

10085

Diagram No. 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-10-1-83
Office No..... H-10085

LOCALITY

State Alaska
General Locality .. Chatham Strait
Locality Rowan Bay to Washington Bay

1983

CHIEF OF PARTY
CDR W.F. Forster

LIBRARY & ARCHIVES

DATE February 25, 1985

10085

Area 6
L-53(85)
LTS:
7370 + INSET
17320

} to sign off see
Record of Application

HYDROGRAPHIC TITLE SHEET

H-10085

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-10-1-83

State Alaska

General locality Chatham Strait

Locality Rowan Bay to Washington Bay

Scale 1:10,000 with 1:5,000 Inset Date of survey 26 April - 19 May, 1983
(JD 116) (JD 139)

Instructions dated 15 June 1981 w/changes 1-6 Project No. OPR-0353-FA-83

Vessel FAIRWEATHER (2020), (2023), (2024), (2025), (2026), AVON (2027)

Chief of party CDR W. F. Forster, NOAA, submitted by Capt. C. Andreasen

Surveyed by Lt. K. Andreen, Lt. S. Ramsey, Lt. T. Rulon, Ens. F. Migaiolo, Ens. P. Steele

Soundings taken by echo sounder, ~~and tide, etc~~ Ross Fineline 5000

Graphic record scaled by FAIRWEATHER Personnel

Graphic record checked by FAIRWEATHER Personnel

Verification by A.A. Luceno Automated plot by PMC Xynetic Plotter

Evaluation by C.R. Davies

Soundings in fathoms ~~100~~ at MLLW and tenths of fathoms

REMARKS: All times are in U.T.C. Revisions and marginal notes in black by evaluator.

AWOIS and SURF CMM 9/23/85

EC

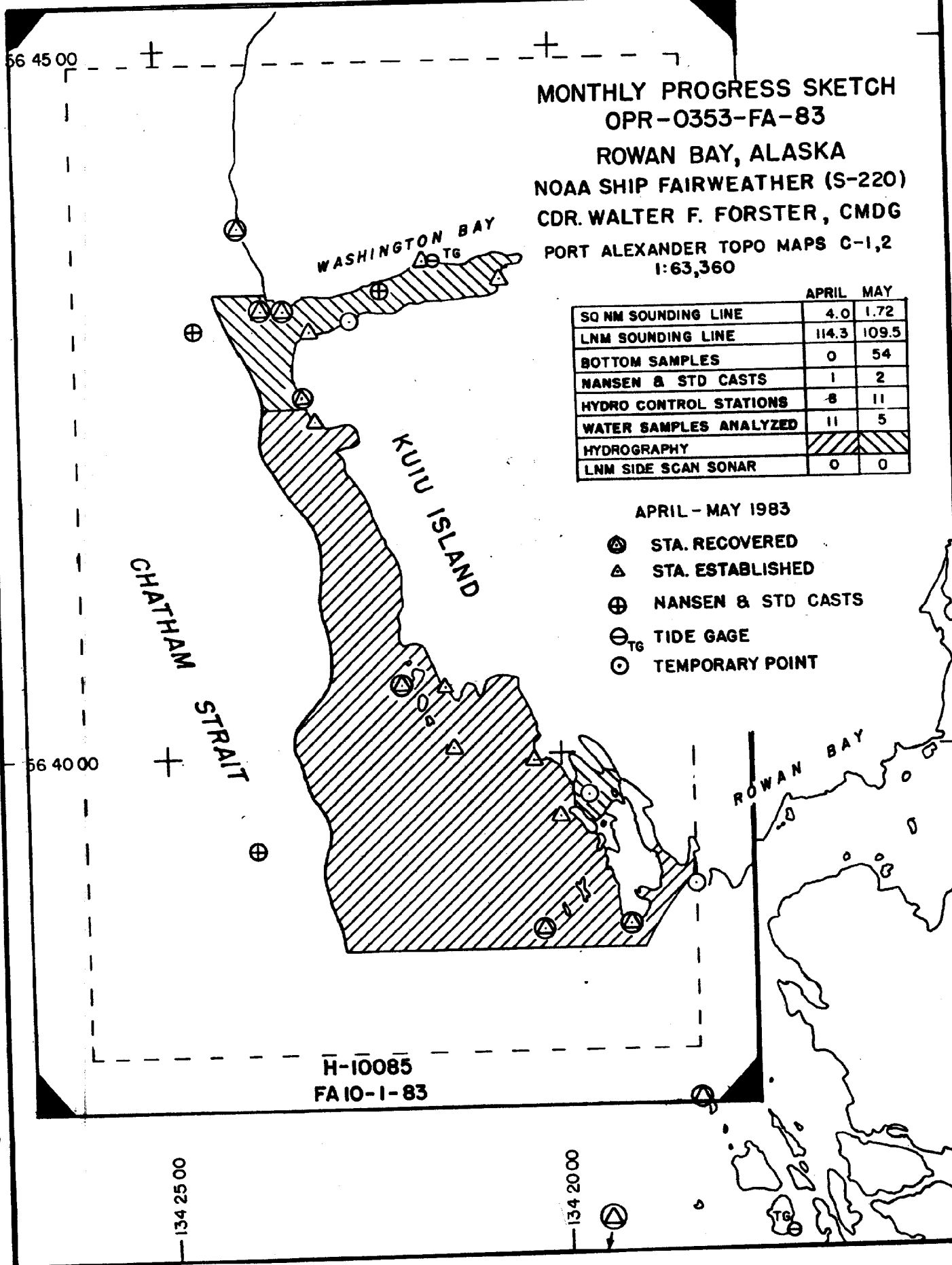
app'd to SHS 2-26-85

MONTHLY PROGRESS SKETCH
 OPR-0353-FA-83
 ROWAN BAY, ALASKA
 NOAA SHIP FAIRWEATHER (S-220)
 CDR. WALTER F. FORSTER, CMDG
 PORT ALEXANDER TOPO MAPS C-1,2
 1:63,360

	APRIL	MAY
SQ NM SOUNDING LINE	4.0	1.72
LNm SOUNDING LINE	114.3	109.5
BOTTOM SAMPLES	0	54
NANSEN & STD CASTS	1	2
HYDRO CONTROL STATIONS	8	11
WATER SAMPLES ANALYZED	11	5
HYDROGRAPHY		
LNm SIDE SCAN SONAR	0	0

APRIL - MAY 1983

- ⊕ STA. RECOVERED
- △ STA. ESTABLISHED
- ⊕ NANSEN & STD CASTS
- ⊖_{TG} TIDE GAGE
- TEMPORARY POINT



H-10085
 FA 10-1-83

Descriptive Report
to accompany
Hydrographic Survey H-10085 (FA-10-1-83)

Scale: 1:10,000
Cdr. Walter F. Forster

NOAA Ship FAIRWEATHER
Commanding Officer

A. Project

This survey was conducted in accordance with Project Instructions OPR-0353-FA-83, dated 15 June, 1981; Change No. 1, dated 1 July, 1981; Change No. 2, dated 11 March, 1982; Change No. 3, dated 26 August, 1982; Change No. 4, dated 2 December, 1982; Change No. 5, dated 16 March, 1983; and Change No. 6, dated 12 April, 1983. The PMC OORDER, Hydrographic Manual (4th Edition), and the Data Requirements Letter updated 14 April 1983 are also applicable.

B. Area Surveyed

The area covered by this survey lies on the eastside of Chatham Strait, immediately north of Rowan Bay, continuing up to and including Washington Bay. The southern limit of this navigable area survey was latitude $56^{\circ}38'38''N$ with the northern edge latitude $56^{\circ}43'45''N$. Hydrography extended from the 50 fathom curve inshore to at least the 2 fathom curve. However, depths from 60-100 fathoms were collected on the eastside of Chatham Strait.

Survey operations began on 26 April (JD 116) 1983 and ended on 19 May (JD 139) 1983.

C. Sounding Vessels

Hydrography on this survey was conducted with Jensen Launches FA-3 (2023), FA-4 (2024), FA-5 (2025), and FA-6 (2026). Bottom samples were collected by FA-5 (2025), and DP's were taken by the AVON (2027). FAIRWEATHER performed two Nansen casts on JD 119, JD 124; and one SV/D cast on JD 139. See Table II, Nansen and SV/D Casts. No unusual sounding equipment configurations were used.

D. Sounding Equipment and Corrections to Echo Soundings

All survey launches were equipped with Ross Finline 5000 narrow beam echo sounders as listed in Table I, Sounding Equipment. Belt tension and phase calibration checks were generally performed in the morning of each day and phase calibration checks were usually done when paper was changed.

Fathometer initial was checked frequently during the day for correct paper alignment. All data was scanned at least twice to compare analog values to corresponding digitized values and to insert peaks and deeps between soundings. The effects of excessive wave and swell action were adjusted at this time in accordance with Section 4.9.8.2 of the Hydrographic Manual. Depths on this survey range between 0 and 103 fathoms.

Table I
Sounding Equipment

Vessel/Dates	Instrument	Model	Recorder	Serial Numbers		
				Digitizer	Inverter	Transceiver
EDP# FA-3 (2023) JD 108-139	Ross	Fineline 5000	1047	1047	1046	1046
EDP# FA-4 (2024) JD 117-119 JD 120-139	Ross	Fineline 5000	1054 1097	1046 --	1054 --	1048 --
EDP# FA-5 (2025) JD 108-139	Ross	Fineline 5000	1036	1036	1103	1054
EDP# FA-6 (2026) JD 116-120, 125 JD 129-137	Ross	Fineline 5000	1097 1046	1054 --	1053 --	1047 --

The only significant problem with sounding equipment affecting this survey occurred on JD 132. It was discovered that the resonant frequency of the transducer in FA-3 had changed. After determining there was no mechanical damage to the transducer, the transmitter and receiver sections of the Ross instrumentation were realigned to the new resonant frequency of the transducer. The system performed satisfactorily when it was tested to an operating depth of 200 fathoms. No data was lost due to this problem.

Velocity correctors used for this survey were calculated from Nansen and SV/D casts. (See Table II, Nansen and SV/D Casts, for location of casts). Cast 001 was used to calculate velocity of sound correctors for the survey area outside Washington Bay applicable to data between JD 116 through JD 126; cast 003 was used to calculate correctors for the area outside Washington Bay after JD 126; and cast 002 was used to calculate all correctors for the Washington Bay data.

Table II
Nansen and SV/D Casts

Cast No.	Date	Depth	Latitude	Longitude
001 (Nansen)	JD 119	150 m	56°39'18"N	134°23'54"W
002 (Nansen)	JD 124	55 m	56°43'17"N	134°22'10"W
003 (SV/D)	JD 139	150 m	56°43'00"N	134°24'30"W

Nansen cast and SV/D instrumentation were calibrated by the Northwest Regional Calibration Center, Seattle, Washington. Reversing thermometers and Beckman salinometers used to determine water temperature and salinity, were calibrated in March, 1983. The Plessey Grundy (Model 9040, S/N 5638) Environmental

Profiling System was calibrated in April 1983. For additional calibration information refer to Appendix F, Reversing Thermometers and SV/D Calibrations, in the Corrections to Echo Soundings Report, OPR-0353-FA-83. ✓

Bar checks were performed twice daily except for seven launch days where, for various reasons, only one check was made. TRA corrector for Launches 2023 and 2026 was determined to be 0.3 fathoms; whereas for Launches 2024 and 2025 it is 0.4 fathoms. ✓

All soundings* on the final field sheets were plotted using a 0.3 fathom TRA. Corrections have been made to the appropriate corrector tapes to reflect the applicable TRA correctors. * Detached positions on submerged rocks and numerous dive investigations require no TRA correction. The associated times for these features were inserted into Tc/TI tables. ✓

All lines for the bar checks and leadlines were checked periodically and found to be correct.

Settlement and squat data for all launches was collected in April 1983 at Shilshole Bay Marina in Seattle, Washington. Calculations were done in accordance with Section 4.9.4.2 of the Hydrographic Manual. ✓

The survey launches were tested at speeds from idle to 2700 RPM, in 200 RPM increments. A Zeiss Ni 2 level was used to read a stadia rod held over the transducer when the launch speed was attained. A tide staff was read simultaneously with the stadia rod to correct for tidal influences. These test results were used to determine speeds at which settlement and squat correctors are applicable. Eliminating the need to apply any settlement and squat correctors, launch speeds were kept below the 0.1 fathom corrector value when collecting data during this project. Refer to Table III, Restricted Speeds, for these values. ✓

For more information see the Corrections to Echo Soundings Report, OPR-0353-FA-83.

Table III
Restricted Speeds

<u>Launch</u>	<u>Speed (RPM)</u>
FA-3 (2023)	N/A
FA-4 (2024)	2650
FA-5 (2025)	2530
FA-6 (2026)	N/A

E. Hydrographic Sheets

All field sheets were plotted aboard FAIRWEATHER using two PDP8/E computers, S/N 09524 and S/N 01021, and two Complot plotters, S/N 5848-17 and S/N 6166-22. Final field sheets were plotted in June 1983 on mylar; the 1:10,000 sheet was plotted on a 21 inch by 59 inch sheet, the Washington Bay inset was plotted on a 16 inch by 40 inch sheet, and the 1:5,000 enlargement was plotted on a 22 inch by 35 inch sheet. ✓

Due to the presence of several small islands, many reefs, and an irregular bottom; the sounding line spacing was reduced to 25 meters in the area just north of Rowan Bay. In order to better portray the bottom contours in this area the 1:5,000 enlargement was plotted. (Development C).

In addition to the mylar sheets, one 8 inch by 12 inch 1:5,000 paper sheet was plotted for developments of shoals in the vicinity of 56°39'00"N, 134°22'30"W. (Developments A & B).

When attempting to overlay a boat sheet with the final field sheet, it was discovered that it was not possible to align the grids of the two sheets. The frame of the final field sheet was checked with a triangle and it was determined that the corners of the frame were not square. Diagnostics were run on the plotter (S/N 5848-17) and it passed all tests. The plotter was checked again and found to have a misaligned traverse bar and sprocket wheels which were not detected by the tests. As a result, a slight discrepancy with positioning occurred when this plotter was utilized.

The frame and grid of both the 10-1 final field sheet and the A & B development sheet, and some of the sounding plots were done with this plotter (S/N 5848-17). However, since both plotters were used for sounding plots, it is impossible to identify which positions were affected. This was the only irregularity noted with the final field sheet. Comparison of the final field sheet with the smooth sheet revealed no significant shift of survey data.

Data for this survey will be forwarded to the Pacific Marine Center in Seattle, Washington for verification and smooth plotting.

F. Control Stations

Horizontal control for the survey was performed by FAIRWEATHER personnel. Conventional traverse and triangulation methods were used throughout the project. Station TP2 (S/N 139) was established by the "A"-Point Method from DEBRA, 1983 (S/N 124). Establishment of Joy, 1983 (S/N 128) by traverse was verified by the A-Point Method. One fixed aid to navigation, Washington Bay Light 10 (S/N 138), position was established by intersection of the light and trilateration to Washington Bay Light 10 ECC. The trilaterated eccentric position was reduced to the intersected position of the light to obtain a check. All control was based on the 1927 North American Datum. All field measurements and shipboard calculations were accomplished to Third Order Class I accuracy or better. For further details, see Horizontal Control Report, OPR-0353-FA-83, Rowan Bay to Washington Bay, dated 3 June 1983.

See Evaluation Report Section 2

The following stations were used in support of this survey:

<u>Station Name</u>	<u>Signal Number</u>
*Spray, 1981 r.m.	100
SURGE, 1981 r.m.	102
CHITON, 1981 r.m.	104
RAZ (Temp Point) 1981 r.n.m.d.	105
LUNAR, 1981 r.m.	106
SULLIVAN 2, 1925 r.m.	108
SLIP, 1982 r.m.	110
*KELP, 1982 r.m.	112

*GEORGE, 1982 r.m.	114
SUE, 1983 d.m.	120
CINDY, 1983 d.m.	122
DEBRA, 1983 d.m.	124
VICKI, 1983 d.m.	126
JOY, 1983 d.m.	128
MARTHA, 1983 d.m.	130
TIM, 1983 d.m.	132
JUT, 1897 r.m.	134
TP1, 1983 d.n.m.	136
WASHINGTON BAY LIGHT 10 d.n.m.	138
*TP2, 1983 d.n.m.	139

*Offshore Control Station

r=recovered m=monumented or marked d=described n=not

All signals were located within the limits of this survey except SPRAY, 1981.

No unconventional survey methods were used; no anomalies in control adjustment or in closures and ties were encountered.

G. Hydrographic Position Control

Hydrographic positioning was accomplished using Motorola Mini-Ranger III in range-range and range-azimuth configurations. Also, several calibration checks, detached positions and check angles were taken with horizontal sextant angles.

See
Evaluation
Report
Section 2

Baseline calibrations and system checks were conducted in accordance with Appendices M and S of the PMC OORDER. Details of the baseline calibrations in support of this survey are contained in the Electronics Control Report, OPR-0353-FA-83.

System checks were conducted using sextant fix, theodolite intersection, multi-rate comparison, baseline crossing, and station-to-station direct distance measuring techniques.

In order to make station-to-station direct distance measurements, a 100 foot long power cable was attached from the launch console to the RT. The launch was then positioned as close to a control station as possible, such that the RT unit could be placed directly over a station benchmark and a baseline reading could be taken.

System checks were conducted in the survey area to confirm BLC corrector values and provide general confirmation of the position for those stations. Critical and non-critical system checks consistently confirmed BLC correctors with a mean departure of less than 2 meters; the greatest departure for a critical system check was 4.4 meters.

Final electronic correctors for the Mini-Ranger systems were obtained by averaging six baseline calibrations performed prior to, during, and after the project. Closing baseline calibration was not possible for Console 506042. For details, consult the Electronic Control Report, OPR-0353-FA-83.

Table IV, Launch Mini-Ranger Equipment, lists the console/RT unit pairs used in the survey launches.

Table IV
Launch Mini-Ranger Equipment

<u>Vessel</u>	<u>Console/RT Unit</u>	<u>Dates (JD)</u>
FA-3 (2023)	506042/1649 (Pos 1-9) B0323/1649 (Pos 20-1239)	117 117-138
FA-4 (2024)	701/1538 701/1538	117-121 136-138
FA-5 (2025)	703/1419	119-139
FA-6 (2026)	B0323/1398 (No beginning Baseline Calib) 506042/1398	116 125-137

No loss of electronic position accuracy occurred during this survey and no data was lost due to equipment malfunction.

Before running range-azimuth hydrography on JD 116, Launch 2026 did a calibration check by intersection from two theodolites and determined that the corrector for code C was -11 meters. Although this was excessive, it was decided to run hydro since the quality of the calibration check was excellent. Upon later investigation it was discovered that the transponder (S/N 1398) in the launch had not been calibrated with that particular console. During the beginning baseline calibrations, a mix-up occurred where transponder 1649 had been inadvertently calibrated with two consoles (S/N 506042 & S/N B0323).

In the morning of JD 117 another calibration check was done by intersection from two theodolites to verify the corrector for code C. Since the corrector was verified the data was kept. On JD 119 a beginning baseline calibration was conducted for console 506042 with transceiver 1398 in combination with codes 5, 7, 8, and C for data collected after that date.

No unusual weather conditions adversely affected positional accuracy of this survey. No hydrography was conducted with weak control geometry or less than minimum signal strength values as determined by BLC data. Launch Mini-Ranger antennas are located over the transducers, eliminating ANDIST corrections to the data. All signal strengths were recorded automatically or manually annotated on line to insure that all hydrography run with less than minimum required signal strength was plotted using time and course methods. For more information see the Electronic Control Report, OPR-0353-FA-83. The Abstract of Correctors to Electronic Position Control and the listing for the different transponders used on each control station are included in the separates following the text.

H. Shoreline

Shoreline for this survey is inadequate and should not be used for charting.

See
Evaluation
Report
Section 2

Shoreline was taken from a 1:10,000 scale enlargement of Chart 17370 (1:20,000 scale), 7th Edition, 16 July 1977; and a 1:10,000 enlargement of U.S.G.S. Topographical Map, Port Alexander (C-2) Alaska (1:63,360 scale), 1951 (limited revisions 1981). Shoreline for the 1:5,000 Washington Bay Inset was taken from a 1:5,000 enlargement of the Washington Bay Inset on Chart 17370. It should be noted that the shoreline on Chart 17370 was based on T-2298 and T-2303 (1897). Also, only the high water line was drawn on the final field sheets. Reef areas were not transferred due to inconsistencies.

A comparison of the shoreline common to both the chart and the topographic map indicate discrepancies of as much as 100 meters and neither correlate with existing shoreline. ✓

On the 1:10,000 final field sheet, the shoreline north of latitude $56^{\circ}40'57''N$ was best represented by the shoreline of the topographic enlargement. The shoreline between $56^{\circ}40'57''N$ and $56^{\circ}40'32''N$, $134^{\circ}21'16''W$ was best represented by the shoreline on the enlargement of Chart 17370 using the pre-1927 datum. The remainder of the shoreline on the 1:10,000 sheet was best represented by the shoreline on the enlargement of Chart 17370 using the 1927 datum. ✓ In addition, the shoreline in the areas of $56^{\circ}39'44''N$, $134^{\circ}19'22''W$; $56^{\circ}39'38''N$, $134^{\circ}19'30''W$; $56^{\circ}39'55''N$, $134^{\circ}19'40''W$; $56^{\circ}39'10''N$, $134^{\circ}18'25''W$; and $56^{\circ}38'50''N$, $134^{\circ}19'56''W$ were adjusted to match hydrography. ✓

Shoreline for the Washington Bay Inset was taken from the expansion of the Washington Bay Inset on Chart 17370 and adjusted considerably as noted on the final field sheet for the inset. ✓

As per Project Instructions, field edit was not performed. In an effort to clarify the shoreline inaccuracies, additional hydrography was run shoreward of the two fathom curve when possible. ✓

Shoreline for this survey is inadequate for charting. It is recommended that new photography and manuscripts be produced to adequately define the shoreline of the entire survey area before the next printing of this chart. ✓

CONCUR

I. Crosslines

A total of 21.5 nautical miles of crosslines were run on this survey comprising 11.5% of the main-scheme hydrography. All crosslines were oriented approximately normal to the main-scheme hydrography. ✓

All crossline soundings meet the requirements of Section 1.1.2 of the Hydrographic Manual. Overall crossline soundings agreed to within 1.0 fathom or better of the main-scheme depths. ✓

J. Junctions ✓

This survey junctions with H-9976 conducted by DAVIDSON in ¹⁹⁸¹⁺ 1982. All junction soundings are in excellent agreement with Section 4.3.4.2 of the Hydrographic Manual.

In the vicinity of 56°38'30"N, 134°22'15"W the 30 fathom curve on H-9976 was adjusted to better fit the soundings in the vicinity.

The only discrepancies in the junction between this survey and H-9976 concern the position of rocks. At 56°38.63'N, 134°18.92'W (Pos #0390) the H-10085 position for the rock differs from the H-9976 position by 75 meters. With the shoaling in the vicinity as indicated by DAVIDSON hydrography, it appears that there might be rocks awash at both ends of the reef. If the H-9976 position is verified, it is recommended that both rocks be charted. Unfortunately, this discrepancy was not found until post processing when it was too late to return to the field to verify rocks at the other end of the reef. Both rocks were verified to exist and should be charted as shown on H-9976 and H-10085. concur

The four rocks in the vicinity of 56°38.65'N, 134°19.70'W on H-9976 differ in position from those on H-10085 by approximately 10 meters. This could be due to hand plotting of the rock symbols on both final field sheets. In this instance there is a discrepancy in position for the rocks, NOT additional rocks. The four rocks, are at the same positions on both surveys. The heights for position numbers 384, 385, and 386 were carried forward from H-9976 (1981-82). See EVAL Report Section 5

K. Comparison With Prior Surveys

Two AWOIS items were within the limits of this survey:

Item #50573 - An abandoned saltry or herring reduction plant with a large cylindrical tank (approx. 25 ft. dia., 12 ft. high) and pier is located at 56°43'27.8"N, 134°21'14.3"W. The buildings are in ruins and the pier is in poor condition and unstable. It appears that the pier had been built so that the southern limit had 30 ft. of water (at MLLW) with two dolphins to protect it. With the exception of the two dolphins and two piles, all existing ruins are shoreward of the high water line. See description of station Tim, 1983

A diver investigation was done to locate ruins seaward of the low water line. Since one of the piles bares 8 ft. at low water, the search was initiated at that pile (Pos #1236). A circle search was conducted at a radius of 80 feet which cleared the bottom to a depth of 60 feet and located the first dolphin (Pos #1237). The search center was then moved to the dolphin and repeated, locating the second dolphin (Pos #1239). A circle search from the second dolphin located a second pile (Pos #1238), and a search from that pile cleared the bottom to a depth of 60 feet at a radius of 80 ft. with no other obstructions located. Table A, PSR Item 10, Diver Investigation, lists the objects that were found.

Table A
PSR Item 10
Diver Investigation

<u>Position Number</u>	<u>Least Depth (MLLW)</u>	<u>Latitude (North)</u>	<u>Longitude (West)</u>	<u>Description</u>
1236	2.6 ft. -6.8	56°43'29.01" ₂	134°21'22.19" ₃₁	Southeastern most pile leaning to the SSE at approx. 65° angle.
1237	1.3 ft. 3.1	56°43'29.01"✓	134°21'22.63" ₇₁	Shoalest of a group of three piles which were probably a dolphin.
1238	✓ 2.3 ft.	56°43'28.62" ₄	134°21'24.00" ₀	Southwestern most pile leaning to the SW at approx. 40° angle.
1239	✓ 2.0 ft.	56°43'28.90" ₂	134°21'23.10" ₀	Shoalest of a group of three piles which were probably a dolphin.

Recommendations: 1) Change the ruins illustration on the chart to agree with the sketch in the sounding volume (Position 1239) and move the illustration so that no part of it is closer than 3 meters from the datum shoreline. 2) Chart position 1236 at 56°43'29.01"N, 134°21'22.19"W as an exposed pile. 3) Chart positions 1237 and 1239 at 56°43'29.01"N, 134°21'22.63"W and 56°43'28.90"N, 134°21'23.10"W respectively as submerged cluster of three piles. 4) Chart position 1238 at 56°43'28.62"N, 134°21'24.00"W as a submerged piling. 5) Delete the pipe charted at 56°43'27.8"N, 134°21'14.3"W.

See EVAL
Report Section
7

concur

Item #50574 - An abandoned saltry or herring reduction plant is located at 56°43'33.3"N, 134°20'39.5"W which was last reported to have only high water piles visible. The ruins include a concrete foundation (probably for machinery) a corrugated sheet metal tank (approx. 20 ft. diameter, 10 ft. high), concrete pier piles, and a few wooden piles. With the exception of a 4 foot diameter flywheel, the entire saltry is above the high water line and is being overgrown by woods. The flywheel is above the low water line (position not obtained). There are no buildings or ruins of buildings.

See EVAL
Report Section 7

Recommendations: Change the position of the ruins illustration such that no part of it is closer than 14 feet from the high water line.

Differences between charted information and survey findings for items 50573 and 50574 are probably due to continual degradation of the ruins and/or salvage of some of the buildings and machinery.

In accordance with instructions in Pre-Survey Review, OPR-0353, Rowan Bay, Alaska, dated June 18, 1981; unnumbered full investigation items and rocks awash transferred from U.S.G.S. quadrangle maps were verified during hydrographic operations.

See EVAC Report
Section 6

Comparisons were made between this survey and three prior surveys: 1) from Point Sullivan south, the comparison was made with H-2334; a 1:20,000 survey done in 1897; 2) north of Point Sullivan, the comparison was made with some scaled depths from H-2333, a 1:80,000 survey done in 1897; and 3) the Washington Bay Inset was compared to H-2336, a 1:10,000 survey done in 1897.

Based on Hydrographic Manual section 1.1.2, Part B, the comparison of this survey to H-2333 and H-2334 indicate over 95% agreement of soundings. There appears to be shoaling at the mouth of the stream in the vicinity of 56°40.52'N, 134°20.7'W; probably due to sediment deposited by the stream. There appear to be no other significant changes in bottom topography and other discrepancies appear to be random. Soundings which do not agree are listed in Table V, Discrepancies With Prior Surveys.

Table V
Discrepancies With Prior Surveys

	<u>Latitude (North)</u>	<u>Longitude (West)</u>	<u>Prior Survey Depth</u>	<u>H-10085 Depth</u>	<u>Position Number</u>
H-2334	56°39.85'✓	134°22.68'✓	39✓	43✓	2254 + 2✓
	56°40.12'✓	134°21.08'✓	18 1/2✓	14.5	292 + 2✓
	56°40.17'✓	134°20.67'✓	5 1/4✓	15✓	306✓
	56°40.16'✓	134°22.17'✓	6 1/2✓	13/4.9	3183 + 2✓
	56°40.23'✓	134°22.10'✓	7 1/2✓	10.87	2439✓
	56°40.29'✓	134°22.45'✓	13 1/2✓	18.4	4731✓
	56°40.27'✓	134°22.60'✓	20✓	37.4	2436✓
H-2333	56°40.67'✓	134°22.95'✓	62✓	50✓	4031 + 2✓
H-2336	56°42.90'✓	134°23.40'✓	30✓	24.3	6220✓
	56°43.13'✓	134°23.10'✓	35✓	40.39	6293✓
	56°43.25'✓	134°23.80'✓	18 1/2✓	3.76	4624✓
	56°43.25'✓	134°22.75'✓	22✓	2.6 0.8	4641✓
	56°43.30'✓	134°21.60'✓	25✓	33✓	760✓

See EVAC Report
Section 4

For the Washington Bay Inset, the comparison of this survey and H-2336 indicate agreement of almost 96%

Almost 70% of the discrepancies in Washington Bay are shoreline soundings. This could be due to the fact that the slope of the bottom along the shore is very steep (as much as 40 to 50 degrees) slight positioning errors could result in significantly different soundings. Sounding discrepancies between H-10085 and H-2336 are listed in Table V, Discrepancies With Prior Surveys.

Non-sounding discrepancies in Washington Bay include: 1) most of the shoreline on the south side of the bay, and 2) the island on the north side of the entrance to the bay. For more information see Section H, Shoreline of this report.

L. Comparison With Charts ✓

Comparisons were made between this survey and Chart 17370, 7th Edition, 16 July 1977. 96% of the soundings meet the requirements of Section 1.1.2, Part B of the Hydrographic Manual.

There appears to be general shoaling at the mouth of the stream located at 56°40.52'N, 134°20.8'W. For more information see Section K, Comparison With Prior Surveys, of this report. Table VI, Discrepancies With the Chart, lists discrepancies between this survey and Chart 17370.

Table VI
Discrepancies With the Chart

<u>Latitude</u> <u>(North)</u>	<u>Longitude</u> <u>(West)</u>	<u>Chart</u> <u>Depth</u>	<u>Survey</u> <u>Depth</u>	<u>Position</u> <u>No.</u>
56°40.15' ✓	134°20.60' ✓	5 1/2 ✓	10.8 ⁹	297 +3 ✓
56°40.50' ✓	134°20.70' ✓	1 3/4 ✓	Shore ✓	N/A ✓
56°40.58' ✓	134°22.42' ✓	35 ✓	13-15 ✓	28 - 28 + 1 ✓
56°40.56' ✓	134°22.24' ✓	18 ✓	11.7	4364 + 2 ✓
56°41.15' ✓	134°21.97' ✓	3 1/4 ✓	Shore ✓	N/A ✓
56°41.06' ✓	134°22.55' ✓	12 ✓	20-22 ✓	88 + 1 - 2 ✓
56°41.41' ✓	134°23.02' ✓	46 ✓	50 f	4057 + 4 ✓
56°43.18' ✓	134°23.83' ✓	9 1/2 ✓	15-17 ✓	983 + 2 - 3 ✓
56°42.99' ✓	134°23.36' ✓	30 ✓	24-27 ✓	6280 - + 1 ✓
56°43.24' ✓	134°22.92' ✓	19 ✓	2.8-4.8 ⁵	4624 + 1, 4632 ✓
56°43.26' ✓	134°22.76' ✓	22 ✓	2.8-2.8 ²	4912 - + 1 ✓
56°43.28' ✓	134°22.66' ✓	10 ✓	Shore ✓	N/A ✓
56°43.17' ✓	134°22.23' ✓	6 ✓	11.1	707 + 1 ✓
56°43.35' ✓	134°21.59' ✓	25 ✓	33 ✓	760 - + 1 ✓
56°43.24' ✓	134°21.55' ✓	8 ✓	13 ✓	761 + 1 ✓
56°43.46' ✓	134°21.31' ✓	15 ✓	1.8-13 ✓	786 + 4 - + 5 ✓
56°43.28' ✓	134°21.08' ✓	6 1/2 ✓	10.7-13 ✓	6183 - 912 ✓
56°43.53' ✓	134°20.98' ✓	2 1/2 ✓	Shore ✓	N/A ✓
56°43.55' ✓	134°20.87' ✓	6 1/4 ✓	Shore ✓	N/A ✓
56°43.46' ✓	134°20.64' ✓	13 ✓	16-20 ✓	6224 - 6221 ✓

See EVAL Report
Section 4

For all discrepancies, it is recommended that the soundings from H-10085 supersede the charted depths.

Least depths over several shoals, rocks and/or AWOIS items were determined by divers in Washington Bay and in the area of Development "C". For more information about the diver investigation in Washington Bay along with recommendations for charting, see Section K, Comparison With Prior Surveys, of this report. Other diver determined depths including geographic positions are tabulated in Table VII, Diver Least Depths.

See EVAL
Report Section 4

Table VII
Diver Least Depths

<u>Latitude (North)</u>	<u>Longitude (West)</u>	<u>Depth (Ft. @ MLLW)</u>	<u>Position Number</u>
56°40.28✓	134°21.34✓	6.0 1.0	1167
56°40.11✓	134°22.38✓	-10.0 ✓	1168
56°38.82✓	134°20.09✓	1.7 2.0	1169
56°38.83✓	134°20.10✓	2.7 3(fm)	1170
56°39.17✓	134°19.90✓	-4.0 ✓	1171
56°39.66✓	134°21.08✓	16.1 2.6(fm)	1172
56°43.48✓	134°21.37✓	-7.4 0	1236
56°43.48✓	134°21.38✓	2.5 3.0	1237
56°43.48✓	134°21.40✓	2.8 0	1238
56°43.48✓	134°21.38✓	2.0 ✓	1239
56°40.35✓	134°21.10✓	21.8 3.7(fm)	6380
56°40.41✓	134°21.49✓	-3.4 0	6381
56°40.39✓	134°21.46✓	-6.8 - 7.0	6382
56°40.36✓	134°21.42✓	-0.8 - 1.0	6383
56°40.33✓	134°21.40✓	3.8 4.0	6384
56°40.42✓	134°21.57✓	-0.8 0	6385
56°40.32✓	134°21.20✓	17.4 2.8(fm)	6386
56°40.22✓	134°21.14✓	20.9 3.3(fm)	6387
56°40.26✓	134°21.05✓	14.6 2.2(fm)	6388
56°40.30✓	134°20.69✓	21.8 3.5(fm)	6389

Table VIII, Newly Found Dangers to Navigation, lists the shoals and other dangers to navigation found during this survey. Copies of all reports sent to the Coast Guard regarding these dangers are included with the separates following the text.

Table VIII
Newly Found Dangers to Navigation

<u>Latitude (North)</u>	<u>Longitude (West)</u>	<u>Depth (MLLW)</u>	<u>Position Number</u>
56°39.93✓	134°21.77✓	8.26	2466
56°39.27✓	134°21.08✓	14.87	142 + 3
56°40.25✓	134°22.28✓	8.89	2333+1
56°40.27✓	134°21.05✓	2.88	323+2
56°40.12✓	134°20.95✓	7.79	2702 + 5 1164 + 4
56°39.87✓	134°20.97✓	8.5 ✓	533 + 3
56°39.28✓	134°20.30✓	8.82	2742 + 45

56°39.00✓	134°20.43✓	2.1✓	6077 + 1✓
56°39.48✓	134°21.25✓	8.79	2177 + 1✓
56°43.15✓	134°23.70✓	0.1✓	864 + 4✓
56°42.50✓	134°23.42✓	5.8 6.9	4167 + 4✓
56°43.10✓	134°23.50✓	7.76	4608 + 5✓

A comparison of non-sounding features indicates several discrepancies: Washington Bay Light 10 was adjusted from its charted position; charted shoreline is as much as 120 meters different from existing shoreline and the position of almost all islands and islets were also adjusted to fit the hydrography obtained for H-10085.

M. Adequacy ✓

With the exception of shoreline, this survey is complete and adequate to supersede all prior surveys in their common areas. There is no incomplete or substandard portion of this survey.

See EVAL
Report Section 4

N. Aids to Navigation ✓

There is one aid to navigation within the survey area: Washington Bay Light 10, located at 56°42'56.9"N, 134°23'12.9"W, is a red triangle on a square frame 33 feet above water. It has a flashing 6 second red light which is obscured from 021°-224° True.

The position of this light was located by 3rd Order Class I geodetic methods. The light was found to be 97.1 meters southwest from the position published in the Light List and ~~71.9~~^{36.0} meters southwest from the charted position (Chart 17370). The Coast Guard has been notified of this change. (Refer to the Danger to Navigation letter included in the separates following the text). Washington Bay Light 10 adequately serves it's purpose.

NOAA Form 76-40, "Nonfloating Aids or Landmarks for Charts" is included with the separates following the text.

O. Statistics ✓

During survey operations on H-10085, 223.8 nm of soundings were run over an area of 5.7 square nautical miles.

	<u>2020</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>Total</u>	
Vessel Positions	1192	1248	1517	1445	978	857	390	3853
Nautical Miles		62.7	90.8	47.8	22.5	0	223.8	
Square Miles		1.6	2.3	1.2	0.6	0	5.7	
Bottom Samples							57	
Velocity Cast	3						3	
Tide Stations							2	

No magnetic or current stations were established within the survey limits.

P. Miscellaneous ✓

Nothing to report.

Q. Recommendations ✓

Photographs should be taken to update the shoreline if correction from existing photogrammetric data is not possible. Ordinarily, updated shoreline is not of great significance for a navigable area survey. However, in this instance, the discrepancy was large enough that it was a problem. Hindsight is always better than foresight, but it is now rather evident that this should have been a basic survey with controlled photography flown in advance of hydrography. CONCUR

R. Automated Data Processing ✓

All range/range and range/azimuth hydrography was processed in accordance with the Hydrographic Data Requirements Letter (Appendix Q) Change No. 2 dated April 14, 1983. For range/range hydro, all peaks, deeps, and sounding corrections were put on the corrector tape. With range/azimuth data, all peaks and deeps that were inserted on arcs were edited onto the master tape with an interpolated range assigned to them. For range/azimuth inserts that were not located on arcs, the inserts were either edited onto the master as a short word or onto the corrector tape being positioned by time and course.

The following list of hydroplot programs were used for data acquisition and processing during this survey.

<u>Number</u>	<u>Program Name</u>	<u>Version Dates</u>
PALOGH. BN	R/R + R/AZ Hydrologger	04/08/83
RK 112	R/R Real Time Plot	08/04/81
FA 181	R/AZ Logger	02/23/78
RK 201	Grid, Signal and Lattice Plot	04/18/75
RK 211	R/R Non Real Time Plot	02/02/81
RK 212	Visual Station Table Load	04/01/74
RK 216	R/AZ Non Real Time Plot	02/09/81
RK 407	Geodetic Inverse/Direct Computations	09/25/78
RK 300	Utility Computations	10/21/81
RK 330	Reformat and Data Check	05/04/76
PM 360	Electronic Corrector Abstract	02/02/76
AM 500	Predicted Tide Generator	11/10/72
RK 530	Layer Corrections for Velocity	05/10/76
RK 561	H/R Geodetic Calibration	12/01/82
AM 602	Elinore	12/08/82

S. Referral to Reports /

The following separate reports contain more information about OPR-0353-FA-83, Chatham Strait, Alaska; Rowan Bay to Washington Bay. All reports were sent to the Pacific Marine Center in July 1983:

Horizontal Control Report

Electronic Control Report

Coast Pilot Report

Geographic Names Report

Corrections to Echo Soundings Report

Approval Sheet

The Commanding Officer inspected all field sheets and field data on a daily basis. The three survey sheets that are included with this report are complete and adequate for charting purposes.

Submitted by:

Stanton M. Ramsey
Lieutenant, NOAA

Approved by:

Christian Andreasen
Christian Andreasen
Captain, NOAA
Commanding Officer



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA Ship FAIRWEATHER S220
1801 Fairview Avenue East
Seattle, Washington 98102

31 May 1983

Commander
Seventeenth Coast Guard District
P.O. Box 3-5000
Juneau, AK 99802

Dear Sir:

The NOAA Ship FAIRWEATHER has completed a navigable area survey of the northern portion of Rowan Bay to Washington Bay in Chatham Strait. During survey operations the following dangers to navigation were discovered and a new position determined for Washington Bay Light 10.

1. Washington Bay Light 10 determined to have revised geographic position; latitude $56^{\circ}42'56.9''N$; longitude $134^{\circ}23'12.9''W$.
2. Shoal covered by 8.2 fathoms at mean lower low water (MLLW) discovered; chart no. 17320 and 17370; latitude $56^{\circ}39'56''N$; longitude $134^{\circ}21'46''W$; distance 0.86 nautical miles (nm), bearing 168° True (T) from Point Sullivan.
3. Shoal covered by 14.0 fathoms at MLLW discovered; chart 17320 and 17370; $56^{\circ}39'16''N$; $134^{\circ}21'05''W$; distance 1.6 nm, bearing $160^{\circ}T$ from Point Sullivan.
4. Shoal covered by 8.6 fathoms at MLLW discovered; chart 17320 and 17370; $56^{\circ}40'15''N$; $134^{\circ}22'17''W$; distance 0.55 nm, bearing $192^{\circ}T$ from Point Sullivan.
5. Shoal covered by 2.5 fathoms at MLLW discovered; chart 17320 and 17370; $56^{\circ}40'16''N$; $134^{\circ}21'03''W$; distance 0.77 nm, bearing $131^{\circ}T$ from Point Sullivan.
6. Shoal covered by 7.7 fathoms at MLLW discovered; chart 17320 and 17370; $56^{\circ}40'07''N$; $134^{\circ}20'57''W$; distance 0.9 nm, bearing $137^{\circ}T$ from Point Sullivan.
7. Shoal covered by 8.5 fathoms at MLLW discovered; chart 17320 and 17370; $56^{\circ}39'52''N$; $134^{\circ}20'58''W$; distance 1.1 nm, bearing $146^{\circ}T$ from Point Sullivan.
8. Shoal covered by 8.3 fathoms at MLLW discovered; chart 17320 and 17370; $56^{\circ}39'17''N$; $134^{\circ}20'18''W$; distance 1.77 nm, bearing $147^{\circ}T$ from Point Sullivan.
9. Shoal covered by 2.1 fathoms at MLLW discovered; chart 17320 and 17370; $56^{\circ}39'00''N$; $134^{\circ}20'26''W$; distance 1.97 nm, bearing $153^{\circ}T$ from Point Sullivan.
10. Shoal covered by 8.7 fathoms at MLLW discovered; chart 17320 and 17370; $56^{\circ}39'29''N$; $134^{\circ}21'15''W$; distance 1.37 NM, bearing $160^{\circ}T$ from Point Sullivan.
11. Rock uncharted bares 0.1 fathom at MLLW discovered; chart 17320 and 17370; $56^{\circ}43'09''N$; $134^{\circ}23'42''W$; distance 0.34 nm, bearing $308^{\circ}T$ from Washington Bay Light 10.



12. Shoal covered by 5.6 fathoms at MLLW discovered; chart 17320; 56°⁴²~~32~~'30"N; 134°23'25"W; distance 0.45 nm, bearing 193°T from Washington Bay Light 10.
13. Shoal covered by 7.7 fathoms at MLLW discovered; chart 17320 and 17370; 56°43'06"N; 134°23'30"W; distance 0.22 nm, bearing 311°T from Washington Bay Light 10.
14. Piling chart revision Washington Bay; chart 17370; 56°43'28.2"N; 134°21'13.5"W; offshore of charted saltry (abandoned). Piling most seaward submerged by 2.3 feet at MLLW discovered; 56°43'28.6"N; 134°21'24.1"W; distance ~~1.17~~^{1.29} nm, bearing 062°T from Washington Bay Light 10. Inshore of this location are two pilings and two dolphins submerged at mean higher high water (MHHW). Mariners are to exercise caution when approaching the saltry (abandoned).

1. 125 nm



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA Ship FAIRWEATHER S220
1801 Fairview Ave. East
Seattle, WA 98102

23 July 1983

Commander
Seventeenth Coast Guard District
P.O. Box 3-5000
Juneau, AK 99802

Dear Sir:

The following is a correction to the Dangers to Navigation letter submitted by the FAIRWEATHER dated 31 May 83 and which appeared in the Local Notice to Mariners #22 dated 31 May 1983, page 9 of 12:

"A shoal covered by 5.6 fathoms at MLLW was discovered at 56°32'30"N, 134°23'25"W..." should have a corrected geographic position of "56°42'30"N, 134°23'25"W".

Sincerely,

Christian Andreasen
Christian Andreasen
CDR NOAA
Commanding Officer

cc: N/MOP - Director, Pacific Marine Center
N/CG222 - Chart Information Section





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

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

N/MOP211C/CRD

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

Dear Sir,

During final office review of hydrographic survey H-10085, Rowan Bay to Washington Bay, Chatham Strait, Alaska, the following changes affecting chart 17370 were noted. Questions concerning the survey may be directed to Lt. Cdr. David W. Yeager, Chief, Nautical Chart Branch, telephone (206) 526-6835.

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

A 0.4 - fathom submerged rock at MLLW exists at latitude $56^{\circ}40'17.29''N$, longitude $134^{\circ}21'20.90''W$ which plots between a $6\frac{3}{4}$ - fathom sounding and a $4\frac{3}{4}$ - fathom sounding on chart 17370.

A 9.3 - fathom sounding at MLLW exists at latitude $56^{\circ}39'59.90''N$ and longitude $134^{\circ}21'02.02''W$ which plots between a 7 - fathom sounding and a 17-fathom sounding on chart 17370.

A 9.7 - fathom sounding at MLLW exists at latitude $56^{\circ}39'32.24''N$ and longitude $134^{\circ}20'20.97''W$, which plots between a 12 - fathom sounding and a 17 - fathom sounding on chart 17370.

A 4.7 - fathom sounding at MLLW exists at latitude $56^{\circ}39'14.88''N$ and longitude $134^{\circ}20'26.06''W$ which plots between a 10 - fathom sounding and a 9 - fathom sounding on chart 17370.

A rock awash at MLLW exists at latitude $56^{\circ}38'51.49''N$ and longitude $134^{\circ}20'33.76''W$ which plots between 3 rocks awash and an islet with reef on chart 17370.

Sincerely,

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



HYDROGRAPHIC CONTROL STATIONS
 OPR-0353-FA-83
 ALASKA
 CHATHAM STRAIT
 ROWAN BAY TO WASHINGTON BAY

SPRAY, 1981	NGS QUAD N561341	DAVIDSON 1981	✓
100 0 56 36 21264	134 19 39094	139 0006 000000	
SURGE, 1981	NGS QUAD N561341	DAVIDSON 1981	✓
102 0 56 37 30453	134 18 19924	250 0004 000000	
CHITON, 1981	NGS QUAD N561341	DAVIDSON 1981	✓
104 0 56 38 44323	134 19 09670	139 0004 000000	
RAZ, 1981	NGS QUAD N561341	DAVIDSON 1981	✓
105 2 56 39 02753	134 18 21605	250 0002 000000	
LUNAR, 1981	NGS QUAD N561341	DAVIDSON 1981	✓
106 0 56 38 43081	134 20 23113	250 0003 000000	
SULLIVAN 2, 1925	NGS QUAD N561341	1033	
108 0 56 40 28604	134 22 01766	250 0007 000000	✓
SLIP, 1982	NGS QUAD N561341	DAVIDSON 1982	✓
110 4 56 42 32446	134 23 14582	139 0005 000000	
KELP, 1982	NGS QUAD N561341	DAVIDSON 1982	✓
112 0 56 43 10976	134 23 42459	250 0006 000000	
GEORGE, 1982	NGS QUAD N561341	DAVIDSON 1982	✓
114 1 56 43 08449	134 23 23813	250 0006 000000	
SUE, 1983	NGS QUAD N561341	FAIRWEATHER 1983	✓
120 4 56 39 55131	134 20 24641	250 0005 000000	
CINDY, 1983	NGS QUAD N561341	FAIRWEATHER 1983	✓
122 4 56 39 32446	134 20 03071	250 0006 000000	
DEBRA, 1983	NGS QUAD N561341	FAIRWEATHER 1983	✓
124 5 56 40 02015	134 21 22153	250 0012 000000	
VICKI, 1983	NGS QUAD N561341	FAIRWEATHER 1983	✓
126 0 56 40 27678	134 21 25194	139 0004 000000	
JOY, 1983	NGS QUAD N561341	FAIRWEATHER 1983	✓
128 2 56 42 22021	134 23 03720	250 0009 000000	

HYDROGRAPHIC CONTROL STATIONS
(CONTINUED)

MARTHA, 1983	NGS QUAD N561341	FAIRWEATHER 1983	✓
130 4 56 43 21333	134 20 38747	250 0003 000000	
TIM, 1983	NGSS QUAD N561341	FAIRWEATHER 1983	✓
132 1 56 43 29504	134 21 24478	250 0002 000000	
JUT, 1897	NGS QUAD N561341	1021	✓
134 3 56 43 45630	134 23 57708	250 0005 000000	
TP 1, 1983	NGS QUAD N561341	FAIRWEATHER 1983	✓
136 7 56 43 05310	134 22 31637	254 0003 000000	
WASHINGTON BAY LT. 10 ¹⁹⁸³	NGS QUAD N561341	FAIRWEATHER 1983	✓
138 0 56 42 56943	134 23 12887	250 0011 000000	
TP 2, 1983	NGS QUAD N561341	FAIRWEATHER 1983	✓
139 0 56 39 44181	134 19 39749	254 0003 000000	

NOAA FORM 76-40
(9-74)
Replaces C&GS Form 567.

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

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

REPORTING UNIT (If field party, ship or office)
FAIRWEATHER
STATE ALASKA
LOCALITY WASHINGTON BAY
DATE 5 MAY 83

CHARTED TO BE CHARTED
REVISSED TO BE REVISSED
DELETED TO BE DELETED
The following objects HAVE NOT HAVE
been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO. 0353-FA-83
JOB NUMBER
SURVEY NUMBER H-10085
DATUM N.A. 1927


CHARTING NAME LIGHT
DESCRIPTION (WASHINGTON BAY LIGHT 10)
Copy made 6-15-83

REASON FOR DELETION OF LANDMARK OR AID TO NAVIGATION
(Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)

POSITION			LONGITUDE	METHOD AND DATE OF LOCATION (See instructions on reverse side)	CHARTS AFFECTED
LATITUDE	LONGITUDE				
° /	'	"	D.P. Meters	OFFICE	FIELD
56 42	134 23	12.887	12.887	F-3-6-L	17370
1767.36	219.23	219.23	219.23	4-27-83	17320

ORIGINATING ACTIVITY

- HYDROGRAPHIC PARTY
 - GEODETIC PARTY
 - PHOTO FIELD PARTY
 - COMPILATION ACTIVITY
 - FINAL REVIEWER
 - QUALITY CONTROL & REVIEW GRP.
 - COAST PILOT BRANCH
- (See reverse for responsible personnel)

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	W.F. FORSTER 
POSITIONS DETERMINED AND/OR VERIFIED	
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'
(Consult Photogrammetric Instructions No. 64.)

ORIGINATOR
<input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
FIELD ACTIVITY REPRESENTATIVE
OFFICE ACTIVITY REPRESENTATIVE
<input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

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.**

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 Tide Note
OPR-0353-FA-83
Chatham Strait, Kuiu Island
and
Washington Bay

Tide Gage (945-1600) Sitka, Alaska served as reference station for the navigable area survey from Rowan Bay to Washington Bay (H-10085), as stated in Project Instructions OPR-0353-FA-83. Change No. 6, Amendment to Project Instructions, dated 12 April 1983 deleted the requirement for third-order levels at the control tide station. Therefore, beginning and ending levels were not run in Sitka.

Predicted tide correctors were interpolated by the hydroplot system using program AM500. All times of both predicted and recorded tides were based on Universal Coordinated Time. All predicted tides were acceptable for hydrography with no discrepancies in data attributable to tide errors.

Two tide gage were utilized for this project.

Chatham Strait, Kuiu Island

Tide station (945-1277) Chatham Strait, Kuiu Island located at latitude 56°36'35"N, longitude 134°17'46"W was the gage that controlled the entire project area. On 18 April 1983 (JD 108) the tide staff, and Bristol bubbler gage s/n 73A 229 were installed. The staff assembly is resting on a near vertical rock ledge, and is secured to the rock face by a series of 7 guide wires. The orifice is secured to the bottom of the tide staff support. Tubing leads up the tide staff to the top of rock ledge where the gage is located.

Opening levels were run to five existing permanent bench marks on 18 April 1983 (JD 108). Closing levels were run on 19 May 1983 (JD 139). Closures were within the acceptable limits set forth by the Hydrographic Manual, Fourth Edition, Section A.8.4. A comparison of opening to closing levels shows no sign of any vertical movement in the marks or tide staff. Staff value of the zero line on analog tide records was 0.8 feet.

Bristol bubbler gage s/n 73A229 worked well between JD's 108 and 139 with the following exceptions. On 5 May 1983 (JD 125) at 1100 UTC the ink well went dry and the marigram trace was lost until the gage was serviced at 2305 UTC, 5 May 1983 (JD 125). Hydrography was run during this down time. Marigram records also show that the clock drive stopped at 0400 UTC, 13 May 1983 (JD 133), and was not restarted until 0300 UTC, 16 May 1983 (JD 136) when the FAIRWEATHER arrived back in the working grounds. This problem was attributed to not winding the chart drive for a long period of time. No hydrography was run during this down time. Due to time restraints Kuiu Island gage was removed before the 4 hour period of post hydrography could be met, as stated in Section 5.8.4 of the Project Instructions.

Washington Bay

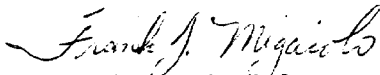
Tide station (945-1392) Washington Bay located at latitude $56^{\circ}43'29''N$, longitude $134^{\circ}21'14''W$ controlled the project area for Washington Bay.

On 26 April 1983 (JD 116) the tide staff and tide bubbler tide gage were installed. The staff assembly is anchored directly to a near vertical rock ledge. The orifice is secured to a submerged pile offshore. Tubing leads from the pile, across the harbor bottom, and up the rock face to the gage which rests on the ruins of an old pier.

Opening levels were run to three existing Standard NOS discs (geodetic monuments) on 26 April 1983 (JD 116). Closing levels were run on 19 May 1983 (JD 139). Closures were within the acceptable limits set forth by the Hydrographic Manual. A comparison of opening to closing levels shows no sign of any vertical movement in the marks or tide staff. Staff value of the zero line on analog tide records were 5.9 feet.

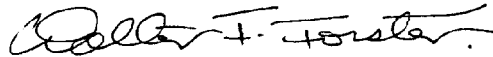
Bristol bubbler s/n 62A92 worked well during the entire project period.

Submitted by



Frank J. Migaiolo
ENS NOAA

Approved by



Walter F. Forster
CDR NOAA
Commanding Officer

DATE: 10/3/83

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): 945-1277 Chatham Straits, AK
945-1392 Washington Bay, AK

Period: April 26 - May 18, 1983

HYDROGRAPHIC SHEET: H-10085

OPR: 0353

Locality: Washington Bay and Chatham Strait, Alaska

Plane of reference (mean lower low water): 945-1277 = 5.4 feet
945-1392 = 9.8 feet

Height of Mean High Water above Plane of Reference is 945-1277 = 11.1 feet
945-1392 = 11.9 feet

REMARKS: Recommended Zoning:

1. South latitude $56^{\circ}38.0'$ zone Direct on 945-1277 Chatham Straits, AK.
2. North of $56^{\circ}38.0'$ to $56^{\circ}40.0'$ zone on 945-1277 Chatham Straits, AK and apply x 1.02 range ratio.
3. North of $56^{\circ}40.0'$ to $56^{\circ}42.0'$ zone on 945-1277 Chatham Straits, AK and apply x 1.04 range ratio.
4. North of $56^{\circ}42.0'$ to $56^{\circ}43.0'$ zone on 945-1277 Chatham Straits, AK and apply x 1.06 range ratio.
5. North of $56^{\circ}43.0'$ zone direct on 945-1392 Washington Bay, AK.


Chief, Tidal Datums Section, Tides & Water
Levels Branch

GEOGRAPHIC NAMES

H-10085

Name on Survey	A ON CHART NO.	B ON PREVIOUS SURVEY NO.	C ON U.S. 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
Alaska (title)									1
Chatham Strait	X	X	X						2
Rowan Bay	X		X						3
Washington Bay	X	X	X						4
									5
									6
									7
									8
									9
									10
									11
									12
									13
									14
									15
									16
									17
									18
									19
									20
									21
									22
									23
									24
									25

HYDROGRAPHIC SURVEY STATISTICS

H-10085

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT
SMOOTH SHEET		1	SMOOTH OVERLAYS: POS., ARC, EXCESS		9
DESCRIPTIVE REPORT		1	FIELD SHEETS AND OTHER OVERLAYS		4
DESCRIP-TION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/SOURCE DOCUMENTS
ACCORDIAN FILES	2				
ENVELOPES					
VOLUMES	5				
CAHIERS					
BOXES					

SHORELINE DATA

SHORELINE MAPS (List):
 PHOTOBATHYMETRIC MAPS (List):
 NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List):
 NAUTICAL CHARTS (List): 2-17370 chart 7th Edition Chart 17370 (Enlarged 1:10,000, 1:5000)

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

PROCESSING ACTIVITY	AMOUNTS		
	VERIFICATION	EVALUATION	TOTALS
POSITIONS ON SHEET			3851
POSITIONS REVISED	5834		5834
SOUNDINGS REVISED			
CONTROL STATIONS REVISED	68	1	69
	TIME - HOURS		
	VERIFICATION	EVALUATION	TOTALS
PRE-PROCESSING EXAMINATION	2		2
VERIFICATION OF CONTROL	3	5	8
VERIFICATION OF POSITIONS	151	10	161
VERIFICATION OF SOUNDINGS	170	21	191
VERIFICATION OF JUNCTIONS	2	2	4
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION	6		6
COMPILATION OF SMOOTH SHEET	166	44	210
COMPARISON WITH PRIOR SURVEYS AND CHARTS		5	5
EVALUATION OF SIDESCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION, REPORT	14	24	38
OTHER Resolution of T-1 problem	4		4
Digitization			12
TOTALS	518	111	641

Pre-processing Examination by	W. Wert	Beginning Date	9/9/83	Ending Date	9/9/83
Verification of Field Data by	A. Luceno	XXXXX Begin date	10/19/83	Ending Date	7/23/84
Verification Check by	S.H. Otsubo and B.A. Oimstead	Time (Hours)	79	Ending Date	9/24/84
Evaluation and Analysis by	C.R. Davies	Time (Hours) Begin Date	8/17/84	Ending Date	9/28/84
Inspection by	D. Hill	Time (Hours)	2	Ending Date	11-11-84

PACIFIC MARINE CENTER
EVALUATION REPORT

REGISTRY NO: H-10085

FIELD NO: FA-10-1-83

Alaska, Chatham Strait, Rowan Bay to Washington Bay

SURVEYED: April 26, - May 19, 1983

SCALE: 1:10,000, Inset; 1:5000
SOUNDINGS: Ross Fineline Fathometer

PROJECT NO: OPR-0353-FA-83
CONTROL: Range/Range
Range/Azimuth
Motorola MiniRanger III

Chief of Party.....CDR W.F. Forster, submitted by
CAPT. C. Andreasen
Surveyed by.....LT. K. Andreen
LT. S. Ramsey
LT. T. Rulon
ENS. F. Migaiolo
ENS. P. Steele

Automated Plot by.....PMC Xynetics Plotter

Verified by.....A. A. Luceno

Evaluated by.....C. R. Davies

I. INTRODUCTION

H-10085 is a navigable area survey conducted by the NOAA ship Fairweather in accordance with the following:

- Project Instructions for OPR-0353-FA-83, dated June 15, 1981.
- Change No. 1, dated July 1, 1981,
- Change No. 2, dated March 11, 1982
- Change No. 3, dated August 26, 1982
- Change No. 4, dated December 2, 1982
- Change No. 5, dated March 16, 1983
- Change No. 6, dated April 12, 1983

The survey was conducted on the east side of Chatham Strait, north of Rowan Bay, continuing north to and including Washington Bay.

Predicted tides based on the Sitka, Alaska tide gage (945-1600) with time and range adjustments were utilized during shipboard processing. Tide correctors used for the reduction of the final soundings are computed from approved hourly heights from two temporary bubbler-tide gages, Kuiu Island and Washington Bay.

During verification, the following were changed.

- a) Projection-parameters were changed to center the hydrography on the smooth sheet and to change the projection to polyconic.
- b) Tide level values are from observed tides, see form 712.
- c) Electronic correctors were revised to reflect the mean of baseline correctors.
- d) TC/TI correctors were revised to reflect corrections made during processing. Whenever a dive investigation (leadline sounding) was taken a TRA value of zero was inserted.

The ship reported a possible collimation error of up to 15 minutes for Theodolite number 13063. This instrument was used in the range/azimuth control conducted during the survey. However, no corrections were applied to the survey for two reasons:

- 1). The times that the error was in effect could not be determined.
- 2). There were several occasions when the identity of the Theodolite used was not recorded.

Had the possible collimation correction been applied, the maximum discrepancy would be in the 1:5000 scale inset. Positions east of longitude 134°21'30 would plot south-east from 1.5 mm to 2.2 mm, increasing eastward. Comparing the prior survey and chart with the present survey reveals no major discrepancy at the survey scale. Additionally, the plotted survey data indicates no unusual anomalies in areas where the instrument may have been used. See attached letters for further information.

II. CONTROL AND SHORELINE

Hydrographic control and hydrographic positioning are adequately discussed in the Descriptive Report, paragraphs F and G, and Horizontal and Electronic Control Reports for OPR-0353-FA-83.

The smooth sheet was plotted using published and field geodetic positions based on the North American Datum of 1927.

Shoreline for orientation only is not shown on H-10085 in accordance with N/CG letter dated February 16, 1984, entitled "Reduction of Marine Center Hydrography Survey Processing Backlog" (copy attached).

It should also be noted that an incorrect datum shift was applied during chart compilation. This resulted in numerous conflicts with the present survey information. See letters dated July 27, and October 25, 1982 (attached).

III. HYDROGRAPHY

Crossline soundings are in fair agreement. Small discrepancies can be attributed to the irregular nature of the bottom. Hydrography within the limits of H-10085 was adequate to determine the bottom configuration and least depths with the exception of the following areas:

<u>Latitude N</u>	<u>Longitude W</u>
56°43'13"	134°23'43"
56°43'07"	134°23'27"
56°42'20"	134°23'01"
56°40'09"	134°22'00"

Standard depth curves could be adequately drawn and developed with the exception of the areas listed above, 0, 1, 2 and 3-fathom curves (in some places) where hydrography was terminated due to foul areas or surf conditions and in areas of steep shoreline change.

IV. CONDITION OF SURVEY

The hydrographic records and final reports adequately conform to the requirements of the Hydrographic Manual, 4th Edition, revised through change number 3, with the following exceptions:

Several areas needed further development to determine the bottom configuration, see section 3, Hydrography (Hydrographic Manual 4.3.4).

The investigations of AWOIS items 50573 and 50574 were incomplete with deficiencies common to both investigations. Most importantly there is insufficient field documentation to support charting recommendations. Hydrographers must insure that charting recommendations are supported by documentation which is both clear and accurate.

The hydrographer should not adjust brown shoreline to conform to hydrography. Brown shoreline is used for orientation purposes only and always originate from a prior survey, manuscript or nautical chart. If the hydrographer substantiates significant change to the shoreline, then the results of the investigation should be shown on the field sheet with a dashed red line or a solid red line, depending on position quality. (Hydrographic Manual, section 1.6.2).

When making a statement comparing the prior survey with the present survey the hydrographer should state the quality of general agreement between the two surveys and give conclusions or opinions as to the reasons for significant differences. (Hydrographic Manual, section 5.3.4, K).

When making a chart comparison only soundings or charted features which do not originate from a prior survey should be discussed. (Hydrographic Manual, section 5.3.4, K, L).

Dive investigations should state how the least depths over a feature are acquired. Both the raw records and Descriptive Report provide little or no information on how the dives were conducted. It is not known how the least depths were obtained.

V. JUNCTIONS

H-10085 joins H-9976 (1981-82). Soundings and depth curves in the junctional area are in agreement (± 1 fathom). Numerous soundings and features were transferred to H-10085 from H-9976 to support depth curves and to depict shoaler information. There are no contemporary surveys to the west

and north. A comparison with the charted depth curves reveals good agreement with the present survey. Refer to H-10085 for all depth curves in the junctional area.

VI. COMPARISON WITH PRIOR SURVEYS

H-2333 (1897) 1:80,000
 H-2334 (1897) 1:20,000
 H-2336 (1897) 1:10,000

After adjusting the datum on these priors to fit the datum shown on H-10085, the priors compare well with differences of ± 1 to 2 fathoms. These differences are attributed to the different data acquisition and positioning techniques. H-10085 contains more complete development of the bottom configuration and numerous areas where shoaler depths were obtained.

However, comparisons with H-2334 also indicate that there are many rocks, reefs and ledges that were not developed on the present survey. In some cases the present hydrography confirms the feature as indicated by shoaler or negative soundings. Despite the fact that the hydrographer has included little or no descriptive information, many of these soundings have been converted to rocks on the smooth sheet. In other cases, there are insufficient data to portray some rocky features and accordingly, features have been carried forward. Some of these features may be outside the limits of hydrography; however, to preclude the possibility that they may be considered disproven they have been carried forward to the present survey. Some of the reef and ledge limits originating with the prior survey have been adjusted to conform to the present hydrography.

With the transfer of features from H-2334, this survey is adequate to supercede the prior surveys within the area of common coverage.

VII. COMPARISON WITH CHART

Chart 17370, 1:20,000, 7th Edition, July 16, 1977.

- a) Hydrography. A chart comparison indicates that most offshore/inshore hydrography originates with the prior surveys. The compilation of the chart in the area originating from H-2334 was without benefit of a projection and is offset from data shown in the survey. See section 1 of this report and reference letters for additional information on the datum discrepancy. All charted features were satisfactorily disposed of and discussed in the Descriptive Report supplemented as follows:

AWOIS item 50573, two dolphins and ruins charted at latitude $54^{\circ}43'27.8''N$ and longitude $134^{\circ}21'14.3''W$ originate from chart letters 138 (1932), 292 (1975), and 184 (1976). An investigation was conducted and one pile, one submerged pile and two submerged dolphins were located in the vicinity of latitude $56^{\circ}43'29.0''N$ and longitude $134^{\circ}21'23.0''W$. It is recommended that the charted dolphins and ruins be changed to correspond to the smooth sheet.

Item 50574, an abandoned saltery, at latitude $56^{\circ}43'33.3''N$ and longitude $134^{\circ}20'39.5''W$ originates from Chart Letters 138 (1932)

and 1841 (1976). The saltery was not fully investigated and it is recommended by the evaluator to retain as charted.

Ten rocks which originate from the USGS quadrangles were verified as isolated rocks awash and/or within a foul area. Chart these areas as shown on the smooth sheet.

The areas covered by H-10085 was examined for unreported dangers to navigation. In addition to the fourteen items submitted by the hydrographer (copy attached), the following are of immediate charting importance:

Present Survey Depth	Latitude (N)	Longitude (W)
0 ⁴ RK	56°40'17.29"N	134°21'20.90"W
9 ³	56°39'59.90"N	134°21'02.02"W
9 ⁷	56°39'32.24"N	134°20'20.97"W
4 ⁷	56°39'14.88"N	134°20'26.06"W
Rock awash	56°38'51.49"N	134°20'33.76"W

This information has been forwarded to the 17th USCG District via letter (copy attached) and to DMAHTC via the Automated Notice to Mariners system.

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

- b) Controlling depths. There are no controlling depths located within the limits of H-10085.
- c) Aids to Navigation. There is one fixed aid to navigation located within the limits of the survey.

<u>Light List Name</u>	<u>Light List Number</u>	<u>Latitude (N)</u>	<u>Longitude (W)</u>
Washington Bay Light 10	3188	56°42'56.943"	134°23'12.887"

This light adequately marks the feature intended.

VIII. COMPLIANCE WITH INSTRUCTIONS

H-10085 adequately complies with the instructions and changes listed in section 1 of the report, except where noted in section 4.

IX. ADDITIONAL FIELD WORK

H-10085 is a good navigable area survey, additional work concerning those items listed in section 3, hydrography, AWOIS item 50574, updated aerial photography and new shoreline compilation should be considered in future project planning for Chatham Strait.

Respectfully submitted

Charles R. Davies

C. R. Davies
Cartographer
10/5/84

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.

J. S. Green
James S. Green
Supervisory Cartographer



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Nautical Chart Branch
7600 Sand Point Way NE
BIN C15700, Bldg. 3
Seattle, Washington 98115-0070

November 18, 1983

TO: All N/MOP21 Employees

FROM: *Ned C. Austin*
N/MOP21 - Ned C. Austin

SUBJECT: Collimation Error in Theodolite T-1 13063

NOAA Ship FAIRWEATHER has reported a collimation problem in Theodolite T-1 #13063 which impacts all 1983 work involving this instrument. Based on tests by the FAIRWEATHER the collimation error is approximately as follows:

Horizontal Circle Reading (Direct)	Collimation Error (Minutes)
000°	15'
090°	14'
180°	1'
270°	3'

The error is apparently systematic and therefore correctable, but additional tests need to be conducted. At this point I am calling the problem to your attention so you will be aware of it. Additional information will be provided when we develop a plan for handling the problem.





EC CA → SO → FCO
93M

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
National Geodetic Survey
I & E Branch
P.O. Box 1
Corbin, Virginia 22446

TO: NOAA Ship Fairweather
Capt. Christian Andreasen , Cmdg.

FROM: Richard L. Wright
Geodetic Techn.
Theodolite Section
I & E Branch

RECEIVED
JUL 27 REC'D

SUBJECT: Wild Theodolite T2-13063

Around January 1984 I received this instrument with colimation horizontal angular error.

The horizontal circle plate was found to be ecc. A calibration test was made using 5° intervals of the horizontal plate and fed into the computer to print out to 1° to 2.0, however the signs + or - will be reversed when making the corrections.

This instrument was tested over the Corbin Quad using the calibration tables and the observed angles checked to + or - 0.2".

The instrument has been dropped or jarred, shifting the horizontal plate ecc.

The instrument will be repaired, serviced and calibrated and returned to you.

The instrument was last serviced and calibrated March 7, 1982 and found to be in good working condition.

Thank you
Richard L. Wright
Geodetic Techn.
Theodolite Section
I & E Branch
Corbin, Virginia 22446

Per telephone call with Dick Wright
on July 27, 1984, the T-1 (SN-13063)
was last serviced March 1983.

M. Kenny





U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
~~NATIONAL OCEANIC AND ATMOSPHERIC SERVICE~~
NATIONAL OCEAN SERVICE
Charting & Geodetic Services
National Geodetic Survey Division
Instrumentation and Equipment Section
P.O. Box 1
Corbin, VA 22446

N/CG163:WVM

June 29, 1984

TO: Lt. Cmdr. David W. Yeager, MOP 21
7600 Sand Point Way, NE
Bin - C15700 Bldg. 3
Seattle, WA 98115-0070

FROM: Richard L. Wright
NOAA, NOS, NGSD

SUBJECT: Theodolite, T1 s/n 13063 Circle Error

This instrument was serviced and tested in 1982 by this facility and returned to Pacific Marine Center in good condition.

The instrument was sent to us in 1983 for calibration of plate readings to salvage surveys performed with the instrument after it had been damaged.

A system of calibration was devised and the data was plotted on a graph. These graph plots were then put on a computer, which generated a correction table.

After the plots and correction tables were made it was discovered that all signs of corrections were reversed. The plots and computer correction tables are good except the correction signs should be reversed.

Per telephone call with
Dick Wright on July 27, 1984
the T1 (SN-13063) was last
serviced March 1983.

By William V. Mast
For Richard L. Wright

M. Kenny



10TH ANNIVERSARY 1970-1980
National Oceanic and Atmospheric Administration
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COPY



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
~~NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION~~ NATIONAL OCEAN SERVICE
Charting & Geodetic Services
National Geodetic Survey Division
Instrumentation and Equipment Section
P.O. Box 1
Corbin, VA 22446

N/CG163:WVM

June 29, 1984

*Affected
Surveys*

*H-10039
10089
10085 - SSS
10087
10108*

TO: Lt. Cmdr. David W. Yeager, MOP 21
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By William V. Mast
For Richard L. Wright



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CALIBRATION HORIZONTAL PLATE
 TI - THEODOLITE NO 13063
 JAN 31, 1984
 I & E BRANCH, CORBIN VIRGINIA

MIN -	00	05	10	15	20	25	30	35	40	45	50	55	60
DEG	"CORRECTION IN SECONDS OF ARC"												
40.0	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.
41.0	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.
42.0	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.	-1021.
43.0	-1020.	-1020.	-1020.	-1020.	-1020.	-1020.	-1020.	-1020.	-1020.	-1019.	-1019.	-1019.	-1019.
44.0	-1019.	-1019.	-1019.	-1019.	-1019.	-1019.	-1018.	-1018.	-1018.	-1018.	-1018.	-1018.	-1017.
45.0	-1017.	-1017.	-1017.	-1017.	-1017.	-1017.	-1016.	-1016.	-1016.	-1016.	-1016.	-1015.	-1015.
46.0	-1015.	-1015.	-1015.	-1015.	-1014.	-1014.	-1014.	-1014.	-1014.	-1013.	-1013.	-1013.	-1013.
47.0	-1013.	-1013.	-1012.	-1012.	-1012.	-1012.	-1012.	-1011.	-1011.	-1011.	-1011.	-1011.	-1010.
48.0	-1010.	-1010.	-1010.	-1010.	-1009.	-1009.	-1009.	-1009.	-1009.	-1008.	-1008.	-1008.	-1008.
49.0	-1008.	-1007.	-1007.	-1007.	-1007.	-1007.	-1006.	-1006.	-1006.	-1006.	-1005.	-1005.	-1005.
50.0	-1005.	-1005.	-1004.	-1004.	-1004.	-1004.	-1003.	-1003.	-1003.	-1003.	-1002.	-1002.	-1002.
51.0	-1002.	-1002.	-1001.	-1001.	-1001.	-1001.	-1000.	-1000.	-1000.	-1000.	-999.	-999.	-999.
52.0	-999.	-999.	-998.	-998.	-998.	-998.	-998.	-997.	-997.	-997.	-997.	-996.	-996.
53.0	-996.	-996.	-996.	-995.	-995.	-995.	-995.	-994.	-994.	-994.	-994.	-994.	-993.
54.0	-993.	-993.	-993.	-993.	-992.	-992.	-992.	-992.	-991.	-991.	-991.	-991.	-990.
55.0	-990.	-990.	-990.	-990.	-990.	-990.	-989.	-989.	-989.	-989.	-989.	-988.	-988.
56.0	-988.	-988.	-988.	-988.	-987.	-987.	-987.	-987.	-986.	-986.	-986.	-986.	-985.
57.0	-985.	-985.	-985.	-985.	-984.	-984.	-984.	-984.	-983.	-983.	-983.	-983.	-982.
58.0	-982.	-982.	-982.	-981.	-981.	-981.	-981.	-980.	-980.	-980.	-979.	-979.	-979.
59.0	-979.	-978.	-978.	-978.	-978.	-977.	-977.	-977.	-976.	-976.	-976.	-975.	-975.

CALIBRATION HORIZONTAL PLATE

T1 - THEODOLITE NO 13263

JAN 31, 1964

I & E BRANCH, CORBIN VIRGINIA

MIN -	00	05	10	15	20	25	30	35	40	45	50	55	60
DEG	"CORRECTION IN SECONDS OF ARC"												
60.0	-975.	-975.	-974.	-974.	-973.	-973.	-973.	-972.	-972.	-972.	-971.	-971.	-970.
61.0	-970.	-970.	-970.	-969.	-969.	-969.	-968.	-968.	-967.	-967.	-967.	-966.	-966.
62.0	-966.	-966.	-965.	-965.	-965.	-964.	-964.	-963.	-963.	-963.	-962.	-962.	-962.
63.0	-962.	-961.	-961.	-961.	-960.	-960.	-959.	-959.	-959.	-958.	-958.	-958.	-957.
64.0	-957.	-957.	-957.	-956.	-956.	-956.	-955.	-955.	-954.	-954.	-954.	-953.	-953.
65.0	-953.	-953.	-952.	-952.	-952.	-952.	-951.	-951.	-951.	-950.	-950.	-950.	-949.
66.0	-949.	-949.	-949.	-948.	-948.	-948.	-947.	-947.	-947.	-946.	-946.	-945.	-945.
67.0	-945.	-945.	-944.	-944.	-944.	-943.	-943.	-942.	-942.	-942.	-941.	-941.	-940.
68.0	-940.	-940.	-940.	-939.	-939.	-938.	-938.	-938.	-937.	-937.	-936.	-936.	-935.
69.0	-935.	-935.	-935.	-934.	-934.	-933.	-933.	-932.	-932.	-931.	-931.	-930.	-930.
70.0	-930.	-929.	-929.	-928.	-928.	-927.	-927.	-926.	-926.	-925.	-925.	-924.	-924.
71.0	-924.	-923.	-923.	-922.	-922.	-921.	-921.	-920.	-920.	-919.	-919.	-918.	-918.
72.0	-918.	-917.	-917.	-916.	-916.	-915.	-915.	-914.	-914.	-913.	-913.	-912.	-912.
73.0	-912.	-911.	-911.	-910.	-910.	-909.	-909.	-908.	-908.	-908.	-907.	-907.	-906.
74.0	-906.	-906.	-905.	-905.	-904.	-904.	-903.	-903.	-902.	-902.	-901.	-901.	-900.
75.0	-900.	-900.	-900.	-899.	-899.	-898.	-898.	-898.	-897.	-897.	-896.	-896.	-895.
76.0	-895.	-895.	-894.	-894.	-894.	-893.	-893.	-892.	-892.	-891.	-891.	-890.	-890.
77.0	-890.	-890.	-889.	-889.	-888.	-888.	-887.	-887.	-886.	-886.	-885.	-885.	-884.
78.0	-884.	-884.	-883.	-883.	-882.	-882.	-881.	-881.	-880.	-880.	-879.	-879.	-879.
79.0	-879.	-878.	-878.	-877.	-877.	-876.	-876.	-875.	-875.	-874.	-874.	-873.	-872.

CALIBRATION HORIZONTAL PLATE
 TI - THEODOLITE NO 13063
 JAN 31, 1984
 I & E BRANCH, CORBIN VIRGINIA

MIN -	00	05	10	15	20	25	30	35	40	45	50	55	60
020	"CORRECTION IN SECONDS OF ARC"												
80.0	-872.	-872.	-871.	-871.	-870.	-870.	-869.	-869.	-868.	-868.	-867.	-867.	-866.
81.0	-866.	-866.	-865.	-864.	-864.	-863.	-863.	-862.	-862.	-861.	-861.	-860.	-860.
82.0	-850.	-859.	-859.	-858.	-858.	-857.	-857.	-856.	-855.	-855.	-854.	-854.	-853.
83.0	-853.	-853.	-852.	-852.	-851.	-851.	-850.	-850.	-849.	-849.	-848.	-848.	-847.
84.0	-847.	-847.	-846.	-846.	-845.	-845.	-844.	-844.	-843.	-843.	-842.	-842.	-841.
85.0	-841.	-840.	-840.	-839.	-839.	-838.	-838.	-837.	-837.	-836.	-836.	-835.	-835.
86.0	-835.	-834.	-834.	-833.	-833.	-832.	-832.	-831.	-831.	-830.	-830.	-829.	-829.
87.0	-829.	-828.	-828.	-827.	-826.	-826.	-825.	-825.	-824.	-824.	-823.	-823.	-822.
88.0	-822.	-822.	-821.	-821.	-820.	-820.	-819.	-819.	-818.	-818.	-817.	-817.	-816.
89.0	-816.	-816.	-815.	-815.	-814.	-814.	-813.	-813.	-812.	-812.	-811.	-811.	-810.
90.0	-810.	-809.	-809.	-808.	-808.	-807.	-807.	-806.	-806.	-805.	-805.	-804.	-804.
91.0	-804.	-803.	-802.	-802.	-801.	-801.	-800.	-800.	-799.	-799.	-798.	-798.	-797.
92.0	-797.	-797.	-796.	-796.	-795.	-794.	-794.	-793.	-793.	-792.	-792.	-791.	-791.
93.0	-791.	-790.	-790.	-789.	-789.	-788.	-787.	-787.	-786.	-786.	-785.	-785.	-784.
94.0	-784.	-784.	-783.	-783.	-782.	-781.	-781.	-780.	-780.	-779.	-779.	-778.	-777.
95.0	-777.	-777.	-777.	-776.	-776.	-775.	-775.	-774.	-774.	-773.	-773.	-772.	-772.
96.0	-772.	-771.	-771.	-770.	-770.	-769.	-768.	-768.	-767.	-767.	-766.	-766.	-765.
97.0	-765.	-764.	-764.	-763.	-763.	-762.	-761.	-761.	-760.	-759.	-759.	-758.	-757.
98.0	-757.	-757.	-756.	-755.	-755.	-754.	-753.	-753.	-752.	-751.	-750.	-750.	-749.
99.0	-749.	-748.	-748.	-747.	-746.	-745.	-745.	-744.	-743.	-742.	-742.	-741.	-740.

CALIBRATION HORIZONTAL PLATE
 T1 - THEODOLITE NO 13263
 JAN 31, 1984
 I & E BRANCH, CORBIN VIRGINIA

MIN -	00	05	10	15	20	25	30	35	40	45	50	55	60
DEG	"CORRECTION IN SECONDS OF ARC"												
120.0	-742.	-739.	-738.	-737.	-737.	-736.	-735.	-734.	-733.	-732.	-732.	-731.	-730.
101.0	-730.	-729.	-728.	-727.	-727.	-726.	-725.	-724.	-723.	-722.	-722.	-721.	-720.
102.0	-720.	-719.	-718.	-717.	-716.	-716.	-715.	-714.	-713.	-712.	-711.	-711.	-710.
103.0	-710.	-709.	-708.	-707.	-706.	-706.	-705.	-704.	-703.	-702.	-702.	-701.	-700.
104.0	-700.	-699.	-698.	-697.	-697.	-696.	-695.	-694.	-693.	-692.	-692.	-691.	-690.
105.0	-690.	-689.	-688.	-687.	-686.	-686.	-685.	-684.	-683.	-682.	-681.	-680.	-680.
106.0	-680.	-679.	-678.	-677.	-676.	-675.	-675.	-674.	-673.	-672.	-671.	-671.	-670.
107.0	-670.	-669.	-668.	-667.	-667.	-666.	-665.	-664.	-663.	-663.	-662.	-661.	-660.
108.0	-660.	-659.	-659.	-658.	-657.	-657.	-656.	-655.	-654.	-654.	-653.	-652.	-651.
109.0	-650.	-650.	-650.	-649.	-648.	-648.	-647.	-646.	-645.	-645.	-644.	-643.	-642.
110.0	-642.	-642.	-641.	-641.	-640.	-640.	-639.	-638.	-638.	-637.	-636.	-636.	-635.
111.0	-635.	-635.	-634.	-633.	-633.	-632.	-631.	-631.	-630.	-629.	-628.	-628.	-627.
112.0	-627.	-626.	-626.	-625.	-624.	-624.	-623.	-622.	-621.	-621.	-620.	-619.	-618.
113.0	-618.	-618.	-617.	-616.	-615.	-615.	-614.	-613.	-612.	-611.	-611.	-610.	-609.
114.0	-609.	-608.	-608.	-607.	-606.	-605.	-604.	-604.	-603.	-602.	-601.	-600.	-599.
115.0	-599.	-598.	-597.	-596.	-596.	-595.	-594.	-593.	-592.	-591.	-590.	-589.	-588.
116.0	-588.	-587.	-586.	-585.	-584.	-583.	-582.	-582.	-581.	-580.	-579.	-578.	-577.
117.0	-577.	-576.	-576.	-575.	-574.	-573.	-572.	-572.	-571.	-570.	-569.	-568.	-568.
118.0	-568.	-567.	-566.	-565.	-564.	-564.	-563.	-562.	-561.	-561.	-560.	-559.	-559.
119.0	-559.	-558.	-557.	-556.	-556.	-555.	-554.	-553.	-553.	-552.	-551.	-551.	-550.

CALIBRATION HORIZONTAL PLATE
 T1 - THEODOLITE NO 13063

JAN 31, 1964
 I & E BRANCH, CORBIN VIRGINIA

MIN -	00	05	10	15	20	25	30	35	40	45	50	55	60
DEG	"CORRECTION IN SECONDS OF ARC"												
120.0	-550.	-550.	-549.	-549.	-548.	-548.	-547.	-547.	-546.	-546.	-545.	-545.	-544.
121.0	-544.	-543.	-543.	-542.	-542.	-541.	-541.	-540.	-539.	-539.	-538.	-537.	-537.
122.0	-537.	-536.	-535.	-535.	-534.	-533.	-533.	-532.	-531.	-531.	-530.	-529.	-528.
123.0	-530.	-528.	-527.	-526.	-526.	-525.	-524.	-523.	-522.	-522.	-521.	-520.	-519.
124.0	-519.	-519.	-518.	-517.	-516.	-515.	-514.	-514.	-513.	-512.	-511.	-510.	-509.
125.0	-509.	-508.	-507.	-506.	-505.	-504.	-503.	-502.	-501.	-500.	-499.	-498.	-497.
126.0	-497.	-496.	-495.	-494.	-493.	-492.	-491.	-490.	-489.	-488.	-487.	-487.	-486.
127.0	-486.	-485.	-484.	-483.	-482.	-481.	-480.	-480.	-479.	-478.	-477.	-476.	-475.
128.0	-475.	-475.	-474.	-473.	-472.	-471.	-471.	-470.	-469.	-468.	-468.	-467.	-466.
129.0	-465.	-465.	-465.	-464.	-463.	-462.	-462.	-461.	-460.	-460.	-459.	-458.	-458.
130.0	-457.	-457.	-457.	-456.	-456.	-455.	-455.	-454.	-453.	-453.	-452.	-452.	-451.
131.0	-451.	-451.	-450.	-450.	-449.	-448.	-448.	-447.	-447.	-446.	-445.	-445.	-444.
132.0	-444.	-444.	-443.	-442.	-442.	-441.	-440.	-440.	-439.	-438.	-438.	-437.	-436.
133.0	-436.	-436.	-435.	-434.	-434.	-433.	-432.	-432.	-431.	-430.	-429.	-429.	-428.
134.0	-428.	-427.	-427.	-426.	-425.	-424.	-424.	-423.	-422.	-421.	-421.	-420.	-419.
135.0	-419.	-418.	-417.	-416.	-415.	-415.	-414.	-413.	-412.	-411.	-410.	-409.	-409.
136.0	-409.	-408.	-407.	-406.	-405.	-404.	-404.	-403.	-402.	-401.	-400.	-399.	-399.
137.0	-399.	-396.	-397.	-396.	-395.	-395.	-394.	-393.	-392.	-391.	-391.	-390.	-389.
138.0	-389.	-388.	-387.	-387.	-386.	-385.	-384.	-384.	-383.	-382.	-381.	-381.	-380.
139.0	-380.	-379.	-378.	-378.	-377.	-376.	-375.	-375.	-374.	-373.	-372.	-372.	-371.

CALIBRATION HORIZONTAL PLATE
 T1 - THEODOLITE NO 13063
 JAN 31, 1984
 I & E BRANCH, CORBIN VIRGINIA

MIN -	(00	05	10	15	20	25	30	35	40	45	50	55	60)
DEG	"CORRECTION IN SECONDS OF ARC"												
140.0	-371.	-370.	-370.	-369.	-368.	-367.	-367.	-366.	-365.	-365.	-364.	-363.	-363.
141.0	-363.	-362.	-361.	-361.	-360.	-359.	-358.	-358.	-357.	-356.	-356.	-355.	-354.
142.0	-354.	-354.	-353.	-352.	-352.	-351.	-350.	-349.	-349.	-348.	-347.	-347.	-346.
143.0	-346.	-345.	-345.	-344.	-343.	-343.	-342.	-341.	-341.	-340.	-339.	-338.	-338.
144.0	-338.	-337.	-336.	-336.	-335.	-334.	-334.	-333.	-332.	-332.	-331.	-330.	-330.
145.0	-329.	-329.	-328.	-328.	-327.	-326.	-326.	-325.	-325.	-324.	-323.	-323.	-322.
146.0	-322.	-321.	-321.	-320.	-319.	-319.	-318.	-317.	-317.	-316.	-315.	-315.	-314.
147.0	-314.	-313.	-313.	-312.	-311.	-311.	-310.	-309.	-308.	-308.	-307.	-306.	-306.
148.0	-305.	-305.	-304.	-303.	-303.	-302.	-301.	-300.	-300.	-299.	-298.	-297.	-297.
149.0	-297.	-296.	-295.	-294.	-294.	-293.	-292.	-291.	-291.	-290.	-289.	-288.	-288.
150.0	-287.	-287.	-286.	-285.	-284.	-283.	-282.	-281.	-280.	-279.	-278.	-278.	-277.
151.0	-277.	-276.	-275.	-274.	-273.	-273.	-272.	-271.	-270.	-269.	-269.	-268.	-267.
152.0	-267.	-266.	-266.	-265.	-264.	-263.	-263.	-262.	-261.	-260.	-260.	-259.	-258.
153.0	-258.	-257.	-257.	-256.	-255.	-255.	-254.	-253.	-253.	-252.	-251.	-251.	-250.
154.0	-250.	-249.	-249.	-248.	-247.	-247.	-246.	-245.	-245.	-244.	-244.	-243.	-243.
155.0	-242.	-242.	-242.	-241.	-241.	-240.	-240.	-239.	-239.	-238.	-238.	-237.	-237.
156.0	-237.	-236.	-235.	-235.	-234.	-234.	-233.	-233.	-232.	-232.	-231.	-231.	-230.
157.0	-230.	-230.	-229.	-229.	-228.	-227.	-227.	-226.	-226.	-225.	-225.	-224.	-224.
158.0	-224.	-223.	-222.	-222.	-221.	-221.	-220.	-220.	-219.	-218.	-218.	-217.	-217.
159.0	-217.	-216.	-215.	-215.	-214.	-214.	-213.	-212.	-212.	-211.	-211.	-210.	-210.

CALIBRATION HORIZONTAL PLATE
 T1 - THEODOLITE NO 13063
 JAN 31, 1984
 I & E BRANCH, CORBIN VIRGINIA

MIN -	(00	05	10	15	20	25	30	35	40	45	50	55	60)
DEG	"CORRECTION IN SECONDS OF ARC"												
158.0	-209.	-209.	-208.	-207.	-207.	-206.	-206.	-205.	-204.	-204.	-203.	-202.	-202.
161.0	-202.	-201.	-200.	-200.	-199.	-198.	-198.	-197.	-197.	-196.	-195.	-195.	-194.
162.0	-194.	-193.	-193.	-192.	-192.	-191.	-190.	-190.	-189.	-188.	-188.	-187.	-187.
163.0	-187.	-186.	-185.	-185.	-184.	-184.	-183.	-182.	-182.	-181.	-181.	-180.	-180.
164.0	-180.	-179.	-178.	-178.	-177.	-177.	-176.	-175.	-175.	-174.	-174.	-173.	-173.
165.0	-172.	-172.	-172.	-171.	-171.	-170.	-170.	-169.	-169.	-168.	-168.	-167.	-167.
166.0	-167.	-166.	-166.	-165.	-165.	-164.	-164.	-163.	-163.	-162.	-162.	-161.	-161.
167.0	-161.	-160.	-159.	-159.	-158.	-158.	-157.	-156.	-156.	-155.	-155.	-154.	-153.
168.0	-153.	-153.	-152.	-151.	-151.	-150.	-150.	-149.	-148.	-148.	-147.	-146.	-146.
169.0	-146.	-145.	-144.	-144.	-143.	-142.	-142.	-141.	-140.	-140.	-139.	-138.	-138.
170.0	-137.	-137.	-136.	-135.	-134.	-133.	-132.	-131.	-131.	-130.	-129.	-128.	-127.
171.0	-127.	-127.	-126.	-125.	-124.	-124.	-123.	-122.	-121.	-121.	-120.	-119.	-118.
172.0	-118.	-118.	-117.	-116.	-116.	-115.	-114.	-114.	-113.	-112.	-112.	-111.	-111.
173.0	-111.	-110.	-109.	-109.	-108.	-108.	-107.	-106.	-106.	-105.	-105.	-104.	-104.
174.0	-104.	-103.	-103.	-102.	-101.	-101.	-100.	-100.	-99.	-99.	-98.	-98.	-98.
175.0	-97.	-97.	-97.	-96.	-96.	-95.	-95.	-94.	-94.	-94.	-93.	-93.	-92.
176.0	-92.	-92.	-92.	-91.	-91.	-90.	-90.	-90.	-89.	-89.	-88.	-88.	-88.
177.0	-88.	-87.	-87.	-87.	-86.	-86.	-85.	-85.	-85.	-84.	-84.	-84.	-83.
178.0	-83.	-83.	-83.	-82.	-82.	-81.	-81.	-81.	-80.	-80.	-80.	-79.	-79.
179.0	-79.	-79.	-78.	-78.	-78.	-77.	-77.	-77.	-76.	-76.	-76.	-75.	-75.

CALIBRATION HORIZONTAL PLATE
 T1 - THEODOLITE NO 13063
 JAN 31, 1984
 I & E BRANCH, CORBIN VIRGINIA

MIN -	00	05	10	15	20	25	30	35	40	45	50	55	60
DEG	"CORRECTION IN SECONDS OF ARC"												
180.0	-75.	-75.	-75.	-74.	-74.	-74.	-74.	-73.	-73.	-73.	-73.	-72.	-72.
181.0	-72.	-72.	-71.	-71.	-71.	-71.	-70.	-70.	-70.	-69.	-69.	-69.	-68.
182.0	-68.	-68.	-68.	-67.	-67.	-67.	-66.	-66.	-65.	-65.	-65.	-65.	-64.
183.0	-64.	-64.	-64.	-63.	-63.	-62.	-62.	-62.	-61.	-61.	-61.	-60.	-60.
184.0	-60.	-59.	-59.	-59.	-58.	-58.	-57.	-57.	-57.	-56.	-56.	-55.	-55.
185.0	-55.	-55.	-54.	-54.	-53.	-53.	-52.	-52.	-51.	-51.	-50.	-50.	-49.
186.0	-49.	-49.	-48.	-48.	-48.	-47.	-47.	-46.	-46.	-45.	-45.	-44.	-44.
187.0	-44.	-44.	-43.	-43.	-42.	-42.	-41.	-41.	-41.	-40.	-40.	-39.	-39.
188.0	-39.	-38.	-38.	-38.	-37.	-37.	-36.	-36.	-35.	-35.	-35.	-34.	-34.
189.0	-34.	-34.	-33.	-33.	-33.	-32.	-32.	-31.	-31.	-31.	-30.	-30.	-30.
190.0	-29.	-29.	-29.	-28.	-28.	-28.	-27.	-27.	-26.	-26.	-26.	-25.	-25.
191.0	-25.	-25.	-24.	-24.	-24.	-23.	-23.	-23.	-22.	-22.	-22.	-21.	-21.
192.0	-21.	-21.	-20.	-20.	-20.	-19.	-19.	-19.	-18.	-18.	-18.	-17.	-17.
193.0	-17.	-17.	-16.	-16.	-16.	-15.	-15.	-15.	-15.	-14.	-14.	-14.	-13.
194.0	-13.	-13.	-13.	-13.	-12.	-12.	-12.	-11.	-11.	-11.	-11.	-10.	-10.
195.0	-10.	-10.	-10.	-9.	-9.	-9.	-9.	-9.	-9.	-8.	-8.	-8.	-8.
196.0	-8.	-8.	-7.	-7.	-7.	-7.	-6.	-6.	-6.	-6.	-5.	-5.	-5.
197.0	-5.	-5.	-4.	-4.	-4.	-4.	-3.	-3.	-3.	-3.	-2.	-2.	-2.
198.0	-2.	-2.	-1.	-1.	-1.	-.	-.	-.	-.	1.	1.	1.	2.
199.0	2.	2.	2.	2.	3.	3.	3.	4.	4.	4.	4.	5.	5.

CALIBRATION HORIZONTAL PLATE
 T1 - THEODOLITE NO 13053
 JAN 31, 1984
 I & E BRANCH, CORBIN VIRGINIA

MIN -	(00	05	10	15	20	25	30	35	40	45	50	55	60)
056	"CORRECTION IN SECONDS OF ARC"												
220.0	30.	30.	31.	31.	31.	31.	32.	32.	32.	32.	32.	32.	33.
221.0	33.	33.	33.	33.	33.	33.	33.	33.	33.	33.	33.	33.	33.
222.0	33.	33.	33.	33.	33.	33.	33.	32.	32.	32.	32.	32.	32.
223.0	32.	31.	31.	31.	31.	31.	30.	30.	30.	30.	29.	29.	29.
224.0	29.	29.	28.	28.	28.	27.	27.	27.	26.	26.	26.	25.	25.
225.0	25.	24.	23.	23.	22.	21.	20.	19.	19.	18.	17.	17.	16.
226.0	15.	15.	15.	14.	14.	13.	13.	12.	12.	11.	11.	10.	10.
227.0	10.	9.	9.	8.	8.	8.	7.	7.	6.	6.	6.	6.	5.
228.0	5.	5.	5.	4.	4.	4.	4.	3.	3.	3.	3.	3.	2.
229.0	2.	2.	2.	2.	2.	2.	2.	1.	1.	1.	1.	1.	1.
230.0	1.	1.	2.	2.	2.	3.	3.	3.	3.	4.	4.	4.	4.
231.0	4.	4.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.
232.0	5.	6.	6.	6.	6.	6.	5.	5.	5.	5.	5.	5.	5.
233.0	5.	5.	5.	5.	5.	4.	4.	4.	4.	4.	4.	3.	3.
234.0	3.	3.	3.	2.	2.	2.	2.	1.	1.	1.	1.	.	0.
235.0	0.	-1.	-1.	-2.	-2.	-3.	-3.	-4.	-4.	-5.	-5.	-6.	-6.
236.0	-6.	-7.	-7.	-8.	-8.	-9.	-9.	-9.	-10.	-10.	-11.	-11.	-12.
237.0	-12.	-12.	-13.	-13.	-13.	-14.	-14.	-15.	-15.	-15.	-16.	-16.	-17.
238.0	-17.	-17.	-17.	-18.	-18.	-18.	-19.	-19.	-20.	-20.	-20.	-21.	-21.
239.0	-21.	-21.	-22.	-22.	-22.	-23.	-23.	-23.	-24.	-24.	-24.	-25.	-25.

CALIBRATION HORIZONTAL PLATE
 T1 - THEODOLITE NO 13063
 JAN 31, 1984
 I & E BRANCH, CORBIN VIRGINIA

MIN -	(20	05	10	15	20	25	30	35	40	45	50	55	60)
DES	"CORRECTION IN SECONDS OF ARC"												
240.0	-25.	-25.	-26.	-26.	-26.	-26.	-27.	-27.	-27.	-27.	-28.	-28.	-28.
241.0	-28.	-28.	-29.	-29.	-29.	-29.	-30.	-30.	-30.	-31.	-31.	-31.	-31.
242.0	-31.	-32.	-32.	-32.	-33.	-33.	-33.	-33.	-34.	-34.	-34.	-35.	-35.
243.0	-35.	-35.	-36.	-36.	-36.	-36.	-37.	-37.	-37.	-38.	-38.	-38.	-39.
244.0	-39.	-39.	-39.	-40.	-40.	-40.	-41.	-41.	-41.	-42.	-42.	-42.	-42.
245.0	-42.	-43.	-43.	-43.	-44.	-44.	-44.	-45.	-45.	-45.	-46.	-46.	-46.
246.0	-46.	-47.	-47.	-47.	-48.	-48.	-48.	-49.	-49.	-50.	-50.	-50.	-51.
247.0	-51.	-51.	-51.	-52.	-52.	-52.	-53.	-53.	-54.	-54.	-54.	-55.	-55.
248.0	-55.	-56.	-56.	-56.	-57.	-57.	-58.	-58.	-58.	-59.	-59.	-60.	-60.
249.0	-60.	-60.	-61.	-61.	-62.	-62.	-62.	-63.	-63.	-64.	-64.	-65.	-65.
250.0	-65.	-65.	-66.	-66.	-67.	-67.	-68.	-68.	-69.	-69.	-70.	-70.	-71.
251.0	-71.	-71.	-72.	-72.	-73.	-73.	-73.	-74.	-74.	-75.	-75.	-76.	-76.
252.0	-76.	-77.	-77.	-78.	-78.	-79.	-79.	-79.	-80.	-80.	-81.	-81.	-82.
253.0	-82.	-82.	-83.	-83.	-83.	-84.	-84.	-85.	-85.	-86.	-86.	-87.	-87.
254.0	-87.	-88.	-88.	-88.	-89.	-89.	-90.	-90.	-91.	-91.	-92.	-92.	-92.
255.0	-92.	-93.	-93.	-94.	-94.	-95.	-95.	-96.	-96.	-97.	-97.	-97.	-98.
256.0	-98.	-98.	-99.	-99.	-100.	-100.	-101.	-101.	-102.	-102.	-103.	-103.	-103.
257.0	-103.	-104.	-104.	-105.	-105.	-106.	-106.	-107.	-107.	-108.	-108.	-109.	-109.
258.0	-109.	-110.	-110.	-111.	-111.	-112.	-112.	-112.	-113.	-113.	-114.	-114.	-115.
259.0	-115.	-115.	-116.	-116.	-117.	-117.	-118.	-118.	-119.	-119.	-120.	-120.	-121.

CALIBRATION HORIZONTAL PLATE
 T1 - THEODOLITE NO 13063
 JAN 31, 1984
 I & E BRANCH, CORBIN VIRGINIA

MIN -	00	05	10	15	20	25	30	35	40	45	50	55	60
DEG	"CORRECTION IN SECONDS OF ARC"												
250.0	-121.	-121.	-122.	-122.	-123.	-123.	-123.	-124.	-124.	-125.	-125.	-126.	-126.
261.0	-126.	-127.	-127.	-128.	-128.	-129.	-129.	-130.	-130.	-131.	-131.	-132.	-132.
262.0	-132.	-133.	-133.	-134.	-135.	-135.	-136.	-136.	-137.	-138.	-138.	-139.	-139.
263.0	-139.	-140.	-141.	-141.	-142.	-143.	-143.	-144.	-145.	-145.	-146.	-147.	-147.
264.0	-147.	-148.	-149.	-150.	-150.	-151.	-152.	-152.	-153.	-154.	-155.	-155.	-156.
265.0	-156.	-157.	-158.	-159.	-159.	-160.	-161.	-162.	-163.	-164.	-165.	-165.	-166.
266.0	-166.	-167.	-168.	-169.	-170.	-170.	-171.	-172.	-173.	-174.	-174.	-175.	-176.
267.0	-176.	-177.	-178.	-178.	-179.	-180.	-181.	-181.	-182.	-183.	-184.	-185.	-185.
268.0	-185.	-186.	-187.	-188.	-188.	-189.	-190.	-190.	-191.	-192.	-193.	-193.	-194.
269.0	-194.	-195.	-196.	-196.	-197.	-198.	-198.	-199.	-200.	-200.	-201.	-202.	-203.
270.0	-202.	-203.	-204.	-205.	-206.	-206.	-207.	-208.	-208.	-209.	-210.	-211.	-211.
271.0	-211.	-212.	-213.	-213.	-214.	-215.	-215.	-216.	-217.	-217.	-218.	-219.	-219.
272.0	-219.	-220.	-221.	-221.	-222.	-222.	-223.	-224.	-224.	-225.	-225.	-226.	-227.
273.0	-227.	-227.	-228.	-228.	-229.	-229.	-230.	-230.	-231.	-232.	-232.	-233.	-233.
274.0	-233.	-234.	-234.	-235.	-235.	-236.	-236.	-237.	-237.	-238.	-238.	-239.	-240.
275.0	-239.	-240.	-240.	-240.	-241.	-241.	-241.	-242.	-242.	-243.	-243.	-243.	-244.
276.0	-244.	-244.	-245.	-245.	-245.	-246.	-246.	-247.	-247.	-248.	-248.	-249.	-249.
277.0	-249.	-250.	-250.	-251.	-251.	-252.	-252.	-253.	-253.	-254.	-254.	-255.	-256.
278.0	-256.	-256.	-257.	-257.	-258.	-258.	-259.	-260.	-260.	-261.	-262.	-262.	-263.
279.0	-263.	-264.	-264.	-265.	-266.	-266.	-267.	-268.	-268.	-269.	-270.	-270.	-271.

CALIBRATION HORIZONTAL PLATE
 T1 - THEODOLITE NO 13063
 JAN 31, 1984
 I & E BRANCH, CORBIN VIRGINIA

KIN -	00	05	10	15	20	25	30	35	40	45	50	55	60
DEG	"CORRECTION IN SECONDS OF ARC"												
280.0	-271.	-272.	-273.	-274.	-275.	-275.	-276.	-277.	-278.	-279.	-280.	-281.	-281.
281.0	-281.	-282.	-283.	-284.	-285.	-286.	-286.	-287.	-288.	-289.	-290.	-290.	-291.
282.0	-291.	-292.	-293.	-293.	-294.	-295.	-296.	-297.	-297.	-298.	-299.	-300.	-300.
283.0	-300.	-301.	-302.	-303.	-303.	-304.	-305.	-305.	-306.	-307.	-308.	-308.	-309.
284.0	-309.	-310.	-310.	-311.	-312.	-313.	-313.	-314.	-315.	-315.	-316.	-317.	-318.
285.0	-317.	-318.	-318.	-319.	-319.	-320.	-320.	-321.	-321.	-322.	-322.	-323.	-323.
286.0	-323.	-324.	-325.	-325.	-326.	-326.	-327.	-328.	-328.	-329.	-330.	-330.	-331.
287.0	-331.	-332.	-332.	-333.	-334.	-334.	-335.	-336.	-337.	-337.	-338.	-339.	-340.
288.0	-340.	-340.	-341.	-342.	-343.	-344.	-344.	-345.	-346.	-347.	-348.	-349.	-349.
289.0	-349.	-350.	-351.	-352.	-353.	-354.	-355.	-356.	-356.	-357.	-358.	-359.	-360.
290.0	-360.	-361.	-363.	-364.	-365.	-366.	-367.	-369.	-370.	-371.	-372.	-373.	-374.
291.0	-374.	-375.	-376.	-378.	-379.	-380.	-381.	-382.	-383.	-384.	-385.	-386.	-387.
292.0	-387.	-388.	-389.	-389.	-390.	-391.	-392.	-393.	-394.	-395.	-396.	-397.	-397.
293.0	-397.	-398.	-399.	-400.	-401.	-401.	-402.	-403.	-404.	-404.	-405.	-406.	-407.
294.0	-407.	-407.	-408.	-409.	-410.	-410.	-411.	-412.	-412.	-413.	-414.	-414.	-415.
295.0	-415.	-415.	-416.	-416.	-416.	-417.	-417.	-418.	-418.	-418.	-419.	-419.	-420.
296.0	-420.	-420.	-421.	-421.	-421.	-422.	-422.	-423.	-423.	-424.	-425.	-425.	-426.
297.0	-426.	-426.	-427.	-427.	-428.	-428.	-429.	-430.	-430.	-431.	-432.	-432.	-433.
298.0	-433.	-433.	-434.	-435.	-435.	-436.	-437.	-437.	-438.	-439.	-440.	-440.	-441.
299.0	-441.	-442.	-442.	-443.	-444.	-445.	-445.	-446.	-447.	-448.	-448.	-449.	-450.

CALIBRATION HORIZONTAL PLATE
 T1 - THEODOLITE NO 13063
 JAN 31, 1984
 I & E BRANCH, CORBIN VIRGINIA

MIN -	00	05	10	15	20	25	30	35	40	45	50	55	60
DEG	"CORRECTION IN SECONDS OF ARC"												
300.0	-450.	-451.	-452.	-453.	-454.	-455.	-456.	-457.	-458.	-459.	-460.	-461.	-462.
301.0	-462.	-463.	-464.	-465.	-466.	-467.	-467.	-468.	-469.	-470.	-471.	-472.	-473.
302.0	-473.	-474.	-474.	-475.	-476.	-477.	-478.	-479.	-479.	-480.	-481.	-482.	-483.
303.0	-483.	-483.	-484.	-485.	-486.	-486.	-487.	-488.	-489.	-489.	-490.	-491.	-492.
304.0	-492.	-492.	-493.	-494.	-494.	-495.	-496.	-497.	-497.	-498.	-499.	-499.	-500.
305.0	-500.	-500.	-501.	-501.	-502.	-502.	-502.	-503.	-503.	-504.	-504.	-505.	-505.
306.0	-505.	-506.	-506.	-507.	-507.	-508.	-509.	-509.	-510.	-510.	-511.	-512.	-512.
307.0	-512.	-513.	-514.	-514.	-515.	-516.	-516.	-517.	-518.	-518.	-519.	-520.	-521.
308.0	-521.	-521.	-522.	-523.	-524.	-524.	-525.	-526.	-527.	-528.	-528.	-529.	-530.
309.0	-530.	-531.	-532.	-533.	-533.	-534.	-535.	-536.	-537.	-538.	-539.	-540.	-541.
310.0	-540.	-542.	-543.	-544.	-545.	-546.	-548.	-549.	-550.	-551.	-552.	-553.	-554.
311.0	-554.	-555.	-556.	-558.	-559.	-560.	-561.	-562.	-563.	-564.	-565.	-566.	-567.
312.0	-567.	-568.	-568.	-569.	-570.	-571.	-572.	-573.	-574.	-575.	-576.	-577.	-577.
313.0	-577.	-578.	-579.	-580.	-581.	-582.	-582.	-583.	-584.	-585.	-586.	-586.	-587.
314.0	-587.	-588.	-589.	-589.	-590.	-591.	-592.	-592.	-593.	-594.	-595.	-595.	-596.
315.0	-596.	-597.	-597.	-598.	-598.	-599.	-599.	-600.	-600.	-601.	-602.	-602.	-603.
316.0	-603.	-603.	-604.	-604.	-605.	-606.	-606.	-607.	-607.	-608.	-609.	-609.	-610.
317.0	-610.	-610.	-611.	-612.	-612.	-613.	-613.	-614.	-615.	-615.	-616.	-616.	-617.
318.0	-617.	-618.	-618.	-619.	-620.	-620.	-621.	-621.	-622.	-623.	-623.	-624.	-625.
319.0	-625.	-625.	-626.	-627.	-627.	-628.	-629.	-629.	-630.	-631.	-631.	-632.	-633.

CALIBRATION HORIZONTAL PLATE

~~T1 THEODOLITE NO 13053~~

JAN 31, 1984

I & E BRANCH, CORBIN VIRGINIA

KIK -	(00	05	10	15	20	25	30	35	40	45	50	55	60)
DEG	"CORRECTION IN SECONDS OF ARC"												
320.0	-632.	-633.	-634.	-634.	-635.	-636.	-636.	-637.	-638.	-638.	-639.	-640.	-640.
321.0	-640.	-641.	-642.	-642.	-643.	-644.	-644.	-645.	-646.	-646.	-647.	-648.	-649.
322.0	-649.	-649.	-650.	-651.	-651.	-652.	-653.	-654.	-654.	-655.	-655.	-656.	-657.
323.0	-657.	-658.	-659.	-659.	-660.	-661.	-662.	-662.	-663.	-664.	-664.	-665.	-666.
324.0	-666.	-667.	-667.	-668.	-669.	-670.	-670.	-671.	-672.	-673.	-673.	-674.	-675.
325.0	-675.	-676.	-677.	-677.	-678.	-679.	-680.	-681.	-682.	-682.	-683.	-684.	-685.
326.0	-685.	-685.	-686.	-687.	-688.	-689.	-689.	-690.	-691.	-692.	-693.	-693.	-694.
327.0	-694.	-695.	-696.	-696.	-697.	-698.	-699.	-700.	-700.	-701.	-702.	-703.	-703.
328.0	-703.	-704.	-705.	-705.	-706.	-707.	-708.	-709.	-709.	-710.	-711.	-712.	-712.
329.0	-712.	-713.	-714.	-714.	-715.	-716.	-717.	-717.	-718.	-719.	-720.	-720.	-721.
330.0	-721.	-722.	-722.	-723.	-724.	-724.	-725.	-726.	-727.	-727.	-728.	-729.	-729.
331.0	-729.	-730.	-731.	-731.	-732.	-733.	-734.	-734.	-735.	-736.	-736.	-737.	-738.
332.0	-738.	-738.	-739.	-740.	-740.	-741.	-742.	-743.	-743.	-744.	-745.	-745.	-746.
333.0	-746.	-747.	-747.	-748.	-749.	-749.	-750.	-751.	-752.	-752.	-753.	-754.	-754.
334.0	-754.	-755.	-756.	-756.	-757.	-758.	-758.	-759.	-760.	-760.	-761.	-762.	-763.
335.0	-762.	-763.	-764.	-765.	-765.	-766.	-767.	-767.	-768.	-769.	-769.	-770.	-771.
336.0	-771.	-771.	-772.	-773.	-773.	-774.	-775.	-775.	-776.	-777.	-777.	-778.	-779.
337.0	-779.	-779.	-780.	-781.	-781.	-782.	-783.	-783.	-784.	-785.	-785.	-786.	-787.
338.0	-787.	-787.	-788.	-789.	-789.	-790.	-791.	-791.	-792.	-793.	-793.	-794.	-795.
339.0	-795.	-795.	-796.	-797.	-797.	-798.	-799.	-799.	-800.	-801.	-801.	-802.	-803.

CALIBRATION HORIZONTAL PLATE
 T1 - THEODOLITE NO 13063
 JAN 31, 1984
 I & E BRANCH, CORBIN VIRGINIA

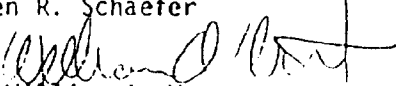
MIN -	00	05	10	15	20	25	30	35	40	45	50	55	60
DEG	"CORRECTION IN SECONDS OF ARC"												
340.0	-802.	-803.	-804.	-805.	-805.	-806.	-807.	-807.	-808.	-809.	-809.	-810.	-811.
341.0	-811.	-811.	-812.	-813.	-813.	-814.	-815.	-815.	-816.	-817.	-817.	-818.	-819.
342.0	-819.	-819.	-820.	-820.	-821.	-822.	-822.	-823.	-824.	-824.	-825.	-825.	-826.
343.0	-826.	-827.	-827.	-828.	-828.	-829.	-829.	-830.	-831.	-831.	-832.	-832.	-833.
344.0	-833.	-833.	-834.	-835.	-835.	-836.	-836.	-837.	-837.	-838.	-838.	-839.	-840.
345.0	-839.	-840.	-840.	-841.	-841.	-842.	-842.	-843.	-843.	-844.	-844.	-845.	-845.
346.0	-845.	-846.	-846.	-847.	-847.	-848.	-848.	-849.	-849.	-850.	-850.	-851.	-851.
347.0	-851.	-852.	-852.	-853.	-853.	-854.	-854.	-855.	-855.	-856.	-856.	-857.	-857.
348.0	-857.	-858.	-858.	-859.	-859.	-860.	-860.	-861.	-861.	-862.	-862.	-863.	-863.
349.0	-863.	-864.	-864.	-865.	-865.	-866.	-866.	-867.	-867.	-868.	-868.	-869.	-870.
350.0	-869.	-870.	-870.	-871.	-871.	-872.	-872.	-873.	-873.	-874.	-874.	-875.	-875.
351.0	-875.	-876.	-876.	-877.	-877.	-878.	-878.	-879.	-879.	-880.	-880.	-881.	-881.
352.0	-881.	-882.	-882.	-883.	-883.	-884.	-884.	-885.	-885.	-886.	-886.	-887.	-887.
353.0	-887.	-888.	-889.	-889.	-890.	-890.	-891.	-891.	-892.	-892.	-893.	-893.	-894.
354.0	-894.	-894.	-895.	-895.	-896.	-896.	-897.	-897.	-898.	-898.	-899.	-899.	-900.
355.0	-900.	-901.	-901.	-902.	-902.	-903.	-903.	-904.	-904.	-905.	-905.	-906.	-907.
356.0	-907.	-907.	-908.	-908.	-909.	-909.	-910.	-910.	-911.	-911.	-912.	-912.	-913.
357.0	-913.	-913.	-914.	-914.	-915.	-915.	-916.	-916.	-917.	-917.	-918.	-918.	-919.
358.0	-919.	-919.	-920.	-920.	-921.	-921.	-922.	-922.	-923.	-923.	-924.	-924.	-925.
359.0	-925.	-925.	-926.	-926.	-926.	-927.	-927.	-928.	-928.	-929.	-929.	-930.	-930.

JUL 27 1982

Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102

July 27, 1982

TO: C35 - Glen R. Schaefer

FROM:  CPM3x2 - William A. Wert

SUBJECT: Apparent Shoreline Discrepancies on H-9977, Rowan Bay, Alaska

As discussed during our telecon on July 27, attached is a copy of a section of H-9977 noting some of the shoreline discrepancies between the contemporary hydrographic survey findings and the charted shoreline from NOAA Chart 17370.

The source of the charted shoreline originates with H-2334, 1:20,000 scale, 1897. It appears that an incorrect datum shift may have occurred during chart compilation, as the contemporary survey indicates a displacement of the charted shoreline in the approximate direction of 080° from north and a distance of 40 to 50 meters. Shoreline details from the Port Alexander (C-1) quadrangle, Alaska, 1:63,360 scale topographic map will be evaluated which may confirm the incorrect datum shift.

H-9977 is currently scheduled for completion during November, 1982 and, unless otherwise directed by C35, the smooth sheet will be submitted without shoreline.

Attachment

bc: CPM32



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md 20852

OCT 25 1982

C35x1:DEW

TO: CPM3x2 - William A. Wert
FROM: C35 - Glen R. Schaefer *Glen R. Schaefer*
SUBJECT: Apparent Shoreline Discrepancies on Survey H-9977, Rowan Bay, Alaska

With reference to your memorandum of July 27, 1982, we have carefully examined the surveys of the area in question and have come to the following conclusions:

1. The original compilation of chart 17370 was done without the benefit of a projection, as was 1:20,000-scale topographic survey T-2303 (1897). Both the charted shoreline and the shoreline on 1:20,000-scale hydrographic survey H-2334 (1897) originate with this topographic survey.
2. Topographic survey T-2298 (1897), at a scale of 1:80,000, is a compilation of data from several surveys, including survey T-2303, and contains a projection and several triangulation stations from which the North American Datum of 1927 (NAD 27) was derived and plotted in June 1933.
3. Hydrographic survey H-2334 contains penciled lines which indicate the approximate location of NAD 27 determined from triangulation stations ELLIS 1897 and SULLIVAN 1897. This approximate datum location compares very well with NAD 27 shown on survey T-2298. However, when the NAD 27 polyconic projection was added to the chart in 1953, it was not placed to coincide with the penciled NAD 27 lines on survey H-2334.
4. The projection lines on chart 17370 should be shifted approximately 24 meters to the east, as shown on the attached chartlet, in order to agree with the information shown on the prior surveys.
5. NAD 27 and shoreline information which NOS has available for charting in this area is very sketchy and weak. The chart should be reconstructed at some future date with new control and shoreline to accompany the contemporary hydrography.

The magnitude of the above-determined shift does not agree with your preliminary conclusions. However, utilizing the 24-meter shift shown on the attached chartlet should properly locate the charted shoreline features so that they may be transferred to survey H-9977 in brown ink for orientation purposes. If this action does not eliminate gross discrepancies between the shoreline and the new hydrography, survey H-9977 should be transmitted to headquarters without shoreline.

Attachment

cc:
C35





UNITED STATES
National Oceanic and Atmospheric Administration
NATIONAL OCEANOGRAPHIC AND CHARTING ADMINISTRATION
Rockville, Maryland

AMERCE
ISTRATION

FEB 16 1984

X1
10P2
10P21

TO: N/MO - Robert C. Munson

FROM: N/CG - John D. Bossler

John D. Bossler

SUBJECT: Reduction of Marine Center Hydrographic Survey Processing Backlog

Marine Center and Nautical Charting Division representatives met on January 30 and 31, 1984, to determine actions to be taken to reduce the Atlantic Marine Center (AMC) processing backlog specifically and reduce processing time in general. The following actions were agreed to and approved by the Chief, Nautical Charting Division:

1. AMC will forward all wire-drag surveys not in final stages of processing to Hydrographic Surveys Branch (HSB) for abstracting of information. Surveys in final stages will be completed by AMC. Surveys where obstructions were not found will not be processed immediately, unless the information is determined critical by HSB (these surveys will be processed completely at a later date).

2. Surveys for the Navy will be processed per the Memorandum of Agreement; i.e., replotting of the field sheets and adding smooth tide data. It is anticipated that approximately 60 to 80 hours will be spent on these surveys.

3. Digitizing of surveys after processing at the Marine Centers will be accomplished by Photogrammetry personnel. This procedure usually requires 24 hours per survey sheet. Personnel at both Marine Centers will be identified by the Marine Center Directors to accomplish this starting immediately. *Have Reservations About This - MCB/CGY UNDESIRABLE BUT EXCESSIVE PERSUBMISSIONS NOT*

4. The requirement for transferring T-sheet (shoreline manuscript) data to the smooth sheet and field sheet will be relaxed. Anything that is on the T-sheet may be transferred to the field sheet by the hydrographer to help in planning or data acquisition. Copious notes on discrepancies must be made by the hydrographer to clearly indicate what was found and method used. Deletions are particularly important. The hydrographer must explain recommended deletions so that no question can come from his work, and it is apparent to the verifier as to what was done. *LT ALVIN WALKER ON MEMORANDUM FOR THIS*

4b. Shoreline and Geographic Names data on T-sheets shall not be duplicated on the smooth sheet. Freehand annotations on the smooth sheet are encouraged. Any further cartographic requirements that could be eliminated should be brought to the attention of the Program Manager (Chief, Nautical Charting Division) for action.



5. The preprocessing effort at AMC will be assigned to one individual.

6. A campaign to increase quality of data acquisition was initiated at both Marine Centers in command seminars and workshops. Every effort should be made to impress upon ships and field parties the importance of complete, orderly, documented data to the efficient processing of that data.

7. Loran-C data will be handled such that it does not impact the normal processing flow of hydrographic data. The stripping off and merging process should be at any point that is most convenient for the processing cycle.

8. To enable AMC to significantly reduce their inventory, a combination of reduced input of surveys and increased output is necessary in addition to the above seven steps.

Assignment of the NOAA Ship MT. MITCHELL to other projects for 3 years will reduce the AMC input to 25 to 30 surveys a year. To increase the AMC output of surveys to 50 to 60 per year, six personnel will be added to processing, bringing the total to 15. Also, procedures to streamline the flow of data will be initiated.

It was determined that the first seven steps should reduce the inventory at the Pacific Marine Center to a normal work in progress level.

At both Marine Centers, a normal work in progress level was determined to be approximately half the annual processing output. This number is necessary to keep every process in the system active.

Resources, both staffing and monetary, must be identified to keep production at the predicted levels. Close coordination between our staffs will be essential over the next several months. A followup meeting with the Marine Centers is planned for April 23 to see if we are on track with our actions and plans.

CC:
N/MOA
N/MOP

CLEARANCE
N/MO: R. C. Munson

SIGNATURE AND DATE:

R. C. Munson 2-17-64

*NEW
DEFINITION
**

*HISTORIC GOAL WORKING INVENTORY = 40 SURVEYS
1960 25
H. G. ...*

25 ... = 17

ATTACHMENT TO DESCRIPTIVE REPORT FOR H-10085

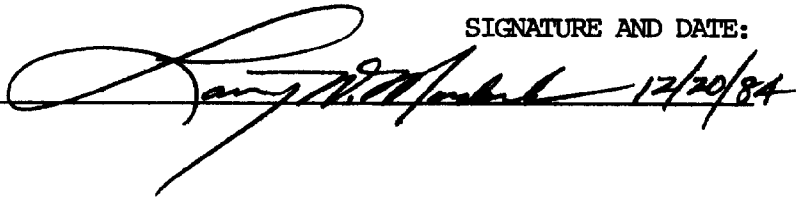
I have reviewed the smooth sheet, accompanying data, and reports of this hydrographic survey. Except as noted in the Evaluation Report, the hydrographic survey meets or exceeds Charting and Geodetic Services (G&GS) standards, complies with instructions, and is accurately and completely represented by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


Chief, Nautical Chart Branch (Date)

CLEARANCE:

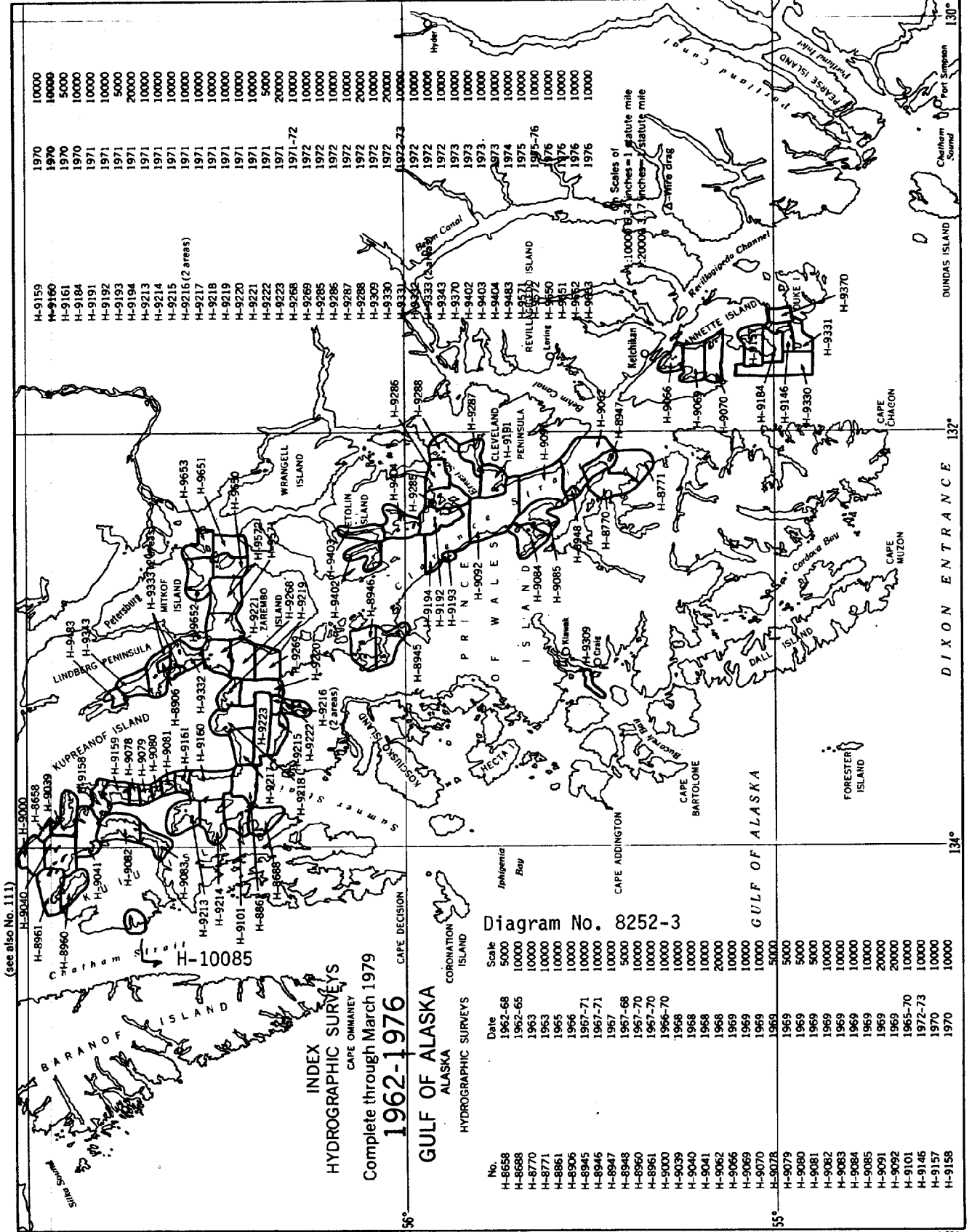
N/MOP2:LWMordock

SIGNATURE AND DATE:


12/20/84

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.


12-21-84
Director, Pacific Marine Center (Date)



(see also No. 111)

INDEX
HYDROGRAPHIC SURVEYS
CAPE OMAHEE

Complete through March 1979
1962-1976

GULF OF ALASKA
ALASKA
HYDROGRAPHIC SURVEYS

Diagram No. 8252-3

No.	Date	Scale
H-8658	1962-68	5000
H-8688	1962-65	10000
H-8770	1963	10000
H-8771	1963	10000
H-8861	1965	10000
H-8861	1965	10000
H-8905	1966	10000
H-8945	1967-71	10000
H-8946	1967-71	10000
H-8947	1967	10000
H-8948	1967-68	5000
H-8960	1967-70	10000
H-8961	1967-70	10000
H-9000	1966-70	10000
H-9000	1966-70	10000
H-9039	1968	10000
H-9040	1968	10000
H-9041	1968	10000
H-9062	1968	20000
H-9065	1969	10000
H-9069	1969	10000
H-9070	1969	10000
H-9078	1969	5000
H-9079	1969	5000
H-9080	1969	5000
H-9081	1969	5000
H-9082	1969	10000
H-9083	1969	10000
H-9084	1969	10000
H-9085	1969	10000
H-9091	1969	20000
H-9092	1969	20000
H-9101	1965-70	10000
H-9146	1972-73	10000
H-9157	1970	10000
H-9158	1970	10000

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10085

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
17370	10/29/90	Dan Black	Full Part Before After Verification Review Inspection Signed Via Drawing No. 11
17320	10/29/90	Dan Black	Full Part Before After Verification Review Inspection Signed Via Drawing No. 24 THRU 17370.
			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.
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