

9035

Diag. Cht. No. 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. .... DA-10-1-69  
Office No. H-9035.....

LOCALITY

State ..... WASHINGTON .....  
General Locality .... HOOD CANAL .....  
Locality .... VICINITY OF ENTRANCE TO DABOB BAY

1969

CHIEF OF PARTY

CDR. R. E. MOSES.....

LIBRARY & ARCHIVES

DATE ..... Sept. 19, 1972.....

9035

**HYDROGRAPHIC TITLE SHEET**

H-9035

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.

DA-10-1-69

State Washington

General locality Hood Canal  
~~Western Washington - Puget Sound~~

Locality Vicinity of Entrance to Hood Canal  
~~Hood Canal - Dabob Bay~~

Scale 1:10,000 Date of survey 18 Feb - 14 Apr 1969

Instructions dated 17 Dec 1968 Project No. OPR-412

Vessel Ship DAVIDSON, Launch I (1192), Launch II (1196), 17' Whaler

Chief of party CDR Ray E. Moses

Surveyed by K.A. Domoto, E.H. Endrud, B.W. Fisher, G.F. Tornberg

Soundings taken by echo sounder, ~~and lead~~ Raytheon DE-723, Ser # 919, 214, 1276, 553

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

Positions Verified by C.R. Lehman  
Automated plot by PMC - Gerber  
verified Digital Plotter

Soundings ~~provided~~ by C.R. Lehman

Soundings in fathoms ~~feet~~ at ~~MLLW~~ MLLW

REMARKS:

*Applied to stds 11/2/72*  
*CR*

DESCRIPTIVE REPORT

To Accompany

Hydrographic Survey H-9035  
DA-10-1-69

OPR-412 Washington

Scale 1:10,000

USC&GS Ship DAVIDSON

Ray E. Moses  
CDR USESSA  
Commanding Officer

1969

## A. PROJECT

This survey was accomplished according to Project Instructions: OPR-412, HOOD CANAL, DABOB BAY, AND ELLIOTT BAY, WASHINGTON, dated 17 December 1968 and the following supplements:

Change No. 1:	Amendment to Instructions	31 January 1969	
Change No. 2:	Supplement to Instructions	20 February 1969	✓
Change No. 3:	Supplement to Instructions	13 March 1969	

## B. AREA SURVEYED

The survey covered an area, centered on the Toandos Peninsula, Washington between the latitudes: 47°40'30" and 47°45'00", and longitudes: 122°43'00" and 122°55'00". The survey is broken into three portions: Hood Canal, Fisherman Harb., and Dabob Bay. The survey area has a regular bottom. ✓

Work was accomplished between 18 February and 14 April 1969.

The survey makes junctions with sheets:

	H-7099	1:10,000 (1947)	
DA-10-2-69	H-9036	Contemporary survey	✓
DA-10-3-69	H-9038	Contemporary survey	

## C. SOUNDING VESSEL

The following vessels were used to obtain soundings on this survey: /

Launch I(#1192)	Red
Launch II(#1196)	Green
17' Whaler	Orange

A summary of each vessel's work by position numbers is attached.

Bottom samples were taken by ship DAVIDSON, blue, and 17' whaler, orange. Most of the samples in Dabob Bay were taken by the University of Washington, brown. ✓

## D. SOUNDING EQUIPMENT

Raytheon DE-723 fathometers were used:

Launch I	#214, #553
Launch II	#1276, #214
17' Whaler	#919

Echo sounder corrections were determined from bar checks taken three times daily by the launches and sounding machine comparisons performed by the ship. Launch and whaler fathometers were initialed at zero, ✓

requiring draft corrections for their soundings. The ship's fathometer was initialed at two(2) fathoms. All soundings are in fathoms.

Some difficulty was encountered in obtaining a trace with the Raytheon fathometers in deep water where "C" scale was used. Traces were particularly poor in Dabob Bay where there is a thick layer of mud. Reducing launch speed in these areas did help somewhat.

#### E. SMOOTH SHEET

The smooth sheet will be constructed and plotted by the Processing Division, Pacific Marine Center, Seattle, Washington.

#### F. CONTROL

Visual three-point fixes were used for control in this survey. There were three types of visual signals used: triangulation signals, photogrammetric signals, and hydrographic signals. Triangulation signals were machine plotted on the boat sheet; Photogrammetric signals were located by three-ray radial plot from the office photographs; Hydrographic signals were cut in with sextant angles. An abstract of signals and manuscripts is included in the appendix.

#### G. SHORELINE

Shoreline and shoal area outlines were traced onto the boat sheet from the photo manuscripts(See appendix) by ship's officers. Manuscript field edit was done by ship's officers and is covered by "Field Edit Report, Hood Canal & Dabob Bay, Washington, March-April 1969."

There is good agreement between the photogrammetric and hydrographic location of features on this survey. *see Review Part 2*

#### H. CROSSLINES

The percentage of crosslines run was 5.7%(18.6 miles). Agreement at crossings is good.

#### I. JUNCTIONS

Junctions are made with sheets:

	H-7099	1:10,000(1947)
DA-10-2-69	H-9036	Contemporary survey
DA-10-3-69	H-9038	Contemporary survey

There is good agreement at the junctions.

J. COMPARISON WITH PRIOR SURVEYS

There are six(6) areas from the pre-survey review which were investigated:

- (1) Area #8 (Lat. 47°42.2', Long. 122°53.5'W) ✓  
 Piling~~s~~ and booms are located in this area---positions #5648-5640, Volume XI, page 18.
- (2) Area #9 (Lat. 47°42.9'N, Long. 122°52.95'W) ✓  
 The location of Seal Rock was verified---position #1641-1642, pages 48-49, Volume VI~~s~~<sup>(6)</sup> and found to be one(1) (5) foot above water at 1406, #12 March 1969.
- (3) Area #10 (Lat. 47°44.5'N, Long. 122°52.3'W) ✓  
 There are two piers<sup>ruins</sup> at this location, but the ruins southward of these piers which are mentioned in the pre-survey review were not found. See Review Par. 7A
- (4) Area #18 ✓  
 The end of this pier was used as a photogrammetric signal (#031): Lat. 47°42'14.6. meters, Long. 122°49'319. meters.
- (5) Area #19 (Lat. 47°42.6'N, Long. 122°49.54'W) ✓  
 There is no tide gage at this location. See Review Par 7A
- (6) Area #20 ✓  
 Tskutsko Point light was used as a hydrographic signal (029): Lat. 47°41'926.6meters, Long. 122°49'1139.5meters.

There is one dash-encircled unnumbered item indicating an inadequately developed feature. Development in this area showed a least depth of twenty-seven(27) fathoms (Lat. 47°43.0'N, Long. 122°51.25'W).  
 42.33' 52.12'

K. COMPARISON WITH THE CHART

Comparison with C&GS chart #6422, 4th edition, 10 June 1968, is generally good. Depth curves compare very good. ~~the survey, however, indicates shallower depths in two shoal areas.~~ See Verifier's Notes ✓

Lat. 98'	Long. 7	Chart 6422	DA-10-1-69, H-9035
47°42.35' ✓	122°52.1' ✓	59fm(351ft) ✓	54fm(324ft) ✓
47°43.0' ✓	122°51.25' ✓	32fm(190ft) ✓	27fm(162ft) ✓
42.33' ✓	52.12' ✓		

There are a number of rocks, piling, and ruins that are not shown on the chart. A list of these obstructions is given in the appendix. ✓

### L. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede prior surveys. ✓

### M. AIDS TO NAVIGATION

There are seven(7) navigation aids on this survey:

<u>Lat.</u>	<u>Long.</u>	<u>Name</u>	<u>Characteristic</u>
47°45.07'	122°45.29'	Hood Canal Light No. 10	Fl R 4sec 15ft10" ✓
47°41.59'	122°46.17'	Hazel Point Light	Fl 4sec 15ft
47°40.92'	122°48.61'	Oak Head Light	Fl 10sec 15ft
47°41.50'	122°49.91'	Tskutsko Point Light	Fl 4sec 15ft
47°44.80'	122°48.55'	Tabook Point Light	Fl 4sec 15ft
47°44.81'	122°51.10'	Pulali Point Light	Fl 4sec 30ft <del>4sec 30ft</del> ✓
47°42.60'	122°45.96'	Radar Reflector Buoy	W Or C Ra Ref

Characteristics were not verified. There are a number of mooring buoys ✓  
used by the Navy in Dabob Bay which are frequently moved. There are two  
(2) warning lights used by the Navy when the torpedo range is being used:

47°41.84'	122°53.64'	Sylopash Point Warning Light	Fl R/Fl G
47°42.7'	122°49.3'	Zelatched Point Warning Light	Fl R/Fl G

For further information the reader is referred to Landmarks Report--OPR-412.

### N. STATISTICS

	<u>No. Positions</u>	<u>Nautical Miles Sounding Lines</u>	<u>Bottom Samples</u>
Launch I	1883	165.6	0
Launch II	461	56.7	0
17' Whaler	1021	69.8	2
Ship DAVIDSON	28	0	28
University of Washington	29	0	29

The total area surveyed is 11.6 square nautical miles. There are fifteen(15) volumes with this survey. Volume number seven(7) includes the bottom samples. Positions have been made up for the University of Washington bottom samples which were taken off graphically from the University's boat sheet.

One current station was observed between 25 February and 25 March 1969 ✓  
at the following location: 47°41'962 m.N, 122°45'540m.W. A geodyne current meter was used. The film and weather observations were forwarded to C-33, C&GS, Rockville, Maryland on 2 April 1969(Ref. No DA-16-69).

Three(3) tide stations were observed at the following locations: ✓  
Bangor Wharf, Seabeck, and Whitney Point. Soundings on the boat  
sheet were reduced with predicted tides based on Bangor Wharf,  
Seabeck, and Zelatched Point. For further information a tide  
note is attached.

#### O. EVALUATION OF LAUNCH LOGGING

An attempt was made to log both positions and soundings in the launch. ✓  
This system was successful once a man was trained to do logging. All  
logging was done in Launch I which had many mechanical problems and  
much down-time. The logging operation accounted for no down-time.

There are some weaknesses to this system which are being overcome. ✓  
First, since the man who normally records now does the logging, sounding  
volumes are used only for recording bar checks, detached positions,  
and other launches' work. With the logging system there is no place to  
record remarks such as speed changes, course changes, and features.  
Therefore either the plotter or an angleman must keep an abstract of  
positions. Second, the logging operation tends to take more time  
between lines on turns. As for frequency of positions, it was found  
that the logger could successfully stay up with minute fixes.

#### P. LOGGING

The HUL Logger(BCD Code)/Friden Flexowriter logging system was used ✓  
with this survey. A "dual indicator" format is used which combines both  
the sounding tape and position tape into one "position and sounding  
tape." An example and an explanation of this format are included in  
the appendix.

Separate position and sounding tapes have been made for minus soundings  
and zero soundings.

#### Q. RECOMMENDATIONS

The following recommendations are made:

- (1) Surveys should continue to be logged in the launch. ✓  
This system not only reduces man-hours and cost, but  
also allows a ship to stay current with its processing.
- (2) A single "position and sounding tape" should be used ✓  
for all automated visual surveys whether on-time logging  
is done or not.



R. REFERENCES TO REPORTS

1. Corrections to Echo Soundings: OPR-412  
To be forwarded with this report.
2. Field Edit Report: OPR-412  
Forwarded to CFS3, 7 June 1969, Transmittal letter no. DA-31-69.
3. Geographic Names Report: OPR-412  
To be forwarded with this report.
4. Landmarks Report: OPR-412  
To be submitted with OPR-412.

Respectfully submitted

*Bruce W. Fisher*

Bruce W. Fisher  
LTJG USESSA

ATTACHMENTS:

Tide Notes  
Geographic Name List  
Modified Velocity Corrections  
Initial Corrections  
Boat Sheet Layout  
Form #1- Parameters for Digital Computing  
List of Manuscripts  
List of Stations on DA-10-1-69  
List of Obstructions  
Position-Sounding Tape  
Abstract of Positions  
Approval Sheet

TIDE NOTES

Three(3) tide stations were observed for this survey. The tide height data were corrected for differences in time and height. Each tide station is assigned to a portion of the survey:

*For*  
HOOD CANAL

Tide Station- Bangor NAD Ammunition Pier  
Lat. 47°44'53" Long. 122°43'33"  
Plane of Reference- MLLW (2.8 ft on the staff)  
Time Meridian- 120°West

Tide gage is a portable bubble gage installed under the lightning tower on the Bangor NAD ammunition pier. On the boat sheet soundings were reduced with predicted tides based on Bangor Wharf.

*For*  
FISHERMAN HARBOR

Tide Station- Seabeck pier  
Lat. 47°38'31" Long. 122°49'42"  
Plane of Reference- MLLW (20.1 ft on the staff)  
Time Meridian- 120°West

Tide gage is a Fischer-Porter Digital tide gage, owned and maintained by the Department of Oceanography, University of Washington. Soundings on the boat sheet were reduced with predicted tides based on Seabeck.

*For*  
DABOB BAY

Tide Station- Point Whitney  
Lat. 47°45'44" Long. 122°51'03"  
Plane of Reference- MLLW (2.1 ft on the staff from 19 February to 18 March 1969; 5.0 ft on the staff after 18 March 1969)  
Time Meridian- 120°West

Tide gage is a portable bubble gage installed on Point Whitney floating pier. Soundings on the boat sheet were reduced with predicted tides based on Zelatched Point.

*Tide correctors are filed with the field records.*

MODIFIED VELOCITY CORRECTIONS

(Includes Draft Correction)

OPR-412

There are three(3) tables of velocity corrections: Table #1 corrections are to be applied to Launch I soundings; Table #2 corrections, to Launch II soundings; And Table #3 corrections, to 17-ft Whaler soundings. The reader is referred to the report on Corrections to Echo Soundings: OPR-412 which will be forwarded with this report.

TABLE I  
(Launch I)

<u>Depth(fm)*</u>	<u>Correction(fm)</u>
7.6	+0.4
11.7	+0.5
17.2	+0.4
22.5	+0.3
42.5	+0.2
200.0	+0.3

TABLE II  
(Launch II)

<u>Depth(fm)*</u>	<u>Correction(fm)</u>
2.7	+0.2
5.4	+0.3
9.8	+0.4
14.4	+0.3
21.7	+0.2
42.4	+0.1
200.0	+0.2

TABLE III  
(Whaler)

<u>Depth(fm)*</u>	<u>Correction(fm)</u>
1.4	+0.3
15.5	+0.2
21.1	+0.1
42.5	+0.0
200.0	+0.1

\* "Depth" refers to the deepest depth to which the correction is applied.

INITIAL CORRECTION

DA-10-1-69

Initial corrections have been divided into three tables which go with the respective boats: Table I, Launch I; Table II, Launch II; Table III, 17-ft Whaler.

TABLE I  
(Launch I)

Time*	Correction(fm)	Day
1219	0.0	049
0800	0.0	050
1331	-0.1	
1413	0.0	
1425	-0.1	
1440	0.0	
0800	0.0	051
0800	0.0	055
0800	0.0	056
0800	0.0	057
0845	-0.1	
1101	0.0	
1130	-0.1	
0800	0.0	058
0800	0.0	059
0800	0.0	063
1459	-0.1	
1545	0.0	
0800	0.0	064
0800	0.0	065
1323	-0.1	
0800	0.0	066
0800	0.0	077
0800	0.0	083
0800	0.0	084
0800	0.0	085
0800	0.0	098

TABLE II  
(Launch II)

Time*	Correction(fm)	Day
1337	0.0	066
1006	0.0	088
0844	0.0	094
1644	0.0	097
0841	0.0	098
0841	0.0	105

TABLE III  
(Whaler)

Time*	Correction(fm)	Day
0800	0.0	066
0938	0.0	070
1336	+0.1	
1348	0.0	
0845	0.0	071
0849	0.0	072
0859	0.0	086
0835	0.0	093
1319	0.0	098
0925	0.0	099

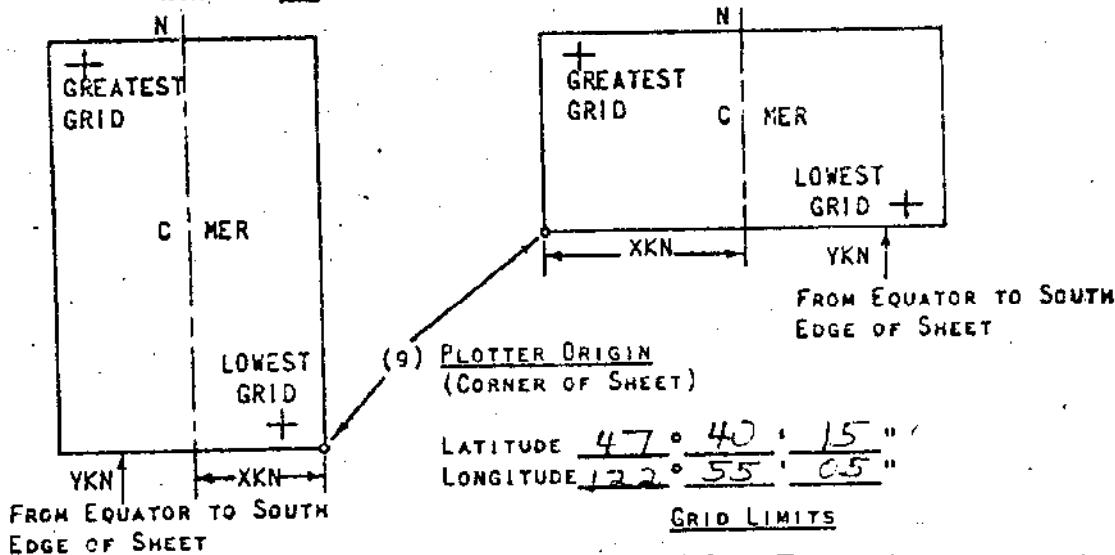
\* Correction applied from the indicated time up to, but not including the next applicable tabulated time of change.

FORM # 1

FIG. 15

PARAMETERS FOR DIGITAL COMPUTING  
POLYGONIC PROJECTION

- (1) PROJECT No. OPR-412 (4) REQUESTER BY Commanding Officer  
 (2) H No. H-9035 (5) SHIP OR OFFICE USC HCSS DAVIDSON  
 (3) FIELD No. B (6) DATE REQUIRED 3 February 1964  
 (7) VISUAL  (8) ELECTRONIC  (FILL OUT FORM #3)  
 (10) XKN (SP 5) DISTANCE FROM CHER TO EAST EDGE (NYX = 1)  
 OR WEST EDGE (NYX = 0). 7,620.035 METERS  
 (11) YKN (SP 241) DISTANCE FROM EQUATOR TO SOUTH EDGE  
 OF SHEET. 5,281,609.624 METERS  
122° 49' 00"  
 (12) CENTRAL MERIDIAN  
 (13) SURVEY SCALE. 1:10,000  
 (14) SIZE OF SHEET (CHECK ONE) 36x54  42x60  OTHER 36x60   
 (15) NYX, ORIENTATION OF SHEET (CHECK ONE)  
 NYX = 1  NYX = 0



LIST G.P. OF ALL STATIONS TO BE PLOTTED ON THIS PROJECTION ON THE BACK OF THIS FORM. (DEG., MIN., METERS)

- (16) GREATEST LATITUDE 47° 45' 00" (PROJECTION LINE  
 (17) LOWEST LATITUDE 47° 40' 30" INTERVAL, PAGE 4  
 (18) DIFFERENCE 0° 4' 30" HYDRO MANUAL)  
 (19) 0' 30"  
 (20) 9 YSN  
 (21) GREATEST LONGITUDE 122° 55' 00"  
 (22) LOWEST LONGITUDE 122° 43' 00"  
 (23) DIFFERENCE 0° 12' 00"  
 (24) 0' 30"  
 (25) 24 XSN

9035  
 PROJECT No. OFR-412 B. 31029  
 Date 1/17/69

HW-40-JE-RWD 271 (PARTIAL) OF 310

31029

PARAMETER CARD II

True major axis of the earth		6.378,200.4	REAR	1	2	3	4	5	6	7	8	9	0
Constant distance from central north- side to center of plotter SP 5			REFERS	6	3	7	8	2	0	6	2	0	7
Constant distance from equator to center of plotter SP 241				7	6	8	0	15	15	0	3	5	4
Central projection of Projection				21	22	23	24	25	26	27	28	29	0
Plotter Scale/Survey Scale				5	2	5	1	5	6	2	5	3	8
North/south axis of sheet .. to correspond to X axis .. 1) of plotter		1 2 3 4 5 6 7 8 9 0	100/100	4	4	3	2	1	0	0	0	0	8
Foot/Platton indicator		0 - Feet 1 - Platton											
Identification No.			REF										
PCP - 1			PCP										

**109035**

Plotted Lat. Intersection	YSP	YSR	YSL	YSR	YSL	YSR	YSL	YSR	YSL	YSR	YSL	YSR
✓	4	7	4	2	3	0	0	0	0	0	0	0
✓	1	2	4	3	6	0	0	0	0	0	0	0
Distance between Grid												
Interval (Long)												
Interval (Lat)												

Computed \_\_\_\_\_  
 Entered \_\_\_\_\_  
 Checked \_\_\_\_\_  
 Date \_\_\_\_\_

List of Stations on DA-10-1-69

<u>Name used in Hydrographic Survey</u>	<u>Origin of Station</u>
001 . . . . .	Volume I, page 10 ✓
002	CARSON, 1964 ✓
003	BANGOR WAREHOUSE W. GABLE, <sup>1934-1963</sup> 1964 ✓ ✓
005	T-12258 ✓
006	Volume I, page 7 ✓
007 . . . . .	T-12258 ✓
008	T-12258 ✓
009	T-12258 ✓
010	T-12314 ✓
011	T-12314 ✓
012 . . . . .	T-12314 ✓
013	T-12258 -Tide gage ✓
014	HOOD CANAL <sup>LIGHT</sup> NO 10, <sup>1963-1964</sup> 1964 ✓
015	CURRANT 2, <sup>1964</sup> 1964 ✓
016	T-12257 <sup>1934-</sup> ✓
017 . . . . .	Volume I, page 4 ✓
018	CHUTE 3, <sup>1963</sup> 1963 ✓
019	T-12257 <sup>1945-</sup> ✓
020	HAZEL POINT LIGHT, 1963 ✓
021	MAPLE 3, <sup>1945</sup> 1963 ✓
022 . . . . .	See DA-10-2-69 (Station #104) ✓
024	T-12257 ✓
025	T-12257 ✓
026	T-12257 ✓
027	OAK HEAD LIGHT, 1963 ✓
028 . . . . .	See DA-10-2-69 (Station #102) ✓
029	Volume III, page 9 (Station #101 ✓ on DA-10-2-69)
031	T-12256 ✓
033	T-12257 ✓
034	DABOB BAY #6, 1961 ✓
035 . . . . .	TABOOK POINT LIGHT, 1963 ✓
036	TABOOK (USN), 1961 ✓
039	Volume III, page 15 ✓
040	See DA-10-2-69 (Station #141) ✓
042	T-12259 ✓
043 . . . . .	See DA-10-2-69 (Station #142) ✓
044	See DA-10-2-69 (Station #143) ✓
045	SYLOPASH POINT <del>WARNING</del> LIGHT, 1963 ✓
046	T-12255 ✓
047	T-12255 ✓
048 . . . . .	Volume III, page 15 ✓
049	T-12255 ✓
050	T-12255 ✓

051	.....	WAWA POINT, <sup>1878-1963</sup> <del>1961</del> ✓
052		T-12256 ✓
053		Volume IX, page 11 ✓
054		T-12256 ✓
055		T-12256 ✓
057	.....	T-12256 ✓
058		Pulali 2, RM#1, 1961 ✓
059		Volume III, page 12 ✓
060		T-12256 ✓
061		T-12257(cuts on photos) ✓
062	.....	T-12257(cuts on photos) ✓
063		T-12257 ✓
064		T-12257 ✓
065		T-12257 ✓



LIST OF OBSTRUCTIONS  
DA-10-1-69

does not agree w/ descriptive report  
page 4 (32)

<u>Item</u>	<u>Pos. No.</u>	<u>Vol.</u>	<u>P.</u>	<u>Lat.</u>	<u>Long.</u>
Mooring Buoy ✓	5730 ✓	XI	46	47°44.84' (1540)	122°50.95' (1180) ✓
Mooring Buoy ✓	5731 ✓	XI	46	47°44.57' (1055)	122°50.47' ( 590) ✓
Rock ✓	5863 ✓	XIII	35	47°44.2 ' ( 380)	122°51.1 ' ( 130) ✓
Rock ✓	5862 ✓	XIII	35	47°44.16' ( 300)	122°51.15' ( 200) ✓
Rock	5679 ✓	XI	29	47°43.87' (1620)	122°52.9 ' (1120) ✓
Seal Rock	1641-42	VII	48-49	47°42.19' (1690)	122°52.95' (1170) ✓
Rock	5662 ✓	XI	22	47°42.64' (1175)	122°53.15' ( 200) ✓
Rock	1601 ✓	VII	36	47°42.63' (1155)	122°53.15' ( 200) ✓
Rock	5663	XI	22 <sup>3</sup>	47°42.59' (1100)	122°53.21' ( 260) ✓
Pilings/Booms	5648-50	XI	18	47°42.15' ( 270)	122°53.55' ( 700) ✓
* Rock - Shoreline Verif	2394-2400	X	22	* 47°41.95' (1770)	122°49.57' ( 710) ✓
• Pile - Shoreline & RK	1952-1965	IX	6-7	47°43.74' (1365)	122°48.58' ( 725) ✓
✓ Rock ✓	5732 ✓	XI	46	47°44.45' ( 812)	122°48.51' ( 640) ✓
Rock ✓	5733 ✓	XI	46	47°44.42' ( 790)	122°48.49' ( 605) ✓
Rock ✓	5734 ✓	XI	46 <sup>7</sup>	47°44.40' ( 740)	122°48.44' ( 550) ✓
Rock ✓	5735 ✓	XI	47	47°44.38' (710)	122°48.47' ( 590) ✓
Pilings (sta 017)	5754-55 ✓	XI	58 <sup>2</sup>	47°43.75' (1420)	122°46.60' ( 750) ✓
Ruins	633-35 ✓	III	4	47°43.30' ( 530)	122°44.78' ( 985) ✓
Submerged Pile (ruins)	350 ✓	I	36	47°41.61' ( 950)	122°44.72' ( 890) ✓
Float	5736	XI	48		✓
Pile	5756	XI	52		✓
Mooring Buoys	5737-41	XI	49-50		✓
Dolphins	5742	XI	50		✓

\* Rock shown on Boat sheet and on T-12256 10m offshore of this position. Boat sheet Elevation reduces to 9' at MLLW \* (2). Elevation on T-12256 (2) is in error.

DUAL INDICATOR  
POSITION-SOUNDING TAPE

			POS							
TIME	IND	SNDG	NUM	DAY	FM	LA	RA	LO	CO	RO
080000	01	0232	0111	123	0	000000	000000	0000	000	000
080030	01	0243								
080100	01	0222								
080200	01	0302								
080230	01	0293	0112	123	0	000000	000000	0000	000	000

TIME - Hour, Min., Sec.  
IND - 00 soundings recorded in whole units  
01 soundings recorded in units and tenths  
SNDG - Depth in feet or fathoms  
POS NUM - Position number  
DAY - Day of year  
FM - Fathoms  
LA - Left angle  
RA - Right angle  
LO - Left object  
CO - Center object  
RO - Right object

ABSTRACT OF POSITIONS

	<u>Volume</u>	<u>Launch I</u>	<u>Launch II</u>	<u>Whaler</u>
Hood Canal:				
Day 49	I	*0001-0070		
Day 50	I	*0071-0138		
Day 51	I	*0136-0225		
Day 55	I	*0226-0315		
Day 56	I	0324-0442 ✓		
Day 57	II	0442-0575		
Day 58	III	*0576-0726		
Day 59	III	*0727-0861		
Day 63	III	*0862-0976		
Day 65	III	*1008-1013		
Day 66	IV			5500-5605
Day 83	IX	*1965-1988		
		*		
Dabob Bay:				
Day 64	III	*0977-1006		
Day 65	III	*1068-1162		
Day 66	III	*1163-1290	1291-1363	
Day 70	V			1364-1521
Day 71	VI			1522-1682
Day 72	VIII			1683-1890
Day 77	IX	*1891-1951		
Day 83	IX	*1989-2028		
Day 84	IX	*2029-2084		
Day 85	IX,X	2085-2400		
Day 86	XI			5606-5729
Day 88	XII		9000-9157	
Day 93	XIII			5770-5832
Day 94	XIV		9158-9311	
Day 97	XIV		9311-9334	
Day 98	XIII,XIV	*2401-2489	9335-9350	5833-5969
Day 105	XV		9351-9387	
Fisherman Harbor:				
Day 99	XV			5971-6018

\* On time logging.

Volume #VII has all the bottom samples; Pos. #7000-7060  
 Field Edit Day 58 Pos. #5737-5756 Vol. XI (independent of time)

APPROVAL SHEET

OPR-412

DA-10-1-69

Hood Canal-Dabob Bay  
Washington

The field work on this survey was accomplished under my supervision. Frequent inspections were made of the boat sheet and other records.



Roy E. Moses  
CDR, USESSA  
Commanding Officer  
USC&GS Ship DAVIDSON

MODIFIED VELOCITY CORRECTION TAPE - INCLUDES DRAFT CORRECTION

OPR 412

HOOD CANAL, WASHINGTON

DA-10-1-69  
LAUNCH II

<i>Depth</i> <i>To</i>	<i>Correction</i>	<i>Table</i> <i>#</i>						
000027	00	0002	0002	000	0	000000	000000	
000054	00	0003						
000093	00	0004						
000144	00	0003						
000217	00	0002						
000424	00	0001						
002000	00	0002						

MODIFIED VELOCITY CORRECTION TAPE-INCLUDES DRAFT CORRECTION

OPR 412

HOOD CANAL, WASHINGTON

DA-10-1-69

WEALER 17 FT

<i>Depth To</i>	<i>Correction Table #</i>
000014	00 0003 0003 000 0 000000 000000
000155	00 0002
000211	00 0001
000425	00 0000
002000	00 0001

TRA CORRECTION/TABLE INDICATOR TAPE  
OTR-412  
HOPE CANAL, WASHINGTON  
EA-10-1-68  
LAUNCH II

<i>Time</i>	<i>Correction</i>	<i>Table#</i>	<i>Day*</i>						
133700	00	0000	0002	083	0	000000	000000		
100800	00	0000	0002	088	0	000000	000000		
094400	00	0000	0002	094	0	000000	000000		
104100	00	0000	0002	097	0	000000	000000		
094100	00	0000	0002	098	0	000000	000000		
034100	00	0000	0002	105	0	000000	000000		

TRA CORRECTION/TABLE INDICATOR TAPE  
OPR-412  
HOOD CANAL, WASHINGTON  
DA-10-1-69  
WHALER

<i>Time</i>	<i>Correction</i>		<i>Table #</i>		<i>Day #</i>			
090000	00	0000	0003	066	0	000000	000000	
093800	00	0000	0003	070	0	000000	000000	
103800	00	0001						
134800	00	0000						
094500	00	0000	0003	071	0	000000	000000	
094900	00	0000	0003	072	0	000000	000000	
095300	00	0000	0005	086	0	000000	000000	
095500	00	0000	0003	083	0	000000	000000	
101900	00	0000	0005	098	0	000000	000000	
092500	00	0000	0003	088	0	000000	000000	



TEA CORRECTION/TABLE INDICATOR TAPE  
 OPR-412  
 HOOD CANAL, WASHINGTON  
 EA-10-1-69  
 LAUNCH I

Time	Correction	Table #	DAY #				
121800	00	0000	0001	049	0	000000	000000
090000	00	0000	0001	050	0	000000	000000
133100	00	11001					
141300	00	0000					
142500	00	1001					
141000	00	0000					
080000	00	0000	0001	051	0	000000	000000
080000	00	0000	0001	055	0	000000	000000
080000	00	0000	0001	056	0	000000	000000
080000	00	0000	0001	057	0	000000	000000
084500	00	1001					
110100	00	0000					
113000	00	1001					
080000	00	0000	0001	058	0	000000	000000
080000	00	0000	0001	059	0	000000	000000
080000	00	0000	0001	063	0	000000	000000
145900	00	1001					
154500	00	0000					
090000	00	0000	0001	064	0	000000	000000
090000	00	0000	0001	065	0	000000	000000
132300	00	1001					
080000	00	0000	0001	066	0	000000	000000
080000	00	0000	0001	077	0	000000	000000
080000	00	0000	0001	083	0	000000	000000
080000	00	0000	0001	084	0	000000	000000
080000	00	0000	0001	085	0	000000	000000
080000	00	0000	0001	093	0	000000	000000

T R I A N G U L A T I O N P L O T T E R C A R D S

H-NO.		LATITUDE	LONGITUDE	X	Y	
31029	001	69 47440677	122441541	14226	07518	001
31029	002	69 47434721	122443302	13841	06881	002
31029	003	69 47431755	122444414	13598	05919	003
31029	005	69 47430139	122444923	13488	05395	005
31029	006	69 47423086	122445061	13458	04405	006
31029	007	69 47415886	122443568	13786	03368	007
31029	008	69 47412950	122443903	13713	02416	008
31029	009	69 47411668	122444263	13635	02000	009
31029	010	69 47410094	122443793	13739	01489	010
31029	011	69 47404277	122444765	13526	00901	011
31029	012	69 47403474	122445034	13468	00640	012
31029	013	69 47445349	122433255	15161	09034	013
31029	014	69 47450392	122451762	12863	09368	014
31029	015	69 47444640	122453115	12568	08800	015
31029	016	69 47443422	122465995	10626	08405	016
31029	017	69 47434656	122463402	11194	06860	017
31029	018	69 47425045	122465009	10843	05040	018
31029	019	69 47423594	122464840	10880	04570	019
31029	020	69 47413539	122461041	11713	02607	020
31029	021	69 47411447	122470460	10527	01928	021
31029	022	69 47410845	122475955	09324	01733	022
31029	024	69 47413005	122480273	09254	02433	024
31029	025	69 47413283	122481223	09046	02524	025
31029	026	69 47414067	122482105	08853	02778	026
31029	027	69 47405511	122483658	08513	01300	027
31029	028	69 47410871	122490269	07941	01741	028
31029	029	69 47413002	122495467	06803	02432	029
31029	031	69 47424682	122491530	07665	04923	031
31029	033	69 47432833	122484103	08415	06269	033
31029	034	69 47444335	122483154	08623	08701	034
31029	035	69 47444821	122483327	08585	08859	035
31029	036	69 47444766	122483092	08636	08841	036
31029	039	69 47420605	122532331	02236	03601	039
31029	040	69 47401761	122541572	01085	00089	040
31029	042	69 47405041	122535120	01623	01152	042
31029	043	69 47405385	122534468	01766	01263	043
31029	044	69 47412629	122531779	02356	02312	044
31029	045	69 47415109	122533794	01916	03116	045
31029	046	69 47424423	122530648	02606	04839	046
31029	047	69 47424964	122530206	02703	05014	047
31029	048	69 47435203	122530192	02708	07037	048
31029	049	69 47443014	122523662	03262	08273	049
31029	050	69 47435249	122523239	03354	07052	050
31029	051	69 47435074	122522054	03613	06995	051
31029	052	69 47444131	122522909	03427	08635	052
31029	053	69 47442998	122521872	03654	08268	053

31029	054	69	47443843	122520510	03930	08542	054
31029	055	69	47444465	122514229	04451	08743	055
31029	057	69	47444319	122512275	04878	08696	057
31029	058	69	47441638	122510360	05297	07827	058
31029	059	69	47444883	122510643	05235	08879	059
31029	060	69	47443205	122522054	03614	08335	060
31029	061	69	47411538	122480638	09174	01958	061
31029	062	69	47411943	122480211	09268	02089	062
31029	063	69	47412652	122480566	09190	02319	063
31029	064	69	47412529	122480691	09163	02279	064
31029	065	69	47411438	122475979	09318	01925	065

Turner(USN)

Brown 1934

King, 1934

Three Spits 2, 1934

Bangor, Whse; W. Gable, Chimney 1934

Chute 3, 1945

Hazel Point 3, 1945

Bangor, Lg.W.House W.Gable,1934

W.House on Beach S. of station Mac

W.Gable(gr.roof) 1934

Brinnon, W.Gas Tank(Larger of 2) 1934

Cherry 1878

Wawa 1878

Zelatched, 1878

Tabook, 1878

Pulali, 1878

Drift 2, 1934

Soak, 1934

Rock II, 1878

Sylopasle 2, 1934

South Landing (USN)

South Camera Bldg.

Tabook 2(USN)

Pulali 2

Zelatched Point (USN)

Dabob Bay E. Dolphin

Dabob Bay W. Dolphin

E

D

A

H

Currant 2

Dabob Bay Target 9

Dabob Bay Target 8

Dabob Bay Target 7

B(North Tower)

Dabob Bay Target 6

Dabob Bay Target 5

Dabob Bay Target 4

Dabob Bay W. Rock

47-44-05.607

47-45-04.027

47-43-13.151

47-44-11.105

47-43-17.536

47-42-50.446

47-41-35.84=

47-43-08.78.74

47-41-58.96

~~47-~~

47-40-48.15

47-41-28.045

47-43-50.739

47-42-42.989

47-44-19.164-

47-44-16.233

47-40-42.846

47-40-56.871

47-41-19.740

47-41-26.176

47-44-48.7218

47-44-48.6152

47-44-47.6434

47-44-16.4454

47-42-42.5525

47-42-47.049

47-42-46.947

47-44-16.209

47-44-24.401

47-44-53.722

47-45-05.061

47-44-16.392

47-44-17.225

47-44-22.980

47-44-24.717

47-44-28.665

47-44-28.901

47-44-32.111

47-44-43.366

47-44-44.035

122-54-40.205

122-45-17.384

122-44-50.383

122-44-19.846

122-44-44.132

122-46-50.070

122-46-11.99

122-44-46.46

122-44-35.54

122-53-53.25

122-49-47.163

122-52-20.532

122-49-18.866

122-48-30.269

122-51-03.873

122-44-47.513

122-48-29.028

122-49-30.585

122-53-17.569

122-51-05.6085

122-51-07.3666

122-48-30.9891

122-51-03.8454

122-49-20.0022

122-49-10.747

122-49-11.680

122-48-09.944

122-48-59.435

122-48-25.916

122-48-16.898

122-45-31.163

122-48-20.733

122-48-23.927

122-48-25.942

122-48-25.474

122-48-25.548

122-48-26.738

122-48-31.535

122-48-31.759

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,

*Cornelius A. J. Pauw*

*for:*

William M. Martin  
Supervisory Carto. Tech.

Approved and Forwarded,

Walter L. Bradley, CDR, NOAA  
Chief, Processing Division  
Pacific Marine Center

TIDE NOTE FOR HYDROGRAPHIC SHEET

November 6, 1969

~~National Chart Division:~~ C.O., USC&GSS DAVIDSON

Plane of reference approved by ~~XXXXXXXXXXXXXXXXXXXX~~ for tide tape printout

HYDROGRAPHIC SHEET 9035

Locality: Hood Canal and Dabob Bay, Washington

~~Chief of Party:~~ Year: 1969

Plane of reference is mean lower low water

Tide Station Used (Form C&GS-681):

Bangor Wharf, Hood Canal  
Whitney Point, Dabob Bay  
Seabeck, Hood Canal

Height of Mean High Water above Plane of Reference is as follows:

Bangor Wharf	10.0 feet
Whitney Point	10.3 "
Seabeck	10.5 "

Remarks Tide reducers for Day 84 have been revised in red and verified.

  
Chief, Tides and Currents Branch

GEOGRAPHIC NAMES

Survey No. H-9035

Name on Survey	Source										
	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			
RANGOR	✓										1
CAMP PARSONS	✓										2
DABOB BAY	✓										3
DOSEWALLIPS FLATS	✓										4
DOSEWALLIPS RIVER	✓										5
FISHERMANS HARBOR	✓										6
HAZEL POINT	✓										7
HOOD CANAL	✓										8
JACKSON CAVE	✓										9
KING SPIT	✓										10
OAK HEAD	✓										11
OLYMPIC VIEW	✓										12
PULALI POINT	✓										13
SEAL ROCK	✓										14
SYLOPASH POINT	✓										15
TABOOK POINT	✓										16
TOANDOS PENINSULA	✓										17
TSKUTSKO POINT	✓										18
WAWA POINT	✓										19
ZELATCHED POINT	✓										20
											21
											22
APPROVED BY											23
<i>A. Joseph Wraight</i>											24
CHIEF GEOGRAPHER											25
											26
											27

PREPARED BY  
*Chas. E. Harrington*  
CARTOGRAPHIC

HYDROGRAPHIC SURVEY STATISTICS  
HYDROGRAPHIC SURVEY NO. H-9035

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & PNO		1	BOAT SHEETS		1	
DESCRIPTIVE REPORT		1	OVERLAYS		3	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES						
CAHIERS		1				
VOLUMES	15					
BOXES			1			
T-SHEET PRINTS (List)						
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				3422
POSITIONS CHECKED		3422	37	
POSITIONS REVISED		109	6	
DEPTH SOUNDINGS REVISED		519	21	
DEPTH SOUNDINGS ERRONEOUSLY SPACED		478	—	
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		32	64	
JUNCTIONS		24	23	
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		120	17	
SPECIAL ADJUSTMENTS			—	
ALL OTHER WORK		120	62	
TOTALS		296	166	296
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY <i>Clarence R Lehman</i>	MAY 14 TO JUNE 4, 1971 JUNE 23-1972		JUNE 28, 1972 Sept. 6th, 1972	
REVIEW BY <i>Carl Geef</i>	JANUARY 9, 1974		JULY 24, 1974	
Inspected by <i>D.R. Engle</i> 52hrs	NOV 21, 1974		JAN 21, 1975	



Reg. No. 9035

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:

H-9035

Information for Future Pre-Survey Review

The area covered by the survey is considered to be stable. Minor changes are attributed to shifting of sand and sediment.

At an opportune time the 5.7-fathom shoal indication discovered in lat. 47°43'28", long. 122°52'26" should be further developed to the south to determine its extent and least depth.

Resurvey Cycle Information

<u>Position Index</u>	<u>Bottom Change</u>	<u>Use</u>	<u>Resurvey</u>
<u>Lat. Long.</u>	<u>Index</u>	<u>Index</u>	<u>Cycle</u>
474 1230	2	2	50 Years
474 1225	2	2	50 Years

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

REGISTRY NO. H-9035

FIELD NO. DA-10-1-69

Washington, Hood Canal, Vicinity of Entrance to Dabob Bay

SURVEYED: February 18 through April 14, 1969

PROJECT NO.: OPR-412

SCALE: 1:10,000

SOUNDINGS: Raytheon DE-723 Depth  
Recorder

CONTROL: Sextant Fixes on  
Shore Signals

Chief of Party .....	R. E. Moses
Surveyed by .....	K. A. Domoto
.....	E. H. Endrud
.....	B. W. Fisher
.....	G. F. Tornberg
Automated Plot by .....	Gerber Digital Plotter-PMC
Verified and Inked by .....	C. R. Lehman
Reviewed by .....	C. Fefe
	Date: 7-24-74
Inspected by .....	D. R. Engle

1. Description of the Area

This survey covers the southern half of Dabob Bay, the part of Hood Canal between lat. 47°41' and 47°44' and Fisherman Harbor at the southern end of Toandos Peninsula.

The bottom of the survey area is generally characterized by very steep slopes close to the shoreline and leveling off to a very gentle slope in the deep offshore areas. Exceptions exist on the western side of Dabob Bay. Off Sylopash Point mud flats, covered by less than one fathom of water, extend 1000 meters offshore at which point the bottom drops abruptly. To the north the bottom slope is gradual. A feature with a least depth of 27 fathoms rises from surrounding depths of 40 to 70 fathoms in lat. 47°42.35', long. 122°53.12'.

The bottom is composed of unconsolidated sediment, ranging in size from clay to gravel.

---

## 2. Control and Shoreline

The control is adequately described in the Descriptive Report.

The shoreline originates with Class I photogrammetric manuscripts T-12255, T-12256, T-12257, T-12258, T-12259, T-12260, T-12261, and T-12314 of 1962-69.

Some differences exist between the smooth sheet and the photogrammetric manuscript positions of shoreline rocks, piles, etc. These items were located by the field editor on the boat sheet and graphically transferred from the boat sheet to the photogrammetric manuscripts, thus introducing error. Photogrammetry has agreed to revise the positions of these items on the manuscripts to agree with the final positions on the smooth sheet of the present hydrographic survey.

## 3. Hydrography

A. Depths at crossings are in adequate agreement.

B. The usual depth curves are adequately delineated except for some portions of the low water line which extended very close to the shoreline or in foul areas. A few soundings have been carried forward from prior surveys to aid in the delineation of the low-water line.

C. The development of the bottom configuration and the investigation of least depths are considered adequate except at the 5.7 fathom shoal indication found in lat.  $47^{\circ}43'28''$ , long.  $122^{\circ}52'26''$  where more development and determination of least depth would have been desirable.

## 4. Condition of the Survey

The field plotting, sounding records, Descriptive Report, and various printout are adequate and conform to the requirements of the Hydrographic Manual and the Instruction Manual-Automated Hydrographic Surveys except that notations regarding the amount rocks cover or uncover should be expressed in words rather than using a number with a plus or minus sign.

## 5. Junctions

Adequate junctions were made with H-9036 (1969) to the south, H-9038 (1969) to the northwest, and H-7099 (1947) to the northeast.

## 6. Comparison with Prior Surveys

H-1483 (1880) 1:20,000  
H-1640b (1884) 1:20,000

These prior surveys cover the area of the present survey. A comparison of prior and present depths indicate a fairly stable bottom in most of the area. Differences in depth are minor, generally within one fathom, except in the deep channel to the northeast of Hazel Point where major scouring is evident. Here present depths are 5 to 20 fathoms deeper than prior depths. Minor differences throughout the area are attributed to different survey methods and to shifting of sand and sediment due to current action.

The more comprehensive present survey is adequate to supersede the prior survey in the common area.

## 7. Comparison with Chart 6422, 6th Ed., October 21, 1972

### A. Hydrography

The charted hydrography originates with the previously discussed prior surveys which require no further consideration, supplemented by the partial application of information from the present survey boat sheet and smooth sheet before verification and review.

Attention is directed to the following:

(1) The pier-in-ruins charted just south of the two larger piers (also shown as ruins on the present survey) in lat. 47°44'28", long. 122°52'22" is considered to be discredited by the present survey. It is recommended that this pier-in-ruins be deleted from the chart.

(2) The existence of the tide gauge charted in lat. 47°42'36", long. 122°49'32" from Notice to Mariners 52 of 1965 was noted by the hydrographer to no longer exist and should be removed from the chart.

(3) The submerged piling charted in lat. 47°41'31", long. 122°44'44" from the boat sheet of the present survey should be revised in accordance with the reviewed smooth sheet. The pile at the offshore end of the pier ruins is uncovered 6 feet at mean lower low water.

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

B. Aids to Navigation

The aids to navigation located on the present survey are in agreement with the chart and adequately mark the features intended.

The mooring buoy charted in lat. 47°43'35", long. 122°50'07" from Notice to Mariners 51 of 1952 was not noted on the present survey.


8. Compliance with Instructions

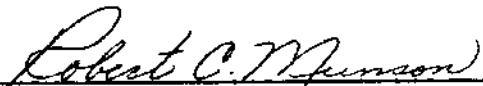
The survey adequately complies with the Project Instructions.

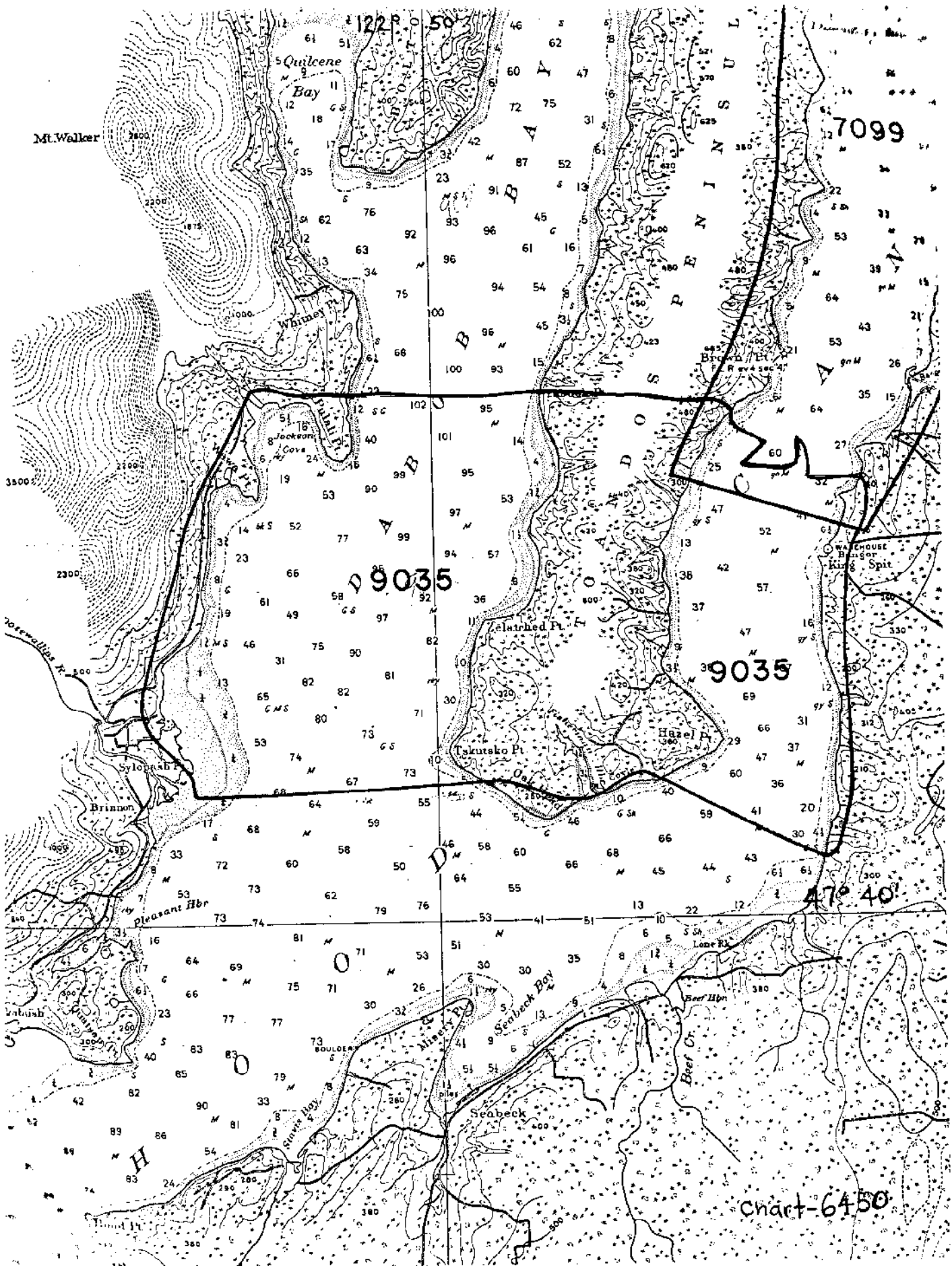
9. Additional Field Work

This survey is considered to be a good basic survey. However, at an opportune time, an investigation should be made of the 5.7 fms. in lat. 47°43'28", long. 122°52'26" for least depth and extent of the feature.

Inspected and Approved:

  
 Chief  
 Marine Chart Division

  
 Associate Director  
 Office of Marine Surveys and Maps



7099

9035

9035

47° 40'

Chart-6450

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. B-9035

INSTRUCTIONS

- A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.  
 1. Letter all information.  
 2. In "Remarks" column cross out words that do not apply.  
 3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
6450	8-2-73	STUART	<del>Part Before</del> After Verification <sup>Before</sup> Review Inspection Signed Via Drawing No.
6401	10-16-73	Chandler	<del>Full Part Before</del> After Verification <sup>Before</sup> Review Inspection Signed Via Drawing No.
185-3C	11-9-73	Chandler	<del>Full Part Before</del> After Verification <sup>Before</sup> Review Inspection Signed Via Drawing No.
6422	3-1-74	Shaw	<del>Full Part Before</del> After Verification <sup>Before</sup> Review Inspection Signed Via Drawing No.
6422	2-25-75	Hamilton	Full Part <del>Before</del> After Verification Review Inspection Signed Via Drawing No.
6450	4/14/75	J Green	Full Part <del>Before</del> After Verification Review Inspection Signed Via Drawing No.
6401	9/14/75	J Green	Full Part <del>Before</del> After Verification Review Inspection Signed Via Drawing No.
18476	12/16/83	M. Jhanika	Full Part <del>Before</del> After <del>Verification Review</del> Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.