON WITH CHART

This survey has been compared with Chart 6450, 12th Ed., Revised 8/6/62. ✓

There is no indication, on the smooth sheet, of the stranded wreck, charted at Latitude $48^{\circ} 13'.46$, Longitude $122^{\circ} 37'.15$. ✓

The sunken rock charted at Latitude $48^{\circ} 13'.5$, Longitude $122^{\circ} 41'.2$ is in an area where the depth is about 8.5 fathoms on the smooth sheet. There is, however, a 2.7 fathom rock about 300 meters ESE shown on the smooth sheet at Latitude $48^{\circ} 13'.45$, Longitude $122^{\circ} 40'.98$. ✓ *2 1/2 presently charted*

See section of Chart 6450 attached to this report for comparison. ✓

L. ADEQUACY OF SURVEY

This survey appears complete and adequate for charting. ✓

M. AIDS TO NAVIGATION

There is one floating aid to navigation, Snatelum Point Buoy No. 1, a black first-class can at Latitude $48^{\circ} 13'.7N$, Longitude $122^{\circ} 37'.2 W$. ✓

A submarine cable area extends through the length of Penn Cove with the terminus at Latitude $48^{\circ} 14'.8 N$, Longitude $122^{\circ} 44'.0 W$. A second cable area extends in a northerly direction from Latitude $48^{\circ} 13'.4 N$, Longitude $122^{\circ} 37'.9 W$. ✓

N. STATISTICS

There are, on this survey, 418 positions and 86.4 nautical miles of sounding lines by the Ship LESTER JONES and 1307 positions and 175.5 nautical miles of sounding lines by Launch No. 88 for a total of 1725 positions and 261.9 nautical miles of sounding lines. There are 13.0 square nautical miles of area covered. ✓

No bottom samples were obtained on this survey. ✓

NOTE

This report was written in the Seattle Processing Office from the

smooth sheet. There were no notes for this survey transmitted from the ship to the Processing Office. ✓

Respectfully submitted,

William M. Martin

William M. Martin
Supervisory Cartographer

Approved and forwarded

M. E. Wennermark

M. E. Wennermark
Captain, C&GS
Seattle District Officer

TIDE NOTE TO ACCOMPANY
HYDROGRAPHIC SURVEY
H-8543

The tide reducers for this survey were taken from the portable tide gage at Coupeville, Whidbey Island, Washington, Latitude $48^{\circ} 13'.37$ N, Longitude $122^{\circ} 41'.21$ W. No staff reading for MLLW is available in the Seattle Processing Office. ✓

LIST OF STATIONS ON H-8543 (LJ-10-5-60) ✓

<u>NAME</u>	<u>ORIGIN</u>	<u>NAME</u>	<u>ORIGIN</u>
ACE	RACE (USE) 1920	JAP	T-11603
AMP	T-11603	JUT	T-11602
ARK	T-11602	KEL	KELP, 1944
BAR	SAN DE FUCA BARN CUPOLA, 1944	KIM	Vol. 4, Pg 34
BLO	BLOWERS BLUFF KLOOTCHMAN ROCK, 1951	KRO	Vol. 4, Pg 34
BOA	T-11604	LAD	taken off boat sheet
BON	Vol. 5, Pg. 8	LAG	T-11604
BUM	T-11603	LEO	T-11603
CAT	T-11603	LET	Vol. 5, Pg 20
COW	T-11602	LUX	taken off boat sheet (not on topo sheet)
DIF	T-11603	NIL	T-11604
DIP	T-11602	OBI	T-11602 (Old prel.)
DOG	taken off boat sheet	PIG	Vol. 5, Pg 8
ELM	T-11604	POW	Vol. 5, Pg 20
FEW	T-11602	PUD	T-11595
HER	T-11604	SIN	LIBBY (USE) 1920
HIS	T-11602	SUB	T-11602
IDA	T-11603	TAX	T-11602
		TOM	T-11602
		TOY	T-11603
		WAD	T-11602
		WAT	COUPEVILLE WATER TANK, 1944
		YAK	T-11602
		ZOO	Vol. 5, Pg 20

VELOCITY CORRECTION ABSTRACT ✓

1960 Field Season

PROJECT CS-241 (Applicable to H-8518, H-8519, H-8520)

<u>DEPTH (Fathoms)</u>	<u>CORRECTION (Fathoms)</u>
0 - 7	+ 0.0
7.1 - 15	+ 0.1
15.1 - 24	+ 0.2
24.1 - 32	+ 0.3
32.1 - 40	+ 0.4
40.1 - 49	+ 0.5
49.1 - 57	+ 0.6
57.1 - 66	+ 0.7
66.1 - 74	+ 0.8
74.1 - 83	+ 0.9
83.1 - 92	+ 1.0
92.1 - 100	+ 1.1
100.1 - 109	+ 1.2
109.1 - 118	+ 1.3
118.1 - 126	+ 1.4
126.1 - 135	+ 1.5
135.1 - 144	+ 1.6
144.1 - 150	+ 1.7

PROJECT CS-412 (Applicable to H-8542, H-8543, H-8544, LJ-10-7-60)

<u>DEPTH (Fathoms)</u>	<u>CORRECTION (Fathoms)</u>
0.0 - 4.0	+ 0.0
4.1 - 12	+ 0.1
12.1 - 19	+ 0.2
19.1 - 26	+ 0.3
26.1 - 40	+ 0.4
40.1 - 53	+ 0.6
53.1 - 68	+ 0.8
68.1 - 81	+ 1.0

REFERENCE:

Data and Computations included in Special Fathometer Report for 1960 Field Season.

R 17
C

TIDE NOTE FOR HYDROGRAPHIC SHEET

February 14, 1963

Nautical Chart Division: R. H. Carstens

Plane of reference approved in
9 volumes of sounding records for

HYDROGRAPHIC SHEET 8543

Locality Penn. Cove, Washington

Chief of Party: N. E. Taylor (1960)

Plane of reference is Mean lower low water reading
1.6 ft. on tide staff at Coupeville, Whidbey Island
14.4 ft. below B. M. 1 (1935)

Height of mean high water above plane of reference is: 10.6 ft.

Condition of records satisfactory except as noted below:


Chief, Tides and Currents Branch

GEOGRAPHIC NAMES ✓

Survey No. H-8543

Name on Survey	Source										1
	A	B	C	D	E	F	G	H	K		
	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			
Coupeville	6450										1
Coveland	6450										2
Blowers Bluff	6450										3
Harrington Bluff ^{Lagoon}	6450										4
Kennedys Lagoon					x						5
Lovejoy Point	184										6
Long Point	184								x		7
Penn Cove	6450										8
Race Lagoon	184										9
San ^d De Fuca	6450										10
Snatelum Point	6450								x		11
Whidbey Island	6450										12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

George M. Bee
Geographic Names Section
28 January 1963

BGN

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8543.....

Records accompanying survey: *3/20/70* Smooth sheets *.1*....;
 boat sheets *.1*....; *Destroyed* sounding vols. *.9*...; wire drag vols.;
 Descriptive Reports *.1*...; graphic recorder envelopes *.3*...;
 special reports, etc. *1-Film Pos.*.....

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

Number of positions on sheet	.....	<i>1725</i>	
Number of positions checked	.....	<i>401</i>	
Number of positions revised	.....	<i>4</i>	
Number of soundings revised (refers to depth only)	.....	<i>1</i>	<i>3</i>
Number of soundings erroneously spaced	.....	<i>None</i>	<i>2</i>
Number of signals erroneously plotted or transferred	.....	<i>None</i>	<i>0</i>
Topographic details	Time	<i>40 hrs.</i>	<i>3</i>
Junctions	Time	<i>None</i>	<i>4</i>
Verification of soundings from graphic record	Time	<i>10 hrs.</i>	<i>1</i>
Special adjustments	Time	<i>None</i>	<i>2</i>

Verification by *G. T. Myers*..... Total time *184 hrs* Date *4-15-65*

Reviewed by *George A. Kozemczak*..... Time *88* Date *5/8/69*
+ 4
92

OFFICE OF HYDROGRAPHY AND OCEANOGRAPHY

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8543

FIELD NO. LJ-10-6-60

Washington, Whidbey Island, Penn Cove and Approaches

SURVEYED: August through September 1960

SCALE: 1:10,000

PROJECT NO.: OPR-412

SOUNDINGS: 808 Fathometer

CONTROL: Sextant angles
on shore signals

Chief of Party.....	N. E. Taylor
Surveyed by.....	N. E. Taylor
.....	L. L. Wilkerson
Protracted by.....	A. E. Eichelberger (Seattle)
Soundings Plotted by.....	A. E. Eichelberger
Verified and Inked by.....	G. K. Myers
Reviewed by.....	G. A. Kozemczak
.....	Date: May 8, 1969
Inspected by.....	R. H. Carstens

1. Description of the Area

This survey covers Penn Cove and that part of Saratoga Passage adjacent to Penn Cove.

The bottom drops gradually to depths of 10 fathoms and greater from the western shores of Penn Cove, and to depths as great as 35 fathoms in Saratoga Passage. A shoal spit extends about one-half mile off Snatelum Point. About a mile off the point an 11-fm. ridge rises from depths of 18 fms. In the area between the high and low water lines there are numerous scattered boulders and rocks awash at MHW.

No bottom samples were obtained on this survey. However, from prior surveys the bottom characteristics are found to consist of green mud, sand, and shells.

2. Control and Shoreline

The source of control is given in the Descriptive Report. The shoreline originates with reviewed photogrammetric manuscripts T-11595, T-11602, T-11603, and T-11604 of 1960.

3. Hydrography

A. Depths at crossings are in satisfactory agreement. Crosslines consist of approximately 5% of sounding lines run.

B. The usual depth curves are adequately defined, except in a few inshore areas where sounding lines paralleling the curves are too widely spaced.

C. The development of the bottom configuration and investigation of least depths are considered adequate.

4. Condition of the Survey

The field plotting, sounding records, and the Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual, except that the ship fathometer instrumental correction was not determined by vertical cast comparisons. However, crossings of ship and launch sounding lines are satisfactory and the correction is probably not significant.

5. Junctions

An adequate junction was effected with H-8544 (1960) on the east. The junction with H-7809 (1951) on the north, and with H-8542 (1960) on the northeast will be considered in the reviews of those surveys.

6. Comparison With Prior Surveys

A.	H-1884	(1888)	1:20,000
	<u>H-1885</u>	<u>(1888)</u>	<u>1:20,000</u>

H-1885 covers most of the area of the present survey. The remaining portion is covered by a part of H-1884. A comparison of the prior and present surveys reveals this area to be generally stable in both the shoreline and depths. Only minor differences in depths are noted except in areas where the closer development on the present survey delineated the bottom in greater detail.

The two prior piers at Coupeville are now nonexistent. A new pier has been constructed and is charted in this area.

As no bottom characteristics were obtained on the present survey, representative ones from the prior surveys have been carried forward.

B. H-7045 (1945) 1:20,000

This prior survey covers a portion of the present survey. A comparison with H-7045 reveals only minor differences of less than 1 fathom.

The larger scale present survey is adequate to supersede these prior surveys in the common area.

7. Comparison With Charts 6405, 1:10,000 (4th Ed., 9/30/68)
6450, 1:80,000 (16th Ed., 2/17/69)
184-SC, 1:80,000 (9th Ed., corr.
through N.M. 11, Mar. 15, 1969)

A. Hydrography

The charted hydrography originates with the previously discussed surveys which require no further consideration, supplemented by the partial application of depths from the boat sheet and unverified smooth sheet of the present survey. Only minor differences were noted between charted depths and present survey depths.

Attention is directed to the following:

1. The sewer out-fall charted in lat. $48^{\circ}14.32'$, long. $122^{\circ}40.75'$ originates with Chart Letter 676 (1966) subsequent to the date of the present survey and should be retained on the chart.
2. The stranded wreck charted in lat. $48^{\circ}13.46'$, long. $122^{\circ}37.15'$ from 1953 to 1964 was investigated by several split lines, but no indication found. However, proof of the nonexistence of submerged remains was not established and the present submerged wreck symbol should be retained on the chart.

The present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation

The one floating aid to navigation, Snatelum Point Buoy No. 1, is in agreement with the charted position and adequately serves the purpose intended .

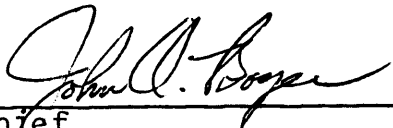
8. Compliance With Instructions

The survey adequately complies with the Project Instructions.


9. Additional Field Work

This is a good basic survey and no additional field work is recommended.

Examined and Approved:



Chief
Marine Chart Division



Associate Director
Hydrography and Oceanography

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8543

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
2-15-63	6450	M. N. Hall	Before After Verification and Review <i>Partly applied</i>
3-11-63	6450	R. E. Elkins	<i>Revised edge, sunk rk, wreck.</i>
4-13-64	6401	G. R. Johnson	Before After Verification and Review <i>Partly app'd</i> <i>thru chrt 6450, drg. #31</i>
			Before After Verification and Review
10/8/64	6404	TAK	Before After Verification and Review
11/15/69	6450	S. McMillan	<i>adequate</i> Before After Verification and Review <i>& Inspection, No</i>
12/31/69	184	R. A. Lillis	<i>critical changes, several shoal edges ch to d.</i> <i>Adequate</i> Before After Verification and Review <i>& Inspection</i>
			<i>thru 6450 Dwg. #38</i>
6-25-70	6401	B. Fernandez	<i>Adequate</i> Before After Verification and Review <i>& Inspection</i>
9-9-70	6300 ^{#33}	J. T. Callahan	Before After Verification and Review <i>no correct. consider</i> <i>fully applied by his deleted on this chart.</i>
			Before After Verification and Review
8/4/73	6404	R. Davis	<i>Fully Applied</i> Before After Verification and Review <i>& inspection</i>
8/8/73	6450	J. STUART	<i>Fully Applied</i> AFTER VERIFICATION REVIEW & INSP.
			<i>through chart 6404</i>
1-10-74	184-5C	W. CHANDLER	<i>FULLY APPLIED AFTER VERIFICATION, REVIEW</i> <i>AND INSPECTION THRU CHART 6450.</i>

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.