

10176

Diagram No. 8201-4

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey ..Hydrographic.....
Field No.RA-10-1-85.....
Registry No.H-10176.....

LOCALITY

StateAlaska.....
General Locality ..Seymour Canal.....
SublocalityMole Harbor to Pleasant Bay.....

19 85

CHIEF OF PARTY
CAPT J.P. Vandermeulen

LIBRARY & ARCHIVES

DATEJune 9, 1986.....

☆U.S. GOV. PRINTING OFFICE: 1985-586-054

Area 6
CHTS

17360 - to sign off see
Record of Application

10176

HYDROGRAPHIC TITLE SHEET

H-10176

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 10-1-85

State Alaska

General locality Seymour Canal

Locality Mole Harbor to Pleasant Bay

Scale 1:10,000 Date of survey April 18 - May 17, 1985

Instructions dated March 14, 1985 Project No. OPR-0179-RA-85

Vessel RAINIER S221 (2120), Launches RA-3 (2123), RA-4 (2124), RA-5 (2125), RA-6 (2126)

Chief of party Captain J.P. Vandermeulen

Surveyed by ENS LaReau, ENC Pickett, ENS Porta, LT(jg) Wilson, ENS Brown

Soundings taken by echo sounder, hand lead, ~~xxx~~ DSF 6000N

Graphic record scaled by RAINIER personnel

Graphic record checked by RAINIER personnel

Verification

~~Produced~~ by P. Niland Automated plot by PMC Xynetics Plotter

~~Evaluation~~

~~Reviewed~~ by A. Lucenio

Soundings in fathoms ~~xxx~~ at ~~xxx~~ MLLW

REMARKS: Marginal Notes in black by evaluator. Separates are filed with the hydrographic data.

STANDARDS CK'D 6-12-86

C. Loy

Analysis/summary checked 11/25/86 SSJ

Notes in red in Descriptive Report were added during

examination, except on the inserts from the Davidson survey including a

copy of an echogram.

PROGRESS SKETCH

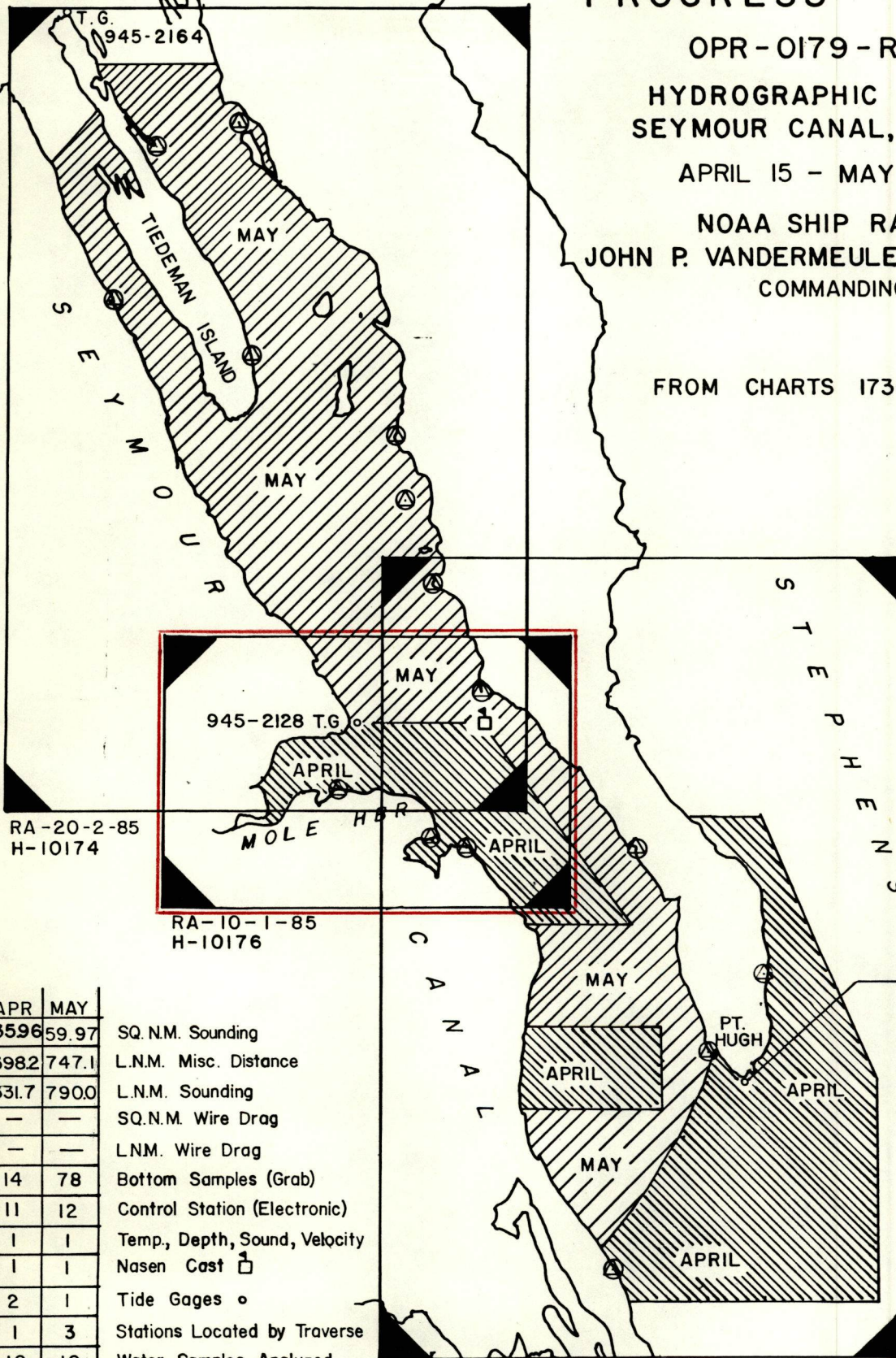
OPR-0179-RA-85

HYDROGRAPHIC SURVEY
SEYMOUR CANAL, ALASKA

APRIL 15 - MAY 28, 1985

NOAA SHIP RAINIER
JOHN P. VANDERMEULEN, CAPT., NOAA
COMMANDING

FROM CHARTS 17360 & 17300



APR	MAY	
3596	59.97	SQ.N.M. Sounding
3982	747.1	L.N.M. Misc. Distance
331.7	790.0	L.N.M. Sounding
—	—	SQ.N.M. Wire Drag
—	—	L.N.M. Wire Drag
14	78	Bottom Samples (Grab)
11	12	Control Station (Electronic)
1	1	Temp, Depth, Sound, Velocity
1	1	Nasen Cast <input type="checkbox"/>
2	1	Tide Gages •
1	3	Stations Located by Traverse
10	10	Water Samples Analyzed
—	—	SQ.N.M. Side Scan Sonar
—	—	L.N.M. Side Scan Sonar

A. PROJECT

This basic hydrographic survey H-10176 (RA-10-1-85) was accomplished in accordance with Project Instructions OPR-0179-RA-85; Seymour Canal, Alaska, dated March 14, 1985, Change No. 1, dated March 21, 1985. ✓

B. AREA SURVEYED

This survey, conducted from April 18 to May 17, 1985, (JD 108 to JD 137) is in the general locality of Seymour Canal, Stephen's Passage, Southeast Alaska. The survey includes the area from Pleasant Bay to Mole Harbor, bounded by latitudes 57/38/15 N to 57/40/51⁴N and longitudes 133/58/12⁰⁰ W to 134/05/15 W. ✓

C. SOUNDING VESSEL

Sounding data for this survey were obtained by vessels RA-3(2123), RA-4(2124), RA-5(2125), and RA-6(2126). Bottom samples were obtained by RA-5 and RAINIER(2120). No unusual sounding vessel configurations or problems occurred during hydrographic data collection. ✓

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

Survey launches were equipped with Raytheon DSF-6000N dual-beam echo sounders with the following serial numbers:

<u>VESSEL</u>	<u>SERIAL NO</u>
RAINIER (2120)	A117N
RA-3 (2123)	A115N
RA-4 (2124)	A119N
RA-5 (2125)	A103N
RA-6 (2126)	A123N

 ✓

Depths within this survey ranged from ^{-1.4} 8 fathoms to ⁴ 163 fathoms.

The DSF-6000N echo sounders were operated primarily in the dual-beam high frequency digitized mode. The high and low frequency gain controls were operated manually because the high frequency beam could not track the bottom when these controls were in the automatic mode. Approximately 2 percent of the time the high frequency trace could not track the bottom. When this occurred the depth values were scanned from the low frequency beam trace. There were no discrepancies at the junctions of the high and low frequency beams data as the two traces were in close agreement at the points of changeover.

All soundings were taken from the launches ^{by theodolite intersection,} under Mini-Ranger range-range or range-azimuth control. Since the echo sounding transducers on the launches are directly below the the Mini-Ranger R/T units the ANDIST associated with these survey data is 0.0 meters. The final field sheets were plotted with this ANDIST value.

Bar checks were conducted at least once daily for both beams of the DSF-6000N echo sounder as per the Provisional Operating and Processing Instructions for the DSF-6000N Echo Sounder. All bar checks were performed within the survey area. The bar checks were used to confirm proper system function, and bar check data were used to determine launch TRA correctors. The TRA for the wide and narrow beams were within 0.1 fathom of each other and were averaged together to obtain a single TRA value. These TRA calculations show a 0.3 fathom TRA for all launches and the final smooth sheets were plotted with this value.

Velocity corrections were derived from two Nansen casts taken during the survey as listed below. One table of velocity corrections was created averaging both Nansen casts. The survey was plotted with a preliminary velocity correction table made from the first Nansen cast. Printouts of velocity tables are included in the ^{separates following} ~~the text.~~ ^{hydrographic data.} The smooth sheet was plotted using velocity corrections derived from the average of two nansen casts.

The Nansen casts were checked with the Plessy 9040 SV/D profiling system. The SV/D casts agreed very well with the Nansen casts. The largest variance in the velocity corrections was 0.1 fm at a depth of 110 fms. The Plessy 9040 SV/D profiling system, serial number 5632, was calibrated at the Northwest Regional Calibration Center (NRCC), Seattle in March 1985. Velocity values were calculated from the frequency readout using the first order calibration parameters. The SVD could only be used to depths of 110 fms because the depth parameter malfunctioned at deeper depths. However when the underwater unit was raised to shoaler depths than 110 fms the malfunction was no longer present and the readings were repeatable at depths shoaler than 110 fms. A surface comparison was made in accordance with instructions from N/MOP dated 1 April 1983. A laboratory thermometer was used to measure temperature and the salinity of the surface water was determined by use of a Beckman model RS-7B salinometer (S/N 22670) calibrated by NRCC in March 1985. The surface comparisons agreed with the SV/D to within 1 M/S for the cast. The reversing thermometers used for the Nansen cast were calibrated by NRCC in March and April 1985. See ~~appendix~~ E, Calibration Data, *filed with the hydrographic data.*

VELOCITY CASTS

<u>CAST NUMBER</u>	<u>DATE</u>		<u>LATITUDE</u>	<u>LONGITUDE</u>
1 (Nansen)	15 APRIL	(105)	57-35-12N	133-43-36W
2 (SV/D/T)	15 APRIL	(105)	57-35-12N	133-43-36W
3 (Nansen)	17 May	(137)	57/40/36N	133/38/00W
4 (SV/D/T)	17 May	(137)	57/40/36N	133/38/00W

According to Section 4.4.9.2 of the Hydrographic Manual, settlement and squat correctors shall be determined to the nearest 0.2 foot and are not required if less than 0.2 foot. However, for surveys in fathoms Table 4-4 and Section 4.9.2 state that corrections need not be applied for correctors less than 0.1 fathom when surveying in fathoms. Therefore, these correctors were not applied as all soundings were in fathoms and all settlement and squat correctors were less than 0.1 fathom.

Settlement and squat trials were run on JD 140 and JD 143 in Windfall Harbor.

Predicted tides were used to plot the final field sheets.

TC/TI tapes were made in accordance with PMC OPORDER, Appendix Q. Printouts of the TC/TI tapes are included in the ~~separates~~ ^{hydrographic data} following the text. For further information and details relating to corrections to echo soundings see Corrections to Echo Soundings Report, OPR-0179-RA-85.

E. HYDROGRAPHIC SHEET

A 1:10,000-scale field sheet designated RA-10-1-85 and one 1:2,500-scale expansion sheet were prepared on the RAINIER using the PDP/8/E Hydroplot system which produces modified transverse Mercator projections. The smooth sheet was plotted by SST Rick Hastings. A list of parameters which define this field sheet is provided in the separates following the text.

All data and accompanying field records will be sent to the Pacific Marine Center for verification.

F. CONTROL STATIONS

Five control stations for this survey were Third Order Class I stations established by the NOAA Ship DAVIDSON in 1983. Stations recovered and used as electronic control sites are as follows:

STATIONS RECOVERED

SIGNAL

122	BEAR	1983	<i>not applicable.</i>
123	FINGER 2	1983	
120	MOLE	1983	
121	RASP	1983	
133	SIN	1983	

PMC furnished preliminary unadjusted positions for these stations. Station positions were verified by ground survey methods commensurate with Section 3.1.1.2 of the Hydrographic Manual.

Two photo-hydro points established by the DAVIDSON in 1983 were also used for control. Aerotriangulated positions for HP-01 (300) and HP-16 (312) were furnished by Nautical Charting Division. When these positions were checked from Third Order control, discrepancies on the order of 3 meters were noted. Subsequently, HP-16 was located to Third Order, Class I standards by traverse. HP-01 was located to Third Order, Class II standards also by traverse. Details of the location and verification of horizontal control can be found in the Horizontal Control Report for OPR-0179-RA-85. ✓

All positions in the survey are based on the 1927 North American Datum.

G. HYDROGRAPHIC POSITION CONTROL

Range/Range, ~~and~~ ^{and theodolite cuts} Range/Azimuth were the methods used for hydrographic positioning. Motorola Mini-Ranger III's were used as the electronic positioning systems and Wild T-2 Theodolites were used to measure azimuths. Sextants were used as check angles for calibrations and detached positions. The following tables summarize the serial numbers and locations of all mobile and shore positioning equipment. ✓

TAMAYA MARINE SURVEYING SEXTANTS

#T2975
#T2985

WILD THEODOLITES S/N

T-2: 73226, 57259, 68648, 75599

MINI-RANGER MOBILE EQUIPMENT

<u>VESSEL</u>	<u>CONSOLE</u>	<u>R/T S/N</u>	<u>JULIAN DAYS</u>
2123	B1405	01789	111, 112, 120, 125, 137
2124	B0269	B1388	108
2125	715	911615	108
2125	711	C1712	109-123
2126	B0269	B1388	115, 120

MINI-RANGER TRANSPONDER LOCATION

JULIAN DAYS[illegible]

CALIBRATIONS AND PERFORMANCE

Mini-Ranger calibrations and system checks were performed in accordance with PMC OORDER, Appendices M and S. Initial baseline calibrations for this project were conducted on Lake Union, Seattle, Washington on March 11, March 12 and March 20, 1985. Ending calibrations for this project are scheduled for the end of May. ✓

Only initial correctors were used to plot the smooth field sheet. The initial calibrations also determined the minimum signal strength cut-off values for each system. For more information regarding system checks and calibrations, refer to the Electronic Control Report, OPR-0179-RA-85.

The smooth sheet was plotted using correctors from the average of the initial & final
Daily system checks for each code used were performed using *calibrations.* either T-2 cuts or static calibration methods. The static system checks were performed at Third Order stations along the water's edge. For ease of calibration, station CAL POLE (signal # 500) was located on a rocky reef near Beacon Rock. Static system checks were performed at station CAL POLE by pulling alongside at mid to high tide. Refer to Horizontal Control Report, OPR-0179-RA-85 for more details on the establishment of station CAL POLE. ✓

On JD 108, the encoder on vessel 2125, Console: 715 and R/T: 911615, malfunctioned. On JD 109, the positioning equipment was replaced by Console: 711 and R/T: C1712. Refer to Electronic Control Report, OPR-0179-RA-85 for more details.

On JD 110 vessel 2124 was disabled; thus, on JD 111 the R/T unit, console and hydroplot controller were switched to vessel 2126. As of JD 112 vessel 2126 had Console: B0269 and R/T: B1388. ✓

Bottom samples obtained by the RAINIER on JD 119 and JD 120 were positioned via radar fixes.

No major problems were encountered with the Mini-Ranger positioning system. All transponders were located on Third Order Class I geodetic stations; except one station, HP-01 which is a Third Order Class II station.

H. SHORELINE

Shoreline was applied to the field sheets from enlargements of 1:20,000 scale registered shoreline maps TP-01165 and TP-01166. Field edit was not required by Project Instructions. Shoreline originating from the manuscript which was verified is shown in black while changes and additions are shown in red on the smooth sheet. ✓

The ~~Azimuth~~^{theodolite intersection} method was used on positions #7000-7096, JD 111 and JD 112, to verify reefs in the vicinity of Beacon Rock and rocks along the southern shore of Mole Harbor. Subtle changes to the rock reefs near Beacon Rock are shown on the field sheet. Note that the reefs in the vicinity of Beacon Rock, as well as Beacon Rock, cover at approximately half tide and are considered to be dangers to navigation. ✓

There was one rock discovered that was not on either TP-01165 or TP-01166, nor was it charted. This rock is located at latitude 57/39/21.75² N and longitude 134/00/17.60⁷ W. The rock ~~bare~~^{is a wash} 0.6 feet at MLLW and is 120 meters offshore. Refer to position number 3297, vessel 2123 on JD 125. ✓

Two small rocks on TP-01166⁵ on the southern shore of Mole Harbor (57/39/34.29 N, 134/01/56.67 W and 57/39/32.25 N, 134/02/04.08 W) were ~~deleted as individually charted rocks. These rocks are not outstanding features along this shoreline.~~^{transferred to the smooth sheet} The shoreline in this area on the field sheet is labelled "stones and boulders". ✓

Another TP-01166⁵ rock on the southern shore of Mole Harbor, 57/39/33.09⁸ N and 134/02/58.84¹⁹ W, ~~was changed to a ledge.~~^{uncovered 1 foot at MLLW} Refer to position number 7094, vessel 2127 on JD 112. ✓

On the northern shore of Mole Harbor, a TP-01166⁵ rock was changed to a ledge. The southern limit of the ledge, position number 5579, ~~bare~~^{is a wash} 1 foot at MLLW (57/40/22.97⁰² N, 134/03/22.88⁹⁴ W). The eastern limit, position number 5580, ~~bare~~^{uncovered} 3.2 feet at MLLW (57/40/23.60⁶ N, 134/03/19.30⁵ W). The western extent of the ledge is position number 5581 (57/40/22.48³² N, 134/03/25.95⁰² W). Refer to the records for vessel 2125, on JD 113, for more information on this ledge. ✓

The ledge was transferred to the smooth sheet in accordance with the smooth field sheet.

A region foul with rocks was located on the northern shore of Mole Harbor. TP-01166⁵ showed ^{three} two rocks in this area. On JD 113, vessel 2125, position number 5583⁸⁸ defines the eastern limit (57/40/27.50² N, 134/04/15.75⁸ W) and position number 5584 defines the western limit (57/40/20.77⁸ N, 134/04/33.14⁸ W). *shown on the smooth sheet in accordance with the smooth field sheet.* ✓

On JD 114, the range/azimuth observer occupying station HP-16 (signal #312), reported that the area surrounding the station (15-meter radius) is a rocky reef ledge. This ledge is not depicted on TP-01166. See the field sheet for details. *shown on the smooth sheet in accordance with the smooth field sheet.* ✓

I. CROSSLINES

A total of 10.9 nautical miles of crosslines were run during the survey, representing 8% of the mainscheme mileage. Agreement of soundings at crossings was excellent, generally within 1 fathom. An exception to this was a 4 fathom discrepancy in the area of latitude 57/39/17 N and longitude 133/59/54 W. Position number 3193^(430 f) on JD 111 (crossline sounding) and the first out of position number 3251^(468 f) on JD 120, crossed in an area where the bottom slopes steeply. ✓

J. JUNCTIONS

This survey junctions to the east and south with contemporary survey RA-20-1-85, H-10175, and to the north with contemporary survey RA-20-2-85, H-10174. Both are 1:20,000-scale surveys. Hydrography was run in a compatible scheme between all three contemporary surveys; all lines being run east-west. No irregularities existed in the contours along limits where surveys joined.

*Refer to
sect. 5 of
Eval. Report*

K. COMPARISON WITH PRIOR SURVEYS

There were no AWOIS items in this survey area. This survey was compared to the following prior surveys:

SURVEY -----	SCALE -----	YEAR -----
H-2001	1:80,000	1889
H-2003	1:20,000	1889

RAINIER survey soundings verified the leadline depths of surveys H-2001 and H-2003. Agreement in the proximity of the 1889 depths was good, generally within 2 fathoms. However, due to the rugged nature of the bottom, prior survey depths inadequately represent sufficient detail in the survey area. In all areas, current survey soundings and shoreline information should supersede prior survey work.

Refer to
sect. 6 of
Eval. Report

New features, not found on the prior surveys are discussed in section L. The following items represent significant disagreements between the prior and current surveys:

H-2001

<u>POSITION</u>	<i>(Smooth Sheet)</i> <u>PRESENT SURVEY</u>	<u>PRIOR SURVEY</u>
57/38/27. ³⁴ ₇₅ N	² 4.1	6.25
133/59/27. ³ ₀₂ W	1st out #5623 JD 113	

NOTE: Survey soundings in Pleasant Bay were generally 3 to 4 fathom shoaler than those found on the prior survey.

There is a significant difference in the delineation of the shoreline between H-2003 and the TP-manuscript.

H-2003

<u>POSITION</u>	<u>PRESENT SURVEY</u>	<u>PRIOR SURVEY</u>	
57/40/11 ^{0.8} .22 N	3.0 ² * (Rock)	6.0	Refer to item 6
134/02/52.88 W	Fix #5694 JD 123		sect. L of this report
57/40/03.96 ⁴ N	2.3 ⁴ * (Rock)	7.5	Refer to item 7
134/03/06.95 ⁴ W	Fix #6000 JD 115		sect. L of this report & sect. 66
57/39/55.30 ^{6.5} N	9.8	12.25	7 of Eval. Report
134/04/15.88 ^{1.7} W	1st out #5184 JD 110		

* Dive investigations were made to determine least depths on these features. Note that these ^{3,2,2,4,5,5,9,9,5} are two distinct features separated by 14 fathoms of water.

Comparisons were also made with surveys ^{DA-20-1-83, blueprint no.} 12498⁹ and ~~12498⁹~~, both 1:20,000-scale reconnaissance survey performed by the NOAA Ship DAVIDSON in 1983.

Refer to
sect. 6 & 7
of Eval. Report

Agreement with these surveys was also good, usually 0-2 fathoms. One major discrepancy, a 2 1/4 fathom shoal, reported by DAVIDSON in CL-167/85 is thoroughly discussed in section L.

L. COMPARISON WITH CHART

The survey was compared to the following chart:

<u>Chart Number</u>	<u>Scale</u>	<u>Edition</u>	<u>Date</u>
17360	1:217,828	26th	Aug. 18, 1984

With the exception of the 2 1/4 fathom shoal in Mole Harbor, present charted soundings originated from the prior surveys discussed in section K.

The following is a listing of significant features which were not represented on the chart. It is recommended that these soundings supersede currently charted depths.

Survey depths are corrected as shown on smooth sheet.

concur

ITEM 1:

POSITION: 57/39/35.2²₁ N
134/00/42.2⁸₇ W

JULIAN DAY: 125

VESSEL: 2123

SURVEY DEPTH: 14.8⁸
~~15~~ fathoms

FIX: ~~between 3-4th out~~
#3317

CHARTED DEPTH: no charted depth in area.

METHOD OF INVESTIGATION: On JD 125, mainscheme lines were split to 50m spacing. Position numbers 3314-3321 were run east-west and position numbers 3322-3323 were run north-south using station FINGER (123) and SIN (133) for control.

ITEM 2:

POSITION: 57/39/10.8⁰₅ N
133/59/47.4⁵₄ W

JULIAN DAY: 120

VESSEL: 2123

SURVEY DEPTH: 14.7⁷
~~14~~ fathoms

FIX: #3258

CHARTED DEPTH: near 50 fathom
contour

METHOD OF INVESTIGATION: On JD 120, a least depth was obtained from one of the 100m mainscheme lines. On JD 125, mainscheme lines were split to 50m spacing. Position numbers 3312-3313 were a north-south line and position numbers 3305-3311 were east-west lines run using FINGER (123) and SIN (133) for control. No depth shoaler than 14.7⁷ fathoms was obtained during this investigation.

ITEM 3:

POSITION: 57/39/57.27 N
134/02/24.13 W

JULIAN DAY: 108

VESSEL: 2125

SURVEY DEPTH: 8.6⁷ fathoms

FIX: ~~between 2-3rd out~~
#5014

CHARTED DEPTH: 16 fathoms

METHOD OF INVESTIGATION: On JD 108, the least depth was obtained from mainscheme lines, by running arcs from FINGER (123). On JD 111, mainscheme lines were split to 25m spacing. Position numbers 5380-5410 were arcs run from FINGER (123) and position numbers 5440-5459 were arcs run from HP-16 (312). On JD 125, vessel 2123, position numbers 3356-3376 were 25m splits run using FINGER (123) and SIN (133) for control. On JD 137, vessel 2123, position numbers 3379-3418 were 25m splits run in this area using FINGER (123) and RASP (121) for control. None of these investigations found a depth shoaler than 8.6⁷ fathoms. Refer to expansion sheet.

ITEM 4:

POSITION: 57/⁴⁰39/^{17.30}57.27 N
134/01/41.78⁵ W

JULIAN DAY: 125

VESSEL: 2123

SURVEY DEPTH: 13.6^{13.6} fathoms

FIX: 2nd out #3336

CHARTED DEPTH: 42 fathoms

METHOD OF INVESTIGATION: On JD 125, mainscheme lines were split to 50m spacing. Position numbers 3334-3339 were run east-west using FINGER (123) and SIN (133) for control.

ITEM 5:

POSITION: 57/40/23.78⁰ N
134/00/55.48⁵² W

JULIAN DAY: 125

SURVEY DEPTH: 15 fathoms

VESSEL: 2123

CHARTED DEPTH: 42-106 fathoms

FIX: ~~between 1st-2nd out~~
#3325

METHOD OF INVESTIGATION: On JD 125, mainscheme lines were split to 50m spacing. Position numbers 3324-3330 were run east-west using FINGER (123) and SIN (133) for control. One axis line was run along the axis of the ridge, position numbers 3331-3333.

ITEM 6:

POSITION: 57/38/27.75^{40 10.82} N
134/02/52.88⁵⁸ W

JULIAN DAY: 123

SURVEY DEPTH: 3.0² fathoms (Rock)

FIX: #5694

Refer to sect.
K of this
report

METHOD OF INVESTIGATION: On JD 108, position numbers 5030-5038, while running arc 5100, from station FINGER (123), a 4.8⁹ fathom peak was found. On JD 111, mainscheme lines in this area were split to 25m spacings. Position numbers 5350-5379 were arcs run from FINGER (123) and position numbers 5440-5459 were arcs run from HP-16 (312). An echo sounder least depth of 3.7⁸ fathoms was obtained.
(Pos. 5455+02)

On JD 123, three divers investigated this peak. Water visibility was 5-10 feet. A 3.0² fathom leadline least depth was obtained over the highest part of the rock outcrop. The divers spent 30 minutes in the water searching the area, the bottom was bedrock. Station FINGER (123) and station SIN (133) were the control used on this dive.

Item 7

POSITION: 57/⁴30/03.98⁴ N
134/04/³06.94 W

JULIAN DAY: 115
FIX: 6000

*Refer to sect.
K of this
report*

SURVEY DEPTH: 2.3⁴ FATHOMS
(Rock)

OTHER DAYS: 111 5350-5495
125 3356-3376
137 3379-3418

CHARTED DEPTHS: 2 1/4

SOURCE OF ITEM: This investigation was prompted by CL-167/85 submitted by DAVIDSON in conjunction with reconnaissance survey DA-20-1-85³, S-0902-DA-83. On page 7 of the descriptive report for this project, DAVIDSON states: "The Mole Harbor shoal least depth of 2.3 fathoms determined on JD 112 at approximate location 57-39.9'N, 134-02.6' W (Position No. 2058) contrasts with the charted depth of 6¹⁶ fathoms (Charts 17360, 17310)." With reference to DAVIDSON's Abstract of Positions for DA-20-1-83 in the descriptive report, no position control was shown for this fix taken by the dive skiff.

*See item 2
next page*

The DAVIDSON survey was depicted on an overlay of discontinued chart 17310, 6 Ed., Feb 1977, 1:20,000. This chart has no latitude and longitude grid. However, the position reported in the descriptive report and the plotted position on the field sheet differ.

A separate 2 1/4 fm DAVIDSON depth is shown near RAINIER position 6000 approximately 500 m NW of position 2058. No reference to this depth is made in the descriptive report.

*Refer to sect.
7 of Eval. Report.*

METHOD OF INVESTIGATION: On Day 111, in the vicinity of the unreferenced shoal, mainscheme lines were split to 25 m spacing, running arcs around station FINGER (123). The feature was then crossed by running arcs off HP-16 (312). The least depth determined by echo sounder was 2.8⁷ fms, inserted 10 seconds out from position 5467.

*Lat. 57°40'04.88"N
Long. 134°03'06.76"W*

On Day 115, three divers investigated the peak. Water clarity was excellent, about 30 feet. Divers spent twenty minutes investigating the ridge, finding a rocky ledge bottom. The 2.3⁴ fathom least depth at MLLW was measured above a distinct high point on the ledge. Position 6000 is a range-azimuth fix over the least depth. A sextant check angle using RASP (121) and SIN (133) verified the position.

DAVIDSON's approximate position (2058) falls approximately 500 m SE of position 6000. On Day 125, 25 m spaced lines were run in the vicinity of the DAVIDSON position and no shoal indication was found (pos. 3356-3376). Depths in this area are 16-19³ fathoms. Further extension of this development was made on Day 137 (3379-3418). No shoal indication was found.

DISCUSSION: The following facts were considered in making the final recommendation for disposition of this item:

1) The reconnaissance survey was run with marginal control. Position 2058 has no position control attached to it.

2) In the DAVIDSON descriptive report, reference is made to a former charted least depth of 6 fathoms on chart 17360 and 17310. The least depth on discontinued chart 17310 was 6 fathoms in the vicinity of the current survey position, not the reported position.

*Refer to sect.
7 of Eval. Report*

3) Given the area covered by the current survey with 25 m spacing, it is highly unlikely that a 2.3 fathom depth can rise from 18 fathoms without showing any indication on the surrounding contours.

CONCLUSION: RAINIER believes that reconnaissance position number 2058 was misplotted. The originally reported position is in error. The unreferenced 2 1/4 fm depth depicted on the reconnaissance survey coincides with RAINIER position 6000.

RECOMMENDATION: Chart the 2.⁴/₅ fathom shoal based on the current survey position 6000.

concur

M. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede all prior surveys for charting purposes. ✓

N. AIDS TO NAVIGATION

There are no Aids to Navigation within the limits of this survey. ✓

O. STATISTICS

Sounding Vessel	Linear Nautical Miles of Hydro	Square Nautical Miles of Hydro	Number of Positions
2120	0		4
2123	39.40		399 403
2124	24.10		157 ⁶
2125	57.15		682
2126	19.40		154
2127	0		974
TOTAL	140.10	4.56	1,496 ⁸³

Bottom Samples: 25
Velocity Casts: 2
Tide Stations : 1

+ 43 (inserted during editing)
1526

P. MISCELLANEOUS

No anomalous currents were observed or reported during this survey. No Loran-C data were collected. Bottom samples were submitted to the Smithsonian Institute. ✓

Q. RECOMMENDATIONS

This survey is complete and no additional field work is recommended. ✓

R. AUTOMATED DATA PROCESSING

Data acquisition and processing were accomplished in accordance with the Hydrographic Manual (Fourth Edition), Manual of Automated Hydrographic Surveys, the PMC OPCODE, Hydrographic Survey Guidelines and the Hydrographic Data Requirements for 1984.

Soundings and positions were collected by a Hydroplot system using Hyperbolic Range/Range Hydroplot program Rk 112, Range-Azimuth Hydroplot program RK 116, and an ASI logger. Daily master tapes and corresponding corrector tapes include the TRA for the sounding vessels, electronic control baseline correctors for Mini-Ranger consoles and R/T units, and all depth corrections. Velocity tapes were generated from Nansen and SV/TD cast data. The following is a list of all computer programs version dates used for data acquisition or processing:

<u>Number</u>	<u>Description</u>	<u>Version</u>
RK 112	Hyperbolic, R/R Hydroplot	4/23/84
RK 116	Range-Azimuth Hydroplot	10/01/84
RK 201	Grid, Signal, and Lattice Plot	4/18/75
RK 211	Range/Range Non-Real Time Plot	2/13/84
RK 212	Visual Station Table Load	4/01/74
RK 216	Range/Azimuth Non-Real Time Plot	2/24/84
RK 300	Utility Computations	10/21/80
RK 330	Reformat and Data Check	5/04/76
PM 360	Electronic Corrector Abstract	2/02/76
RK 407	Geodetic Inverse/Direct Computation	9/25/78
AM 500	Predicted Tide Generator	11/10/72
RK 530	Layer Corrections for Velocity	5/10/76
RK 561	H/R Geodetic Calibration	12/01/82
AM 602	Elinore-Line Oriented Editor	12/08/82
AM 606	Tape Duplicator	8/22/74
AM 607	Self-Starting Binary Loader	8/10/80
RK 610	Binary Tape Duplicator	12/01/82
RK 612	Line Printer List	3/22/78
RK 900	Plot Test Tape Generator for AM902	5/07/76
RK 901	Core Check	3/01/72
AM 902	Real Time Checkout	11/10/72
DA 903	Diagnostic-Instruction Time	2/27/76
RK 905	Hydroplot Controller Checkout	3/18/81
RK 935	Hydroplot Hardware Tests	3/15/82

Programmable calculators HP97 and HP9815 were used to calculate the geographic positions of calibration points.

S. REFERENCES TO OTHER REPORTS

The following reports contain information related to this survey.

Echo Sounding Report	OPR-0179-RA-85
Electronic Control Report	OPR-0179-RA-85
Horizontal Control Report	OPR-0179-RA-85
Coast Pilot Report	OPR-0179-RA-85
DAVIDSON Descriptive Report	S-0902-04-83
	(CL-167/85)
DAVIDSON Horizontal Control Report	S-0902-DA-83

✓

APPROVAL SHEET

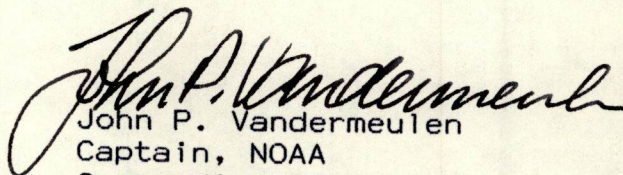
DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SURVEY

RA-10-85 (H-10176)

In producing this sheet, standard procedures were observed in accordance with the Hydrographic Manual, Hydrographic Survey Guidelines and PMC OPORDERS. The data were examined daily during the execution of the survey.

The field sheet and the accompanying records have been examined by me, and are considered complete and adequate for charting purposes, and are approved.


John P. Vandermeulen
Captain, NOAA
Commanding Officer

DAVIDSON RECONNAISSANCE SURVEY

OVERLAY OF CHART 17310, 6 ED. FEB 1977 (DISCONTINUED)

42

POS 6000-2.3 fm
DIVE L.D.

AREA COVERED AT 25 m
SPACING BY RAINIER

5. MI-CALCULATED AS 5.8 FATHOMS
SHOULD BE 10.8 FATHOMS
4. PLOTTED AS 10.0 FA.
AFTER APPLYING TIDE
CORRECTOR
Beacon Rk
(SEE XEROX COPY OF
FATHOMGRAM)

21/4 NOT REFERENCED

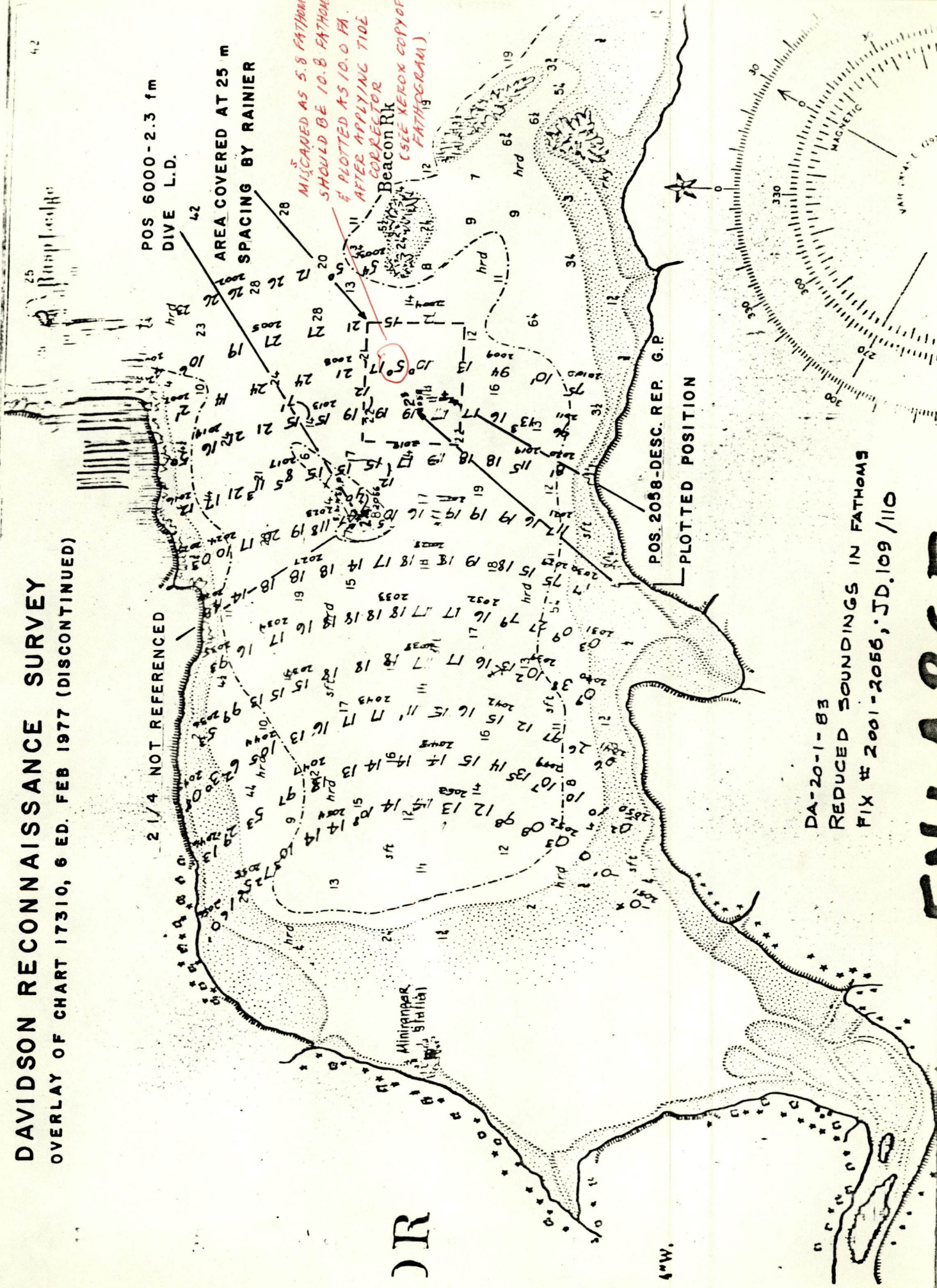
POS. 2058-DESC. REP. G.P.

PLOTTED POSITION

DA-20-1-B3
REDUCED SOUNDINGS IN FATHOMS
FIX # 2001-2056, JD.109/110

DR

4"W.



1708

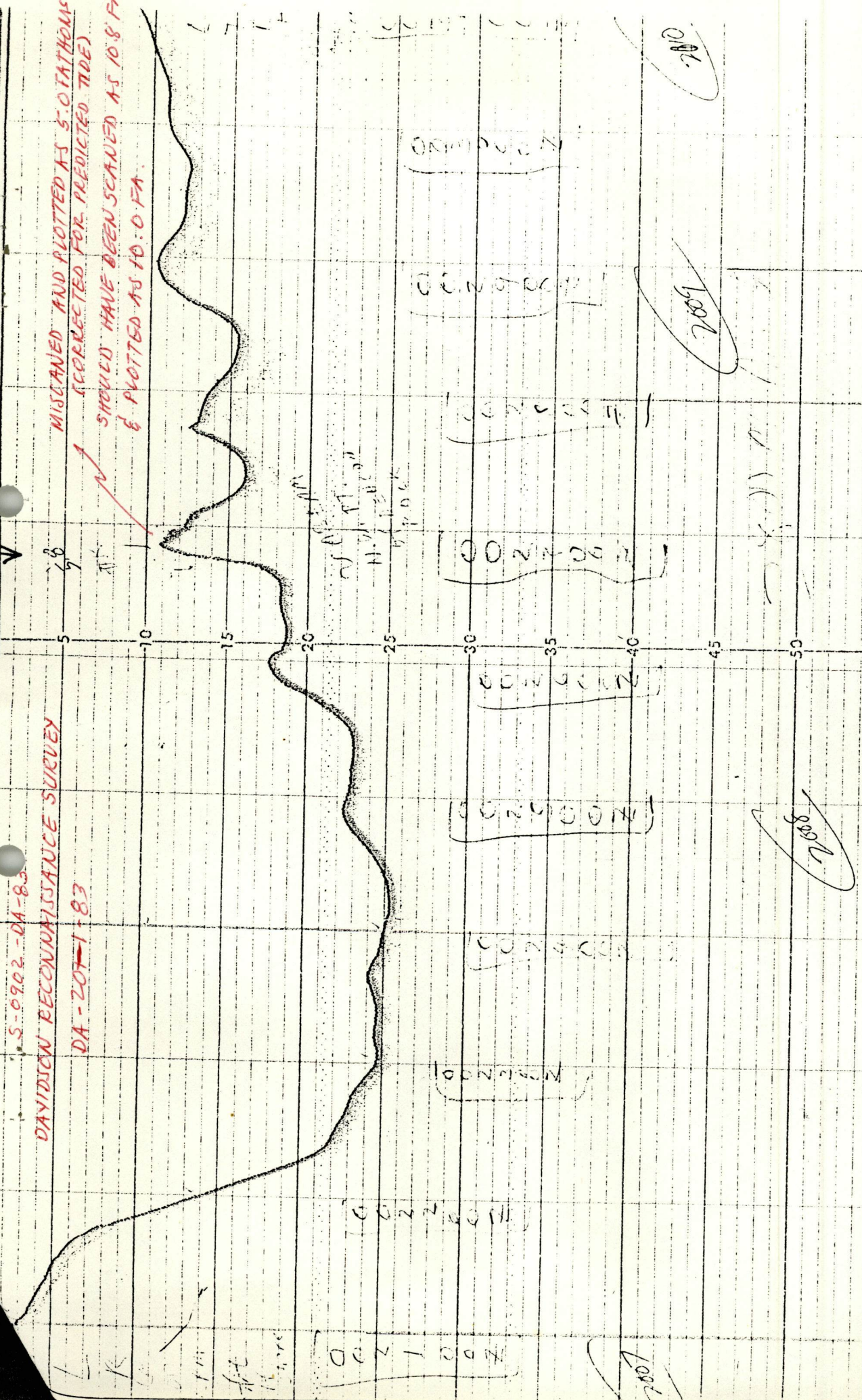
B.5 units - 2000

No. 31. GRAPHIC RECORD
 13-7002 - 22-783
 Sheet No. Recorder No. 1048
 Locality *Wedge Harbor*
 Vessel *3131*
 From Pos. No. *7201* Date: *109*
 To Pos. No. *7453* Date: *110*
 Logged from *7201* to *7453*
Don. L. L. L.
 Tide reduced by *Operator*

NO. 33	SOUNDING APPARATUS	
When Sdr. No.	1081	
Calibrated Velocity	800	
Initial Set at	0-0	
Transducer Draft	0-3	
Fuse Correction	AB -1 BC -1	
Speed Count	100	
Swing Length	Correct	

S-0902-DA-83
DAVIDSON RECONNAISSANCE SURVEY
DA-20-1-83

MISSED AND PLOTTED AS 5.0 TATONS.
CORRECTED FOR PREDICTED TIDE
SHOULD HAVE BEEN SCANNED AS 10.8 FA
& PLOTTED AS 10.0 FA.



MASTER STATION LIST
H-10176 (RA-10-1-85)
OPR-0197-RA-85
SEYMOUR CANAL. ALASKA

FINAL VERSION

120 3 57 38 26576 133 58 30217 ¹³⁹~~250~~ 0003 000000
/MOLE ~~1983~~ PRELIMINARY ADJUSTED

121 3 57 40 41533 134 02 18811 250 0004 000000
/RASP ~~1983~~ PRELIMINARY ADJUSTED

123 4 57 41 17217 133 58 08343 250 0005 000000
/FINGER 2 ~~1983~~ PRELIMINARY ADJUSTED

133 4 57 38 47375 133 53 29415 250 0003 000000
/SIN ~~1983~~ PRELIMINARY ADJUSTED

300 0 57 38 35173 133 59 37878 254 0000 000000
/HP-01 FIELD G.P.

312 6 57 39 332³⁹~~85~~ 134 02 53310 254 0000 000000
/HP-16 FIELD G.P.

500 3 57 39 53044 134 01 29516 243 0000 000000
/CAL. POLE FIELD G.P.

Field
G.P.

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

DATE: 08/08/85

Marine Center: Pacific

OPR: 0179

Hydrographic Sheet: H-10176

Locality: Seymour Canal, AK

Time Period: April 18-May 17, 1985

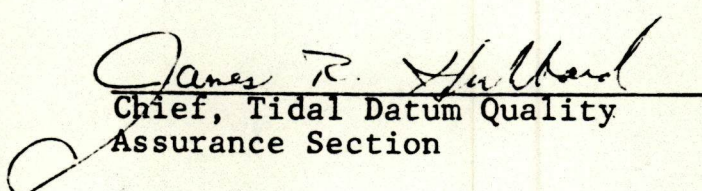
Tide Station Used: 945-2128 Rasp Ledge, Seymour Canal, AK

Plane of Reference (Mean Lower Low Water): 19.10 ft.

Height of Mean High Water Above Plane of Reference: 14.2 ft.

Remarks: Recommended Zoning:

Zone Direct


Chief, Tidal Datum Quality
Assurance Section

FIELD TIDE NOTE
RA-10-1-85
H-10176

Field tide reduction of soundings for survey H-10176 was based on predicted tides from Juneau, Alaska (945-2210). Corrections were obtained from Preliminary Tidal Zoning OPR-0179-RA-85 (0 min time corrector for high and low water and a height ratio of 0.94). The predicted tides were derived using program AM500.

One Bristol Bubbler tide gage was installed in the project area. The gage was tended by RAINIER personnel at regular intervals. Annotations were made in UTC. The location and period of operation is as follows:

<u>SITE</u>	<u>LOCATION</u>	<u>PERIOD</u>
Rasp Ledge	57/40.7 N 134/02.3 W	April 15 - May 12, 1985 May 15 - May 23, 1985

RASP LEDGE

The 0-30 ft gage (S/N 67A16209) was installed and began operation April 15, 1985. Rasp Ledge is a rock outcrop offshore of Flaw Point just north of Mole Harbor. The gage site was only accessible by boat. Four benchmarks were recovered as described, one benchmark 2128A was set. The staff was a 2x4 with plastic sections marked with graduations nailed to it. The staff was installed and leveled April 15, 1985. The marigram reads 10.4 ft less than the staff.

Excellent records were obtained at Rasp Ledge. The gage was operational during all periods of hydrography and shoreline verification. However, due to weather and sea conditions before and after a scheduled inport the gage could not be tended at the regular interval. This resulted in the clock stopping on May 12 for a period of 2.5 days. The gage was restarted May 15 and ran satisfactorily throughout the duration of the survey. The Tiedeman Island gage was operational for concurrent survey RA-20-2-85 (H-10174) during this period.

Final levels verified no movement in the tide staff.

LEVELS

The reference station at Juneau was leveled April 26, 1985. Final levels were run May 22, 1985. Initial and final levels compared very well.

Comparisons between opening and closing levels showed less than 0.003m movement in the tide staff.

COMPARISONS

Times and height of high and low tides were scanned off the marigrams. The following estimates were made using Juneau as the reference station.

<u>Location</u>	<u>TIME CORRECTORS</u>		<u>Height Ratio</u>
	<u>High Water</u>	<u>Low Water</u>	
Rasp Ledge	-7 min	-7 min	x0.92



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA Ship RAINIER
1801 Fairview Avenue East
Seattle, Washington 98102-3767

TO: N/OMS12 - Chief, Tides and Water Levels Branch
FROM: *John P. Vandermeulen*
CAPT. John P. Vandermeulen
Commanding Officer, NOAA Ship RAINIER S221
SUBJECT: Request for Approved Tide Data

Please provide the Nautical Chart Branch (N/MOP21), Pacific Marine Center, the following tide data:

1. Approved Tide Note (Form 712)
2. Approved Hourly Heights for Days of Hydrography
3. Hourly Heights on Magnetic Tape

These data are required for the processing of hydrographic survey:

Registry No. H-10176
Project Instructions: OPR-0179-RA-85
Location: Alaska, Seymour Canal, Mole Harbor

The final Progress Sketch and Abstract of Times of Hydrography/
Shoreline Verification (check one):

- ☐ are included with this request.
will be
- ☒ ~~have been~~ forwarded with the final tide record package for this
survey ~~marked~~ on 5/29/85
- ☐ are included with this request. The final tide record package for
this survey will be forwarded at the end of this month.

Tide data are required within 90 days of receipt of this request.
If this schedule cannot be met, please advise the Chief of the Hydro-
graphic Section, N/MOP211, telephone FTS 392-6853.



GEOGRAPHIC NAMES

RA-10-1-85
H-10176

Name on Survey	ON CHART NO. 17360 ON PREVIOUS SURVEY CON U.S. QUADRANGLE MAPS FROM LOCAL INFORMATION ON LOCAL MAPS P.O. GUIDE OR MAP GRAND MCNALLY ATLAS U.S. LIGHT LIST									
	A	B	C	D	E	F	G	H	K	
ADMIRALTY ISLAND	X		X						1	
BEACON RK	X		X						2	
FLAW PT	X		X						3	
* GLASS PENINSULA	X		X						4	
* HASSELBORG HOMESTEAD			X						5	
MOLE HARBOR	X		X						6	
* MOLE RIVER			X						7	
PLEASANT BAY			X						8	
RASP LEDGE	X		X						9	
SEYMOUR CANAL	X		X						10	
* THE STONE WALL (topographic feature)			X						11	
ALASKA (title)									12	
									13	
									14	
									15	
									16	
									17	
									18	
									19	
									20	
									21	
									22	
									23	
* Geographic names not shown on smooth sheet									24	
									25	

Approved:

Chief Geographer

MAY 20 1985

HYDROGRAPHIC SURVEY STATISTICS

H-10176

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	SMOOTH OVERLAYS: POS., ARC, EXCESS	10
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	2

DESCRIP- TION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR- GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS
ACCORDION FILES	1				
ENVELOPES					
VOLUMES	2				
CAHIERS					
BOXES					

SHORELINE DATA

SHORELINE MAPS (List): TP-01165, TP-01166

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List):

NAUTICAL CHARTS (List): 17360 26th Ed. August 18, 1984

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	VERIFICATION	EVALUATION	TOTALS
POSITIONS ON SHEET			1526
POSITIONS REVISED			1793
SOUNDINGS REVISED			161
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	EVALUATION	TOTALS
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	36.0		36.0
VERIFICATION OF SOUNDINGS	164.5		164.5
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	20.0		20.0
COMPARISON WITH PRIOR SURVEYS AND CHARTS		19.0	19.0
EVALUATION OF SIDE-SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		37.0	37.0
GEOGRAPHIC NAMES			
OTHER* Digitizing	8.0		8.0
*USE OTHER SIDE OF FORM FOR REMARKS			
TOTALS	228.5	56.0	234.5
Pre-processing Examination by Lt. S. Iwamoto	Beginning Date 5/31/85	Ending Date 7/3/85	
Verification of Field Data by P. Niland	Time (Hours) 220.5	Ending Date 3/21/86	
Verification Check by J. Stringham, S. Otsubo, B. Olmstead, J. Green	Time (Hours) 62.5	Ending Date 5/7/86	
Evaluation and Analysis by A. Luceno	Time (Hours) 56.0	Ending Date 5/7/86	
Inspection by D. Hill	Time (Hours) 2.0	Ending Date 5/6/86	

PACIFIC MARINE CENTER
EVALUATION REPORT
H-10176

1. INTRODUCTION

H-10176 is a 1:10,000 scale basic hydrographic survey conducted by the NOAA Ship RAINIER in compliance with the following project instructions:

OPR-0179-RA-85, Seymour Canal, Alaska, dated March 14, 1985
Change No. 1, dated March 21, 1985

The area surveyed is located in Alaska and covers a portion of Seymour Canal between latitudes 57°38'05"N and 57°40'54"N and between longitude 133°58'00"W and the eastern shore of Admiralty Island. The surveyed area also includes Pleasant Bay and Mole Harbor. Pleasant Bay is a small cove in Admiralty Island where anchorage for small craft is available. The southern half of the entrance to the cove is foul with rocks and three islets. Mole Harbor, also on the shore of Admiralty Island, is located 2 miles above Pleasant Bay. Rasp Ledge is a bare rock located 0.2 mile off Flaw Point at the north point of the entrance to the harbor. Two detached rocks submerged 2.4 fathoms and 3.2 fathoms are located at the entrance to the harbor .55 mile and .4 mile SSW off Flaw Point. Beacon Rock is another rock located midway at the entrance to the Harbor. South of Beacon Rock the entrance is obstructed with two groups of rocks. Anchorage is available for small craft southwest of Beacon Rock in 3 to 10 fathoms, mud bottom.

The field sheet parameters were revised to change the modified transverse mercator projection to polyconic and to center the hydrography on the smooth sheet. The revised data is listed in the smooth position/sounding printout.

Predicted tides for the reduction of soundings on the field sheet are based on the Juneau, Alaska reference station with subordinate station Rasp Ledge, Seymour Canal. Final tide reducers for the reduction of soundings on the smooth sheet were derived from the ship operated Bristol Bubbler tide gage at Rasp Ledge.

A digital file for this survey has been generated and includes categories of information required to comply with N/CG2 Hydrographic Survey Guideline No. 23, Completion of Digital Hydrographic Surveys, September 7, 1983. Certain descriptive information, however, may not be included in the digital record due to the restrictions of the presently available cartographic codes. The user should refer to the smooth sheet for complete information.

2. CONTROL AND SHORELINE

The horizontal control for this survey is discussed in sections F and G of the Descriptive Report and in the Horizontal Control Report for OPR-0179-RA-85. The smooth sheet is plotted using third order field and preliminary adjusted field positions.

The following reviewed photogrammetric manuscripts apply to this survey:

<u>T-Sheet</u>	<u>Scale</u>	<u>Date of Photography</u>	<u>Class</u>
TP-01165	1:20,000	July 1983	III
TP-01166	1:20,000	July 1983	III

There are no changes observed by the hydrographer to the high water line as shown on the photo manuscripts. Minor changes to ledges adjacent to the high water line and in the vicinity of Beacon Rock in Mole Harbor are shown in red on the field sheet and were transferred directly to the smooth sheet in black.

3. HYDROGRAPHY

Crossline soundings generally agree within 1 fathom with the main scheme sounding lines. Soundings are adequate to:

- Delineate the bottom configuration, determine least depths and draw depth curves.
- Show that there are no significant discrepancies requiring further investigation.
- Show that the survey had been properly controlled and soundings are plotted correctly.

Positions 7000 to 7096 were controlled by theodolite intersection methods. Ranges from pseudo signals were computed using the positions determined from theodolite cuts for purposes of automation. There is no existing Hydroplot software format for positioning by the theodolite intersection method.

4. CONDITION OF SURVEY

The hydrographic records and reports conform to the requirements of the Hydrographic Manual, 4th Edition, revised through change 3, except as noted in the Preprocessing Examination Report, dated July 3, 1985, and:

Beacon Rock should be indicated at the northern most ledge instead of as indicated on the smooth field sheet (Refer to prior survey H-2003 and chart 17360).

The field sheet is excellent. Detached positions on rocks, ledges and other features were clearly indicated, resulting in savings of office processing time.

5. JUNCTIONS

H-10176 junctions with the following surveys:

<u>Survey</u>	<u>Year</u>	<u>Scale</u>	<u>Location</u>	<u>Note</u>
H-10174	1985	1:20,000	North	Joins
H-10175	1985	1:20,000	East	Joins

Junctions were satisfactorily effected with the surveys listed above. Depths and depth curves in all of the above junction areas are in good agreement.

6. COMPARISON WITH PRIOR SURVEYS

H-2001 (1889) 1:80,000

Data obtained in this survey generally compares well with data from prior survey H-2001. Common coverage in these sheets is located along Seymour Canal.

H-2003 (1889) 1:20,000

Common coverage between the two surveys occurs inside Mole Harbor. Soundings obtained in the present survey generally compare well with those from the prior survey except the current survey afforded discovery of several shoaler soundings because of closer sounding line spacing.

There are no AWOIS items originating from prior surveys applicable to the survey.

H-10176 is adequate to supersede the prior surveys within the area of common coverage.

7. COMPARISON WITH CHART

Chart 17360, 26th Edition, August 18, 1984, 1:217,828

a. Hydrography - Most soundings and other information on this chart originate from the prior surveys mentioned in Section 6 of this report.

The discussion of the 2.4-fathom depth on this survey at latitude 57°40'03.94"N longitude 134°03'06.94"W contained in Section L (Item 7) of Descriptive Report is supplemented as follows:

The 2 1/4-fathom depth, shown near RAINIER position 6000 approximately 500 meters northwest of DAVIDSON position 2058, is shown on the DAVIDSON field sheet in pencil and originated subsequent to the submission of the DAVIDSON reconnaissance survey, thereby explaining the lack of reference to this depth in that survey's records.

A review of the DAVIDSON reconnaissance survey records reveals that position 2058, the 2.3-fathom dive depth, is not supported by positional data. The records indicate that the dive took place at a point previously marked by buoys.

The situation is further complicated by a 5-fathom sounding on the DAVIDSON survey located approximately 200 meters east of the questioned 2.3 fathom depth and an 8.7-fathom shoal on H-10176 in proximity of that same position, indicating the existence of a shoal in this area. A check of the survey records, however, indicates that the 5-fathom sounding is misscanned by 5 fathoms and is actually a 10-fathom sounding (see attached echogram copy).

Therefore, we concur with the RAINIER's conclusion that the 2.3-fathom sounding, DAVIDSON position number 2058, is misplotted. Both areas should be charted according to this survey.

There are no AWOIS items originating from miscellaneous sources.

Geographic names appearing on the smooth sheet originate with this chart and the TP manuscripts and have been approved by the Chief Geographer.

H-10176 is adequate to supersede the charted information within the area of common coverage.

b. Controlling Depths - There are no controlling depths within the limits of this survey.

c. Aids to Navigation - There are no fixed and floating aids to navigation within the limits of this survey.

8. COMPLIANCE WITH INSTRUCTIONS

H-10176 complies adequately with the project instructions and changes to the instructions mentioned in Section 1 of this report.

9. ADDITIONAL FIELD WORK

H-10176 is a good basic hydrographic survey.

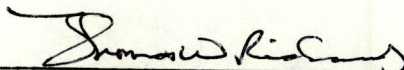
Arsenio A. Luceno
Arsenio A. Luceno
Cartographer

This survey has been examined and it meets Charting and Geodetic Services standards and requirements for use in nautical charting. The survey is recommended for approval.

Dennis Hill
Dennis Hill
Chief, Hydrographic Section

ATTACHMENT TO DESCRIPTIVE REPORT FOR H-10176

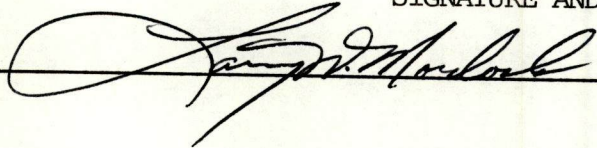
I have reviewed the smooth sheet, accompanying data, and reports of this hydrographic survey. Except as noted in the Evaluation Report, the hydrographic survey meets or exceeds Charting and Geodetic Services (C&GS) standards, complies with instructions, and is accurately and completely represented by the smooth sheet and digital data file for use in nautical charting.


Chief, Nautical Chart Branch (Date)

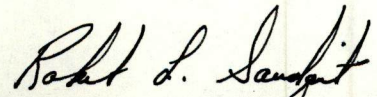
CLEARANCE:

N/MOP2:LWMordock

SIGNATURE AND DATE:



After review of the smooth sheet and accompanying reports, I hereby certify this survey is accurate, complete, and meets appropriate standards with only the exceptions as noted above. The above recommendations are forwarded with my concurrence.

 5/21/86
Director, Pacific Marine Center (Date)



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF CHARTING AND GEODETIC SERVICES
ROCKVILLE, MARYLAND 20852

N/CG242:SRB

April 22, 1987

TO: N/CG24 - Roy K. Matsushige

FROM: N/CG242 *George K. Myers, Jr.*
George K. Myers, Jr.

SUBJECT: Examination of Hydrographic Survey H-10176 (1985), Alaska, Seymour Canal, Mole Harbor to Pleasant Bay

Chief of Party	J. P. Vandermeulen
Field Unit	NOAA Ship RAINIER
Processed by	Pacific Marine Center
Examined by	S. R. Baumgardner

An examination of hydrographic survey H-10176 (1985) was accomplished to monitor the survey for adequacy with respect to data acquisition, conformance with applicable project instructions, delineation of the bottom, determination of least depths, navigational hazards, junctions, sounding line crossings, smooth plotting, shoreline transfer, decisions made and actions taken by the evaluator, and the cartographic presentation of data.

Cartographic deficiencies and constructive comments are noted on a full-scale copy of the survey smooth sheet which will be forwarded to the marine center. Digital data on magnetic tape were not available during the examination of this survey. Therefore, an inspection of a graphic plot from the certified tape was not performed.

In general, the survey was found to conform to National Ocean Service standards and requirements except as stated in the Evaluation Report and as follows:

1. For most of the detached positions obtained on day numbers 111 and 112, field corrected depths and heights were mistakenly entered as raw data in the final sounding listing. Subsequently reduced values of soundings and elevations were computed erroneously and, in some cases, plotted in error on the smooth sheet.

The following should be revised as indicated:

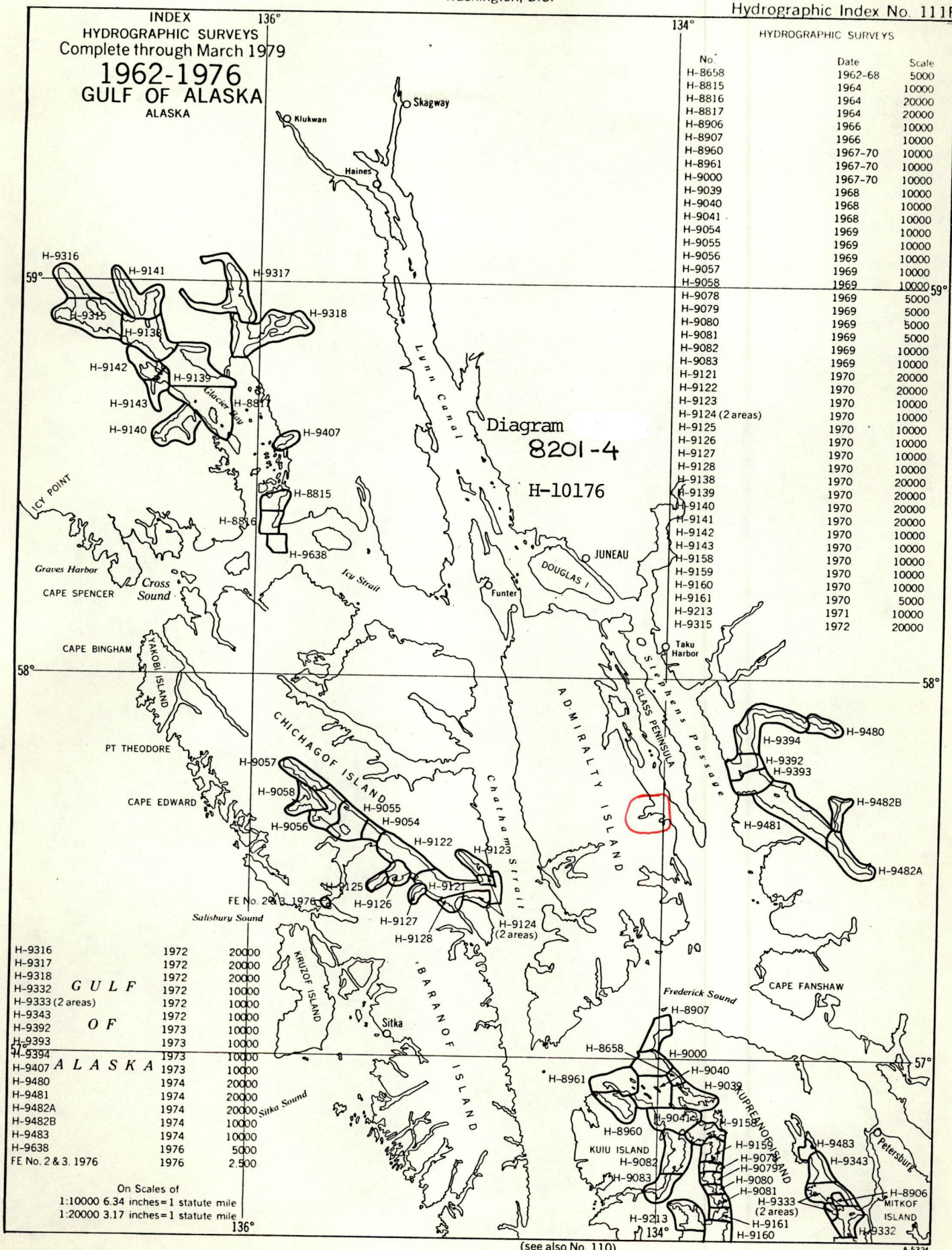
<u>Feature</u>	<u>Latitude (N)</u>	<u>Longitude (W)</u>	<u>Correct depth/elevation</u>
reef (5)	57°39'57"	134°01'49"	uncovers 6 ft, (6)
reef (2)	57°39'53"	134°01'30"	uncovers 5 ft, (5)
reef awash	57°39'47"	134°01'20"	uncovers 7 ft, (7)
rock awash	57°39'43"	134°01'16"	covered 1 ft at MLLW



2. Triangulation stations MOLE and RASP were not identified on the smooth sheet by the year of establishment--1983. Although formal documentation of acceptance of these stations by NGS was not available during processing, it is assumed that triangulation specifications were complied with and that the necessary records and computations will be forwarded and the stations accepted by NGS.
3. The Evaluation Report should be complete within itself and should not reference the Preprocessing Examination Report which is not made a part of the permanent record. If necessary, copy portions of the Preprocessing Examination Report and attach to the Evaluation Report.

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Washington, D.C.

Hydrographic Index No. 111F



MARINE CHART BRANCH RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10176

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.

[illegible]

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10176

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.

[illegible]