

9977

Diagram No. 8201-4 & 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. DA-10-4-81
Office No..... H-9977.....

LOCALITY

State Alaska
General Locality Chatham Strait
Locality Rowan Bay

1981

CHIEF OF PARTY
CDR N.C. Austin

LIBRARY & ARCHIVES

DATE November 2, 1983

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

AREA 6
Ref Bp120553
CHT: 17370 App'd
117320

2266

HYDROGRAPHIC TITLE SHEET

H-9977

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.

DA-10-4-81

State Alaska

General locality Chatham Strait

Locality Rowan Bay

Scale 1:10,000

Date of survey Oct. 7 - Nov. 2, 1981

Instructions dated June 15, 1981; Change No. 1 Project No. OPR-0353-DA-81
dtd. July 1, 1981

Vessel NOAA Ship DAVIDSON and Launches 3131, 3132

Chief of party CDR N. C. Austin

Surveyed by CDR N. C. Austin, LCDR D. R. Seidel, LT D. Dreves, LT H. Ramm,
LTJG S. Konrad, LTJG D. Actor, LTJG N. Bogue & Ship's Personnel

Soundings taken by echo sounder, hand lead, ~~pot~~ Ross Finline, Model 5000

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

Verification by

~~Reviewed~~ by Charles R. Davies

Automated plot by PMC Xynetics Plotter

Evaluation

~~Verification~~ by Bruce A. Olmstead

Soundings in fathoms ~~XXX~~ at ~~MLLW~~ MLLW

REMARKS: Survey Time Zone: GMT

Survey is complete.

Revisions and marginal notes in black were added during Evaluation.

STANDARDS CK'D 11-3-83

C. L. O'J

Awois ✓ Rnd 11/7/83

134° 30'

134° 20'

134° 10'

134° 00'

56° 50'

PROGRESS SKETCH OPR-0353-DA-81

ROWAN BAY, ALASKA

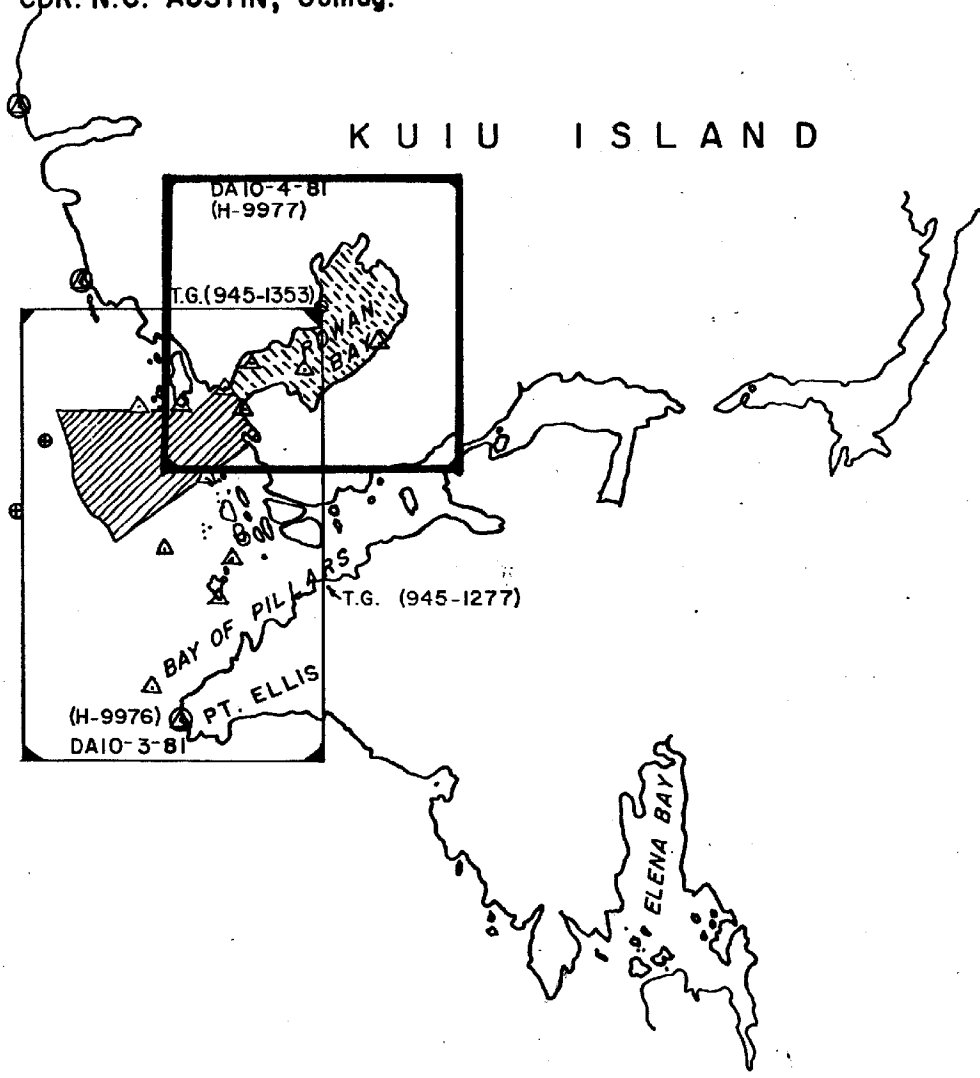
CHART: 17320 (1:217,828)

NOAA SHIP DAVIDSON (S-331)

CDR. N.C. AUSTIN, Comdg.

CHATHAM STRAIT

KUIU ISLAND



56° 40'

56° 30'

SEPT.	OCT.	NOV.	STATISTICS
0	267.7	4	L. N. M. SOUNDING LINE
0	8.4	0	SQ. N. M. SOUNDING
10	0	0	TRIANGULATION STA. RECOVERED
9	3	0	TRIANGULATION STA. ESTABLISHED
2	0	0	TIDE GAGE
0	34	10	BOTTOM SAMPLES
0	1	1	NANSEN CAST / X. S. T. D.
5	0	0	BENCH MARKS RECOVERED / ESTAB.
0	5	5	DIVE INVESTIGATIONS

DESCRIPTIVE REPORT
ROWAN BAY, ALASKA
H-9977 OPR-0353-DA-81

A. PROJECT

The navigable area survey of Rowan Bay was accomplished in accordance with Hydrographic Project Instructions OPR-0353-DA-81, dated 15 June, 1981, and amended by change No. 1, dated 1 July, 1981. Registry number H-9977 was received 19 October, 1981. ✓

B. AREA SURVEYED

The area surveyed is on the eastern side of Chatham Strait, in Rowan Bay. It is bounded on the west by the narrowest part of the entrance to the bay, and on the north, south, and east by the shoreline. The inshore limit of hydrography is the 2-fathom curve. Due to the ruggedness of the bottom terrain, the 0-fathom curve was often transited, helping to delineate the mean lower low water line. ✓

The eastern half of Rowan Bay is characterized by a soft, gradually sloping bottom with occasional rocks. The western half of the bay is generally deeper, rockier, and rises abruptly to the shoreline.

Hydrographic operations in Rowan Bay began 7 October, 1981 (J.D. 280), and were completed 2 November, 1981 (J.D. 306).

C. SOUNDING VESSELS

All soundings and detached positions were obtained by DAVIDSON launches as listed below:

<u>Vessel</u>	<u>EDP Number</u>	<u>J.D.'s</u>	<u>Position Numbers</u>
DA-1	3131	302 - 304	3380 - 3414
DA-2	3132	280 - 306	4001 - 5342
SKIFF	3041	306	5343 - 5345

 ✓

Vessel DA-1 was used exclusively for dive operations. Data recording and preliminary plotting was color coded by vessel: all work by DA-1 was done in red, and all work by DA-2 was done in blue. The skiff (3041) was used to collect three detached positions (Data is logged in a sounding volume)

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

Both survey launches used Ross Fineline fathometers, Model 5000, to obtain soundings. Serial numbers of the sounding equipment used by both launches are listed below. ✓

<u>Vessel</u>	<u>Recorder S/N</u>	<u>Transceiver S/N</u>	<u>Digitizer S/N</u>
DA-1	1048	1081	1081
DA-2	1080	1077	1048
Skiff (3041)	NA	NA	NA

The Ross fathometers were operated satisfactorily in the fathom mode in depths from 0 to 22 fathoms. Phase calibrations were made at 10 fathom intervals, from 0 to 150 fathoms, at the beginning of operations each day and after each fathometer paper change. The fathogram initial was maintained at zero during operations. Fathograms were scanned and the analog record compared to digitized depths. Missed depths, peaks, and deeps were entered into the hydrographic record via a separate corrector tape, or edited onto the master tape. ✓

Soundings on the final field sheet has been corrected for transducer draft and predicted tides. Bar checks were made daily, conditions permitting, and a TRA correction of +0.3 fathoms determined and used throughout the survey. ✓

Predicted tides were computed from published daily predictions for Sitka, Alaska, corrected to Rowan Bay, Alaska using preliminary zoning correctors provided in the project instructions. Predicted tides were applied at 0.1 fathom intervals. ✓

The DAVIDSON conducted two Nansen casts during the project to determine velocity correctors. The first was taken on 9 October, 1981 (JD 282) in the vicinity of 56°32.5'N, 134°38.5'W., and on 3 November 1981 (JD 307) in the vicinity of 56°38.3N., 134°23.5'W. Details are given in the corrections to Echo Soundings Report. Velocity corrections were not applied to soundings on the final field sheet. *Both Nansen casts were not in the survey area.* ✓

Corrections for settlement and squat were determined and submitted to PMC; however, settlement and squat corrections were not applied to soundings on the final field sheet. See the Corrections to Echo Soundings Report for details. ✓

Two bubbler type tide gages were installed to support hydrography. These were: Chatham Strait (station 1277) and Rowan Bay (station 1353). The Field Tide Note contains details of the installations, and the geographic positions of the gages.

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E. HYDROGRAPHIC SHEETS

Field sheets were prepared on the DAVIDSON's Hydroplot system: the PDP 8/e computer (S/N 10756) and Houston Instrument model DP-3 plotter (S/N 6166-2). Two sheets were prepared: a 1:10000 scale boat sheet, and a 1:5000 scale blow-up of the western half of the bay. The blow-up sheet boundaries are indicated on the 1:10000 final field sheet. ✓

Field records have been submitted to the Pacific Marine Center for verification.

F. CONTROL STATIONS

Five traingulation stations and one temporary station were established on NAD 27 to control hydrography. The triangulation stations were established from existing second order control and using second order techniques. The temporary station is third order. The stations, signal numbers and usage are given in the following:

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<u>Station</u>	<u>Signal Number</u>	<u>Use</u>
ROWAN, 1981	011	Range/Azimuth, R/R Miniranger
BAY, 1981	012	Range/Azimuth, R/R Miniranger
ELIZA, 1981 (Islet)	013	Range/Azimuth, R/R Miniranger ✓
MONARK, 1981	014	Range/Azimuth, R/R Miniranger
SEAL, 1981	015	R/R Miniranger
TATTOO, 1981 (Temp)	021	Range/Azimuth, R/R Miniranger

For further information, consult the appended Signal List, Electronic Control Report, and Horizontal Control Report.

G. HYDROGRAPHIC POSITION CONTROL

Sounding line position control was accomplished by range-azimuth or range-range techniques using Motorola Mini-ranger and Wild T-2 theodolites. The serial numbers of

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Miniranger equipment used in the launches are as follows: Pseudo
 ranges and azimuths were logged for positions 5343-5345 day 306. (Skiff 3041)

<u>Vessel</u>	<u>Console S/N</u>	<u>R/T S/N</u>	<u>Julian Days</u>
DA-1	710	721	302 - 304
DA-2	707	719	280 - 306

The Miniranger transponder codes, serial numbers, control type, and days of operation of shore stations are as follows:

<u>Station</u>	<u>Code</u>	<u>S/N</u>	<u>Control Type</u>	<u>Position No.</u>	<u>Julian Days</u>
MONARK, 1981	3	773	R/R	4001 - 4328	280-281
			R/AZ	4517 - 4600	282
	4	771	R/R	3381 - 3392	302
	2	772	R/R	3393 - 3414	303-4
ELIZA, 1981	2	772	R/R	4001 - 4328	280-281
			R/AZ	4329 - 4516	281
			R/AZ	4986 - 5026	292
			R/R	5040 - 5135	301-302
	5	911711	R/AZ	5136 - 5205	302
BAY, 1981	2	772	R/AZ	4601 - 4695	287
	1	723	R/R	3380 - 3392	302
ROWAN, 1981	4	771	R/AZ	4696 - 4770	288
	2	772	R/AZ	4771 - 4904	289
TATTOO, 1981	4	771	R/R	5040 - 5135	301-302
	5	911711	R/AZ	5206 - 5220	302
	2	772	R/R	3380 - 3392	302
	4	771	R/R	3393 - 3415	303-4
SEAL, 1981	6	911723	R/R	3395 - 3415	303-4

Range-Range station configurations were selected to provide unobstructed line of sight to the survey area, as well as minimum 30° range arc intersection angles. Range-Azimuth positions have 90° intersection angles in all cases.

Miniranger system checks were conducted twice daily, before and after hydrography. The check was accomplished via the baseline transit method, which compares the sum of the observed ranges to the computed inverse distance between the two observed stations. The difference between computed distances and summed observed ranges was always within 5 meters, after applying baseline correctors to be the observed range values. Three acceptable (<5m error) baseline transits were considered a satisfactory system check. ✓

On JD 302, the fixed point calibration method was used. The launch was brought within 2 m of station MONARK 1981 and three ranges were obtained from code 5 on station TATTOO 1981 (Temp). The recorded values were compared to the computed inverse distance between MONARK 1981 and TATTOO (Temp), to ensure proper operation of the system. ✓

Miniranger signal strengths during survey operations were good, and the minimum acceptable signal strengths were not violated. Minimum acceptable signal strengths were established for each code based on the proceeding baseline calibration. The cutoff point was established when the corrector at a given signal strength exceeded by more than 5 meters the mean corrector determined at greater signal strengths. Miniranger baseline correctors were determined from observations over known ranges on 4 October (JD 277), 27 October (JD 300), and 7 November, 1981 (JD 331). Baseline correctors applied to final field sheet data for work prior to JD 300 are the means of the correctors obtained on JD 277 and JD 300. Data collected after JD 300 was plotted using the correctors obtained on JD 300, since the final plots were completed before the JD 311 baseline calibration. Final correctors submitted to the Marine Center are the means of the baseline correctors bracketing the time of hydrographic operations. For details on Miniranger operation, baseline calibrations, and daily system check procedures consult the Electronic Control Report. ✓

The Andist corrector was not applied, as the displacement of the Miniranger antenna from the fathometer transducer is less than one meter. ✓

H. SHORELINE

Shoreline details on the final field sheet were obtained from a 1:10000 scale blow-up of chart 17370 (7th Edition, 16 July, 1977, scale 1:20000. Aerial photographs and a photo-compiled shoreline manuscript are not available. Discrepancies between the actual and charted shorelines were detected: many of the newly established (1981) horizontal control stations plotted in the water rather than on the beach; some inshore soundings plotted on the beach.

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The charted shoreline was obtained from surveys T-2303 and T-2298, both dated 1897. Shoreline for these surveys was determined by plane table methods on a local datum, which was subsequently transformed to the North American Datum 1927. It is presumed that errors in the transformation process and in the original survey contributed to the discrepancies observed. Consequently, it is recommended that a new shoreline be generated using photogrammetric techniques. See letter from C 35 dated October 25, 1982, for additional information concerning disposition of the charted shoreline. (Attached)

I. CROSSLINES

Crosslines comprise 10.7% of the total sounding line mileage. Comparisons were made between 136 crossline and mainscheme soundings with the following results: exact agreement was seen in 116 (85%) of the soundings, 19 (14%) agreed within 1 fathom, and 1 disagreed by 2 fathoms. Differences can be attributed to the erratic bottom topography, wherein small horizontal displacement of soundings may result in significant variations in depth.

J. JUNCTIONS

This survey junctions with contemporary survey H-9976 (DA 10-3-81) at the mouth of Rowan Bay. Comparisons between 15 soundings yielded the following results: nine (60%) agreed exactly, five (33%) agreed within one fathom, and one disagreed by two fathoms. Differences can be attributed to the erratic bottom topography in the junction area, wherein small horizontal displacement of soundings may result in significant variations in depth. No major discrepancies were seen.

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K. COMPARISON WITH PRIOR SURVEYS

The survey was compared with prior survey H-2334, 1:20000 scale, 1897. Agreement is generally good and a total of 76 specific comparisons were made. Exact agreement was

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seen in 49 soundings (64%). Twenty-one soundings (29%) agreed within one fathom, and five (6%) agreed within two fathoms. A series of discrepancies exist along the shoreline between latitudes 56° 39' 30"N. and 56° 40' 30"N. and between longitudes 134° 14' 00"W. and 134° 13' 00"W. Along this section of shoreline, the prior survey shows seven soundings ranging from 1/2 to 3-3/4 fathom inside the 0 fathom curve of the survey. This is almost certainly a results of the shoreline discrepancy referenced earlier. At 56° 39' 16"N., 134° 15' 41"W., a 16 fathom sounding from H-2334 lies in between an 11 and 12 fathom sounding on H-9977. The 16 fathom depth is believed to be in error, as no indication of depths this great was observed. ✓

In the western third of the sheet, specific comparisons are relatively meaningless due to the extreme bottom topography. General agreement is good, and no major depth differences were noted. Soundings from H-9977 should be charted in lieu of prior sounding data. ✓

L. COMPARISON WITH THE CHART

H-9977 was compared with a 1:10000 scale blow-up of chart 17370 (1:20000, 7th Edition, July, 1977. Agreement is generally good.

Because virtually all charted depths are from H-2334, comments concerning comparison of depth data made in section K, Comparison with Prior Surveys apply to the chart as well. Charted depths not found on H-2334 are discussed in Pre Survey Review, later in this section.

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Shoreline for H-9977 was transferred from the chart blow-up, and is derived from H-2334. For comments, see section H, Shoreline.

Nine shoal features were investigated by divers. Two of them are close to PSR item 4, and either could be the reported object. Another was identified as PSR item 5, and the remainder were unique features observed during routine operations.

Pre Survey Review Items

Six numbered (4,5,6,7,8,15) PSR items fall within the limits of H-9977. Discussion of these items follows. ✓

- * PSR Item 4 - Reported 3 fathoms, PA, at 56° 39' 31.5"N., 134° 15' 12.0"W. A 10 fathom sounding was observed at this location, with no indication of shoaling. However, two peaks were found nearby. A 3.9 fathom depth was

Concur

*

observed at $56^{\circ} 39' 22.5''\text{N.}$, $134^{\circ} 15' 14.1''\text{W.}$, and a 3.4 fathom depth was observed at $56^{\circ} 39' 30.8''\text{N.}$, $134^{\circ} 14' 55.1''\text{W.}$ Both of these features were verified by divers and should be charted. The PA should be deleted. *(Positions 3393 and 3396 confirmed the existence of submerged rocks. These are diver verified with lead line determinations)*

PSR Item 5 - Reported sunken rock, covered 2 fathoms, at $56^{\circ} 39' 34.0''\text{N.}$, $134^{\circ} 15' 05.0''\text{W.}$ The rock was found near by in 8 to 9 fathoms depth. Divers investigating the area identified a 2.0 fathom depth at $56^{\circ} 39' 39''\text{N.}$, $134^{\circ} 14' 52''\text{W.}$ The chart should show a submerged rock at this position, and the PA should be deleted.

Concur

PSR Item 6 - The Log Boom, is not at the charted location, but lies between $56^{\circ} 40' 07.5''\text{N.}$, $134^{\circ} 14' 15.0''\text{W.}$ and $56^{\circ} 40' 15.0''\text{N.}$, $134^{\circ} 14' 25.4''\text{W.}$ The boom consists of a series of logs chained together, and permanently anchored to the bottom at the ends. At times, logs are stored within the confines of the boom making it larger. Early in the project the boom was filled with logs, so a sounding line was run around the perimeter. Later the logs were removed from the boom, and soundings were obtained in the area. The boom should be charted in the same manner as presently charted, but between the positions reported in the H-9977 data.

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PSR Item 7 - Log Storage Area, PA, was observed in the charted location, but is smaller than the chart indicates. The final field sheet shows the proper size of the storage area. Future editions of the chart should be amended to properly show this area.

Concur

PSR Item 8 - Float, PA was observed in the charted location but the chart is somewhat misleading due to an error in the shoreline in this area. *(There were no detached positions taken on the inside corners of the floating dock and or dimensions shown on the sketch. Also no positions were taken to confirm the shoreline revision in this area.)*

The float is a small craft facility maintained by the Mud Bay Logging Company for the convenience of the Rowan Bay employees, and serves as a staging area for arriving and departing float planes which frequent the camp. It consists of an inclined rubble roadway built out from the natural shoreline, and faced with logs at the seaward end. The float is moored approximately 25 feet offshore from the end of the rubble ramp; an inclined wooden ramp permits access between the rubble ramp and the float. The ramp is fastened to the rubble ramp at the shoreward end, and rides on rollers at the float end. Refer to the sketch and photographs in the cahier, JD 302. The charted shoreline should be modified to indicate the rubble fill roadway which approaches the float, instead of indicating the long pier section leading to shore.

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PSR Item 15 - A Mooring Buoy, PA was observed north and west of the charted location, and near the earthen quays indicated on the final field sheet south of the log storage area, PSR Item 7. The buoy is actually two 10 foot long sections of log approximately 3 ft. in diameter permanently and independently anchored to the bottom. The buoys are maintained by the Mud Bay Logging Company. Positions 5017 and 5018 identify the locations at which the symbols should be placed on future editions of this chart. *The mooring buoy plotted on the Pre-Survey Review mark-up was never charted. This item was placed on the chart standard for update to the next edition.*

The two rocks transferred from the USGS quad maps were observed in the charted location and should be retained. In addition to the above, ~~two~~ ^{nine} features were investigated by divers to obtain least depths, and positions for them. The same search techniques were used in each case: Prior to deploying the dive team, the survey launch investigated the area thoroughly with the fathometer operating. When a location was determined for the least observed fathometer depth, a marker buoy was deployed at that position for diver reference. Once in the water, the divers searched the area around the marker buoy thoroughly and systematically using circle search techniques to identify the point of least depth, describe the feature, and to ensure that another danger nearby would not go undetected. When the least depth was identified, it was marked with an inflatable float on a taut line secured to the feature. The survey launch maneuvered alongside the second float, placing the Miniranger R/T unit as close to it as possible, generally within one meter. Range-range or range-azimuth data were then recorded for the position and check. The marker float was retrieved and the line measured to obtain the least depth. Predicted tide information was applied to the observed depth and baseline corrector values applied to the Miniranger data before plotting on the final field sheet. The features thus investigated were:

Concur

<u>Position</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Depth (f.m.)</u>	<u>Remarks</u>
3380	56°39'20.5"N	134°16'34.4"W	6.0	Flat-topped
3384	56°39'28.8"N	134°16'17.8"W 16'18.2"	4.6	Flat-topped broken rock shelf.
3386	56°39'28.2"N	134°16'17.0 ⁴ "W	4.5	Broken rock ridge, roughly 90x 120'.
3389	56°39'24.0"N	134°16'09.0 ⁴ "W	2.8	Rock pinnacle marked by kelp.
3393	56°39'22.2"N	134°15'14.5"W	3.9	Rock ridge
3396	56°39'30.5"N	134°14'53.0"W	3.4	Rock ridge
3401	56°39'39.6"N	134°14'53.3"W	1.8	Rock pinnacle

3391	56°39' ^{14.1} 29.0 "N	134°15'22. ³ 2 "W	4.6	Rocky
3414	56°39'29.0"N	134°16'47. ⁶ 8 "W	1. ⁴ 8	Flat-topped rock, 50' diameter

Main scheme hydrography in the vicinity of the diver verified least depth at position 3414 indicated a least depth of 1.2 fathoms, less than the diver verified depth. The discrepancy may be the result of errors in tide predictions, or deflection of the divers' marker float by current, although this was not noted at the time of the investigation. After application of smooth tides the shoaler depth should be charted.

Concur

Six features less than 5 fathoms deep, plus the log boom discussed above were reported in a Danger to Navigation message submitted to the U.S. Coast Guard, District 17 Headquarters, and to the Director, National Ocean Survey. A copy of the message is appended to this report.

✓

M. ADEQUACY OF SURVEY

This survey is adequate to supercede all prior sounding data in the area investigated. Existing shoreline data should be reviewed for agreement with H-9977 hydrographic data, and adjusted to conform.

Concur

N. AIDS TO NAVIGATION

There are no aids to navigation in this area.

✓

O. STATISTICS

	<u>DA-1</u>	<u>DA-2</u>	<u>Ship</u>
Total number of positions	35	1200 1342	
Nautical miles of sounding lines	0.3	89.3	
Square miles of hydrography		3.3	
Bottom samples		31 25	
Tide stations		1	
Velocity casts			2

(Six additional positions are a combination of Dives on least depths and determination of bottom characteristics)

P. MISCELLANEOUS

The shallow, gradual sloping, mud bottom in the north-eastern third of Rowan Bay appears to be the result of

sediment deposition from streams entering the head of the bay. The bottom in the remaining portion of the bay, and offshore (see H-9976), is extremely rugged. The variation in bottom characteristics suggests that either the rate of sedimentation has increased (possibly with the start of logging operations, around 1972) and sediments have not yet advanced close to the mouth of the bay, or that scour caused by large semi-diurnal tides is sufficient to minimize the effects of deposition in that part of the bay nearer the mouth, where the exchange of water is more energetic than at the head of the bay. In either case, an investigation of Rowan Bay in the late 1980's should help clarify the influence of sedimentation in the bay. If sedimentation is associated with the logging operation, and logging continues, the rate of deposition may be expected to increase, and warrant re-survey sooner than ordinarily expected.

Concur

Q. RECOMMENDATIONS

H-9977 is a navigable area survey whose inshore limit is the 2-fathom curve. Aerial photographs were not available to assist in the evaluation of features above mean lower low water. Spot checks and horizontal control extension suggest significant errors in the charted shoreline. It is therefore recommended that a modern shoreline mapping program be undertaken to eliminate inconsistencies.

✓

R. AUTOMATED DATA PROCESSING

The following programs were used in conjunction with the Hydroplot system for data collection, manipulation and presentation:

✓

<u>Program Number</u>	<u>Program Name</u>	<u>Version Date</u>
RK 112	Range-Range Real Time HYDROPLOT	3/19/81
RK 201	Grid, Signal and Lattice Plot	4/18/75
RK 211	Range-Range Non-Real Time Plot	2/02/81
RK 212	Visual Station Table Load	4/01/74
RK 216	Range-Azimuth Non-Real Time Plot	2/09/81
RK 300	Utility Computations	10/21/80
RK 330	Reformat and Data Check	5/04/76
RK 407	Geodetic Inverse/Direct Computation	9/25/78

✓

RK 409	Geodetic Utility Package	9/20/78
AM 500	Predicted Tide Generator	11/10/72
RK 530	Layer Corrections for Velocity	5/10/76
AM 602	Elinore (Line Oriented Editor)	5/20/75

Geodetic computations were made using the geodetic and triangulation programs written for the HO-9815A calculator.

S. REFERREL TO REPORTS

Horizontal Control Report, H-9977

Field Tide Note, H-9977

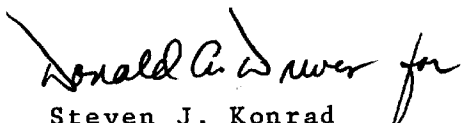
Electronic Control Report, H-9977

Corrections to Echo Soundings Report, H-9977

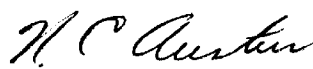
Coast Pilot Report

Dangers to Navigation Report

Respectfully submitted,


Steven J. Konrad
LTJG, NOAA

Approved and forwarded,


N. C. Austin, CDR, NOAA
Commanding Officer
NOAA Ship DAVIDSON

✓
FIELD TIDE NOTE
OPR- 0353-DA-81
ROWAN BAY, ALASKA

INTRODUCTION

Field tide reduction of soundings on H-9976 (DA-10-3-81) and H-9977 (DA-10-4-81) is based on predicted tides for Sitka, Alaska, corrected to Rowan Bay, Alaska, using the zoning corrections specified in the project instructions. Tidal heights were interpolated using the DAVIDSON's PDP 8/e computer system and program AM 500. All times of predicted and recorded tides are Greenwich Mean Time.

Two tide stations were occupied to provide data for the surveys. They are listed below.

<u>Station</u>	<u>Position</u>	<u>Period of Operation</u>	<u>S/N</u>
Chatham Strait (945-1277)	56/36.4 N 134/17.3 W	9/17/81 - 11/3/81	73A233
Rowan Bay (945-1353)	56/40.1 N 134° 15' 2 W	9/19/81 - 11/2/81	62A92

The Chatham Strait gage provided data for both surveys, while the Rowan Bay gage is for sheet H-9977 (DA-10-4-81) only.

CHATHAM STRAIT

The Chatham Strait tide station is located on the southeast side of a small island approximately 3 miles NNW of Point Ellis. The staff and orifice were at the south end of a narrow but deep channel between two islands. There were no impediments to tidal flow through the channel, and the gage continuously provided good data.

Based on 37 staff-to-gage comparisons, including three hours of observations at 12 minute intervals on 21 September 1981, a marigram reading of 11.55 feet corresponds to the staff zero. No orifice shift was detected or is suspected. The gage and staff were removed on 3 November 1981.

ROWAN BAY (945-1353)

The Rowan Bay tide station is located on the northern shore of Rowan Bay, near the wharf and log boom facilities of the Mud Bay Logging Company, Rowan Bay Logging Camp. The gage was installed on property belonging to the logging camp, after receiving permission to do so.

The gage continuously provided good data until 14 October 1981 (JD 287) when an extreme high tide covered the bottom four inches of the gage; the record was not lost and the gage not damaged. The following day, the gage was set on a wood platform, raising it 5 feet. At 2159Z, JD 288, the paper was observed to have jumped some sprockets. Moisture in the gage from the previous day probably contributed to this problem. On JD 289, the paper was changed, and no further problems were encountered with this gage.

The gage and staff were removed on 1 November 1981. No orifice shift was detected.

Based on 40 staff-to-gage comparisons, including three hours of observations at 12 minute intervals on 21 September 1981, a marigram reading of 5.03 feet corresponds to staff zero.

LEVELING

The Chatham Strait tide station was leveled to five newly established permanent bench marks at the time of installation and removal. No shift of the staff was observed.

The Rowan Bay tide station was leveled to three temporary bench marks at the time of installation and removal. A negligible shift of +0.002 m was observed between the two leveling runs.

REFERENCE STATION

The Sitka, Alaska tide station (945-1600) served as the reference station for this survey. The staff was leveled to three bench marks on 11 September 1981, prior to beginning of hydrography. The staff was again leveled on 3 November 1981 after the completion of hydrography. A negligible shift of +0.004 m was observed between the two leveling runs.

ZONING RECOMMENDATIONS

Zoning recommendations are as follows. The Chatham Strait tide station data should be used to reduce soundings on field sheet H-9976. The Rowan Bay tide station should be used to reduce soundings on field sheet H-9977.

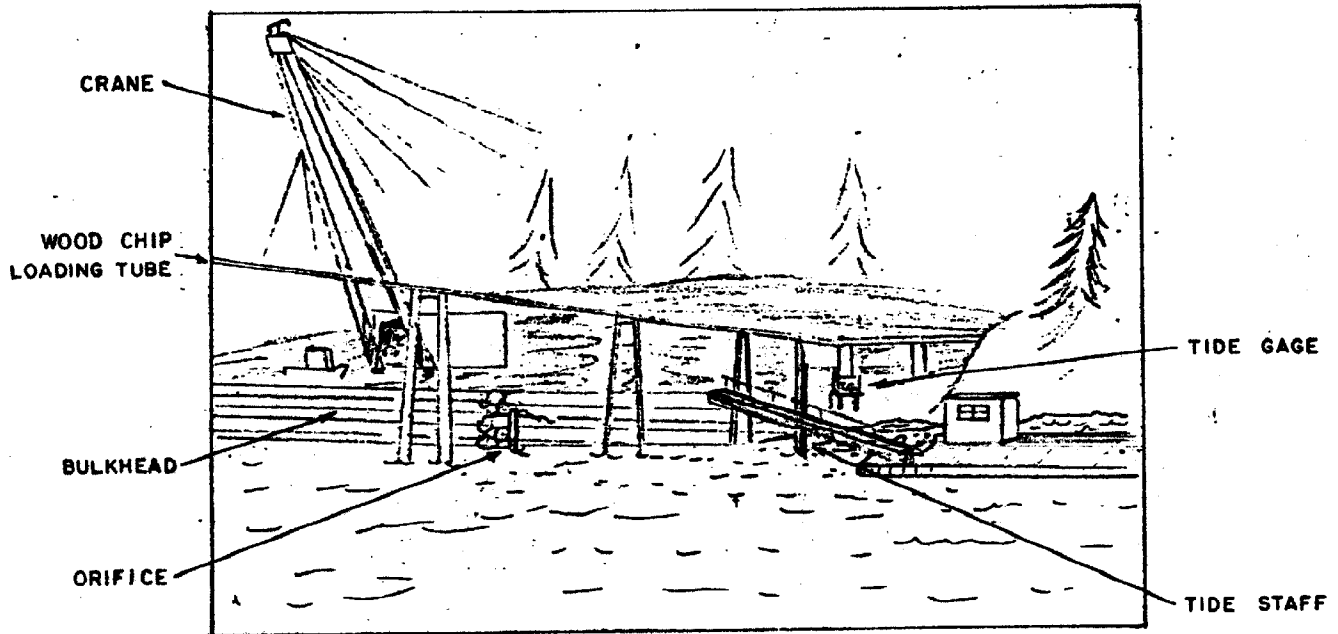
Respectfully Submitted

Steven J. Konrad
Steven J. Konrad LTJG, NOAA

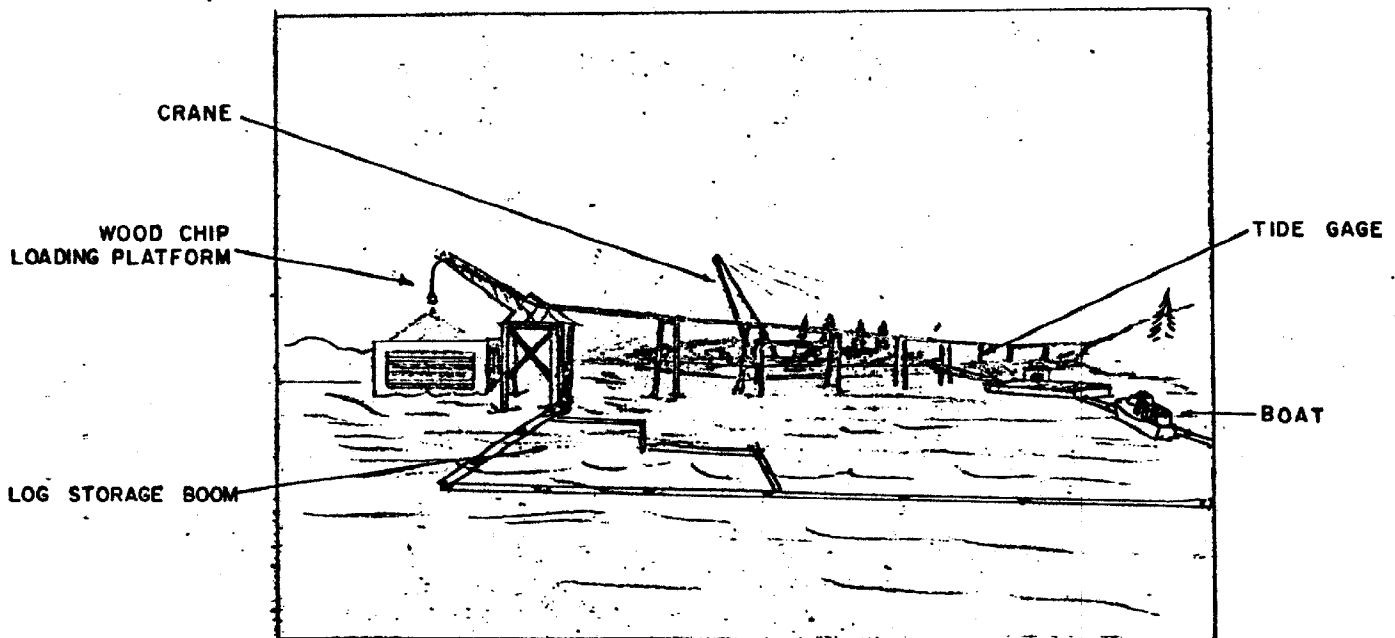
Approved and Forwarded

N. C. Austin
N. C. Austin CDR, NOAA

ROWAN BAY TIDE GAGE LOCATION



VIEW FROM THE NORTH-EAST



LONGRANGE VIEW FROM THE NORTH EAST

ROWAN BAY
TIDE GAGE LOCATION



VIEW FROM THE NORTH-EAST



LONG-RANGE VIEW FROM THE NORTH-EAST

QPR-0353-DA-81
DA 10-4-81 (H-9977)
Rowan Bay
PREDICTED TIDES CORRECTOR TAPE PRINTOUT

SITKA, ALASKA
ROWAN BAY
56 38 134 20 -0.06 -0.06 0.0 0.0 1.25 1.25
000
FM
0.1

PR-0353-DA-81
DA-10-4-81 (H-9977)
VELOCITY AND TC/TI TAPES PRINTOUT

VELOCITY TAPE:
00045 0 0000 0002 001 000000 009977
00106 0 0001
00173 0 0002
00241 0 0003
00305 0 0004
00377 0 0005
00465 0 0006
00554 0 0007
00646 0 0008
00750 0 0009
00860 0 0010

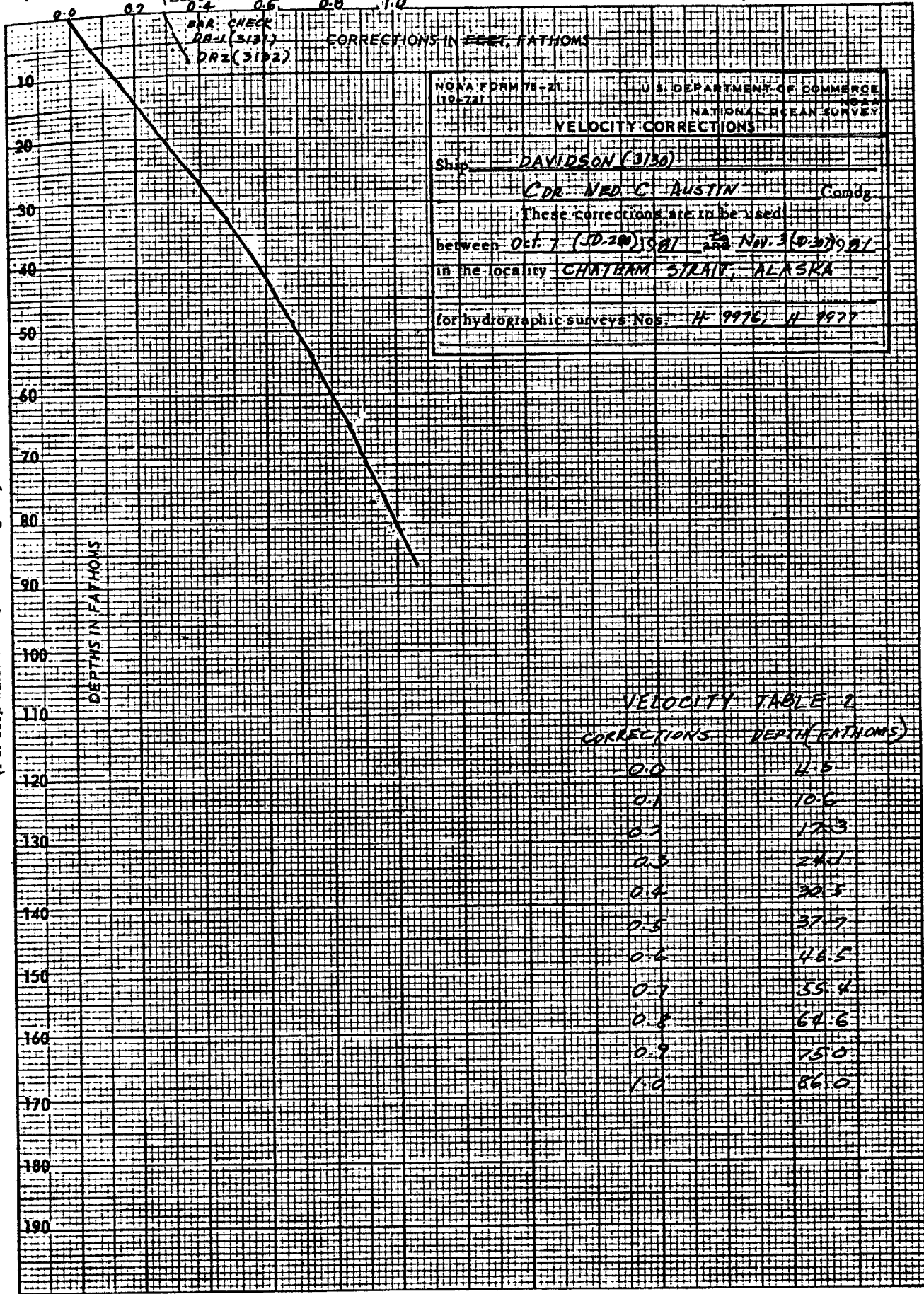
TC/TI TAPES:

LAUNCH DA-1 (3131)
183441 0 0003 0002 302 313100 000000
002530 0 0003 0002 304 313100 000000
235900 0 0003

LAUNCH DA-2 (3132)
163958 0 0003 0002 280 313200 000000
170025 0 0003 0002 305 313200 000000
235900 0 0003

191350 0 0000 0002 280
191812 0 0003 0002 280
190032 0 0000 0002 292
190530 0 0003 0002 292
191513 0 0000 0002 292
192145 0 0003 0002 292
204600 0 0000 0002 306

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



NGNA FORM 75-21 (10-72)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEAN SURVEY	
VELOCITY CORRECTIONS		
Ship	DAVIDSON (3130)	
Comdr	CDR. NED C. AUSTIN	
These corrections are to be used		
between	Oct 7 (0200) 1951	Nov 3 (0300) 1951
in the locality	CHATHAM STRAIT, ALASKA	
for hydrographic surveys Nos.	H-9976	H-9977

VELOCITY TABLE 2
CORRECTIONS DEPTH (FATHOMS)

0.0	11.5
0.1	10.6
0.2	17.3
0.3	24.1
0.4	30.5
0.5	37.7
0.6	44.5
0.7	53.4
0.8	64.6
0.9	75.0
1.0	86.0

46 1240

K-E 20 X 28 TO THE INCH • 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

(For deep water add a 0 to these figures)

WORKSHEET

VESSEL 3132

DA 10-4-81

BAR CHECK

	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	RESULT
JD 280	—	1.7	2.7	3.7	4.7	5.7	6.7	7.6	FAIR
AM ONLY	—	1.7	2.7	3.7	4.7	5.7	6.7		
JD 281	0.7	1.7	2.7	3.7	4.7	5.7	6.7	7.6	FAIR
AM ONLY	0.7	1.7	2.7	3.7	4.7	5.7	6.7		
JD 282	0.7	1.7	2.7	3.7	4.7	5.6	6.6	7.6	GOOD
AM ONLY	0.7	1.7	2.7	3.7	4.7	5.7	6.6		
JD 287	0.7	1.7	2.7	3.7	4.7	5.5	6.4	7.7	POOR
AM ONLY	0.7	1.7	2.7	3.7	4.7	5.7	6.6		
JD 288	0.7	1.7	2.7	3.7	4.6	5.6			GOOD
AM ONLY	0.7	1.7	2.7	3.7	4.7	5.6			
JD 289	0.7	1.7	2.7	3.7	4.7	5.7	6.7		GOOD
AM ONLY	0.7	1.7	2.7	3.7	4.7	5.7			
JD 290	0.7	1.7	2.7	3.7	4.7	5.7			GOOD
AM ONLY	0.7	1.7	2.7	3.7	4.6	5.6			
JD 291	—	1.7	2.7	3.7	4.7	5.7	6.7		FAIR
AM ONLY	—	1.7	2.7	3.7	4.7	5.7			FATHO- MALFUNCTION AT 1.0 fm.
JD 301	0.7	1.8	2.7	3.7	4.6	5.7			GOOD
AM ONLY	0.7	1.7	2.7	3.7	4.7	5.6			
JD 302	0.7	1.7	2.7	3.7	4.7	5.7			GOOD
AM ONLY	0.7	1.7	2.7	3.6	4.7	5.7			
MEAN	0.70	1.70	2.70	3.70	4.69	5.68	6.64	7.63	
TRA	0.30	0.30	0.30	0.30	0.31	0.32	0.36	0.37	

MEAN TRA = 0.32 fm.

✓
ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 3132

SHEET : DA-10-4-81

TIME	DAY	PATTERN 1	PATTERN 2
163958	280	-00001	+00000
164822	281	+00000	-00001
172317		-00001	+00000
203328	301	-00004	-00003
232720		-00003	-00004
000054	302	-00003	-00004
170025	306	+00000	+00000

✓
RANGE-AZIMUTH CORRECTOR ABSTRACT

VESSEL : 3132

SHEET : DA-10-4-81

TIME	DAY	PATTERN 1	PATTERN 2
185345	281	-00001	No Correction
171900	282	+00000	
183115	287	-00001	
195715	288	-00003	
172145	289	-00001	
204845	291	-00001	
183315	292	-00001	
183630	302	+00000	

✓
ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 3131

SHEET : DA-10-4-81

TIME	DAY	PATTERN 1	PATTERN 2
183441	302	-00001	+00000
183747	303	+00000	-00002
002530	304	+00000	+00000

OPR-0353-DA-81

DA-10-3-81 (H-9975)

DA-10-4-81 (H-9977)

SIGNAL TAPE PRINTOUT

001	1	56	32	23795	134	38	12853	139	0009	000000	PAT 1926
002	3	56	33	32345	134	37	32150	139	0012	000000	HALT 1897
003	3	56	38	11398	134	35	52385	139	0005	000000	BARE 1897
004	3	56	39	59188	134	37	00232	139	0004	000000	FEZ 1897
005	3	56	43	33483	134	37	43595	139	0003	000000	CUT 1897
006	3	56	48	24981	134	39	49598	139	0010	000000	CEGIL 1925
007	4	56	43	45538	134	23	57708	139	0005	000000	JUT 1897
008	2	56	40	28504	134	22	01756	139	0007	000000	SULLIVAN 2 1925
009	0	56	38	43080	134	20	23118	139	0003	000000	LUNAR 1981
010	1	56	38	44324	134	19	09569	250	0004	000000	CHITON 1981
011	1	56	39	02058	134	17	48776	250	0004	000000	ROWAN 1981
012	1	56	39	27644	134	17	07098	250	0004	000000	BAY 1981
013	4	56	40	04837	134	13	03254	250	0003	000000	ELIZA 1981
014	0	56	39	21854	134	15	34520	250	0004	000000	MONARK 1981
015	4	56	38	44845	134	17	28753	250	0004	000000	SEAL 1981
016	7	56	37	30454	134	18	19922	250	0004	000000	SURGE 1981
017	3	56	35	21264	134	19	39088	250	0008	000000	SPRAY 1981
019	4	56	33	34159	134	19	14170	139	0011	000000	ELLIS 1897
020	2	56	39	02753	134	18	21605	252	0000	000000	RAZ 1981 (TEMP PT)
021	2	56	39	54043	134	15	25715	252	0000	000000	TATTOO 1981 (TEMP PT)



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

NOAA Ship DAVIDSON S331
1801 Fairview Avenue East
Seattle, Washington 98102

Ref: CPM331/101-3A
Ser 12-4

DATE : 4 December 1981
TO : Director
National Ocean Survey
THRU : OA/CPM - C. K. Townsend
FROM : OA/CPM331 - N. C. Austin
Commanding Officer, NOAA Ship DAVIDSON
SUBJECT: Dangers to Navigation Observed and Reported, 1981 Field Season

The following dangers to navigation have been reported to the Commanding Officer, District 17, U.S. Coast Guard.

A. Kazakof Bay, Alaska

1. $58^{\circ}06.9'N$, $152^{\circ}36.4'W$, Depth 1.1 fathoms.
Rocky shallows marked by kelp.
2. $58^{\circ}09.2'N$, $152^{\circ}35.6'W$, Depth 2.5 fathoms.
High point on rocky N-S oriented ridge.
3. $58^{\circ}10.3'N$, $152^{\circ}35.3'W$, Depth 4.3 fathoms.
High point on broken rocky bottom, marked by kelp.
4. $58^{\circ}10.9'N$, $152^{\circ}35.0'W$, Depth 3.4 fathoms.
Rocky shallow.
5. $58^{\circ}10.8'N$, $152^{\circ}34.3'W$, Depth 2.9 fathoms.
High point on slab-like ridge.

B. Ouzinkie Narrows, Alaska

1. $57^{\circ}54'48.0''N$, $152^{\circ}31'33.1''W$, Depth 1.1 fathoms.
High point and terminus of rocky ledge.

* C. Rowan Bay, Alaska

1. $56^{\circ}38.1'N$, $134^{\circ}20.4'W$, Depth 4.7 fathoms.
Broken rocky ridge, approximately 90' x 120'.



10TH ANNIVERSARY 1970-1980

National Oceanic and Atmospheric Administration

A young agency with a historic
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- X2. 56°37.6'N, 134°20.3'W, Depth 1.7 fathoms.
Rock pinnacle marked by kelp.
- X3. 56°37.7'N, 134°20.1'W, Depth 3.5 fathoms.
Flat-topped broken rock shelf.
- X4. 56°38.2'N, 134°18.4'W, Depth 3.0 fathoms.
Rock, approximately 40' diameter near top, marked by kelp.
- X5. 56°38.8'N, 134°18.1'W, Depth 3.2 fathoms.
Least depth obtained by lead line, no description.
- X6. 56°38.8'N, 134°17.7'W, Depth 3.1 fathoms.
Least depth obtained by lead line, no description.
- ✓7. 56°39.5'N, 134°16.3'W, Depth 4.5 fathoms.
Peak of rock ridge. (Position 3386)
- ✓8. 56°39.4'N, 134°16.1'W, Depth 2.8 fathoms.
Elevated rocky area. (Position 3389)
- ✓9. 56°39.2'N, 134°15.4'W, Depth 4.6 fathoms.
Elevated broken (rock) bottom. (Position 3391)
- ✓10. 56°39.4'N, 134°15.2'W, Depth 3.9 fathoms. (Position 3393)
Extended rocky shallow, approximately 20 m x 40 m.
- ✓11. 56°39.5'N, 134°14.9'W, Depth 3.4 fathoms.
Least depth on rock ridge. (Position 3396)
- ✓12. 56°39.7'N, 134°14.9'W, Depth 2.0 fathoms. (Position 3401)
Rounded rock pinnacle, approximately 50' diameter.
- ✓13. Log boom moored between 56°40.1'N, 134°14.8'W, and 56°40.3'N,
134°14.4'W.

NCA/DD:jf

134° 18' W

134° 16' W

134° 14' W

56° 40' N

CHART 17370
SCALE 1:20,000

56° 40' N

56° 39' N

56° 39' N

134° 18' W

134° 16' W

134° 14' W

ROWAN BAY

OPR-0353-DA-81
DA-10-4-81

DANGERS TO NAVIGATION

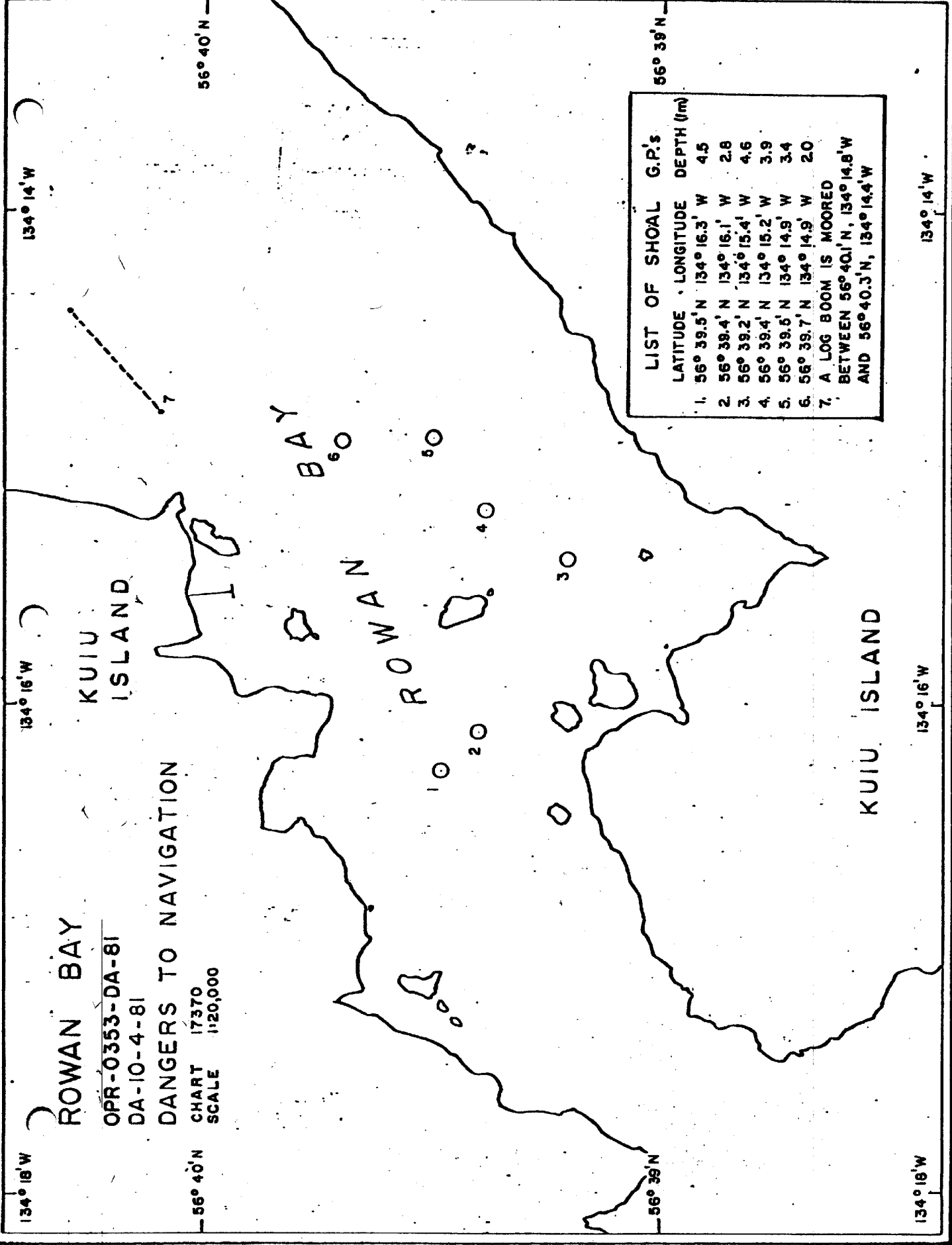
KUIU ISLAND

BAY

ROWAN

KUIU ISLAND

LIST OF SHOAL G.P.'s		
LATITUDE	LONGITUDE	DEPTH (m)
1. 56° 39.5' N	134° 16.3' W	4.5
2. 56° 39.4' N	134° 16.1' W	2.8
3. 56° 39.2' N	134° 15.4' W	4.6
4. 56° 39.4' N	134° 15.2' W	3.9
5. 56° 39.5' N	134° 14.9' W	3.4
6. 56° 39.7' N	134° 14.9' W	2.0
7. A LOG BOOM IS MOORED BETWEEN 56° 40.1' N, 134° 14.8' W AND 56° 40.3' N, 134° 14.4' W		





U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA Ship DAVIDSON S331
1801 Fairview Avenue East
Seattle, Washington 98102

Ref: CPM331/101-3K
Ser 11-15

DATE : 25 November 1981
TO : OA/C324 Chief, Coast Pilot Branch
N. C. Austin
FROM : OA/CPM331 N. C. Austin
Commanding Officer, NOAA Ship DAVIDSON
SUBJECT: Coast Pilot Report for 1981 Field Season

Coast Pilot Number 8, Fourteenth Edition, June 1980, was reviewed for completeness and accuracy during hydrographic survey operations in Chatham Strait, Rowan Bay and Bay of Pillars, Alaska. A list of recommended revisions is attached.

NCA:jaf



10TH ANNIVERSARY 1970-1980
National Oceanic and Atmospheric Administration
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tradition of service to the Nation

Revisions to Coast Pilot No. 8

(Fourteenth Edition, June 1980)

Bay of Pillars

page 182, 39L

READ: reported to be in this vicinity. Anchorage for vessels up to 300' length can be found 1 mile NNE of the cannery in 15 - 20 fathoms, mud bottom. The NOAA Ship DAVIDSON found this anchorage secure in 70 knot SW winds in 1981.

Rowan Bay

page 182, line 64L

READ: uncharted shoals in the bay and its approaches.
page 182, line 1R

STRIKE: lines 1 - 7

READ: A rock covered 1.7 fathoms is 1.9 miles SW of the entrance to Rowan Bay. A second rock, covered 3.5 fathoms is 1.8 miles SW of the entrance. A 4.7 fathom shoal lies 1.7 miles WSW of the entrance. A rock, covered 3.0 fathoms is 0.8 mile SSW of the entrance. A 3.2 fathom shoal lies 0.3 mile WSW of the entrance, and a 3.1 fathom shoal is 0.1 mile W of the S shore of the entrance. Other shoals exist in the approach to the bay, but they are 5 fathoms or deeper.

page 182, line 12R

STRIKE: Irregular bottom and kelp nearly cross the bay.

page 182, line 15 - 16R

READ: about 200 yards. Three rocky shoals on the E side of the island should be avoided. A shoal covered 3.9 fathoms is 0.2 mile E of the S extremity of the island. A shoal covered 3.4 fathoms is at $56^{\circ} 39.5'N.$, $134^{\circ} 14.9'W.$ A shoal covered 2.0 fathoms is at $56^{\circ} 39.7'N.$, $134^{\circ} 14.9'W.$

The passage N of the island is narrow and bordered on both sides by foul ground, but it is the preferred approach to the inner bay, since a nearly straight approach is possible.

page 182, line 17R

READ: E of the island the arm has a N direction with

page 182, line 23R

READ: A logging camp is operating in Rowan

page 182, line 28R

STRIKE: offshore,

READ: N from the point. A log boom is permanently moored between $56^{\circ} 40.1'N.$, $134^{\circ} 14.8'W.$ and $56^{\circ} 40.2'N.$, $134^{\circ} 14.4'W.$ Two log mooring buoys are anchored near $56^{\circ} 40.1'N.$, $134^{\circ} 15.1'W.$ Gasoline and a machine

(all of the above were observed
by DAVIDSON personnel during
survey operations)

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

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

VESSEL	DATE	PROJ. NO.		YEAR	DEPTH	WEIGHT OF SAMPLER	AP. PENE. TRA. TION	LENGTH OF CORE	COLOR OF SEDI. MENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, gelled cutter, stat. no., type of bottom, relief, etc., slope, plain, deposition, etc.)	OBS. INIT.
		LATITUDE	LONGITUDE									
3132	DAVIDSON LAUNCH DA-2 0353-DA	134°14'57.3"	1981	4.7	15.2g	3cm	-	gn	M			OK
5123	JD 301 OCT. 28, 1981	56°40'56.40"	134°14'57.3"	4.7	15.2g	3cm	-	gn	M			OK
5124	"	56°40'02.7"	134°14'49.5"	11.7	"	"	-	gn	M			OK
5125	"	56°40'04.3"	134°14'11.0"	7.4	"	"	-	gn	M			OK
5126	JD 302 OCT. 29, 1981	56°40'56.40"	134°13'49.5"	5.3	"	"	-	gn	M			OK
5324	JD 306 NOV. 2, 1981	56°58'57.57"	134°17'11.54"	12.5	15.4g	3cm	-	gn	M.G. Sh			OK
5325	"	56°58'56.83"	134°16'52.17"	7.5	"	"	-	gn	M, brk Sh, Wd			OK
5326	"	56°58'57.57"	134°17'15.09"	7.0	"	"	-		brd			OK
5327	"	56°59'05.80"	134°17'56.21"	10.0	"	"	-		brk Sh			OK
5328	"	56°58'57.125"	134°17'57.99"	14.0	"	"	-		brd			OK
3380	JD 302 OCT. 29, 1981	56°59'02.80"	134°16'58.57"	6.0	15.1g	3cm	-		G			
3384	"	56°59'02.80"	134°16'58.57"	4.6	"	"	-		cky			
3386	"	56°59'02.80"	134°16'12.33"	4.5	"	"	-		cky			
3389	"	56°59'02.80"	134°16'10.84"	2.8	"	"	-		cky			
3391	"	56°59'04.16"	134°16'45.20"	6.8	"	"	-		cky			
3414	"	56°59'28.03"	134°16'47.67"	5.1	"	"	-		brd			OK

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

SERIAL NO.	DATE	PROJ. NO.	YEAR	CHECKED BY		FIELD DESCRIPTION	REMARKS (Unusual conditions, coarseness, dotted center, etc., type of bottom relief, etc.)	OBS. INIT.					
				DATE CHECKED									
				DA-10-4-81 (H-9977)									
VESSEL Launch 3132	JD	SAMPLE POSITION		DEPTH (Fathoms)	WEIGHT OF SAM- PLER	AP. PROX. TRA- TION	LENGTH OF CORE	COLOR OF SEDI- MENT					
		LATITUDE N	LONGITUDE W										
5093	OCT. 28	08R-0353-DA-81	1981	56°37'41.18"	134°14'57.30"	8.4	15.48	3.6M		br, gy	M		
5095	"			56°37'50.30"	134°15'17.96"	12.1	"	"		br, gy	M, Sh		
5097	"			56°37'05.46"	134°15'19.06"	12.3	"	"		gy	M, sh		
5098	"			56°37'10.00"	134°15'15.10"	14.2	"	"		gy	M, Rk, Sh		
5100	"			56°37'32.62"	134°15'40.17"	6.5	"	"		br	S, Sh		
5101	"			56°37'40.30"	134°15'30.87"	10.4	"	"		br	S, Sh		
5102	"			56°37'52.72"	134°15'12.92"	6.7	"	"		gy	M, Sh		
5103	"			56°37'16.32"	134°14'57.01"	11.4	"	"		gy	M, S		
5105	"			56°37'26.78"	134°14'34.77"	14.1	"	"		dk	M		
5106	"			56°37'39.72"	134°14'10.87"	11.5	"	"		dk, gy	M		
5107	"			56°37'50.06"	134°13'47.07"	8.0	"	"		gy, gn	M		
5108	"			56°37'57.57"	134°13'27.77"		"	"					
5109	"			56°37'57.67"	134°13'20.77"	6.1	"	"		gy	M		
5110	"			56°37'51.57"	134°14'54.47"	11.1	"	"		gy, gy	M		
5119	"			56°40'14.50"	134°14'20.60"	6.6	"	"		gy	M		
5121	"			56°40'24.43"	134°14'10.33"	5.4	"	"		gy, gn	M		
5122	"			56°40'46.93"	134°14'32.73"	4.0	"	"		gy, gn	M		

Use more than one line per sample if necessary. * U.S. G.P.O. 1972-769-565/530 REG. #6

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

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

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)

TO BE CHARTED
 TO BE REVISED
 TO BE DELETED

REPORTING UNIT
(Field Party, Ship or Office)

NOAA Ship DAVIDSON

STATE

Alaska

LOCALITY

Rowan Bay

DATE

1981

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

OPR PROJECT NO. OPR-0353-DA-81

JOB NUMBER

SURVEY NUMBER

DATUM

CHARTING NAME

DESCRIPTION
(Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)

None

METHOD AND DATE OF LOCATION
(See instructions on reverse side)

OFFICE

FIELD

CHARTS AFFECTED

POSITION

LATITUDE LONGITUDE

• / D.M., Meters • / D.P., Meters

//

//

ABSTRACT OF POSITIONS
DA 10-4-81 (H-9977)

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
280	4001-4046	042	013	---	014	Shoreline
280	4047-4057	042	013	---	014	Delineation of Log Boom
280	4058-4234	042	013	---	014	Mainscheme
280	4235-4263	042	013	---	014	X-Line
281	4264-4307	042	014	---	013	Shoreline
281	4308-4328	042	013	---	014	Mainscheme
281	4329-4487	112	013	---	R/A	Mainscheme
281	4490-4516	112	013	---	R/A	X-Lines
282	4517-4590	112	014	---	R/A	Mainscheme
282	4591-4600	112	014	---	R/A	X-Lines
287	4601-4680	112	012	---	R/A	Mainscheme
287	4681-4695	112	012	---	R/A	Fill-In
288	4696-4770	112	011	---	R/A	Splits
289	4771-4876	112	011	---	R/A	Mainscheme
289	4877-4904	112	011	---	R/A	X-Lines
291	4905-4977	112	012	---	R/A	Mainscheme
291	4978-4982	112	012	---	R/A	X-Line
292	4986-5003	112	013	---	R/A	Splits
292	5005-	112	013	---	R/A	D.P.
292	5006-5011	112	013	---	R/A	Splits
292	5012-	112	013	---	R/A	D.P.
292	5014-5016	112	013	---	R/A	Split
292	5017-5026	112	013	---	R/A	D.P.'s
301	5040-5080	042	021	---	013	Development
301	5085-5092	042	021	---	013	X-Lines
301	5093-5110	042	021	---	013	Bottom Samples
301	5111-5118	042	013	---	014	Fill-In
301	5119-5126	042	013	---	014	Bottom Samples
301	5127-5135	042	013	---	014	Splits
302	3380-	042	012	---	021	Dive D.P. (& B.S.)
302	3384-	042	012	---	021	Dive D.P. (& B.S.)
302	3386-	042	012	---	021	Dive D.P. (& B.S.)
302	3389-	042	012	---	021	Dive D.P. (& B.S.)
302	3391-	042	012	---	021	Dive D.P. (& B.S.)
302	5136-5215	112	013	---	R/A	Mainscheme
302	5216-5220	112	013	---	R/A	D.P.'s
303	3393-	042	014	---	021	Dive D.P. (& B.S.)
303	3396-	042	014	---	021	Dive D.P. (& B.S.)
303	3401-	042	014	---	021	Dive D.P. (& B.S.)
303	3405-3413	042	014	---	015	Fill-Ins
303	3414-	042	014	---	015	Dive D.P. (& B.S.)
306	5324-5328	042	011	---	012	Bottom Samples

DAY # LAUNCH COMMENTS AND INITIALS OF OIC

280	3132	R/R Hydro Easter Rowan Bay Code 2 (-1) ELIZA DA 10-4-81 No s/s on printout AM bar check only Good M/R systems check Code 3 (0) MONARK Konrad Ramm Lack Boyle's Tactical
281	3132	R/R + R/AZ Hydro Rowan Bay on DA 10-4-81 Code 2 (-1) ELIZA + Code 3 (0) MONARK New RK 112 did not load. Plotter would not plot depths. Tide reader did not work. AM bar check only. Good M/R systems check
282	3132	R/AZ Hydro Rowan Bay on DA 10-4-81 code 3 (0) on Monark. Logger worked well. AM Bar check only. M/R systems check good. Started 45 m spacing.
287	3132	R/AZ Hydro Rowan Bay on DA-10-4-81. Code 2 on Bay. Electronics fine, one exception - periodic "0" typed on CR. AM Bar check only. M/R systems check o.k. 45 m spacing all day. Tide gage may be non-operational due to extremely high tide.
288	3132	R/AZ Hydro Rowan Bay on DA 10-4-81. Code 4 (-2) on Rowan. Morning - repaired Rowan Bay Tide gage by elevating on platform. No data lost. AM bar check only. M/R systems check good. No electrical problems. Bad water temp sending unit - no problems. 45 m spacing all day.
289	3132	R/AZ Hydro Rowan Bay on DA 10-4-81. Code 2 (-1) on Rowan. No problems of any kind. Continued 45 m spacing westward. AM bar check only. M/R systems check fair.
290	3132	Bar Check only. Weather turned progressively worse in the morning. Data from Bar Check saved.
291	3132	R/AZ Hydro Rowan Bay on DA 10-4-81. Code 2 (-1) on Bay. Fathometer Problem: At any depth, with blanking off, digitized depth was 0.1 Fm, ET's informed. Completed 45 m mainscheme in mouth of bay. AM bar check only - good results except for 1.0 fathom with blanking problem. Good M/R check with code 6
301	3132	R/R Hydro (20 meter splits) and 20 Bottom Samples on DA 10-4-81. Code 2 (-1) and Code 4 (-2). Electronics fine. Ran two lines in log barge area (removed). Good M/R systems check. AM bar check only
302	3132	R/AZ Hydro on DA 10-4-81. 45 m splits and D.P.'s on De Plane Deck. Logger failed intermittently, but caused not major delays. Code 5 (+2) on Eliza (then Tattoo) and Code 6 on Monark. AM Bar check only.

OPR-0353-DA-81
DA 10-4-81 (H-9977)
Parameter Tapes Printout

SKEW: 0,22,36

FEST=22000
CLAT=6264000
CMER=134/20/00
GRID=30
PLSCL=10000
PLAT=56/38/34
PLON=134/19/55
VESNO=3132
YR=81
ANDIST=00.0

INSET
SKEW: 0,21,29

FEST=22000
CLAT=6264000
CMER=134/20/00
GRID=15
PLSCL=5000
PLAT=56/38/34
PLON=134/18/00
VESNO=3132
YR=81
ANDIST=00.0

SURVEY APPROVAL SHEET

- A. Amount and degree of personal supervision of field work and frequency of record and sheet inspection:

Daily supervision of personnel and inspection of data accomplished through the Executive Officer and Field Operations Officer who received guidance from the Commanding Officer. In addition, the Commanding Officer periodically inspected sheets and records during the project.

- B. State whether the survey is complete and adequate, or if additional field work is recommended:

This is a complete and adequate navigable area survey.

The charted shoreline is inadequate. A modern photogrammetric compilation to correct the charted shoreline is recommended.

- C. Cite additional information or references that may be of assistance for verifying and reviewing the survey:

None.

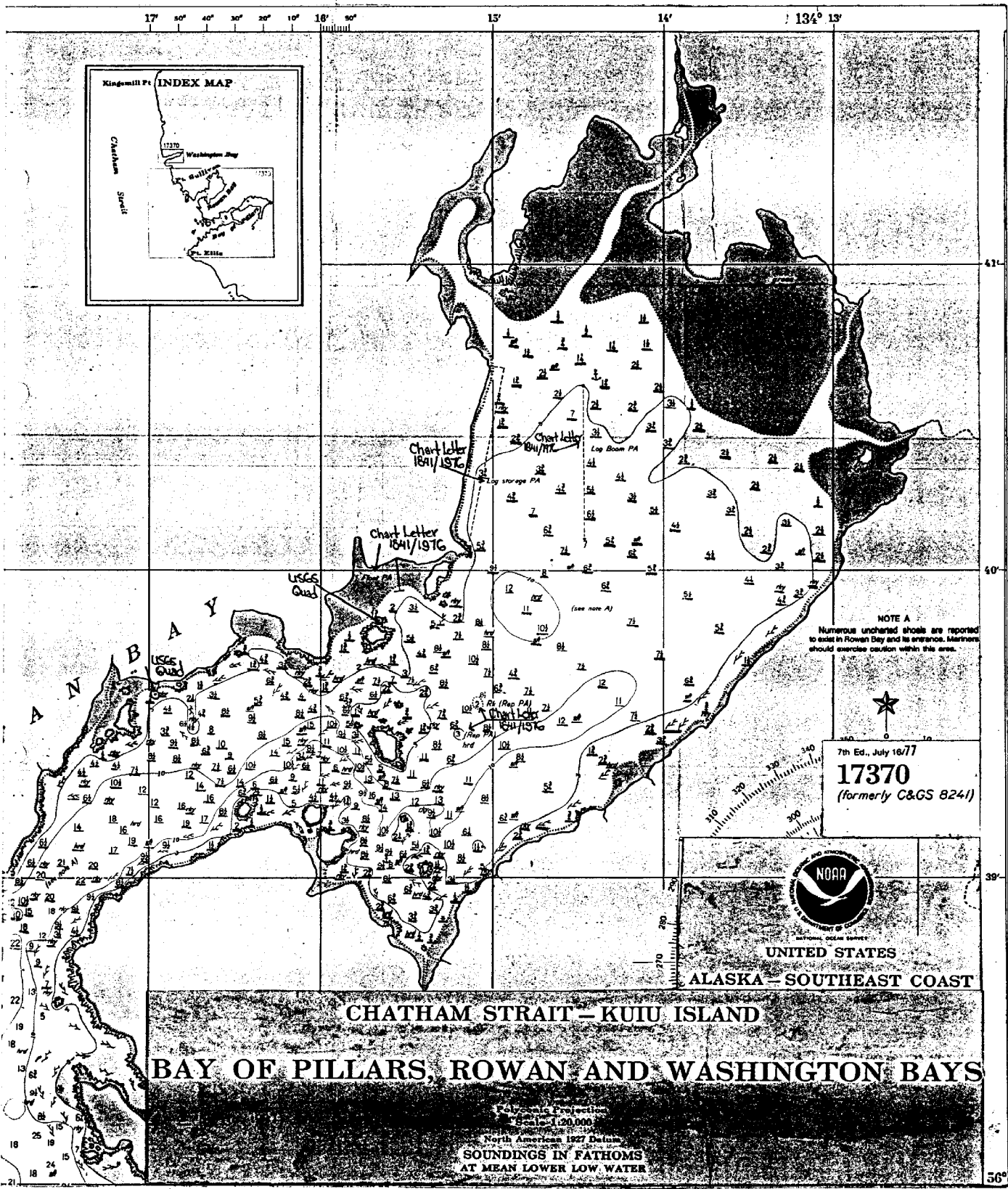
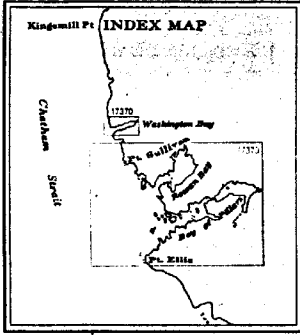
- D. Signed statement of approval of the field sheet and all accompanying records:

Date: 1/4/82

Approved and forwarded by:

N. C. Austin
N. C. Austin
CDR, NOAA
Commanding Officer

17° 50' 40' 30' 20' 10' 18' 50' 15' 14' 134° 13'



NOTE A
Numerous uncharted shoals are reported to exist in Rowan Bay and its entrance. Mariners should exercise caution within this area.



7th Ed., July 18/77

17370
(formerly C&GS 8241)



UNITED STATES
ALASKA - SOUTHEAST COAST

CHATHAM STRAIT - KUIU ISLAND
BAY OF PILLARS, ROWAN AND WASHINGTON BAYS

Polyconic Projection
Scale 1:20,000
North American 1927 Datum
SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

56°

HYDROGRAPHIC SURVEY STATISTICS

H-9977

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET		1	BOAT SHEETS & PRELIMINARY OVERLAYS		12	
DESCRIPTIVE REPORT		1	SMOOTH OVERLAYS: POS. ⁴ ARC, EXCESS ⁴		8	
DESCRIP-TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES			raw PLO			
CAHIERS			1 - Pathogon			
VOLUMES						
BOXES			1 - Smooth PLO			

T-SHEET PRINTS (List) Chart Enlargement 17370, Prior Survey Enlargement H-2334
SPECIAL REPORTS (List)

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

PROCESSING ACTIVITY	AMOUNTS		
	PRE-VERIFICATION	VERIFICATION	TOTALS
POSITIONS ON SHEET			1200
POSITIONS CHECKED			
POSITIONS REVISED		1200	
SOUNDINGS REVISED		34	
SOUNDINGS ERRONEOUSLY SPACED		149	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		--	
		--	
	TIME - HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	10	*(VER)/(EVAL)	10
VERIFICATION OF CONTROL		02/01	03
VERIFICATION OF POSITIONS		20/02	22
VERIFICATION OF SOUNDINGS		58/08	66
COMPILATION OF SMOOTH SHEET		21/02	23
APPLICATION OF TOPOGRAPHY		NA/06	06
APPLICATION OF PHOTOBATHYMETRY		NA/NA	NA
JUNCTIONS		01/02	03
COMPARISON WITH PRIOR SURVEYS & CHARTS		00/13	13
VERIFIER'S REPORT		04/40	44
OTHER		/02	02
TOTALS	10	106/76	192

Pre-Verification by James S. Green	Beginning Date	Ending Date 2/11/82
Verification by Charles R. Davies	Beginning Date 3/26/82	Ending Date 4/18/83
Evaluated by Bruce A. Olmstead	Beginning Date 3/24/83	Ending Date 5/5/83
Verification Check by James L. Stringham, James S. Green	Time (Hours) 30	Date 5/11/83
Marine Center Inspection by Hydrographic Inspection Team	Time (Hours) 5.5	Date 5/27/83
Quality Control Inspection by	Time (Hours)	Date
Requirements Evaluation by	Time (Hours)	Date

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

P

NOAA FORM 76-155
(11-72)

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

SURVEY NUMBER

GEOGRAPHIC NAMES

H-9977

Name on Survey

A ON CHART NO. 17370
 B ON PREVIOUS SURVEY NO.
 C ON U.S. QUADRANGLE MAPS
 D FROM LOCAL INFORMATION
 E ON LOCAL MAPS
 F P.O. GUIDE OR MAP
 G RAND McNALLY ATLAS
 H U.S. LIGHT LIST
 K

Name on Survey	A	B	C	D	E	F	G	H	K
KUIU ISLAND	X								1
ROWAN BAY	X								2
ALASKA (title)									3
CHATHAM STRAIT (title)									4
									5
									6
									7
									8
									9
									10
									11
									12
									13
									14
									15
									16
									17
									18
						Approved:			19
									20
						<i>Charles E. Harnett</i>			21
						Chief Geographer - N/Cg 2x5			22
						13 JUNE 1983			23
									24
									25

PACIFIC MARINE CENTER
EVALUATION REPORT

REGISTRY NO: H-9977

FIELD NO: DA-10-4-81

Alaska, Chatham Strait, Rowan Bay

SURVEYED: October 7 - November 2, 1981

SCALE: 1:10,000

PROJECT NO: OPR-0353-DA-81

SOUNDINGS: Ross Fineline 5000
Leadline

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

Chief of Party.....CDR N. C. Austin

Surveyed By.....LCDR D. R. Seidel
LT D. Dreves
LT H. Ramm
LTJG S. Konrad
LTJG D. Actor
LTJG N. Bogue
Ship's Personnel

Automated Plot By.....PMC Xynetics Plotter

Verified By.....Charles R. Davies

Evaluated By.....Bruce A. Olmstead

1. INTRODUCTION

H-9977 (DA-10-4-81) is a navigable area survey conducted under the current methods of planning, executing and processing a hydrographic survey as defined in the Hydrographic Manual, 4th Edition. The PMC OPCODE and the Data Requirements Letter for 1981 further defines field procedures. Project Instructions OPR-0353-DA-81, Rowan Bay, Alaska, dated June 15, 1981 were generated to supplement the Hydrographic Manual. One supplement to instructions was appended for the 1981 field work; Change 1 dated July 1, 1981.

H-9977 (DA-10-4-81) is situated on the eastern side of Chatham Strait and along the western side of Kuiu Island. Specifically, the survey area includes all of Rowan Bay from the narrowest part of the entrance to the head of the bay. Rowan Bay is essentially divided into two distinct parts. The entrance to Rowan Bay, 5 miles north of Point Ellis, has depths of 10 to 20 fathoms and numerous uncharted shoals. The shores at the entrance are foul. Approximately one mile within the entrance, there is an island in the middle with navigable channels on either side. The deeper channel follows the SW and SE sides of the island. The passage north of the island is narrow and bordered on both sides by foul ground but is preferred because a nearly straight approach is possible. The eastern side of the bay is more shallow

with depths generally running from 1-10 fathoms. Shoaling is gradual up to three fathoms and good anchorage is available.

The area of survey operations is encompassed by the shoreline on the north, south and east. Generally, depths of water range from one fathom along the shoreline to twenty-two fathoms in the center of the entrance. There was no requirement to delineate the mean lower low water line. Alongshore and offshore characteristics are primarily composed of isolated rocks (awash, submerged) and rocky ledges fringing much of the shoreline. Bottom characteristics generally consist of mud and shells. However, the western portion of the survey is rockier and predominantly of a hard nature.

One temporary gage (bubbler), Rowan Bay, Alaska was operating during the 1981 field work. The tidal data generated by this gage was employed to zone the survey for office reduction of sounding data. Field tide reduction of soundings was based on predictions from Sitka, Alaska, with time and range ratios.

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

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

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

2. CONTROL AND SHORELINE

Five Second Order, Class II triangulation stations and one Third Order, Class I topographic station was used to control the entire hydrographic survey. All control stations plot within the survey limits. Motorola Mini-Ranger III was configured in both a range-range and range-azimuth mode (Wild T-2) in determining positional data during launch operations. Corrections to positional data were determined by calibrations run on baselines conducted in Ketchikan and Rowan Bay. Confirmation of these correctors was accomplished by daily systems checks utilizing two methods; (1) baseline transit and (2) fixed point. All remaining information affecting the positioning and station control of this survey is listed in parts F and G of the ship's descriptive report, the Horizontal Control Report and the Electronic Control Report for OPR-0353-DA-81. The letter dated March 10, 1982 from CPM133, PMC Computer's Addendum to Horizontal Control Report, OPR-0353-DA-81, Rowan Bay, Alaska, provides additional information.

The smooth sheet was plotted using Preliminary Adjusted Field Positions.

There are no Class I or Class III shoreline manuscripts available for this survey. Shoreline from Chart 17370 was to be used for "orientation only". However, significant discrepancies with the charted shoreline was apparent during field operations and noted in the appropriate sections of the descriptive report. Further analysis by the Nautical Chart Branch confirmed

a datum shift of approximately 40 meters. Although N/CG24 confirms a 24 meter shift, a larger correction appears to be required. As this shift was not in a constant direction, the shoreline from the chart was not transferred to the smooth sheet. However, small islands falling completely within the limits of hydrography are shown in brown ink (displaced to not conflict with hydrography) to indicate that these apparent holidays contain potential hazards to navigation. Additional information can be found in a letter from C35 dated October 25, 1982 entitled, Apparent Shoreline Discrepancies on Survey H-9977, Rowan Bay, Alaska (copy attached).

3. HYDROGRAPHY

Depths at crossings are in good agreement.

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

		<u>Latitude</u>	<u>Longitude</u>
/a.	2.0 fathom sounding	56°39'15"N ✓	134°14'47"W ✓
/b.	1.3 fathom sounding	56°39'07"N ✓	134°15'06"W ✓
/c.	1.0 fathom sounding	56°39'23"N ✓	134°14'30"W ✓
/d.	1.3 fathom sounding	56°39'15"N ✓	134°15'54"W ✓
/e.	3.2 fathom sounding	56°39'33"N ✓	134°15'51"W ✓
/f.	2.8 fathom sounding	56°39'07"N ✓	134°16'52"W ✓
/g.	3.9 fathom sounding	56°38'50"N ✓	134°17'36"W ✓
/h.	2.4 fathom sounding	56°39'40"N ✓	134°14'39"W ✓
/i.	-0.3 fathom sounding	56°39'33"N ✓	134°15'35"W ✓

4. CONDITION OF SURVEY

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

a. Detached positions 4094, 5005, 5012 and 5343 were found by the hydrographer and entered into the hydrographic file. However, there were no rocks plotted on the final field sheet. The smooth sheet was plotted incorporating these features.

b. Detached positions 3380, 3384, 3386, 3389, 3391, 3393, 3396, 3401 and 3414 were diver verified least depths. Additionally, the description of these features and bottom characteristics was noted in the raw data. The final field sheet was not annotated to show these least depths as submerged rocks. The smooth sheet incorporated the appropriate information.

c. Detached positions on the floating dock were not taken on the inside corners. The sketch would have been more helpful during verification if dimensions had accompanied the drawing. The smooth sheet has shown this structure in red (dashed where compilation is approximate).

d. The final field sheet in the vicinity of PSR Item 8, latitude 56°39'57"N, longitude 134°15'39"W is shown in black. As such, this indicates

verified shoreline and not a mean high water change as in section L, Comparison with the Chart. (See discussion of PSR #8.) Revisions to the shoreline source, whether approximate or located accurately, is to be shown in red. Additionally, detached positions were not taken to substantiate this modification.

e. The two rocks from the USGS quad maps were confirmed by the present survey but are not shown on the final field sheet. The Nautical Chart Branch found nothing in the raw records to substantiate these features. The Evaluator recommends that the chart compiler retain these rocks as charted.

5. JUNCTIONS

H-9977 (DA-10-4-81) is bordered by one contemporary survey, H-9976 (DA-10-3-81). The common area of hydrography with this junctional sheet lies in the extreme southwest limits of the present survey from latitude 56°38'45"N to latitude 56°39'00"N, longitude 134°17'21"W to longitude 134°18'00"W. Here, the bottom is very irregular and several notable differences exist in the area of overlap. Additionally, hydrography on this survey was run parallel to the shoreline. Satisfactory agreement was made with all standard depth curves. The junctional note is inked accordingly.

6. COMPARISON WITH PRIOR SURVEYS

H-2334 (1897) 1:20,000

Depths since the prior hydrographic survey reveal that this area of Rowan Bay has remained basically unchanged. Generally, soundings agree within one fathom. Greater differences are found in the western portion of Rowan Bay which is deeper, rockier and rises more abruptly to the shoreline. Discussion with the shoreline information will be covered in the Comparison with Chart.

Four dashed pre-survey review items were noted for investigation. Three of these were adequately investigated by the field and are discussed as follows:

a. A charted 1.5 fathom sounding at latitude 56°39'29"N, longitude 134°16'48"W originates from prior survey H-2334 (1897). A series of sounding ^{ck} lines and a dive investigation were conducted in this area. A least depth of 1.4 fathoms over a flat-topped rock was found (Position 3414).

b. A charted 1½ fathom sounding at latitude 56°39'15"N, longitude 134°15'51"W originates from prior survey H-2334 (1897). One sounding line ^{ck} was run in this area and a depth of 1.3 fathoms was found (Position 465702, day 287). There were no developments and/or a dive investigation to determine a least depth.

c. A charted 10 fathom sounding at latitude 56°38'53"N, longitude 134°17'48"W originates from prior survey H-2334 (1897). The hydrography ^{ck} conducted in this area by the present survey and the contemporary junctional sheet reveal depths of 7.7 to 9.4 fathoms 50 meters west of the charted depth.

Three additional pre-survey review items should have been identified by Requirements for Further Investigation. These three soundings are located very close to a narrow channel that leads into the eastern half of Rowan Bay.

	<u>Latitude</u>	<u>Longitude</u>
a. 2-3/4 fathom sounding	56°39'36"N ✓	134°15'24"W ✓
b. 2-3/4 fathom sounding	56°39'38"N ✓	134°15'38"W ✓
c. 3 fathom sounding	56°39'40"N ✓	134°15'31"W ✓

The above soundings were not investigated by the field. However, the main scheme hydrography in this area delineates this area somewhat differently than the prior survey. The narrow channel is 50-100 meters further north and the three soundings appear displaced proportionately but not in a constant direction. This may or may not be a reflection of the datum error inherent in the prior information.

The charted rock awash at latitude 56°39'45"N, longitude 134°15'40"W originates from a USGS Quad Map. This feature is not plotted on the present survey but should be retained as charted (see section 4, item e).

H-9977 (DA-10-4-81) is adequate to supersede the prior survey within the common areas.

7. COMPARISON WITH CHART

a. Hydrography - A comparison was made with Chart 17370, 7th Edition, July 16, 1977. The charted information originates primarily with the previously discussed prior survey. Other features identified are from either Geological Survey Quad Maps or Chart Letters.

All numbered Pre-survey Review Items were adequately discussed and disposed of by the field with the following exception: PSR Item #6 is a log boom originating from Chart Letter 1841, 1976. The field investigated this feature and determined an amended configuration from that shown on the chart. However, the ends of the boom which are permanently anchored to the bottom were not positioned. Additionally, the anchors which fix the ends of the old charted log boom were not addressed as being removed. The evaluator recommends charting this area as shown on the smooth sheet. Additionally, configuration of the source data governing the undefined 2 millimeter circles that mark the ends of the old log boom should be investigated and charted accordingly.

H-9977 (DA-10-4-81) supersedes the charted hydrography within the common area except for the three islands shown in brown on the smooth sheet. These areas should continue to be charted according to the prior survey data.

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

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

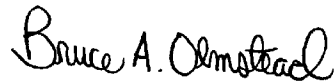
8. COMPLIANCE WITH INSTRUCTIONS

H-9977 (DA-10-4-81) adequately complies with the project instructions except as noted in section 4, Condition of Survey.

9. ADDITIONAL FIELD WORK

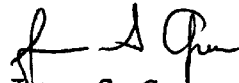
H-9977 (DA-10-4-81) is a good navigable area survey. With the exception of updated aerial photography and new shoreline compilation, no additional field work is required.

Respectfully submitted,



Bruce A. Olmstead
Evaluator

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



James S. Green
Supervisory Cartographer



CPM 3

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102

March 10, 1982

CPM133/RBM

TO: C18x2 - National Geodetic Survey

FROM: CPM133 - R. B. Melby

SUBJECT: PMC Computer's Addendum to Horizontal Control Report, OPR-0353-DA-81,
Rowan Bay, Alaska

This project was the result of one season's field work undertaken by personnel of the NOAA Ship DAVIDSON to support hydrographic surveys.

The field data was forwarded to the Pacific Marine Center, Seattle, Washington. The field data was then entered and processed through the telephone data terminal by personnel of the Pacific Photo Party, and transmitted to the National Geodetic Survey headquarters in Rockville, Maryland.

The majority of the horizontal control established was second-order class II traverse specifications.

The scheme commenced with the established second-order triangulation net that follows Chatham Strait, Alaska, then extending into Rowan Bay, and into the mouth of the Bay of Pillars. The ADJNET computer program was run holding the old USC&GS second-order triangulation stations fixed, except for station ELLIS 1897, an old third-order triangulation station that was permitted to "float" in the adjustment, and upgraded to a second-order class II traverse station. Stations STRAW and BERRY, at the mouth of the Bay of Pillars, were considered as third-order class I traverse stations as they lacked reciprocal zenith distance observations and horizontal observations. They were trilateration stations with horizontal azimuths to them. Station RAZ and TATTOO were also computed as third-order stations, due to their temporary nature and methods of location.

The published VABM elevations of stations JUT 1897, SULLIVAN 2 1925, and ELLIS 1897, were held fixed in the vertical adjusted. All other stations were computed and adjusted via the ADJZEN computer program.

Several of the distances from stations to their reference marks were entered as feet only, as the metric distance to the marks failed to agree within the specified tolerances, ($\pm 3M/M$).

Station JUT 1897 is listed as such on the Horizontal Control Data sheet but appears as JUT 1923 on the NGS Database printout. Apparently the station may have been re-marked in 1923, but a recovery note to support this action was not submitted.



Summary - The job processed through the data terminal and all stations adjusted without undo effort or rework. The field data was submitted in a good format, requiring little recomputation or problem solving. The final results were considered to be superior to the normal field work by the PMC NOAA vessels.

Respectfully submitted,

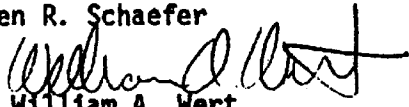
R. B. Melby

R. B. Melby
Chief, PMC Photo Party
CPM133

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

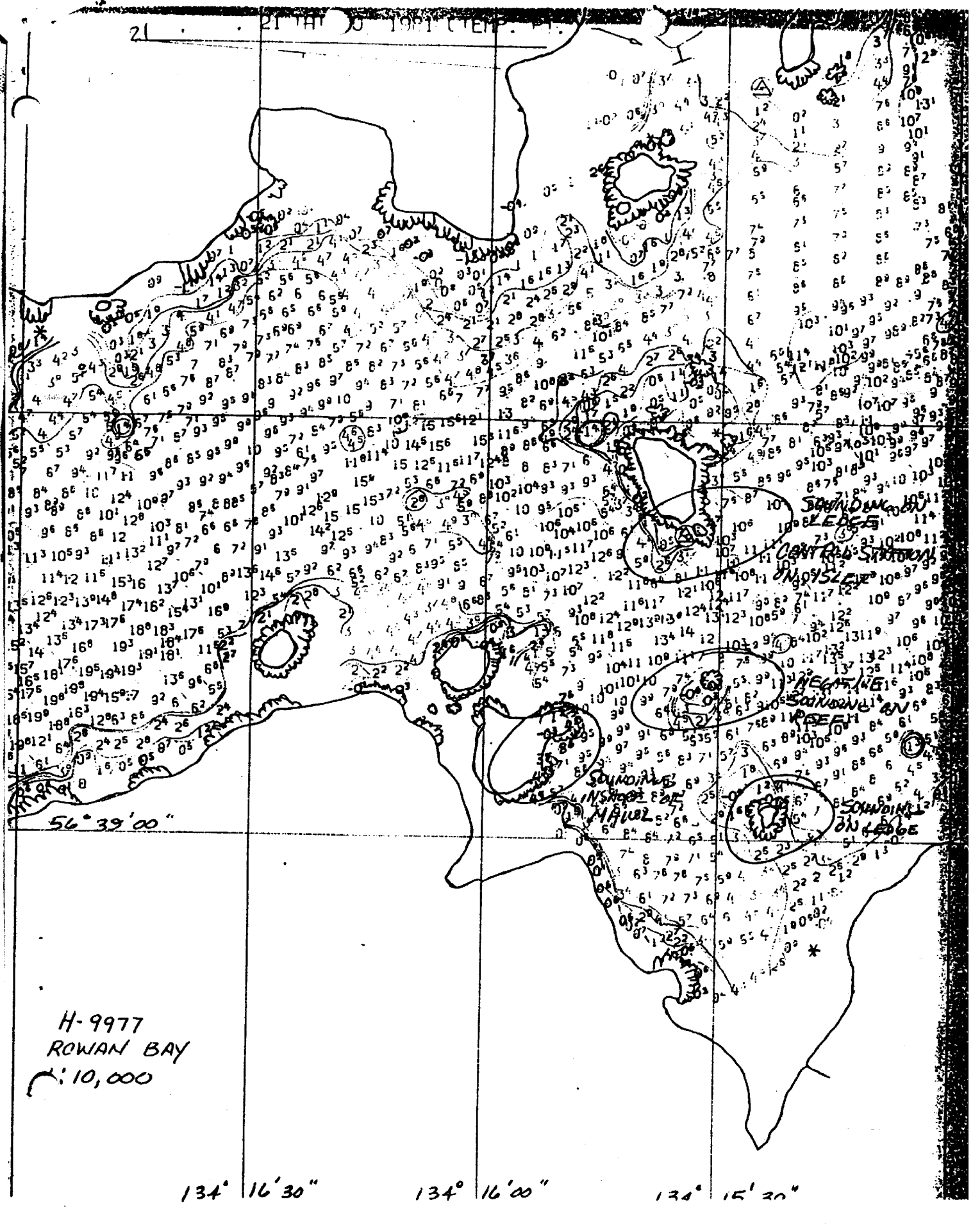
As discussed during our telecon on July 27, attached is a copy of a section of H-9977 noting some of the shoreline discrepancies between the contemporary hydrographic survey findings and the charted shoreline from NOAA Chart 17370.

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



H-9977
 ROWAN BAY
 1:10,000

134° 16' 30"

134° 16' 00"

134° 15' 30"



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:
C32



DATE: April 20, 1982

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 945-1353 Rowan Bay, AK

Period: October 7 - November 2, 1981

HYDROGRAPHIC SHEET: H-9977

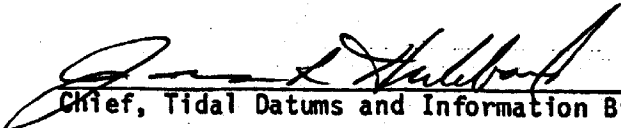
OPR: 0353

Locality: Rowan Bay, Alaska

Plane of reference (mean lower low water): 5.1 ft.

Height of Mean High Water above Plane of Reference is 11.4 ft.

REMARKS: Zone Direct.


Chief, Tidal Datums and Information Branch



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102

JUL 0 6 1983

N/MOP211C:1604-17JSG

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

Dear Sir:

A review of verified hydrographic survey H-9977, Alaska, Chatham Strait, Rowan Bay, indicates the following changes affecting NOAA Chart 17370. The indicated depths are reduced to MLLW.

1. A 1.8 fathom rock is in an area charted at 4-3/4 fathoms at latitude 56°39'40"N, longitude 134°14'56"W (previously reported by CPM331/101-3A, Ser 12-4 as a 2 fathom rock at latitude 56°39.7'N, longitude 134°14.9'W). This 1.8 fathom rock is the west most extremity of a shoal extending eastward to a 2.1 fathom depth at latitude 56°39'39"N, longitude 134°14'41"W.

2. A 1.0 fathom sounding is in an area charted at 3 fathoms at latitude 56°39'22"N, longitude 134°14'30"W.

3. A 2.0 fathom sounding is in an area charted at 5 fathoms at latitude 56°39'15"N, longitude 134°14'47"W.

4. A 1.3 fathom sounding supersedes a charted 1.5 fathom sounding at latitude 56°39'07"N, longitude 134°15'05"W.

5. A 6.0 fathom sounding is in an area charted at 7 fathoms at latitude 56°39'20"N, longitude 134°16'34"W.

6. A 1.4 fathom rock supersedes a charted 1.5 fathom sounding at latitude 56°39'29"N, longitude 134°16'47"W.

7. A 1.6 fathom sounding is in an area charted at 3.5 fathoms at latitude 56°38'50"N, longitude 134°17'32"W.

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

Sincerely,

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

bc: N/CG222



ATTACHMENT TO DESCRIPTIVE REPORT FOR H-9977

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

Lang W. Mardal 10/14/83
Chief, Nautical Chart Branch (Date)

CLEARANCE:

N/MOP2:RLSandquist

Robert L. Sandquist

SIGNATURE AND DATE:

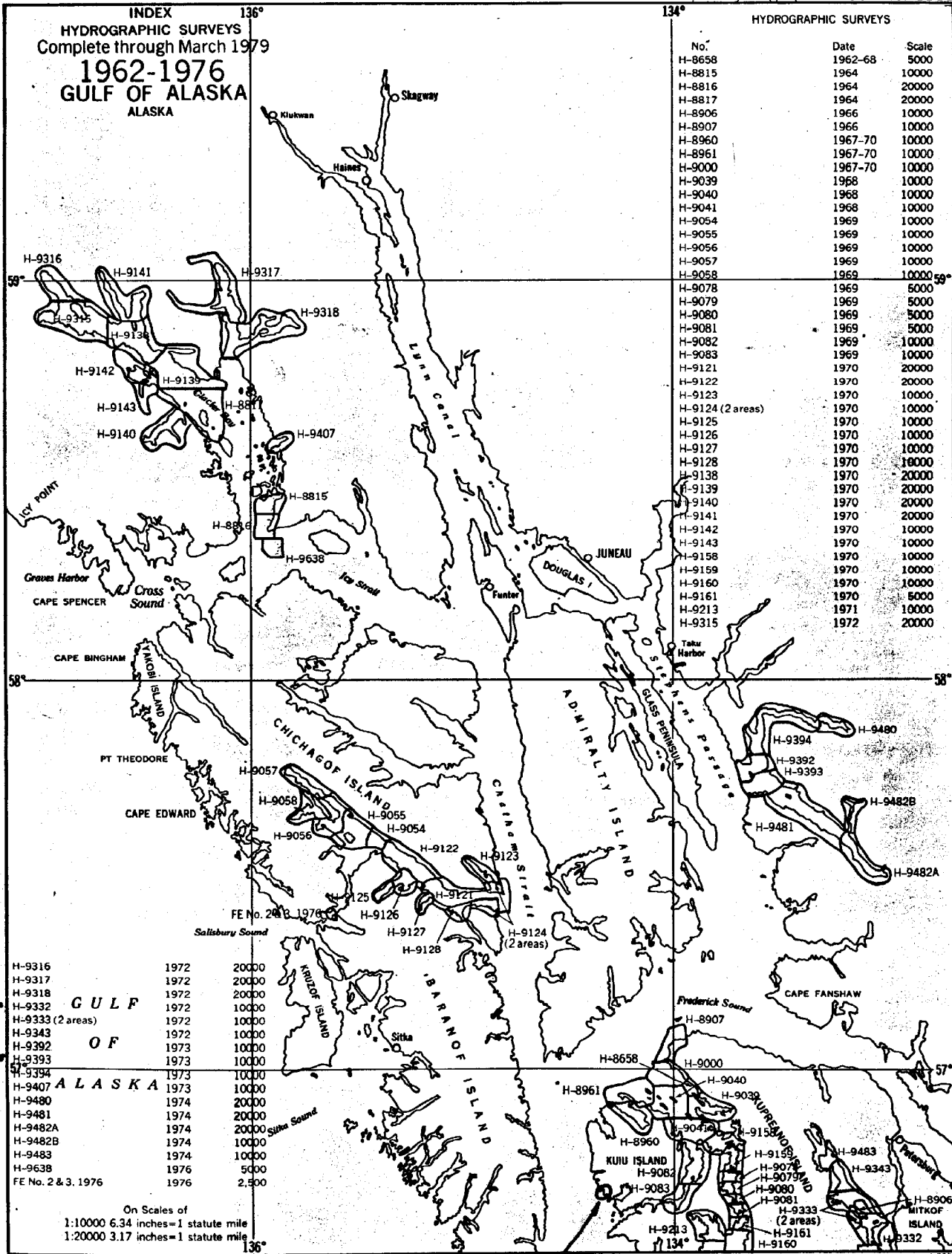
8/9/83

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

Charles J. Fourness 10/14/83
Director, Pacific Marine Center (Date)

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

Hydrographic Index No. 111E



(see also No. 110)

H-9977

Diagrams B201-1, B202

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9977

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	12/14/83	T. W. ALEXANDER	Full Part Before After Verification Review Inspection Signed Via Drawing No. <u>9</u> <u>APPLIED</u> <u>CORRECTIONS ONLY</u> <u>(APPLIED AT PROOF STAGE)</u>
17370	3/5/85	J. Bailey	Full Part Before After Verification Review Inspection Signed Via Drawing No. <u>10</u> <u>Applied.</u>
17370	10/24/90	D. Black	Full Part Before After Verification Review Inspection Signed Via Drawing No. <u>24</u> <u>THRU 17370</u>
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
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