

9939

Diagrams 8202-3 & 8252-3

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-20-1-81
Office No. H-9939

LOCALITY

State Alaska
General Locality Tenakee Inlet
Locality Crab Bay to Seal Bay

19 81

CHIEF OF PARTY
CDR W.F. Forster

LIBRARY & ARCHIVES

DATE January 11, 1984

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

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4/1/84

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11320
16016 DC, Kennedy District

NOAA FORM 77-28 (11-72)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTER NO. H-9939
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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. FA-20-1-81
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State Alaska

General locality Tenakee Inlet

Locality Crab Bay to Seal Bay

Scale 1:20,000 Date of survey May 12 - June 1, 1981

Instructions dated January 13, 1981 Project No. OPR-0342-FA-81

Vessel NOAA Ship FAIRWEATHER (2020) and Launches 2023, 2024, 2025

Chief of party CDR W. F. Forster

Surveyed by LT D. G. Hennick, LT T. A. Baxter, LTJG A. F. Trimble, ENS G. H. Tuell, ENS A. E. Francis, ENS R. H. Pingry, CST E. R. Krick

Soundings taken by echo sounder, hand lead, pole Ross Fineline Model 5000

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

Verification
~~Reviewed~~ by Leonardo T. Deodato Automated plot by PMC Xynetics Plotter
 Evaluation
~~Verification~~ by Gordon E. Kay

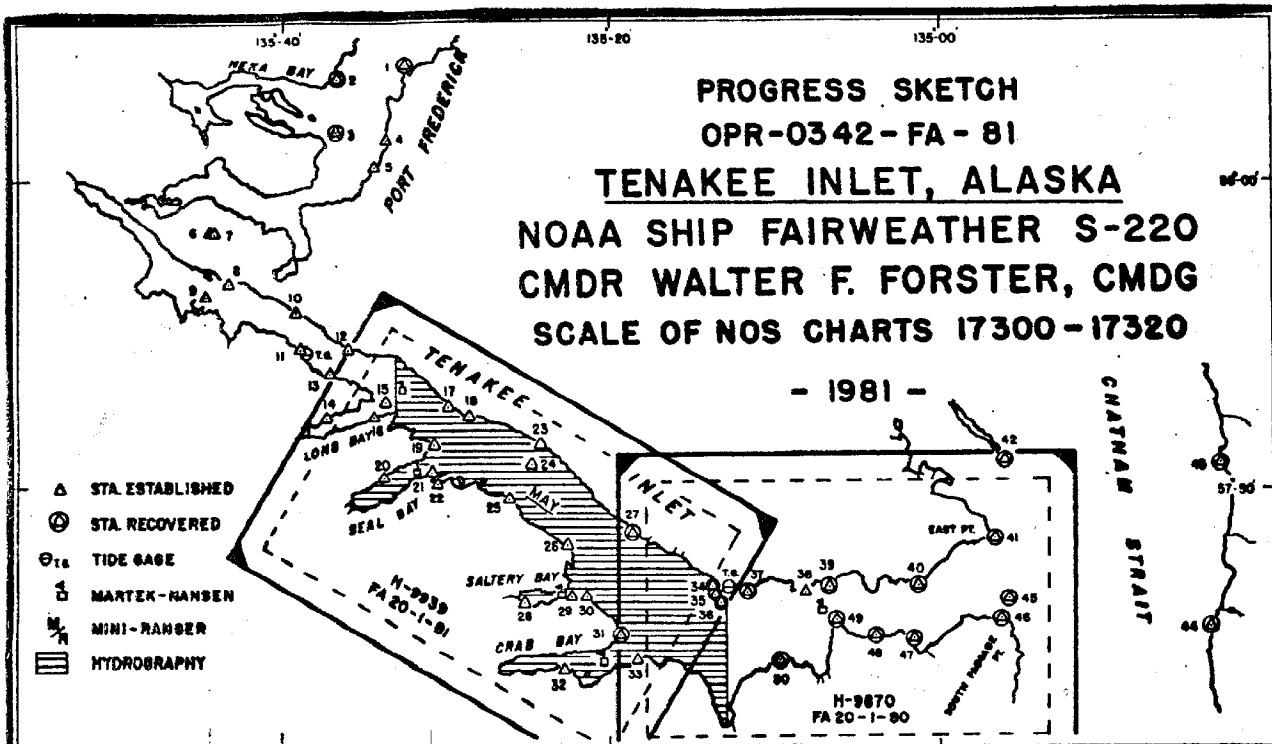
Soundings in fathoms feet at MLW MLLW

REMARKS: Revisions and marginal notes in black were made by the Evaluator.

AWD15 - 1/23/84 MPT

STANDARDS CK'D 1-19-84

C. LOY



STATIONS RECOVERED & ESTABLISHED

- | | | |
|--|--|--|
| 1 FRED 2, 1923
2 NECK 2, 1923
3 CHIM, 1923
4 GRADY, 1981
5 VICKI, 1981
6 WALTER, 1981 RM-2
7 WALTER, 1981
8 JILL, 1981
9 JACK, 1981
10 KRISTEN, 1981
11 PAUL, 1981
12 SPOKE USGS, 1981
13 HUB USGS, 1981
14 EASY, 1981
15 O'TOOLE USGS, 1981 ½
16 DENNIS, 1981
17 JEANNE, 1981 ½
18 GUT, 1981 ½ | 19 WHEEL USGS, 1981 ½
20 SEAL, 1981 ½
21 CAROL ANN, 1981 ½
22 LAURIE, 1981 ½
23 DOT USGS, 1981 ½
24 TENAKEE INLET DAYBEACON T
25 BETH USGS, 1981 ½
26 EMMA USGS, 1981 ½
27 WHIP USGS, 1980 ½
28 SALT, 1981 ½
29 BREEZE, 1981 ½
30 CALM, 1981 ½
31 KITTY, 1980 ½
32 CRAB, 1981 ½
33 ROBIN, 1981
34 TENAKEE REEF DAYBEACON
35 TENAKEE USGS, 1980 ½ | 36 TENAKEE REEF LIGHT
37 GRAVE ISLAND LIGHT 4
38 TENAKEE INLET DAYBEACON 8
39 CAN USGS, 1949-1980 ½
40 DON USGS, 1980
41 AID 2, 1925
42 BAR 2, 1925
43 TAX 2, 1925
44 SAD 2, 1925
45 TENAKEE ENTRANCE LIGHT 1
46 CONSTANCE, 1980
47 TRAP, 1980 ½
48 BEANY, 1980
49 FOO USGS, 1980
50 MURI USGS, 1980 ½ |
|--|--|--|
- | | |
|---------------------|-----|
| LNM SOUNDING LINE | 770 |
| SQ NM SOUNDING LINE | 29 |
| MARTEK-NANSEN CAST | 4-1 |
| BOTTOM SAMPLE | 106 |

60

DESCRIPTIVE REPORT TO ACCOMPANY
 HYDROGRAPHIC SURVEY H-9939
 (Field No. FA-20-1-81)
 Scale: 1:20,000 Year: 1981
 NOAA SHIP FAIRWEATHER
 Commanding Officer: Walter F. Forster

A. PROJECT

This hydrographic survey was conducted in accordance with Project Instructions OPR-0342-FA-81, Tenakee Inlet, Alaska, dated 23 January 1981; Supplement to instructions, Change 1, dated 23 February 1981 and Amendment to Change 1, dated 11 May 1981. The PMC OORDER and they Hdrographic Manual, 4th Edition are also applicable. ✓

B. AREA SURVEYED

The area covered by this survey includes that portion of Tenakee Inlet, bounded on the east by 135°17.7'W and on the west by 135°33.1'W. Junction to the east is with H-9870 (FA-20-1-80) and on the west with a 1:20,000 Upper Tenakee Inlet sheet as yet undesignated. The survey was commenced on 12 May 1981, J.D. 132, and completed on 1 June 1981, J.D. 151. ✓

C. SOUNDING VESSELS

All soundings were obtained by Jensen aluminum survey launches numbers 2023, 2024, and 2025 using Ross 5000 Finline systems. The NOAA Ship FAIRWEATHER (2020) participated in bottom samplings and velocity of sound in water sampling and provided all logistical support during the survey. There were no unusual vessel configurations or significant problems. ✓

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

Soundings were taken using the Ross 5000 Finline fathometers. No unusual faults were found with these systems. Serial numbers of sounding systems used throughout the survey are as follows:

<u>Vessel</u>	<u>Day</u>	<u>Digitizer</u>	<u>Analog</u>	<u>Inverter</u>	<u>Transceiver</u>
2023	132-147	1054	1097	1046	1047
2024	134-136	1047	1054	1054	1046
	137-148	1047	1047	1054	1046
2025	132-136	1046	1047	1053	1054
	137-141	1046	1036	1053	1054
	142-149	1036	1036	1053	1048

All soundings were less than 110 fathoms. Launch 2025 was used in the small bays, and the other two launches were used in the main inlet.

The initial settings of the Ross fathometers were zeroed each morning and monitored throughout the surveying day by the operators. The analog was reinitialed when necessary.

Phase calibrations were checked before and after operations by the Electronic Department and during operations by the fathometer operators.

Settlement and squat observations were made in Seattle at the beginning of the year using Zeiss level observations on a stadia rod held vertically in the launch over the transducers. Speeds which resulted in the largest settlement and squat were observed for each sounding vessel and were posted to avoid operations at that speed. In all cases settlement and squat was less than 0.07 fathoms, rounding to 0.0 fathoms, so no settlement and squat correctors were applied to the data.

Predicted tide correctors were applied as per the project instructions as follows: High- 12 minutes; Low- 19 minutes; Height - X 0.90 applied to Juneau tides. ✓

Nansen casts were performed on 21 May 1981 at 57°46.0'N, 135°07.0'W; and on 27 May 1981 at 57°45.0'N, 135°30.0'W. Beckman salinometer serial number 29851, calibrated by NW Regional Instruments Center in April 1981 was used. MarTek casts were performed in conjunction with the 27 May Nansen cast and in three small bays in the survey area. The MarTek data was not used due to 75-100% discrepancies with the Nansen and bar check observations. As yet the error of the MarTek unit is unresolved, but symptoms suggest a partial ground in the power supply system of the sensor. Bar check data showed variations of 0.1 fathoms due to wind and wave. Bar check data was used to determine TRA correctors, and Nansen data was used to determine velocity correctors. Further information may be found in the Corrections to Echo soundings report filed for this project.

E. HYDROGRAPHIC SHEETS

The approved sheet layout was slightly modified to allow for better junctions between surveys. This survey was shifted northwest along the same skew as approved. The new eastern boundary is 135°17'30"W and western edge is 135°33'15"W. Overall sheet size is still 54 by 36 inches. Field sheets were constructed on board the FAIRWEATHER on mylar using RK201, a PDP/8e computer and the Complot plotter (S/N 6166-22). The survey was plotted on two computer sheets, FA-20-1E-81 and FA-20-1W-81. In addition blowups at a scale of 1:10,000 were made of Crab and Seal Bays to increase legibility of soundings, and a 1:5,000 blowup was made on a development at the mouth of Saltery Bay. Parameters for these sheets are attached at the end of this report. There were no problems or irregularities in scale, projection or other properties. Field records will be sent to PMC Processing Division for verification and smooth plotting. ✓

F. CONTROL STATIONS

Monumented Control Stations on this survey are:

<u>Station Name</u>	<u>Signal Tape Number</u>
Whip, 1981	107
Beth, 1981	108
Dot, 1981	109
Emma, 1981	110
Kitty, 1980	303
Robin, 1981	500
Crab, 1981	501
Breeze, 1981	504
Salt, 1981	505
Calm, 1981	507
Carolann, 1981	508
Seal, 1981	509
Gut, 1981	510
Jeannie, 1981	511
O'Toole, 1981	512
Wheel, 1981	513

All Horizontal directions, vertical angles and distances for the Main Scheme control were observed using Second Order, Class II methods and standards. Horizontal directions in support of the spur traverses in Crab, Saltery and Seal Bays were observed using Third Order, Class I methods and standards. No unconventional survey methods were used. No anomalies in control adjustment, or problems in closure or ties occurred on this survey. The NA 1927 datum was used. A complete list of stations used in this project is appended to this report. See Horizontal Control Report, OPR-0342-FA-81, for more details, pertinent data and computations.

G. HYDROGRAPHIC POSITION CONTROL

Positioning for launch hydrography was controlled by both the R/R and R/Az methods utilizing the Motorola Mini-Ranger III system. (See Appendix E for a day-to-day listing of electronic component serial numbers for each sounding vessel). No known difficulties which degraded position accuracy were encountered during this survey. Mini-Rangers were baseline calibrated in Seattle prior to the field season. They were system checked at the beginning and ending of each day by visual fixes or calibration pole methods. No unusual system check methods were used during this survey. There were no unusual atmospheric conditions, no systematic errors in the data, and poor geometric configurations were avoided as per the hydrographic manual. The Mini-Ranger electronics performed well during this survey, with no indications of corrector drift or significant equipment malfunctions.

By and large, signal strengths were excellent due to the relatively close range of operating conditions and lack of significant wave action on vessels. Some "skipping" and null zone action was encountered, most probably caused by high water surface reflectivity encountered on the many extremely calm days during the project. All survey vessels made extensive use of the automatic signal strength alarms to detect sub-standard signal strengths. Manual observations of the signal strengths to detect low signal strength or variable rates were made on line. Erratic rates attributed to surface reflective "skipping" were adjusted by time and course. These occasions of rate adjustment were not numerous or of a highly extensive nature. ✓

TABLE I
Electronic Control Equipment

<u>Launch</u>	<u>Date</u>	<u>Model</u>	<u>Serial Number</u>
2023	132-148	Motorola Mini-Ranger III Console/RT Unit	702
2024	134-148	Motorola Mini-Ranger III Console/RT Unit	701
2025	132-149	Motorola Mini-Ranger III Console/RT Unit	703

The application of calibration and systems check data to raw positioning data showed no indications of errors or inconsistencies.

H. SHORELINE

As a navigable area survey no field edit or shoreline verification was performed as such. No modern photogrammetry exists for this area. Shoreline was traced onto the field sheets from 1:20,000 blowups of USGS shoreline manuscripts obtained by NOS Marine Chart Division, Rockville and supplied to the FAIRWEATHER thru CPM3. Efforts were made ✓

by hydrographic, geodetic and support field parties to confirm the predicted shoreline as much as possible. Some inconsistencies were noted between the USGS shoreline and the shoreward limits of soundings. Shoreline on the southern side of the inlet from station Kitty, 1980 (303) westward to station Beth, 1981 (108) is shown consistently higher than is actually the case resulting in a significant gap between the shallowest soundings and the shoreline. Conversely, soundings on the northern side of the inlet, from station Whip, 1980 (107) westward to station Gut, 1981 (510), tend to crowd and even override the shoreline. It is recommended that a 1:20,000 scale blowup of the NOS charted shoreline and the 1:20,000 scale blowup of the USGS shoreline be examined against the limits of shoal soundings on this survey to select the most correct shoreline for charting purposes. Additionally, when current photogrammetric shoreline becomes available for this area the adequacy of the existing shoreline manuscripts should be reviewed. ✓

I. CROSSLINES

Crosslines constitute 9.5% of the sounding lines on this survey. All crossline soundings on smooth bottom are in agreement with main scheme lines, meeting the requirements of Section 1.1.2 of the hydrographic manual. There are a few instances of apparent crossline/main scheme variations that exceed the referenced limits, but these occur exclusively in areas of rugged bottom and rapidly changing contours. These soundings are not discrepancies given the rough bottom and lack of exact coincidence of soundings. Post survey review of the data shows that no crossline was run through the R/Az work from station Carolann, 1981 (508) at the mouth of Seal Bay. However, this data shows good agreement with junction from other control. ✓

J. JUNCTIONS

This survey junctions with H-9870 (FA-20-1-80), a contemporary survey, on the east. Junction to the west will be with a 1:20,000 scale survey, as yet uninitiated or numbered, which is assigned to the FAIRWEATHER by the referenced project instruction and is due for completion in late 1981 or early 1982. No junctions occur to the north or south of this survey, since the operation encompasses the entire width of Tenakee Inlet. Junction with H-9870 is complete and consists of an identical north-south main scheme sounding line run on both surveys. Both contours and individual soundings agree very well at the junction between these two surveys, meeting the requirements of Section 1.1.2 of the hydrographic manual. This survey junctions with only one prior survey, H-2206, 1:40,000, 1894. ✓

K. COMPARISON WITH PRIOR SURVEYS

The only previous survey available for comparison is a 1:40,000 scale, USC&GS H-2206, done in 1894. An overall comparison of soundings between H-9939 and H-2206 shows agreement meeting the requirements of Section 1.1.2 of the hydrographic manual. The following exceptions are noted: ✓

1. In the upper portion of Saltery Bay, soundings are significantly shallower on H-9939 than on H-2206. Sounding disagreement is west of 135°23'30"W to the mouth of the stream at the head of the bay. The pattern of discrepancy and first hand observation of the bay suggests that sediment deposition from the stream at the head of the bay has progressed approximately 1/4 mile in the 85 years between surveys, producing the shoaling on H-9939.

2. The extent of shoaling on the south shore at the mouth of Crab Bay is more extensive on H-9939 than on H-2206. Soundings on the previous survey are quite sparse, and the area in question contains only one line of soundings parallel to the shoreline, suggesting that the shoal area in question was not highly developed on H-2206.

The following pre-survey review items were investigated and resolved:

PSR #7 - A detached rock awash at 57°51'^{06"}40"N, 135°24'^{28"}30"W. The feature was developed, and a least depth of -0.6 fathoms was established by sounding pole. This feature is surrounded by navigable water and is not connected to either shore or the adjacent reef marked with Day Beacon "T". This feature should be charted. *Post #4650,4651*

Rock bank
PSR #8 - An extensive reduced line spacing development was done in an attempt to locate the reported 2 fathom shoal at the mouth of Crab Bay at 57°44'48"N, 135°18'54"W. No such shoal was located at that position. A two (2) fathom shoal does exist in shallower water on the south side of the mouth at 57°44'30"N, 135°18'30"W. Soundings of 2 fathoms were also found on the limits of a submerged rock ledge at the north mouth of the bay, 57°44'50"N; 135°18'30"W. Either of these shoals could have been encountered and reported slightly out of their true positions. The center of the mouth to Crab Bay remains navigable and should be charted as such. *Post #4691/11*
**135°18'30"W is off chart limit, it is assumed to be 135°19'30"W*

A danger to navigation was discovered and reported (by letter to CPM3, dated 9 June 1981) concerning a submerged rock located in the mouth of Seal Bay at 57°50'48"N, 135°29'44"W. The least depth of 1.7 fathom was determined by diver investigation. *Post #3659*
at LAT. 57°50'48"N, LONG. 135°29'44"W

An uncharted aid to navigation was located, Day Beacon "T" at 57°50'41'^{173"}182"N, 135°24'50'^{28"}20"W. This was reported to the US Coast Guard for inclusion in the light list. Copies of correspondence are attached at the end of this report.

L. COMPARISON WITH THE CHART

Two NOS charts cover the area surveyed, Chart 17300, 21st edition, 17 March 1979 and Chart 17320, 10th edition, 14 February 1981. Due to the vast difference in scale between H-9939 and these two charts, all comparisons are quite subjective. All soundings found on both charts are justified by soundings on H-9939, and meet the comparison criterion of Section 1.1.2 of the hydrographic manual. The following items are not in agreement between the charts and H-9939:

1. The mooring buoy shown at 57°44'30"N, 135°19'00"W was not found.
 2. A log and gravel fill pier with two anchored log mooring floats is located at 57°44'33"N, 135°18'07"W. These anchored logs may be the reason an anchor buoy is shown on the chart, but that symbol is misleading.
 3. The 8 fathom "Shoaling Reported" note at the mouth of Crab Bay, 57°44'48"N, 135°18'54"W has been substantiated by H-9939 and the true depth should be charted. *USE ITEM #8 Post 6425/0 at LAT 57°44'47.13"N LONG 135°18'26.77"W.*
 4. The 21 fathom sounding at 57°47'00"N, 135°21'30"W is misleading. *4.2 A 4 fathom peak exists at 57°47'00"N, 135°21'00"W as confirmed by development and diver's least depth, and should be charted. Post 2973/1*
 5. Rocks awash at 57°^{51'}15'00"N, 135°25'00"W have a red and green triangular Day Beacon "T" on them. The "reef reported" (1976) notation should be changed to a detached rock awash symbol at 57°51'10"N, 135°24'30"W as developed by PSR #7 investigation. *(4) RK Post 4651 at 57°51'06.81"N, 135°24'28.65"W*
 6. A peak of 37 fathoms at 57°46'20"N, 135°18'30"W should be charted. *Post 1346/5*
 7. A rock awash at 57°46'25"N, 135°12'01"W should be added to the chart. *Post 467 A 0.9 RK 27.56' 21.03.98' SEE EVALUATOR REPORT SECTION 7.A.1*
- * Error with transposed number.*
- Charted shoreline should be revised as recommended in paragraph H. All other charted features are accurate.

M. ADEQUACY OF SURVEY

This survey is complete and should supercede all prior surveys for charting. Although the hydrography extended inshore only to the 2 fathom mark, the entire coastline and intertidal area was inspected for indications of hazards that a prudent mariner would not be able to infer from the trend of the shoreline and bottom contours. None were found despite hundreds of hours of small boat and launch operations in the area.

N. AIDS TO NAVIGATION

There are no floating aids to navigation in the survey area. See Section L for discussion of a single fixed aid Day Beacon "T", and proper position of the aid for charting and light list. A copy of correspondence on this subject is attached to this report.

The ⁷ *Post 3659* 1.8 fathom shoal outside the ^{mouth} ~~mouth~~ of Seal Bay at 57°50'48"N, 135°29'46"W should be considered for a fixed aid if increased use of the upper inlet is anticipated by larger vessels. *SEE EVALUATOR REPORT SECTION 7*

There are no overhead cables, bridges, submarine cables, pipelines or other unusual encumbrances to navigation in this survey.

O. STATISTICS

<u>Vessel</u>	<u>Positions Used</u>	<u>NM Ran</u>	<u>Square Miles Ran</u>
2023	2002-3661	245	10.0
2024	4000-5313	271	11.1
2025	6000 7087	118	4.8

A total of 63 bottom samples were taken, using launch 2025 in water depth less than 50 fathoms and the ship FAIRWEATHER in the deeper areas. Two tide stations and two Nansen casts were used for this survey.

P. MISCELLANEOUS

No unusual observations were recorded.

Q. RECOMMENDATIONS

This survey is entirely adequate to define a Navigable Area Survey and requires no further field work. Photogrammetry was flown in the summer of 1981 and the inlet should be field edited prior to new nautical charting for accurate shoreline and for shore definition. No known construction is planned in this area.

R. AUTOMATED DATA PROCESSING

<u>Version Date</u>	<u>Program Number</u>	<u>Purpose</u>
3/19/81	RK 112	R/T data aquis. & plot
2/23/78	FA 181	R/Az logger
4/18/75	RK 201	Grid & lattice plot
1/30/76	RK 211	R/R non-real time plot
4/1/74	RK 212	Visual station table load & plot
10/7/80	RK 214	R/V non-real time plot
2/5/78	RK 216	R/Az non-real time plot
10/21/80	RK 300	Utility package
5/4/76	RK 330	Reformat & format check
2/2/76	PM 360	Electronic correction abstract

<u>Version Date</u>	<u>Program Number</u>	<u>Purpose</u>
11/10/72	AM 500	Predicted Tides
5/10/76	RK 530	Velocity Correctors
2/19/75	RK 561	Electronic Calibrations
5/21/75	AM 602	Editor

S. REFFERAL TO REPORTS

The following reports pertain to this survey:

		<u>Dated</u>
OPR-0342-FA-81	Horizontal Control Report	6/1/81
OPR-0342-FA-81	Electronic Control Report	6/30/81
OPR-0342-FA-81	Corrections to Echo Soundings Report	6/30/81
OPR-0342-FA-81	Geographic Names Report	To be forwarded
OPR-0342-FA-81	Coast Pilot Report	To be forwarded

SEPARATES FOLLOWING TEXT

- A. Hydrographic Sheet Projection Parameters
- B. Field Tide Note & Times of Hydro
- C. Geographic Names
- D. Abstracts of Corrections to Echo Soundings
(Velocity & TC/TL Printouts)
- E. Abstracts of Corrections to Electronic Position Control
- F. List of Stations
- G. Abstract of Positions
- H. Bottom Samples (Log Sheet M)
- I. Landmarks for Charts - None
- J. Approval Sheet



APPENDIX A

Hydrographic Sheet Project in Parameters

✓

FA 20-IE-81 Skew 90,20,33

001 FEST=40000
002 CLAT=6390000
003 CMED=135/25/00
004 GRID=60
005 PLSCL=20000
006 PLAT=57/43/30
007 PLON=135/17/20
008 VESNO=2020
009 YR=81
010 ANDIST=0.0

FA 20-IW-81 Skew 0,20,20

001 FEST=40000
002 CLAT=6390000
003 CMED=135/25/00
004 GRID=60
005 PLSCL=20000
006 PLAT=57/49/05
007 PLON=135/36/30
008 VESNO=2020
009 YR=81
010 ANDIST=0.0

PSR 4 & Reef Development Skew 0,15,15

001 FEST=40000
002 CLAT=6390000
003 CMED=135/05/00
004 GRID=15
005 PLSCL=5000
006 PLAT=57/50/30
007 PLON=135/25/15
008 VESNO=2024
009 YR=81
010 ANDIST=0.0

I:10000 Inset (Crab Bay) on FA 20-IE-81 Skew 0,12,34

001 FEST=40000
002 CLAT=6390000
003 CMED=135/05/00
004 GRID=30
005 PLSCL=10000
006 FLAT=57/43/48
007 FLON=135/26/00
008 VESNO=2023
009 YR=81
010 ANDIST=0.0

I:10000 Inset (Seal Bay) on FA 20-IW-81 Skew 0,22,35

001 FEST=40000
002 CLAT=6390000
003 CMED=135/25/00
004 GRID=30
005 PLSCL=10000
006 FLAT=57/49/30
007 FLON=135/35/00
008 VESNO=2025
009 YR=81
010 ANDIST=0.0

I:5000 Inset (Saltry Bay Devel#3) on FA 20-IE-81 Skew 0,15,12

001 FEST=40000
002 CLAT=6390000
003 CMED=135/05/00
004 GRID=15
005 PLSCL=5000
006 FLAT=57/46/30
007 FLON=135/22/30
008 VESNO=2023
009 YR=81
010 ANDIST=0.0

APPENDIX B

Field Tide Note & Times of Hydro

✓

FIELD TIDE NOTE
OPR-0342 - FA - 81
Tenakee Inlet, Alaska

Field tide reduction of soundings was based on predicted tides from Juneau, Alaska, corrected as per project instructions as follows:

Time Corrections	Height Correction Ratio
High Low	
-12 minutes -19 minutes	X 0.90

Correctors were interpolated by the HYDROPLOT system using program AM500. All times of both predicted and recorded tides were based on Greenwich Mean Time (GMT). The predicted tides were acceptable for hydrography with no discrepancies in data attributable to tides errors.

The tide station at Juneau, Alaska (945-2210) was the primary gage for the project. Levels were run on May 8, 1981 (JD 128), as per change 2 to project instructions, dated May 13, 1981. Agreement with historical level data was good.

Tide data was collected from two tide stations, the Tenakee Springs gage, #945 - 2386, located at 57°46' 46.6"N, 135°13'03.1"W on the pier at the town of Tenakee Springs and from the Upper Tenakee Inlet gage, #945 - 2489, located at 57°54'19"N, 135°38'36"W on horizontal control station Paul 1981.

Survey H-9870 was controlled by 945 - 2386 alone, and survey H-9939 was controlled by both gages west of 135°25'W.

ADR gage 7403A3402M20 was installed on May 1, 1981 (JD 121) and removed on June 1, 1981 (JD 152) at the end of the project. Three wire levels were run from the tide staff to five benchmarks on these dates.

The Tenakee gage tended to skip punches so the gage time was found to be ahead by intervals of six minutes during the first several days' checks. The punch block was changed at 1824 GMT on May 5 (JD 125) in an attempt to solve the problem. Thereafter, checks were satisfactory and were still ahead in increments of six minutes. On May 15 (JD 135) at 0324 GMT the tape was changed with a roll of paper with more accurately punched drive holes, which solve the problem.

The following is a chronological table of time corrections to be applied due the obvious missed punches:

Corrections to Tide Tape JD 122-134

<u>Day</u>	<u>Time(GMT)</u>	<u>Time Gain</u>	<u>Correction</u>
122	1448	6 minutes	Subtract 6 minutes after 1442 ✓
122	2130	6 minutes	Subtract 12 minutes after 2124 ✓
124	1724	reset time	No corrector ✓
124 *	2124	6 minutes	Subtract 6 minutes after 2118 ✓
125	1854	reset time	No corrector ✓
126	2130	6 minutes	Subtract 6 minutes after 2124 ✓
127	2136	6 minutes	Subtract 12 minutes after 2130 ✓
128	2124	6 minutes	Subtract 18 minutes after 2118 ✓
129	2148	6 minutes	Subtract 24 minutes after 2142 ✓
130	2136	6 minutes	Subtract 30 minutes after 2130 ✓
131 *	2130	6 minutes	Subtract 36 minutes after 2124 ✓
132	0148	reset time	No corrector ✓
133 *	2154	6 minutes	Subtract 6 minutes after 2148 ✓
134	2154	reset time	No corrector ✓

Note that the times listed in Table 1 are the times that were obvious misses on the punch tape, where a punch was skipped. There are some intervals where six minutes time losses occurred which cannot be accounted for by skipped punches. These are denoted by asteriks and should be interpolated from the tide curve. At no time did this occur for more than 2 days while sounding data was being gathered. ✓

An unaccountable 12 minutes loss was noted after six days (JD 126-132), but this occurred during an inport period when no data was gathered; and was corrected prior to resuming hydrography.

After the paper was changed two other gage problems were noted:

1. On J.D. 135 the paper skipped 18 minutes from 1648 - 1706 after the gage was checked. This was caused by the observer bumping the tape and can be corrected by subtracting 18 minutes from the gage times starting at 1706, JD 135, until the paper was reset at 1854 on JD 137.

2. Starting on JD 146 until removal on JD 152 the gage did not gain or lose time, but skipped punches at irregular intervals. The tape's advance holes show evidence of stress at these times and it appears that some holes may be double punched.

The Integrated Logistics Support Plan's (ILSP) "data defects symptoms/probable causes" section addresses this situation and suggests punch cam, pins, or stripper plate malfunction or wet data tape as possible problems.

Upon removal, the gage was set up and run aboard the ship for 24 hours and all mechanical components checked out with no failures noted. The problem did not occur during this trial period, therefore, it is assumed that this error was due to wet paper punch tape.

The times of skipped punches are listed chronologically in table 2. Missed tide data will have to be interpolated from the curve.

TABLE 2
Missing Tide Tape Punches

<u>Julian Day</u>	<u>Times</u>
146	1818 , 1954
147	1642 ✓
151	1248 , 1440 , 1548
152	1000 , 1048 , 1324 , 1348 , 1400 , 1412, 1418 , 1436 , 1500 , 1512 , 1524 , 1536, 1548 , 1600 , 1618 , 1654 , 1706 , 1718, 1730 , 1742 , 1754 , 1806 , 1818 , 1936

The mean gage reading was 36.47 feet higher than the staff. All readings were within .2 feet of the mean.

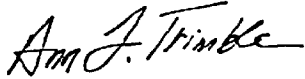
Bristol bubbler gage number 68A14940 was installed on May 16 (JD 136) and removed on June 1, 1981 (JD 152) at the Upper Tenakee Inlet site #945-2489, on horizontal control station Paul 1981. Two extra reference marks were set so the station and four reference marks could serve as the five benchmarks. Thus, this station's B.M.s do not follow the normal rules for labelling as established in the "Users guide for establishment of Tidal Benchmarks and Leveling Requirements for Tide Stations".

Levels were runs upon installations but could not be completed until the evening. Confusion in the afternoon's leveling occurred because of several one meter busts and one reversal in the logical leveling sequence between marks. Another observer was sent out on 19 May in an attempt to clarify the levels, but he got backsights confused with foresights on one leg.

On 21 May the entire set of levels from the staff to all five benchmarks was rerun with a check leg directly between the first and last B.M.'s on the leveling loop. This solid level data made the earlier mistakes easily discernable so the leveling data collected at installation was recoverable. Levels run on May 31 prior to gage removal also confirm the initial leveling data and prove that the staff did not move in elevation during the project.

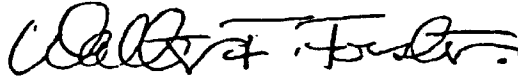
No problems were noticed with the bubbler gage nor abnormalities noted in the data collected. The initial 3 hour check showed the gage readings averaged 10.35 feet higher than the staff. The average gage to staff difference during the observation period was 10.22 with no readings more than .2 feet from the mean. Gage to staff comparison calibrated from only the daily checks should be used because the tubing was wet during the initial 3 hour check. All data has been abstracted by hourly intervals.

Submitted by:



Ann F. Trimble
LT(JG), NOAA

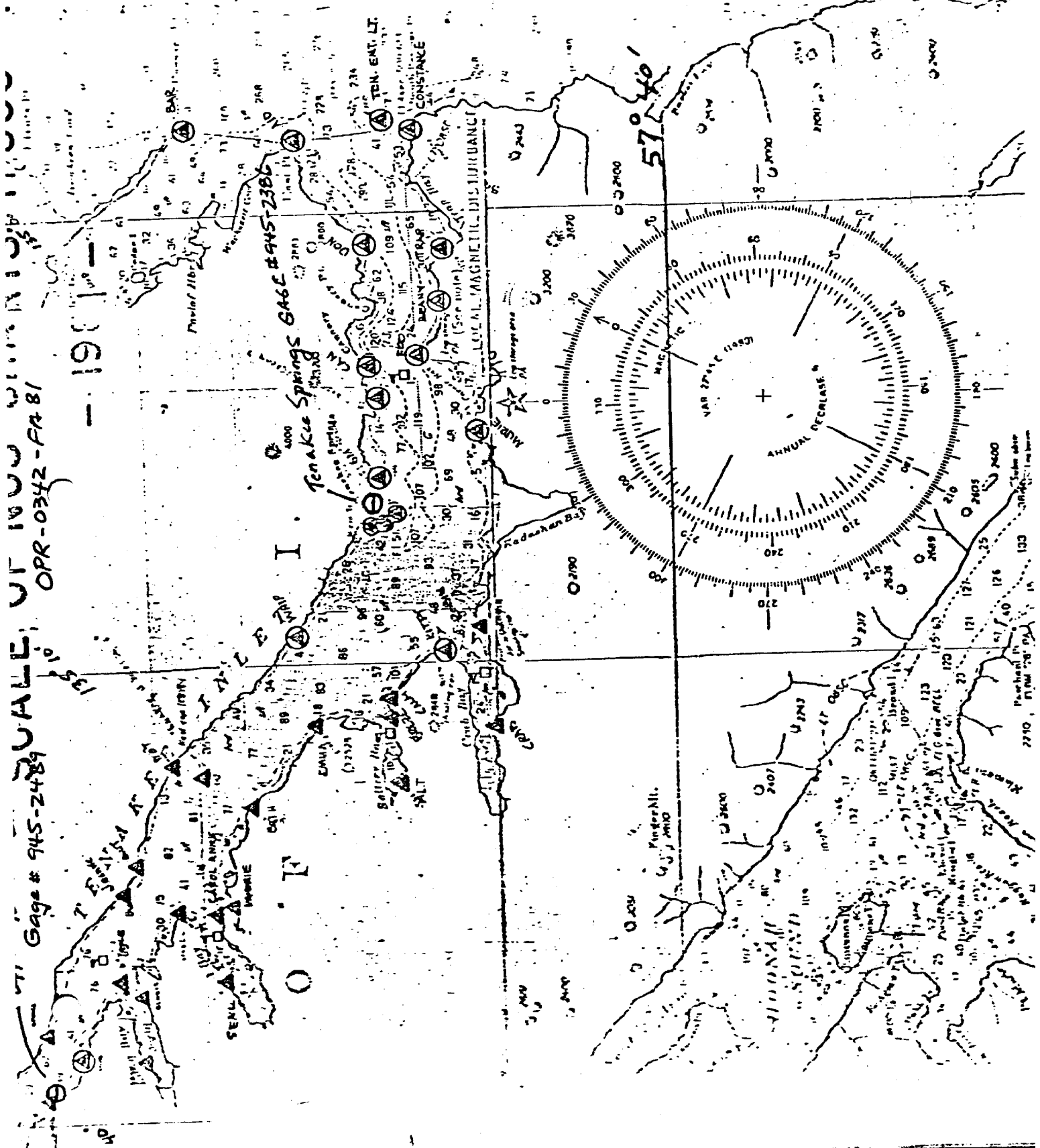
Approved by:



Walter F. Forster
CDR, NOAA

U.S. GEOLOGICAL SURVEY
GAGE # 945-2489 UALLE; UT 1600 WILSON
OPR-0342-FA 81

1911



(A)

(A)

APPENDIX C
Geographic Names

✓



GEOGRAPHIC NAMES

Name on Survey	<p style="text-align: center;"> <i>A</i> ON CHART NO. <i>B</i> ON PREVIOUS SURVEY NO. 2206 <i>C</i> ON U.S. QUADRANGLE MAPS <i>D</i> FROM LOCAL INFORMATION <i>E</i> ON LOCAL MAPS <i>F</i> P.O. GUIDE OR MAP <i>G</i> RAND McNALLY ATLAS <i>H</i> U.S. LIGHT LIST <i>K</i> </p>										
	A	B	C	D	E	F	G	H	K		
CHICHAGOF ISLAND	X	X	X								1
CRAB BAY	X	X	X								2
LITTLE SEAL BAY				X							3
SALTERY BAY	X	X	X								4
SEAL BAY	X	X	X								5
TENAKEE INLET	X	X	X								6
ALASKA (title)											7
											8
											9
											10
											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25

Approved:

Charles E. Harrison

Chief Geographer - N/CH 2x5

15 JUNE 1983

APPENDIX D

Abstracts of Corrections to Echo Soundings
(Velocity & TC/T1 Printouts)



Velocity Correctors H-9939

Data from Graph #2

Data for Corrector Tape

<u>Depth</u>	<u>Corrector</u>	<u>Applies From</u>
0	0	0
2.5	.02	1.25
5.0	.04	3.75
7.5	.06	6.25
10.0	.07	8.75
12.5	.08	11.25
15.0	.09	13.75
17.5	.10	16.25
20.0	.10	18.75
25.0	.12	22.50
30.0	.13	27.50
35.0	.15	32.50
40.0	.17	37.50
45.0	.19	42.50
50.0	.21	47.50
60.0	.25	55.00
70.0	.30	65.00
80.0	.36	75.00
90.0	.43	85.00
100.0	.50	95.00
110.0	.57	105.00
120.0	.65	115.00
130.0	.77	125.00

<u>Depth</u>	<u>Corrector</u>
0	0
12.5	0.1
45.0	0.2
70.0	0.3
90.0	0.4
100.0	0.5
120.0	0.6
130.0	0.7

*Disregard this page
Table used is on next page*

VELOCITY CORRECTION TABLES

TABLE#: 00 YR: 81 FM TABLE#: 03 YR: 81 FM

DEPTH	VEL COR	DEPTH	VEL COR
.00	.00	-5.50	.00
99999.99	.00	35.00	.10
		59.20	.20
		77.80	.30
		93.00	.40
		107.20	.50
		119.20	.60
		128.80	.70
		99999.99	.70

PRINTOUTS OF TC/TI TAPES
H-9939, FA-20-1-81

FA-3

001 211254 0 0003 0003 132 202300 000000
002 212500 0 0000 0000 151 000000 000000

FA-4

001 211733 0 0003 0004 134 202400 000000
002 223000 0 0000 0000 149 000000 000000

FA-5

001 212045 0 0003 0005 132 202500 000000
002 231500 0 0000 0000 150 000000 000000

SHIP 2020

001 170000 0 0000 0000 150 202000 000000
002 210600 0 0000 0000 150 000000 000000

APPENDIX E

Abstracts of Corrections to Electronic Position Control

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ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2025

SHEET : FA-20-1E-81

TIME	DAY	PATTERN 1	PATTERN 2
212045	132	-00002	-70316
170245	133	-00002	57357
190038		-00002	-61500
005300		00002	56070
170245	134	-00002	-73382
235900		+00000	+00000
164220	135	-00002	-68500
180800		+00000	+00000
204330	135	00002	-07489
235900	999	+00000	+00000

*FA - Corrector (A100)
POS #0000 - 0000*

R/2 Corrector (S.R.#)

R/2 Corrector



ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2024

SHEET : FA-20-1E-R1

TIME	DAY	PATTERN 1	PATTERN 2
211733	134	+00000	+00002
172409	135	+00000	+00002
175440	136	+00000	+00002
234358		+00000	+00001
162623	137	+00000	+00002
193921		+00001	-00002
160426	138	+00001	-00002
175709	139	+00001	-00002
200132	139	+00002	+00000
170427	140	-00002	+00002
195535		+00002	+00002
181842	147	-00002	+00000
215700		+00000	+00000
161604	136	+00002	+00002
161800		+00000	+00000
170420	137	+00000	+00002
185000		-00002	+00000
162606	148	-00002	+00002
171908		+00002	-00002
173200		+00000	+00000
195839	138	+00001	-00002
225300		+00000	+00000
162828	139	+00001	00000
235000		+00000	+00000

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2023

SHEET : FA-20-1E-81

TIME	DAY	PATTERN 1	PATTERN 2
211254	132	+00002	+00002
161946	134	+00002	+00002
175602	134	-00002	+00002
210539		-00002	+00003
164649	135	+00000	-00002
225400		+00000	+00000
184822	136	+00000	-6R020
200900		+00000	+00000
212801	136	+00000	-02000
163058	137	+00000	-03526
211430	137	+00000	+07434
171700	138	+00000	+46458
204500		+00000	-60001
222840		+00000	-68333
225427		+00000	-07156
235900		+00000	+00000
171700	138	+00000	+44400
164000		+00000	+00000

E/A Corrector (Line 5)
pos # 2612-2618

E/A Corrector (FSET+E)
pos # 2611-2654

E/A Corrector (Line 7)
pos # 2657-2720

E/A Corrector (Develop)
pos # 2800-2802



ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2025

SHEET : FA20-1W-81

TIME	DAY	PATTERN 1	PATTERN 2
172729	140	00000	00001
174915		00000	00440
172000	141	00000	00000
173030		00000	00000
175959		00000	05031
194054	141	-00000	-33100
221700		-00000	-71343
210300	147	-00000	-68148
215200		00000	00000
201320		00000	00000
161655	148	-00000	-16066
174045		-00000	-15004
183345		00000	00000
204100		-00000	-19181
204900		00000	15383
205330		00000	17400
172754	149	-00000	-14107
195815		00000	01130
223500		-00000	-75518
165700	150	-00000	-32582
201400		00000	00167
210645		00000	10288
213300		00000	10005
214210		00000	00070
223546		00000	00000
230730		00000	13370
231300		00000	00000

FILE
2025-7001

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ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2023

SHEET : FA20-1V-01

TIME	DAY	PATTERN 1	PATTERN 2
173700	139	+00000	-28000
211745		+00000	+75000
220700		+00000	+00000

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2024

SHEET : FA20-1W-81

TIME	DAY	PATTERN 1	PATTERN 2
205449	140	+00002	+00002
162729	141	+00002	-00002
183134		+00002	+00002
182519	148	+00002	+00002
164035	149	+00002	+00002
205237		+00002	+00002
205237	149	+00002	+00002
212600		+00000	+00000

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2023

SHEET : FA-20-1W-R1

TIME	DAY	PATTERN 1	PATTERN 2
170854	140	-00002	+00002
185318	141	+00002	+00000
172832	147	+00002	+00000
202830	147	+00002	+00000
162243	148	+00002	+00002
175359	148	+00002	+00000
192144 200703	150	+00002	+00000
212056	151	+00002	+00002
212500		+00000	+00000
192144	150	+00002	+00002
200100		+00000	+00000
172005	150	+00002	+00000
175229	151	+00002	+00000
181300		+00000	+00000
195834	151	+00002	+00000
195900		+00000	+00000

1/2 Corrector (m.s.)
Pos # 3074-3651

1/2 Corrector (Star Pattern)
Pos # 3623-3628 1:20,000

1/2 Corrector (Star Pattern)
Pos # 3578-3611 1:10,000
3643-3655

1/2 Corrector (4 L. encl.)

APPENDIX F
List of Stations

✓

TENAKEE SIGNAL LISTING

001
002
003

004 CAN, 1949-1980 571351 FAIRWEATHER 1980
005 ~~100 1 57 46 43511 135 06 48849 250 0003 000000~~

006
007 DON, 1980 571351 FAIRWEATHER 1980
008 ~~103 1 57 46 43853 135 01 24261 250 0001 000000~~

009
010 FOO, 1980 571351 FAIRWEATHER 1980
011 ~~104 6 57 45 38961 135 06 20114 250 0001 000000~~

012
013 MURI, 1980 571351 FAIRWEATHER 1980
014 ~~105 6 57 44 24539 135 09 54565 250 0004 000000~~

015
016 ^{US68} TENAKEE, 1980/ 571351 FAIRWEATHER 1980
017 106 1 57 46 17572 135 13 34547 250 0004 000000

018
019 ^{US65} WHIP, 1980/ 571351 FAIRWEATHER 1980
020 107 2 57 48 29448 135 18 51713 250 0003 000000

021
022 ^{US65} BETH, 1981 571351 FAIRWEATHER 1981
023 108 5 57 49 43772 135 26 12974 250 0001 000000

024
025 ^{US65} DOT, 1981 571351 FAIRWEATHER 1981
026 109 2 57 51 23570 135 24 16521 250 0001 000000

027
028 EMMA 2, 1981 571351 FAIRWEATHER 1981
029 110 5 57 48 05314 135 22 31088 250 0001 000000

030
031 CALIBRATION POLE 1, 571351 FAIRWEATHER 1981
032 ~~111 7 57 44 32964 135 18 06704 139 0002 000000~~

033
034 AID 2, 1925 571344 1001
035 ~~200 2 57 48 19567 134 56 43653 250 0002 000000~~

036
037 BEANY, 1980 571351 FAIRWEATHER 1980
038 300 6 57 45 12333 135 03 59173 250 0001 000000

039
040 CONSTANCE, 1980 571344 FAIRWEATHER 1980
041 301 4 57 45 51882 134 56 18990 250 0003 000000

042
043 TRAP, 1980 571351 FAIRWEATHER 1980
044 ~~302 5 57 45 02449 135 01 36559 250 0002 000000~~

045
046 KITTY, 1980 571351 FAIRWEATHER 1980
047 303 5 57 45 25918 135 19 37368 250 0004 000000

048
049 TENAKEE INLET ENTRANCE LT. 1, 1980 571344
050 ~~400 7 57 46 21638 134 55 57645 139 0006 000000~~

051											
052		TENAKEE REEF DAYBEACON, 1980								571351	
053	001 0	57 46 364 ³⁵ 47	135 13	5989 ⁴⁵ 45	139 0000	000000					
054											
055		TENAKEE INLET LT. 4, 1980								571351	
056	002 1	57 46 30381	135 11	49128	139 0000	000000					
057											
058		TENAKEE REEF LT., 1980								571351	
059	002 2	57 46 13387	135 13	33504	139 0000	000000					
060											
061		TENAKEE INLET DAYBEACON T, 1981								571351	
062	004 3	57 50 411 ¹³ 42	135 24	5020 ²⁰ 0	139 0000	000000					
063											
064		TENAKEE DAYBEACON 2, 1981								571351	
065	005 1	57 46 30069	135 00	15045	139 0000	000000					
066											
067		ROBIN, 1981 ²⁰								571351	FAIRWEATHER 1981
068	009 6	57 44 224 ⁷⁹ 79	135 18	2820 ⁴⁶ 46	250 0003	000000					
069											
070		CRAB, 1981 ⁸								571351	FAIRWEATHER 1981
071	001 4	57 44 1128 ²	135 22	4949 ²⁸ 28	250 0003	000000					
072											
073		TP 1								571351	FAIRWEATHER 1981
074	002 6	57 44 52878	135 19	2883 ¹⁸ 18	250 0002	000000					
075											
076		TP 2								571351	FAIRWEATHER 1981
077	003 2	57 44 2813 ² 2	135 23	0945 ²⁷ 27	250 0001	000000					
078											
079		BREEZE, 1981								571351	FAIRWEATHER 1981
080	004 6	57 46 35922	135 22	2511 ¹⁸ 18	250 0002	000000					
081											
082		SALT, 1981								571351	FAIRWEATHER 1981
083	005 6	57 46 19483	135 25	141 ¹⁹ 19	250 0001	000000					
084											
085		CALIBRATION POLE 2								571351	FAIRWEATHER 1981
086	001 5	57 49 0160 ⁴ 4	135 24	4167 ⁰⁴ 04	250 0001	000000					
087											
088		CALM, 1981 ²⁰								571351	FAIRWEATHER 1981
089	007 5	57 46 324 ¹⁸ 18	135 21	3799 ⁴³ 43	250 0002	000000					
090											
091		CAROLANN, 1981								571354	FAIRWEATHER 1981
092	008 6	57 50 336 ¹⁸ 18	135 30	557 ⁸⁸ 88	250 0006	000000					
093											
094		SEAL, 1981								571354	FAIRWEATHER 1981
095	009 0	57 50 16962	135 33	455 ¹² 12	250 0002	000000					
096											
097		GUT, 1981 ⁵³								571351	FAIRWEATHER 1981
098	010 1	57 52 101 ⁴⁸ 48	135 28	326 ²¹ 21	250 0000	000000					
099											
100		JEANNIE, 1981								571351	FAIRWEATHER 1981
101	011 2	57 52 351 ⁰⁷ 07	135 29	558 ⁴⁰ 40	250 0001	000000					

001
002 OTDOLE,1981 571354 FAIRWEATHER 1981
003 012 3 57 52 507329 135 33 4661709 250 0001 000000
004
005 WHEEL,1981 571354 FAIRWEATHER 1981
006 015 3 57 51 25318 135 30 4729184 250 0003 000000
007
008 LAURIE,1981 571354 FAIRWEATHER 1981
009 014 3 57 50 12661 135 30 34881 250 0007 000000
010
011 TP 4 571354 FAIRWEATHER 1981
012 ~~014 3 57 53 00573 135 34 29030 250 0004 000000~~

APPENDIX G
Abstract of Positions

ABSTRACT OF POSITIONS

VESSEL 2023

H 9939
 FA 20-1-81
 CONSOLE # 702
 or
 MOBILE UNIT

DAY	POSITIONS	CONTROL CODE *	CONTROL STATIONS and XPDR #	TYPE OF HYDRO			PSR #	DEVEL. #	BS of p.p.s.	SHEETS WHERE PLOTTED		REJECTED OR DUPLICATED POSITIONS
				MS	XL	SPLITS				SEMI-SMOOTH	ENLARGMENT #	
132	2002-2050	4	106/6		X							2000, 2001 2008, 2009 2036-R, N/A
132	2051-2054	4	106/6			X						
134	2055-2067	4	106/6		X							2068-2267 not used
134	2268-2420	4	107/B		X							2304, 2319 2325, 2326 2333, 2334 2335, 2358 2361
135	2421-2466	4	109/9		X							2400-2420 2443, 2446 2447
135	2467-2485	4	109/9			X						N/A
135	2489-2605	4	109/9			X						2486-2488 2496-2520 2536, 2549
136	2606-2610	4	109/9									N/A
136	2611-2654	3	501/5			X						2655-2656
136	2657-2695	3	503/5									2671-2674

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

ABSTRACT OF POSITIONS

VESSEL 2023

H 9939
 FA 20-1-81
 CONSOLE # 702
 OF
 MOBILE UNIT

DAY	POSITIONS	CONTROL CODE *	CONTROL STATIONS		TYPE OF HYDRO						SHEETS WHERE PLOTTED			REJECTED or DUPLICATED POSITIONS
			STATION #	XPDR #	MS	XL	MS SPLITS	PSR #	DEVEL. #	BS #	SEMI-SMOOTH	SMOOTH ENLARGMENT #		
137	2696-2760	3	503 5						X					None
137	2761-2828	3	505 5		X									None
138	2829-2895	3	507 5					X						2829-2938 Data edited to remove excess soundings and fix density
138	2896-2924	3	505					X						None
138	2925-2938	3	504 5		X				X					None
139	2939-3034	3	508/5		X									None
139	3035-3072	3	509/5		X									None
140	3073-3247	4	108/8		X									3073, 3079
140	3248-3255	4	108/8			X								3142, 3198
141	3256-3322	4	513/7		X									3215, 3216
147	3323-3387	4	513/7		X									3217, 3247
														3248
														3307
														3323, 3336
														3349, 3430

CON L CODES: 01 Visual; 03 Range/Az; 04 Range/Range; 05 Hyperbolic; 08 Hypervisual; 09 Range/Visual

ABSTRACT OF POSITIONS

VESSEL 2023

H 9939
 FA FA-20-1-81
 MOBILE UNIT

CONSOLE # 702

OR

MOBILE UNIT

DAY	POSITIONS	CONTROL CODE #	CONTROL STATIONS and XPR #	TYPE OF HYDRO						SHEETS WHERE PLOTTED			REJECTED or DUPLICATED POSITIONS	
				MS	XL	MS SPLITS	PSR #	DEVEL. #	BS #	SEMI-SMOOTH	SMOOTH	ENLARGEMENT #		
147	3388-3403	4	511/6		X						X			
147	3404-3446	4	511/6		X						X			
148	3446-3477	4	511/6		X						X			3451, 3480 3486, 3525 3552, 3575
148	3478-3577	4	511/6		X						X			

CON L CODES: 01 Visual; 03 Range/Az; 04 Range/Range; 05 Hyperbolic; 08 Hypervisual; 09 Range/Visual

ABSTRACT OF POSITIONS

VESSEL 2024

H 9939
 FA 20-1-81
 CONSOLE # 701
 OF
 MOBILE UNIT

DAY	POSITIONS	CONTROL CODE *	CONTROL STATIONS		TYPE OF HYDRO				SHEETS WHERE PLOTTED			REJECTED or DUPLICATED POSITIONS	
			ST PDR / PDR	PDR / PDR	MS	XL	MS SPLITS	PSR #	DEVEL. #	BS P/S	SEMI-SMOOTH		SMOOTH/ENLARGMENT #
134	4000-4049	4	107/B		X								None
135	4050-4163	4	107/B		X								4050, 4058
136	4164-4216	4	107/B		X								4206, 4207
	4217-4240	4	107/B		X								4208, 4221
	4241-4293	4	107/B		X								4237, 4226
	4294-4308	4	107/B		X								
137	4309-4315	4	107/B		X								
	4316-4323	4	107/B		X								4324, 4373
	4324-4351	4	107/B		X								4382, 4383
	4352-4357	4	107/B		X								4397, 4398
138	4358-4383	4	110/A		X								4399, 4439
	4384-4392	4	110/A		X								
	4393-4482	4	110/A		X								
	4483-4561	4	110/A		X								4487, 4532
139	4562-4596	4	110/A		X								4571, 4593
	4597-4634	4	110/A		X								4602
	4635-4649	4	110/A		X								
	4650-4652	4	110/A		X								

* CON L CODES: 01 Visual; 03 Range/Az.; 04 Range/Range; 05 Hyperbolic; 08 Hypervisual; 09 Range/Visual

ABSTRACT OF POSITIONS

VESSEL 2024

H 9939
 FA 20-1-81
 CONSOLE # 701
 OF
 MOBILE UNIT

DAY	POSITIONS	CONTROL CODE *	CONTROL STATIONS and XPDR #	TYPE OF HYDRO				SHEETS WHERE PLOTTED			REJECTED or DUPLICATED POSITIONS	
				MS	XL	MS SPLITS	PSR #	DEVEL. #	BS #	SEMI- SMOOTH		SMOOTH/ENLARGMENT #
139	4653-4656	4	110/A									
	4657-4693	4	110/A			8.2						
	4694-4702	4	109/9					1.5				
	4703-4712	4	109/9			3.4						
	4713-4783	4	109/9									
	4784-4839	4	108/8			12.5						4794, 4811 4835, 4882 4889, 4890 4891
141	4840-4844	4	108/8			1.5						
	4845-4865	4	511/6			4.9						
	4866-4882	4	511/6			3.4						
	4883-4895	4	511/6					0.5				
148	4896-4909	4	511/6			6.9						
	4910-4927	4	109/9									4962, 4963 4968
	4928-4968	4	511/6									
148	4969-4977	4	511/6									
	5077-5176	4	511/6									5106, 5117 5162
	5177-5185	4	511/6									

* CON L CODES: 01 Visual; 03 Range/Az; 04 Range/Range; 05 Hyperbolic; 08 Hypervisual; 09 Range/Visual

ABSTRACT OF POSITIONS

VESSEL 2025

H 9939
FA 20-1-81

CONSOLE # 703
OR
MOBILE UNIT

DAY	POSITIONS	CONTROL CODE *	CONTROL STATIONS and XPDR #	TYPE OF HYDRO				SHEETS WHERE PLOTTED			REJECTED or DUPLICATED POSITIONS
				MS	XL	MS SPLITS	PSR #	DEVEL. #	BS #s	SEMI-SMOOTH	
132	6000-6065	3	501/5	X							6056, 605p 6064
133	6072-6132	3	501/5	X							6066, 6071 6095, 6096 (6081-6087 doubles)
133	6133-6155	3	501/5		X						6138, 6139
133	6156-6220	3	501/5	X							N/A
134	6221-6386	3	501/5	X							6221, 6296 6303, 6305 6312, 6314 6321, 6322 6329, 6337 6345, 6346 6353, 6354 6361, 6362
135	6387-6410	3	501/5				#8	X			N/A
135	6411-6433	3	501/5				#8	X			N/A
135	6434-6516	3	507/5								N/A
137	6517-6523	3	503/5 107/B						X		6440
	6524-6536	9	505/5 108/8 110/A 106/6								N/A
138	6538-6558	4	109/9 108/8 107B 110/A						X		N/A

CON L CODES: 01 Visual; 03 Range/Az.; 04 Range/Range; 05 Hyperbolic; 08 Hypervisual; 09 Range/Visual

ABSTRACT OF POSITIONS

VESSEL 2025

H 9939

CONSOLE # 703

FA 20-1-81

OR MOBILE UNIT

DAY	POSITIONS	CONTROL CODE *	CONTROL STATIONS		TYPE OF HYDRO				SHEETS WHERE PLOTTED			REJECTED or DUPLICATED POSITIONS			
			and XPDR #	ST PDR #	MS	XL	MS SPLITS	PSR #	DEVEL. #	BS of P's	SEMI-SMOOTH		SMOOTH/ENLARGMENT #		
139	6559-6581	4/9	508/5	511/6											
			108/8	109/9											
140	6582-6589	3	509/5												
	6590	3	509/5												
	6591-6700	3	509/5												
141	6701-6703	3	509/5												
	6704-6715	3	509/5												
	6716-6720	3	509/5												
	6721-6726	3	514/5												
	6727-6762	3	508/5												
147	6778-6795	3	510/5												
	6796-6800	3													
	6801-6811	3	510/5												
148	6812-6815	3	509/5												
	6816-6835	3	514/5												
	6836-6837	3	514/5												
	6838-6840	3	514/5												

CON L CODES: 01 Visual; 03 Range/Az; 04 Range/Range; 05 Hyperbolic; 08 Hypervisual; 09 Range/Visual

6763, 6777 not used

6816

6720, 6741, 6745, 6755

6617

6602

REJECTED or DUPLICATED POSITIONS

ABSTRACT OF POSITIONS

VESSEL 2025

H 9939
 FA 20-1-81
 CONSOLE # 703
 OF
 MOBILE UNIT

DAY	POSITIONS	CONTROL CODE #	CONTROL STATIONS and XPDR #	TYPE OF HYDRO					SHEETS WHERE PLOTTED			REJECTED or DUPLICATED POSITIONS	
				MS	XL	MS SPLITS	PSR #	DEVEL. #	BS S.P.'s	SEMI-SMOOTH	SMOOTH ENLARGMENT #		
148	6841-6848	3	514/5						X				
	6849-6852	3	511/5		X								
	6853-6907	3	511/5	X									6859, 6860 6863, 6880
	6908	3	511/5						X				
	6909-6911	3	511/5		X								
	6912-6913	3	510/5						X				
	6914-6948	3	510/5	X									6935, 6964 6996
	6949-6953	3	510/5		X								
	6954-6957	3	510/5						X				
	6958-6961	3	510/5		X								
149	6962-6964	3	510/5						SL				
	6965	3	510/5						X				
	6966-6983	3	510/5						SL				
	6984-6995	3	508/5						SL				
	6996-6999	3	508/5						X				

CON L CODES: 01 Visual; 03 Range/Az.; 04 Range/Range; 05 Hyperbolic; 08 Hypervisual; 09 Range/Visual

APPENDIX H
Bottom Samples (Log Sheet M)

APPENDIX I
Landmarks for Charts

No uncharted landmarks were found in conjunction with this survey. All charted landmarks were judged adequate for retention on future NOS charts.

APPENDIX J
Approval Sheet

J. APPROVAL SHEET

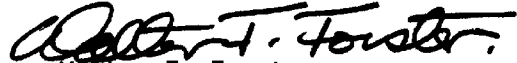
This survey is complete and adequate. The commanding officer supervised field work and examined the records daily during the entire survey period.

Submitted by:



Todd A. Baxter
LT, NOAA

Approved by:



Walter F. Forster
CDR, NOAA
Commanding Officer



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

NOAA Ship FAIRWEATHER S220
FPO, Seattle, WA 98799

July 14, 1981

Commander, 17th Coast Guard District
P. O. Box 3-500
Juneau, Alaska 99801

Dear Sir:

While conducting a survey in Tenakee Inlet, Alaska, May 1981,
geodetic operations determined positions for two aids to navigation
which have no Light List positions.

The aids and positions are as follows:

Tenakee Daybeacon 2: 57°46'30.869"N ✓
135°08'15.845"W ✓

Tenakee Daybeacon T: 57°50'41.162"N ✓
135°24'50.200"W ✓

Sincerely,

Walter F. Forster, CDR, NOAA
Commanding Officer

cc: NOS Marine Chart Division, OA/C3
NOS Pacific Marine Center, CPM3



10TH ANNIVERSARY 1970-1980
National Oceanic and Atmospheric Administration

A young agency with a historic
tradition of service to the Nation



-61-

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY *9/81*
NOAA Ship FAIRWEATHER S220

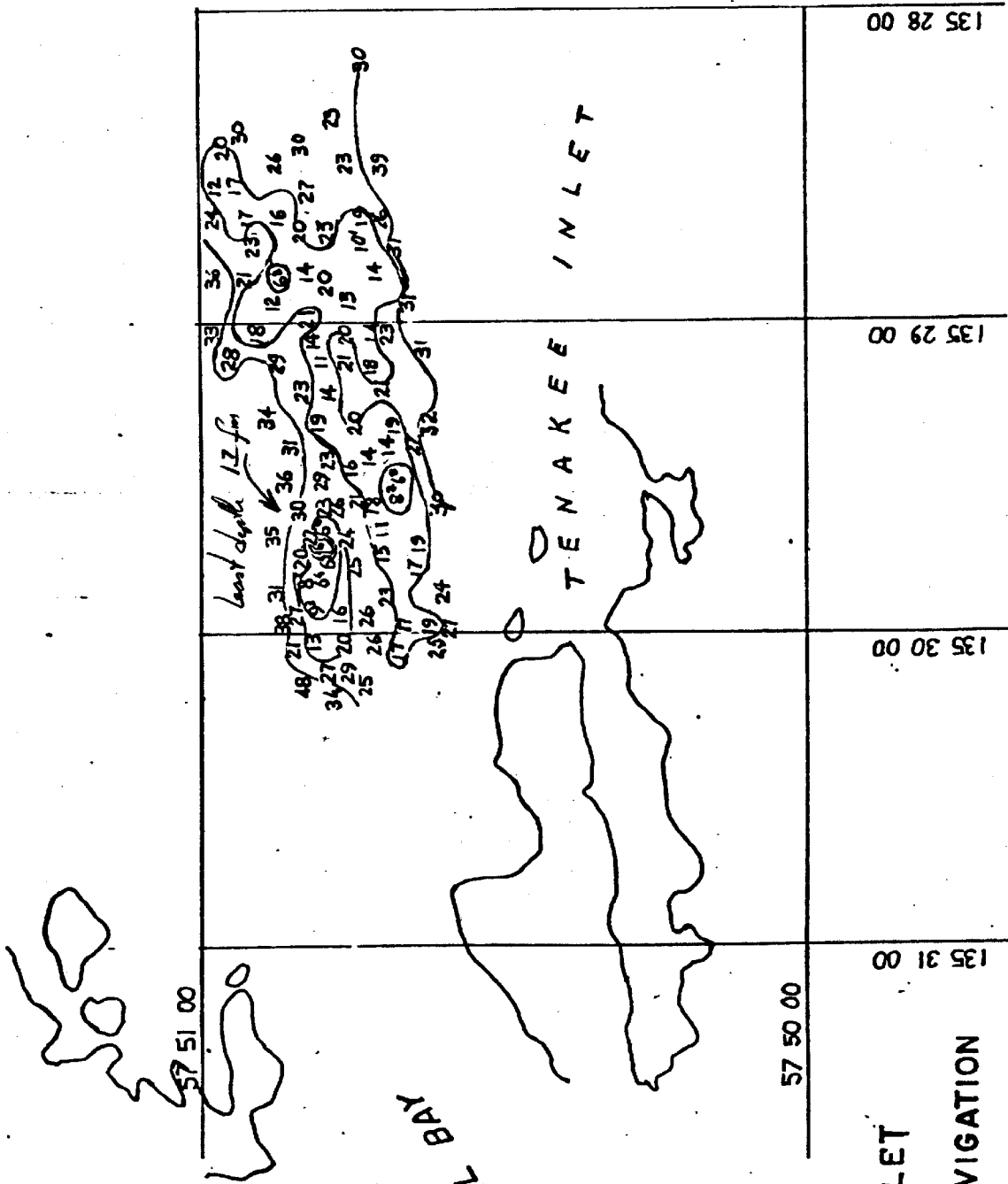
CPM220/WFF:acm/A-15

DATE : June 9, 1981
TO : OA/C3 - Roger F. Lanier
THRU : OA/CPM3 - John W. Carpenter
FROM : *[Signature]*
OA/CPM220 - Commanding Officer
NOAA Ship FAIRWEATHER
SUBJECT: Danger to Navigation Letter

Enclosed is a copy of a message concerning a danger to navigation, plus a tracing from the smooth sheet of H-9939. The least depth was determined by a diver search of the area, and a taped depth from the pinnacle to the surface.



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TENAKEE INLET

DANGER TO NAVIGATION

FA-20-1-80 (H-9939)

FAIRWEATHER 1981

OPR-0342-FA-81

20
X0
FOO

NOJ NOJ DE WTEB WTEB

T

RTTUZYUW RUHPTER0063 1601730-UUUU--RUHPSUU.
ZNR UUUUU
R 091730Z JUN 81
FM NCAAS FAIRWEATHER
TO CCGDSEVENTEEN JUNEAU AK
CM GRNC

BT

UNCLAS

DANGER TO NAVIGATION

A DANGER TO NAVIGATION WAS LOCATED DURING HYDROGRAPHIC SURVEY OPERATIONS IN TENAKEE INLET, AK. AN UNCHARTED ROCK, LOCATED AT THE MOUTH OF SEAL BAY IN TENAKEE INLET (LAT. 57/50/48.12N, LONG. 135/29/44.01W), HAS A LEAST DEPTH OF 1.6 FATHOMS AT MEAN LOWER LOW WATER. THE ROCK IS IN A POTENTIALLY NAVIGABLE AREA WITH SURROUNDING DEPTHS OF 30 FATHOMS.

BT

#3063

least depth 1.7 fm

NNNN

NOJ DE WTEB INT QSL K

2006Z WTEB DE NOJ RRR 091730Z - INT GRU K

NOJ DE WTEB GRU GRU TNX WTEB

*NOJ / 092006 Jun 81
4332
C. Jacobson / 4332*

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		4	
DESCRIPTIVE REPORT		1	SMOOTH OVERLAYS: POS. ARC, EXCESS		11	
DESCRIP-TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	2					
VOLUMES						
BOXES			1			

T-SHEET PRINTS (List)

SPECIAL REPORTS (List)

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	PRE-VERIFICATION	VERIFICATION	TOTALS
POSITIONS ON SHEET			
POSITIONS CHECKED		3716	3716
POSITIONS REVISED		784	784
SOUNDINGS REVISED		259	259
SOUNDINGS ERRONEOUSLY SPACED		-0-	-0-
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		-0-	-0-
	TIME - HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	10	*(VER)/(EVAL)	10
VERIFICATION OF CONTROL		05/ 05	10
VERIFICATION OF POSITIONS		86/ 13	99
VERIFICATION OF SOUNDINGS		373/ 21	394
COMPILATION OF SMOOTH SHEET		103/ 15	118
APPLICATION OF TOPOGRAPHY		02/ 00	02
APPLICATION OF PHOTOBATHYMETRY		00/ 00	00
JUNCTIONS		03/ 03	06
COMPARISON WITH PRIOR SURVEYS & CHARTS		00/ 28	28
VERIFIER'S REPORT		01/ 25	26
OTHER		03/ 02	05
TOTALS	10	576/113	695

Pre-Verification by James S. Green	Beginning Date 8/13/81	Ending Date 8/14/81
Verification by Leonardo T. Deodato Evaluation Gordon E. Kay	Beginning Date 10/16/81 3/14/83	Ending Date 1/7/83 4/13/83
Verification Check by Stanley H. Ocullo, James S. Green	Time (Hours) 81	Date 4/19/83
Marine Center Inspection by	Time (Hours)	Date
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-9939

FIELD NO: FA-20-1-81

Alaska, Tenakee Inlet, Crab Bay to Seal Bay

SURVEYED: May 12 - June 1, 1981

SCALE: 1:20,000

PROJECT NO: OPR-0342-FA-81

SOUNDINGS: Ross Fineline 5000

CONTROL: Mini-Ranger
Range-Azimuth
Range-Range

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

Surveyed By.....LT D. G. Hennick
LT T. A. Baxter
LTJG A. F. Trimble
ENS G. H. Tuell
ENS A. E. Francis
ENS R. H. Pingry
CST E. R. Krick

Automated Plot By.....PMC Xynetics Plotter

Verified By.....Leonardo T. Deodato

Evaluated By.....Gordon E. Kay

1. INTRODUCTION

H-9939 is a Navigable Area Survey (NAS) conducted by the NOAA Ship FAIRWEATHER in accordance with Project Instructions OPR-0342-FA-81, Tenakee Inlet, Alaska, dated January 13, 1981 and the following changes: Change No. 1, February 23, 1981; Change No. 2, May 13, 1981; and Change No. 3, October 27, 1981. This survey is a continuation of the surveys started in Tenakee Inlet in 1980, whose purpose is to completely survey all areas of safe navigation within assigned limits of a navigable area survey.

H-9939 is situated in Tenakee Inlet, between (and including) Seal and Crab Bays. An inset of Seal Bay (same scale as smooth sheet, 1:20,000) is on the smooth sheet to confine the survey to maximum sheet width (36 inches).

During verification/evaluation the following data was changed:

a. Projection parameters were changed to center the hydrography on the smooth sheet (including inset) and to change the projection to polyconic.

b. List of stations has been adjusted to reflect preliminary adjusted field positions and names to reflect National Geodetic Service (NGS) listings.

c. Tide level values used on this survey (H-9939) are from observed tides. See 77-12 on following separate.

d. Correction to soundings are amended in the smooth printout. Velocity correctors have been changed to reflect errors found in interpretation of the original velocity curve.

The digital records for this survey have been updated to include all categories of information required to comply with N/CG letter, Policy For Certification and Delivery of Hydrographic Surveys, December 17, 1982.

2. CONTROL AND SHORELINE

Horizontal control and hydrographic position control are adequately discussed in paragraphs F and G of the ship's descriptive report. Additional information is contained in the electronic control report, OPR-0342-FA-80 and horizontal control report, OPR-0342-FA-80.

The smooth sheet was plotted using preliminary adjusted field positions on the North American Datum of 1927.

Shoreline used during the field work was an enlargement of a U. S. Geological Survey (USGS) stable base matte composite positive (at a scale of 1:20,000), hereafter referred to as a Base Manuscript, Tenakee Inlet - East. The shoreline shown on the smooth sheet originates from the above mentioned Base Manuscript. Shoreline is shown in brown ink and is for "orientation purposes only". The shoreline is not shown in the following areas due to conflict between the Base Manuscript and hydrographic data:

<u>Latitude</u>	<u>Longitude</u>
57°51'58"N	135°32'45"W
57°51'32"N	135°31'30"W
57°50'18"N	135°30'07"W
57°50'09"N	135°28'15"W
57°50'04"N	135°27'55"W
57°49'49"N	135°26'30"W
57°50'42"N	135°32'50"W
57°50'23"N	135°31'30"W
57°50'07"N	135°32'25"W
57°49'50"N	135°32'55"W
57°49'35"N	135°33'45"W
57°44'10"N	135°23'30"W

3. HYDROGRAPHY

Soundings at crosslines are in good agreement.

The hydrography in this survey, H-9939, is adequate to determine the bottom configuration and determine least depths.

Standard depth contours were adequately drawn and developed with the exception of the 0-fathom contour where hydrography was terminated due to navigable area survey requirements.

4. CONDITION OF SURVEY

The hydrographic records and final reports adequately conform to the requirements of the Hydrographic Manual, July 4, 1976 edition.

5. JUNCTIONS

H-9939 junctions with the following contemporary surveys:

H-9870, 1:20,000 (1980-81) junctions the entire eastern limit of H-9939. No problems were encountered in making a junction, but two soundings from H-9870 have been transferred onto H-9939. Depth contours are in coincidence and marginal notes (in red) have been inked.

H-9982, 1:20,000 (1981) junctions the entire western limit of H-9939. No problems were encountered in making a junction. Depth contours are in coincidence and marginal notes (in violet) have been inked.

6. COMPARISON WITH PRIOR SURVEY

H-2206, 1:40,000 (1894)

See ship's descriptive report, paragraph K, for an adequate comparison.

There are two numbered presurvey review items located on H-9939 as follows:

a. PSR #7, a reported reef connecting the shore with two charted rocks (source H-2206) at latitude $57^{\circ}51'00''N$, longitude $135^{\circ}24'00''W$, originates with Chart Letter 1797/76, and was extensively searched for and developed. The features found are located midway between the two charted rocks and the shoreline and is an isolated shoal surrounded with navigable water. The two features (isolated soundings) that make up this shoal are as follows:

(1) Pos. #4650, a 0.4 fm Rk at latitude $57^{\circ}51'03.12''N$, longitude $135^{\circ}24'30.46''W$.

(2) Pos. #4651, a -4.0 ft Rk (uncovered) at latitude $57^{\circ}51'06.81''N$, longitude $135^{\circ}24'28.68''W$.

This area should be charted according to this survey, H-9939.

b. PSR #8, a reported possible shoaling of 2.0 fathoms at latitude $57^{\circ}44'48''N$, longitude $135^{\circ}18'54''W$, originates with Chart Letter 1797/76. This area was extensively searched for and developed. No 2.0 fathom soundings were found at that location, but 2.0 fathom soundings were located on either side of the channel into Crab Bay. A 2.5 fathom sounding (Pos. #6024/0) in particular lies south of the charted "shoaling reported 8.0 fathoms". This 8.0 fathom shoal encompasses this 2.5 fathom and connects onto the southern shore, not the northern one as charted. The charted

shoaling reported 8.0 fathoms was also investigated and a least depth of 5.9 fathoms found (Pos. #6021/2). This area should be charted according to this survey, H-9939.

The above two mentioned shoals, 2.5 and 5.9 respectively, have been reported to the U. S. Coast Guard as a hazard to navigation (see following attachment).

H-9939 is adequate to supersede H-2206 over their common areas.

7. COMPARISON WITH CHART

H-9939 was compared with two charts as follows:

Chart 17300, 21st Edition, scale 1:209,978, March 17, 1979
 Chart 17320, 10th Edition, scale 1:217,828, February 14, 1981

An adequate discussion of the comparisons are found in the ship's descriptive report, paragraph L.

a. Hydrography - Charted information comes from the before mentioned prior survey (see enclosed chartlet). Two charted rocks do need to be mentioned as follows:

(1) A rock charted at latitude 57°46'27"N, longitude 135°21'06"W was located on this survey (Pos. #4212) and is a 0.9 fathom sounding Rk. The present survey data should be charted.

(2) A rock, charted (source unknown) at latitude 57°51'33"N, longitude 135°30'30"W was not found on this survey. It appears that due to chart scale of 1:217,828 this feature has been displaced from the shoreline. The present survey reveals depths of 40 fathoms in this general location. The present survey data should be charted.

H-9939 is adequate to supersede the charts over their common areas.

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

c. Aids to Navigation - There is one fixed aid to navigation, Day Beacon "T" at latitude 57°50'41.173"N, longitude 135°24'50.220"W. This aid was first located on this survey (see attached correspondence and paragraph N of the ship's descriptive report).

There are no floating aids on this survey, but one is recommended at the mouth of Seal Bay on top of a 1.7 fathom Rk depth, located at (Pos. #3659) latitude 57°50'48.08"N, longitude 135°29'44.06"W.

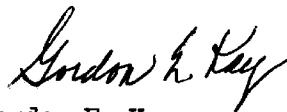
8. COMPLIANCE WITH INSTRUCTIONS

H-9939 complies with the project instructions and amendments listed in section 1 of this report.

9. ADDITIONAL FIELD WORK

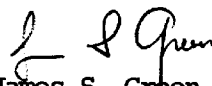
H-9939 is an adequate navigable area survey. Additional field work is neither recommended nor required at this time.

Submitted by,



Gordon E. Kay
Cartographer

This survey has been verified and evaluated. I have examined the survey and it meets Charting and Geodetic Services standards and requirements for use in nautical charting except as noted above in the Evaluation Report. This survey, H-9939, is recommended for approval.



James S. Green
Supervisory Cartographer

U.S. DEPARTMENT OF COMMERCE
November 2, 1981 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): 945-2386 Tenakee, AK
945-2489 Upper Tenakee Inlet, AK

Period: May 12-31, 1981

HYDROGRAPHIC SHEET: H-9939

OPR: 0342

Locality: Tenakee Inlet, Alaska

Plane of reference (mean lower low water): 945-2386 = -3.29 ft.
945-2489 = 11.8 ft.

Height of Mean High Water above Plane of Reference is 945-2386 = 14.24 ft.
945-2489 = 14.2 ft.

REMARKS: Recommended Zoning:

Use Automatic Zoning:

For J-Days 132-136 when the tide gage at 945-2489 was inoperative. Zone direct on 945-2386 Tenakee, Alaska.


Chief, Datums and Information Branch

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

CORRECTIONS IN FEET, FATHOMS

NOAA FORM 15-21
110-772 U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEAN SURVEY

VELOCITY CORRECTIONS

Ship FAIRWEATHER
Comdg. CDR W.F. FORSTER

These corrections are to be used
between MAY 1 19 81 and MAY 31 19 81
in the locality TENAKEE INLET, ALASKA

for hydrographic surveys Nos. H-9939

VELOCITY CORRECTORS

Shoal correctors from
NANSEN EAST OF
27 MAY 81



Deep correctors from
NANSEN EAST OF
21 MAY 81

DEP. IN FATHOMS

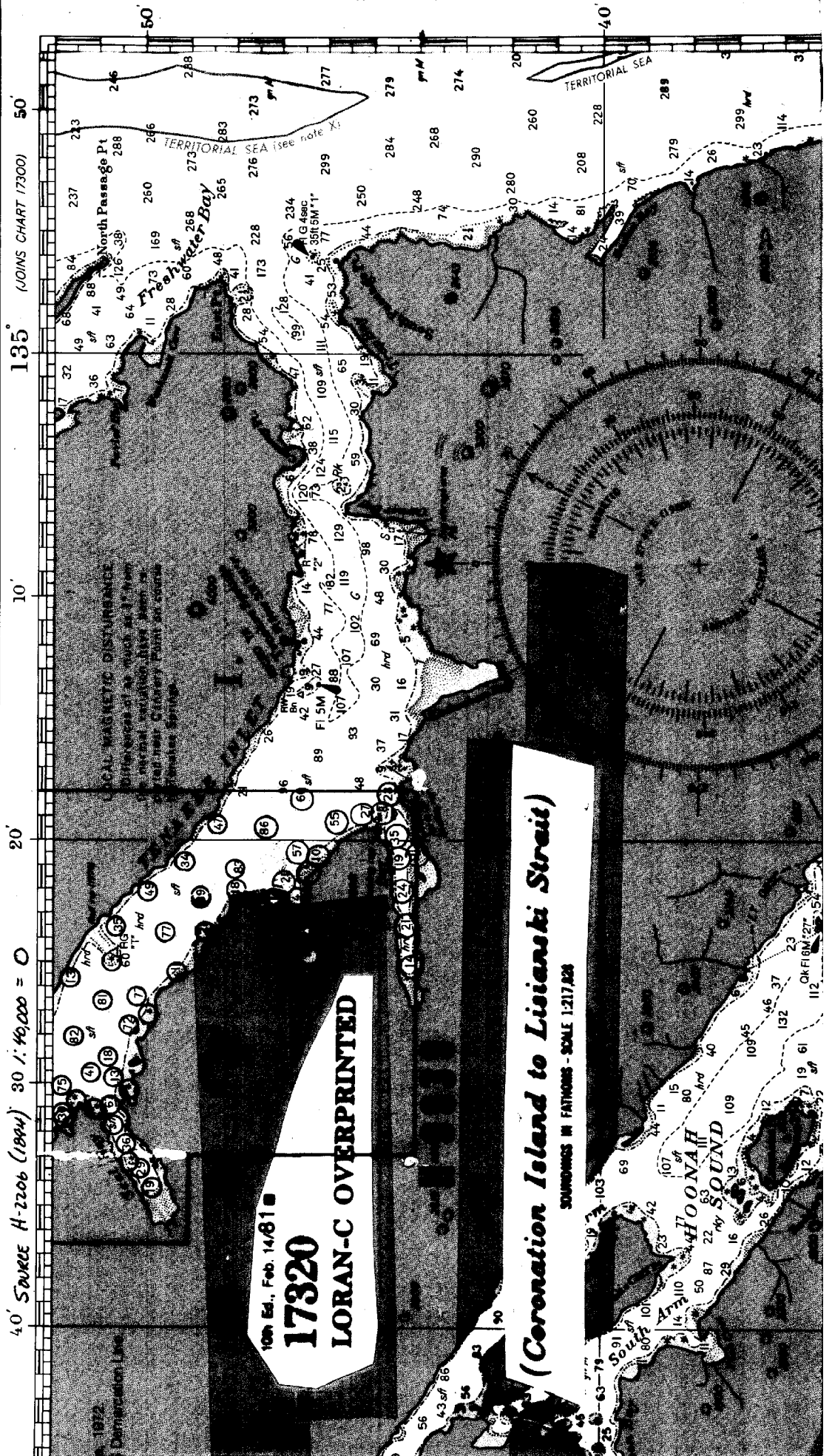
0 0.1 0.2 0.3 0.4 0.5 0.6

CORRECTORS (FATHOMS)

Graph 2

0-2

Formerly C&GS 8252, 1st Ed., Feb. 1936 C-1936-447

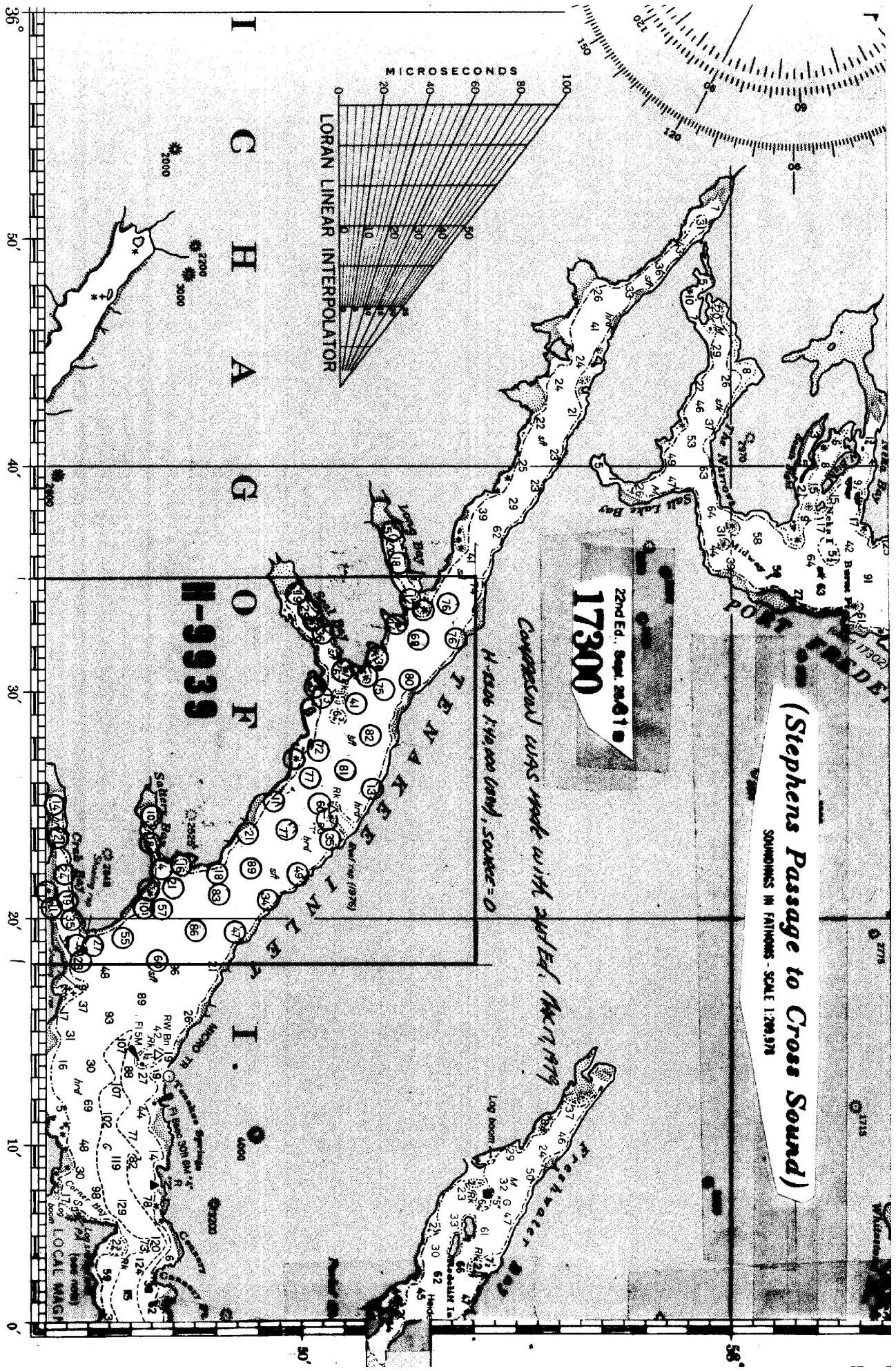


40' SOURCE H-2206 (1894) 30 1:49,000 = 0 20' 10' 135° (JOINS CHART 17300) 50'

10th Ed., Feb. 14/81
17320
LORAN-C OVERPRINTED

(Coronation Island to Lisianski Strait)
SOUNDINGS IN FATHOMS - SCALE 1:217,226

LOCAL MAGNETIC DISTURBANCE
Difference of 10 minutes and 15 seconds
from normal variation. Difference from
2nd meridian. Corrected value at
Honolulu Springs.



22nd Ed. Sup. 2861
17300

(Stephens Passage to Cross Sound)
SOUNDINGS IN FATHOMS - SCALE 1:200,000

Compass rose was made with added markings

N-2861 (17300) (and) source-D

N-9939

Published at Washington, D. C.
U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY



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

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

May 4, 1983

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

Dear Sir:

A review of verified hydrographic survey H-9939, Alaska, Tenakee Inlet, Crab Bay to Seal Bay, indicates the following changes affecting NOAA Chart 17320. The indicated depths are reduced to MLLW.

1. A 5.8 fathom sounding is in an area charted at over 18 fathoms at latitude 57°50'57"N, longitude 135°28'09"W.
2. A 6.6 fathom sounding is in an area charted at 13 fathoms at latitude 57°50'40"N, longitude 135°29'30"W.
3. A 5.9 fathom sounding is in an area charted at 8 fathoms at latitude 57°44'50"N, longitude 135°18'44"W.
4. A 2.5 fathom sounding is in an area charted at 10 fathoms at latitude 57°44'37"N, longitude 135°18'38"W.
5. A 4.2 fathom rock is in an area charted at 16 fathoms at latitude 57°47'01"N, longitude 135°21'59"W.
6. A 7.0 fathom sounding is in an area charted at 18 fathoms at latitude 57°50'52"N, longitude 135°28'53"W.

In addition, the commanding officer of the NOAA Ship FAIRWEATHER recommends a new aid to navigation to mark a rock submerged 1.6 fathoms at the entrance to Seal Bay at latitude 57°50'48.12"N, 135°29'44.01"W. This uncharted rock was reported to the Seventeenth Coast Guard District by the NOAA Ship FAIRWEATHER on June 9, 1981 by radio message.

Any questions regarding the above items may be directed to Cdr. Ned C. Austin, Chief, Nautical Chart Branch, telephone (206) 442-4764.

Sincerely,

for *K.W. Townsend*
Charles K. Townsend
Rear Admiral, NOAA
Director, Pacific Marine Center

bc: N/CG222



ATTACHMENT TO THE DESCRIPTIVE REPORT FOR H-9939

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.

Neil Clouston 5/3/83
Chief, Nautical Chart Branch (Date)

CLEARANCE:

N/MOP2:KWJeffers

SIGNATURE AND DATE:

K.W. Jeffers 5/3/83

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.

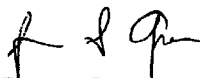
Philip R. Townsend 5/3/83
Director, Pacific Marine Center (Date)

ADDENDUM TO EVALUATION REPORT FOR H-9939

Paragraph 7.c, Aids to Navigation, is supplemented by the following:

Aids to navigation shown in the control file have been updated from field positions to preliminary adjusted positions. The Form 76-40, NonFloating Aids or Landmarks for Charts, for Tenakee Inlet Daybeacon T should be updated to reflect this improved position.

Respectfully submitted,



James S. Green
Supervisory Cartographer
November 16, 1983

APPROVED:



Ned C. Austin
Chief, Nautical Chart Branch

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9939

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
17300	7-13-84	Barley	Full Part Before After Verification Review Inspection Signed Via Drawing No. 26 Revised curves, sndgs, rocks, MHW Line, and btm char.
17320	8-2-84	Stambel	Full Part Before After Verification Review Inspection Signed Via Drawing No. 22 Fully applied thru chart 17300
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
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