10174

Diagrams 8101-4 & 8102-3

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-20-2-85

Registery No. ... H-10174

LOCALITY

State ... Alaska

General Locality ... Seymour Canal

Sublocality ... Tiedeman Island to Flaw Point

1985

CHIEF OF PARTY
CAPT J. Vandermeulen & CAPT C. Fisher

LIBRARY & ARCHIVES

DATE ... November 14, 1986

☆U.S. GOV. PRINTING OFFICE: 1985—566-054

10174

Area 5
Chts
17360 } TO SIGN OFF SEE
17300 } "RECORD OF APPLICATION"

NOAA FORM 77-28 (11-72)

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

REGISTER NO.

H-10174

HYDROGRAPHIC TITLE SHEET

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 20-2-85

State: Alaska

General locality: Seymour Canal

Locality: Tiedeman Island to Flaw Point

Scale: 1:20,000 Date of survey: April 30 - May 24, 1985

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

Vessel: RAINIER S221 (2120) Launches (2123), (2124), (2125) and (2126)

Chief of party: Capt. J.W. Vandermeulen

Surveyed by: LT(jg) Konrad, LT(jg) Wilson, ENS Griffin, ENS Pickett, ENS LaReau, ENS Porta, ENS Brown

Soundings taken by echo sounder, hand lead, pole: DSF 6000-N Echo Sounder

Graphic record scaled by: RAINIER Personnel

Graphic record checked by: RAINIER Personnel

Evaluated by: A. Luceno Automated plot by: PMC Xynetics Plotter

Verification by: T. Jones

Soundings in fathoms and tenths at MLLW

REMARKS: Marginal notes in black by evaluator. Separates are filed with the hydrographic data. See "Title Page" for additional work done in October, 1986 for this survey. Title page attached to this report.

NWOPS/SURF checked 1/8/87 SS

Notes in blue ink in Descriptive Report made during Examination.

SC 4-7-97

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

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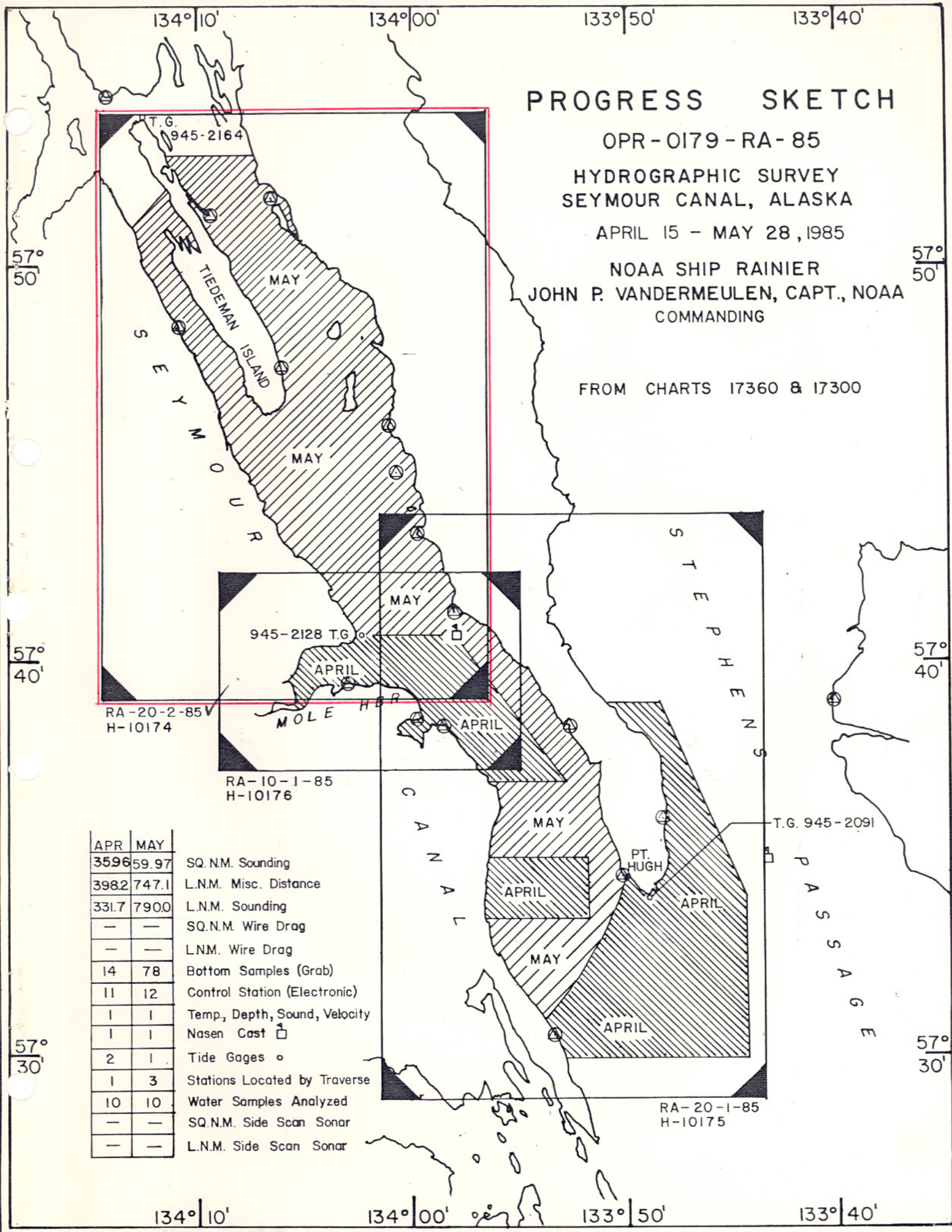


PROGRESS SKETCH

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
398.2	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
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

A basic hydrographic survey in Seymour Canal, Alaska was completed following the specifications of Project Instructions OPR-0179-RA-85, dated March 14, 1985. The survey was assigned Registry Number H-10174 (Field Number RA-20-2-85). One change was made to the initial instructions, Change Number 1, dated March 21, 1985.

B. AREA SURVEYED

Seymour Canal is located in Southeast Alaska, roughly 70 miles south of Juneau. There the Canal branches off from Stephens Passage and runs roughly northwest, approximately paralleling Stephens Passage. The sheet covers the area from just north of Mole Harbor to the entrance to Winning Cove, which includes the southern half of Tiedeman Island. The sheet limits are:

South Limit	Latitude	57° 40' 54" N
North Limit	Latitude	57° 52' 45" N
West Limit	Longitude	134° 13' 00" W
East Limit	Longitude	133° 58' 00" W

The survey was conducted from April 30, 1985 to May 24, 1985 (J.D.'s 120-144).

The area surrounding Seymour Canal is characterized by dense evergreen forests and snow-capped mountains. The shoreline has numerous ledges and detached rocks with occasional stretches of sand or gravel beaches, and few, if any, man made features .

C. SOUNDING VESSEL

The following vessels were used on this survey:

Vessel	EDP #
RAINIER	2120
RA-3	2123
RA-4	2124
RA-5	2125
RA-6	2126

No problems were encountered which required changing the configuration of the sounding vessels from the standard set up.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

All survey vessels were equipped with Raytheon DSF-6000N dual-beam echo sounders with the following serial number assignments:

Vessel	EDP #	DSF-6000N #
RAINIER	2120	A117N
RA-3	2123	A115N
RA-4	2124	A119N
RA-5	2125	A103N
RA-6	2126	A123N

Soundings were taken in depths ranging from 0 to 1512 fathoms.

The echo sounders were normally operated in the high and low frequency combined mode, with the high frequency beam supplying the digitized depths to the data acquisition system.

There were two problems encountered with the echo sounding equipment during data acquisition for this survey. The primary problem was that the DSF-6000N had difficulty tracking the bottom in areas of steep slope. This problem was remedied by slowing the launch down in areas with steep bottom slopes, and by manually operating the gain controls as mentioned above. The second problem encountered was the tendency of the echo sounders to track schools of fish that were spawning in the area. Normally the low-frequency would remain locked on the bottom, but the high-frequency would often leave the bottom and track the school of fish, creating false peaks. The digitized depths had to be replaced with depths scaled off of the low-frequency trace during the check scanning procedure. In some cases where the low-frequency also lost the bottom, or where it was not obvious that the peak was due to fish, that section of the line was re-run in order to disprove the peak's existence. During data acquisition, the high-frequency was sometimes forced to follow the bottom by using the manual gate position knob, or by using a higher gain setting.

D.1. Velocity of Sound Through Water

Nansen casts were taken twice during the project period. The sound velocity values calculated from these casts were checked against sound velocity values obtained from SV/D casts which were taken simultaneously with the Nansen casts. A Plessy 9040 SV/D profiling system was used for this purpose. The SV/D values were in very close agreement with those calculated from the Nansen casts, and the greatest variance between the corrector values was 0.1 fathom at a depth of 110 fathoms. For depths to 110 fathoms, the final velocity curve was based on an average of the values obtained from the two Nansen casts and the

two SV/D casts. Beyond 110 fathoms, the curve was based on an average of the values from the two Nansen casts. The velocity corrector tape listings are contained in the separate attachment "V. Velocity Corrector Tape Listings", which may be found at the end of this report.

A surface comparison was made with the SV/D unit in accordance with instructions from N/MOP dated 1 April 1983. The comparison agreed with the SV/D to within 1 M/S. The only anomalous behavior exhibited by the SV/D equipment was a malfunction in the depth parameter at depths deeper than 110 fathoms, at which point repeatable values could not be obtained. Reliable values were, however, obtained at depths less than 110 fathoms. Velocity values were calculated from the frequency readout using the first order calibration parameters.

A table of the dates and locations of the casts follows, in addition to a table of the serial numbers and calibration dates for the equipment used:

VELOCITY CASTS				
Type	Date	J.D.	Latitude	Longitude
Nansen	15 April	105	57° 35' 12" N	133° 43' 36"W
SV/D	15 April	105	57° 35' 12" N	133° 43' 36"W
Nansen	17 May	137	57° 40' 36" N	133° 38' 00"W
SV/D	17 May	137	57° 40' 36" N	133° 38' 00"W

SOUND VELOCITY EQUIPMENT		
Instrument	Serial Number	Date Last Calibration*
Plessy 9040 SV/D	5632	March 1985
Beckman RS-7B Salinometer	22670	March 1985
Reversing Thermometers	Various	March & April 1985

D.2. Variation in the Instrument Initial

The DSF-6000N echo sounder has no initial adjustment that is made by the hydrographer.

* Performed by the Northwest Regional Calibration Center

D.3. Other Instrument Corrections

All soundings were positioned using Mini-Ranger control with the R/T unit placed directly over the transducer; yielding an ANDIST value of 0.0, which was used for plotting the final field sheet.

D.4. Draft

Bar checks were performed at least once per day, usually in the morning prior to collecting data. Both beams were checked in compliance with the Provisional Operating Instructions for the DSF-6000N Echo Sounder, and all bar checks were performed in the working grounds. The bar check data were used to check proper system operation, and to compute an average TRA value for the launches. The averaged TRA values for the high and low frequency beams were within 0.1 fm of one another, and an average value for the two, 0.3 fm, was used in plotting the final field sheet. This value was obtained for all launches used in collecting data for this survey.

D.5. Settlement and Squat

Settlement and squat trials were held in Windfall Harbor during J.D. 140 and J.D. 143. The correctors determined for all launches were less than 0.1 fm, and were not used in the plotting of the final field sheet in accordance with the Hydrographic Manual, sections 4.9.2, and 4.9.4.2..

D.6. Tides

Predicted tides were used in plotting the final field sheet.

In compliance with PMC OPORDER, Appendix Q, TC/TI tapes were cut, and listings of these tapes are included in separate attachment "VII. TC/TI Tape Listings". For further details relating to corrections to echo soundings, see Corrections to Echo Soundings Report, OPR-0179-RA-85.

E. HYDROGRAPHIC SHEETS

The final field sheet is a modified transverse Mercator projection at the scale of 1:20,000, and was generated on board the RAINIER using the Hydroplot system. There is also one overlay of shoreline features at the same scale, and four expansion sheets at the scale of 1:5,000 plotted using the same computer system.

Listings of the electronic parameter tapes used in plotting the sheets may be found in the attachment,"I. Hydrographic Sheet Parameters", ~~at the end of this report~~. *in the separates filed with the Hydrographic data.*

F. CONTROL STATIONS

In the course of conducting this survey, twelve Third Order Class I stations and six photogrammetric points, all established by the NOAA Ship DAVIDSON, were recovered.

THIRD ORDER CLASS I STATIONS	
Signal #	Station Name
120	Mole 1983
121	Rasp 1983
122	Bear 1983
123	Finger 1983
124	Sore 1983
125	Susan 1983
126	Buck 1983
127	Sandy 1983
128	Weed 1983
129	Tied 1983
130	Bug 1983
132	Swan 1983

PHOTOGRAMMETRIC POINTS	
Signal #	Station Name
304	HP-07
305	HP-08
306	HP-09
311	HP-15
313	HP-18
314	HP-19

All of these stations were used as electronic control stations with the exception of signals ~~120~~, 122 and 314. Signal 120 was used to position one bottom sample. Signal 122 was used for a check angle during Range-azimuth work from signal 125. Signal 314 was used as a static calibration site.

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.

The aerotriangulated positions for the photo-hydrographic points were verified and used for plotting the final field sheet. A discrepancy was found between the aerotriangulated position and land surveyed position for station 313. This amounted to a positional error of about three meters. This station was used as a Range-azimuth range station, Range-azimuth theodolite station, and as a calibration station, on J.D.'s 137, 138, and 139. The three meter positional error translates to a 5' error in the check initial during Range-azimuth operations. Since the error introduced by the discrepancy is small, at the scale of the survey, the data have been plotted using the aerotriangulated position.

Temporary station "Cal Pole", station number 500, was used on several occasions as a static calibration site. The pole, which consisted of a single section of Raydist tower guyed to a reef, was positioned to Third Order Class I standards, and was torn down at the end of the survey.

All positions in the survey are based on the 1927 North American datum. For further information on control stations, refer to the separate report, Horizontal Control Report for OPR-0179-RA-85.

G. HYDROGRAPHIC POSITION CONTROL

Range-range and Range-azimuth position control methods were used on this survey. Range information was obtained by using Motorola Mini-Ranger III equipment, and all angular information was obtained using Wild theodolites. The following tables list the serial numbers of the equipment used, and the dates of operation for the consoles and R/T units:

WILD THEODOLITES	
Model	Serial #
T-2	73226
T-2	57259
T-2	68648
T-2	75599

MINI-RANGER MOBILE EQUIPMENT				
Vessel	E.D.P.#	Console Serial #	R/T Serial #	Days of Operation
RA-3	2123	720	B1405	124-142
RA-4	2124	B0269	B1388	133-142
RA-5	2125	711	C1712	124-142
RA-6	2126	715	911615	133-142

Mini-Ranger calibrations and system checks were performed in accordance with PMC OPORDER, Appendices M and S. Initial base line calibrations for this project were conducted on Lake Union, Seattle, Washington, on March 11, March 12, and March 20, 1985. Ending calibrations were conducted in Juneau, Alaska, on May 24, 1985.

Only opening base line correctors were used in plotting the final field sheet. The initial calibrations were also used to determine the minimum signal strength cut-off values for each console/code combination. Updated corrector tapes have been cut which take into account both the initial and final base line correctors. For more information regarding system checks and calibrations, refer to Electronic Control Report, OPR-0179-RA-85.

Daily system checks for each code used were performed using one of the following methods: theodolite intersection or static calibration were used for critical checks, and three-range calibration or baseline crossing were used for non-critical checks.

Static calibrations were performed at Third Order stations along the water's edge. The launch was positioned as close as possible to the calibration station, on a range with the Mini-Ranger station. While the launch was held in position, the distance to the calibration station was taped off, and at the same time, ten range rates were recorded from the Mini-Ranger console. The geodetic distance between the calibration station and the range station was then adjusted by the taped distance, and this adjusted value was compared to the ten range rates.

Bottom samples obtained by the RAINIER, E.D.P.# 2120, on days 137-138 and 142-143 were positioned by radar fixes.

No major problems were encountered while using the Mini-Ranger system. Transponder locations and dates of operation are listed in the following table:

DAYS	STATIONS										
	121	123	125	126	127	128	130	132	304	311	313
124				2							
125				2							
126		1	D	2							
127	0	1	D	F,2		A					
128	0	1		F,2							
129	0	1	D	F,2							
136	0	1	D	2							
137	0	1		2	F						E
138	0	1		2	F					B	E
139		1		2	F					B	E
140					F		2		1	B	E
141							2	D,0	1		
142				2	F	F,0				B	

H. SHORELINE

Shoreline details were taken from shoreline manuscripts TP-01164 and TP-01165, both of which are at the scale of 1:20,000.

Shoreline detail notes have been plotted on an overlay sheet at the same scale as the final field sheet in order to avoid obscuring soundings. The features themselves are plotted on the final field sheet.

No field edit was performed.

In general, positions were taken on features detached from the shoreline. Other shoreline features were verified without hydrographic positioning data and assigned reference numbers. The following are items which were either depicted on the manuscript and disproven, or items which were not depicted on the manuscript and were found. Of particular interest are items 9, 13, 17, 23, 28, 31 and 48 which address the "Notes to the Hydrographer" which were listed on the manuscript.

Item #: 1
Survey Feature: Exposed rock * (5)
Feature Depth: -5 ft
Manuscript Feature: Ledge
Detached Position #: 4098 Day: 136 (7) E.D.P.#: 2124
Latitude: 57° 41' 08.~~94~~" N 56.86"
Longitude: 134° 02' ~~57.01~~" W 56.89"
General Location: The rock is located 0.6 nm NNW of Rasp Ledge.
Method of Investigation: A detached position was taken on the rock.
Recommendations: Show the feature as an exposed rock. concur

Item #: 2
Survey Feature: Submerged rock, ~~1.4~~ 2.0 ft (* Cov. 2 ft at MLLW)
Manuscript Feature: Not depicted
Detached Position #: 6185 Day: 128 E.D.P.#: 2126
Latitude: 57° 41' 59.45" N
Longitude: 133° 58' 28.32" W
General Location: The rock is located 0.7 nm NNW of station FINGER.
Method of Investigation: A detached position was taken on the rock.
Recommendations: Show the rock. concur

Item #: 3
Survey Feature: Ledge
Manuscript Feature: Not depicted
Reference #: 404 Day: 136 E.D.P.#: 2124
Latitude: 57° 42' 00" N
Longitude: 134° 04' 00" W
General Location: The ledge is located 1.6 nm NW of Rasp Ledge.
Method of Investigation: The location of the ledge was noted on the data printout during shoreline verification. The limits of the ledge were defined as the launch ran parallel to the shore.
Recomendations: Show the ledge. concur

Item #: 4
Survey Feature: Ledge
Manuscript Feature: Not depicted 2 rocks awash shown on TP-01165
Reference #: 603 Day: 128 E.D.P.#: 2126
Latitude: 57° 42' 20" N
Longitude: 133° 58' 39" W
General Location: The ledge is located 1.4 nm SE of the entrance to Sore Finger Cove.
Method of Investigation: The location of the ledge was noted on the data printout during shoreline verification. The limits of the ledge were defined as the launch ran parallel to the shore.
Recomendations: Show the ledge. concur

Item #: 5
Survey Feature: Exposed rock, ~~-6.0~~ -5.0 ft *(5)
Manuscript Feature: Exposed rock (different position)
Detached Position #: 4097 Day: 136 7 E.D.P.#: 2124
Latitude: 57° 42' 56.~~39~~24" N
Longitude: 134° 05' 47.~~94~~91" W
General Location: The rock is located 0.9 nm south of Buck Island.
Method of Investigation: A detached position was taken on the rock.
Recommendations: Show the rock at the above location, and remove the rock symbol that is further inshore. concur

Item #: 6
Survey Feature: Exposed rock, ~~-5.0~~ -4.0 ft * (4)
Manuscript Feature: Exposed rock (different position)
Detached Position #: 4095 Day: 135 7 E.D.P.#: 2124
Latitude: 57° 43' 02.~~55~~" N .39"
Longitude: 134° 05' 51.~~56~~" W .53"
General Location: The rock is located 0.9 nm south of Buck Island.
Method of Investigation: A detached position was taken on the rock .
Recommendations: Show the rock at the above location, and remove the rock symbol that is further inshore. concur

Item #: 7
Survey Feature: Ledge
Manuscript Feature: Not depicted - LWL shown on TP-01165
Reference #: 344 Day: 136 E.D.P.#: 2126
Latitude: 57° 43' 20" N
Longitude: 133° 59' 48" W
General Location: The ledge is near the southern point of the entrance to Sore Finger Cove.
Methoc of Investigation: The location of the ledge was noted on the data printout during shoreline verification. The limits of the ledge were defined as the launch ran parallel to the shore.
Reccomendations: Show the ledge. concur

Item #: 8
Survey Feature: Ledge, ~~-0.6~~ 0.0 ft (feature is part of the ledge)
Manuscript Feature: Exposed rock
Detached Position #: 6189 Day: 128 E.D.P.#: 2126
Latitude: 57° 43' 45.26" N
Longitude: 134° 00' 01.01" W
General Location: The ledge is located on the southern edge of the point which defines the northern limit of Sore Finger Cove. The item depicted on the manuscript as an exposed rock is actually the southern limit of the large ledge which is depicted on the manuscript.
Method of Investigation: A detached position was taken on the ledge.
Recommendations: Show the feature as the southern limit of the ledge. concur

Item #: 9 (Note to the Hydrographer)
Survey Feature: Point north of Sore Finger Cove
Manuscript Feature: "Charted as an Island" Chart 17360, shown as a point of land on TP-01165
Position #: 6189 Day: 128 E.D.P.#: 2126
Latitude: 57° 43' 53" N
Longitude: 134° 00' 00" W
General Location: The feature is a point, and not an island. It is connected to the main shoreline by a land bridge that is covered with grass and trees.
Method of Investigation: The point was examined during shoreline verification.
Recommendations: Show the feature as a point of land. concur

Item #: 10
Survey Feature: Exposed rock, ~~-6.0~~ -5.0 ft * (5)
Manuscript Feature: Ledge
Detached Position #: 4094 Day: 136 E.D.P.#: 2124
Latitude: 57° 43' 54.~~23~~" N .08"
Longitude: 134° 06' 00.~~96~~" W .99"
General Location: The rock is located south of Buck Island. It is on the southern extreme of the ledge that surrounds the island.
Method of Investigation: A detached position was taken on the rock.
Recommendations: Show the rock. concur

Item #: 11
Survey Feature: Ledge
Manuscript Feature: Not depicted – LWL shown on TP-01165
Reference #: 335 Day: 128 E.D.P.#: 2123
Latitude: 57° 44' 27" N
Longitude: 134° 07' 24" W
General Location: The ledge is located 0.75 nm NW of station BUCK.
Method of Investigation: The location of the ledge was noted on the data printout during shoreline verification. The limits of the ledge were defined as the launch ran parallel to the shore.
Reccomendations: Show the ledge. concur

Item #: 12
Survey Feature: Ledge, ~~-1.6~~ -1.0 ft awash * (1)
Manuscript Feature: Exposed rock – 2 rocks awash on TP-01165
Detached Position #: 6191 Day: 128 E.D.P.#: 2126
Latitude: 57° 44' ~~36.87~~" N 06.96"
Longitude: 134° 00' ~~01.36~~" W 02.76"
General Location: The ledge is located on the northern edge of the point which defines the northern limit of Sore Finger Cove. The item depicted on the manuscript as an exposed rock is actually the northern limit of the large ledge which is depicted on the manuscript.
Method of Investigation: A detached position was taken on the ledge.
Recommendations: Show the feature as the northern limit of the ledge. concur

Item #: 13 (Note to the Hydrographer)
Survey Feature: Ledge
Manuscript Feature: "Charted as a rock awash" Chart 17360 Islet at Station Susan shown on TP-01165. Chart as shown on smooth sheet.
Detached Position #: 6196 Day: 128 E.D.P.#: 2126
Latitude: 57° 44' 48.72" N
Longitude: 134° 00' 49.80" W
General Location: The feature depicted as a rock awash is actually part of the ledge which surrounds the islet where station SUSAN is located.
Method of Investigation: A detached position was taken on the ledge.
Recommendations: Show the feature as the eastern limit of the ledge. concur

Item #: 14
Survey Feature: Pair of rocks 05 RK
Manuscript Feature: Not depicted
Detached Position #: 6194 Day: 128 E.D.P.#: 2126
Latitude: 57° 44' 52.82" N
Longitude: 133° 59' 58.25" W
General Location: The rocks are located 0.6 nm east of station SUSAN.
Method of Investigation: A detached position was taken on the rocks.
Recommendations: Show the feature as ~~exposed~~ subm rocks. concur

Item #: 15
Survey Feature: Ledge
Manuscript Feature: Not depicted
Reference #: 323 Day: 127 E.D.P.#: 2123
Latitude: 57° 45' 39" N
Longitude: 134° 08' 20"W
General Location: The ledge is located 0.95 nm SW of the south end of Tiedeman Island.
Method of Investigation: The location of the ledge was noted on the data printout during shoreline verification. The limits of the ledge were defined as the launch ran parallel to the shore.
Reccomendations: Show the ledge. concur

Item #: 16
Survey Feature: Ledge
Manuscript Feature: Not depicted
Reference #: 332 Day: 128 E.D.P.#: 2123
Latitude: 57° 46' 00" N
Longitude: 134° 01' 17" W
General Location: The ledge is located 0.1 nm WSW of station HP-18.
Method of Investigation: The location of the ledge was annotated on the data printout during shoreline verification. The limits of the ledge were defined as the launch ran parallel to the shore.
Reccomendations: Show the ledge. concur

Item #: 17 (Note to the Hydrographer)
Survey Feature: Exposed rock, -9.0 ft * (9)
Manuscript Feature: "Charted as bare islets" Chart 17360
Detached Position #: 3680 Day: 138 E.D.P.#: 2123
Latitude: 57° 46' 01.35" N .39"
Longitude: 134° 01' 21.64" W .80"
General Location: The rock is located 0.1 nm WSW of station HP-18.
Method of Investigation: A detached position was taken on the rock.
Recommendations: Show the feature as an ~~exposed~~ rock awash. concur

Item #: 18
Survey Feature: Area "Foul with Rocks"
Manuscript Feature: Group of exposed rocks
Reference #: 351 Day: 138 E.D.P.#: 2123
Latitude: 57° 46' 10" N
Longitude: 134° 07' 00" W
General Location: The foul area is located on the soutern tip of Tiedeman Island between an offshore reef and a ledge.
Method of Investigation: The area was noted on the data printout during shoreline verification as the launch passed the area.
Recommendations: Show the area as "Foul with Rocks". concur
(foul limits transferred from field sheet)

Item #: 19
Survey Feature: Ledge awash
Manuscript Feature: ~~Exposed~~ rock
Reference #: 348 Day: 137 E.D.P.#: 2123
Latitude: 57° 46' 23.98" N
Longitude: 134° 02' 34.84" W
General Location: The feature depicted as an exposed rock is actually part of the ledge on the southern tip of Dorn Island.
Method of Investigation: The location of the ledge was noted on the data printout during shoreline verification.
Recommendations: Show the feature as a ledge. concur

Item #: 20
Survey Feature: Ledge
Manuscript Feature: Not depicted
Position #: 5017 Day: 124 E.D.P.#: 2125
Latitude: 57° 46' 28" N
Longitude: 134° 07' 12" W
General Location: The ledge is located on the west side of Tiedeman Island, 0.3 nm NW of the southern tip of the island.
Method of Investigation: The location of the ledge was noted on the data printout at the end of a main-scheme line.
Reccomendations: Show the ledge. concur

Item #: 21
Survey Feature: Submerged rock, ~~-6.6~~ 1.2 fm ft 12 rk
Manuscript Feature: Not depicted
Detached Position #: 5263 Day: 127 E.D.P.#: 2125
Latitude: 57° 46' 42.~~67~~" N .69"
Longitude: 134° 07' 50.~~26~~" W .27"
General Location: The rock is located on the west side of Tiedeman Island, 0.7 nm NW of the southern end of the island.
Method of Investigation: A detached position was taken on the rock.
Recommendations: Show the rock. shown as 1.2 fm subm. rock ~~in~~ on the smooth sheet.

Item #: 22
Survey Feature: Reef, ~~-3.0~~ -2.0 ft * (2)
Manuscript Feature: ~~Exposed~~ rock (awash)
Detached Position #: 5261 Day: 127 E.D.P.#: 2125
Latitude: 57° 46' 48.~~38~~" N .39"
Longitude: 134° 07' 51.~~68~~" W .69"
General Location: The reef is located on the west side of Tiedeman Island, 0.8 nm NW of the southern end of the island.
Method of investigation: A detached position was taken on the reef.
Recommendations: Change the rock symbol to a reef symbol. Kept rock as high point of reef.

Item #: 23 (Note to the Hydrographer)
Survey Feature: Ledge, ~~-9.0 ft~~ -8.0ft
Manuscript Feature: "Possible submerged rock, insufficient photo coverage to determine existence"
Detached Position #: 5304 Day: 136 E.D.P.#: 2125
Latitude: 57° 47' 01.~~33~~" N .32"
Longitude: 134° 06' 01.40" W
General Location: The ledge is located on the east side of Tiedeman Island, 1.6 nm west of Dorn Island. The possible rock is part of the depicted ledge.
Method of Investigation: A detached position was taken on the ledge.
Recommendations: Show the feature as part of the ledge. shown as rock as high point of ledge.

Item #: 24
Survey Feature: Exposed rock, ~~-4.0~~ -3.0 ft * (3)
Manuscript Feature: Not depicted
Detached Position #: 2251 Day: 142 E.D.P.#: 2123
Latitude: 57° 47' 12.~~31~~" N .30"
Longitude: 134° 08' 02.51" W
General Location: The rock is located on the western side of Tiedeman Island, 1.1 nm NE of the southern end of the island.
Method of Investigation: A detached position was taken on the rock.
Recommendations: Show the rock. concur

Item #: 25
Survey Feature: Ledge
Manuscript Feature: Not depicted
Position #: 5093 Day: 125 E.D.P.#: 2125
Latitude: 57° 47' ~~18~~" N 18.57"
Longitude: 134° 09' ~~43~~" W 41.23"
General Location: The ledge is located on the western side of the channel on the western side of Tiedeman Island, 1.4 nm SSE of station WEED.
Method of Investigation: The ledge was noted on the data printout at the end of a main-scheme line.
Recommendations: Show the ledge. concur

Item #: 26
Survey Feature: Ledge, ~~-5.0~~ -4.0 ft
Manuscript Feature: ~~Exposed~~ rock (awash)
Detached Position #: 2252 Day: 142 E.D.P. #: 2123
Latitude: 57° 47' 24.~~65~~" N .63"
Longitude: 134° 08' 00.09" W
General Location: The ledge is located on the western side of Tiedeman Island, 1.3 nm NE of the southern end of the island.
Method of Investigation: A detached position was taken on the ledge.
Recommendations: Replace rock symbol with ledge. RK shown as high point of ledge.

Item #: 27
Survey Feature: ~~Exposed~~ rock, ~~-9.0~~ -12.0 ft * (12) (awash)
Manuscript Feature: Ledge
Detached Position #: 5674 Day: 139 E.D.P.#: 2125
Latitude: 57° 47' 37.~~51~~5" N .82"
Longitude: 134° 00' 58.~~73~~" W .18"
General Location: The rock is located on the edge of a depicted ledge, 0.9 nm ENE of Dorn Island.
Method of Investigation: A detached position was taken on the rock.
Recommendations: Show the rock. concur

Item #: 28 (Note to the Hydrographer)
Survey Feature: Single island
Manuscript Feature: "Charted as two islets" Chart 17360
Reference #: 411 Day: 137 E.D.P.#: 2124
Latitude: 57° 47' 40" N
Longitude: 134° 03' 25" W
General Location: The island is located 0.2 nm NW of Dorn Island.
Method of Investigation: The feature was noted on the data printout during shoreline verification.
Recommendations: Change the charted islets to one island. concur

Item #: 29
Survey Feature: Deadhead obstruction, -6.0 ft (snag)
Manuscript Feature: Not depicted
Detached Position #: 5609 Day: 139 E.D.P.#: 2125
Latitude: 57° 47' 40.~~82~~" N .80"
Longitude: 134° 01' 09.~~69~~" W .68"
General Location: The deadhead is a fixed log protruding out of the water, 0.85 nm ENE of Dorn Island.
Method of Investigation: A detached position was taken on the deadhead.
Recommendations: Show the deadhead. shown as snag on smooth sheet

Item #: 30
Survey Feature: Disproven rock
Manuscript Item: Exposed rock
Position #: 5103 3 Day: 125 E.D.P.#: 2125
Latitude: 57° 47' ~~40.0~~" N
Longitude: 134° 09' 58.0" W
General Location: Western side of channel on western side of Tiedeman Island, 1.15 nm SSE of station WEED.
Method of Investigation: Rock was searched for at the end of a main-scheme arc during a minus tide.
Recommendations: Do not show the rock. concur

Item #: 31 (Note to the Hydrographer)
Survey Feature: Single islet
Manuscript Feature: "One islet charted"
Reference #: 425 Day: 139 E.D.P.#: 2124
Latitude: 57° 48' 25" N
Longitude: 134° 02' 07" W
General Location: The feature is located 0.6 nm east of Faust Island. The items which were to be investigated were not islets, but were exposed reefs. Only one islet is in the area.
Method of Investigation: The feature was noted on the data printout during shoreline verification. (TP-01165)
Recommendations: Show the vicinity as on the manuscript. concur
Chart as shown on smooth sheet.

Item #: 32
Survey Feature: Rock awash, ~~0.0~~ 6.8 ft
Manuscript Feature: Not depicted
Detached Position #: 6438 Day: 141 E.D.P.#: 2126
Latitude: 57° 49' 04.~~65~~" N .63"
Longitude: 134° 07' 19.85" W .86"
General Location: Rock is located on the eastern side of Tiedeman Island, 1.6 nm west of a small island to the north of Faust Island.
Method of Investigation: A detached position was taken on the rock.
Recommendations: Show the rock. concur. Excessed. Part of subm. reef.

Item #: 33
Survey Feature: Ledge
Manuscript Feature: Group of exposed rocks * (7)
Detached Position #: ~~6439~~ 6440 Day: 141 E.D.P.#: 2126
Latitude: 57° 49' ~~06.03~~" N 10.90"
Longitude: 134° 07' ~~21.68~~" W 26.46"
General Location: Ledge is located on the eastern side of Tiedeman Island, 1.6 nm west of a small island to the north of Faust Island.
Method of Investigation: A detached position was taken on the ledge.
Recommendations: Replace the rock symbols with the ledge. shown as rock at end of ledge.

Item #: 34
Survey Feature: Exposed rock, ~~-5.0~~ -4.0 ft * (4)
Manuscript Feature: Not depicted
Detached Position #: 4395 Day: 139 E.D.P.#: 2124
Latitude: 57° 49' ~~07.01~~ 06.98" N
Longitude: 134° 02' 1~~0.04~~ 09.99" W
General Location: The rock is located 0.95 nm NE of Faust Island.
Method of Investigation: A detached position was taken on the rock.
Recommendations: Show the rock. concur

Item #: 35
Survey Feature: Disproven ledge
Manuscript Feature: Ledge
Reference #: 550 Day: 140 E.D.P.#: 2125
Latitude: 57° 49' 17" N
Longitude: 134° 10' 25" W
General Location: The ledge is depicted on the western side of Tiedeman Island, 0.8 nm NNE of station WEED.
Method of Investigation: The ledge was not observed during shoreline verification.
Recommendations: Do not show the ledge. concur

Item #: 36
Survey Feature: Ledge, ~~-6.8~~ -7.0 ft * (1)
Manuscript Feature: Exposed rock
Detached Position #: 6436 Day: 141 E.D.P.#: 2126
Latitude: 57° 49' 21.~~40~~38" N
Longitude: 134° 07' 42.85" W
General Location: The ledge is located 2.1 nm SE of station HP-15.
Method of Investigation: A detached position was taken on the ledge.
Recommendations: Show the ledge instead of the rock. shown as rock as high point of ledge.

Item #: 37
Survey Feature: Ledge
Manuscript Feature: Not depicted
Reference #: 606 Day: 140 E.D.P.#: 2126
Latitude: 57° 49' 25" N
Longitude: 134° 02' 47" W
General Location: The ledge is located on the NW side of the small island located 0.85 nm NE of Faust Island.
Method of Investigation: The ledge was noted on the data printout during shoreline verification. The limits of the ledge were determined as the launch travelled parallel to the shore.
Recommendations: Show the ledge. concur

Item #: 38
Survey Feature: Disproven piers Piers are not shown on TP 01164 at given location.
Manuscript Feature: Two piers
Detached Position #: 6434 Day: 141 E.D.P.#: 2126
Latitude: 57° 49' 25.20" N
Longitude: 134° 07' 56.24" W
General Location: The piers are ~~depicted~~ noted on the manuscript on the eastern side of Tiedeman Island, 1.9 nm SE of station HP-15.
Method of Investigation: A detached position was taken at the depicted location of the piers after the area was searched and no signs of the piers were found.
Recommendations: Do not show the piers. concur

Item #: 39
Survey Feature: ~~Exposed~~ awash rocks, ~~-2.0~~ -5.0 ft * (5)
Manuscript Feature: "Uncharted rocks"
Detached Position #: 3784 3785 Day: 139 E.D.P.#: 2123
Latitude: 57° 50' 34.~~78~~40" N
Longitude: 134° 05' 16.~~78~~54" W
General Location: The above location represents the shoalest depth on a pair of rocks which are located 1.4 nm SE of the entrance to Winning Cove.
Method of Investigation: Detached positions were taken on the rocks.
Recommendations: Show the rocks. concur. Rocks at pos. 3784 & 3785 excessed. Highest elev. of 3 rocks grouped together shown on smooth sheet as single rock awash. Chart as * (5)

Item #: 40
Survey Feature: ~~Exposed~~ awash rock, ~~-13~~ -12 ft * (12)
Manuscript Feature: Not depicted
Detached Position #: 2026 Day: 140 E.D.P.#: 2123
Latitude: 57° 50' 42.~~14~~16" N
Longitude: 134° 09' 14.~~66~~73" W
General Location: The rock is located 0.55 nm south of station HP-15.
Method of Investigation: A detached position was taken on the rock.
Recommendations: Show the rock. concur

Item #: 41
Survey Feature: Rock awash, ~~0.0~~ 1.0 ft * cov. 1 ft at MLLW)
Manuscript Feature: Not depicted
Detached Position #: 2150 Day: 141 E.D.P.#: 2123
Latitude: 57° 50' 54.~~13~~15" N
Longitude: 134° 08' 58.~~03~~15" W
General Location: The rock is located 0.38 nm SE of station HP-15.
Method of Investigation: A detached positon was taken on the rock.
Recommendations: Show the rock. concur

Item #: 42
Survey Feature: Northen limit of depicted ledge, ~~-4.8~~ -4.0 ft * (4)
Manuscript Feature: Ledge
Detached Position #: 5966 Day: 141 E.D.P.#: 2125
Latitude: 57° 50' 55.~~44~~" N .39"
Longitude: 134° 11' 07.~~68~~" W .66"
General Location: The ledge is located on the western side of Tiedeman Island, 2.5 nm north of station WEED.
Method of Investigation: A detached position was taken on the northern extent of the ledge.
Recommendations: Show the ledge with the new north limit. shown as rock, high point on ledge.

Item #: 43
Survey Feature: Ledge
Manuscript Feature: Not depicted
Reference #: 570 Day: 141 E.D.P.#: 2125
Latitude: 57° 50' 57" N
Longitude: 134° 13' 02" W
General Location: The ledge is located west of Tiedeman Island, on the western side of the channel, 2.7 nm NNW of station WEED.
Method of Investigation: The ledge was noted on the data printout during shoreline verification.
Recommendations: Show the ledge. concur

Item #: 44
Survey Feature: Rock awash, 0.0 ft *(0)
Manuscript feature: Not depicted
Detached Position #: 2153 Day: 141 E.D.P.#: 2123
Latitude: 57° 50' 57.~~56~~" N .58"
Longitude: 134° 09' 22.~~40~~" W .51"
General Location: The rock is located 0.25 nm south of station HP-15.
Method of Investigation: A detached position was taken on the rock.
Recommendations: Show the rock. concur

Item #: 45
Survey Feature: Submerged rock, ~~0.3~~ 1.0 ft * Gov. 1 ft at MLLW
Manuscript Feature: Not depicted
Detached Position #: 2154 Day: 141 E.D.P.#: 2123
Latitude: 57° 51' 04.~~78~~" N .80"
Longitude: 134° 09' 33.~~46~~" W .56"
General Location: The rock is located near station HP-15, to the south.
Method of Investigation: A detached position was taken on the rock.
Recommendations: Show the rock. concur

Item #: 46
Survey Feature: Ledge
Manuscript Feature: Not depicted
Reference #: 571 Day: 141 E.D.P.#: 2125
Latitude: 57° 51' 18" N
Longitude: 134° 10' 51" W
General Location: The ledge is located on the western side of Tiedeman Island, 2.9 nm north of station WEED.
Method of Investigation: The ledge was noted on the data printout during shoreline verification. The limits of the ledge were defined as the launch travelled parallel to the shore.
Recommendations: Show the ledge. *concur*

Item #: 47
Survey Feature: Ledge
Manuscript Feature: Not depicted
Refence #: 572 Day: 141 E.D.P.#: 2125
Latitude: 57° 51' 30" N
Longitude: 134° 11' 08" W
General Location: The ledge is located on the western side of Tiedeman Island, 3.0 nm north of station WEED.
Method of Investigation: The ledge was noted on the data printout during shoreline verification. The limits of the ledge were defined as the launch travelled parallel to the shore.
Recommendations: Show the ledge. *concur*

Item #: 48 (Note to the Hydrographer)
Survey Feature: Point of land
Manuscript Feature: "Charted as an island"
Reference #: 368 Day: 141 E.D.P.#: 2123
Latitude: 57° 51' 32" N
Longitude: 134° 09' 48" W
General Location: The feature is on the eastern side of Tiedeman Island near station HP-15. The feature charted as an island is actually attached to land by a tree covered land bridge.
Method of Investigation: The feature was noted on the data printout during shoreline verification.
Recommendations: Show the feature as being connected to land. *concur*

Item #: 49
Survey Feature: Ledge
Manuscript Feature: Not depicted
Reference #: 573 Day: 141 E.D.P.#: 2125
Latitude: 57° 51' 45" N
Longitude: 134° 11' 17" W
General Location: The ledge is located on the western side of Tiedeman Island, 3.4 nm north of station WEED.
Method of Investigation: The ledge was noted on the data printout during shoreline verification. The limits of the ledge were defined as the launch travelled parallel to the shore.
Recommendations: Show the ledge. concur

Item #: 50
Survey Feature: Rock awash, ~~0.0~~ -5.0 ft * (5)
Manuscript Feature: Not depicted
Detached Position #: 2002 Day: 140 E.D.P.#: 2123
Latitude: 57° 52' 01.~~49~~" N .50"
Longitude: 134° 07' 01.~~19~~" W .23"
General Location: The rock is located on the northern edge of the entrance to Winning Cove.
Method of Investigation: A detached position was taken on the rock.
Recommendations: Show the rock. concur

Item #: 51
Survey Feature: Area "Foul with rocks"
Manuscript Feature: Not depicted
Reference #: 363 Day: 140 E.D.P.#: 2123
Latitude: 57° 52' 10" N
Longitude: 134° 07' 03" W
General Location: The area is in a small cove to the north of Winning Cove.
Method of Investigation: The area was noted on the data printout during shoreline verification.
Recommendations: Show the area as "Foul with rocks". concur. Area limits transferred from field sheet overlay

Item #: 52
Survey Feature: Rock awash, 0.0 ft * (0)
Manuscript Feature: Not depicted
Detached Position #: 2148 Day: 141 E.D.P.#: 2123
Latitude: 57° 52' 40.~~92~~ .99" N
Longitude: 134° 11' 02.~~56~~ .57" W
General Location: The rock is located on the eastern side of Tiedeman Island, 1.18 nm SW of station BUG.
Method of Investigation: A detached position was taken on the rock.
Recommendations: Show the rock. concur

I. CROSSLINES

The total linear mileage of crosslines run during this survey amounts to 9.4% of the total mileage run.

Crossline soundings were compared with main-scheme soundings in compliance with the Hydrographic Manual, Section 4.6.1. There were no discrepancies between compared soundings. In some cases, adjacent soundings varied by as much as 3% due to the irregular bottom profile found throughout the survey area. However, all such occurrences matched the depth contours for the area where the apparent discrepancy occurred, and in all cases overlapping soundings were within the 3% limit allowed by the Hydrographic Manual.

J. JUNCTIONS

This survey junctions with two contemporary surveys at its southern edge. The depth contours at the junctions were in close agreement, and no discrepancies between adjacent soundings were found.

see Eval. Report

JUNCTION SURVEYS				
Registry #	Field #	Scale	Date	Relative Location
H-10175	RA-20-1-85	1:20,000	1985	southern limit
H-10176	RA-10-1-85	1:10,000	1985	southern limit
H-10201	RA-10-2-85	1:10,000	1985	northern limit
H-10204	RA-10-3-85	1:10,000	1985	northern limit

K. COMPARISON WITH PRIOR SURVEYS

The survey was compared to ~~three~~ one prior survey of the same area. The first was #H-2001, which was conducted in 1889 at the scale of 1:80,000, The other ~~prior~~ surveys were DAVIDSON reconnaissance surveys BF#124982 & BF#124984, which were conducted in 1983 at the scale of 1:20,000.

All of these surveys were compared to the contemporary survey on a sounding to sounding basis in all areas of significant shoaling or outstanding bottom features. The remaining soundings were compared either sounding to sounding, or by comparing the general depth trends in an area where the bottom had few changes.

see Eval. Report

In comparing these surveys to the contemporary survey, few discrepancies were found. Soundings compared to one another were in close agreement, and the discrepancies between adjacent soundings may be attributed to the steep bottom slopes found throughout the survey area.

Since the prior surveys of this area consist of either lead line surveys or reconnaissance surveys, many of the features found during the course of this survey were in areas that had not been previously surveyed. These features were not considered to be in disagreement with the prior surveys, but with the chart. Therefore, they have been addressed in the following section.

L. COMPARISON WITH THE CHART

The survey was compared with an enlargement of chart 17360, 26th Edition, dated 8/18/84, and with an enlargement of chart 17300, 23rd Edition, dated 1/14/84.

In general, the charts and the survey were in close agreement. Since the survey area is characterized by steep bottom slopes, adjacent soundings were not always equal, but were normally within 3% of one another.

Of particular interest are items 57 and 59 which represent rocks charted as exposed, which were found to be submerged, and items 16 and 18 which represent uncharted, submerged rocks.

Items 54, 55, 56, 57, 59, 61, and 64 were referenced in the letter, "Chart Discrepancies and Verifications in Seymour Canal OPR-0179-RA-85", dated 13 May, 1985, which was sent to the Director, Pacific Marine Center. Items 68, 69, and 70 were referenced in the letter, "Dangers to Navigation", dated 17 June, 1985, which was sent to the Chief of the Chart Information Section. Copies of both of these letters may be found at the end of this report in the separate section titled, "XV. Correspondence". Items 64, 66, and 72 were referenced by the DAVIDSON as dangers to navigation in a letter to the Commander (OAN), 17th U.S. Coast Guard District, dated 13 June, 1983.

Item #: 53
Survey Feature: Submerged ridge
Survey Sounding: ~~19 fm~~ 19.5 fm.
Charted Feature: Depth charted in general area of sounding chart 17360
Charted Depth: 62 fm
Position #: 3297 Day: 127 E.D.P.#: 2123
Latitude: 57° 40' 52.~~51~~" N .43"
Longitude: 134° 01' 43.85" W
General Location: The sounding is 0.36 nm ENE from Rasp Ledge. The sounding is a least depth on a submerged ridge in the area where the sheet junctions with survey H-10176 (RA-10-1-85), which should also be consulted for more details about this feature.
Method of Investigation: The least depth was taken from a crossline. The main scheme lines in the area were split to 200 meter spacing.
Recommendations: Show the sounding. concur

Item #: 54 (Referenced in "Chart Discrepancies" letter) - CL 486/85 (Item 1c)
Survey Feature: Submerged ridge
Survey Sounding: ~~12 fm~~ 11.2 fm
Charted Feature: Uncharted
Charted Depth: None
Position #: 4052+~~2~~3 Day: 136 E.D.P.#: 2124
Latitude: 57° 41' ~~39.53~~" N 42.77"
Longitude: 134° 02' ~~42.98~~" W 47.69"
11² sdg. also about 220 meters south of item 54.
General Location: The ridge is 1.3 nm NNW of Rasp Ledge, and runs parallel to the shore in the vicinity of Bear Creek.
Method of Investigation: The least depth was taken from a development scheme that was run over the feature. The development scheme consisted of splitting the main scheme lines to 100 meters.
Recommendations: Show the least depth sounding. concur

Item #: 55 (Referenced in "Chart Discrepancies" letter) - CL 486/85 (item 2c)
Survey Feature: Submerged Ridge
Survey Sounding: 5.8 fm
Charted Feature: Uncharted
Charted Depth: 13 fm (nearest charted depth)
Position #: ~~3150+1~~ 4063+01 Day: 126 E.D.P.#: 2123~~4~~
Latitude: 57° 42' ~~05.36~~" N 02.00"
Longitude: 134° 03' ~~34.78~~" W 26.77"
General Location: The ridge is 1.6 nm NNW of Rasp Ledge, and runs parallel to the shore, approximately 400 meters offshore.
Method of Investigation: The least depth was taken from a development scheme that was run over the feature. The development scheme consisted of splitting the main scheme lines to 100 meters.
Recommendations: Show the least depth sounding. concur

Item #: 56 (Referenced in "Chart Discrepancies" letter) - CL 486/85 (Item 3c)
Survey Feature: ~~Exposed~~ Rock (awash)
Survey Sounding: ~~-0.3 fm~~ -1.0 ft * (1)
Charted Feature: ~~Exposed~~ Rock (awash)
Charted Depth: None
Position #: 6186 Day: 128 E.D.P.#: 2126
Latitude: 57° 42' 26.22" N
Longitude: 133° 59' 36.~~23~~" W .08"
General Location: The rock is 2.2 nm NE of Rasp Ledge at the charted position. The rock bares 1.6' at MLLW, and it is usually submerged. ✓
Method of Investigation: A detached position was taken on the rock while it was exposed at low tide.
Recommendations: ~~Update the charted rock with the survey sounding.~~ concur
(Chart as shown on smooth sheet.

Item #: 57 (Referenced in "Chart Discrepancies" letter) - CL 486/85 (Item 4c)
Survey Feature: Submerged Rock
Survey Sounding: ~~0.4 fm~~ 0.5 fm 05 RK
Charted Feature: ~~Exposed~~ Rock (Awash)
Charted Depth: None
Position #: 3162 Day: 127 E.D.P.#: 2123
Latitude: 57° 44' 58.38" N
Longitude: 133° 59' 54.03" W
General Location: Rock is 1.8 nm SE of Dorn Island. The charted exposed rock is actually an islet, and the submerged rock is 4~~3~~00 meters north of the islet. The rock is submerged ~~2.6~~' at MLLW. ✓ 0.5 fm
Method of Investigation: A detached position was taken on the rock while it was exposed at a minus tide.
Recommendations: Change the symbol for an exposed rock to that for an islet and show the submerged rock to the north. concur ✓

Pos. 6195 (13) lat. 57°44'45.76" N
long. 134°01'00.96" W

Item #: 58
Survey Feature: Shoal sounding
Survey Sounding: ~~25~~ fm 24
Charted Feature: Charted depth in general area of sounding
Charted Depth: 53 68 fm
Position #: 35~~23~~+3 Day: 13~~6~~7 E.D.P.#: 2123
Latitude: 57° 45' 16.~~16~~" N .23"
Longitude: 134° 03' ~~15.16~~" W 13.23"
General Location: Sounding represents a least depth on a peak located 1.17 nm south of Dorn Island. ✓
Method of Investigation: The least depth was taken from a development scheme that was run over the feature. The scheme consisted of 100 meter splits and a crossline.
Recommendations: Show the survey sounding. concur ✓

Item #: 59 (Referenced in "Chart Discrepancies" letter) – CL 485/85 (Item 6c)
Survey Feature: Submerged Rock
Survey Sounding: 0.~~4~~5 fm 05 RK
Charted Feature: ~~Exposed~~ Rock (awash)
Charted Depth: None
Position #: ~~5124~~ 5088 Day: 125 E.D.P.#: 2125
Latitude: 57° 45' 25.11" N
Longitude: 134° 06' 07.75" W
General Location: The rock's charted position was verified, although the rock is submerged 2.6' at MLLW. The rock is located to the south of the tip of Tiedeman Island.
Method of Investigation: A detached position was taken on the rock while it was exposed at a minus tide.
Recommendations: Change the symbol to that of a submerged rock using the survey sounding as a depth. concur

Item #: 60
Survey Feature: Shoal sounding
Survey Sounding: 7.~~4~~5 fm
Charted Feature: Charted depth in the general area of the sounding
Charted Depth: 8.0 fm
Position #: 3339 Day: 128 E.D.P.#: 2123
Latitude: 57° 45' 32.22" N
Longitude: 134° 01' 25.~~62~~75" W
General Location: The sounding represents a least depth on a peak located 1.07 nm SE of Dorn Island.
Method of Investigation: The least depth was taken from a development scheme, consisting of 100 meter splits, that was run over the feature.
Recommendations: Show the survey sounding. concur

Item #: 61 (Referenced in "Chart Discrepancies" letter) – CL 485/85 (Item 5c)
Survey Feature: Submerged Ridge
Survey Sounding: 4.2 fm
Charted Feature: Charted depth in general area of sounding
Charted Depth: 33 fm
Position #: 3227+2 Day: 127 E.D.P.#: 2123
Latitude: 57° 46' 04.36" N
Longitude: 134° 03' ~~06.88~~07.03" W
General Location: A submerged ridge extends south from Dorn Island, with a least depth at the above position.
Method of Investigation: The least depth was taken from a development scheme that was run over the feature. The development scheme consisted of 100 meter splits run perpendicular to the ridge, and a crossline was run down the length of the ridge.
Recommendations: Show the least depth sounding. concur

Item #: 62
Survey Feature: Submerged ridge
Survey Sounding: ~~5.4 fm~~ 4.9 fm.
Charted Feature: Charted depth in general area of sounding
Charted depth: 20 fm on Cht 17360. 18fm on Cht 17300
Position #: ~~3755+1~~ 3770+05 Day: 139 E.D.P.#: 2123
Latitude: 57° 46' 40.~~26~~" N .21"
Longitude: 134° 03' ~~32.82~~" W 30.73"
General Location: The ridge runs parallel to Dorn Island, 0.2 nm off of the ~~eastern~~ shore. The sounding is a least depth on the ridge. western
Method of Investigation: The least depth was taken from a development scheme consisting of splits run with a spacing of 100 meters.
Recommendations: Show the least depth sounding. concur

Item #: 63
Survey Feature: Shoal sounding
Survey Sounding: ~~43 fm~~ 39 fm
Charted Feature: Charted depth in general area of sounding
Charted Depth: 67 fm on cht 17360, 55fm on Cht 17300.
Position #: ~~5318+5~~ 3776+02 Day: 136 E.D.P.#: 2125
Latitude: 57° 47' 26.~~65~~" N .03"
Longitude: 134° 05' ~~26.23~~" W 18.02"
General Location: The sounding is a least depth on a peak, 1.25 nm NNE of the southern tip of Tiedeman Island.
Method of Investigation: The least depth was taken from a scheme of 100 meter splits which were run over the feature.
Recommendations: Show the survey sounding. concur

Item #: 64 (Referenced in "Chart Discrepancies", and DAVIDSON letters) - CL485/85 (Item 7c)
Survey Feature: Submerged ridge
Survey sounding: 4.~~6~~3fm - 5.3fm sdg falls about 170 meters to the NW.
Charted Feature: Charted depth in general area of sounding
Charted Depth: 27 fm on cht 17360 279 5½ on Cht 17300
Position #: ~~2315+2~~ 8071 Day: ~~142~~ E.D.P.#: 2123
Latitude: 57° 48' ~~23.14~~" N 19.59"
Longitude: 134° 09' ~~42.46~~" W 31.42"
General Location: The ridge is located on the west side of Tiedeman Island, 2.4 nm north of the south end of the island. The sounding at the above location represents the least depth on the ridge.
Method of Investigation: The least depth was taken from a development scheme that was run over the feature. This scheme consisted of a series of Range-Azumith arcs which were spaced 50 meters apart. For a more detailed depiction of the feature, see expansion sheet #3.
Recommendations: Show the survey sounding. concur

Item #: 65
Survey Feature: Shoal sounding
Survey Sounding: 32 fm
Charted Feature: Charted depth in general area of sounding
Charted Depth: 64 fm
Position #: 3793 Day: 139 E.D.P. #: 2123
Latitude: 57° 49' 08.63" N
Longitude: 134° 05' 15.55" W
General Location: The sounding represents a least depth on a peak which is located 1.03 nm NNW of Faust Island.
Method of Investigation: The least depth was taken from a development scheme that was run over the feature. The scheme consisted of 100 meter splits and a crossline.
Recommendations: Show the survey sounding. concur

Item #: 66 (Referenced in DAVIDSON letter) dated 6/13/83, item #2. CL167/85
Survey Feature: Submerged Ridge
Survey Sounding: 8.3 fm
Charted Feature: Uncharted
Charted Depth: None
Position #: 2204+5 07 Day: 141 E.D.P.#: 2123
Latitude: 57° 50' 10.31" N
Longitude: 134° 07' 49.~~69~~" W .89"
General Location: The sounding represents a peak which is located 1.33 nm SE of station HP-15 on the eastern side of Tiedeman Island. The peak is a part of a long ridge which extends north to the foul area listed below as "Item #: 69", and south approximately 0.4 nm.
Method of Investigation: A scheme of split lines, spaced 50 meters, and a cross line were run over the feature to determine a least depth. For a more detailed depiction of the feature, see expansion sheet #4.
Recommendations: Show the survey sounding. concur

Item #: 67
Survey Feature: Shoal sounding
Survey Sounding: 22 fm
Charted Feature: Charted depth in general area of sounding
Charted Depth: 48 fm
Position #: 3835+1 Day: 139 E.D.P.#: 2123
Latitude: 57° 50' 36.03" N
Longitude: 134° 06' ~~30.76~~" W 33.49"
General Location: The sounding represents the least depth on a peak, located 1.1 nm south of the entrance to Winning Cove.
Method of Investigation: The least depth was taken from a development scheme that was run over the feature. The scheme consisted of a series of 100 meter split lines.
Recommendations: Show the survey sounding. concur

Item #: 68 (Referenced in "Dangers to Navigation" letter) dated 9/30/86 (included)
Survey Feature: Submerged Rock
Survey sounding: ~~7.9 fm~~ 6.2 RK
Charted Feature: Charted depth in general area of sounding
Charted Depth: ~~86 fm~~ 8fm on Cht 17300
Position #: ~~8062~~ 4405 Day: 142 E.D.P.#: 2125
Latitude: 57° 51' ~~10.54~~" N 11.03"
Longitude: 134° 07' 48.~~13~~" W .99"
General Location: The sounding represents the least depth on a pinnacle located east of Tiedeman Island, 4.0 nm WSW of the entrance to Winning Cove. ✓
Method of Investigation: The pinnacle was located by splitting the main scheme lines to 100 meters, and the least depth was found by taking drift soundings over the feature.
Recommendations: Show the survey sounding. concur. shown as sounding on rock.

Item #: 69 (Referenced in "Dangers to Navigation" letter)
Survey Feature: Foul area Message P2822037 May 1985 (included)
Survey Sounding: None
Charted Feature: Uncharted
Charted Depth: None
Position #: 2149-2157 Day: 141 E.D.P. #: 2123
Latitude: 57° 51' 12.34" N
Longitude: 134° 09' 22.08" W
General Location: The foul area runs along the east side of Tiedeman Island, extending 0.6 nm SE from the above Position. The area is 4.0 nm NW of Faust Island. ✓
Method of Investigation: The area was fully surveyed by launch, and detached positions were taken on the larger of the numerous rocks found in the area.
Recommendations: Designate the area as "Foul With Rocks". concur. New ledge shown on smooth sheet.

Item #: 70 (Referenced in "Dangers to Navigation" letter) dated 9/30/86 (included)
Survey Feature: Submerged rock
Survey Sounding: 1.~~2~~'fm 1' RK
Charted Feature: Charted depth in general area of sounding
Charted Depth: 6.0 fm on Cht 17360, charted as dangerous rock awash on Cht 17300
Position #: ~~6540~~ 5991+01 Day: 126 E.D.P.#: 2126
Latitude: 57° 51' 19.~~31~~" N -6.4"
Longitude: 134° 11' ~~52.68~~" W 53.27"
General Location: The rock is off the west shore of Tiedeman Island, 4.0 nm SE of the entrance to Windfall Harbor. ✓
Method of Investigation: The rock was located by running 100 meter splits in the area, and the least depth was found by taking drift soundings over the rock.
Recommendations: Show the rock. ~~Concur~~. shown as sounding on subm. rock.
1' RK

Item #: 71
Survey Feature: Disproven offshore rock
Survey Sounding: ~~7A~~ fm
Charted Feature: Offshore rock awash on cht 17300
Charted Depth: None
Position #: 8060 Day: 142 E.D.P.#: 2125
Latitude: 57° 51' 20.72" N
Longitude: 134° 06' 46.73" W
General Location: The rock is charted 0.~~25~~ 50 nm south of the entrance to Winning Cove.
Method of Investigation: The area was fully developed by splitting the main scheme lines to 100 meters in the general area, and to 50 meters at the location where the rock is charted. No indications of a rock, or of shoaling were found. It is the opinion of the survey party that a rock that is located close to the shoreline was improperly located. For a more detailed depiction of the investigation, see expansion sheet #1. ✓
Recommendations: Remove the rock symbol. concur Chart as shown on smooth sheet

Item #: 72 (Referenced in DAVIDSON letter) dated 6/13/83, CL 167/85
Survey Feature: Shoal sounding
Survey Sounding: 8.~~5~~9 fm
Charted Feature: Shoal Depth
Charted Depth: 9.2 fm
Position #: 3957+4 Day: 140 E.D.P.#: 2123
Latitude: 57° 51' ~~34.96~~" N 33.46"
Longitude: 134° 08' 41.68" W
General Location: The sounding represents the least depth on a pinnacle located 0.48 nm ENE of station HP-15.
Method of Investigation: The least depth was taken from a development scheme run over the feature. The scheme consisted of 100 meter and 50 meter splits run over the feature. ✓
Recommendations: Replace the shoal with the survey sounding. concur

Expansion sheet #2 represents a development of a "false peak" which was the result of the echo sounder tracking a school of fish. There is no significant feature in the developed area.

No changes to the scale, coverage, or format of the published charts of the survey area are recommended.

M. ADEQUACY OF THE SURVEY

This survey is complete, and it is adequate to supersede all prior surveys.

There is a small, triangular gap in the main sounding line scheme to the north of Faust Island. This does not represent a deficiency in the survey; due to the fact that the required line spacing for the depths involved is 400 meters, and the gap is 300 meters across at its widest point. The depth contours in this area are regular, and no unusual bottom features are evident. ✓ see sect. 4 of Eval. Report.

N. AIDS TO NAVIGATION

There were no aids to navigation in the survey area.

There were no overhead cables, pipelines, or bridges in the survey area.

There is a submerged cable area indicated on the current edition of chart #17360, but there was no visible evidence of such an area observed during the survey. ✓

O. STATISTICS

The following tables list the hydrographic statistics for the survey:

STATISTICS			
Vessel	EDP #	Linear Nautical Miles	Total # of Positions
RAINIER	2120	0.0	41
RA-3	2123	257.7	1354 65
RA-4	2124	74.5	~~382~~ 403
RA-5	2125	106.4	~~1036~~ 1092
RA-6	2126	93.3	~~580~~ 589 ✓
Total		531.9	3403 90

MISCELLANEOUS STATISTICS	
Total Square Mileage	45.5
Velocity Casts	2
Tide Stations	2
Bottom Samples	44

P. MISCELLANEOUS

No current observations were made.

No evidence of silting was found.

Bottom samples were submitted to the Smithsonian Institution.

Q. RECOMMENDATIONS

This survey is complete, and no additional field work is required. *Supplementary work accomplished in Oct. 1985 to comply with the requirements of Hydrographic survey Guideline No. 15 prior to acceptance for Marine center processing.*

R. AUTOMATED DATA PROCESSING

PROGRAMS USED IN DATA PROCESSING		
Number	Name	Version
RK 112	Hyperbolic, R/R Hydroplot	4/23/84
RK 116	Range-Azumith 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-Azumith 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

3. REFERENCES TO OTHER REPORTS

Refer to the following reports for further information on this survey:

Corrections to Echo Soundings	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 (CL-167/85)	S-0902-04-83
DAVIDSON: Horizontal Control Report	S-0902-DA-83

MASTER STATION LIST

OPR-0179-RA-85
SEYMOUR CANAL, ALASKA

RA-20-2-85 (H-10174)

FINAL VERSION

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

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

~~122 3 57 41 37940 134 03 21408 250 0005 000000~~
~~/BEAR 1983 PRELIMINARY ADJUSTED~~

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

124 4 57 43 11341 133 59 45050 139 ~~250~~ 0004 000000
/SORE ~~1983~~ PRELIMINARY ADJUSTED

125 4 57 44 47907 134 00 59499 250 0005 000000
/SUSAN ~~1983~~ PRELIMINARY ADJUSTED

126 5 57 44 01916 134 06 11749 250 0003 000000
/BUCK ~~1983~~ PRELIMINARY ADJUSTED

127 3 57 47 56922 134 06 20140 250 0004 000000
/SANDY ~~1983~~ PRELIMINARY ADJUSTED

128 3 57 48 31951 134 10 52333 250 0005 000000
/WEED ~~1983~~ PRELIMINARY ADJUSTED

129 4 57 50 39468 134 11 27628 139 ~~250~~ 0003 000000
/TIED ~~1983~~ PRELIMINARY ADJUSTED

130 3 57 53 06021 134 08 56385 250 0008 000000
/BUG ~~1983~~ PRELIMINARY ADJUSTED

132 1 57 54 18495 134 14 06098 250 0003 000000
/SWAN ~~1983~~ outside survey limits PRELIMINARY ADJUSTED

304 6 57 51 48020 134 06 29092 254 ~~243~~ 0000 000000
/HP-07 PHOTOGRAMMETRIC

305 5 57 51 39666 134 06 08998 254 ~~243~~ 0000 000000
/HP-08 PHOTOGRAMMETRIC

~~306 5 57 50 55177 134 11 20385 243 0000 000000~~
~~/HP 09 PHOTOGRAMMETRIC~~

311 0 57 51 13626 134 09 20224 ~~243~~ 254 0000 000000
/HP-15 PHOTOGRAMMETRIC

313 4 57 46 03618 134 01 12452 ~~243~~ 254 0000 000000
/HP-18 PHOTOGRAMMETRIC

~~314 3 57 47 09770 134 02 38153 243 0000 000000~~
~~/HP-19 PHOTOGRAMMETRIC~~

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

National Ocean Service
Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102-3767

March 20, 1986 N/MOP211/TOJ

Commander (OAN)
Seventeenth Coast Guard District
P.O. Box 3-5000
Juneau, Alaska 99802

Dear Sir:

During office processing of hydrographic survey H-10174, Alaska, Seymour Canal, Tiedman Island Vicinity, the following change affecting chart 17300 was noted. Questions concerning the survey may be directed to Cdr. Thomas W. Richards, Chief, Nautical Chart Branch, telephone (206) 526-6835.

The following statement is recommended for inclusion in the Local Notice to Mariners:

An uncharted shoal covered by 1.7 fathoms at MLLW (based on actual tides) was discovered; chart 17300; latitude 57°49'42"N, longitude 134°07'57"W; distance 10.3 nautical miles, bearing 267 degrees true from Midway Island Light.

Sincerely,

Original Signed By
Ned C. Austin

Robert L. Sandquist
Rear Admiral, NOAA
Director, Pacific Marine Center

H-10174, H-10175, H-10176 OPR-0179

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Pacific Marine Center
Nautical Chart Branch
7600 Sand Point Way NE
BIN C15700
Seattle, Washington 98115-0070

May 20, 1985 N/MOP21/DWY

TO: N/CG241 - Andrew A. Armstrong

FROM: N/MOP21 - David W. Yeager David W. Yeager

SUBJECT: Report of Chart Discrepancies, Seymour Canal
OPR-0179-RA-85

The attached report was submitted by the NOAA Ship RAINIER as a result of their survey activities in Seymour Canal and is forwarded for your use as a chart letter for revision of NOS Chart 17360. It is recognized that this report does not identify these items as dangers to navigation, therefore, this early report may be of marginal utility unless the affected chart is scheduled for reprint prior to completion of survey processing and submission by the Marine Center.

A copy has been retained at the Pacific Marine Center for use during verification and evaluation of the surveys conducted under instructions for OPR-0179-RA-85.

cc: N/CG24
N/MOP211 ✓
N/MOP2x1

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

NOAA Ship RAINIER
1801 Fairview Ave E.
Seattle Wa. 98102

May 13, 1985

TO: Robert L. Sandquist-N/MOP

FROM: John P. Vandermeulen-S221

SUBJECT: Chart Discrepancies and Verifications in Seymour Canal OPR-0179-RA-85

During the hydrographic survey of Seymour Canal, RAINIER has discovered several discrepancies between currently charted features and those delineated by the current survey. These items are not considered dangers to navigation at the scale of chart 17360 (1:217,828), but are certainly significant features at the scale of the surveys (1:20,000 and 1:10,000). Since no AWOIS items were assigned in conjuction with this project, RAINIER feels this is an appropriate method for reporting these items.

To this date, RAINIER has conducted field work on the following surveys:

Sheet	Field Number	Registry Number	Field Work Completed
~~A~~	~~RA-20-1-85~~	~~H-10175~~	~~100%~~
~~B~~	~~RA-10-1-85~~	~~H-10176~~	~~100%~~
C	RA-20-2-85	H-10174	50%

~~Six items are submitted from Sheet A (1A-6A), six items from Sheet B (1B-6B), and~~ seven items from Sheet C (1C-7C). All items are depicted on a chartlet of 17360, 26th Ed., August 1984. Additional enlargements from the field sheets are included for certain items.

Hydrographic position control used to locate features was range-range and range-azimuth. Mini-Ranger was used as the electronic positioning system. Unless otherwise noted, depths were recorded with DSF-6000 echo sounders. Soundings are reduced to MLLW based on predicted tides.

It is recommended that N/MOP review these particular items and consider forwarding them to N/CG241 as a chart letter.

ITEMS on RA-20-2-85: H-10174: Tiedeman Island Vicinity

ITEM 1C: 12 fm depth

11.2-fm depth see D.R, pg 24, item 54.

General Location: 1.3 nm NNW of Rasp Ledge

Geographic Position: 57-41-39.53 N
134-02-42.98 W

Charted Depths: 13-27 fm

Description: This position represents the least depth over a detached offshore ridge.

Recommendation: Chart the 12 fm depth at the above position. chart according to survey.

ITEM 2C: 5.8 fm

see DR, pg 24 item 55

General Location: 1.6 nm NNW of Rasp Ledge

Geographic Position: 57-42-05.36 N
134-03-34.78 W

Charted Depths: 13-15 fms

Description: This detached ridge lies approximately 400 m offshore. Charted depths do not depict the area adequately.

Recommendation: Chart the 5.8 fm depth. Increase the blue tint coveage in this area to include this position. chart according to survey.

ITEM 3C: ~~Exposed~~ Awash Rock

see D.R, pg 25 item 56

General Location: 2.2 nm NE of Rasp Ledge.

Geographic Position: 57-42-26.22 N
133-59-36.23 W

Description: The charted rock was verified in the above position. At MLLW the rock bares 1.6 ft. At most stages of the tide, the rock is submerged.

Recommendation: Retain the charted rock based on the above position. chart according to survey.

ITEM 4C: Submerged Rock

see D.R, pg 25, item 57

General Location: 1.8 nm SE of Dorn Island

Geographic Position: 57-44-58.38 N
134-00-54.03 W

Charted Depiction: Exposed Rock

Description: Located at the charted position of the exposed rock is a small islet. Three hundred meters north of the islet is a rock submerged 2.6 ft at MLLW.

Recommendation: Depict the submerged rock on the chart.

ITEM 5C: 4.2 fm depth

General Location: .25 nm south of Dorn Island

Geographic Position: 57-46-04.36 N
134-03-06.88 W

See D.R., pg 26 item 61. ✓

Charted Depth: 33 fm

Description: A submerged ridge extends south of Dorn island showing a least depth of 4.2 fm at the above position.

Recommendation: Add the 4.2 fm sounding to the chart. chart according to survey.

ITEM 6C: Submerged Rock

General Location: 1.1 nm S of Tiedeman Island

See DR., pg 26 item 59

Geographic Position: 57-45-25.11 N
134-06-07.75 W

Charted Depiction: Exposed Rock ✓

Description: The rock's charted position was verified. The rock is submerged 2.6 ft. at MLLW.

Recommendation: Chart the rock as submerged. chart according to survey.

ITEM 7C: 5.7 fm depth

General Location: West side of Tiedeman Island. 2.4 nm north of south end of island.

See DR., pg 27 item 64

Geographic Position: 57-48-23.14 N
134-09-42.46 W

Charted Depth: 27 fm ✓

Description: This 5.7 fm depth is the least depth over a detached ridge.

Recommendation: Chart the 5.7 fm depth at the above position. chart according to survey.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA Ship RAINIER S-221
1801 Fairview Ave E
Seattle, WA 98102

17 June, 1985

TO: Norman Banks
Chief, Chart Information Section

FROM: John P. Vandermeulen
Commanding Officer
NOAA Ship RAINIER

SUBJECT: Dangers to Navigation

The NOAA Ship RAINIER has found the following three dangers to navigation in Seymour Canal. These dangers have been reported to the Coast Guard for publication in the Notice to Mariners.

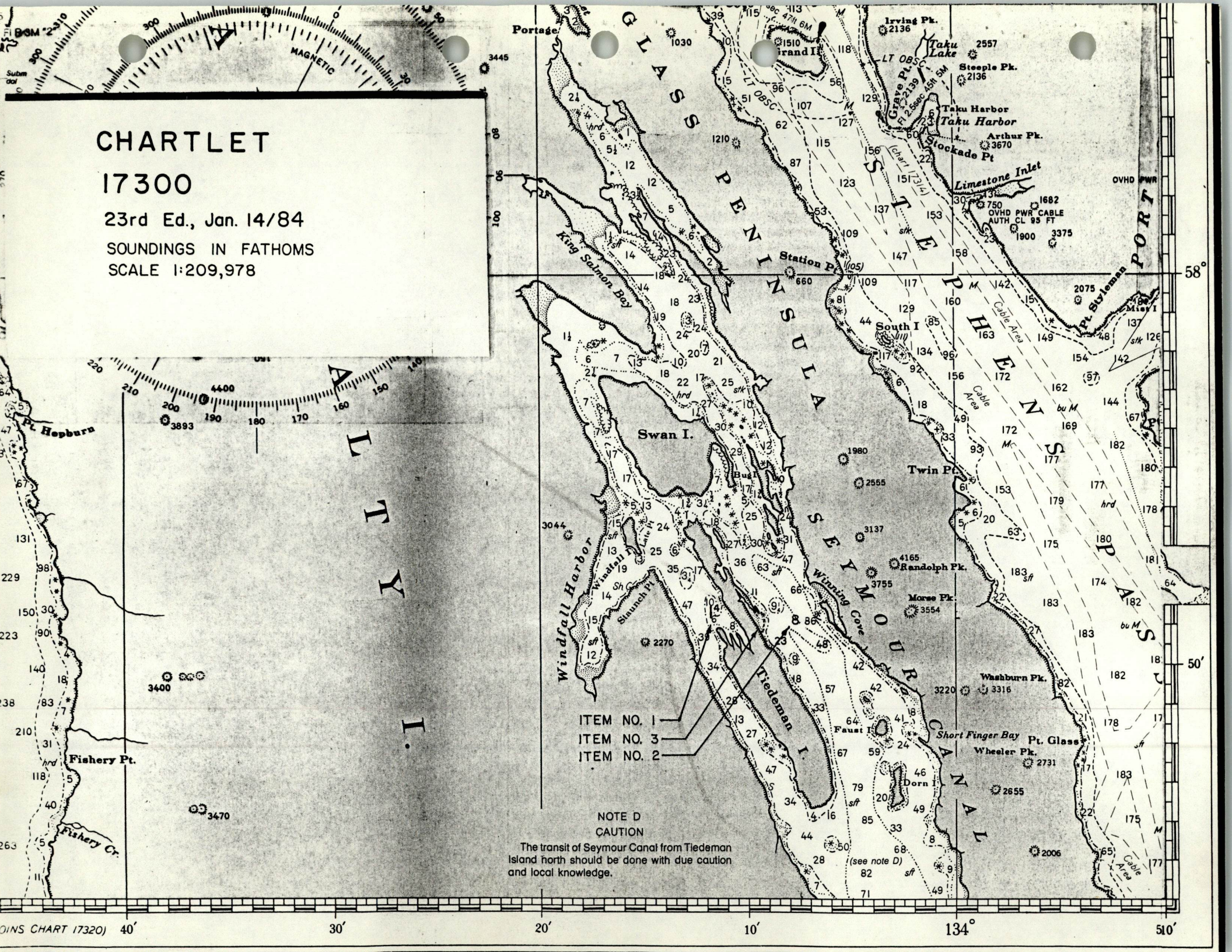
1. A 1.4 fathom rock at MLLW off the west shore of Tiedeman Island, 2.2 nm SE of the entrance to Windfall Harbor at position latitude 57/51/19.31 N, longitude 134/11/52.68 W. Item 70 pg 29.

2. An 8.0 fathom rock at MLLW off the eastern shore of Tiedeman Island, 0.8 nm WSW of the entrance to Winning Cove at position latitude 57/51/10.54 N, longitude 134/07/48.13 W. Item 68 pg 29.

3. A foul area along the east side of Tiedeman Island, 4.0 nm NW of Faust Island. The foul area begins at position latitude 57/51/12.34 N, longitude 134/09/22.08 W and extends in a SE direction 0.6 nm. This foul area goes awash at minus tides. Item 69 pg 29.

A chartlet of chart 17300 is included and has the above three dangers to navigation plotted on it.

See attached memo revising depths.


CHARTLET
17300
23rd Ed., Jan. 14/84
SOUNDINGS IN FATHOMS
SCALE 1:209,978
ITEM NO. 1
ITEM NO. 3
ITEM NO. 2
NOTE D
CAUTION
The transit of Seymour Canal from Tiedeman Island north should be done with due caution and local knowledge.
GLASS PENINSULA
STEPHENS PASS
SEYMOUR CANAL
ALTY I.
Portage
Grand I.
Irving Pk.
Taku Lake
Steeple Pk.
Grave Pt.
Taku Harbor
Arthur Pk.
Stockade Pt
Limestone Inlet
OVHD PWR CABLE AUTH CL 95 FT
Pt. Styleman
Station Pt.
South I
King Salmon Bay
Swan I.
Bug I.
Twin Pt.
Randolph Pk.
Morse Pk.
Windfall Harbor
Windfall I.
Staunch Pt.
Winning Cove
Tiedeman I.
Faust I.
Short Finger Bay
Pt. Glass
Wheeler Pk.
Dorn I.
Washburn Pk.
Pt. Hepburn
Fishery Pt.
Fishery Cr.
Cable Area
(see note D)
58°
50′
134°
40′
30′
20′
10′
510′
OINS CHART 17320)

/

'9 MAY 85 02 3 Z

D	~~O~~	~~M~~	MSO
~~DCS~~	~~OSR~~	B	
BPA	OAN	F	NMFS
DPL	OOG	FLP	
DI	OIL	P	
DL	OR	E	UTE
DSO	OTM	EEE	
DJ	RMIC	ENE	
DCEA	DT	ECV	~~OPGE~~

PTTUZYUW RUHPTEF0075 1482203-UUUU--RUHPSUU.
ZNR UUUUU
P 282203Z MAY 85
FM NOAAS RAINIER
TO CCGDSEVENTEEN JUNEAU AK
INFO NOAAMOP SEATTLE WA
DMAHTC WASHINGTON DC//NVS//
CCGDTHIRTEEN SEATTLE WA
ACCT CM-VCAA
BT
UNCLAS
SUBJECT: DANGERS TO NAVIGATION
REQ THE FOLLOWING BE PUBLISHED IN THE LOCAL NOTICE TO MARINERS:
THE NOAA SHIP RAINIER REPORTS THE FOLLOWING DANGERS TO NAVIGATION IN SEYMOUR CANAL ON THE EAST SIDE OF ADMIRALTY ISLAND
1. A 1.~~1~~ FATHOM ROCK AT MLLW 2.2 NM SE OF THE ENTRANCE TO WINDFALL HARBOR AT POSITION LATITUDE 57/51/19.~~17~~ N, LONGITUDE 134/11/~~52.68~~ W. 53.27 64 Item 70
2. A ~~8.8~~ FATHOM SHOAL AT MLLW 0.8 NM WSW OF THE ENTRANCE TO WINNING COVE AT POSITION LATITUDE 57/51/~~16.54~~ N, LONGITUDE 134/07/48.~~17~~99 W. 62 RK 11.03 Item 68
3. A FOUL AREA ALONG THE EAST SIDE OF TIEDEMAN ISLAND 4.0 NM NW OF FAUST ISLAND, STARTING AT POSITION LATITUDE 57/51/12.34 N, LONGITUDE 134/09/22.08 W AND EXTENDING 0.6 NM TO THE SE. THE FOUL AREA IS A SUBMERGED RIDGE WHICH GOES AWASH AT MINUS TIDES. Item 69
4. CHARTS AFFECTED ARE 17300 AND 17360.
BT
#0075

NNNN

Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102-3767

SEP 30 1986 N/MOP211C/JSG

Commander (OAN)
Seventeenth Coast Guard District
P. O. Box 3-5000
Juneau, Alaska 99802

Dear Sir:

During office review of hydrographic survey H-10174, Tiedeman Island, Seymour Canal, Alaska, the following changes affecting charts 17300 and 17360 were noted. Questions concerning the survey may be directed to Commander Thomas W. Richards, Chief, Nautical Chart Branch, telephone (206) 526-6835.

The following statements are recommended for inclusion in the Local Notice to Mariners:

a. A 1.1 fathom rock at MLLW off the west shore of Tiedeman Island, 2.2 nautical miles southeast of the entrance to Windfall Harbor at latitude 57°51'19" longitude 134°11'53". Item 70

b. A 6.2 fathom rock at MLLW off the eastern shore of Tiedeman Island, 0.8 nautical miles west southwest of the entrance to Winning Cove at latitude 57°51'11" longitude 134°07'48". Item 68

Both of these features have been submitted previously as dangers by NOAA Ship RAINIER (message 282203Z May 85). The application of observed tides resulted in shoaler depths than previously reported.

Sincerely,

Original Signed By

Robert L. Sandquist
Rear Admiral, NOAA
Director, Pacific Marine Center

bc:N/CG222

CODE	SURNAME	DATE	CODE	SURNAME	DATE
N/MOP21	Richards	9/24	N/MOP	Sandquist	9/30
N/MOP2	Mordock	9/29			
N/MOPx1	Austin	9/30			

FILE COPY

✓JSG

NOAA FORM 61-2

* U.S. GPO: 1983-667-002

APPROVAL SHEET

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SURVEY

RA-20-2-85 (H-10174)

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

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

DATE: 01/06/86

Marine Center: Pacific

OPR: O-179

Hydrographic Sheet: H-10174

Locality: Seymour Canal, Tideman Island to Flaw Point ~~Vicinity~~, Alaska

Time Period: October 6 - 10, 1985

Tide Station Used: North End, Tideman Island, AK

Plane of Reference (Mean Lower Low Water): 18.35 ft.

Height of Mean High Water Above Plane of Reference: 14.4 ft.

Remarks: Recommended Zoning:

Zone direct

James R. Hubbard
Chief, Tidal Datum Quality
Assurance Section

NOAA FORM 77-28 (11-72)

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

HYDROGRAPHIC TITLE SHEET

REGISTER NO. H-10174

FIELD NO. RA 20-2-85

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

State Alaska

General locality Seymour Canal

Locality Tiedeman Island to Flaw Point

Scale 1:20,000 Date of survey October 6-10, 1985

Instructions dated September 27, 1985 Project No. OPR 0179-RA-85

Vessel Rainier

Chief of party Capt. C.W. Fisher

Surveyed by N.E. Perugini, M.H. Pickett, J.S. Griffin, T.K. Porta, S.D. LaReau, M.B. Brown, J.C. Damm

Soundings taken by echo sounder, ~~hand lead, pole~~ Raytheon DSF-6000N Echo Sounder, Pneumatic Depth Gauge

Graphic record scaled by

Graphic record checked by

Protracted by Automated plot by

Verification by

Soundings in fathoms and tenths, ~~feet~~ at ~~MLW~~ MLLW

REMARKS: Additional work done in October, 1985 supplements present survey.

☆ U.S. GPO: 1974-0-768-081/1207

REPORT TO ACCOMPANY SUPPLEMENTAL FIELD WORK ON HYDROGRAPHIC SURVEY H-10174

A. INTRODUCTION

With certain exceptions a basic hydrographic survey was completed in Seymour Canal in accordance with Project Instructions OPR-0179-RA-85 dated March 14, 1985 and Change No. 1 dated March 21, 1985 during RAINIER's Spring 1985 season. This survey was assigned Registry Number H-10174 and Field Number RA 20-2-85.

Upon completion, the survey was evaluated by Nautical Chart Branch, which developed a Preprocessing Examination Critique dated August 27, 1985. From this critique, Change No. 2 dated September 27, 1985 was added to the original Project Instructions. Change No. 2 references the Preprocessing Examination Critique and directs selected items to be surveyed during the Fall 1985 season. A clarification of Change No. 2 was received by the Operations Officer, Lt. N. Perugini through a telephone conversation on October 1, 1985 with Lt. S. Iwamoto of Nautical Charting Branch. This change was to eliminate Attachment D from the Preprocessing Examination Critique.

This survey was begun October 6, 1985 and completed October 10, 1985. Data acquisition was performed by personnel of the NOAA Ship RAINIER with supervision from the following ship's officers:

Lt. Perugini, Lt(jg) Pickett, Ens. Griffin, Ens. LaReau, Ens. Porta, Ens. Brown and Ens. Damm.

B. ELECTRONIC POSITIONING CONTROL

Positioning control throughout the survey used range/range and range/azimuth methods. Motorola Mini-Ranger IIIs were used as the ranging instruments and Wild T-2 theodolites were used to measure azimuths. Mini-Ranger consoles and RT units used were as follows:

LOCATION	CONSOLE S/N	RT S/N
2124(RA-4)	B0269	B1388
2125(RA-5)	715	911615

Transponder locations were:

SIGNAL #	SIGNAL NAME	CODE	S/N
132	SWAN	2	B1106
128	WEED	A	1645
130	BUG	3	911635
311	HP-15	0	0101789

Correctors were developed through a baseline calibration conducted on September 18, 1985 in Seattle, Washington. Throughout the project daily static checks were conducted to confirm the correctors. There was good agreement with the checks and no problems were experienced. A closing baseline calibration will be conducted at the close of the fall season. Further details on the calibrations and static checks can be found in the Electronic Control Report, OPR-0179-RA-85(FALL).

The Wild T-2 theodolites used were the following:

LOCATION	S/N
SWAN	57259
WEED	57259

Control stations used in this survey are Third Order Class I stations, with the exception of HP-15 which is a hydro-photo point established by the DAVIDSON in 1983. The following stations were used:

SIGNAL #	STATION NAME	CONTROL TYPE
132	SWAN 1983	range/azimuth
128	WEED 1983	range/azimuth
130	BUG 1983	range/range range/azimuth initial
311	HP-15 1983	range/range
135	STAUNCH 1983	range/azimuth check (RAINIER, FALL,1985)
137	PAD 1985	range/azimuth check (RAINIER, FALL,1985)
129	TIED 1985	range/azimuth initial

off smooth sheet

All positions in this survey are based on the 1927 North American datum. For further details refer to the Horizontal Control Report for OPR-0179-RA-85 (FALL and SPRING).

C. SOUNDING VESSELS AND EQUIPMENT

Survey launches 2124 and 2125 were used to acquire soundings. Each was equipped with a Raytheon DSF-6000N dual beam echo sounder with serial numbers A115N and A103N, respectively.

Velocity correctors were derived from an SV/D cast taken with a Plessy 9040 SV/D probe (s/n 5632) on October 10, 1985. These correctors were not applied to the plotted soundings. For more detail see the Corrections to Echo Soundings Report, OPR-0179-RA-85 (FALL).

A TRA value of .3 fm was used to account for the transducer depth on the launches. This was confirmed with daily bar checks. Bar checks were at 2 fms with both high and low beams checks. Agreement was within .1 fm between high and low beams. The TRA value has been applied to survey soundings.

Divers were used on three occasions to investigate shoals and take least depths. These depths were determined with a NOAA Precision Direct-Drive Pnuematic Depth Gage (s/n 8504192N). The gage was calibrated and operated in accordance with Hydrographic Survey Guideline No. 47.

D. TIDES

In accordance with Change No. 2, the reference station used was Juneau, Alaska. Correctors applied are as in Change No. 2. Predicted tides have been applied to the survey soundings.

TIME CORRECTORS

high water	low water	height ratio
+10 min	+10 min	x.94

A subordinate station was established on the north shore of Tiedeman Island at the start of the project. The control station was Juneau, Alaska (945-2210). A second gage which the Project Instructions called for on Rasp Ledge, south of Tiedeman Island, was deemed unneccessary through a phone conversation Lt. N. Perugini had with Mr. Joe Mullen of Tides Division, Rockville, Maryland on September 30, 1985.

For more details on the tide station at Tiedeman Island, see Field Tide Note, H-10201. Smooth tides have been requested from Rockville for this project.

ATTACHMENTS

Enclosed are item investigation descriptions with accompaning mylar overlays addressing the attachments referenced in the Preprocessing Examination Critique. ✓

Mylar overlays not included in Desc. Rept.

Submitted by:

John C Damm

John C. Damm, ENS NOAA

Approved by:

Carl W. Fisher

Carl W. Fisher, Captain NOAA
Commanding Officer
NOAA Ship RAINIER

ATTACHMENT A

ITEM #: 1
Survey feature: 4.6 fm sounding found during spring survey
Least depth: 4.~~1~~3fm
Position #: 8071 Day: ~~297~~ 279 Vesno: 2125
Latitude: 57 48 19.~~60~~59"N
Longitude: 134 09 31.42W

Method of investigation: The feature was located by means of range/azimuth from station WEED. A marker buoy was placed over the least depth. Divers went down on the buoy line and made a circle search of the area. The buoy weight was placed on the least depth. The pneumatic gage orifice was placed in this location while a series of readings were taken. The slack was taken out of the buoy line and the launch pulled up against it. A fix was taken. The feature was found to be a rocky plateau. ✓

Recommendations: It is recommended that the least depth be charted in the given location. ^concur

Item #: 2
Survey feature: 7.5 fm depth found on spring survey
Least depth: 5.~~1~~3fm
Position #: 8072 Day: ~~297~~ 279 Vesno: 2125
Latitude: 57 48 21.4~~1~~5N
Longitude: 134 09 43.14W

Method of investigation: A dive investigation was conducted in the same manner as in Item # 1. The feature was found to be a rocky plateau. ✓

Recommendations: It is recommended that the least depth be charted in the given location. ^concur

Item #: 3
Survey feature (1983 DAVIDSON survey): 13 fm shoal
Least depth: 11.~~4~~6 fm
Position #: 8111 Day: ~~297~~ 279 Vesno: 2125
Latitude: 57 48 36.4~~9~~7N
Longitude: 134 10 28.16W

Method of Investigation: Using range/azimuth from station WEED 50m splits were run over the charted shoal. A 25m split was run to locate a shoaler depth. Drift soundings were also taken over this area in search of a shoaler depth. The least depth was found on the 425m arc at position 8111. Because of the close spacing of arcs in this development, several soundings are not shown on the final plot. ✓

Recommendations: It is recommended that a shoal of 11.~~4~~6 fm be charted in the given location. *concur*

Item #: 4
Survey feature: 10 fm depth found on the spring survey
Least depth: 9.~~1~~5 fm
Position #: 8094 Day: ~~297~~ 279 Vesno: 2125
Latitude: 57 48 26.38N
Longitude: 134 09 54.~~35~~41W

Method of Investigation: Using range/azimuth from station WEED, 50m splits were run over the charted shoal. A 25m split was run to locate a shoaler depth. Drift soundings were also taken over this area and a detached position was taken. A least depth of 9.~~1~~5 fm was found at a range of 973m from WEED. ✓

Recommendations: It is recommended that a shoal of 9.~~1~~5 fm be charted in the given location. *concur*

ATTACHMENT B

Item #: 5
Survey feature: 7.5 fm depth found on spring survey
Least depth: 6.~~0~~2fm
Position #: 4405 Day: ~~297~~ 279 Vesno: 2124
Latitude: 57 51 11.0~~5~~3N
Longitude: 134 07 48.9~~8~~9W

Method of investigation: A dive investigation was conducted in the same manner as in Item # 1, with the exception that the shoal was located with a range from station BUG and a range from station HP-15. The feature was found to be a rocky plateau. Field records describe feature as rock. Smooth plotted as 6 2 RK.

Recommendations: It is recommended that a shoal of 6.~~0~~2 fm be charted in the given location. Concur Chart as 6' RK

Item #: 6
Survey feature: 18 fm shoal found on spring survey
Least depth: ~~14.9 fm~~ 15.0 fm
Position #: 25 secs out of #4417 +01 Day: ~~297~~ 279 Vesno: 2124
Latitude: 57 50 47.2~~5~~4N
Longitude: 134 08 06.8~~6~~2W

Method of investigation: Using range/range from stations BUG and HP-15 for positioning, 50m splits were run N/S and E/W in the area of the 18 fm shoal. The shoalest depth was located 15 secs out of position #4417 +01.

Recommendations: It is recommended that the ~~14.9~~ 15.0 fm shoal be charted in the given location. Concur

ATTACHMENT C

Item #: 7
Survey feature: futher development off of a rocky point from spring survey
Position #: 2427-2506 Day: 282,283 Vesno: 2125
General location:
Latitude: 57 51 00N
Longitude: 134 15 00W

Method of investigation: Using range/azimuth from station SWAN, 100m splits were run to develop the area around the rocky point. 50m splits were run to further develop 2 shoals in this area which were found on the spring survey; a 3.~~9~~ 8 fm and ~~10.9~~ 11.6 fm shoal. Drift soundings were also taken. A depth of 3.6 fm, 15 secs out of position # 2460 was found in the area of the 3.9 fm shoal with a geographic position of; Pos. 5926 +04 +01

Latitude: 57 51 18.~~23~~ 19 N
Longitude: 134 11 29.2~~1~~W

A least depth of 11.~~6~~ fm at position # 2502 was found in the area of the ~~10.9~~ 11.6 fm shoal with a geographic position of:

Latitude: 57 50 56.77N
Longitude: 134 11 56.14W

Recommendations: It is recommended that the 3.6 fm shoal be plotted in the given location and that the ~~10.9~~ 11.6 fm shoal from the spring survey remain as charted. concur Pos. 5911 +02

MASTER STATION LIST
OPR-Ø17/9-RA-85
SEYMOUR CANAL, ALASKA

VERSION FINAL

128 3 57 48 31951 134 1Ø 52333 25Ø ØØØ5 ØØØØØØ
/WEED ~~1983~~ PRELIMINARY ADJUSTED

129 3 57 5Ø 39468 134 11 27628 139 ØØØ3 ØØØØØØ
/TIED ~~1983~~ PRELIMINARY ADJUSTED

13Ø 3 57 53 Ø6Ø21 134 Ø8 56385 25Ø ØØØ8 ØØØØØØ
/BUG 1983 PRELIMINARY ADJUSTED

132 3 57 54 18495 134 14 Ø6Ø98 25Ø ØØØ3 ØØØØØØ
/SWAN 1983 PRELIMINARY ADJUSTED

~~135 3 57 52 27515 134 14 54794 139 0000 000000~~
~~/STAUNCH 1985 RAINIER G.P~~

~~137 3 57 53 59002 134 16 41794 139 0000 000000~~
~~/PAD 1985 RAINIER G.P.~~

311 3 57 51 13626 134 Ø9 2Ø224 254 ØØØØ ØØØØØØ
/HP-15 PHOTO

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

RA-20-2-85
H-10174

Name on Survey	A ON CHART NO.	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
ADMIRALTY ISLAND										1
ALASKA (title)										2
BEAR CREEK										3
BUCK ISLAND										4
DORN ISLAND										5
FAUST ISLAND										6
FLAW POINT										7
GLASS PENINSULA										8
~~MOLE HARBOR~~										9
RASP LEDGE										10
SEYMOUR CANAL										11
SHORT FINGER BAY										12
SORE FINGER COVE										13
~~STAUNCH POINT~~										14
THE STONE WALL(hypsographic feature)										15
TIEDEMAN ISLAND										16
WINNING COVE										17
										18
										19
					Approved:					20
					Chas. E. Harrington					21
					Chief Geographer - N/CG2x5					22
										23
					JUN 6 1985					24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 77-27(H)
(9-83)

U.S. DEPARTMENT OF COMMERCE

HYDROGRAPHIC SURVEY STATISTICS

REGISTRY NUMBER: H-10174

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	SMOOTH OVERLAYS: POS., ARC, EXCESS	6
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	5

DESCRIPTION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS	
ACCORDION FILES	3					
ENVELOPES						
VOLUMES	2					
CAHIERS						
BOXES						

SHORELINE DATA

SHORELINE MAPS (List):

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List):

NAUTICAL CHARTS (List):

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			3569
POSITIONS REVISED			581
SOUNDINGS REVISED			123
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	*EVALUATION*	*TOTALS*
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	82.0		82.0
VERIFICATION OF SOUNDINGS	335.0		335.0
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	107.0		107.0
COMPARISON WITH PRIOR SURVEYS AND CHARTS		24.0	24.0
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		27.0	27.0
GEOGRAPHIC NAMES			
OTHER* Digitizing	17.0		17.0
*USE OTHER SIDE OF FORM FOR REMARKS — TOTALS	541.0	51.0	595.0

Pre-processing Examination by S. Iwamoto	*Beginning Date*	*Ending Date* 8/27/85
Verification of Field Data by T. Jones	*Time (Hours)* 524.0	*Ending Date* 9/10/86
Verification Check by J. Stringham, B. Olmstead, A. Luceno, J. Green	*Time (Hours)* 37.5	*Ending Date* 9/26/86
Evaluation and Analysis by A. Luceno	*Time (Hours)* 51.0	*Ending Date* 9/26/86
Inspection by D. Hill for	*Time (Hours)* 2.0	*Ending Date* 9/26/86

Additional work performed in Oct, 1985 based on critique comments.

☆ U.S. GOVT. PRINTING OFFICE 1983: 764-006/6061

PACIFIC MARINE CENTER
EVALUATION REPORT
H-10174

1. INTRODUCTION

H-10174 was accomplished by NOAA Ship RAINIER in accordance with the following project instructions:

OPR-0179-RA-85, dated March 14, 1985
Change Number 1, dated March 21, 1985
Change Number 2, dated September 27, 1985

H-10174 was accomplished during April and May 1985 and submitted to the Pacific Marine Center. The preprocessing examination identified features requiring additional development. This additional work was accomplished in October 1985 and included in this survey. The supplemental report is appended to the H-10174 Descriptive Report.

This is a basic hydrographic survey of the northern portion of Seymour Canal between the eastern shore of Admiralty Island and the western shore of Glass Peninsula in Alaska. Tiedeman Island divides the upper part of this canal. Faust Island and Dorn Island are two small islands located about 1 1/2 nautical miles east of the lower end of Tiedeman Island. The canal is filled with islets, rocks and ledges lying close to the shore to .6 mile from the shore. A maximum depth of 152 fathoms is located at the southern limit of the surveyed area, close to Glass Peninsula. The bottom is generally muddy in the southern part of the canal with mixtures of either mud, sand, pebble, gravel or broken shells in other parts of the area.

The main passage, from 1.3 to 1.6 miles wide, is located east of Tiedeman Island. The main passage depths are moderate and gradually decrease near the northern limit of the surveyed area.

A narrower passage, about .6 mile wide, is located west of Tiedeman Island. Depths of 24 fathoms to 46 fathoms are available along this intricate passage.

Isolated, rocky shoals exist throughout the area and are not marked. Navigation may be hazardous without local knowledge.

Predicted tides based on the Juneau, Alaska gage were used during field processing. Tide correctors used for the reduction of final soundings reflect approved hourly heights zoned from the ship operated bubbler tide gages at Rasp Ledge and at the north end of Tiedeman Island, Alaska.

The field sheet parameters have been revised to center the hydrography on the smooth sheet and to change the projection to polyconic.

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

Hydrographic control and positioning are adequately discussed in sections F and G of the hydrographer's report and in the Horizontal and Electronic Control Reports for OPR-0179-RA-85.

Horizontal control station positions used during hydrography are field and NGS published positions based on North American Datum of 1927.

The applicable shoreline manuscripts are TP-01164 and TP-01165. These maps are registered Class III, and originate from photography dated July 1983.

3. HYDROGRAPHY

Soundings at line crossings are in good agreement. The depth curves could be completely and adequately drawn except in areas of steep slopes where only the shoalest and deepest curves were shown to avoid congestion. With the noted exception, hydrography within the limits of the sheet is generally adequate to:

a. Delineate the bottom configuration, determine least depths and to draw the standard depth curves.

b. Reveal that there are no significant discrepancies or anomalies requiring further investigation.

c. Show that the survey had been properly controlled and soundings are plotted correctly.

There are several areas that lack adequate development to determine the bottom configuration.

4. CONDITION OF SURVEY

The hydrographic records and reports are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through Change Three, except as noted in the Preprocessing Examination Report, dated August 27, 1985 and November 19, 1985, except:

a. The significance of the deficiencies mentioned in section 3 is difficult to access without additional information regarding the level of marine traffic in this area. It is recommended that the survey be thoroughly reviewed by well informed authority in N/CG2 and a proper determination made regarding the requirement for additional work.

b. The small triangular gap in the main scheme sounding pattern north of Faust Island, while conforming to the strictest interpretation of the line spacing requirements contained in the Hydrographic Manual, section 4.3.4.1,

Review by N/CG2 indicates insufficient justification for additional work.
aaa 11/17/86

deviates from the intent of a basic survey which is discussed in section 4.1.1. The hydrographer's mention of this gap in section M as not representing a deficiency in the survey is not entirely accurate.

5. JUNCTIONS

H-10174 junctions with the following surveys:

Survey	Year	Scale	Note	Area
H-10175	1985	1:20,000	joins	south
H-10176	1985	1:20,000	joins	south
H-10201	1985	1:10,000	joins	north
H-10204	1985	1:10,000	~~joins~~ adjoins	north

Soundings and depth curves between H-10174 and the junction surveys are in agreement.

6. COMPARISON WITH PRIOR SURVEYS

H-2001 (1889) 1:80,000

Plotted soundings are in good agreement. Significant shoals not found during the prior survey were discovered during the present survey as the result of a more detailed coverage of the area. Moreover, shoaler peak depths were obtained in the present survey for previously plotted peak soundings and rock elevations.

A 17 1/2 fathom sounding on H-2001 at latitude 57°50'36"N, longitude 134°12'11"W was not specifically investigated during the present survey. This depth has been brought forward from H-2001. Before any additional field work is conducted to verify or disprove this sounding, it is recommended that a thorough review of archived field data pertaining to the positioning and record-logging of the value be conducted.* There is a reasonable chance that errors were generated during the survey which account for the anomalous depth.

BP124982 DA-20-1-83 1:20,000 Reconnaissance Survey
BP124989 DA-20-2-83 1:20,000 Reconnaissance Survey
BP124985 DA-20-2-83 1:10,000 Enlargement 1
BP124986 DA-20-2-83 1:10,000 Enlargement 2

Reconnaissance surveys were done by the NOAA Ship DAVIDSON in 1983. Plotted soundings are in good agreement. No significant discrepancies exist between the surveys.

There are no pre-survey review items/AWOIS items that fall within the limits of this sheet.

H-10174 is adequate to supersede the prior surveys within their common areas.

*-Review by N/CG241 (55r) on 12/23/86 of archived field data found position of 17½ fathom sounding to be in error. This sounding should be superseded by the present survey. A field examination conducted by RAINIER (11/5/86) also disproved this sounding (Field data subject to verification). FE 291 (1986) disproved 17.5-fm sounding.

7. COMPARISON WITH CHART

Chart 17300, 23rd Edition, dated 1/14/84; scale 1:209,978
Chart 17360, 26th Edition, dated 8/18/84; scale 1:217,828

a. Hydrography - Most charted information originates from the prior surveys discussed in section 6 of this report. Other soundings and charted features originate from miscellaneous sources. For more detail see section L of the hydrographer's report.

Geographic names appearing on the smooth sheet have been approved by the Chief Geographer. These names originate with and are plotted in accordance with these charts.

H-10174 is adequate to supersede charted hydrography within the common area.

The following Dangers to Navigation Reports (copies appended) have been submitted:

Originator	Date	Coast Guard District
Ship RAINIER	5/28/85	Seventeenth, Juneau, Alaska
PMC	3/20/86	Seventeenth, Juneau, Alaska
PMC	9/30/86	Seventeenth, Juneau, Alaska

DMA has been notified of these changes through the Automated Notice to Mariners System (ANMS).

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

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

8. COMPLIANCE WITH INSTRUCTIONS

H-10174 adequately complies with the project instructions noted in section 1 of this report.

9. ADDITIONAL FIELD WORK

This is a good basic hydrographic survey. Additional field work is recommended on an opportunity basis to verify or disprove the existence of the 17 1/2 fathom plotted sounding on H-2001 at latitude 57°50'36"N, longitude 134°12'11"N, pending the results of the research recommended in section 6. See section 6.

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-10174

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.

Thomas W Richards

Chief, Nautical Chart Branch (Date)

CLEARANCE: SIGNATURE AND DATE:

N/MOP2:LWMordock

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.

Robert L. Faulet

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

October 5, 1988

TO: N/CG24 - Russell C. Arnold

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

SUBJECT: Examination of Hydrographic Survey H-10174 (1985), Alaska, Seymour Canal, Tiedeman Island to Flaw Point

Chiefs of Party	J. P. Vandermuelen C. W. Fisher
Field Unit	NOAA Ship RAINIER
Processed by	Pacific Marine Center
Examined by	L. Quinlan

An examination of hydrographic survey H-10174 (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.

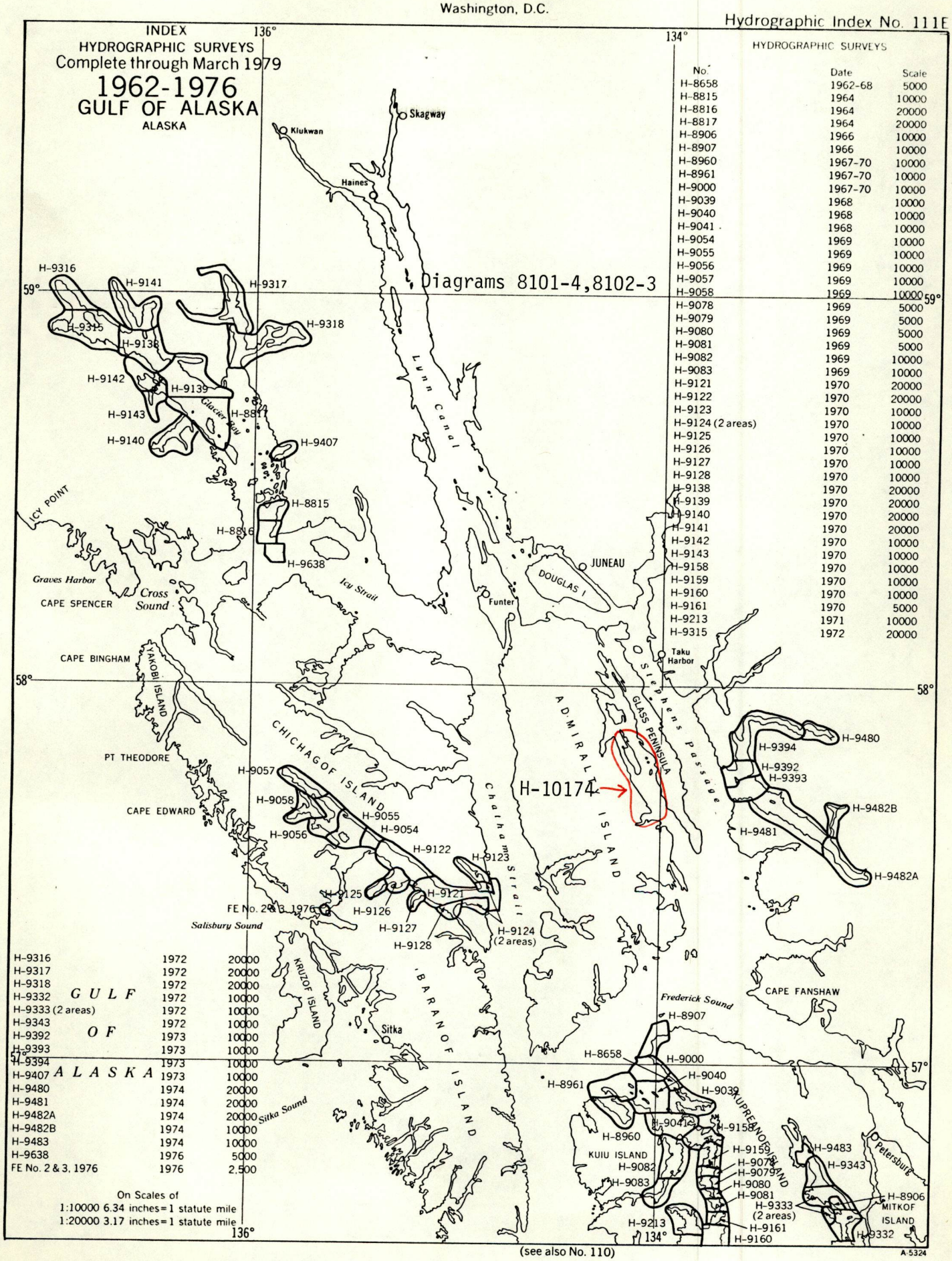
Cartographic deficiencies and constructive comments are noted on a ½-scale copy of the survey smooth sheet which will be forwarded to the marine center. Digital data on magnetic tape were not available during the examination of this survey. Therefore, an inspection of a graphic plot from the certified 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.

Most of the triangulation stations are not identified by the year of establishment on the survey as data and supporting documentation for these stations were not available during marine center processing. It is assumed that triangulation specifications were complied with and that the necessary records and computations will be forwarded to, and the stations accepted by, the National Geodetic Survey Division.

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

Hydrographic Index No. 111E



HYDROGRAPHIC SURVEYS

No.	Date	Scale
H-8658	1962-68	5000
H-8815	1964	10000
H-8816	1964	20000
H-8817	1964	20000
H-8906	1966	10000
H-8907	1966	10000
H-8960	1967-70	10000
H-8961	1967-70	10000
H-9000	1967-70	10000
H-9039	1968	10000
H-9040	1968	10000
H-9041	1968	10000
H-9054	1969	10000
H-9055	1969	10000
H-9056	1969	10000
H-9057	1969	10000
H-9058	1969	10000
H-9078	1969	5000
H-9079	1969	5000
H-9080	1969	5000
H-9081	1969	5000
H-9082	1969	10000
H-9083	1969	10000
H-9121	1970	20000
H-9122	1970	20000
H-9123	1970	10000
H-9124 (2 areas)	1970	10000
H-9125	1970	10000
H-9126	1970	10000
H-9127	1970	10000
H-9128	1970	10000
H-9138	1970	20000
H-9139	1970	20000
H-9140	1970	20000
H-9141	1970	20000
H-9142	1970	10000
H-9143	1970	10000
H-9158	1970	10000
H-9159	1970	10000
H-9160	1970	10000
H-9161	1970	5000
H-9213	1971	10000
H-9315	1972	20000
H-9316	1972	20000
H-9317	1972	20000
H-9318	1972	10000
H-9332	1972	10000
H-9333 (2 areas)	1972	10000
H-9343	1972	10000
H-9392	1973	10000
H-9393	1973	10000
H-9394	1973	10000
H-9407	1973	10000
H-9480	1974	20000
H-9481	1974	20000
H-9482A	1974	20000
H-9482B	1974	10000
H-9483	1974	10000
H-9638	1976	5000
FE No. 2 & 3, 1976	1976	2,500

GULF OF ALASKA

On Scales of
1:10000 6.34 inches = 1 statute mile
1:20000 3.17 inches = 1 statute mile

(see also No. 110)

A-5324

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10174

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
17360	5/4/89	ALMACEN	Full ~~Part Before~~ After Marine Center Approval Signed Via full application
			Drawing No. of soundings from SS.
17300	5-28-91	Ed Martin	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 28 revising sdgs, curves and dangers
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
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			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.

appld to Std 11-17-86 pav