10013

Diagram No. 8202-3

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Navigable Area Hydrographic

Field No. FA-10-2-82

Office No. H-10013

LOCALITY

State Alaska

General Locality Port Frederick

Locality West of the Narrows

1982

CHIEF OF PARTY
CDR W.F. Forster

LIBRARY & ARCHIVES

DATE March 2, 1984

☆U.S. GOV. PRINTING OFFICE: 1980—766-230

10013

AREA 6
SHEETS:
17302 } to sign off see
17300 } Record of Application

NOAA FORM 77-28 (11-72)

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

HYDROGRAPHIC TITLE SHEET

REGISTER NO.: H-10013

FIELD NO.: FA-10-2-82

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: Port Frederick

Locality: West of The Narrows

Scale: 1:10,000 Date of survey: May 6 - 24, 1982

Instructions dated: October 14, 1981 Project No.: OPR-0343-FA-82

Vessel: NOAA Ship FAIRWEATHER and Launches 2023, 2024, 2025, 2027

Chief of party: CDR Walter F. Forster

Surveyed by: ENS R. H. Pingry, ENS A.E. Francis, ENS C. L. Bailey, ENS P. T. Steele

Soundings taken by echo sounder, hand lead, pole: Ross Fineline 5000, Raytheon DE719B, Leadline

Graphic record scaled by: Ship's Personnel

Graphic record checked by: Ship's Personnel

Verification ~~Protracted~~ by: A. A. Luceno Automated plot by: PMC Xynetics Plotter

Evaluation ~~Verification~~ by: B. A. Olmstead

Soundings in fathoms feet at MLW MLLW and tenths of fathoms

REMARKS: Survey Time Zone: UTC.
Survey is complete.
Revisions and marginal notes in black were added during Evaluation.

3-5-84 STANDARDS CK'D
C. Loy
AWOIS - 3/26/84

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

☆ U.S. GOVERNMENT PRINTING OFFICE: 1976—665-661/1222 REGION NO. 6

MONTHLY PROGRESS SKETCH
OPR-0343-FA-82

PORT FREDERICK, S.E. ALASKA

NOAA SHIP FAIRWEATHER S-220

CDR. WALTER F. FORSTER, CMDG

SCALE OF NOS CHART 17300

APRIL – MAY 1982

	APRIL	MAY
SQ NM SOUNDING LINE	53.0	21.0
LNM SOUNDING LINE	768.7	247.7
BOTTOM SAMPLES	71	64
NANSEN CAST	3	6
HYDRO CONTROL STATIONS	19	21
WATER SAMPLES ANALYZED	30	50
TIDE GAGES INSTALLED	2	–

ICY STRAIT

H-9990
FA10-6-81

H-10010
FA10-1-82

H-10013
FA10-2-82

STA. RECOVERED
STA. ESTABLISHED
NANSEN CAST
TG TIDE GAGE
TEMPORARY POINT

NEKA BAY

SOUTH BIGHT

PORT FREDERICK

HOONAH

TENAKEE INLET

SALT LAKE

TG

58 10 00

58 00 00

135 40 00

135 20 00

CHICHAGOF ISLAND

DESCRIPTIVE REPORT

H-10013 (FA-10-2-82)

OPR-0343-FA-82

Port Frederick, Alaska

A. Project

This hydrographic survey was conducted in accordance with Project Instructions OPR-0343-FA-82, Port Frederick, Alaska, dated 14 October 1981 and the following supplements to instructions: Change No. 1, dated 14 October 1981; Change No. 2, dated 23 November 1981; Change No. 3, dated 29 March 1982. The PMC OPORDER, the Hydrographic Manual, 4th Edition and the Data Requirements Letter, dated 27 April 1981 are also applicable.

See Evaluation Report Section 1

B. Area Surveyed

Survey H-10013 (FA-10-2-82) is the southernmost of four surveys conducted in Port Frederick, Alaska. The area surveyed was from the Narrows to the Portage, and included Salt Lake Bay and the lagoon south of Salt Lake Bay, known locally as Salt Chuck. The boundaries of the survey lie between latitudes 57° 56' 42"N and 58° 00' 38"W and longitudes 135° 38' 18"W to 135° 50' 03"W. The northernmost boundary junctions with comtemporary survey H-10010 (FA-10-1-82). Hydrography was run from 6 May 1982 to 24 May 1982. (Julian Dates 126 to 144.)

See Evaluation Report Section 1

C. Sounding Vessels

Hydrographic data acquisition and bottom samples for this survey were conducted using Jensen Survey launches FA-3 (2023), FA-4 (2024), FA-5 (2025). Boston Whaler #1 (2027) was equipped with a Mini-Ranger III positioning system and a Raytheon DE719B fathometer to conduct shallow water hydrography and bottom samples. The FAIRWEATHER (2020) was used from oceanographic casts and deep water bottom samples.

✓

There was no unusual configurations or problems encountered with these vessels, with the exception of a cracked transducer housing on vessel 2024. The damage was not serious and no data was rejected as a result of this equipment casualty (see the Corrections to Echo Soundings Report for this project for further details).

✓

D. Sounding Equipment and Corrections to Echo Soundings

The three survey launches were equipped with Ross Fineline 5000 fathometers. Vessel 2027 was equipped with a Raytheon DE 719B fathometer. For details of sounding equipment, see Table I, Sounding Equipment by Vessel and Date.

✓

TABLE I

Sounding Equipment by Vessel and Date

Vessel	Day	ROSS 5000 Analog	Digitizer	Inverter	Transceiver	RAYTHEON DSF 600A	LSR
2023	131-132	1047	1054	1046	1047		
	140	1047	1054	1046	1047		
	143	1047	1054	1046	1047		
2024	126-130	1097	1046	1054	1046		
	138	1097	1046	1054	1046		
2025	128-129	1036	1036	1053	1054		
	131	1036	1036	1053	1054		
	132	1036	1036	1053	1054		
2027	127					DE719B	6261
	132					DE719B	6261
	139					DE719B	6261
	144					DE719B	626

The Raytheon DE719B fathometer was used for all the echo soundings taken in the Salt Chuck south of Salt Lake Bay. The fathometer was calibrated in accordance with PMC OPORDER, 22 April 1982, Appendix I.

The Ross fathometers were used for all other echo soundings on this survey and were phase checked and calibrated each morning and evening and periodically during the day. Instrument initial was monitored closely and corrected by the fathometer operator. The Ross fathometers operated as designed and no serious malfunctions were experienced.

Depths taken by the echo sounding equipment on this survey range from -1.7 to 78 fathoms, after tide reducers were applied. Analog and digitized depths were scanned at least twice for comparison and to insert peaks and deeps into the digital records.

Velocity of sound through water was measured by two Nansen casts from the FAIRWEATHER (2020). See Table II, Nansen Casts Dates and Locations, for latitudes and longitudes of the casts. The reversing thermometers used for the casts were calibrated by the Northwest Regional Calibration Center on 4 March 1982. Beckman Salinometers S/N 59435 and S/N 4919 determined the water salinity and were also calibrated at the Northwest Regional Calibration Center in March 1982. The results of the Nansen casts indicate that velocity correctors ~~were not required~~ are zero for any echo soundings on this survey.

TABLE II

Nansen Casts Dates and Locations

Date	Latitude	Longitude	Vicinity
7 May 1982	57° 59' 18"N	135° 39' 24"W	The Narrows
25 May 1982	57° 59' 00"N	135° 39' 12"W	The Narrows

TRA correctors were determined by comparing bar check data to the Nansen casts data in accordance with the Hydrographic Manual, Section 4.9.5.3. Bar checks were taken twice daily except when weather or seas prohibited. The bar checks lines were calibrated in Seattle at PMC in March 1982. ✓

Settlement and Squat correctors were measured in accordance with the Hydrographic Manual Section 4.9.4.2 in March 1982 at the Shilshole Bay Marine, Seattle, Washington. These measurements revealed that the three survey launches required correctors at higher speeds. Launch OICs were instructed not to run hydrography above those speeds in order to eliminate settlement and squat correctors to the soundings. See Table III, Restricted Settlement and Squat Speeds. ✓

TABLE III

Restricted Settlement and Squat Speeds

Launch	Restricted RPMs
FA-3 (2023)	2250 to 2700
FA-4 (2024)	2400 to 2700
FA-5 (2025)	2300 to 2700

✓

Leadlines 1, 2, 3, and 4 were used for least depths on submerged shoreline features, three shoals and along two log piers. The leadlines were calibrated in Seattle during the 1981 winter inport at Pacific Marine Center. For further details on sounding equipment and corrections, see the Corrections to Echo Soundings Report, OPR-0343-FA-82. ✓

E. Hydrographic Sheets

Field sheets were plotted aboard the FAIRWEATHER using two complot plotters S/N 5557-5 and S/N 5848-17 and two PDP8e computers S/N 09524 and S/N 01020. All field sheets and records will be sent to Pacific Marine Center for verification and smooth plotting. ✓

One main sheet, one enlargement and development A were plotted for this survey.

The enlargement is a 1:2,500 scale development detailing the floating log boom and loading pier at the Silver Bay logging camp at Eight Fathom Bight. ✓

Development A is a 1:2,500 scale development of a mainscheme shoal sounding. A least depth of 3.2 fathoms was located at 57° 59' 24.5"N and 135° 40' 47.5"W, position 2265+1. Twenty meter splits and one star pattern were run to assure a proper bottom profile and adequate contour delineation. The least depth should appear on the next edition of Chart 17302. Evaluator Concurs

A skew of 335° was used to allow the entire area surveyed to plot on one standard size sheet. There were no PSR item investigations for this survey.

TABLE IV

Hydrographic Sheets

Field Number or Description	Scale
FA-10-2-82	1:10,000
Enlargement - Log Boom and Pier	1:2,500
Development A, Shoal Sounding	1:2,500

The complot pen was manually operated to avoid overlapping soundings, making a legible smooth sheet in accordance with PMC OPORDER, dated 22 April 1982, Appendix Q, Section 1a, paragraph 2 and 3. See Appendix E, Abstracts of Positions for identification of those soundings that were not plotted on the final field sheet.

F. Control Stations

FAIRWEATHER personnel established ten and recovered one hydrographic control stations. Station FOR, 1923, a hydrographic station, was recovered in the field, but was not found in the NGS adjusted position listings. The FAIRWEATHER updated station FOR, 1923 to a Second Order control station, FOR, 1923 ~~1982~~. Conventional Second Order Class II or Third Order Class I methods were used to locate all geodetic stations on the North American Datum 1927.

See Evaluation Report Section 2

Geodetic positioning for TP-10 in the Salt Chuck south of Salt Lake Bay utilized a single A point from TP-8 and TP-9. TP-10 was used to control all hydrography in the Salt Chuck. Due to the instability of the location, TP-8 and TP-9 were not monumented. This area is a sandy beach used for storing heavy machinery and equipment for a nearby logging operation. TP-10 is a drill hole in bedrock at the head of the Salt Chuck.

Station PORTAGE, 1982 and station DAWG, 1982, at the head of the inlet, were located by a double A point, closed loop traverse from stations FATHOM, 1982 and FATHOM RM1, 1982. TP-8, TP-9, TP-10, station DAWG, 1982 and station PORTAGE, 1982 were located using Third Order Class I accuracies and methods. See Table V, Monumented Control Stations, for a listing of control stations used in this survey. For further information, refer to the Horizontal Control Report, OPR-0343-FA-82.

TABLE V

Monumented Control Stations

Station Name	Order	Signal Number	Latitude	Longitude
SUNNY, 1982	2	470	57° 59' 29.422"N	135° 41' 02.600"W
FOR, 1923 ~~1982~~	2	471	57° 58' 53.008"N	135° 42' 07.719"W
EIGHT, 1982	2	472	57° 59' 54'876"N	135° 42' 38.068"W
OLGA, 1982	2	473	57° 59' 25.541"N	135° 44' 21.164"W
FATHOM, 1982	2	474	58° 00' 05.899"N	135° 44' 37.996"W
SILVER, 1982	3	475	57° 58' 34.984"N	135° 38' 55.647"W
QUICK, 1982	3	476	57° 58' 22.521"N	135° 39' 45.753"W
TP-8 ~~1982~~	3	477	57° 57' 49.617"N	135° 38' 24.109"W
TP-9 ~~1982~~	3	478	57° 57' 49.155"N	135° 38' 24.365"W
TP-10, 1982	3	479	57° 56' 52.683"N	135° 40' 19.943"W
BM 2484A, 1982	3	480	57° 57' 27.291"N	135° 39' 13.703"W
KATHY, 1982	3	481	57° 59' 36.174"N	135° 47' 16.685"W
DAWG RM1, 1982	3	482	57° 58' 50.470"N	135° 47' 20.222"W
DAWG, 1982	3	483	57° 58' 50.281"N	135° 47' 21.046"W
PORTAGE, 1982	3	484	57° 59' 26.617"N	135° 47' 58.486"W
FOR CAL, 1982	3	485	57° 58' 53.252"N	135° 42' 08.189"W

G. Hydrographic Position Control

Motorola Mini-Ranger III Range/Range and Range/Azimuth methods were used for positioning echo soundings, leadline DPs, positioning of rocks and verification of shoreline features. All DPs had a check angle or range except positions 7099 to 7101, 7305, 7176, 7306, 2148, 2149, 2150, 2158, 2159, 2160 and 2165. Existing control was inadequate to supply a check fix in the narrow and confining area of the Portage. Based upon the criteria of a Navigable Area Survey, the two fathom limit of the hydrography as specified in the Project Instructions, and the infrequent use of this area, it was not deemed cost effective to provide extra control expressly for checks on these few positions. Sextant angles with a check fix were used to position DPs 8139, 8140, 8141 and 8142. (Converted to mini-ranger rates)

See Evaluation Report Section 2

Range/Range was used for 101.8 miles from Eight Fathom Bight east through Salt Lake Bay. Numerous control setups were required due to the narrow width of the survey area. Range/Azimuth control was used for 48.0 miles including the lagoon south of Salt Lake Bay, and from Eight Fathom Bight to the head of the inlet. Mini-Rangers used on this project were initially baseline calibrated at Pacific Marine Center on 3 and 4 March 1982. A final baseline calibration was conducted on 22 May 1982 in Port Frederick. Results from initial and ending BLCs were averaged to determine final correctors for smooth plotting. Daily critical and non-critical system checks were conducted using the FOR CAL calibration pole located at latitude 57° 58' 53"N and longitude 135° 42' 08"W, or by maneuvering to a geodetic station. See the Electronic Control Report OPR-0343-FA-82 for a table listing the beginning and closing system checks for each block of position numbers.

Table VI, Hydrographic Positioning Equipment, is a tabulation of launch positioning component equipment and serial numbers.

TABLE VI

Hydrographic Positioning Equipment

Survey Launch	Console	RF Unit
2023	702	1649
2024	701	1633
2025	B0323	B1398
2027	703	4926

There were no unusual methods of operating the electronics, nor unusual atmospheric conditions. No systematic errors in position data occurred on the final field sheet; poor geometric configurations were not used. There were several instances of marginal signal strength observed during Range/Range or Range/Azimuth hydrography as a result of the vessel being obscured from the transponder by small islands. The positions of these soundings were calculated using time and course and are all noted in the raw data printouts. The coxswains steered a range before losing signal strength and were always within 10 meters of the true line. Fixes were obtained at "Last Sight" and "First Sight" where ever possible. Time and course was not used to establish more than one sounding and one position beyond the last point of acceptable control. ✓

On 12 May 1982 (J.D. 132) the magnatron on transponder 7 had a catastrophic failure. This failure occurred during Range/Azimuth in the Portage area at the head of the inlet affecting positions 7325 to 7344, launch FA-5 (2025). A critical system check of the transponder 7 on J.D. 131 confirmed the baseline correctors within 0.3 meters and verified that the transponder operated properly up to the time of failure. The hydrography collected the day of the system failure was kept based on the above mentioned systems check and the abrupt nature of the failure. This hydrography consisted of two 45 meter splits between station PORTAGE, 1982 and DAWG, 1982 for contour development. ✓

H. Shoreline

Shoreline manuscripts were provided by Requirements Branch, OA/C34, in the form of USGS shoreline manuscripts at a scale of 1:10,000. Field edit was not required as per the Project Instructions, however, shoreline details such as rocks, ledges, and charted items were individually investigated. Shoreline discrepancies occurred in nine different locations throughout the survey. These discrepancies were evidenced by soundings overplotting on the shoreline. Table VII, Areas of Shoreline Discrepancies, lists the location of the discrepancies and the number of miles of shoreline affected. The shoreline was shifted on the final field sheet based on the hydrographic positions and the distance the launch was from the shoreline at the end of the line.

See Evaluation Report Section

TABLE VII

Areas of Shoreline Discrepancies

From Latitude	Longitude	Vicinity Of	No. of Miles
57° 59' 37"N to 57° 59' 36"N	135° 41' 30"W to 135° 39' 12"W	About 0.25 miles W of Station SUNNY to the narrows along the northern shoreline.	1.3
58° 00" 12"N to 58° 00' 00"N	135° 43' 08"W to 135° 42' 43"W	About 0.25 miles W of Station EIGHT along the northern shoreline.	0.3
58° 00' 13"N to 58° 00' 05"N	135° 45' 30"W to 135° 44' 38"W	Near Station FATHOM along the NW shore.	0.4
57° 59' 33"N to 57° 59' 36"N	135° 47' 33"W to 135° 47' 16"W	Near Station KATHY.	0.2
57° 59' 48"N to 57° 59' 54"N	135° 47' 18"W to 135° 47' 12"W	North of Station KATHY.	0.1
57° 59' 15"N to 57° 59' 28"N	135° 47' 30"W to 135° 46' 21"W	NE of Station DAWG area along the north shore.	0.9
57° 59' 08"N to 57° 59' 28"N	135° 48' 36"W to 135° 48' 27"W	SW of Station PORTAGE along southern shoreline.	0.4
57° 58' 22"N to 57° 57' 27"N	135° 39' 45"W to 135° 39' 15"W	Salt Lake Bay along the southern shoreline.	1.0
57° 57' 27"N to 57° 56' 43"N	135° 39' 15"W to 135° 40' 21"W	Salt Chuck along the western shoreline.	1.0

See Evaluation Report Section 2.

No discernable pattern was found among the noted shoreline discrepancies. Visual estimates of the distance to shore by launch personnel support these discrepancies, and may be of some use in adjusting the shoreline for charting purposes. The USGS shoreline manuscript is marginally adequate for charting purposes in this portion of Port Frederick and should be supplemented with controlled shoreline photography if charts greater than 1:80,000 scale are anticipated. ✓

I. Crosslines

A total of 21.1 nautical miles of crosslines were run on this survey comprising 14% of the total hydrography. Crosslines were run at 45° to 90° angles to mainscheme hydrography, and were placed to follow mid channel courses that a transiting vessel would utilize. Five discrepancies between mainscheme and crosslines were encountered on this survey as a result of slight positional differences in soundings or rapidly changing bottom contours. See Table VIII, Mainscheme (MS) - Crossline (XL) Discrepancies for locations and depths of these discrepancies.

TABLE VIII

Mainscheme (MS) - Crossline (XL) Discrepancies

Latitude	Longitude	Depth XL	Depth MS
57° 58' 55"N	135° 39' 36"W	63	59
57° 57' 14"N	135° 39' 34"W	0.4	-0.2
57° 57' 26"N	135° 39' 10"W	1.3	4.1
57° 59' 15"N	135° 46' 21"W	10.7	9.7
57° 59' 36"N	135° 46' 28"W	~~7~~ 9.3	13

J. Junctions

This survey junctions with H-10010, FA-10-1-82 in the Narrows. Junction between the two surveys was excellent with one discrepancy at 57° 59' 17"N and 135° 39' 06"W. This discrepancy occurs on steep slope, with a depth of 64 fathoms on survey H-10013 and a depth of 57 fathoms on survey H-10010. The lesser depth, 57 fathoms, should be charted.

See Evaluation Report Section 5

K. Comparisons With Prior Surveys

The only prior survey covering this area is H-4319, a 1:20,000 scale survey conducted in 1923. Excellent agreement was found between H-10013 and H-4319 with only 7 discrepancies. These discrepancies occur over steeply sloping bottom contours or at the head of bays where sediment deposits may be progressively accumulating. See Table IX, Comparison With Prior Survey, for locations of the discrepancies.

See Evaluation Report Section 6

TABLE IX

Comparison With Prior Survey

	Latitude	Longitude	Depth H-4319	Depth H-10013
1.	57° 59' 22"N	135° 39' 13"W	78	73
2.	57° 59' 18"N	135° 39' 13"W	72	67
3.	57° 58' 50"N	135° 39' 55"W	58	53
4.	57° 59' 06"N	135° 44' 13"W	34	31
5.	57° 58' 00"N	135° 43' 38"W	25	23
6.	57° 58' 08"N	135° 45' 36"W	14	22

In the comparisons 1-5 the lesser depths come from survey H-10013, and should be used to supercede the prior survey. Comparison 6 shows a lesser depth on the prior survey. This is over a sloping bottom and may represent positional differences between the prior and current surveys. Even though no indication of the lesser depth was evidenced on the current survey (i.e. side echos, etc.), the lesser depth should be carried over for charting.

L. Comparisons With the Chart

NOAA chart 17302, 13th Edition, 13 May 1978, 1:80,000 scale was used for comparison with this survey. Of the 52 soundings on the chart, three (3) or 6% do not agree within the specifications of the Hydrographic Manual, Section 1.1.2. The general trend of the bottom contours is the same between the surveys. The three discrepancies occur in the Portage area at the head of Port Frederick, where sediment deposits have created shoal depths since 1923. These three discrepancies between the present survey and chart 17302 are listed in Table X, Present Survey-Chart Discrepancies. These three comparisons are not the most significant. Refer to the evaluation report for complete information.

See Evaluation Report Section 7

TABLE X

Present Survey-Chart Discrepancies

Location		Depth	
		Chart 17302	Present Survey
57° 59' 17"N	135° 48' 24"W	4	3
57° 59' 22"N	135° 48' 00"W	5.5	4
57° 59' 06"N	135° 47' 18"W	10	8

✓

All charted features, as well as items found on USGS topographic maps, Juneau A-6 Quadrangle, were located, investigated and verified. Significant uncharted features were also treated in a similar manner. A brief description and a recommendation concerning each of these features follows:

1. An uncharted waterfall should be charted at 57° 59' 35"N, 135° 39' 25"W, controlled by position 8141. This feature is of some value as a landmark while passing through the narrows.

2. An uncharted rock should be charted at 58° 00' 04"N, 135° 44' 24"W, controlled by position 8142.

Evaluator Concurs

3. The Silver Bay Logging Company has a log crib pier and log boom in the vicinity of Eight Fathom Bight. See the 1:2,500 enlargement, log boom/pier, for details of the pier and boom controlled by positions 2000 through 2016.

✓

4. An uncharted mooring log should be charted at 58° 00' 05"N, 135° 44' 48"W, controlled by position 2017.

Evaluator Concurs

5.* An uncharted rock ledge should be charted at 58° 00' 03"N, ✓
135° 45' 47"W, controlled by position 2088.

6.* A rock ledge shown on the USGS topographic map at ~~57° 58'~~ 58° 00' 07"N, ✓
135° 45' 37"W was confirmed and was controlled by position 2087.

7. A rock shown on the USGS topographic map at 57° 59' 31"N, ✓
135° 46' 47"W was found to be a rocky ledge extending from shore to 57° 59' 31"N, 135° 46' 47"W, controlled by position 2062, and should be charted as such. The Final Field Sheet depicts an isolated rock awash.

8.* The charted rock at 57° 59' 24"N, 135° 46' 12"W should be charted ✓
as a rock islet controlled by positions 2321 and 2326. This feature is an island of considerable size. (70 meters x 50 meters)

9.* The islet charted at 57° 59' 36"N, 135° 46' 12"W was confirmed and ✓
is connected to shore by a rocky spit that is bare at low water. See hydrographic positions 2165 and 2166 for definition of this feature.

10. The rock charted at 57° 59' 12"N, 135° 47' 30"W was found to be ✓
a rocky ledge controlled by positions 2158 thru 2160, and should be charted as such. (Estimated heights on this feature when corrected for tides produces a high water line configuration)

11.* A rock charted at 57° 59' 24"N, 135° 47' 54"W was found out of position and should be charted at 57° 59' 22"N, 135° 47' 57"W, controlled by position 7305. ✓

12.* An uncharted rock located at 57° 59' 13"N, 135° 47' 54"W should ✓
be charted, controlled by position 7101.

13. The rock charted at 57° 59' 06"N, 135° 47' 48"W was confirmed and ✓
should be charted at 57° 59' 04"N, 135° 47' 49"W, controlled by position 7100. This rock is connected to shore by a rocky ledge, the most seaward point being controlled by position 7126. This feature is an islet situated on a reef. The area is foul with rocks when heading shoreward.

14.* An uncharted rock should be charted at 57° 58' 59"N, 135° 47' 38"W, ✓
controlled by position 7099. This rock is part of a larger type feature.

15.* The islet charted at 57° 58' 54"N, 135° 42' 12"W was confirmed by the position of geodetic station FOR, 1982 which is located on this islet at 57° 58' 53"N, 135° 42' 08"W. ✓

16. The islet shown on the USGS topographic map at 57° 58' 48"N, ✓
135° 42' 06"W should be charted at 57° 58' 51"N, 135° 42' 08"W, controlled by position 4975. The islet is connected to shore by a small rocky ledge. The most seaward point is controlled by position 4976. The hydrographer confirms an islet but the collected data reduces to rocks awash. (*(12), *(11))

17. An uncharted rocky ledge located from 57° 58' 52"N, 135° 42' 06"W ✓
to 57° 58' 46"N, 135° 41' 57"W is controlled by position 4974 to 4969, and should be charted. The hydrographers statement suggests that this feature is continuous. However, the Final Field Sheet shows this area as separate and independent ledges. See item *19 for additional information.

* Evaluator Concurs. Many of these items are inadequately described. Refer to the smooth sheet for complete information.

18.* An uncharted rock should be charted at 57° 58' 46"N, 135° 41' 55"W, controlled by position 4968. This feature is part of the uncharted rock ledge defined by item #19. ✓

19.* An uncharted rock ledge should be charted at 57° 58' 44"N, 135° 41' 56"W, controlled by position 4964. (Positions 4964-4969 define this feature) See Smooth Sheet for graphic portrayal). ✓

20.* An uncharted rock should be charted at 57° 58' 45"N, 135° 41' 54"W, controlled by position 4965. (Part of rock ledge as defined by item #19). ✓

21.* An uncharted rock should be charted at 57° 58' 46"N, 135° 41' 53"W, controlled by position 4966. (Part of rock ledge as defined by item #19). ✓

22.* An uncharted rock should be charted at 57° 58' 46"N, 135° 41' 52"W, controlled by position 4967. (Part of rock ledge as defined by item #19). ✓

23. An uncharted rock ledge should be charted at 57° 58' 42"N, 135° 41' 52"W, controlled by positions 4962 to 4963. (See Smooth Sheet for graphic portrayal).

24. A charted rock ledge was confirmed between 135° 41' 43"W and 135° 41' 46"W, controlled by positions 4957 to 4961. (See Smooth Sheet for graphic portrayal).

} These two items are actually part of the same feature.

25.* An uncharted rock ledge should be charted at 57° 58' 40"N, 135° 41' 27"W, controlled by position 4956. This position is defined by a rock awash (*) marking a high point of the ledge. ✓

26.* An uncharted rock ledge should be charted at 57° 58' 40"N, 135° 41' 28"W, controlled by position 4955. This position is defined by a rock awash (*) marking a high point of the ledge. ✓

27.* A rock ledge shown on the USGS topographic map was confirmed between 135° 41' 19"W and 135° 41' 18"W and controlled by positions 4951 to 4954, and should be charted. ✓

28. A charted islet at 57° 58' 30"N, 135° 40' 58"W was confirmed and is attached to shore by a rock ledge, controlled by position 4935. There was no elevation data provided by the hydrographer. The final field sheet depicts only a rock ledge. ✓

29.* An uncharted rock ledge should be charted between 135° 40' 33"W to 135° 40' 42"W and is controlled by positions 4931 to 4934. (From latitude 57°58'25"N to 57°58'26"N). See Smooth Sheet for graphic representation of this area.

30.* Silver Bay Logging Company has a log pier that should be charted at 57° 58' 23"N, 135° 38' 49"W, controlled by positions 8135 to 8138 and a floating ~~log pier~~ walkway at 57° 58' 17"N, 135° 38' 47"W, controlled by position 8134 and taped distances. ✓

31.* An uncharted rock should be charted at 57° 57' 25"N, 135° 39' 14"W, controlled by position 8098. ✓

32.* An uncharted rock should be charted at 57° 57' 24"N, 135° 39' 20"W, controlled by position 8099. ✓

33.* An uncharted rock should be charted at 57° 56' 45"N, 135° 40' 07"W, controlled by position 8103. ✓

34. An uncharted rock should be charted at 57° 58' 53"N, 135° 41' 55"W, controlled by position 4464. This rock is part of larger rocky reef feature. ✓

* Evaluator Concurs. Many of these items are inadequately described. Refer to the smooth sheet for complete information.

M. Adequacy of Survey

This survey is adequate to supercede all prior surveys for charting. Survey H-10013 is excellent, containing no substandard work. All data has been scanned and checked by FAIRWEATHER personnel. In addition to meeting the requirements of the Navigable Area Survey to locate the two fathom contour, all rocks, islets and ledges in the intertidal zone were investigated except for areas of extensive mudflats. If further detail is required for future chart editions, controlled shoreline photography will be necessary.

See Evaluation Report Section 4

N. Aids to Navigation

There were no aids to navigation on this survey and none are required. ✓

O. Statistics

TABLE XI

Statistics

Vessel	Positions	Nautical Miles of Hydro	Square Miles of Hydro	Bottom Samples
FA-3 (2023)	2000-2322	6.2	0.32	3
FA-4 (2024)	4000-5076	91.1	4.86	-
FA-5 (2025)	6859-7334	45.5	2.43	19
WH-1 (2027)	8000-8142	8.0	0.43	1
FAIRWEATHER (2020)	-	-	-	-
Totals	2015	150.8	8.04	23

Nautical Miles M/S Crosslines: 21.1 (14%)

Bottom Samples: 23

Tide Stations: 2-Salt Lake Bay Tide Station, 945-2484 (located at 57° 57' 36"N, 135° 39' 18"W); Hoonah Harbor Tide Station, 945-2441 (located at 58° 07' 45"N, 135° 27' 47"W)

Nansen Casts: 2

Martek Casts: 0

P. Miscellaneous

A reprint of a memorandum dated 10 June 1982, to Captain Elsenshon of the Southeast Alaskan Pilots Association informing the Association when copies of the Port Frederick hydrographic surveys would be available is included in Appendix I, Landmarks for Charts. A copy of a memorandum, dated 4 June 1982, to the Director of the Pacific Marine Center, concerning current anomalies and user evaluation of chart 17302 of Port Frederick is also included in Appendix I, Landmarks for Charts. ✓

The Silver Bay Logging Company operates a ferry between Eight Fathom Bight and Salt Lake Bay. The ferry is infrequent and unscheduled and should not be included on the charts. ✓

The channel into Salt Chuck, the lagoon south of Salt Lake Bay, experiences swift currents and rip tides during maximum tides and should be so described on the charts. ✓

Q. Recommendations

For recommendations as to charted features, see Section L, Comparison with the Charts. Recommendation is made that this survey be used to update all previous charts of this area. If larger scale charts are planned for this area, controlled aerial photography should be flown to upgrade the existing shoreline sources. ✓

R. Automated Data Processing

NOS standards were followed for all data acquisition and processing methods. See Table XII, Computer Programs, for programs used on this survey.

TABLE XII

Computer Programs

Number	Description	Version Date
RK 112	R/R Real Time Plot	9/11/82
RK 201	Grid, Signal Lattice Plot	4/18/75
RK 211	R/R Non-real Time Plot	2/2/81
RK 212	Visual Station Load and Plot	4/1/74
RK 215	Visual Non-real Time Plot	2/11/81
RK 216	R/Az Non-real Time Plot	2/9/81
RK 300	Utility Package	10/21/81
RK 330	Data Reformat and Check	5/4/76
RK 360	Electronic Corrector Abstract	2/2/76
AM 500	Predicted Tides	11/10/72
RK 530	Velocity Correctors	5/10/76
RK 561	Geodetic Calibration	2/19/75
AM 602	Elinore	5/20/75

✓

S. Referral to Reports

1. OPR-0343-FA-82, Horizontal Control Report.
2. OPR-0343-FA-82, Electronic Control Report.
3. OPR-0343-FA-82, Correction to Echo Sounding Report.
4. OPR-0343-FA-82, Coast Pilot Report.
5. OPR-0343-FA-82, Geodetic Names Report.

SUBMITTED BY:

Arthur E. Francis

ARTHUR E FRANCIS
ENS, NOAA

APPROVED BY:

Walter F Forster

WALTER F FORSTER II
CDR, NOAA
COMMANDING

List of Separates Following the Test

A. Hydrographic Sheet Projection Parameter Printouts

B. Field Tide Note
Abstracts of Times of Hydrography

C. Geographic Names List

D. Abstracts of Corrections to Echo Soundings
Velocity Corrector Tape Printouts
TC/TI Tape Printouts

E. Abstracts of Corrections to Electronic Position Control

F. List of Signals

G. Abstracts of Positions

H. Bottom Sample Log Sheets

I. Landmarks for Charts

J. Approval Sheet

APPENDIX B

Field Tide Note
Abstracts of Times of Hydrography

FIELD TIDE NOTE

OPR-0343-FA-82 (Spring)

Port Frederick, Alaska

Field tide reduction of soundings was based on predicted tides from Juneau, Alaska, corrected as per project instructions OPR-0343-FA-82, dated 14 October 1981, amended by Change 1, dated 15 October 1981 and 23 November 1981. Correctors were as follows:

Time Corrections		Height Correction Ratio
High	Low	
0 minutes	+10 minutes	X 0.90

Predicted tide correctors were interpolated by the hydroplot system using program AM 500. All times of both predicted and recorded tides were based on Greenwich Mean Time. The predicted tides were acceptable for hydrography with no discrepancies in data attributable to tides errors.

The tide station at Juneau, Alaska was the primary gage for this project. Levels were run to this gage on 15 April 1982 (JD105) and 14 May 1982 (JD134). Tide data was collected from the Hoonah Harbor tide station 945-2441, located at the Icy Strait Salmon Company pier at 58° 07' 45"N, 135° 27' 47"W and also from the Salt Lake Bay tide gage 945-2484, located at 57° 57' 36"N, 135° 39' 18"W. Survey H-9990 was controlled by gage 945-2441, while surveys H-10010 and H-10013 were controlled by gages 945-2441 and 945-2482 together.

ADR gage 6402A4596M2 was installed on 9 April 1982 (JD099) at the Hoonah Harbor tide station and removed on 25 May 1982 (JD145) at the end of the field work. Three wire levels were run to four existing bench marks (2441A-2441D) to the tide staff stop and tied into horizontal control station FERRY 1981 on 9 April 1982 (JD099). On 21 May 1982 (JD111) three wire levels were run from the staff stop to the existing bench marks and tied into horizontal control station FERRY RM1 and station FERRY at the end of field work. The entire run of 1.77 km closed within 2 mm.

Gage plots off sheet limits

For the Salt Lake Bay tide station, bubbler gage #67A-16205 was installed on 10 April 1982 (JD100). Three existing bench marks were recovered as described and two new bench marks stamped 2484A and 2484B were installed. Three wire levels were run to all five bench marks and to the tide staff stop. Closure for the 0.39 km run was 5.62 mm. Closing levels for this tide station were run on 24 May 1982 and closure was 5.09 mm for the same run.

An additional bubbler gage was installed at each tide station as a back up for each main gage. Back up tide gage data was not used, since no serious main gage problems developed. Data from the back up gages has been retained aboard.

OPERATIONAL PROBLEMS

On 27 April 1982 (JD117) the chart drive in the Salt Lake Bay bubbler gage #67A-16205 showed signs of malfunctioning. This chart drive was removed and replaced. Tidal data for the period 181000Z on 20 April 1982 (JD110) to 184500Z on 21 April 1982 (JD111) was recoverable by interploation of the tide marogram. A malfunction also occurred in the back up gage at the Salt Lake Bay tide station on 29 April 1982 (JD119). A anomalis trace on the tide marogram appeared and was interpreted to be an internal problem and the gage was sent to the Pacific Tides Party for required maintenance. No gage problems were incurred at the Hoonah Harbor tide station.

MISCELLANEOUS

One day of hydrography was run on survey H-9990 (FA-10-6-81) during the 1981 FAIRWEATHER field season. Hydrography run on this day (JD 347) will be controlled by tidal data collected during the 1981 field season. This information may be found in the Field Tide Note for the FAIRWEATHER'S 1981 season in Port Frederick (Copy Attached).

APPENDIX C

Geographic Names List

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER
H-10013
(FA-10-2-82)

Name on Survey	A ON CHART NO. 17302	B ON PREVIOUS SURVEY NO. 4319	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	
BELL ISLAND	X	X	X							1
CHICHAGOF ISLAND		X	X							2
EIGHT FATHOM BIGHT	X		X							3
PORT FREDERICK		X	X							4
~~PORTAGE~~			X							5
THE NARROWS	X									6
SALT CHUCK ~~BAY~~				X						7
SALT LAKE BAY	X	X	X							8
ALASKA (title block)										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
					Approved:					20
										21
					Chas. E. Harrington					22
					Chief Geographer - N/CG2x5					23
					16 June 1983					24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

APPENDIX D

Abstracts of Corrections to Echo Soundings
~~Velocity Corrector Tape Printout~~
TC/TI Tape Printouts

✓

TC/TI TAPE LISTING
FA10-2-82 H-10013

See Evaluation Report Section 1. Times were inserted for lead lines and detached positions not requiring TRA or Velocity.

```
155400 0 0000 0000 131 202300 000000
160900 0 0003
173222 0 0000
173740 0 0003
235200 0 0000 0000 143 202300 000000

173841 0 0003 0000 136 202400 000000
200540 0 0000 0000 130 202400 000000
202951 0 0003
203207 0 0000
203326 0 0003
204102 0 0000
204439 0 0003
194400 0 0000 0000 138 202400 000000

173900 0 0003 0000 128 202500 000000
155800 0 0000 0000 132 202500 000000

184200 0 0020 0000 127 202700 000000
204300 0 0000 0000 132 202700 000000
210400 0 0018
215745 0 0000
220000 0 0018
170600 0 0000 0000 139 202700 000000
162800 0 0000 0000 144 202700 000000
```

APPENDIX E

Abstracts of Corrections to Electronic Position Control

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2023 R/Az SHEET : FA-10-2-82

TIME	DAY	PATTERN 1	PATTERN 2
155400	131	+00001	-00209
160900		+00001	-97541
173222		+00001	-45531
173740		+00001	-51125
190620		+00000	+59325
192043		+00000	+76328
192456		+00000	+58199
173840	132	+00002	-04241
185400		+00002	-83264
200000		+00002	+87529
220536		+00001	-95286
223800	143	+00000	-03465
235200		+00000	+00000

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2027 R/Az SHEET : FA-10-2-82

TIME	DAY	PATTERN 1	PATTERN 2
184200	127	+00002	-87293
223033		+00002	-81910
204300	132	+00000	-83180
210400		+00000	-99402
215745		+00000	-67155
220000		+00000	-64547
232500		+00000	-74393
234630		+00000	-83017
235900		+00000	+00000

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2025 R/Az SHEET : FA-10-2-82

TIME	DAY	PATTERN 1	PATTERN 2
173900	128	+00002	-89151
233824		+00002	-98541
000000	129	+00002	-04500
001800		+00002	-94429
164700		+00002	+85041
210524		+00002	-85134
220300		+00002	-75435
221000		+00002	-51111
154823	132	+00001	-01565
155800		+00000	+00001

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2025 R/Az SHEET : FA-10-2-82

Bottom Samples

TIME	DAY	PATTERN 1	PATTERN 2
204232	131	+00001	-12598
223748		+00001	-13487
223800		+00000	+00000

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2027 R/R SHEET : FA-10-2-81

TIME	DAY	PATTERN 1	PATTERN 2
170800	139	+00002	+00002
220000		+00000	+00000

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2023 R/R SHEET : FA-10-2-82

TIME	DAY	PATTERN 1	PATTERN 2
192752	131	+00001	+00000
231321	132	+00001	+00000
000359	133	+00000	-00001
184519	140	+00001	+00001
194053	143	+00001	+00001
211756		+00001	+00000
215620		+00001	+00001
215900		+00000	+00000

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2024 R/R SHEET : PA-10-2-82

TIME	DAY	PATTERN 1	PATTERN 2
173841	126	+00000	+00000
161710	127	+00002	+00000
215825		+00000	+00002
170910	128	+00000	-00001
211602		-00002	-00001
155827	129	+00002	+00002
165333	130	-00002	-00001
214648		+00002	+00000
221145		-00002	-00001
165721	138	+00002	-00001
175156		-00001	+00001
184235		+00001	+00002
194400		+00000	+00000

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2025 R/R SHEET : FA-10-2-82

Bottom Samples

TIME	DAY	PATTERN 1	PATTERN 2
155543	131	-00001	+00001
172939		+00001	-00001
180610		-00001	+00001
195400		+00000	+00000

APPENDIX F

List of Signals

OPR-0343-FA-82

PORT FREDERICK, AK SIGNAL LIST

SCRAGGY 1923 581352 1923

190 0 58 10 28805 135 28 16165 250 0009 000000

SCRAGGY CAL POLE 581352 FAIRWEATHER 1982

191 3 58 10 24571 135 28 13628 243 0000 000000

GEBNEY 1982 581353 FAIRWEATHER 1982

193 3 58 11 03288 135 31 04738 250 0009 000000

HOONAH 1982 581352 FAIRWEATHER 1982

194 4 58 11 01132 135 29 32520 250 0008 000000

BAY 1922 581352 1922

195 3 58 16 12134 135 20 29222 250 0008 000000

QUILL 2 1922 581351 1922

196 3 58 10 47069 135 15 25244 250 0008 000000

THE SISTERS LIGHT 1959 581351 1959

197 0 58 10 47243 135 15 03497 139 0008 000000

PUT 2 1923 581352 1923

200 3 58 09 00122 135 29 24916 250 0007 000000

MESSY 1981 581353 FAIRWEATHER 1981

205 3 58 08 27817 135 31 08160 250 0006 000000

PORT 1923 581353 1923

210 0 58 07 15173 135 31 11242 250 0007 000000

HUMP 1923 581353 1923

220 0 58 06 04924 135 32 10627 250 0006 000000

CAL POLE 1 1981 581353 FAIRWEATHER 1981

230 0 58 05 06145 135 33 54982 243 0000 000000

TP1 1981 581353 FAIRWEATHER 1981

240 0 58 04 00122 135 35 34010 243 0004 000000

TP1 EGG 1981 581353 FAIRWEATHER 1981

241 5 58 04 08441 135 35 34472 254 0004 000000

CHIM 1923 581353 1923

243 3 58 01 24583 135 36 36240 250 0002 000000

NECK 1923 581353 1923

250 0 58 03 16877 135 36 29915 139 0000 000000

NECK RM 1981 581353 FAIRWEATHER 1981

251 5 58 03 16840 135 36 29929 250 0002 000000

INNER POINT SOPHIA LIGHT 581352 FAIRWEATHER 1981

260 4 58 07 56664 135 27 48532 250 0009 000000

SOPHIA 2 1923 581352 1923

262 7 58 08 35144 135 23 47230 250 0011 000000

```
060
061 INNER 2 1981                    581352 FAIRWEATHER 1981
062 265 4  58 07 56634 135 27 48505  250 0007 000000
063
064 FERRY 1981                      581352 FAIRWEATHER 1981
065 270 4  58 07 01634 135 27 19565  250 0008 000000
066
067 HOONAH CHURCH
068 HIGHER CROSS 1981               581352 FAIRWEATHER 1981
069 280 2  58 06 47564 135 26 45670  139 0045 000000
070
071 CHURCH CROSS
072 WITH BELL 1981                  581352 FAIRWEATHER 1981
073 285 2  58 06 34453 135 26 38457  139 0045 000000
074
075 WIND SOCK 1981                  581352 FAIRWEATHER 1981
076 290 3  58 06 46163 135 26 51920  139 0002 000000
077
078 RADIO TOWER 1981                581352 FAIRWEATHER 1981
079 300 2  58 06 31502 135 26 36456  139 0055 000000
080
081 PITT 1981                       581352 FAIRWEATHER 1981
082 320 7  58 06 36960 135 27 46310  139 0004 000000
083
084 PITT RM2 1981                   581352 FAIRWEATHER 1981
085 322 5  58 06 36742 135 27 16565  250 0004 000000
086
087 LEDGE 1981 (SEXTANT)            581352 FAIRWEATHER 1981
088 330 6  58 06 35355 135 27 07820  243 0001 000000
089
090 HOONAH BKWATER LT 2 1981   581352 FAIRWEATHER 1981
091 340 2  58 06 31955 135 26 54651  139 0009 000000
092
093 HOONAH BKWATER LT 3 1981   581352 FAIRWEATHER 1981
094 350 3  58 06 26575 135 26 40881  139 0009 000000
095
096 CAL POLE 3 1981                 581352 FAIRWEATHER 1981
097 360 3  58 06 23693 135 26 42029  243 0000 000000
098
099 GAME 3 1981                     581352 FAIRWEATHER 1981
100 420 7  58 05 19709 135 29 39142  250 0004 000000
101
102 CAL POLE 2 1981                 581353 FAIRWEATHER 1981
103 430 7  58 05 00523 135 30 00348  243 0000 000000
104
105 FRED 2 1923                     581353      1923
106 440 5  58 03 45528 135 32 34015  250 0006 000000
107
108 GRASS 1981                      581353 FAIRWEATHER 1981
109 450 7  58 02 53523 135 33 46677  250 0011 000000
110
111 VICKI 1981                      581353 FAIRWEATHER 1981
112 452 4  58 00 24112 135 34 27864  250 0003 000000
113
114 GRADY 1981                      581353 FAIRWEATHER 1981
115 454 4  58 00 51395 135 33 55399  250 0003 000000
116
117 NEKA 1981                       581353 FAIRWEATHER 1981
118 455 5  58 02 59020 135 40 06543  250 0004 000000
```

```
119
120 HEAD 1982                          581353 FAIRWEATHER 1982
121 454 7  58 01 33284 135 38 26907  250 0007 000000
122
123 NORA 1982                         581353 FAIRWEATHER 1982
124 457 2  58 02 23911 135 40 07654  250 0005 000000
125
126 VIRGIL 1982                       581353 FAIRWEATHER 1982
127 458 5  58 02 30876 135 41 21247  250 0005 000000
128
129 SOUTH 1982                        581353 FAIRWEATHER 1982
130 459 5  58 01 31725 135 39 29010  250 0009 000000
131
132 REB 1981                          581352 FAIRWEATHER 1981
133 460 0  58 06 31968 135 26 54622  250 0008 000000
134
135 AGAIN 1982                        581353 FAIRWEATHER 1982
136 461 6  58 01 48293 135 41 39210  250 0005 000000
137
138 SOUTH RM2 1982                    581353 FAIRWEATHER 1982
139 462 5  58 01 31455 135 39 28806  250 0009 000000
140
141 SEAGULL CREEK CAL FOL 1982        581353 FAIRWEATHER 1982
142 463 4  58 01 21069 135 34 14240  250 0001 000000
143
144 JOOP 1982                         581353 FAIRWEATHER 1982
145 464 6  58 01 55292 135 39 48344  250 0003 000000
146
147 ISLE 1982                         581353 FAIRWEATHER 1982
148 465 1  58 01 58492 135 38 08234  250 0006 000000
149
150 TP6 1982                          581353 FAIRWEATHER 1982
151 466 1  58 03 17754 135 40 13171  250 0005 000000
152
153 TP7 1982                          581353 FAIRWEATHER 1982
154 467 1  58 03 19869 135 41 20230  250 0007 000000
155
156 PING, 1982                        571354 FAIRWEATHER 1982
157 468 1  57 59 43201 135 38 16250  250 0001 000000
158
159 PASS, 1982                        571354 FAIRWEATHER 1982
160 469 6  57 59 13359 135 38 13706  250 0004 000000
161
162 SUNNY, 1982                       571354 FAIRWEATHER 1982
163 470 2  57 59 29422 135 41 02600  250 0004 000000
164
165 FOR, 1923                         571354      1923
166 471 6  57 58 53008 135 42 07719  250 0007 000000
167
168 EIGHT, 1982                       571354 FAIRWEATHER 1982
169 472 2  57 59 54876 135 42 38068  250 0006 000000
170
171 OLGA, 1982                        571354 FAIRWEATHER 1982
172 473 6  57 59 25541 135 44 21164  250 0004 000000
173
174 FATHOM, 1982                      581353 FAIRWEATHER 1982
175 474 0  58 00 05899 135 44 37996  250 0003 000000
176
177 SILVER, 1982                      571354 FAIRWEATHER 1982
178 475 4  57 58 34984 135 38 55647  250 0004 000000
```

```
180 QUICK, 1982                    571354 FAIRWEATHER 1982
181 476 5  57 58 22531 135 39 45753  250 0005 000000
182
183 TP 8 1982                      571354 FAIRWEATHER 1982
184 477 4  57 57 49617 135 38 24109  250 0005 000000
185
186 TP 9 1982                      571354 FAIRWEATHER 1982
187 478 4  57 57 49155 135 38 24365  250 0006 000000
188
189 TP 10, 1982                    571354 FAIRWEATHER 1982
190 479 3  57 56 52683 135 40 19943  250 0005 000000
191
192 BM 2484A, 1982                 571354 FAIRWEATHER 1982
193 480 3  57 57 27291 135 39 13703  250 0003 000000
194
195 KATHY, 1982                    571354 FAIRWEATHER 1982
196 481 3  57 59 36174 135 47 16685  250 0003 000000
197
198 DAWG RM1, 1982                 571354 FAIRWEATHER 1982
199 482 7  57 58 50470 135 47 20222  250 0003 000000
200
201 DAWG, 1982                     571354 FAIRWEATHER 1982
202 483 5  57 58 50281 135 47 21046  250 0003 000000
203
204 PORTAGE, 1982                  571354 FAIRWEATHER 1982
205 484 2  57 59 26617 135 47 58486  250 0003 000000
206
207 FOR CAL, 1982                  571354 FAIRWEATHER 1982
208 485 3  57 58 53252 135 42 08189  254 0007 000000
209
210 TP 3 1982                      581352 FAIRWEATHER 1982
211 580 3  58 06 16324 135 26 44426  254 0007 000000
212
213 TP 4 1982                      581352 FAIRWEATHER 1982
214 581 7  58 06 18972 135 26 49928  254 0007 000000
215
216 TP 2 1982                      581352 FAIRWEATHER 1982
217 582 0  58 06 19458 135 26 28736  243 0007 000000
218
219 TP 5 1982                      581352 FAIRWEATHER 1982
220 585 2  58 05 49212 135 27 04067  254 0005 000000
221
222 FALSE TP5 ECC 1982             581352 FAIRWEATHER 1982
223 586 4  58 05 49140 135 27 03952  250 0005 000000
```

APPENDIX H

Bottom Sample Log Sheets

NOAA FORM 75-
(11-72)

FA-3

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

U.S. DEPARTMENT OF CO[illegible]RCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

VESSEL	PROJ. NO.	YEAR		CHECKED BY	DATE CHECKED
FAIRWEATHER FA-5 & Wh-2		1982	FA 10-2-82		

SERIAL NO.	DATE	SAMPLE POSITION		DEPTH (Fathoms)	WEIGHT OF SAMPLER	APPROX. PENETRATION	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, dented cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)	OBS. INIT.
		LATITUDE	LONGITUDE								
2148	12 MAY 1982	57/59/04	135/47/37	6.4				gn	M, ~~brk Sh~~		
2149	"	57/59/09	135/46/54	11.5				gn	M, brk Sh		
2150	"	57/59/24	135/48/10	4.2				gn	M, brk Sh		
7306	11 MAY 1982	57/58/22	135/39/07	28.9				gn	M, G		
7307	"	57/58/32	135/40/03	44.0				gn	M		
7308	"	57/58/57	135/39/32	60.7				gn	M		
7309	"	57/59/25	135/40/10	49.0				gn	M		
7310	"	57/59/05	135/40/23	61.7				gn	M		
7311	"	57/58/41	135/41/10	17.9					rky		
7312	"	57/59/04	135/42/40	39.2				gn	M, Sh		
7313	"	57/59/16	135/41/26	49.9				gn	M		
7314	"	57/59/44	135/42/17	13.7				gn	S, G		
7315	"	57/59/21	135/43/03	25.0				gn	M, G		
7316	"	57/59/35	135/43/32	23.2					rky		
7317	"	57/59/55	135/43/19	21.5					rky		
7318	"	58/00/25	135/44/13	9.8				gn	M, G, Sh		
7319	"	58/59/47	135/44/35	31.9				gn	M		

Use more than one line per sample if necessary.

☆ U.S.GPO:1978-765-092/1190 Region No. 6

NOAA FORM 75-44
(11-72)

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

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

VESSEL	PROJ. NO.	YEAR		CHECKED BY	DATE CHECKED
FAIRWEATHER FA-5 & WL 2		1982	FA 10-2-82		

SERIAL NO.	DATE	SAMPLE POSITION		DEPTH (Fathoms)	WEIGHT OF SAMPLER	APPROX. PENETRATION	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, dented cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)	OBS. INIT.
		LATITUDE	LONGITUDE								
7320	"	58/00/02	135/44/59	30.9				gn	M, brk Sh		
7321	"	57/59/40	135/45/52	24.6				gn	M		
7322	"	57/59/40	135/47/07	12.5				gn	M, brk Sh		
7323	"	57/59/22	135/46/07	10.4				gn	S, brk Sh		
7324	"	57/57/44	135/38/53	23.3				bk	M		
8100	12 MAY 1982	57/57/01	135/39/44	11.7				dk gn	M		

Use more than one line per sample if necessary.

U.S.GPO: 1978-765-092/1190 Region No. 6

APPENDIX I

Landmarks for Charts

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

ORIGINATING ACTIVITY
- [X] HYDROGRAPHIC PARTY
- [ ] GEODETIC PARTY
- [ ] PHOTO FIELD PARTY
- [ ] COMPILATION ACTIVITY
- [ ] FINAL REVIEWER
- [ ] QUALITY CONTROL & REVIEW GRP.
- [ ] COAST PILOT BRANCH

(See reverse for responsible personnel)

- [X] TO BE CHARTED
- [ ] TO BE REVISED
- [ ] TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
NOAA Ship FAIRWEATHER	Alaska	Port Frederick	6/20/82

The following objects HAVE [·] HAVE NOT [ ] been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
343-FA-82	H-10013	FA-10-2-82	1972 North American

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	″ D.M. Meters	POSITION LONGITUDE ° ′	″ D.P. Meters	METHOD AND DATE OF LOCATION (See Instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
Waterfall		57 59	35	135 39	25		F-VIS-8-L	17302 Appl PA 17300 NCorr
Logging Pier		57 58	23	135 38	49		F-VIS-8-L	17302 Appl 17300 N Corr
Logging Pier		57 58	23	135 38	49		F-VIS-8-L	17302 17300
	NO CORR							

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD	Waterfall: Lt. Todd Baxter Logging Pier's; S.T. Steve Markle	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED	Walter F. Forster, CDR, NOAA	FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64,

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS
Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.
EXAMPLE: 75E(C)6042
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED
Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field Identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.
EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.
EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED
When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.
EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH
Enter 'V-Vis.' and date.
EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

★ U.S. GOVERNMENT PRINTING OFFICE: 1974-665-073/1030 Region 6

APPENDIX G

Abstracts of Positions

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA Ship FAIRWEATHER S220
Fleet Post Office
Seattle, Washington 98799

CPM220/WFF:rmw/A-17

10 June 1982

Captain H. R. Elsensohn
Southeastern Alaska Pilot Association
P.O. Box 6100
Ketchikan, Alaska 99901

Dear Captain Elsensohn:

The FAIRWEATHER has completed a Navigable Area Survey of Port Frederick as of 24 May 1982. The surveys will be forwarded to the Director, Pacific Marine Center, 1801 Fairview Avenue East, Seattle, Washington 98102, according to the following time table. By this letter, the FAIRWEATHER is requesting the Marine Center to copy these surveys and forward them for your information.

Survey Number	Title of Survey	Scale	Date Forwarded to Pacific Marine Center
H-9987	Hoonah Harbor and Approaches	1:10,000	1 December 1981
H-9990	Approaches to Port Frederick	1:10,000	12 June 1982
H-10010	Burnt Point to the Narrows	1:10,000	1 July 1982
H-10013	The Narrows to Portage	1:10,000	1 July 1982

The copies of H-9987, H-9990, H-10010 and H-10013 will bear the usual cautionary note "Advanced Information, subject to office review". The soundings on these sheets are based on predicted tides with the application of real tide correctors applied after office review.

Thank you for responding to our initial inquiry to mariners prior to the survey of Port Frederick.

Sincerely,

Walter F. Forster
Commander, NOAA
Commanding Officer

cc: Director, Pacific Marine Center

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA Ship FAIRWEATHER S220

708

CPM220/WFF:acm/A-01

DATE : June 4, 1982

TO : OA/C2 - Director, Office of Oceanography

THRU : OA/CPM - Director, Pacific Marine Center

FROM : OA/CPM220 - Commanding Officer
NOAA Ship FAIRWEATHER S220

SUBJECT: Current Anomalies, Port Frederick, Alaska

Although significant tide related currents were found to exist at the restricted entrances of South Bight and Salt Chuck Bays, no anomalous currents that affect safe navigation were discovered within Port Frederick.

Interviews with several local persons confirmed that no current anomalies existed in the area. A list of those persons interviewed by FAIRWEATHER personnel is attached.

Local Information

George Dalton Jr.	Resident, 10 years Box 175 Hoonah, Alaska 99829
Paul Dybdahle	Hoonah Harbor Master Resident 10 years General Delivery Hoonah, Alaska 99829
Walter Jewell	Fisherman In area 40 years General Delivery Hoonah, Alaska 99829
Gary Miner	Student, Eight Fathom Bight Resident 3 years General Delivery Hoonah, Alaska 99829
Melinda Moore	Teacher, Eight Fathom Bight General Delivery Hoonah, Alaska 99829
Miles Murphy	Mayor of Hoonah Lifetime Resident City Hall Hoonah, Alaska 99829
Ken Wicks	Teacher Resident 10 years P.O. Box 181 Hoonah, Alaska 99829

ABSTRACT OF POSITIONS

H- 10013 Console # 792
FA- 3 (2023) (or Mobile unit)

DAY	POSITIONS	CONTROL CODE*	CONTROL STATIONS and XPDR # S1/XPDR	M	S2/XPDR	TYPE OF HYDRO MS	XL	MS SPLITS	PSR #	DEVEL. #	BB or DPs	Sheets where Plotted Main Sheet	Enlargement #	Rejected or Duplicated Positions
131	2000 - 2017	03	474/C								✓ DP		A	
131	2018 2035	03	474/C			✓								2036 Leadline Sounding Submerged Reef
131	2037	03	474/C					Plot in Red			✓ DP			
131	2038 2061	03	474/C			✓								2054
131	2062	03	474/C								✓ DP			Rock
131	2063 2076	03	473/A			✓								
131	2077	03	473/A					PLOT IN RED			HYDRO ✓ DP			
131	2078 2086	03	473/A				✓							
131	2087 2088	03 04	473/A								✓			Rock LEDGE
132	2089 2132	03	483/7			✓								2094 - 2095

CONTROL CODES: 01 Visual; 03 Range/Az; 04 Range/Range; 05 Hyperbolic; 08 Hyper/Visual; 09 Range/Visua.

ABSTRACT OF POSITIONS

H- 10013

FA-3 (2023)

Console # 702 (or Mobile unit)

DAY	POSITIONS	CONTROL CODE*	CONTROL STATIONS and XPDR # S1/XPDR	M	S2/XPDR	TYPE OF HYDRO MS	XL	MS SPLITS	PSR #	DEVEL. #	BS or DPs	Sheets where Plotted Main Sheet	Enlargement #	Rejected or Duplicated Positions
132	2133 2142	03	483/7				✓							
132	2143 2147	03	483/7			✓								2144
132	2148 2150	03	483/7								BS ✓			
132	2151 2157	03	483/7			✓								
132	2158 2160	03	483/7								DPs ✓			Rocky PT
132	2161 2164	03	483/7			✓								
132	2165 2166	03	472/C								DPs ✓			SAND BAR & Rocky PT.
132	2167 2170	03	472/C			✓								
132	2171 2195	04	470/B		475/A	✓								2179 - 2180, 2185 POSITIONS NOT PLOTTED; 2171 - 2178
132	2196 2198	04	475/A		471/8	✓								

CONTROL CODES: 01 Visual; 03 Range/Az; 04 Range/Range; 05 Hyperbolic; 08 Hyper/Visual; 09 Range/Visua.

ABSTRACT OF POSITIONS Fl. 3

H- 10013

FA- 10-2-82

Console # 707 (or Mob unit)

DAY	POSITIONS	CONTROL CODE*	CONTROL STATIONS and XPDR # S1/XPDR	M	S2/XPDR	TYPE OF HYDRO MS	XL	MS SPLITS	PSR #	DEVEL. #	BS or DPs	Sheets where Plotted Main Sheet	Enlargement #	Rejected or Duplicated Positions
140	2199 2222	04				X								2208 - 2210 2217 - 2219
140	2223 2229	04			\	X								
140	2230 2232	04				x								
143	2233 2250	04				X								2151 DO NOT PLOT 2233 - 2250
143	2252 2257	04					X							DO NOT PLOT
143	2258 2264	04				X								DO NOT PLOT
143	2265 2266	04				X								
143	2267 2268	04				X								DO NOT PLOT
143	2269 2272	04					X							DO NOT PLOT
143	2273 2283	04				X								

CONTROL CODES: 01 Visual; 03 Range/Az; 04 Range/Range; 05 Hyperbolic; 08 Hyper/Visual; 09 Range/Visual

ABSTRACT OF POSITIONS FA-3

H- 10013 Console # 702
FA- 10-2-82 (or Mob unit)

DAY	POSITIONS	CONTROL CODE*	CONTROL STATIONS and XPDR #			TYPE OF HYDRO						Sheets where Plotted		Rejected or Duplicated Positions
			SI/Aircraft	M	SI/XPDR	MS	XL	MS SPLITS	PSR #	DEVEL. #	BS or DPs	Main Sheet	Enlargement #	
143	2284 2295	04				X								DO NOT PLOT 22 m. SPLITS
143	2296 2299	04					X							
143	2300 2301	04				X								
143	2302 2320	09				X								
143	2321 2322	03									D.P.			

CONTROL CODES: 01 Visual; 03 Range/Az; 04 Range/Range; 0[illegible] Hyperbolic; 08 Hyper/Visual; 09 Range/Visua.

ABSTRACT OF POSITIONS

H-

FA- 4 (2024)

Console # 701
(or Mobile unit)

DAY	POSITIONS	CONTROL CODE*	CONTROL STATIONS and XPDR # S1/XPDR	M	S2/XPDR	TYPE OF HYDRO MS	XL	MS SPLITS	PSR #	DEVEL. #	BS or DPs	Sheets where Plotted Main Sheet	Enlargement #	Rejected or Duplicated Positions
126	4000 4187	04	471/C		473/5	✓						✓		
126	4188 4223	04	471/C		473/5		✓					✓		
126	4225 4289	04	471/C		473/5	✓						✓		4224, 4234
127	4290 4429	04	476/A		471/6	✓						✓		4367, 4369
127	4430 4440	04	476/A		471/6		✓							
127	4441 4463	04	472/6		470/A	✓					4464 DP			
128	4465 4589	04	472/6		470/B	✓								4469, 4533, 4534, 4538, 4540, 4564, 4579, 4580, 4590, 4591
128	4592 4689	04	480/8		476/7	✓								4606, 4607, 4628, 4629, 4631, 4655, 4677
129	4690 4758	04	471/A		470/9	✓								4702, 4703, 4715, 4716, 4749, 4694

CONTROL CODES: 01 Visual; 03 Range/Az; 04 Range/Range; 05 Hyperbolic; 08 Hyper/Visual; 09 Range/Visua.

ABSTRACT OF POSITIONS

H-

FA-4 (2024)

Console # 701 (or Mobile unit)

DAY	POSITIONS	CONTROL CODE*	CONTROL STATIONS and XPDR # S1/XPDR	M	S1/XPDR	TYPE OF HYDRO MS	XL	MS SPLITS	PSR #	DEVEL. #	BS or DPs	Sheets where Plotted Main Sheet	Enlargement #	Rejected or Duplicated Positions
129	4759 4765	04	470/9		475/A	✓								
129	4767 4860	04	475/A		477/9	✓								4766, 4801, 4810 4694, 4843
129	4861 4868	04	475/A		477/9		✓							
129	4869 4912	04	474/A		472/9	✓								
130	4913 4930	04	471/8		470/7		✓							
130	4931 4935	04	471/8		470/7						DPs ✓			4936, 4937
130	4938 4950	04	471/8		470/7	✓								
130	4951 4976	04	471/8		470/7						DPs ✓			4977
130	4978 4986	04	474/A		472/5		✓							
130	4987 5017	04	471/8		473/B	✓								

CONTROL CODES: 01 Visual; 03 Range/Az; 04 Range/Range; 05 Hyperbolic; 08 Hyper/Visual; 09 Range/Visua.

ABSTRACT OF POSITIONS

H-

Console # 701
(or Mobile unit)

FA- 4 (2024)

DAY	POSITIONS	CONTROL CODE*	CONTROL STATIONS and XPDR # S1/XPDR	M	S2/XPDR	TYPE OF HYDRO MS	XL	MS SPLITS	PSR #	DEVEL. #	BS or DPs	Sheets where Plotted Main Sheet	Enlargement #	Rejected or Duplicated Positions
138	5018 5026	04	472/A		470/B	✓								5027-5030
138	5031 5035	04	470/B		475/C	✓								
138	5036 5039	04	476/C		471/A	✓								
138	5040 5066	04	476/C		471/A	✓								
138	5067 5076	04	476/C		471/A		✓							NOTE: 22m. XL

CONTROL CODES: 01 Visual; 03 Range/Az; 04 Range/Range; 0[illegible] Hyperbolic; 08 Hyper/Visual; 09 Range/Visua.

ABSTRACT OF POSITIONS

H- _____ Console # B0323 (or Mobile unit)

FA- 5 (2025)

DAY	POSITIONS	CONTROL CODE*	CONTROL STATIONS and XPDR # S1/XPDR	M	S2/XPDR	TYPE OF HYDRO MS	XL	MS SPLITS	PSR #	DEVEL. #	BS or DPs	Sheets where Plotted Main Sheet	Enlargement #	Rejected or Duplicated Positions
128	6859 7070	03	472/6			✓								6000-6858 (not used) 6870, 6927, 6961, 6962 7064
128 129	7071 7095	03	472/6				✓							
128 129	7096 7098	03	472/6			✓								
129	7099 7101	03	483/B								DP			
129	7102 7228	03	483/B			✓					7126 DP			7239-7248
129	7229 7253	03	484/B				✓							
129	7254 7305	03	484/B			✓					7305 DP			7271
131	7306 7319	04	471/8		470/7						B.S. ✓	✓		
131	7312	04	470/7		471/8						B.S. ✓	✓		
131	7313 7319	04	471/8		473/A						B.S. ✓	✓		

CONTROL CODES: 01 Visual; 03 Range/Az; 04 Range/Range; 05 Hyperbolic; 08 Hyper/Visual; 09 Range/Visua.

ABSTRACT OF POSITIONS

H- _____ Console # B0323 (or Mobile unit)

FA- 5 (2025)

DAY	POSITIONS	CONTROL CODE*	CONTROL STATIONS and XPDR #			TYPE OF HYDRO						Sheets where Plotted		Rejected or Duplicated Positions
			S1/XPDR	M	S2/XPDR	MS	XL	MS SPLITS	PSR #	DEVEL. #	BS or DPs	Main Sheet	Enlargement #	
131	7320 7323	03	472/5								B.S. ✓	✓		
131	7324	03	475/7								B.S. ✓	✓		
132	7325 7334	03	483/7			✓								

CONTROL CODES: 01 Visual; 03 Range/Az; 04 Range/Range; 0[illegible] Hyperbolic; 08 Hyper/Visual; 09 Range/Visua.

ABSTRACT OF POSITIONS

H-

Console # 703
(or Mobil unit)

FA- (2027)

DAY	POSITIONS	CONTROL CODE*	CONTROL STATIONS and XPDR # S1/XPDR	M	S2/XPDR	TYPE OF HYDRO MS	XL	MS SPLITS.	PSR #	DEVEL. #	BS or DPs	Sheets where Plotted Main Sheet	Enlargement #	Rejected or Duplicated Positions
127	8000 8083	03	479/C			✓								POSITIONS NOT PLOTTED: 8077, 8081, 8082 POSITION ONLY: 8078
127	8084 8097	03	479/C				✓				8098 8099 8103 DPs 8100 BS			
132	8101 8114	03	479/5			✓								
132	8115 8120	03	479/5								DPs ✓			NOT ON TAPE, SHORELINE CHECK ONLY
132	8121 8133	03	408/5			✓								POSITIONS NOT PLOTTED: 8125-8126, 8129, 8132+2 POSITION ONLY: 8128
139	8134 8140	04									DP			
144	8141 8142	01									DP			

CONTROL CODES: 01 Visual; 03 Range/Az; 04 Range/Range; 05 Hyperbolic; 08 Hyper/Visual; 09 Range/Visua.

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

ABSTRACT OF TIME OF HYDROGRAPHY AND/OR FIELD EDIT

Date 30 MAY 82

Project No. OPR-0343-FA-82 Vessel 2023

Date of Survey 5/82

Field Sheet No. FA10-2-82 Registry No. H-10013

Field Sheet is Complete/~~Incomplete~~

J.D.	Time (Z)		J.D.	Time (Z)
131	155400	-	131	201023
132	173840	-	133	000539
140	184519	-	140	210635
143	194053	-	143	235113

J.D.	Time (Z)		J.D.	Time (Z)
		-		

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

ABSTRACT OF TIME OF HYDROGRAPHY AND/OR FIELD EDIT

Date 30 MAY 82

Project No. OPR-0343-FA-82 Vessel 2024

Date of Survey 5/82

Field Sheet No. FA 10-2-82 Registry No. H-10013

Field Sheet is Complete/~~Incomplete~~

J.D.	Time (Z)		J.D.	Time (Z)
126	173841	-	126	234932
127	161710	-	127	222703
128	170910	-	128	231119
129	155827	-	129	223506
130	165333	-	130	224412
138	165721	-	138	194333

J.D.	Time (Z)		J.D.	Time (Z)

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

ABSTRACT OF TIME OF HYDROGRAPHY AND/OR FIELD EDIT

Date 30 MAY 82

Project No. OPR-0343-FA-82 Vessel 2025

Date of Survey 5/82

Field Sheet No. FA10-2-82 Registry No. H-10013

Field Sheet is Complete/~~Incomplete~~

J.D.	Time (Z)		J.D.	Time (Z)
128	173900	-	129	002057
129	164708	-	129	230850
131	155543	-	131	223748
132	154820	-	132	155735

J.D.	Time (Z)		J.D.	Time (Z)

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

ABSTRACT OF TIME OF HYDROGRAPHY AND/OR FIELD EDIT

Date 30 MAY 82

Project No. OPR-0343-FA-82 Vessel 2027

Date of Survey 5/82

Field Sheet No. FA10-2-82 Registry No. H-10013

Field Sheet is Complete/~~Incomplete~~

J.D.	Time (Z)		J.D.	Time (Z)
127	184200	-	127	225420
132	204300	-	132	234750
139	170800	-	139	213800
144	140101	-	144	162703

J.D.	Time (Z)		J.D.	Time (Z)
		-		

APPENDIX A

Hydrographic Sheet Projection Parameter Printouts

PARAMETER TAPE PRINTOUT

Final Field Sheet	Enlargement Log Boom & Pier	Development A
FEST=40000	FEST=40000	FEST=40000
CLAT=6390000	CLAT=6390000	CLAT=6390000
CMED=135/25/00	CMED=135/25/00	CMED=135/25/00
GRID=30	GRID=10	GRID=10
PLSCL=10000	PLSCL=2500	PLSCL=2500
PLAT=57/59/12	PLAT=57/59/10	PLAT=57/59/50
PLON=135/50/45	PLON=135/41/00	PLON=135/45/50
VESNO=2020	VESNO=2020	VESNO=2020
YR=82	YR=82	YR=82
ANDIST=3.0	ANDIST=3.0	ANDIST=3.0

APPENDIX J

Approval Sheet

APPENDIX J

APPROVAL SHEET

This survey is complete and adequate for charting purposes. The Commanding Officer supervised field work, inspected field records, and inspected plotting sheets on a daily basis.

Submitted by:

Robert H. Pingra
ENS, NOAA

Approved by:

Walter F. Forster
CDR, NOAA

NOAA FORM 77-27 (5-77) | U. S. DEPARTMENT OF COMMERCE NOAA | HYDROGRAPHIC SURVEY NUMBER H-10013

HYDROGRAPHIC SURVEY STATISTICS

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS & PRELIMINARY OVERLAYS	3
DESCRIPTIVE REPORT	1	SMOOTH OVERLAYS: POS. ARC, EXCESS	7

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES						
CAHIERS			1			
VOLUMES						
BOXES			1			

T-SHEET PRINTS (List) Chart 17302 (1:10,000), Prior Survey 4319 (1:10,000) USGS Quad (1:10,000)

SPECIAL REPORTS (List)

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

PROCESSING ACTIVITY	AMOUNTS: PRE-VERIFICATION	AMOUNTS: VERIFICATION	AMOUNTS: TOTALS
POSITIONS ON SHEET		1937	1937
POSITIONS CHECKED		18	
POSITIONS REVISED		47	
SOUNDINGS REVISED		00	
SOUNDINGS ERRONEOUSLY SPACED		00	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED			

	TIME – HOURS: PRE-VERIFICATION	TIME – HOURS: (VER)/(EVAL)	TIME – HOURS: TOTALS
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	4 *		
VERIFICATION OF CONTROL		02/00	02
VERIFICATION OF POSITIONS		101/00	101
VERIFICATION OF SOUNDINGS		206/24	230
COMPILATION OF SMOOTH SHEET		82.5/00	82.5
APPLICATION OF TOPOGRAPHY			
APPLICATION OF PHOTOBATHYMETRY		NA	
JUNCTIONS		.5/00	.5
COMPARISON WITH PRIOR SURVEYS & CHARTS		01/12	13
VERIFIER'S REPORT		05/45	50
OTHER (Quality Control)		00/56	56
TOTALS	4	398/137	535

	Beginning Date	Ending Date
Pre-Verification by: James S. Green	7/22/82	
Verification by: Arsenio A. Luceno Evaluated by Bruce A. Olmstead	8/26/82	9/21/83
Verification Check by: Stanley H. Otsubo, James S. Green	Time (Hours) 57	Date 10/03/83
Marine Center Inspection by: Hydrographic Inspection Team	Time (Hours) 4	Date 12/12/83
Quality Control Inspection by	Time (Hours)	Date
Requirements Evaluation by	Time (Hours)	Date

*Time in this column is for Verification (VER) and Evaluation (EVAL)

PACIFIC MARINE CENTER
EVALUATION REPORT

REGISTRY NO: H-10013 FIELD NO: FA-10-2-82

Alaska, Port Frederick West of the Narrows

SURVEYED: May 6 - May 24, 1982

SCALE: 1:10,000 PROJECT NO: OPR-0343-FA-82

SOUNDINGS: Ross Fineline 5000
Raytheon DE 719B Leadline

CONTROL: Mini-Ranger
Range/Range Mode
Range/Azimuth

Chief of Party.....CDR W. F. Forster

Surveyed By.....ENS R. H. Pingry
ENS A. E. Francis
ENS C. L. Bailey
ENS P. T. Steele

Automated Plot By.....PMC Xynetics Plotter

Verified By.....A. A. Luceno

Evaluated By.....B. A. Olmstead

1. INTRODUCTION

H-10013 (FA-10-2-82) is a Navigable Area Survey conducted under the current methods of planning, executing and processing a hydrographic survey as defined in the Hydrographic Manual, 4th Edition. The PMC OPORDER and the Data Requirements Letter for 1982 further defines field procedures. Project Instructions OPR-0343-FA-82, Port Frederick, Alaska, dated October 14, 1981 were generated to supplement the Hydrographic Manual. Three supplements to instructions were appended for the 1982 field work: Change 1 dated October 15, 1981; Change 2 dated November 23, 1981; and Change 3 dated March 2, 1982.

H-10013 (FA-10-2-82) is situated in the southernmost reaches of Port Frederick approximately 1-3 miles north of Tenakee Inlet on Chichagof Island. Specifically, the survey area includes that area from The Narrows south to Salt Chuck and west to Bell Island. Generally, depths of water range from the MLLW along the shore to over seventy fathoms at The Narrows. Alongshore and offshore characteristics are primarily composed of isolated rocks (awash, submerged) and rocky ledges fringing parts of the shoreline. Bottom characteristics generally consist of mud and broken shells.

Survey operations generally encompass four distinctive geographic areas:

a. Salt Lake Bay to Salt Chuck - Salt Lake Bay extends in a southerly direction with depths of 47 fathoms at the entrance to 11 fathoms off the flats and narrows to 100 meters wide at the opening to Salt Chuck. Depths

along this entrance are less than 1 fathom, but generally deepen to 5-10 fathoms near the center portions of the basin.

b. Head of Port Frederick - This area around Bell Island is divided into two inlets. Depths to 26 fathoms are found at the entrance to the north inlet shoaling to 7½ fathoms near the head. The south inlet is long and narrow with several bends. Depths generally range from 6-11 fathoms in the widest parts.

c. Eight Fathom Bight - Located some 3 miles northwest of The Narrows, this region indents the north shore and provides good anchorage in 5-17 fathoms.

d. The Narrows to Bell Island - The center portions of this area extend in an east-west direction for approximately 4.5 miles and contain safe navigable waters. Depths over 70 fathoms exist in the center of The Narrows and gradually shoal to 20 fathoms off Bell Island.

The ADR gage at Hoonah Harbor was in operation during all field operations in Port Frederick. Additionally, one temporary gage (bubbler), Salt Lake Bay, Alaska, was operating during this survey. The tidal data generated by these gages were employed to zone the survey for office reduction of sounding data. Field tide reduction of soundings was based on predictions from Juneau, Alaska, with time and range ratios.

Sounding differences of .1 to .2 fathoms between the final field sheet and smooth sheet are attributed to the application of approved tidal zoning. Greater differences are evident where rescanning of the fathograms and data selection were merited during verification.

The project parameters, signal list and TC/TI tables were amended during the verification/evaluation process. All corrected data is listed in the smooth printouts to accompany the final PMC plot.

2. CONTROL AND SHORELINE

Several new horizontal control stations were established in accordance with Second Order Class II and Third Order Class I geodetic standards. All control stations plot within the survey limits. Motorola Mini-Ranger III was configured in both a range-range and range-azimuth mode (Wild T-2, T-1) in determining positional data during launch operations. Corrections to positional data were determined by calibrations run on baselines conducted at the Pacific Marine Center and Port Frederick. Confirmation of these correctors was accomplished by daily systems checks (fixed point). All remaining information affecting the positioning and station control of this survey is listed in parts F and G of the ship's Descriptive Report, the Horizontal Control Report and the Electronic Control Report for OPR-0353-DA-81.

The smooth sheet was plotted using one NGS data base listing (FOR, 1923) and field geodetic positions for newly established control.

There are no Class I or Class III shoreline manuscripts available for this survey. However, Requirements Branch, OA/C34, provided the field with USGS compiled shoreline manuscripts (using 1981 NOS photography) at 1:20,000 which the final field sheet used for "orientation only". Shoreline discrepancies with hydrography were apparent during field operations and so noted in the appropriate section of the ship's Descriptive Report. Shoreline from Chart 17302, 13th Ed., May 13, 1978, 1:80,000, was not used (scale difference of 8.1). The smooth sheet contains no shoreline in accordance with Hydrographic Survey Guideline No. 17, paragraph G, subparagraph 3, items 2 and 3.

3. HYDROGRAPHY

Depths at crossings are in good agreement.

The bottom configuration was adequately developed. Generally, all standard depth curves are complete and adequately developed. There was no requirement to survey inshore of the two fathom curve. The determination of least depths was satisfactory with the exception of the following:

		Latitude	Longitude
a.	9.2 fathoms	57°59'22"N	135°40'35"W
b.	10.1 fathoms	57°59'18"N	135°40'45"W
c.	14.7 fathoms	57°59'19"N	135°40'28"W
d.	2.8 fathoms	57°58'58"N	135°42'35"W
e.	2.7 fathoms	58°00'05"N	135°44'21"W
f.	7.2 fathoms	58°00'09"N	135°44'14"W
g.	1.5 fathoms	57°59'34"N	135°46'27"W
h.	3.9 fathoms	57°59'29"N	135°45'57"W
i.	2.9 fathoms	58°00'18"N	135°44'24"W
j.	20.9 fathoms	57°58'59"N	135°42'18"W
k.	7.1 fathoms	57°59'32.5"N	135°47'00"W

4. CONDITION OF SURVEY

The hydrographic records and reports are adequate and conform to the requirements of the Hydrographic Manual of July 4, 1976 with the following exceptions:

a. Control stations that fell outside the mean high water line were not described in the hydrographic records (Hydrographic Manual, section 4.2.5, Control Stations). The smooth sheet describes those signals outside the MHWL for which information was available.

b. Paragraph 5.3.4 of the Hydrographic Manual specifies what should be discussed in the Comparison With Chart section of the Descriptive Report. The discussion of numerous uncharted features found during this survey is not necessary and has induced the following problems during office verification and evaluation.

(1) Many of the features discussed by the hydrographer in paragraph L, Comparison With Chart, were either not shown on the final field sheet or graphically displayed in error (see paragraph L, discussion of items #7, #10, #13, #16 and #17).

(2) Items #27 and #29 are positioned solely by lines of longitude. As such, these features could plot near the shoreline on either side of the survey limits.

(3) The position as listed for item #6 by the field falls near Tenakee Inlet.

c. The disposition of a 3.2 fathom least depth at latitude 57°59'24.5"N, longitude 135°40'47.5"W was discussed in paragraph E, Hydrographic Sheets. Any special shoal investigations conducted and/or hydrographic findings of special note should be included in paragraph L, Comparison With The Chart. (Reference Hydrographic Manual, 5.3.4, Descriptive Report text.)

d. Numerous depth curves on the final field sheet were not drawn. As examples, see the 9.2 fathom sounding and 9.4 fathom sounding at latitude 57°59'22"N, longitude 135°40'35"W and the 9.7 fathom sounding at latitude 57°59'19.5"N, longitude 135°40'48"W.

e. The junctional note with H-10010 (FA-10-1-82) was not portrayed on the final field sheet.

f. Rocks recorded in the remarks column of the record book at position numbers 8014, 8024, 8025 and 8033 were not substantiated on the final field sheet. Carto codes were assigned for these features in the office and plotted on the smooth sheet.

5. JUNCTIONS

H-10013 (FA-10-2-82) is bordered by one contemporary survey. There are no junctional sheets on the west, north and southern limits of the present survey.

H-10010 (FA-10-1-82) - This survey joins in that area known as The Narrows. Depths in the common area range from the MLLW to over 70 fathoms. Soundings are in good agreement and an adequate junction was effected. The junctional note is inked accordingly.

6. COMPARISON WITH PRIOR SURVEYS

H-4319 (1923) 1:20,000

Depths since this prior survey reveal that this area of Port Frederick has remained relatively unchanged. Comparison of depths along the shoreline and seaward throughout the central portions of the project generally indicate a slight shoaling (½-1 fathom) in 59 years. However, several new shoal soundings were found that differ significantly from the prior survey. These items and their geographic positions are listed as follows:

		Prior Depth	Latitude	Longitude
a.	7.2 fathoms	13 fathoms	58°00'09"N	135°44'14"W
b.	Rock (cov 1 ft. at MLLW)	4 fathoms	58°00'04"N	135°44'24"W
c.	2.9 fathoms	6 fathoms	58°00'18"N	135°44'24"W
d.	3.2 fathoms	7.5 fathoms	57°59'24"N	135°40'48"W
e.	9.2 fathoms	20 fathoms	57°59'22"N	135°40'35"W
f.	10.1 fathoms	20 fathoms	57°59'18"N	135°40'45"W
g.	20.9 fathoms	40 fathoms	57°58'59"N	135°42'18"W
h.	3.9 fathoms	8 fathoms	57°59'29"N	135°45'57"W
i.	2.8 fathoms	21 fathoms	57°58'58"N	135°42'35"W

The shoreline comparison will be covered in section 7, Comparison With Chart. There were no numbered Pre-Survey Review or dashed feature items for investigation.

H-10013 (FA-10-2-82) is adequate to supersede the prior survey within the common area.

7. COMPARISON WITH CHART

a. Hydrography - A comparison was made with Chart 17302, 13th Edition, May 13, 1978. The charted information originates with the previously discussed prior survey. Comparison of the charted shoreline with the compiled USGS quadrangles and 1981 NOS photography reveal little change in the general configuration of the Mean High Water Line. However, the enlargement of the chart at 8:1 and a possible datum error have accounted for several areas of shoreline discrepancies as noted in the ship's report. In addition, comparison was made to the Danger to Navigation report originating from NOAA Ship FAIRWEATHER (Chart Letter 517/82). Item 15 of that report, a rock awash in the entrance channel to the southern portion of Salt Lake Bay at 57°57'27"N, 135°39'12"W, is applicable to the area covered by this survey. Item 15 of the above report is superseded by this survey; therefore, this survey should become the charting source for this item. The area covered by this survey was examined for additional dangers and an additional Danger to Navigation report has been written (copy attached). There are no additional items for discussion. The present survey is adequate to supersede the charted hydrography within the common area.

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 to navigation within the limits of this survey.

8. COMPLIANCE WITH INSTRUCTIONS

H-10013 (FA-10-2-82) adequately complies with the project instructions except as noted in section 4, Condition of Survey.

9. ADDITIONAL FIELD WORK

H-10013 (FA-10-2-82) is a good navigable area survey. However, additional field work for those items listed in section 3, Hydrography, should be considered in future project planning for Port Frederick.

Respectfully submitted,

Bruce A. Olmstead

Bruce A. Olmstead
Evaluator

This survey has been verified and evaluated. I have examined the survey and it meets Charting and Geodetic Services survey standards and requirements for use in nautical charting except as noted in the Evaluation Report. The survey is recommended for approval.

James S. Green
Supervisory Cartographer

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

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

December 22, 1983

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

Dear Sir:

During final office review of hydrographic survey H-10013, West of The Narrows, Port Frederick, Alaska, changes affecting chart 17302 were noted. Questions concerning the survey may be directed to Capt. Ned C. Austin, Chief, Nautical Chart Branch, telephone (206) 527-6835.

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

1. A 3.2 fathom depth at latitude 57°59'24.5"N, longitude 135°40'47.5"W supersedes the charted 7-1/2 fathom depth.

2. A rock covered 1 foot at MLLW at latitude 58°00'04"N, longitude 135°44'23"W supersedes the charted 4 fathom depth.

3. A 0.9 fathom submerged rock at latitude 57°59'30"N, longitude 135°45'42"W supersedes a 2-3/4 fathom sounding charted in that vicinity.

4. A rock awash at latitude 57°58'59"N, longitude 135°47'38"W supersedes the charted 3-1/2 fathom depth.

5. A foul area extends southwest to the HWL from the islet charted at latitude 57°59'04"N, longitude 135°47'49"W.

6. A 2.8 fathom sounding, outside the charted 10 fathom curve and between charted 6 and 25 fathoms soundings, at latitude 57°58'58"N, longitude 135°42'35"W was found.

Sincerely,

Robert L. Stanfield
for
Charles K. Townsend
Rear Admiral, NOAA
Director, Pacific Marine Center

bc: N/CG222

DATE: August 16, 1982

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 945-2441 Hoonah Harbor, AK
945-2484 Salt Lake Bay, AK

Period: May 6-24, 1982

HYDROGRAPHIC SHEET: 10013

OPR: 0343

Locality: Port Frederick, Alaska

Plane of reference (mean lower low water): 945-2441 = 10.01 ft.
945-2484 = -3.82 ft.

Height of Mean High Water above Plane of Reference is 945-2441 = 14.17 ft.
945-2484 = 14.21 ft.

REMARKS: Recommended Zoning:

1. North of latitude 58°01.0' zone direct on 945-2441 Hoonah Harbor, Alaska.

2. South of latitude 58°01.0' zone direct on 945-2484 Salt Lake Bay, Alaska.

Chief, Tidal Datums and Information Branch

ATTACHMENT TO DESCRIPTIVE REPORT FOR H-10013

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.

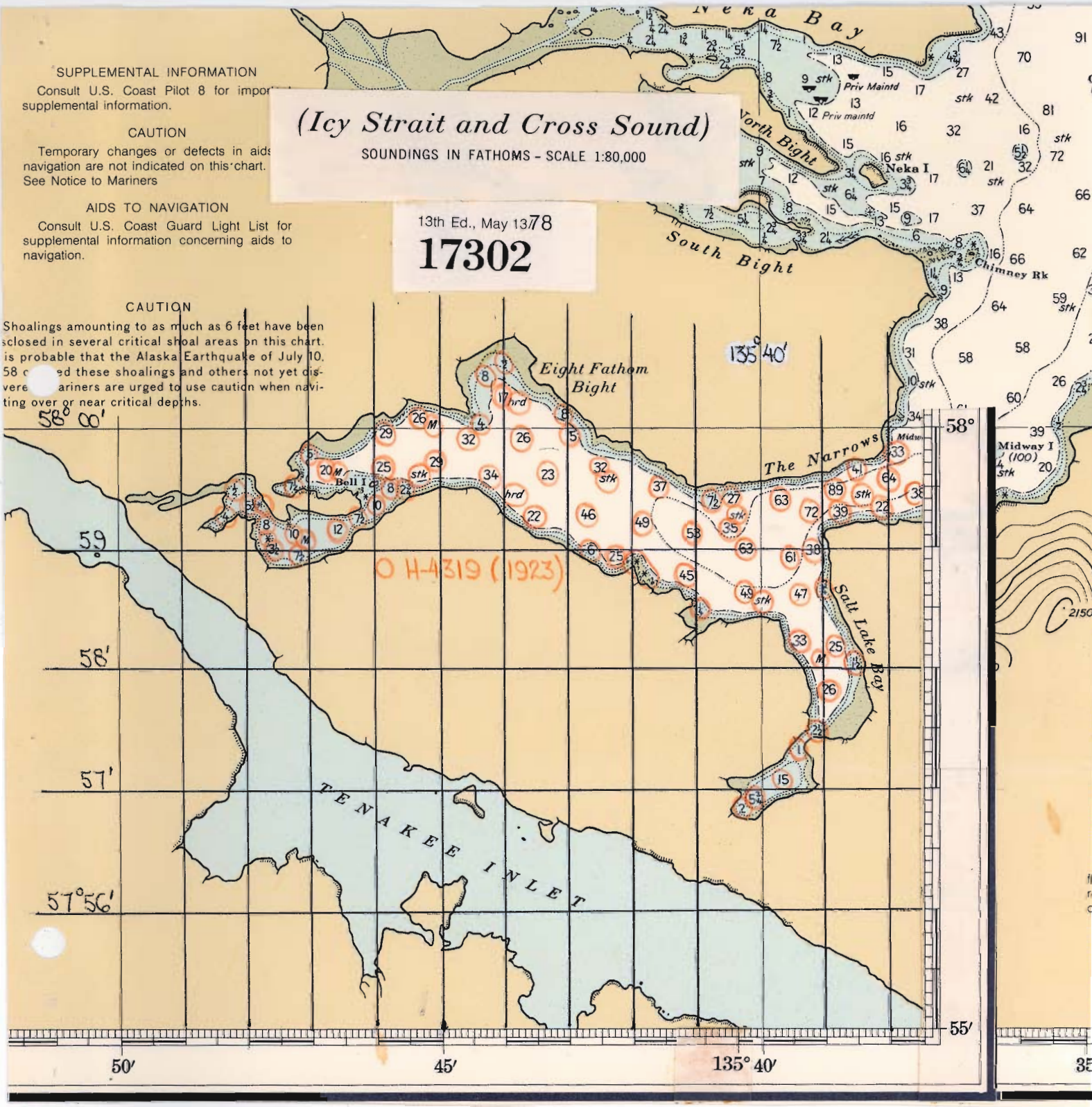
Karl C Austin 2/2/84
Chief, Nautical Chart Branch (Date)

CLEARANCE: SIGNATURE AND DATE:

N/MOP2:LWMordock 2/2/84

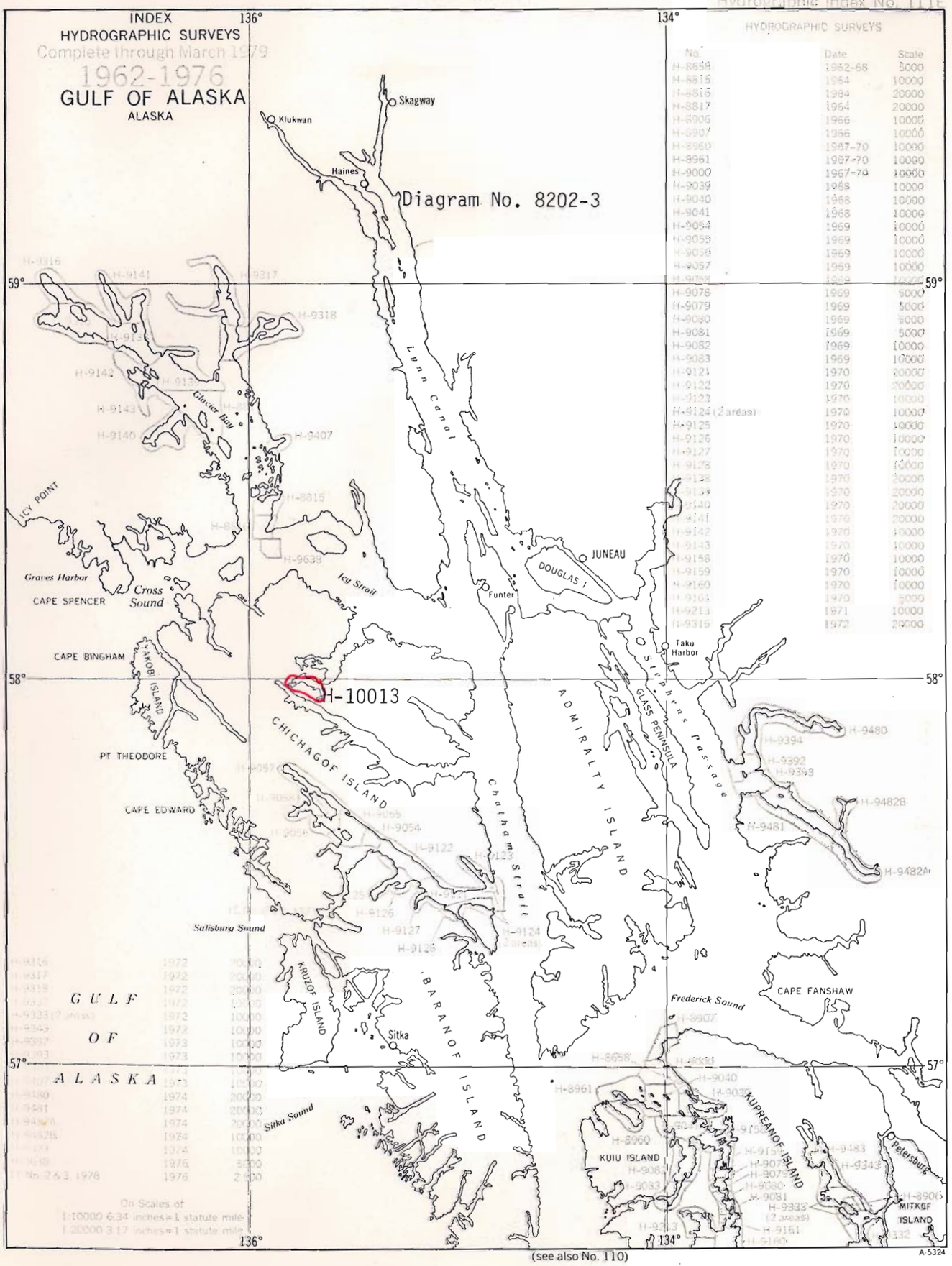
After review of the smooth sheet and accompanying reports, I hereby certify this survey is accurate, complete, and meets appropriate standards with only the exceptions as noted above. The above recommendations are forwarded with my concurrence.

Captain K Townsend 2/3/84
Director, Pacific Marine Center (Date)


SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilot 8 for impor
supplemental information.
CAUTION
Temporary changes or defects in aids
navigation are not indicated on this chart.
See Notice to Mariners
AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for
supplemental information concerning aids to
navigation.
CAUTION
Shoalings amounting to as much as 6 feet have been
closed in several critical shoal areas on this chart.
is probable that the Alaska Earthquake of July 10,
58 c ed these shoalings and others not yet dis-
vere ariners are urged to use caution when navi-
ting over or near critical depths.
(Icy Strait and Cross Sound)
SOUNDINGS IN FATHOMS - SCALE 1:80,000
13th Ed., May 13/78
17302
Neka Bay
North Bight
South Bight
Neka I
Priv Maintd
Priv maintd
Chimney Rk
Eight Fathom Bight
The Narrows
Bell I
Midway I
(100)
Salt Lake Bay
TENAKEE INLET
H-4319 (1923)
135° 40'
58° 00'
58°
59°
58'
57'
57°56'
55'
50'
45'
135° 40'

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

Hydrographic Index No. 111F



(see also No. 110)

FORM C&GS-8352
(3-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10013

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
17302	5/30/84	JOC H.J. Borawski	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. #16 Fully app'd hydro
17300	3/1/85	JOC C. James	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. #24
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.