

# 9417

Diagram 6450-2

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

## DESCRIPTIVE REPORT (HYDROGRAPHIC)

Type of Survey ..... Hydrographic .....  
Field No. .... RA-40-4-74 & RA-10-1-74 .....  
Office No..... H-9417 .....

### LOCALITY

State ..... Washington .....  
General Locality... Strait of Juan De Fuca .....  
Locality ..... Approach to Admiralty Inlet .....

1974

CHIEF OF PARTY  
CDR K.W. Jeffers

### LIBRARY & ARCHIVES

DATE ..... January 6, 1985 .....

☆ U.S. GOV. PRINTING OFFICE: 1978-689-441

9417  
2146

Abert  
Cht  
12464? 40 SIGN OFF 500  
"Records of Application to Charts"

HYDROGRAPHIC TITLE SHEET

H-9417

INSTRUCTIONS - 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.

RA-40-4-74 & RA-10-1-74

State Washington

General locality Strait of Juan de Fuca

Locality Approach to Admiralty Inlet

Scale 1:40,000 & 1:10,000

Date of survey April 17-25, 1974

Instructions dated 1 March 1974

Project No. OPR-412-RA-74

Vessel NOAA Ship RAINIER

Chief of party CDR K. William Jeffers

Surveyed by NOAA Ship RAINIER Personnel

Soundings taken by echo sounder, ~~and lead line~~ Ross Model 5000 S/N's 1040, 1042 & 1046

Graphic record scaled by Ship's personnel

Graphic record checked by Ship's personnel

Verified ~~Plotted~~ by Stanley H. Otsubo

Automated plot by PMC Harris  
Synetics Plotter

Soundings ~~plotted~~ verified by Stanley H. Otsubo

Soundings in fathoms ~~XXXX~~ at ~~XXXX~~ MLLW

REMARKS: Time meridian: 0°

Mean Longitude of Survey 123/50/00

*Answers/SUCF ✓ 12/13/85 JS ✓*

#### A. PROJECT

This survey was conducted in accordance with Project Instructions: OPR-412-RA-74, dated 1 March, 1974. Also included in this survey is a large-scale development of Partridge Bank. ✓

#### B. AREA SURVEYED

The general area of this survey is between Partridge Bank and Dallas Bank: Lat.  $48^{\circ} 10.0'N$  to Lat.  $48^{\circ} 16.0'N$  and Long.  $122^{\circ} 45.0'W$  to Long.  $123^{\circ} 00.0'W$ . ✓

The special investigation included a development of Partridge Bank.

The main sheet was assigned field number RA-40-4-74, and Registry Number H-9417. The 1:10,000 development of Partridge Bank was assigned field number RA-10-1-74 only.

The survey began on 17 April, 1974 (JD 107) and was completed on 25 April, 1974 (JD 115).

#### C. SOUNDING VESSEL

Soundings were obtained by NOAA Ship Rainier (2120), one Uniflite launch (RA-6) and one aluminum Fairweather launch (FA-5). ✓

#### D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

All soundings were recorded on Ross Model 5000 fathometers. Launches RA-6 and FA-5 used Ross S/N's 1040 and ~~1054~~<sup>1056</sup>, respectively. The Rainier used Ross S/N 1042. ✓

During the operation of the Ross fathometer, the initial value on the fathogram was maintained near zero through continuous monitoring and periodic adjustment. The fathogram was scanned continuously in the field and compared to the digitized value to agree with the fathogram.

The blanking function was employed to eliminate spurious returns, and the fathometer was internally phased and adjusted so as to have no phase corrections. Phase checks were routinely made.

Bar checks down to 7 fm. were taken routinely and the results abstracted.

RA-6 used a 0.4 fm. Transducer Correction (TRA), and FA-5 ,  
a 0.4 fm. TRA.

All applicable corrections are incorporated on a TC/TI (Transducer Correction/Table Indicator) Tape for automated processing (see appendix).

Velocity corrections were computed from bar checks and a TDC cast taken on 24 April, 1974.

The sounding equipment operated well during the survey with no noteworthy errors which would have an effect on the accuracy of the soundings. For further information on sounding corrections refer to Corrections to Echo Soundings, OPR-412-RA-74.

#### E. BOATSHEETS

The boatsheet's Transverse Mercator Projection and soundings were plotted by Rainier personnel using the onboard PDP/8e Complot System. The Rainier used PDP/8e S/N 1011, and a Houston Instrument Complot DP-3 plotter, s/n 4670-4.

The Central Meridian of the projection is 123° 00.0'W Long., and the southern control latitude is 5,320,000 meters north of latitude zero. Position numbers and soundings were machine plotted. Signals were hand plotted.

Main scheme sounding lines are plotted in black ink, crosslines in red, and bottom samples in green.

The first plot was made on 17 April, 1974 and the final plot was made on 1 May, 1974.

#### F. STATION CONTROL

All stations and signals used existing triangulation.

See Station List in appendix for more detailed information.

#### G. POSITION CONTROL

The survey was controlled exclusively by Motorola Mini-Ranger (a range-range system). Mini-Ranger sites were picked to provide the strongest possible arc intersections. Almost all hydrography was accomplished with arc intersections greater than 30° and less than 150°.

The Mini-Ranger receivers were calibrated at the beginning and end of each day and the results abstracted. The calibration was accomplished by visual three-point sextant fixes on Mini-Ranger and visual signals. A mathematical solution for three-point sextant fixes was obtained by using program AM560s (with slope correction) version: 4/1/74, in the PDP/8e computer.

A special tape providing the ships heading at each position fix was made to compensate for Ross transducer--Mini-Ranger antenna displacement as requested in the letter dated 5 March, 1974. (See appendix) The Ross transducer was located 114 feet aft of the Mini-Ranger antenna.

The Rainier used Range Console unit s/n 720 with receiver/transmitter s/n 727. RA-6 used range console s/n 715 with R/T s/n 720. FA-5 used range console s/n 711 with R/T s/n 718.

For more information on Daily calibrations refer to appendix and Mini-Ranger Report, OPR-412-RA-74.

#### H. SHORELINE

Since the closest work to the shore was  $\frac{1}{2}$  mile, no shoreline information is included. ✓

#### I. CROSSLINES

RA-40-4-74: 30.5 NM or 7.5% of the 403.8 NM run. ✓

RA-10-1-74: No crosslines were run on this sheet. ✓

Crosslines show good agreement with main scheme lines.

#### J. JUNCTIONS

The only junctions made with contemporary surveys was between RA-40-4-74 and RA-10-1-74. The two boatsheets show excellent junction. ✓

#### K. COMPARISONS WITH PRIOR SURVEYS

Prior surveys covering this area are:

<u>Registry No.</u>	<u>Scale</u>	<u>Date</u>
<u>RA-40-4-74</u>		
H-8927	1:20,000	1967
H-8930	1:10,000	1967
H-6613	1:20,000	1941
<u>RA-10-1-74</u>		
H-6616	1:10,0000	1941

> junctional surv

All prior surveys show good junction with boatsheets. No general or detailed changes seem to have occurred within the area of this survey.

L. COMPARISON WITH THE CHART

C&GS chart 6450, 21st Ed., Jan. 12, 1974 was compared to the surveys conducted in this area and no noticeable changes have occurred.

M. ADEQUACY OF SURVEY

H- 9417 and RA-10-1-74 were completed and are adequate to supercede prior surveys for the intended special charting, with one exception: splits on RA-40-4-74 were unable to be completed. The area includes about 1½ sq. miles on the extreme right hand side of the boatsheet. ✓

All fathograms were scanned and re-checked for peaks and deeps, with any corrections applied to the master tape.

N. AIDS TO NAVIGATION

No information was obtained with regard to existing or new aids to navigation.

O. STATISTICS

<u>Boatsheet</u>	<u>NM of snd. lines</u>	<u>sq. mi. of hydro</u>	<u>Position</u>	<u>BS</u>
RA-40-4-74	403.8	38.0	780	1
RA-10-1-74	88.5	4.8	559	0

RA-40-4-74

<u>Launch</u>	<u>miles of snd. lines</u>	<u>Positions</u>	<u>BS</u>
Ship	189	380 ✓	1 ✓
RA-6	114.8	238 ✓	0
FA-5	100.0	162	0

RA-10-1-74 was surveyed by RA-6 only.

Q. RECOMMENDATIONS

Any further dredging in vicinity of survey will change the characteristics of the bottom due to its irregular bottom contours. ✓

R. REFERENCES TO REPORT

1. Corrections to Echo Soundings, OPR-412-RA-74. ✓
2. Mini-Ranger REport, OPR-412-RA-74.

S. DATA PROCESSING PROCEDURES

Launches RA-6 and FA-5 were equipped with a NOS Hydrolog system which when used in conjunction with program Am170, version: 11/10/72 (without slope correction), allowed for all sounding data to be recorded in master tape format. The Rainier used AM100, version: 11/10/72 which enabled the ship to plot on-line. Launches RA-6 and FA-5 used program AM200, version: 3/23/73 for a sounding plot. Corrector tapes were prepared only to update Mini-Ranger calibration correctors.

Separate master and corrector tapes were prepared for each day. Standard formats as specified in the Instruction Manual, Automated Hydrographic surveys, were used for the TC/TI and velocity corrector tapes.

TRA corrector values and velocity table numbers shown on the Hydroplot/Hydrolog Tapes are to be ignored for processing at PMC. The correct data is listed on the TC/TI and velocity corrector tapes. All soundings were plotted with predicted tide corrections.

respectfully submitted,



Garth Stroble ENS, NOAA

VELOCITY CORRECTION TAPE

RA-40-1-74

RA-40-2-74

VESSEL: SHIP (2120), RA-6 (2126), RA-5 (2125)

TIME PERIOD: 20 MARCH-3 APRIL 1974

TABLE: 0001

000130 0 0000 0001 000 000000 000000  
000310 0 0001  
000475 0 0002  
000630 0 0003  
000775 0 0004  
000905 0 0005  
001165 0 0006  
001400 0 0008

VELOCITY CORRECTION TAPE

RA-40-2-74

RA-40-3-74

VESSEL: SHIP (2120)

TIME PERIOD: 4 APRIL-16 APRIL 1974

TABLE: 0002

000110 0 0000 0002 000 000000 000000  
000255 0 0001  
000400 0 0002  
000540 0 0003  
000645 0 0004  
000775 0 0005  
000892 0 0006  
001015 0 0007  
002000 0 0010

VELOCITY CORRECTION TAPE

RA-40-4-74

RA-10-1-74

RA-10-2-74

RA-5-2-74

VESSEL: SHIP (2120), RA-6 (2126), RA-5 (2025)

TIME PERIOD: 17 APRIL- 26 APRIL 1974

TABLE: 0003

000110 0 0000 0003 000 000000 000000  
000260 0 0001  
000406 0 0002  
000540 0 0003  
000665 0 0004  
000775 0 0005  
000900 0 0006  
001300 0 0007



TC/TI TAPE LISTING  
RA-40-4-74  
FATHOMETER: ROSS 1042  
VESSEL: 2120

212600 0 0003 0023 108 000000 000000  
173415 0 0003 0023 113 000000 000000  
160515 0 0003 0023 114 000000 000000  
160816 0 0003 0023 115 000000 000000

109?

TC/TI TAPE LISTING  
RA-40-1-74  
FATHOMETER: ROSS 1040  
VESSEL: 2126

202325 0 0001 0004 085 000000 000000

TC/TI TAPE LISTING  
RA-10-1-74  
FATHOMETER: ROSS 1040  
VESSEL: 2126

173646 0 0003 0004 107 000000 000000  
203837 0 0003 0004 112 000000 000000  
162045 0 0003 0004 113 000000 000000

TC/TI TAPE LISTING  
RA-40-4-74  
FATHOMETER: ROSS 1040  
VESSEL: 2126

174436 0 0003 0004 107 000000 000000  
155240 0 0003 0004 114 000000 000000  
154228 0 0003 0004 115 000000 000000

TC/TI TAPE LISTING  
RA-40-1-74  
FATHOMETER: ROSS 1041  
VESSEL+ 2125

215509 0 0001 0003 079 000000 000000  
165044 0 0001 0003 080 000000 000000  
164112 0 0001 0003 081 000000 000000  
184915 0 0001 0003 084 000000 000000  
163400 0 0001 0003 086 000000 000000  
174009 0 0001 0003 087 000000 000000

TC/TI TAPE LISTING  
RA-5-2-74  
FATHOMETER: ROSS 1054  
VESSEL: FA-5 (2025)

204138 0 0003 0004 112 000000 000000

TC/TI TAPE LISTING  
RA-10-2-74  
FATHOMETER: ROSS 1054  
VESSEL: FA-5 (2025)

165325 0 0003 0004 113 000000 000000

TC/TI TAPE LISTING  
~~RA-40-4-74~~  
FATHOMETER: ROSS 1054 \*  
VESSEL: 2025

170249 0 0003 0004 109 000000 000000  
162102 0 0003 0004 114 000000 000000  
162504 0 0003 0004 115 000000 000000  
221601 0 0003 0004 115 000000 000000

116?

\* assume 1046  
intended ✓

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2120  
(SHIP RAINIER)

SHEET : RA-40-4-74

TIME	DAY	PATTERN 1	PATTERN 2
212600	108	-00019	+00010
231500		-00023	+00014
000030	109	-00023	+00014
173415	113	+00004	+00005
160515	114	-00002	+00013
205015		+00001	+00010
000000	115	+00001	+00010
160816	115	-00002	+00013
172930		-00005	+00015



ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2126  
(RA-6)

SHEET : RA-10-1-74  
(SPECIAL INVESTIGATION)

TIME	DAY	PATTERN 1	PATTERN 2
173646	109	+00035	+00014
203837	112	+00031	+00017
212006		+00030	+00013
224004		+00029	+00009
000006	113	+00029	+00009
162045	113	+00027	+00005


✓

## ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2025  
(FA-5)

SHEET : RA-40-4-74

TIME	DAY	PATTERN 1	PATTERN 2
170249	109	+00014	+00006
162102	114	+00001	+00006
162504	115	+00002	-00003
173008		+00002	+00002
190034		+00002	+00007
203038		+00002	+00011
221601	115	+00003	+00013
000003	116	+00003	+00013




## ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2126  
(RA-6)

SHEET : RA-40-4-74

TIME	DAY	PATTERN 1	PATTERN 2
174436	107	+00045	-00007
180021		+00040	-00002
194041		+00036	+00004
212025		+00032	+00009
155240	114	+00033	+00015
193415		+00036	+00011
223439		+00037	+00008
154228	115	+00037	+00011
170022		+00038	+00016



H-9417 VELOCITY TABLES

e

000110	0	0000	0003	000	000000	000000
000260	0	0001				
000406	0	0002				
000540	0	0003				
000665	0	0004				
000775	0	0005				
000900	0	0006				
001300	0	0007				

STATION LIST  
H-9417 AND SPECIAL INVESTIGATIONS

STA	O	LATITUDE	LONGITUDE	CRT	ELEV	F.	KHZ	TYPE/NAME	SOURCE
300	*	48 19 07072	122 50 36787	139	0030	149835	SMITH	V. I P. 1416	
							IS. LT.	1867-1954	
301	6	48 08 39626	122 45 12585	139	0016	149835	PT WILSON	" P. 1432	
							LTH	1921-1954	
302	*	48 25 12169	122 53 00373	139	0060	149835	ICEBERG	1854 P. 1414	
303	6	48 08 11241	122 50 10923	139	0027	149835	MID RM2	GP COMP.**	
400*6		48 10 54947	123 06 32297	243	0000	000000	NEW DUNGENESS	LTH	
								1942 V. I P. 1813	
401	*	48 25 28105	123 13 28704	243	0000	000000	DISCOVERY IS	LTH 1940-1957	
								V. I 1814	
402	6	48 13 29438	122 46 05325	243	0000	000000	PT PARTRIDGE	LT	
								1974 PMCFIELD PARTY	
403	*	48 24 29659	122 39 19100	243	0000	000000	DECEPTION PASS	LT	
								1939 V. I P. 1484	
404	*	48 27 02954	122 57 43371	243	0000	000000	CATTLE PT	LT 1940-1953	
								V. I P. 1448	
405	*	48 25 19989	122 53 34746	243	0000	000000	ICEBERG PT	LT 1940	
								V. I P. 1449	
406	*	48 24 48346	122 48 38538	243	0000	000000	DAVIDSON RK	LT 1935-1954	

VISUAL STATIONS SHOW NO ELEVATION  
 \* STATIONS DO NOT FALL ON BOATSHEET  
 \*\* GEODETIC POSITION COMPUTATION

K  
\*



CONTROL ABSTRACT

VESSEL: SHIP RA-40-4-74

<u>DAY</u>	<u>POS.</u>	<u>CTRL</u>	<u>S<sub>1</sub></u>	<u>M</u>	<u>S<sub>2</sub></u>	<u>REMARKS</u>
108	0001-90	0004	302		303	none
113	0091-0182	0004	301		303	none
114	0183-0334	0004	300		303	BS #214, 11/1/74
115	0335-388	0004	300		303	none

VESSEL: RA-6 RA-40-4-74

107	6000-6094	0004	301		303	none
114	6095-6195	0004	301		303	none
115	6196-6239	0004	301		303	none

VESSEL: RA-6 RA-10-1-74

109	7000-7098	0004	301		303	none
112	7099-7248	0004	301		303	none
113	7249-7583	0004	301		303	none

VESSEL: FA-5 RA-40-4-74

109	5001-5038	0004	30 <del>x</del> <sup>1</sup>		30 <del>x</del> <sup>3</sup>	none
114	5039-5164	0004	300		303	none
115	5175-5327	0004	300		303	none



ASCII SIGNAL TAPE LISTING  
=====

300	48	19	0707	122	50	3679
301	48	08	3963	122	45	1258
302	48	25	1217	122	53	0037
303	48	08	1 <sup>2</sup> 24	122	50	1092
400	48	10	5495	123	06	3230
401	48	25	2810	123	13	2870
402	48	13	2944	122	46	0532
403	48	24	2966	122	39	1910
404	48	27	0295	122	57	4337
405	48	25	1999	122	53	3475
406	48	24	4835	122	48	3854



APPROVAL SHEET

H-9417 (RA-40-4-74)  
RA-10-1-74)

OPR-412-FA-RA-74

Strait of Juan de Fuca, Washington

This survey was carried out in accordance with the Hydrographic Manual, PMC OPORDER, and the Instruction Manual for Automated Hydrographic Surveys. The boatsheet and data were examined daily for completeness and accuracy.

This sheet is considered complete and adequate for the special charting purposes of the survey.

*K. William Jeffers*  
K. William Jeffers  
Commander, NOAA  
CO, RAINIER



U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SURVEY  
Pacific Marine Center



Date : 5 March 1974

Reply to Attn. of: GPM32

To : Commanding Officer  
NOAA Ship RAINIER

From : *Walter F. Forster*  
Walter F. Forster, Cdr., NOAA  
Chief, Processing Division

Subject: Ross Transducer--Mini-Ranger Antenna Displacement, OPR-412

The EDP Branch will be able to compensate for Ross transducer--Mini-Ranger antenna displacement using computer procedures. This is a temporary solution and must only be used for this project (OPR-412). Data Processing will require a special tape to be logged providing the ship's heading at each position fix.

This tape shall be logged in the following format, using an ASI or similar data logger in ASCII code. One word is to be logged for each fix word on the HYDROPLOT master tape.

Format: HHMMSS O OHDG FIXN DAY 000000 000000

Where : HHMMSS is the time of the fix word  
OHDG is the ship's heading in degrees  
FIXN is the fix number of the position  
DAY is the Julian day number

All unused fields and the leading character of the heading field are to be zeros.

Include a copy of this memorandum in the Descriptive Report.

*3 MAR 74 ANNOUNCED -  
COURSE NEED ONLY BE  
LOGGED UPON MAKING  
COURSE CHANGE -  
FIXN TO BE LOGGED  
WITH NEW COURSE -  
HHMMSS WILL BE  
CONTROLLING FILE  
MERGING ENTRY TO  
PRODUCE DATA AT PMR.*

1. CO.	_____
2. NO.	_____
3. CH.	_____
4. I.	_____
5. SH.	_____
6. E.	_____
7. SH. OF.	_____
8. W. R.	_____
9.	_____
10. RET TO	_____

*When making a course change, you must log the new course as well as the old course. (JDR)*

*WFF K003*



U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration

*CPM3*  
↓  
*GREEN J*  
↓  
*CPM3/FILE*

Date: April 24, 1975  
Reply to Attn: C323  
Subject: Replotting Survey H-9417

To: Chief, Processing Division (CPM3)

In reviewing survey H-9417, Strait of Juan de Fuca, disagreements with prior surveys were revealed. An examination of the tide corrector printout for H-9417 indicates that errors in the tide correctors exist. A value of 7.7 feet has been used instead of 3.1 feet for the value of the plane of reference (MLLW) at Port Townsend in computing tide correctors for H-9417. See tide note for hydrographic sheet.

The smooth plot, boat sheet, overlays, descriptive report, and all records are being returned for correcting the reduction of soundings and replotting the survey.

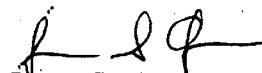
The priority for this survey remains as originally established.

Richard H. Houlder  
Chief, Marine Chart Division

APPROVAL SHEET

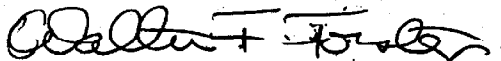
The smooth sheet has been inspected, is complete, and meets the requirements of the General Instructions for automated surveys and the Hydrographic Manual. (Note: All exceptions are listed in the Verifier's Report)

Examined and approved,



James S. Green  
Supervisory Cartographic Technician

Approved and forwarded,



Walter F. Forster, Cdr., NOAA  
Chief, Processing Division  
Pacific Marine Center

✓

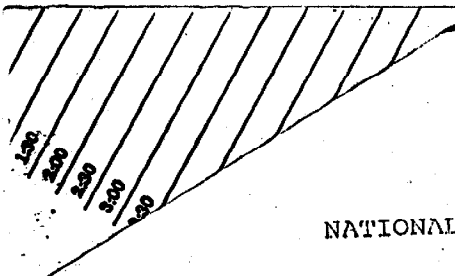
TIDE NOTE

RA-40-4-74  
RA-10-1-74  
RA-10-2-74  
RA-5-~~1~~-74  
|

It is recommended that the tide station at Smith Island, Washington, latitude 48 19.05'N., longitude 122 50.25'W., be used to control the soundings on surveys RA-40-4-74, RA-10-1-74, and RA-10-2-74. Due to improper operation of the gage at Smith Island, a number of hourly tidal heights were not recorded. If tidal information must be obtained elsewhere, the station at Port Townsend, Washington, latitude 46 06.9'N., longitude 122 45.0'W., should be used for surveys RA-40-4-74 and RA-10-1-74. The alternate tidal information for the survey RA-10-2-74 should be obtained from the station at Mosquito Pass, Washington, latitude 48 34.8'N., longitude 123 10.3'W. It is recommended that the tide station at Reservation Bay, Washington, latitude 48 24.9'N., longitude 122 39.1'W., be used to control the soundings on survey RA-5-<sup>1</sup>~~1~~-74. The gages operated on Greenwich Mean Time. Hourly heights from the Smith Island Station will be furnished by the ship to PMC Processing Division. Hourly heights from the stations at Port Townsend and Mosquito Pass will be furnished to PMC by the tide station observers. Reduction to MLLW and copies of the marigrams will be furnished by Tides Division, Rockville.

Predicted tides for boatsheet control were obtained from the Tide Tables, 1974, West Coast of North and South America, using the Port Townsend substation.

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U.S. DEPARTMENT OF COMMERCE  
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
 NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center:

Hourly heights are approved for Form 362

Tide Station Used (NOAA Form 77-12): Smith Island  
 Port Townsend

Period: April 1, 1974

HYDROGRAPHIC SHEET: H9417

OPR: 412

Locality: Strait of Juan De Fuca

Plane of reference (mean lower low water): 0.9 (Smith Island)  
 3.1 (Port Townsend)

Height of Mean High Water above Plane of Reference is 7.7 Port Townsend  
 6.4 Smith Island

Remarks: Recommended Zoning:

(1) Hydro north of Smith Island, direct on Smith Island Gage.

*151  
 zones that  
 had  
 ✓ marks*

- ✓ (2) (1) 123°00' - 122°55' ✓
- ✓ (2) (2) 122°55' - 122°50' ✓
- ✓ (4) (2) East of 122°50'

Correction on Port Townsend	
- 30 min.	x0.87 Range ✓
- 15 min.	x0.87 Range ✓

- a. 48°16' - 48°14' apply range ratio x0.87
- (3) ✓ b. 48°14' - 48°12' apply range ratio x0.92
- (4) ✓ c. From 48°12' south to Admiralty Inlet - Zone direct on Port Townsend

*James R. Hubbard*  
 Chief, Tides Branch



GEOGRAPHIC NAMES

Survey No.

Name on Survey	Source										
	On Chart No.	On previous survey No.	On U. S. Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List			
	A	B	C	D	E	F	G	H	K		
DALLAS BANK ✓											1
<del>DEERHORN</del>											2
MIDDLE PT											3
PARTRIDGE BANK ✓											4
PT WILSON ✓											5
ADMIRALTY INLET ✓											6
MCCURDY POINT ✓											7
POINT PARTRIDGE ✓											8
<del>PROTECTION ISLANDS</del> <sup>29</sup>											9
STRAIT OF JUAN DE FUCA ✓											10
											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26

Approved  
 Chas. E. Harrington  
 Staff Geographer  
 7 Feb. 1975

HYDROGRAPHIC SURVEY STATISTICS  
 HYDROGRAPHIC SURVEY NO. H-9417

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & PNO + 3		1	BOAT SHEETS		2	
DESCRIPTIVE REPORT		1	OVERLAYS		5 <del>7</del>	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES			1			
CAHIERS	1 & Misc. Data		<del>1</del>			
VOLUMES						
BOXES						
T-SHEET PRINTS (List)						NONE
SPECIAL REPORTS (List)						

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				
POSITIONS CHECKED		1497	1497	
POSITIONS REVISED		7	0	
DEPTH SOUNDINGS REVISED		260	27	
DEPTH SOUNDINGS ERRONEOUSLY SPACED			-	
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED			-	
	TIME (MANHOURS)			
Verification of Control		2	2	
Verification of Positions		13	6	
Verification of Soundings		<del>201</del> 132	6	
Smooth Sheet Compilation		<del>105</del> 52	-	
ALL OTHER WORK			54	
<b>TOTALS</b>		<del>318</del> 199	68	
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY <i>Stanley H. Otsubo</i>	June 17, 1974		MARCH 2 1976 <del>December 15, 1974</del>	
REVIEW BY <i>L. G. ...</i>	9 Apr 76		29 Apr 76	

Reg. No. H-947

The Computer and Excess Sounding Cards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

When the cards have been updated to reflect the final results of the survey the following shall be completed:

CARDS CORRECTED

DATE \_\_\_\_\_ TIME REQ'D \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

Reg. No. \_\_\_\_\_

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

MAGNETIC TAPE CORRECTED

DATE \_\_\_\_\_ TIME REQ'D. \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

H-9417

Information for Future Presurvey Reviews

This is an area of stable bottom.

<u>Position Index</u>		<u>Bottom Change Index</u>	<u>Use Index</u>	<u>Resurvey Cycle</u>
<u>Lat.</u>	<u>Long.</u>			
481	1230	1	6	50 years
481	1225	1	6	50 years

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OFFICE OF MARINE SURVEYS AND MAPS  
MARINE SURVEYS DIVISION  
MODIFIED HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-9417

FIELD NO. RA-40-4-74  
RA-10-1-74

Washington, Strait of Juan de Fuca, Approach to Admiralty Inlet

SURVEYED: April 17-25, 1974

SCALE: 1:40,000 and 1:10,000

PROJECT NO.: OPR-412

SOUNDINGS: Ross Fineline Depth Recorder  
Model 5000

CONTROL: Mini-Ranger  
(Range-Range Mode)

Chief of Party .....	K. W. Jeffers
Surveyed by .....	Ship's Officers
Automated Plot by .....	Harris Xynetics Plotter (PMC)
Verified by .....	S. H. Otsubo
Reviewed by .....	L. Quinlan
	Date: April 29, 1976
Cursory inspection made--survey	G. K. Myers
processing considered complete .....	May 14, 1976

1. Control and Shoreline

The origin of the control is adequately covered in part F of the Descriptive Report.

There is no shoreline within the limits of this survey.

2. Hydrography

A. Depth curves at crossings are in good agreement.

B. The standard depth curves are adequately delineated.

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

3. Condition of the Survey

A. The sounding records and smooth plotting conform to the requirements of the Hydrographic Manual and the Instruction Manual for Automated Hydrographic Surveys.

B. The following records were not inserted in the Descriptive Report as prescribed by requirements of the Automated Hydrographic Manual, revised October 1968:

- (1) Parameters for Digital Computing Polyconic Projections (Form #1).
- (2) Computer Parameters for Electronically Controlled Surveys (Form #3).
- (3) Reference of Hydrographic Data buoys and bottom characteristics.
- (4) The Descriptive Report Data Record of the smooth sheet preparation was not completed.

C. An insufficient number of bottom characteristics were obtained in the field.

#### 4. Junctions

Adequate junctions have been effected with H-6653 (1941) on the west; and H-8927 (1967) and H-8930 (1967) on the southwest. The present survey should be used to supplement the following surveys: H-6613 (1940-41) on the northwest, H-6614 (1940-41) on the northeast, and H-6817 (1940-41) on the southeast. A partial butt junction was effected with H-6616 (1940-41) on the northeast because of extensive overlap between the two surveys.

#### 5. Comparison with Prior Surveys

H-6612 (1940-41) 1:20,000

This survey covers most of the present survey area. There are no significant differences between prior and present depths except on some bottom irregularities which were not investigated on the present survey. The prior least depths and a few bottom characteristics have been carried forward.

With these additions, the present survey is adequate to supersede the prior survey in the common area.

#### 6. Comparison with Chart 6450 (18441), 23rd Ed., December 6, 1975 184SC (18423), 15th Ed., March 1, 1975

##### A. Hydrography

The charted hydrography originates with the previously discussed prior survey which requires no further consideration supplemented by Notice

to Mariners. Present hydrography is also supplemented by the following early surveys: H-8927 (1967), H-8930 (1967), H-6817 (1942-43), H-6614 (1940-41), H-6616 (1940-41), and H-6613 (1940-41). These prior soundings are considered reliable depths and should be retained on the chart.

The non-dangerous submerged wreck, charted at latitude  $48^{\circ}11.62'$ , longitude  $122^{\circ}46.6'$ , originating with Notice to Mariners 36/69 was neither proved nor disproved by the present survey. This wreck should be retained on the chart.

Except as noted in the aforementioned reference, the present survey is adequate to supersede the charted hydrography in the common area.

B. Aids to Navigation

The navigational aids adequately mark the features intended.

7. Compliance with Instructions

This survey adequately complies with the Project Instructions.

8. Additional Field Work

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

Examined and Approved:

*Ray K. Matsushige*  
Chief  
~~Marine Surveys Division~~  
Hydrographic Surveys Branch

*J. Ant Yeager*  
~~Associate Director~~  
~~Office of Marine Surveys~~  
~~and Maps~~  
Chief  
Nautical Charting Division

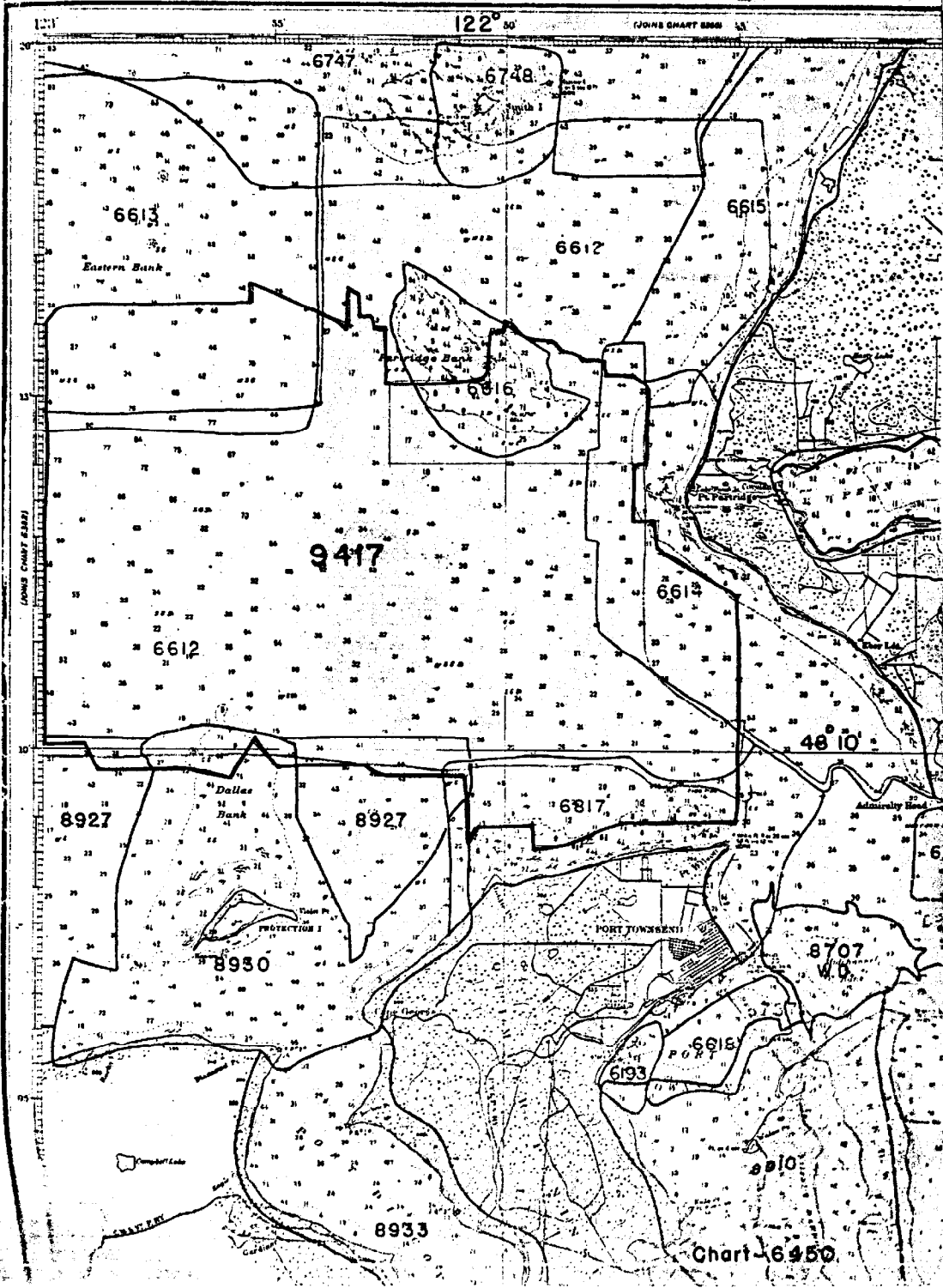


Chart 6450



