

9976

Diagrams 8201-4 & 8252-3

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey .. Navigable Area Hydrographic

Field No. DA-10-3-81

Registry No. H-9976

LOCALITY

State Alaska

General Locality .. Chatham Strait

Sublocality Point Ellis to Rowan Bay

19 84

CHIEF OF PARTY

... CDR. J. Wintermye, CDR. N. C. Austin

LIBRARY & ARCHIVES

DATE September 19, 1984

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

9976

Chart
17370 }
17376 } *Carto 6*
17320 } *Sight of*
or for use

7

HYDROGRAPHIC TITLE SHEET

H-9976

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-10-3-81

State Alaska

General locality Chatham Strait

Locality Point Ellis to Rowan Bay

Scale 1:10,000 Date of survey Oct. 8 - Nov. 3, 1981

Instructions dated June 15, 1981 Project No. OPR-0353 -DA-81

Vessel NOAA Ship DAVIDSON 3130 Launch 3131, Launch 3132

Chief of party CDR Ned C. Austin, Comdg.

Surveyed by LCDR D. Seidel, LT D. Dreves, LT H. Ramm, LTJG S. Konrad, LTJG D. Actor, LTJG N. Bogue

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

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

Verified ~~Produced~~ by J. Stringham, J. Shofner, C. Davies Automated plot by PMC Xynetics Plotter

Evaluated ~~Verification~~ by Gordon E. Kay

Soundings in fathoms feet at MLW MLLW

REMARKS: Annotations in black were made during Evaluation, at the Pacific Marine Center, Seattle, Washington.

Partial report for 1981, 1982 Report at end of 1981

9-24-84 STANDARDS CC'D
C. LOM

AWOIS checked 4/29/85 SJS
SURF checked 4/29/85 SJS

134° 30'

134° 20'

134° 10'

134° 00'

56° 50'

PROGRESS SKETCH OPR-0353-DA-81

ROWAN BAY, ALASKA

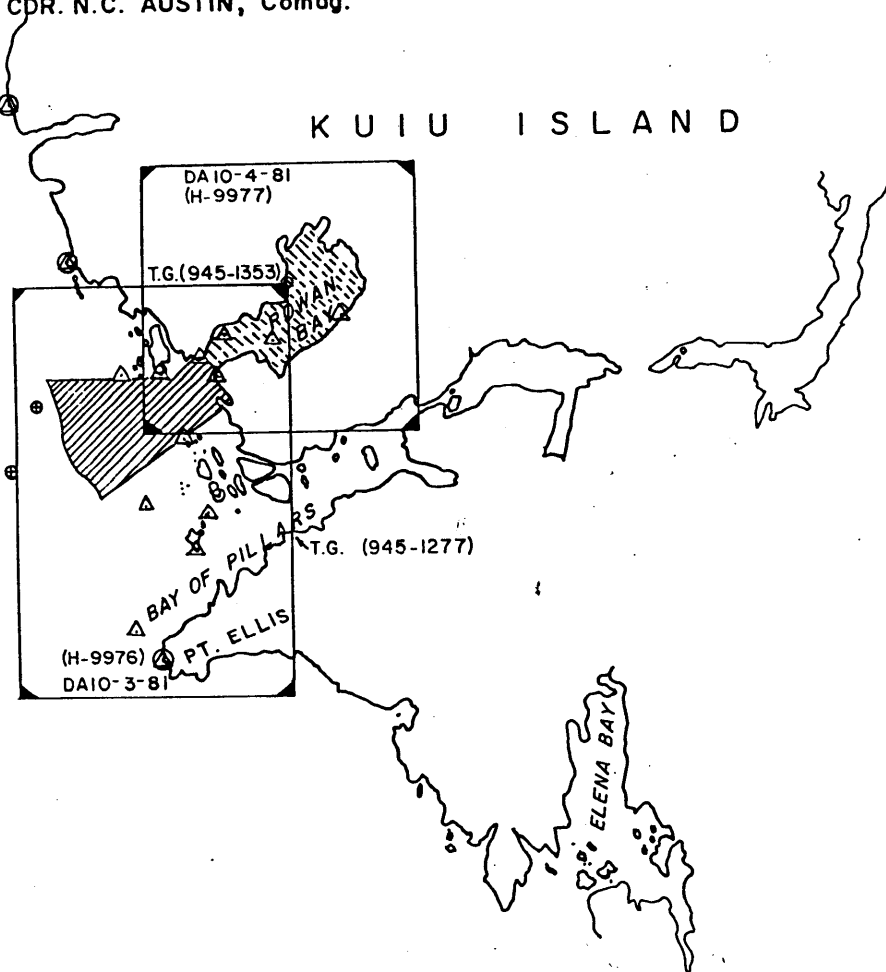
CHART: 17320 (1:217,828)

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	SO. 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
H-9976
OPR-0353-DA-81
ROWAN BAY, ALASKA

A. PROJECT

Survey operations were conducted in accordance with Project Instructions OPR-0 353-DA-81, dated June 15, 1981, and Change No. 1 dated July 1, 1981. Registry No. H-9976 was assigned on October 26, 1981. Operations commenced on October 8, 1981 (JD 281) and completed on November 3, 1981 (JD 307). ✓

B. AREA SURVEYED

This survey area includes the approaches to Rowan Bay, and Bay of Pillars, on the east side of Chatham Strait. The survey area boundaries are indicated on the appended sketch. Due to time limitations, only the northern 40% of H-9976 was completed. The area is defined by the limits of priority area #1 indicated in the project instructions. The bottom is uneven and predominately rock. *See following Descriptive Report text.*

C. SOUNDING VESSEL

Sounding vessels were launch DA-1 (3131) and DA-2 (3132). For ease of identification, raw data records and preliminary plots for DA-1 were made in red ink, and blue ink used for DA-2. ✓

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

Both launches were equipped with Ross 5000 Fineline Fathometers for recording all depths. Sounding equipment serial numbers were as follows: ✓

<u>Launch</u>	<u>Fathometer</u>	<u>Digitizer</u>	<u>Transceiver</u>
DA-1 (3131)	1048	1081	1081
DA-2 (3132)	1080	1048	1077

 ✓

Daily phase calibrations were conducted at 10 fathom intervals to 60 fathoms. Fathometers were monitored continuously during survey operations to keep the initial at zero, and to keep the phase calibration setting correct at mid-scale.

The fathograms were scanned after each day's hydrography, and digitized values compared to the analog record. Missed depths, digitizer errors, and peak/deep insertions were identified and corrected according to the fathogram trace. Changes were entered on the edited master tape or via the corrector tape. ✓

A preliminary transducer depth correction (TRA) was determined via daily bar checks to be 0.3 fathoms for both launches. This value was used in all field plots and on the TC/TI tape. It was not applied to field data. For further information see appended Corrections to Echo Soundings Report. ✓

Velocity corrections were determined from two Nansen casts. The casts were conducted on October 9, 1981 (JD 282) at 56°36.6'N, 134°24.0'W and on November 3, 1981 (JD 307) at 56°38.3'N, 134°23.5'W. Velocity corrections were not applied to final field sheet depths. ✓

Tide correctors were calculated from predicted high and low waters for Sitka, Alaska and corrected to Chatham Strait, Kuiu Island (per Project Instructions). Correctors were computed via AM 500 at 0.2 fathom intervals and were applied to preliminary and final field sounding plots. No tidal zoning was applied. ✓

Tide data was recorded by bubbler tide gages near the entrance to Bay of Pillars (Chatham Strait) and at Rowan Bay. A field tide note is appended. ✓

E. HYDROGRAPHIC SHEETS

Field sheets were prepared at a scale of 1:10000 using the DAVIDSON's PDP8/e Complot system and standard NOS software. Due to plotter limitations the field sheet was divided into two sections, referred to as DA10-3A-81, covering the approach to Rowan Bay, and DA10-3B-81, covering the approach to the Bay of Pillars. Only DA10-3A-81 was completed due to time limitations. Two 1:5000 scale blow ups were prepared to relieve sounding congestion in presurvey review and developed areas. Only the least observed depths in these areas are presented on the final field sheet. All data was transmitted to PMC Processing Division for verification. ✓

F. CONTROL STATIONS

The survey datum for horizontal control is NAD 1927. Eight existing second order stations and one third order station were recovered for hydrographic control. In addition, nine disk-monumented stations were established using second-order class II methods, and two temporary stations were established using third order methods. These temporary stations were established to control small areas of hydrography on H-9977 (TAT00, 1981 temp. pt.) and H-9976 (RAZ, 1981 temp. pt.) where monumented control was inadequate. ✓

Five stations were used as Miniranger sites and as visual signals. Station positions are included in the appended signal list. Stations and their uses are as follows: ✓

<u>Station</u>	<u>Use</u>
CHITON 1981	Miniranger Station, Visual Signal
ROWAN 1981	Miniranger Station, Visual Signal
SEAL 1981	Miniranger Station, Visual Signal
SURGE 1981	Miniranger Station, Visual Signal
SPRAY 1981	Miniranger Station, Visual Signal
LUNAR 1981	Not used for this survey
BAY 1981	Not used for this survey
ELIZA 1981	Not used for this survey
MONARCH 1981	Not used for this survey
RAZ 1981 Temp. Pt.	Not used. For support of southern half of H-9976
TATT00 1981 Temp. Pt.	Not used. For support of H-9977

A Horizontal Control Report is appended.

G. HYDROGRAPHIC POSITION CONTROL

The Motorola Miniranger III system was used for range-range operations. Transponders were deployed as indicated in Section F, and mounted directly above the station on a visual signal or survey tripod. Power was supplied by two 12 volt 60 amp./hr. lead-acid storage batteries connected in series to provide the required voltage. Equipment serial numbers follow: ✓

<u>Vessel</u>	<u>Julian Date</u>	<u>Console/R-T Unit</u>
DA-T 3131	281 - 307	710/721
DA-T 3132	281 - 309	707/719

Transponders

<u>Code</u>	<u>SN</u>
1	723
2	772
3	773
4	771
5	911711
6	911723

Baseline calibrations were conducted on October 4 (JD 277) and October 27 (JD 300) in the working grounds, and on November 7 (JD 311) in Ketchikan, Alaska. Baseline correctors are as follows: ✓

BASELINE CALIBRATION CORRECTOR ABSTRACT

<u>Console-R/T</u>	<u>Code</u>	<u>Oct 4 (JD 277)</u>	<u>Oct 27 (JD 300)</u>	<u>Nov 7 (JD 311)</u>
707 - 719	1	-7	-2	-5
	2	-1	-1	-4
	3	0	1	Not used
	4	-2	-3	-4
	5	-1	2	-2
	6	0	1	-1
710 - 721	1	-3	0	-2
	2	1	2	-2
	3	-3	1	Not used
	4	-1	-1	-2
	5	-2	0	-1
	6	-1	0	-1

Pre-operation baseline correctors (JD 277) were applied during preliminary and final field sheet plotting. Corrector tapes submitted to PMC incorporate meaned corrector values from baseline calibrations which preceded and succeeded hydrography. ✓

Daily Miniranger system checks, bracketed each day's hydrography, weather permitting. The baseline transit system check was the only method utilized during this project. Miniranger Baseline Calibrations, equipment problems and system check procedures are discussed in the Electronic Control Report. ✓

H. SHORELINE

Shoreline detail was derived from a 1:10000 scale blow-up of chart 17370 (7th edition, July 16, 1977). Field edit was not required, and aerial photographs were not provided. Discrepancies between actual and charted shoreline detail were detected. Several inshore soundings plotted within the shoreline rather than in water, and many newly ✓

established control stations plotted in the water rather than on the shoreline. The navigation and horizontal control data for these cases is not suspect. ✓

The charted shoreline was derived from 1897 plane table surveys T-2298 and T-2303, which used local datum. The subsequent adoption of the North American 1927 Datum may have contributed to the observed discrepancies. A modern, photogrammetrically supported field edit survey is recommended to accurately map the shoreline in the area. *Correct*

Shoreline is not shown on smooth sheet

I. CROSSLINES

Crosslines comprise 9.1% of all sounding data. Comparison indicates 45% of the crossings in exact agreement, 93% agree within one fathom, and 99% agree within two fathoms. ✓

J. JUNCTIONS

This survey junctions to the east with the contemporary survey of Rowan Bay, H-9977 (DA10-4-81), at the entrance to the bay. Comparison of overlapping depths yielded the following results. Agreement is exact with 39% of the depths, 89% agree within one fathom, and 94% agree within two fathoms. ✓

K. COMPARISON WITH PRIOR SURVEY/PRESURVEY REVIEW

This survey was compared with prior survey H-2334 (1:20000 scale, 1897). Agreement is good in areas of gentle slope but areas of broken bottom indicate differences greater than one fathom. The more dense sounding pattern plus greater accuracy of the contemporary data give it greater credibility. ✓

Of the 177 crossings examined 26% are of equal depth, 78% agree within one fathom, and 96% agree within two fathoms. Depth differences greater than two fathoms (with some exceptions) are not considered significant since several meters in horizontal displacement between compared soundings could produce up to several fathoms variance in depth in characteristically broken bottom areas. Comparison between surveys was made by coinciding latitude and longitude grids and selecting overlapping or nearly overlapping depths. ✓

Comparison between surveys showed differences greater than two fathoms in the following areas:

See Evaluation Report Section 6

<u>Latitude</u>	<u>Longitude</u>	<u>Charted</u>	<u>1981 Survey</u>	<u>Remarks</u>
56°38'06"	134°22'07"	43	38	Area of steep slope. The 1981 surveyed depth should replace charted depth.

* *Prior and Charted depths do not reflect NA 1927 datum adjustment, please use present survey for charting purposes. - 5 -^A or observed tides.*

Prior and charted depths do not reflect NA 1927 datum adjustment or observed tides. Please use present survey for charting purposes.

<u>Latitude</u>	<u>Longitude</u>	<u>Charted</u>	<u>1981 Survey</u>	<u>Remarks</u>
56°38'06"	134°21'32"	26	38	Encompassed by depths 35 - 40 fms no search was conducted due to the depth involved, recommend compiler decide. <i>chart according to present survey</i>
56°37'09"	134°21'06"	46	41	Recommend charted depth be replaced by shoaler 1981 survey data.
56°38'20"	134°19'52"	18	22	Area of steep slope; 1981 surveyed depth should replace charted depth.
56°38'02.5"	134°19'45"	46	42	Encompassed by depths 37 - 42 fms. Recommend 1981 surveyed depth.
56°37'56"	134°19'52"	21	31	Uneven bottom steep slope, recommend 1981 surveyed depth.
56°37'05.5"	134°19'44"	24	27	Recommend 1981 surveyed depth.
56°37'37"	134°19'19"	33	16	Steep slope, recommend 1981 surveyed depth.
56°37'45.5"	134°19'45"	32	40	Steep slope, uneven bottom, compiler decide.
56°37'56"	134°19'18"	35	42	Uneven bottom encompassed by surveyed depths of 32 - 42 fathoms. <i>chart according to present survey</i> Chart compiler decide.
56°38'21"	134°19'08"	21	24	Uneven bottom, recommend contemporary data.

Shin and charted depths do not reflect the NA-1927 datum adjustment, or observed tides. Please refer (use) present survey for charting purposes.

<u>Latitude</u>	<u>Longitude</u>	<u>Charted</u>	<u>1981 Survey</u>	<u>Remarks</u>
56°38'30"	134°19'09"	26	23	Uneven bottom, recommend ^{CON} temporary data
56°38'31.5"	134°19'13"	18	25	Uneven bottom, encompassed by 25-27 fm depths.
56°38'55"	134°18'43.5"	18	25	Steep slope, uneven bottom
56°38'44.5"	134°18'51.0"	13	20	Steep slope, uneven bottom.
56°38'36.5"	134°18'50"	4½	6.4	Uneven bottom
56°38'38.5"	134°18'43"	6½	10.4	Uneven bottom
56°38'14.5"	134°18'44.5"	10.5	12	Surveyed depth, 15 m NW of charted depth
56°37'39.5"	134°18'40.5"	35	31	Uneven bottom
56°38'52.5"	134°18'30"	24	26	Uneven bottom
56°38'48"	134°18'09.5"	3.5	5.2	Uneven bottom
56°38'48"	134°17'59"	6.5	9.1	6.3 30 m N.W.
56°38'30"	134°18'28.5"	9.	5.6	Uneven bottom, diver verified, JD 306 position 3424
56°38'25"	134°18'22.5"	19	12	Uneven bottom, recommend contemporary depth
56°38'05"	134°18'05"	24	34	Examine source data for 24 fm sounding
56°37'49"	134°18'05"	29	25	Uneven bottom recommend contemporary depth
56°38'44"	134°18'08"	6.5	7.4	Uneven bottom
56°38'07"	134°17'25.5"	7	10.2	Uneven bottom

Prior and charted depths do not reflect the NA-1925 datum adjustment or observed tides. Please use present survey for charting purposes.

<u>Latitude</u>	<u>Longitude</u>	<u>Charted</u>	<u>1981 Survey</u>	<u>Remarks</u>
56°38'11"	134°17'32"	15	6.9	Uneven bottom, recommend contemporary depth
56°38'08"	134°17'48"	18	22	Uneven bottom
56°38'21"	134°17'42"	6 3/4	2.4	Recommend contemporary depth (Position 5339, JD 306) Lead line depth
56°38'32.7"	134°17'38"	5	7.9	Uneven bottom
56°38'35.8"	134°17'48"	22	17	Uneven bottom Recommend contemporary depth
56°38'52.5"	134°17'47"	10	7.4	Uneven bottom, recommend contemporary depth
56°38'51"	134°17'33"	9.5	6.5	Uneven bottom, recommend contemporary depth

Presurvey Review

refer to present survey for charting.

Presurvey review items were investigated by hydrographic techniques using reduced line spacing. Diver investigations were used to identify least depths.

PSR item 2, sunken rock covered 2½ fathoms PA, 56°37'30"N, 134°20'06"W was searched for using 22 m line spacing (1:5000 scale *Part 3506* blow-up No. 1, JD 295, positions 3182 - 3277). A least depth was identified approximately 265 meters NW of the PA. A diver investigation was conducted on JD 305 and the least depth determined to be *see evaluation Report section 7* 1.7 fathoms (see JD 305, position 3416).
1.9 fathoms

PSR item 3, rock awash PA, at 56°38'12.4"N, 134°18'23"W was searched for using 22 m line spacing (1:5000 scale blow-up No. 2, *see evaluation Report section 7* JD 299, positions 3278 - 3350), as no rock awash was visibly evident. A shallow area was identified nearby, and a diver investigation was conducted on JD 306. The least depth was determined to be 3.0 fathoms (see JD 306 position 3428).

Numerous shoal depths not evident on the 1897 survey (or the chart) were investigated during this survey.

A ⁸4.7 fathom peak at 56°38'08"N, 134°20'^{24.0'}08.5"W was identified. The immediate area was developed at 22 m line spacing (JD 294, positions 2952 - 3085), and a dive investigation provided the least depth (JD 305, position 3421). *4.8RK, MLLW* ✓

A 3.5 fathom peak at 56°37'41.8"N, 134°20'06.2"W was identified. The immediate area was developed at 22 m line spacing (JD 295, positions 3182 - 3277) and a dive investigation provided the least depth (JD 306, position 5221). *3.5RK, MLLW* ✓

A ^{6.2}5.9 fathom peak at 56°38'15.5"N, 134°18.48.5"W was observed. The immediate area was developed at 22 m line spacing (JD 305, positions 5222 - 5274), and a dive investigation provided the least depth (JD 307, position 3436). *6.2RK, MLLW* ✓

A ³3.7 fathom peak at 56°38'46"N, 134°17'41"W was observed while running 45 m splits (JD 289, positions 2888 to 2889). The least depth was obtained via the drift lead line method on JD 306 (position 5338). ✓

A 3.2 fathom peak at 56°38'01.7"N, 134°18.06.5"W was observed while running 45 m splits (JD 287, positions 2593 - 2594). The least depth was obtained via the drift lead line method on JD 306, position 5342. *3.3* ✓

L. COMPARISON WITH CHART

Comparison of H-9976 with Chart 17370 (1:20000 scale, 7th Edition, July 1977) shows good agreement in flat and gently sloping areas, and fair agreement in areas of rapidly changing, broken bottom characteristics. Since all charted depths are from prior survey H-2334, depth comparison information is discussed in Section K, Comparison with Prior Surveys. Presurvey review items 2 and 3 were investigated and accurately located, and are described in Section K. The next edition of the chart should reflect these changes.

The unverified charted rock to the southwest of station LUNAR 1981 at 56°38'39.7"N, 134°20'27"W was not positioned during this survey. The H-9976 depths surrounding this rock-ledge area are at the kelp limit. The kelp symbols charted are adequate. *retain features as charted*

The rocks charted in the vicinity of 56°38'38"N, 134°19'42"W are actually protruding parts of a reef (JD 294 positions 6003 - 6006). This area should be charted to reflect this. The H-9976 depths surrounding this area are at the kelp limit. The charted kelp symbols are adequate. *Area is marked foul with kelp with a limit, use smooth chart for final portrayal.*

The U.S. Coast Guard was notified of the following dangers to navigation discovered by this survey. See appended letter.

	Latitude (N)	Longitude (W)	Depth (Fathoms) <i>Reduced</i>
1.	56°38.1'	134°20.4'	4.78

	<u>Latitude (N)</u>	<u>Longitude (W)</u>	<u>Depth (Fathoms)</u>
2.	56°37.6'	134°20.3'	1.79
3.	56°37.7'	134°20.1'	3.5
4.	56°38.2'	134°18.4'	3.03 <i>Beiten #9</i>
5.	56°38.8'	134°18.1'	3.23
6.	56°38.8'	134°17.7'	3.23

M. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede the prior survey for the navigable area covered. Historic shoreline data should be reviewed for agreement with H-9976 and H-9977 hydrographic/geodetic data. Charted shoreline discrepancies exist. ✓

N. AIDS TO NAVIGATION

None. ✓

O. STATISTICS

Number of positions:	1491 1489
Total Nautical Miles of Sounding Lines:	178.3
Square Miles:	5.1
Nansen Casts:	2
Bottom Samples	16

P. MISCELLANEOUS

All investigative dives were conducted with launches DA-1 and DA-2 as platforms of operations. Before dives, each feature was identified using the launch Hydroplot system, and marked with a buoy for diver reference. Divers identified least depths and marked them with an anchored float on a taut line. The launch was maneuvered into position with its Miniranger R-T unit adjacent to the float when Miniranger rates were observed. A sextant fix or third range provided the position check. Upon retrieving the float, the length of the taut line was measured to provide a least depth. ✓

In two instances float markers placed by the divers were not directly above the least depth because of current. On JD 305, position 3421, the current placed such a strain and angle on the float line that an accurate position and depth could not be determined for this item. Using the float as a reference point, the least ✓

depth was located by launch fathometer. On JD 306, position 3433, ^{7.2fm} the same technique was used but, with less acceptable results. The adjacent hydro-determined depth (JD 282, position 2439 +2) is shoaler, _{6.8fm} and should be used. ✓

All drift-lead line investigations were conducted with launch DA-2 (3132) in compliance with Section 1.4.3 of the Hydro manual. Each feature was investigated for a minimum of thirty minutes to insure that the shoalest area was located. Sea conditions were calm and visibility good, though the areas investigated could not be visibly located due to their depth. ✓

Bottom sample requirements were not met due to the launch sampling depth limitation (25 fathoms). Navigation hazards in the area did not permit ship bottom sampling in deeper water. All sounding lines junctioning near shore and foul areas were begun or ended at kelp and ledge limits. In all cases, launch safety and/or the 2 fathom inshore navigable area limit was the determining factor. The raw data record is annotated with distances from these features. ✓

Q. RECOMMENDATIONS

A floating aid to navigation is recommended to mark the 1. ⁹ ~~X~~ fathom shoal at 56°37'36.6"N, 134°20'15.6"W (JD 305, position 3416). *Concur*

R. AUTOMATED DATA PROCESSING

The following programs were used on the DAVIDSON's PDP 8/e Hydroplot system to prepare field sheets and to collect and process the data:

<u>Program</u>		<u>Version</u>
RK 112	Hyperbolic, Range-Range Hydroplot	3/19/81
RK 201	Grid, Signal, and Lattice Plot	4/18/75
RK 211	Range-Range Non-Real Time Plot	2/9/81
RK 300	Utility Computations	10/21/80
RK 330	Reformat and Data Check	5/4/76
RK 407	Geodetic Inverse/Direct Computation	9/25/78
RK 410	Geodetic Three Point Fix	9/22/78
RK 500	Predicted Tide Generator	11/10/72
RK 530	Layer Corrections for Velocity	5/10/76
AM 602	ELINORE	5/20/75

S. REFERENCES TO REPORTS

Horizontal Control Report

Field Tide Note

Corrections to Echo Soundings Report

Electronic Control Report

Dangers to Navigation Letter

Respectfully submitted:



David I. Actor
LT(jg), NOAA

Approved and forwarded:



N. C. Austin
CDR, NOAA
Commanding Officer

DIA:jaf



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
tradition of service to the Nation

- ✓ 2. 56°37.6'⁵N, 134°20.3'⁵W, Depth 1.7 fathoms.
Rock pinnacle marked by kelp.
- ✓ 3. 56°37.7'⁵N, 134°20.1'⁵W, Depth 3.5 fathoms.
Flat-topped broken rock shelf.
- ✓ 4. 56°38.2'³⁵N, 134°18.4'³⁵W, Depth 3.0 fathoms.
Rock, approximately 40' diameter near top, marked by kelp.
- ✓ 5. 56°38.8' N, 134°18.1'W, Depth 3.2 fathoms.
Least depth obtained by lead line, no description.
- ✓ 6. 56°38.8'⁷⁵N, 134°17.7'⁷⁵W, 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.
8. 56°39.4'N, 134°16.1'W, Depth 2.8 fathoms.
Elevated rocky area.
9. 56°39.2'N, 134°15.4'W, Depth 4.6 fathoms.
Elevated broken (rock) bottom.
10. 56°39.4'N, 134°15.2'W, Depth 3.9 fathoms.
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.
12. 56°39.7'N, 134°14.9'W, Depth 2.0 fathoms.
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

OPR-0353-DA-81
DA 10-3-81 (H-9976)
PARAMETER TAPES PRINTOUT

SKEW:0,22,36

FEST=22000
CLAT=6264000
CMER=134/20/00
GRID=30
PLSCL=10000
PLAT=56/36/10
PLON=134/23/44
VESNO=3132
YR=81
ANDIST=00.0

INSET #1
SKEW:90,22,28

FEST=22000
CLAT=6264000
CMER=134/20/00
GRID=15
PLSCL=5000
PLAT=56/37/00
PLON=134/19/00
VESNO=3132
YR=81
ANDIST=00.0

INSET #2
SKEW:90,20,30

FEST=22000
CLAT=6264000
CMER=134/20/00
GRID=15
PLSCL=5000
PLAT=56/37/08
PLON=134/17/00
VESNO=3132
YR=81
ANDIST=00.0

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	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 LTJG, NOAA

Approved and Forwarded


N. C. Austin CDR, NOAA

OPR-0353-DA-81
DA 10-3-81 (H-9976)
ROWAN BAY PREDICTED TIDES CORRECTOR TAPE

SITKA, ALASKA
ROWAN BAY
56 38 134 20 -0.06 -0.06 0.0 0.0 1.25 1.25
000
FM
0.2

OPR-0353-DA-81
DA-10-3-81(H-9976)
VELOCITY AND TC/TI TAPES PRINTOUT

VELOCITY TAPE:

00045 0 0000 0002 001 000000 009976
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)

65238 0 0003 0002 281 313100 000000
193933 0 0003 0002 307 313100 000000
235900 0 0003

LAUNCH DA-2(3132)

191129 0 0003 0002 303 313200 000000
174125 0 0003 0002 306 313200 000000
235900 0 0003

MONARK SKIFF(3133)

213000 0 0003 0002 294 313300 000000
235900 0 0003

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 3131

SHEET : DA-10-3-81

TIME	DAY	PATTERN 1	PATTERN 2
165238	281	-00001	-00002
165645	282	-00001	-00002
171558	287	-00002	-00001
204644		-00001	+00000
165551	288	-00001	+00000
160649	289	-00001	+00000
212149		+00000	-00001
221900	291	+00000	+00000
200831	294	+00002	+00000
181930	295	+00002	-00001
204436		+00000	-00001
211615		+00002	+00000
184027	299	+00000	+00002
194439		+00002	-00001
211843		+00000	+00002
212620		+00002	-00001
221053		+00002	+00000
223307		+00000	+00002
183933	305	-00001	+00000
200242		+00000	+00000
184257	306	+00000	-00001
211517		-00001	+00000
193933	307	-00001	+00000

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 3132

SHEET : DA-10-3-81

TIME	DAY	PATTERN 1	PATTERN 2
191129	303	+00000	+00000
221226	305	-00004	+00000
174125	306	-00004	+00000
180754		+00000	-00004
183832		-00004	+00000
205109		+00000	-00004

PR-0353-DA-81

DA-10-3-81 (H-9976)

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

SIGNAL TAPE PRINTOUT

001	1	55	32	23796	134	38	12853	139	0009	000000	PAT, 1926
002	3	56	33	32345	134	37	32150	139	0012	000000	HALT, 1897
003	3	55	38	11398	134	35	52365	139	0005	000000	DARE, 1897
004	3	55	39	59100	134	37	00232	139	0004	000000	FEZ, 1897
005	3	55	43	33403	134	37	43595	139	0003	000000	GUT, 1897
006	3	55	48	24981	134	39	49598	139	0010	000000	CECIL, 1925
007	4	55	43	45530	134	23	57708	139	0005	000000	JUT, 1897
008	2	55	40	28604	134	22	01766	139	0007	000000	SULLIVAN, 2 1925
009	0	55	38	43080	134	20	23118	139	0003	000000	LUNAR, 1981
010	1	55	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	55	39	27644	134	17	07398	250	0004	000000	BAY, 1981
013	4	56	40	04837	134	13	03264	250	0003	000000	ELIZA, 1981
014	0	55	39	21854	134	15	34520	250	0004	000000	MONARK, 1981
015	4	55	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	55	35	21264	134	19	39088	250	0008	000000	SPRAY, 1981
019	4	55	33	34159	134	19	14170	139	0011	000000	ELLIS, 1897
020	2	55	39	02753	134	18	21605	252	0000	000000	RAZ, 1981 (TEMP PT)
021	2	55	39	54043	134	15	25716	252	0000	000000	TATTOO, 1981 (TEMP PT)

ABSTRACT OF POSITIONS
DA 10-3-81 (H-9976)

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
281	2001-2190	042	016	---	017	Mainscheme
281	2191-2209	042	016	---	017	Splits
281	2210-2249	042	016	---	017	Mainscheme
282	2250-2268	042	016	---	017	Mainscheme
282	2269-2286	042	016	---	017	Splits
282	2287-2496	042	016	---	017	Mainscheme
287	2497-2585	042	010	---	011	Mainscheme
287	2586-2616	042	015	---	016	Mainscheme
288	2619-2752	042	010	---	016	Splits
288	2753-2793	042	010	---	016	X-Line
289	2794-2817	042	015	---	016	Mainscheme
289	2818-2821	042	015	---	016	Splits
289	2822-2824	042	015	---	016	Inshore
289	2825-2881	042	015	---	016	Splits
289	2884-2927	042	010	---	011	Splits
291	2928-2933	042	016	---	010	Bottom Samples
294	2934-2943	042	010	---	016	Splits
294	2944-2951	042	010	---	016	Shoreline
294	2952-3038	042	010	---	016	Development
294	3039-3050	042	010	---	016	Fill-In
294	3051-3085	042	010	---	016	Development
294	6001-6008	010	---	VIS	---	D.P.'s
295	3088-3093	042	010	---	011	Splits
295	3094-3100	042	010	---	011	Inshore
295	3101-3130	042	010	---	011	Splits
295	3131-3137	042	010	---	011	X-Line
295	3138-3157	042	016	---	010	X-Line
295	3158-3169	042	010	---	016	X-Line
295	3170-3181	042	010	---	016	Line Extentions
295	3182-3277	042	010	---	016	Dev. (Inset #1)
299	3278-3290	042	016	---	010	Inshore-Lines
299	3291-3294	042	016	---	010	Split
299	3296-3305	042	016	---	010	Inshore-Lines
299	3306-3309	042	016	---	010	Channel Line
299	3310-3313	042	016	---	010	Fill-In
299	3314-3317	042	016	---	010	Channel Line
299	3318-3350	042	010	---	011	Development
299	3351-3365	042	010	---	016	Development
299	3366-3379	042	016	---	010	Shoreline
303	5221-	042	010	---	016	Dive D.P.
305	3416-	042	010	---	016	Dive D.P.
305	3421-	042	011	---	016	Dive D.P.
305	5222-5274	042	010	---	011	Dev. (Inset #2)
305	5275-5287	042	010	---	016	Dev. (Inset #1)
305	5288-5291	042	010	---	016	Split
305	5292-5323	042	010	---	016	Development

ABSTRACT OF POSITIONS
DA-10-3-81 (H-9976)

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
306	3424-	042	016	---	010	Dive D.P. (& B.S.)
306	3428-	042	016	---	010	Dive D.P. (& B.S.)
306	3433-	042	010	---	016	Dive D.P. (& B.S.)
306	5329-5330	042	011	---	016	Bottom Samples
306	5331-	042	016	---	010	Bottom Samples
306	5332-	042	010	---	016	Bottom Sample
306	5337-	042	010	---	016	Bottom Sample
306	5338-5339	042	016	---	010	Least Depths
306	5342-	042	016	---	010	Least Depth
307	3436-	042	010	---	011	Dive D.P. (& B.S.)

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

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

VESSEL <i>DAWDSON</i>		PROJ. NO. <i>OPR-0353-DA-81</i>		YEAR <i>1981</i>	DA-10-3-81 (<i>H-9976</i>)			CHECKED BY	DATE CHECKED		
SERIAL NO.	DATE	SAMPLE POSITION		DEPTH (Fathoms)	WEIGHT OF SAM- PLER	AP- PROX. TREN- TION	LENGTH OF CORE	COLOR OF SEDI- MENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, denuded cutters, strat., type of bottom relief, i.e., slope, plain, deposition, etc.)	OBS. INIT.
		LATITUDE N	LONGITUDE W								
<i>2928</i>	<i>(UD-291) 18 Oct 1981</i>	<i>56/39/03</i>	<i>134/18/29</i>	<i>5.7</i>					<i>hrd</i>		<i>PIA</i>
<i>2929</i>	"	<i>56/38/55</i>	<i>134/17/42</i>	<i>16.0</i>					<i>hrd</i>		"
<i>2930</i>	"	<i>56/38/42</i>	<i>134/18/31</i>	<i>7.5</i>					<i>G</i>		"
<i>2931</i>	"	<i>56/38/29</i>	<i>134/19/05</i>	<i>9.1</i>					<i>S</i>		"
<i>2932</i>	"	<i>56/38/35</i>	<i>134/17/40</i>	<i>10.0</i>					<i>hrd</i>		"
<i>2933</i>	"	<i>56/38/07</i>	<i>134/17/27</i>	<i>10.0</i>					<i>hrd</i>		"
<i>3421</i>	<i>(UD 305) 1 Nov 1981</i>	<i>56/38/08</i>	<i>134/20/34</i>	<i>5.9</i>					<i>rky</i>		"
<i>3424</i>	<i>(UD 306) 2 Nov 1981</i>	<i>56/38/30</i>	<i>134/18/28</i>	<i>6.6</i>					<i>rky</i>		"
<i>3428</i>	"	<i>56/38/12</i>	<i>134/18/22</i>	<i>4.2</i>					<i>rky</i>		"
<i>3433</i>	"	<i>56/38/30</i>	<i>134/20/53</i>	<i>8.1</i>					<i>rky</i>		"

Use more than one line per sample if necessary.

OCEANOGRAPHIC LOG SHEET . M
BOTTOM SEDIMENT DATA

VESSEL <i>DAVIDSON</i>		PROJ. NO. <i>DP-0353-DA-81</i>		YEAR <i>1981</i>	DA-10-3-81				(H-9976)		CHECKED BY	DATE CHECKED
SERIAL NO.	DATE	SAMPLE POSITION		DEPTH (Fathoms)	WEIGHT OF SAM- PLER	AP- PROX. TRA- TION	LENGTH OF CORE	COLOR OF SEDI- MENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, dented cutter, stat. no., type of bottom relief i.e., slope, plain, deposition, etc.)	OBS. INIT.	
		LATITUDE	LONGITUDE									
5327	30 Oct 1981 (JD-306)	56/38/52	134/19/07	6.75					ky		SK	
<i>5329</i>	<i>2 Nov 1981</i>	<i>56/38/17</i>	<i>134/18/49</i>	<i>10.1</i>					<i>hrd</i>		"	
<i>5330</i>	"	<i>56/38/48</i>	<i>134/18/03</i>	<i>11.1</i>					<i>hrd</i>		"	
<i>5331</i>	"	<i>56/38/27</i>	<i>134/18/02</i>	<i>14.0</i>					<i>hrd</i>		"	
<i>5332</i>	"	<i>56/38/24</i>	<i>134/19/46</i>	<i>11.0</i>					<i>hrd</i>		"	
<i>5337</i>	"	<i>56/38/19</i>	<i>134/20/58</i>	<i>15.0</i>					<i>hrd</i>		"	

Use more than one line per sample if necessary.

SURVEY APPROVAL SHEET

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

Supervision of personnel and inspection of sheets and field records were accomplished on a daily basis through the Executive Officer and the Field Operations Officer. The Commanding Officer inspects sheets daily and field records periodically.

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

This survey is incomplete. Time permitted only the Priority I areas specified in the Project Instructions to be completed during this season. Field work within the area surveyed is complete and meets navigable area survey specifications.

The charted shoreline contains discrepancies. A modern shoreline compilation is recommended.

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

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

Date: _____

1/8/82

Approved and forwarded by:

N. C. Austin

N. C. Austin
CDR, NOAA
Commanding Officer

HYDROGRAPHIC TITLE SHEET

H-9976

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-10-3-81

State ALASKA

General locality Chatham Strait

Locality Point Ellis to Rowan Bay

Scale 1:10,000 Date of survey May 13 - September 22, 1982

Instructions dated June 15, 1981 Project No. OPR-0353 - DA-81

Vessel NOAA Ship DAVIDSON 3130, Launches 3131 and 3132, Skiff 3133

Chief of party CDR J. M. Wintermyre

Surveyed by LCDR D. MacFarland, LT D. Dreves, LT S. Tullis, LTJG N. Bogue, ENS E. Hawk, ENS J. Duggan

Soundings taken by echo sounder, ~~and lead~~ Ross Fathometer, Model 5000

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

Verified ~~Plotted~~ by J. Stringham, J. Shofner, C. Davies Automated plot by PMC Xynetics Plotter

Evaluated ~~Checked~~ by G. E. Kay

Soundings in fathoms feet at MLW MLLW

REMARKS: Annotations in black were made during evaluation at the Pacific Marine Center, Seattle, Washington.

Partial report of 1982

134°30'

134°20'

134°10'

134°00'

56°50'

PROGRESS SKETCH

OPR-0353-DA-81

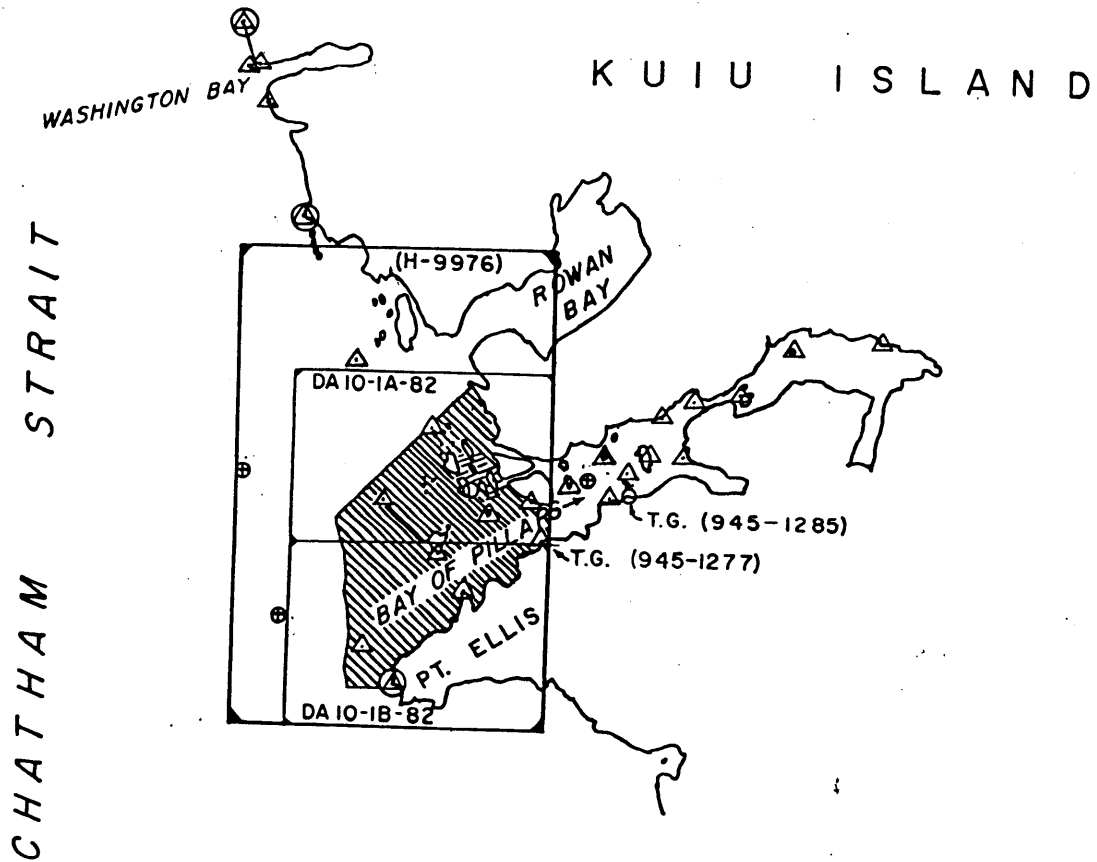
ROWAN BAY, ALASKA

SCALE: CHART 17320

NOAA SHIP DAVIDSON (S-331)

CDR JAMES M. WINTERMYRE Comdg.

MAY - JUNE, 1982



56°40'

56°30'

MAY		JUNE		STATISTICS	
219.0	14.3	L. N. M. SOUNDING LINE			
12.5	0.2	SQ. N. M. SOUNDING			
11	1	TRIANGULATION STA. RECOVERED			
9	9	TRIANGULATION STA. ESTABLISHED			
2	0	TIDE GAGE			
26	15	BOTTOM SAMPLES			
4	1	NANSEN CAST			
8/0	0	BENCH MARKS RECOVERED/ESTAB.			
0	22	DIVE INVESTIGATIONS			



134°00'

DESCRIPTIVE REPORT
H-9976
(OPR-0353-DA-81)
BAY OF PILLARS, ALASKA

A. PROJECT

Survey operations were a continuation of the navigable area survey begun in 1981. A final field sheet and descriptive report were submitted in December, 1981 for the portion of the survey completed at that time. Present survey operations were conducted in accordance with Project Instructions OPR-0353-DA-81 dated 15 June 1981, Change No. 1 dated 1 July 1981, and Change No. 2 dated 11 March 1982. Registry No. H-9976 was assigned on 26 October 1981. Operations were begun on 2 May 1982 and completed ~~16 June~~ 1982. *September 22, 1982*

B. AREA SURVEYED

The area surveyed includes the approaches to Bay of Pillars and Rowan Bay, on the east side of Chatham Strait, Alaska. Between latitudes 56/36/15N and 56/33/30N the survey area was limited on the east by longitude 134/15/36W and on the west by the 50 fathom depth curve. The inshore limit is the 2 fathom curve. Between latitudes 56/36/15N and 56/38/09N the survey junctions with prior survey DA-10-3-81. *H-9976* The survey areas are indicated on the appended sketch. The morphology of the bottom is predominantly rugged, irregular and rocky.

C. SOUNDING VESSELS

Sounding vessels were survey launches DA-1 (3131) and DA-2 (3132). For ease of identification, raw data records were annotated in red ink for DA-1 and blue ink for DA-2.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

Both launches were equipped with Ross 5000 Fineline Fathometers for recording all soundings. Serial numbers of the sounding equipment used by both launches are listed below:

<u>Launch</u>	<u>Fathometer</u>	<u>Digitizer</u>	<u>Transceiver</u>	<u>Julian Days</u>
DA-1	1048	1081	1081	133-166
DA-2	1080	1048	1077	133-139
			1036	140-166

Daily stylus belt tension checks were conducted, and phase calibrations were conducted at 10-fathom intervals to 60 fathoms. Fathometers were monitored continuously during survey operations and the fathogram initial was maintained at zero. Fathograms were scanned and the analog record compared to digitized depths. Digitizer errors, missed depths, and peak/deep insertions were identified and corrected according to the fathogram trace. Changes were entered on the edited master tape or via the corrector tape and noted on the raw data printout and fathogram.

Soundings on the final field sheet have been corrected for transducer draft, velocity, and predicted tides. Bar checks were generally made twice daily, weather permitting, and a TRA correction of 0.3 fathoms was determined and applied throughout the survey. Corrections for settlement and squat were determined for both survey launches on 12 May 1982 (JD 132) and the results submitted to PMC. Settlement and squat corrections were not applied to soundings on the final field sheet because 1) correctors were less than 0.2 feet (see Hydrographic Manual, 4th Edition, 1976, Sec. 4.9.4.2, p. 3-31), and 2) due to the irregular nature of the bottom topography and character of the survey area which made necessary frequent speed changes (see PMC OORDER, 3-03.06x1, p. 3-31). ✓

The DAVIDSON conducted three Nansen casts during the project to determine velocity correctors. Velocity corrections from a mean velocity correction curve were applied to soundings on the final field sheet. Additional information is contained in the appended Corrections to Echo Soundings Report. ✓

Predicted tides were computed from published daily predictions for Sitka, Alaska, corrected to Rowan Bay, Alaska using the preliminary zoning correctors provided in the Project Instructions (see Field Tide Note). Predicted tides were applied at 0.2 fathom intervals for preliminary field sheet plotting, and 0.1 fathom intervals for final field sheet plotting. ✓

Bristol bubbler-type tide gages were installed at two sites, though only one station (Chatham Strait) should be used to control hydrography. Two gages (SN's 64A11030 and 67A10292) were installed at the Chatham Strait tide station (945-1277) to ensure a continuous tide record in the event of a gage failure. The Field Tide Note contains details of the installations and locations of the gages and staff, as well as leveling results. ✓

E. HYDROGRAPHIC SHEETS

Field sheets were prepared at a scale of 1:10,000 using the DAVIDSON's PDP8/e Complot system and standard NOS software. The field sheet was divided into two sections referred to as DA-10-1A-82, covering the northern approaches to Bay of Pillars (and junctioning with prior survey DA-10-3-81), and DA-10-1B-82, covering the southern and western approaches to Bay of Pillars as far south as the southern limit of chart 17370, near Point Ellis. Blowups (1:5,000 scale) were prepared to relieve congestion in areas where extensive development was undertaken to delineate bottom features. Only the least observed depths from these areas are presented on the final field sheet. All data was submitted to PMC Processing Division for verification. ✓

F. CONTROL STATIONS

Two triangulation stations and one temporary station were established to control hydrography. The triangulation stations were extensions of the second order net established in 1981. Second order techniques were used. ✓

In addition, two third order stations (STRAW 1981, BERRY 1981) were re-occupied to upgrade them to second order. The temporary station is third order. The stations, signal numbers and usage are listed below:

<u>Station</u>	<u>Signal Number</u>	<u>Use</u>	
CHITON, 1981	010	R/R, R/AZ	
SPRAY, 1981	017	R/R	
BERRY, 1981	018	R/R	
RAZ (TEMP PT), 1981	020	R/R, R/AZ	✓
PILLAR, 1981	022	R/R	
SPRAY RM2, 1981	025	R/R, R/AZ	
BERRY RM1, 1981	026	R/R	
STRAW RM2, 1981	028	R/R	
LUNAR RM1, 1981	029	R/R	
POST RM2, 1982	032	R/R	
RIPE RM2, 1982	035	R/R	
SURGE RM1, 1981	039	R/R	
SURGE RM2, 1981	040	R/R	
GAGE (TEMP PT), 1982	042	R/R, R/AZ	

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-range or range azimuth techniques using Motorola Miniranger III and Wild T-2 theodolites. The serial numbers of Miniranger consoles and receiver transceiver units used are listed below, as well as the transponders used: ✓

<u>Vessel</u>	<u>MR Console S/N</u>	<u>RT Unit S/N</u>	<u>Julian Days</u>
DA-1	710	721	133-166
DA-2	713166	1527	133-138
	707	SM307	139-148
	713166	1545	152-166

Transponders

<u>Code</u>	<u>S/N</u>	<u>JD</u>	<u>Code</u>	<u>S/N</u>	<u>JD</u>
1	1606	133-166	4	3376	133-166
2	1137	133-147	5	B1412	133-149
	1172	158		B1413	158-166
	1572	158-166	6	911723	133-166
3	4950	133-166	7	B1215	133-166

The Miniranger transponder codes and serial numbers, stations and days of operation, control types and position numbers are tabulated as follows:

<u>Station</u>	<u>Code</u>	<u>S/N</u>	<u>Control Type</u>	<u>Position Numbers</u>	<u>Julian Days</u>	<u>Survey Launch</u>
SPRAY, 1981	1	1606	R/R	2001-2912	133-137	DA-1
BERRY, 1981	2	1137	R/R	2001-2646	133-135	DA-1
BERRY RM1, 1981	2	1137	R/R	2647-3555	136-140	DA-1
	6	911723	R/R	7304-7337	165-166	DA-1
STRAW RM2, 1981	5	B1412	R/R	2925-3271	138-139	DA-1
	4	3376	R/R	3423-3702	146-147	DA-1
PILLAR, 1981	3	4950	R/R	2925-3271	138-139	DA-1
	7	B1215	R/R	7001-7267	150-151	DA-1
	7	B1215	R/R	4289-4429	153	DA-2
SPRAY RM2, 1981	1	1606	R/AZ	4004-4061	138	DA-2
	1	1606	R/R	3299-3355	140	DA-1
	4	3376	R/R	3851-4000	149	DA-1
	4	3376	R/R	7001-7267	150-151	DA-1
	4	3376	R/R	4477-4480	162	DA-2
	4	3376	R/R	7271-7313	163-165	DA-1
	4	3376	R/AZ	7316-7337	166	DA-1
RIPE RM2, 1982	3	4950	R/R	3356-3850	145-148	DA-1
	3	4950	R/R	7316-7337	166	DA-1
POST RM2, 1982	2	1137	R/R	3356-3702	145-147	DA-1
	7	B1215	R/R	3754-4000	148-149	DA-1
	5	B1413	R/R	7304-7377	165-166	DA-1
LUNAR RM1, 1981	7	B1215	R/R	4062-4180	139	DA-2
	5	B1412	R/R	3754-4000	148-149	DA-1
	6	911723	R/R	7001-7267	150-151	DA-1
	6	911723	R/R	4289-4429	153	DA-2
	7	B1215	R/R	4477-4480	162	DA-2
	7	B1215	R/R	7271-7303	163-164	DA-1

<u>Station</u>	<u>Code</u>	<u>S/N</u>	<u>Control Type</u>	<u>Position Numbers</u>	<u>Julian Days</u>	<u>Survey Launch</u>
SURGE RM1, 1981	3	4950	R/R	3754-4000	148-149	DA-1
	3	4950	R/R	7001-7152	150	DA-1
	3	4950	R/R	4289-4429	153	DA-2
	3	4950	R/R	4477-4480	162	DA-2
	3	4950	R/R	7290-7303	164	DA-1
SURGE RM2, 1981	1	3376	R/R	3754-3850	148	DA-1
		3376	R/R	4289-4474	153-154	DA-2
CHITON, 1981	4	3376	R/AZ	4253-4288	152	DA-2
	4	3376	R/AZ	4431-4474	154	DA-2
RAZ (TEMP PT) 1981	6	911723	R/R	4181-4252	148	DA-2
	4	3376	R/AZ	4253-4288	152	DA-2
	4	3376	R/AZ	4431-4474	154	DA-2
GAGE (TEMP PT)	4	3376	R/AZ	4431-4474	154	DA-2
	4	3376	R/AZ	7316-7337	166	DA-1

Range-range station configurations were selected to provide unobstructed lines of sight to the survey area, as well as minimum 30° range arc intersection angles. Range-azimuth control was used only where satisfactory range-range control was not possible.

Miniranger system checks were performed at least twice daily in most instances, before and after each day's hydrography, using the baseline transit method developed by the DAVIDSON. Miniranger signal strengths during survey operations were good. Minimum acceptable signal strengths were established for each of the seven transponder codes based on the latest Miniranger baseline calibration preceding hydrography. These minimum acceptable signal strengths were not violated. The minimum strengths were determined as follows: First, the Miniranger correctors were determined from the baseline calibration results. Then, the corrector-curve for each transponder code was plotted using corrector values (y-axis) versus signal strengths (x-axis). The minimum acceptable signal strength was established at the signal strength value where the slope of the corrector-curve changed most abruptly, i.e. where the plotted corrector varied most significantly from the mean of the preceding correctors. This "breaking point" of the curve usually occurred between signal strengths 5 and 7 on all codes for all Miniranger console/receiver transceiver combinations calibrated.

Miniranger baseline calibrations were performed on JD's 124, 130, 141, 158, and 167 over ranges measured with EDM equipment. The first and last calibrations were performed at the working grounds; the remainder were in Juneau, Alaska. Baseline correctors are listed in the appended Miniranger Baseline Corrector Abstract. The most recent correctors available were used in preparation of the preliminary field sheet. In preparing the final field sheet, correctors to the Miniranger ranges are the means of the two sets of correctors bracketing the period of hydrographic data acquisition, except when a Miniranger component failed, thereby precluding a "closing"

calibration. Transponder codes 2 and 5 failed during the course of hydrography. Data gathered using these codes were plotted using the most recent baseline calibration correctors obtained prior to their failure. The repaired codes 2 and 5 were calibrated before their return to the field, and again at the completion of hydrography. All final corrector tapes submitted to PMC incorporate the meaned correctors with the exceptions previously noted. ✓

H. SHORELINE

Discrepancies between actual and charted shorelines were detected during the course of field operations. In some inshore areas soundings plotted on the beach. Similar deficiencies were also noted in the 1981 descriptive reports for H-9976 and H-9977. Shoreline differences were noted between 56/38/05N, 134/17/22W and 56/38/06.5N, 134/17/25W; between 56/34/52N, 134/17/28W and 56/34/54N, 134/17/29W; between 56/35/09N, 134/16/49W and 56/35/10.5N, 134/16/48W; and at 56/35/30N, 134/18/31W. ✓

The charted shoreline (chart 17370) was obtained from surveys T-2303 and T-2298, both dated 1897. Shoreline for these surveys was determined by plane table using a local datum, which was subsequently transformed to the North American Datum of 1927. It is presumed that errors in the original survey and in the transformation process contributed to the discrepancies observed. ✓

The shoreline details on the final field sheet were obtained from 1:10,000 blow-ups of chart 17370. A 1:10,000 blow-up of the 1:63360 USGS quad map for the Bay of Pillars (Port Alexander, C-1, Alaska, 1948) was also obtained. Shoreline data for this map was obtained from 1948 *Comau* aerial photography and in some areas provided better agreement with the 1982 hydrography. It is strongly recommended that the shoreline revision photography flown this summer in the area be incorporated into the next edition of chart 17370.

Shoreline is not shown on small sheet

I. CROSSLINES

Crosslines comprise 11.2% of the total sounding line mileage. All crosslines were scanned, and agreement with main scheme soundings was good. Specific comparisons were made between 48 randomly selected cross-line and main scheme soundings with the following results: Exact agreement was seen in 22 (46%) of the soundings, 18 (37%) agreed within one fathom, and 8 (17%) disagreed by two or more fathoms. Differences are attributed to the irregular bottom topography, where small horizontal displacement of soundings may result in significant variations in depth. Forty two (88%) of the soundings between 11 and 55 fathoms agree within 1.5 fathoms, while six (13%) do not. The six which do not agree within 1.5 fathoms, even when the observed soundings are moved 1.5 mm on the sheet, are all on steeply sloping bottoms. Inspection of the fathogram record showed very abrupt changes in depth in the six cases where the soundings disagree.

J. JUNCTIONS *see Inclusive Report Section 5*

This survey is a continuation of DA-10-3-81 (H-9976) begun in 1981.

Irregular bottom relief in the area made junctioning difficult, but results are satisfactory. Specific comparisons between 39 randomly selected soundings from the junction overlap zone of DA-10-1-82 with DA-10-3-81 yielded the following results: Nine (30%) agreed exactly, 15 (50%) agreed within one fathom, and six (20%) disagreed by two or more fathoms. Eighty percent of the soundings between 11 and 55 fathoms agreed within 1.5 fathoms. Differences are attributable to erratic bottom topography in the junction area, where small horizontal displacements of soundings may result in significant variations in depth. No major discrepancies were noted. It is the opinion of the hydrographer that all apparent discrepancies are due to the irregularity of the bottom topography.

K. COMPARISONS WITH PRIOR SURVEYS *see Evaluation Report Section 6*

The survey was compared with prior survey H-2334, 1:20,000 scale, 1897 and with a 1:10,000 scale blow-up of chart 17370 (7th Edition, 16 July 1977, 1:20,000 scale). Sounding agreement criteria was taken from the PMC OORDER (Appendix Q):

- 0.2 fms for depths 0-5 fms.
- 0.5 fms for depths 5-11 fms. ✓
- 1.5 fms for depths 11-55 fms.
- 3% of depths greater than 55 fms.

Comparisons between present and prior survey soundings were made by coinciding latitude and longitude grids and selecting overlapping or nearly overlapping soundings. Agreement was generally good. A total of 417 specific comparisons were made. Two hundred eighty five (68%) of these met the above criteria. Of these, 191 (67%) plotted within 1.5 mm of the prior sounding while 94 (33%) plotted within 3.0 mm. ✓

One hundred thirty two soundings of the 417 comparisons (32%) did not meet the criteria. Of these, six (5%) were within 1 fm of the prior sounding, 40 (30%) were within 2 fms, 34 (26%) were within 3 fms, and the remaining 39% of the soundings not meeting the agreement criteria had differences exceeding 3 fms. ✓

Of the 132 comparisons failing to meet the criteria, 59 (31%) were from depths less than or equal to 11 fathoms where a difference of greater than 0.5 fms is in disagreement. A difference several times greater than 0.5 fathoms is not improbable given the rocky and irregular bottom of the survey area. ✓

General agreement between prior and present survey soundings is good and depth differences can be ascribed to the rugged and irregular bottom profile. Soundings from H-9976 should be given preference over prior sounding data, and charted in lieu of the latter. ✓

L. COMPARISON WITH THE CHART

The largest scale chart of the area is chart No. 17370, 7th Edition, July 16, 1977 at 1:20,000 scale. The charted soundings in and around approaches to Bay of Pillars originate from survey H-2334 (1897). A com-

parison of soundings on H-2334 was made with those on the current survey (H-9976). The results are discussed in section K, Comparison with Prior Surveys. ✓

Presurvey review item No. 1 lies within the limits of H-9976. It is a rock, originated with the 1st edition of Chart No. 17370, 1907, plotted at 56/34/24.10N, 134/19/38.00W. A fix (Position No. 6001) taken on the rock places its location at 56/34/21.73N, 134/19/38.67W, approximately 75 meters south of its charted position. Future editions of the chart should be amended to show the rock in its actual position. A foul line was run around the kelp surrounding the item. The area inside the line is thick with kelp and declared foul by the hydrographer as unsafe for navigation due to the presence of numerous rocks. *Concur*

Numerous rocks awash whose positions in the project area were applied from USGS quadrangle C1 and C2, Port Alexander, Alaska were investigated. An open skiff was used to search for the charted features. Investigations were conducted at or near low water. Conditions were favorable for observing submerged features: glassy or calm seas, and good underwater visibility. An area roughly 200 m x 200 m was searched around each feature to identify other dangers in the area which should also be located. When the rocks were found, electronic and visual positioning methods were used to locate them. The positions of the charted features differ significantly from positions determined during the present survey. The discrepancies can probably be related to 1) errors in the transformation of the charted shoreline from the original survey datum to the North American Datum of 1927; and 2) errors in the original shoreline manuscripts. ✓

Because the rocks come from different sources, and their positions have been modified by changes in datum, a single rock may be charted at two locations in close proximity to each other, one position derived from the 1897 C&GS survey, and the other from the 1948 USGS data. The H-9976 data is believed to be complete and adequate to supersede both. Preference should be assigned to the 1982 positions over the charted positions of the items thus investigated. *See Inclusion Report Section 7* ✓

The rock charted at 56/34/01.0N, 134/18/57.5W was searched for but not found. A large stand of kelp was observed nearby at 56/34/00.5N, 134/19/04.0W (Position 6002) at a depth of 5 feet. The bottom could not be felt beneath the kelp with a 7-foot sounding pole. The rock should be deleted from future editions of chart 17370. ✓

- (floating deadhead)*
1. An uncharted submerged piling was discovered at 56/36/25.47N, 134/16/32.10W (Position No. 3681). The piling was searched for at a later time in conditions of smooth seas and good underwater visibility at a low stage of tide, and was not observed. Since other cultural features were not present in the area, the "piling" may have been a deadhead. The feature will be reinvestigated in the fall, 1982. *see following addendum to paragraph 1*
No feature was found

Items 1 thru 7 are covered in Addendum to paragraph L, attached to end of this report.

2. A small uncharted rock was seen at approximate location 56/36/35.5N, 134/16/07.0W, about 10 meters southwest of Position No. 3492. It will be investigated and a position determined for it in the fall, 1982. *Pos# 6087 8RK MLLW*
3. A thorough search was conducted in conditions of good water visibility and negative tide for the rock charted at 56/37/06.0N, 134/17/22.5W. The survey launch motored slowly and repeatedly through the area in a zig zag pattern while an observer scanned the water from the bow, and another monitored the fathometer trace. The rock was not found. *Pos# 6086 1.4RK MLLW*
4. The rock charted at 56/34/58.6N, 134/17/04.0W was not observed. It will be investigated in the fall, 1982. *not found remove from chart*
5. The rock charted at 56/38/04.0N, 134/17/10.5W was not observed. It will be investigated in the fall, 1982. *Pos# 6074 * Cooled 1 foot at MLLW*
6. A sounding line (Position Nos. 3849 - 3850) run around and 5 - 10 meters off the rock charted at 56/36/22.5N, 134/19/50.0W places its true position approximately 50 meters east of the charted location. *Pos# 6079 *(13)*
7. The rock awash charted at 56/35/42.3, 134/18/40.0W was searched for but not observed; however a nearby sounding (Position 4395+1) shows an elevated feature rising to 1.0 fathom at the charting datum. *Pos# 6075 8RK MLLW*

Resolution of numbered items is discussed in Addendum to Section L, appended to this report. Item numbers correspond to the above numbers.

Twenty two features were investigated by divers for identification of least depths and to fix their positions. The search technique used to determine the least depths is as follows: The launch investigated the area by running short lines (10 - 20 meter spacing) over the shoal while an operator monitored the fathometer. A marker float was dropped at the least depth observed on the fathogram. Divers followed the float line down and searched the surrounding area to identify the least depth. When located, the divers moved the float marker to it and tied off the line making sure the float line was taut and vertical through the water column. A series of sharp tugs on the line let the launch personnel know that the float line was secured and the time was noted. The launch was maneuvered alongside the float, with the Miniranger RT unit as close to it as possible, generally within one meter. Range-Range or range-angle fixes and check fixes were then taken. The float was retrieved and the line measured with a steel tape to determine the observed depth. Depths determined are believed accurate to 1.0 ± 0.5 ft. due to deflections of the float line away from the vertical by wave, wind, tide, and current effects, error in securing the float line, and measuring error. ✓

Predicted tide information and baseline corrector values were applied to the least depths and fixes before plotting on the final field sheet. Features investigated in this manner are listed in the following table. ✓

Please refer to smooth sheet

<u>JD</u>	<u>POSITION</u>	<u>LATITUDE N</u> *	<u>LONGITUDE W</u> *	<u>DEPTH*</u>	<u>REMARKS</u>
162	4477	56/36/35.27	134/18/54.19	9.6	Rocky, N-S ridge, approximately 40' X 100'
162	4478	56/36/18.33	134/19/13.39	3.8	Rocky, N-S ridge, kelp
162	4479	5/36/14.03	134/19/48.04	9.2	Rocky, N-S ridge approximately 30' X 75'
162	4480	56/36/27.06	134/19/47.86	1.3	Rocky pinnacle on E-W ridge, kelp
163	7271	56/36/34.75	134/18/09.94	4.9	Flat-topped rock, heavy kelp
163	7274	56/36/48.71	134/18/03.54	2.0	Rocky N-S ridge, approximately 70' X 100', kelp
163	7278	56/37/02.62	134/18/19.51	2.6	Jagged rocky ridge approximately 40' X 120'
163	7283	56/37/08.97	134/18/26.24	4.0	Rocky rugged oval N-S ridge, approximately 50' X 60'
163	7286	56/37/11.51	134/18/32.22	4.5	Rocky bottom, kelp
164	7290	56/36/57.30	134/18/12.74	2.1	Rocky N-S ridge, approximately 45' X 120', kelp
164	7294	56/36/41.51	134/18/58.87	0.9	Flat-topped steep sided pinnacle approximately 4' X 12', kelp
164	7295	56/36/03.25	134/19/49.49	7.8	Irregular rocky ridge
165	7304	56/35/12.46	134/18/36.24	2.6	N-S ridge approximately 30' wide, kelp
165	7305	56/35/12.90	134/18/37.08	3.1	NE-SW rocky ridge
165	7306	56/35/06.89	134/18/30.46	6.2	S end of long N-S rocky ridge approximately 60' wide
165	7308	56/35/11.13	134/19/02.21	3.5	Steep-sided pinnacle peak, approximately 10' X 10', kelp
165	7313	56/33/40.25	134/19/40.60	3.1	Flat topped rocky pinnacle, approximately 30' X 45'

** field computed S.P.'s - refer to smooth printouts for corrected Latitude, Longitude*

<u>JD</u>	<u>POSITION</u>	<u>LATITUDE N</u>	<u>LONGITUDE W</u>	<u>DEPTH*</u>	<u>REMARKS</u>
166	7326	56/35/10.24	134/17/12.64	0.8	Rocky N-S ridge in kelp zone
166	7327	56/35/07.37	134/17/11.53	Bares 2.4 ft.	Rocky N-S ridge in kelp zone
166	7328	56/36/20.25	134/17/09.20	4.2	Rocky pinnacle ridge
166	7335	56/37/07.52	134/17/35.96	1.1	Large rock rising several ft. from flat bottom, inside heavy kelp
166	7337	56/37/08.86	134/17/31.92	0.7	Large rock rising several ft. from flat bottom, inside heavy kelp

*Diver determined depths, in fathoms, reduced with predicted tides.

NOTE: Smooth sheet depths supersede these diver determined depths

SSV #16241

5/8/85

J. ADEQUACY OF SURVEY

This survey is complete and adequate within its boundaries to supersede the prior survey for charting, with the recommendations noted in the previous section. ✓

N. AIDS TO NAVIGATION

Point Ellis Light 8 was established after completion of spring 1982 operations. It was located by third order techniques upon resumption of operations in the fall. The light is less than one meter away from station PILLAR. Additional information is contained in the H-10050 Horizontal Control Report. ✓

O. STATISTICS

Number of Positions:	2258 2379
Total Nautical Miles of Sounding Lines:	243.3
Square Miles of Sounding Lines:	12.7
Bottom Samples:	48
Nansen Casts:	3
Tide Stations Occupied:	2
Dive Investigations:	24

Total for both years 3901

P. MISCELLANEOUS

Stations and nearby reference marks were used for Miniranger and theodolite emplacement. To avoid undesirable congestion on the final field sheet, some control station symbols in close proximity to each other were deleted. ✓

Q. RECOMMENDATIONS

The shoreline revision photography flown this summer should be applied to the next edition of chart 17370 to correct apparent shoreline discrepancies between the present survey and the chart. ✓

R. AUTOMATED DATA PROCESSING

The following programs were used for automated data acquisition and processing during this survey: ✓

<u>Program Number</u>	<u>Program Name</u>	<u>Version Date</u>
RK 112	Range-Range Real Time HYDROPLOT	3/19/81
FA 181	Range-Azimuth Logger	2/23/78

 ✓

<u>Program Number</u>	<u>Program Name</u>	<u>Version Date</u>
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 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 HP-9815A calculator.

S. REFERRAL TO REPORTS

Horizontal Control Report for H-9976, 1982
 Field Tide Note for H-9976, 1982
 Electronic Control Report for H-9976, 1982
 Corrections of Echo Soundings Report for H-9976, 1982
 Field Geographic Names for H-9976, 1982
 Coast Pilot Report for H-9976, 1982

Respectfully submitted,

Donald A. Hawk
 for Eric G. Hawk
 ENS, NOAA

Approved and forwarded,

James M. Wintermyre
 James M. Wintermyre, CDR, NOAA
 Commanding Officer
 NOAA Ship DAVIDSON

EGH:jaf

ADDENDUM TO SECTION L
"COMPARISON WITH CHART"
H-9976

Survey operations on H-9976, DA-10-1-82 were begun in Bay of Pillars, AK on 2 May 1982 and suspended on 16 June 1982. Time constraints precluded the completion of investigations on several charted and uncharted features. These items were addressed upon return to the Bay of Pillars in September 1982. and are discussed below. ✓

Paragraph numbers correspond to *paragraph 1* Section 1, Descriptive Report for H-9976, spring 1982.

- reference from May/June 1982 Report paragraph 1 #1.*
1. A dive investigation was conducted on JD 265 (Sounding Volume 2, 2115Z). The survey launch ran a search pattern at idle speed through the area of the reported piling. One person monitored the fathometer while two lookouts searched from the bow. The tide was low, water clarity was 25-30', the sea calm. Nothing that might indicate the presence of a piling was observed. Divers then made several sweeps of the area, searching the bottom from the shoreline to 50' depth. No piling was encountered; however, a 40-50' long sunken log approximately 0.75 feet in diameter was seen lying loosely on the bottom. Dead heads have been observed elsewhere in the bay and the reported piling is believed to have been another. It may have been the log now on the bottom. The absence of ruins or other cultural features in the area suggests the existence of a solitary piling is unlikely. *no piling - Concun*

2. The feature was reinvestigated and located on JD 278 (Sounding Volume 1, Pos. 6089). The rock is a pinnacle about 1 m in diameter in 0.7-1.2 fathoms (MLLW) at 56/36/38.32 N, 134/16/16.23 W. A second rock approximately 7 m in diameter was located south and offshore of the pinnacle at 56/36/37.91 N., 134/16/15.71 W. (Sounding Volume 1, Pos. 6088). Both rocks should be charted at the appropriate positions. *These are 2 rocks*
Post# 6087, exceeded by Post# 6088, chart only 1 rock

3. A dive investigation was conducted in conditions of low tide and good underwater visibility for the rock charted at 56/37/06.0 N, 134/17/22.5 W, on JD 265. The survey launch motored slowly and repeatedly through the area while two observers scanned the water from the bow and another monitored the fathometer trace. A marker float was dropped and positioned by divers over the shoalest feature. The time was noted, and a range-azimuth fix and check fix taken on the launch while alongside the anchored float (Sounding Volume 2, Pos. 6086). The observed location is ✓

56/37/04.0 N, 134/17/23.3 W; the measured least depth over the feature was 1.0 fathoms reduced to MLLW. The ~~depth~~ *charted rock* should be charted at the observed position.*

4. A search pattern consisting of Hydroplot controlled sounding lines at 10 m line spacing was conducted at the charted location JD 305. Water visibility from the surface was greater than 40 feet. (During the morning bar check the bar was clearly visible from the surface at 42 feet depth.) ✓

Sounding lines were run in both N-S and E-W directions. The search pattern extended 50 meters east and west, and 100 meters north and south of the charted position. A lookout was posted on the bow, and the fathometer monitored continuously as the launch motored slowly through the area. No evidence of the rock was observed visually or on the fathometer trace. ✓

A marker float was then deployed at the charted location and divers used it as a reference point for an underwater search. Subsurface visibility was greater than 60 feet.

The divers reported that the bottom sloped gently, and was composed of mud. There were no projections of rock anywhere in the area. ✓

It is noted that during the fall season all rock projections in the bay are marked at the surface by stands of kelp. There was no kelp in this area, except for the kelp to the north, which marked the rock located by positions 6085 and 7327. ✓

The symbol should be deleted from the chart. *Concur*

5. The area was investigated on JD 265 at a low stage of tide in conditions of good under-water visibility. The fathometer trace was monitored continuously and an observer scanned the water from the bow. Nothing was observed at ~~the~~ ** covered 2 foot* the charted location. A rock was observed nearby at *at MLLW* 56/38/05.06 N., 134/17/13.55 W. (Sounding Volume 1, Pos. 6074). The charted rock should be deleted, and the observed rock charted. *Charted rk was found, chart at new observed position**

6. The position of the rock charted at 56/36/22.5 N., 134/19/50.0 W. was determined on JD 265 (Sounding Volume 1, Pos. (13) 6079). The chart should be revised to show the rock at the observed position, 56/36/22.51 N., 134/19/50.86 W. *chart from present survey*

7. The rock charted at 56/35/42.3 N, 134/18/40.0 W. was investigated on JD 265. A search pattern (10 m line spacing)

** use smooth sheet, for charting*

was run over the area of a one fathom shoal observed while running hydrography in the area. The approximate least depth was identified and marked with an anchored float. A dive investigation was conducted and divers positioned the float over the shoalest point on the feature. The launch was maneuvered into position along-side the float and a position determined (Sounding Volume 2, Pos. 6087). A least depth of 0.98 fathoms (MLLW) was recorded at 56/35/43.2 N., 134/18/38.4 W. The rock symbol should be removed, *BRK MLLW* from the chart. *Chart according to present survey.*

The position of the rock charted at 56/37/39 N., 134/16/52 W. was confirmed (Sounding Volume 1, Pos. 6076). (7) A nearby ~~rock~~ *charted reef* at 56/37/37.54 N, 134/16/49.33 W (Sounding Volume 1, Pos. 6077) (2) *MLLW* should be added to the chart, *as a rock Pos#6077 (9)*

The position of the rock charted at 56/36/21 N., 134/18/56 W., was determined by range-azimuth techniques on JD 265 (Sounding Volume 1, Pos. 6080). The correct position is 56/36/21.98, 134/18/58.61 W. The feature is densely surrounded by kelp to *south* 150 m south of the indicated position, and 50 m east and west (3) *MHW* of the indicated position. The feature is approximately 25 m by 35 m. The rock should be charted at the 1982 position. *Chart edit according to present survey*

09.08
A previously unobserved and uncharted rock was observed at 56/38/01.43 N., 134/17/08.84 W. (Sounding Volume 1, Pos. 6075). It should be included in future editions of the chart. (6) *MLLW*
Chart according to smooth sheet



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: CPM331/101-3M
Ser 8-7

8 August 1982

Commander
U.S. Coast Guard District 17
P.O. Box 3-5000
Juneau, Alaska 99802

Sir:

The following Dangers to Navigation were discovered during recent hydrographic survey operations near the Bay of Pillars, off Chatham Strait, Alaska.

1. Rock bares 0.3 fathoms at MLLW discovered; Chart 17370, Lat. $56^{\circ}34'21.73''$ N; Long. $134^{\circ}19'38.67''$ W; distance 0.6 nautical mile, bearing 341 degrees true from Point Ellis, Kuiu Island. This rock is presently charted as "Reported Submerged Rock".
2. Uncharted rock covered by 0.3 fathoms at MLLW discovered; Chart 17370; Lat. $56^{\circ}36'18.30''$ N; Long. $134^{\circ}14'00.01''$ W; distance 3.8 nautical miles bearing 050 degrees true from Point Ellis, Kuiu Island.
3. Uncharted rock covered by 1.7 fathoms at MLLW discovered; Chart 17370; Lat. $56^{\circ}36'17''$ N, Long. $134^{\circ}17'08''$ W; distance 2.8 nautical miles bearing 025 degrees true from Point Ellis, Kuiu Island.
4. Uncharted rock covered 3.5 fathoms at MLLW discovered; Chart 17370; Lat. $56^{\circ}35'11''$ N, Long. $134^{\circ}19'03''$ W; distance 1.4 nautical miles bearing 004 degrees true from Point Ellis, Kuiu Island.
5. Uncharted rock covered 2.6 fathoms at MLLW discovered; Chart 17370; Lat. $56^{\circ}35'13''$ N, Long. $134^{\circ}18'37''$ W; distance 1.5 nautical miles bearing 014 degrees true from Point Ellis Kuiu Island.



These features were also reported by radio teletype message.

Sincerely,



James M. Wintermyre

CDR, NOAA

Commanding Officer

JMW:jaf

OPR-0353-DA-81
DA-10-1-82(H-9976)
PARAMETER TAPE PRINTOUT

DA-10-1A-82:
FEST=22000
CLAT=6264000
CMER=134/20/00
GRID=30
PLSCL=10000
PLAT=56/35/50
PLON=134/22/00
VESNO=3132
YR=82
ANDIST=00.0

SKEW:0,20,30

DA-10-1B-82:
FEST=22000
CLAT=6264000
CMER=134/20/00
GRID=30
PLSCL=10000
PLAT=56/33/10
PLON=134/22/00
VESNO=3132
YR=82
ANDIST=00.0

SKEW: 0,21.50,30

OPR-0353-DA-81
DA-10-1-82(H-9976)
INSET PARAMETER TAPES PRINTOUT

INST 1:
FEST=22000
CLAT=6264000
CMER=134/20/00
GRID=15
PLSCL=5000
PLAT=56/34/45
PLON=134/20/45
VESNO=3131
YR=82
ANDIST=00.0
SKEW: 0,16,21

INSET 2:
FEST=22000
CLAT=6264000
CMER=134/20/00
GRID=15
PLSCL=5000
PLAT=56/34/15
PLON=134/20/00
VESNO=3131
YR=82
ANDIST=00.0
SKEW: 0,8,8

INSET 3:
FEST=22000
CLAT=6264000
CMER=134/20/00
GRID=15
PLSCL=5000
PLAT=56/35/55
PLON=134/18/00
VESNO=3131
YR=82
ANDIST=00.0
SKEW: 0,10,10

INSET 4:
FEST=22000
CLAT=6264000
CMER=134/20/00
GRID=10
PLSCL=2500
PLAT=56/36/15
PLON=134/17/45
VESNO=3131
YR=82
ANDIST=00.0
SKEW: 0,6,7

FIELD TIDE NOTE
OPR-0353-DA-81
H-9976 DA-10-1-82
BAY OF PILLARS, ALASKA

Field tide reduction of soundings for H-9976 (DA-10-1-82) is based on daily predicted tides for Sitka, Alaska (Reference Station 945-1600) corrected for predicted times and heights as described in the Project Instructions.

Tide correctors of -6 minutes were applied to the daily predicted Greenwich Mean Times of high and low water; and a height ratio of 1.25 applied to the predicted heights for use as preliminary zoning.

Program AM 500, "Predicted Tides Generator" (11/10/72 version), was used to produce ASCII and Binary Predicted Tide Tapes at 0.1 fathom intervals for the use in the field and preliminary plotting. Soundings on the final field sheet submitted to PMC were plotted using predicted tides at 0.1 fathom intervals.

The Sitka tide reference station served as control for this survey. The gage was inspected and the staff leveled to three benchmarks to third order class I accuracy requirements on 11 May 1982 prior to the start of hydrography. The staff was leveled to second order class I accuracy requirements by personnel of PTP on 16 June 1982 after completion of survey operations. There is no evidence of staff movement.

Two tide stations were occupied to provide data for H-9976 (DA-1-10-82). They are as follows:

<u>Station</u>	<u>Location</u>	<u>Period of Operation</u>	<u>S/N</u>
Chatham Strait (945-1277)	56/36/34 N 134/17/15 W	5/2/82 5/3/82 - 6/16/82 5/2/82 - 6/16/82	73A233* 64A11030 67A10292
Bay of Pillars	56/36/38 N 134/12/58 W	5/5/82 - 5/23/82	64A11021

* Gage S/N 73A233 was damaged on installation and replaced with gage S/N 64A11030.

All gages were operated on GMT and observations performed by DAVIDSON personnel. No unusual tides or currents were observed during the survey.

Chatham Strait (945-1277)

The Chatham Strait tide station was located on the southeast tip of a small island approximately 3 n.mi. NNE of Point Ellis. The staff and orifice were installed in a deep and narrow channel approximately 1 n.mi. NW of the entrance to Bay of Pillars. The criteria for gage site selection were its proximity to the survey area, its location in a zone of tidal flow representative of the survey area, its accessibility for inspections and servicing, in addition to being well protected from the elements. The site was first occupied in the fall, 1981.

Two gages were installed at this site to provide redundancy in the event that one gage failed. To help distinguish between the gages red ink was used to annotate records for gage S/N 67A10292 while blue ink was used to annotate records for gage S/N 64A11030.

Both gages continuously provided good data. Gage S/N 67A10292 was generally off by several minutes a day and had to be reset frequently. Attempts to reduce the magnitude of the time gain or loss per day were relatively unsuccessful and often compounded the problem. Never-the-less, since observations were made every two or three days the magnitude of time error on the gage was kept to a minimum (usually less than 5 minutes of difference between inspections).

Based on 50 staff to gage comparisons, including three hours of observations at 12-minute intervals on 3 May 1982, a marigram reading of 5.4 feet ($\sigma=0.2$ ft.) on gage S/N 67A10292 corresponds to 0.0 feet on the tide staff. Based on 42 staff to gage comparisons, including three hours of observations at 12-minute intervals on 3 May 1982, a marigram reading of 2.4 feet ($\sigma=0.1$ ft.) on gage S/N 64A11030 corresponds to 0.0 feet on the tide staff.

The data gathered from gage S/N 64A11030 has a slightly greater central tendency than that of gage S/N 67A10292. Gage S/N 67A10292 had the time reset more often than gage S/N 64A11030, yet comparisons taken immediately after resetting the time do not appear significantly different from staff to gage comparisons for other times. Both gages performed acceptably and both data sets are good. The data set with the greatest measure of central tendency (gage S/N 64A11030) is the gage of choice for control of the survey due to its minimal variability from the mean.

Bay of Pillars(945-1285)

In anticipation of survey operations inside the Bay of Pillars, an additional gage in excess of the project requirements was installed near the center of the Bay of Pillars on the south

shore. It was located on the western side of a small wooded point of land located approximately 1.6 n.mi. NW of the abandoned cannery on the southern shore of the Bay. As with the Chatham Strait site, criteria for site selection in the Bay of Pillars were tidal flow representative of the survey area, proximity to the survey area, accessibility, and protection from the elements. The station reference number was issued by OA/C231 based on a request from the DAVIDSON.

Tide gage S/N 64A11021 and tide staff were installed on 6 May 1982. The gage continuously provided good data and kept reasonable time, requiring setting about once a week to remove a gain of about 5 minutes. The gage was removed on 4 June 1982. It had been damaged as a consequence of an animal chewing through the N₂ gas supply hose. The gas escaped from the system and the nitrogen cylinder was emptied. When the gas pressure suddenly dropped on the high pressure side of the constant differential pressure regulator, the weight of the water column over the bubbler orifice apparently forced the gas in the orifice tubing back through the lines, into the bubbler jar filled with silicone oil. With no nitrogen gas pressure to oppose it the back pressure caused by the water over the orifice forced silicone oil through the bubbler needle valve into the low pressure port of the constant differential pressure regulator. When the animal damage was discovered, the gage was restarted with new nitrogen supply and feed hose. At first it appeared to function properly but subsequent regular observations revealed that the bubble rate was increasing or decreasing in a manner inversely related to the height of the tide. Previous experience has shown this to be a characteristic symptom of silicone oil contamination of the constant differential pressure regulator.

This gage was not used to control hydrography on H-9976 and the data are provided for reference only. Based on 31 staff to gage comparisons prior to the 22 May gage failure, and including 3.75 hours of observations at 12-minute intervals on 6 May 1982, a marigram reading of 7.3 feet ($\sigma=0.1$ ft) corresponds to 0.0 feet on the tide staff.

When scanning the marigrams from all gages used during the project, time errors caused by fast or slow gage clock drive mechanisms were distributed linearly throughout the period between observations.

Leveling

The Chatham Strait tide staff was leveled to five historic (1981) benchmarks at the times of installation (5/2/82) and removal (6/16/82) of the staff. No shift of the staff was observed.

Leveling was performed to third order class I accuracy requirements. Mean differences of elevations of permanent benchmarks observed at time of installation and removal of the staff were within 0.002 meters of each other. During the closing levels of station 945-1277 a discrepancy of elevation with the historic record was noted at Benchmark 1277-D, 1981 yet the level run closed successfully. Apparently the observer repeated his mistaken readings on both forward and backward runs, as a rerun of that section again closed, and agreed with the historic elevation. Comments were noted on the Leveling Record.

The Bay of Pillars tide staff was leveled to three temporary benchmarks on 6 May 1982 and closing levels were run on 16 June 1982. Temporary benchmarks installed were eyebolts screwed into lead shields set in holes drilled into bedrock. Leveling was performed to third order class I accuracy requirements. No shift of the staff was observed. Mean differences of elevations of temporary benchmarks observed at times of staff installation and removal were within 0.001 meter of each other.

Zoning

Recorded water levels are representative of the area and should be applied directly.

Respectfully submitted,



Eric G. Hawk
ENS, NOAA

Approved and forwarded,



J. M. Winternyre, CDR, NOAA
Commanding Officer
NOAA Ship DAVIDSON

OPR-0353-DA-81
DA-10-1-82(H-9976)
PREDICTED TIDES CORRECTOR TAPE PRINTOUT

SITKA, ALASKA
CHATHAM STRAIT
56 38 134 20 -0.06 -0.06 0.0 0.0 1.25 1.25
000
FM
0.1

GEOGRAPHIC NAMES

H-9976

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
ALASKA (Title)									1
CHATHAM STRAIT	X								2
KUIU ISLAND	X								3
POINT ELLIS	X								4
ROWAN BAY	X								5
BAY OF PILLARS	X								6
									7
									8
									9
									10
									11
									12
									13
									14
									15
									16
									17
						Approved:			18
									19
						<i>Charles E. Harrington</i>			20
						Chief Geographer - N/Cg 2x5			21
						13 SEPT. 1983			22
									23
									24
									25

OPR 0353-DA-81

BOUNDING CORRECTION ABSTRACT

Fathometer No. 1048

FIELD NO. DA-10-1-82

REGISTRY NO. N-9976

VESSEL Launch DA-1 (3131)

Julian Date	From Time (GMT)	To Time (GMT)	Velocity Corr Table No.	(Notes: TBA Corr. is the algebraic sum of these columns)				Remarks	
				Draft Corr	Instrument Error Corr	Initial Corr.	Sis Corr		TBA Corr ft/fm
133	170503		1	0.3 fm	0.0	0.0	0.0	0.3 fm	
137	202233		2	0.0 fm	0.0	0.0	0.0	0.0 fm	
138	181016		1	0.3 fm	0.0	0.0	0.0	0.3 fm	
140	203035		2	0.0 fm	0.0	0.0	0.0	0.0 fm	
145	194907		1	0.3 fm	0.0	0.0	0.0	0.3 fm	
145	215249		2	0.0 fm	0.0	0.0	0.0	0.0 fm	
146	154206		1	0.3 fm	0.0	0.0	0.0	0.3 fm	
147	204153		2	0.0 fm	0.0	0.0	0.0	0.0 fm	
148	162157		1	0.3 fm	0.0	0.0	0.0	0.3 fm	
148	173217		2	0.0 fm	0.0	0.0	0.0	0.0 fm	
148	201330		1	0.3 fm	0.0	0.0	0.0	0.3 fm	
163	171722		2	0.0 fm	0.0	0.0	0.0	0.0 fm	
164	214357		1	0.3 fm	0.0	0.0	0.0	0.3 fm	
166	180800		2	0.0 fm	0.0	0.0	0.0	0.0 fm	

OPR-0353-DA-81
DA-10-1-82(H-9976)
ROWAN BAY, ALASKA

TC/TI TAPES PRINTOUT:

SHIP DAVIDSON(3130)

111500 0 0000 0002 147 313000 000000
120000 0 0000

LAUNCH DA-1(3131)

170503 0 0003 0001 133 313100 000000
202233 0 0000 0002 137 313100 000000
181016 0 0003 0001 138 313100 000000
203035 0 0000 0002 140 313100 000000
194907 0 0003 0001 145 313100 000000
215249 0 0000 0002 145 313100 000000
154206 0 0003 0001 146 313100 000000
204153 0 0000 0002 147 313100 000000
162157 0 0003 0001 148 313100 000000
173217 0 0000 0002 148 313100 000000
201330 0 0003 0001 148 313100 000000
171722 0 0000 0002 163 313100 000000
214357 0 0003 0001 164 313100 000000
180800 0 0000 0002 166 313100 000000
202926 0 0003 0001 166 313100 000000
215500 0 0000 0002 166 313100 000000
223000 0 0000

LAUNCH DA-2(3132)

181408 0 0003 0001 138 313200 000000
201834 0 0000 0002 139 313200 000000
202617 0 0003 0001 139 313200 000000
215124 0 0000 0002 139 313200 000000
215635 0 0003 0001 139 313200 000000
220003 0 0000 0002 139 313200 000000
221233 0 0003 0001 139 313200 000000
222022 0 0000 0002 139 313200 000000
185845 0 0003 0001 152 313200 000000
210149 0 0000 0002 152 313200 000000
223909 0 0003 0001 152 313200 000000
182821 0 0000 0002 162 313200 000000
250000 0 0000

MONARK SKIFF(3133)

170800 0 0000 0002 133 313300 000000
220000 0 0000 0002 166 313300 000000
230000 0 0000

OPR-0353-DA-81
DA-10-1-81(H-9976)
VELOCITY TAPE PRINTOUT

000060 0 0000 0001 001 000000 009976
000185 0 0001
000315 0 0002
000460 0 0003
000562 0 0004
000710 0 0005
000865 0 0006
001020 0 0007

OPR-0353-DA-81
DA-10-1-82(H-9976)
ROWAN BAY, ALASKA

VELOCITY TAPE PRINTOUT
TABLE NO.2

000000 0 0000 0002 001 000000 009976
001020 0 0000

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 3130

SHEET : DA-10-1-82

TIME	DAY	PATTERN 1	PATTERN 2
111500	147	+00000	+00000

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 3131

SHEET : DA-10-1-82

TIME	DAY	PATTERN 1	PATTERN 2
170503	133	-00001	+00002
214148		-00001	+00002
155457	134	-00001	+00002
162552	135	-00001	+00002
165547	136	-00001	+00002
211245		-00001	+00002
162817	137	-00001	+00002
181016	138	+00004	+00002
205105		+00002	-00001
160252	139	+00004	+00002
212558		+00002	-00001
170738	140	-00001	+00002
195620		-00001	+00002
194907	145	+00004	+00002
200006		+00004	+00002
201850		+00004	+00002
205205		+00004	+00002
212841		+00004	+00002
215249		+00004	+00002
154206	146	+00004	+00002
171411		+00004	+00002
205439		+00004	-00003
155804	147	+00004	+00002
204153		+00004	-00003
162157	148	+00004	-00001
173217		+00004	-00001
194414		-00001	-00001
201330	148	-00001	+00004
214000	265	+00000	+00000

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 3131

SHEET : DA-10-1-82

TIME	DAY	PATTERN 1	PATTERN 2
204819	148	-00001	+00004
155622	149	-00001	-00003
164230	149	-00003	-00001
211256	149	-00001	-00003
161716	150***	-00002	+00004
194149		-00001	-00002
204639		-00001	-00003
171722	163	-00003	-00001
171800	164	-00003	-00001
203600		-00001	+00004
214357	164	-00003	-00001
181500	165	-00002	-00002
212606		-00003	-00002
180800	166	-00002	-00002
202500		+00004	-00002
*** 164536	151***	-00001	-00002
183741		-00003	-00002
201920		-00001	-00003
214017		-00003	-00002

RANGE AZ. CORRECTOR ABSTRACT

VESSEL : 3131

SHEET : DA-10-1-82

TIME	DAY	PATTERN 1	PATTERN 2
161613	166	-00003	NO
202926		-00003	CORRECTORS
215500		-00003	
182000	265	+00001	

RANGE-AZ. CORRECTOR ABSTRACT

VESSEL : 3132

SHEET : DA-10-1-82

TIME	DAY	PATTERN 1	PATTERN 2
181408	138	-00001	NO
185845	152	+00001	CORRECTORS
204412	152	+00001	
210149	152	+00000	
223909	152	+00001	
161028	154	+00001	
163617	154	+00001	
175102	154	+00001	
191739	154	+00001	

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 3132

SHEET : DA-10-1-82

TIME	DAY	PATTERN 1	PATTERN 2
172822	139	+00000	-00001
195342		+00000	-00001
201834		+00000	-00001
183802	148	+00000	+00000
190911		+00000	+00000
191843		+00000	+00000
213935		+00000	+00000
220151		+00000	+00000
164934	153	+00001	+00000
172450		+00000	+00000
212825		+00001	+00000
225350		+00001	+00000
001624	154	+00000	+00000
182821	162	+00001	+00001
195459	162	+00001	+00000

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 3133

SHEET : DA-10-1-82

TIME	DAY	PATTERN 1	PATTERN 2
170800	133	-00001	+00001
171100	146	+00001	+00000

RANGE VIS. CORRECTOR ABSTRACT

VESSEL : 3133

SHEET : DA-10-1-82

TIME	DAY	PATTERN 1	PATTERN 2
205700	133	-00001	NO CORRECTOR

OPR-0353-DA-81
 DA-10-1-82 (H-9976)
 SIGNAL TAPE PRINTOUT

009	0	56	38	43080	134	20	23119	139	0004	000000	LUNAR	1981
010	1	56	38	44323	134	19	09670	250	0005	000000	CHITON	1981
016	4	56	37	30453	134	18	19924	139	0005	000000	SURGE	1981
017	6	56	36	21264	134	19	39094	250	0006	000000	SPRAY	1981
018	2	56	35	32237	134	18	01935	250	0005	000000	BERRY	1981
019	4	56	33	24164	134	19	14164	139	0011	000000	ELLIS	1987
020	2	56	39	02753	134	18	21605	254	0000	000000	RAZ (TEMP. PT.)	1981
022	1	56	34	01421	134	19	53209	250	0007	000000	PILLAR	1981
023	1	56	36	12630	134	16	40430	139	0005	000000	STRAW	1981
024	2	56	36	21353	134	19	38880	139	0006	000000	SPRAY No. 1	1981
025	3	56	36	21460	134	19	39438	250	0006	000000	SPRAY No. 2	1981
026	1	56	35	32498	134	18	02275	250	0005	000000	BERRY No. 1	1981
027	5	56	35	31971	134	18	02517	139	0005	000000	BERRY No. 2	1981
028	1	56	36	12606	134	16	40093	250	0004	000000	STRAW No. 2	1981
029	2	56	38	43269	134	20	22923	250	0004	000000	LUNAR No. 1	1981
030	4	56	35	04313	134	17	23459	139	0006	000000	POST	1982
031	1	56	35	04065	134	17	23466	139	0006	000000	POST No. 1	1982
032	7	56	35	03920	134	17	24651	250	0006	000000	POST No. 2	1982
033	6	56	35	48977	134	15	25399	139	0005	000000	RIPE	1982
034	1	56	35	49060	134	15	25144	139	0005	000000	RIPE No. 1	1982
035	7	56	35	48791	134	15	25363	250	0005	000000	RIPE No. 2	1982
036	1	56	36	12485	134	15	39604	139	0004	000000	FRESH	1982
037	2	56	36	12774	134	15	39273	139	0004	000000	FRESH No. 1	1982
038	7	56	36	12540	134	15	39169	139	0004	000000	FRESH No. 2	1982
039	7	56	37	30474	134	18	20272	250	0005	000000	SURGE No. 1	1981
040	3	56	37	31040	134	18	19297	250	0005	000000	SURGE No. 2	1981
041	3	56	37	30203	134	18	20002	139	0005	000000	SURGE No. 3	1981
042	1	56	36	33464	134	17	03064	254	0004	000000	GAGE (TEMP. PT.)	1982
043	1	56	36	24570	134	15	05887	139	0004	000000	BOP	1982
044	1	56	36	39987	134	14	34337	139	0004	000000	PILE	1982
045	1	56	37	08403	134	13	39774	139	0004	000000	COLUMN	1982
046	1	56	37	57865	134	11	16024	139	0004	000000	SPRUCE	1982
047	1	56	38	14193	134	10	08474	139	0004	000000	RIVER	1982
048	1	56	38	44713	134	08	46865	139	0004	000000	BACK	1982
049	7	56	36	30488	134	13	30708	139	0005	000000	SALT	1982
050	1	56	37	30254	134	13	16393	139	0006	000000	CLEAR	1982
051	2	56	39	02572	134	06	25178	139	0003	000000	VIEW	1982
052	1	56	37	12045	134	11	34701	139	0005	000000	BIRD	1982
053	3	56	37	13058	134	12	28052	139	0004	000000	LIMPET	1982
054	1	56	37	47162	134	12	14900	139	0003	000000	ALGAE	1982
055	1	56	34	01431	134	19	53248	139	0003	000000	POINT ELLIS LT "8"	1982

ABSTRACT OF POSITIONS
DA-10-1-81 (H-9976)

Launch DA-1 (3131)

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u> <u>M</u> <u>S2</u>	<u>REMARKS</u>
133	2001-2029	042	017---018	X-line
133	2030-2046	042	017---018	Foul line
133	2047-2177	042	017---018	Mainscheme
134	2178-2241	042	017---018	Mainscheme
134	2242-2269	042	017---018	X-lines
134	2270-2284	042	017---018	Foul line
134	2285-2373	042	017---018	Splits
135	2474-2478	042	017---018	Splits
135	2480-2489	042	017---018	Splits
135	2491-2507	042	017---018	Splits
135	2510-2529	042	017---018	Splits
135	2533-2570	042	017---018	Splits
135	2574-2577	042	017---018	Splits
135	2579-2602	042	017---018	Splits
135	2607-2646	042	017---018	Splits
136	2647-2701	042	017---026	Development plotted on 1:5000 scale
136	2707-2708	042	017---026	
136	2713-2729	042	017---026	
136	2734-2736	042	017---026	
136	2737-2788	042	017---026	
136	2791-2815	042	017---026	
136	2816-2833	042	017---026	
137	2834-2867	042	025---026	Splits
137	2873-2880	042	025---026	Development
137	2881-2886	042	025---026	Development
137	2887-2897	042	025---026	Splits
137	2901-2910	042	025---026	Development
137	2911-2912	042	025---026	Development
138	2925-2929	042	022---026	Bottom Samples
138	2931-2948	042	022---026	Shoreline
138	2951-2969	042	022---026	Shoreline
138	2970-2985	042	022---026	Shoreline
139	2986-2996	042	022---026	Line about 50 m offshore
139	2999-3000	042	022---026	Line about 50 m offshore
139	3001-3004	042	022---026	Splits
139	3005-3012	042	022---026	Around rock awash
139	3015-3038	042	022---026	Splits
139	3041-3090	042	022---026	Inshore/Mainscheme
139	3091-3126	042	026---028	Inshore/Mainscheme
139	3129-3149	042	026---028	Mainscheme
139	3151-3212	042	026---028	Mainscheme
139	3214-3225	042	026---028	Mainscheme
139	3226-3242	042	026---028	Mainscheme
139	3245-3250	042	026---028	X-line
139	3252-3262	042	026---028	X-line
139	3263-3266	042	022---026	X-line
139	3268-3271	042	022---026	Fill in
				Fill in

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
140	3299-3301	042	025	---	026	Bottom Samples
140	3303-3311	042	025	---	026	Bottom Samples
140	3312-3321	042	025	---	026	Splits
140	3323-3335	042	025	---	026	Splits
140	3337-3346	042	025	---	026	Splits
140	3347-3355	042	025	---	026	Bottom Samples
145	3356-3358	042	035	---	032	X-line
145	3359-3365	042	035	---	032	Shoreline
145	3369-3384	042	035	---	032	Mainscheme
145	3387-3398	042	035	---	032	Mainscheme
145	3399-3401	042	035	---	032	X-line
145	3403-3405	042	035	---	032	X-line
146	3423-3449	042	035	---	032	Development on scale 1:5000
146	3450-3461	042	035	---	032	Development on scale 1:2500
146	3462-3465	042	035	---	032	Development on scale 1:5000
146	3466-3471	042	035	---	032	Shoreline
146	3472-3473	042	035	---	032	Foul line
146	3476-3477	042	035	---	032	Foul line
146	3487-3494	042	035	---	032	Shoreline
146	3499-3500	042	035	---	032	Shoreline
146	3504-3507	042	035	---	028	Shoreline
146	3513-3517	042	035	---	028	Mainscheme
146	3560-3574	042	035	---	032	Mainscheme
146	3576-3589	042	035	---	032	Mainscheme
147	3590-3647	042	035	---	032	Mainscheme
147	3648-3669	042	035	---	032	X-lines
147	3671-3678	042	035	---	032	Mainscheme
147	3679-3680	042	035	---	032	Inshore
147	3681	042	035	---	028	Determined position
147	3682	042	035	---	028	Bottom sample
148	3722-3726	042	035	---	032	Fill in
148	3728-3736	042	035	---	032	Fill in
148	3737-3750	042	035	---	032	X-line
148	3751	042	035	---	032	Bottom sample
148	3753-3754	042	035	---	032	Bottom samples
148	3760-3761	042	029	---	040	Bottom samples
148	3762-3772	042	029	---	039	Foul line
148	3774-3775	042	029	---	039	Mainscheme
148	3777-3780	042	029	---	039	Mainscheme
148	3781-3788	042	029	---	039	Mainscheme
148	3790-3840	042	029	---	039	Mainscheme
148	3842-3843	042	029	---	039	Mainscheme
148	3844-3846	042	029	---	039	Shoreline
148	3847-3850	042	029	---	039	Foul line around SPRAY 1981
149	3851-3855	042	032	---	025	Shoreline
149	3856-3861	042	029	---	039	Shoreline
149	3862-3868	042	029	---	039	Mainscheme
149	3870-3932	042	025	---	032	Mainscheme
149	3933-3934	042	025	---	032	Splits
149	3940-3952	042	025	---	032	X-line
149	3954-4000	042	025	---	032	Splits

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
150	7001-7029	042	029	---	039	Mainscheme
150	7031-7049	042	029	---	039	Mainscheme
150	7050-7071	042	029	---	039	Splits
150	7073-7076	042	029	---	039	Splits
150	7080-7083	042	040	---	029	Fill in
150	7084-7087	042	022	---	025	Mainscheme
150	7088-7096	042	022	---	025	Shoreline
150	7101-7110	042	022	---	025	Shoreline
150	7112-7130	042	022	---	025	Shoreline
150	7132-7133	042	022	---	025	Shoreline
150	7134-7136	042	022	---	025	Splits
150	7137-7145	042	022	---	025	Splits
150	7146-7152	042	022	---	025	X-line
151	7153-7160	042	022	---	029	Shoreline
151	7161-7166	042	022	---	029	Fill in
151	7167-7174	042	022	---	029	X-line
151	7177-7183	042	022	---	029	Mainscheme
151	7188-7195	042	025	---	029	Inshore/Mainscheme
151	7196-7198	042	025	---	029	Inshore/Splits
151	7199-7201	042	025	---	029	Inshore/Splits
151	7203-7207	042	025	---	029	Inshore/Splits
151	7208-7212	042	022	---	025	Inshore/Mainscheme
151	7214-7216	042	022	---	025	Inshore/Mainscheme
151	7217-7218	042	022	---	025	Shoreline
151	7220-7226	042	022	---	025	Shoreline
151	7227-7230	042	022	---	025	Inshore/Mainscheme
151	7232-7249	042	022	---	025	Inshore/Mainscheme
151	7250-7259	042	025	---	029	Inshore/Mainscheme
151	7260-7263	042	025	---	029	Shoreline
151	7264-7267	042	025	---	029	X-line
163	7271,7274	042	025	---	029	Detached positions
163	7278,7283	042	025	---	029	Detached positions
163	7286	042	025	---	029	Detached position
164	7290	042	025	---	029	Detached position
164	7294	042	025	---	029	Detached position
164	7295	042	029	---	039	Detached position
164	7298-7303	042	025	---	029	Splits
165	7304-7306	042	026	---	032	Detached positions
165	7308,7310	042	026	---	032	Detached positions
165	7312-7313	042	025	---	032	Detached positions
166	7316-7318	112	025	---	R/Az	Channel lines
166	7320-7322	112	025	---	R/Az	Channel lines
166	7326-7327	042	032	---	026	Detached positions
166	7329-7333	112	042	---	R/Az	Mainscheme
166	7335,7337	112	042	---	R/Az	Detached positions
166	7328	042	035	---	032	Detached position
265	6074-6075	112	040	---	R/Az	Detached positions
265	6076-6079	112	010	---	R/Az	Detached positions
265	6085	112	018	---	R/Az	Detached position
265	6081-6084	042	036	---	033	Bottom Samples

ABSTRACT OF POSITIONS
DA-10-1-81 (H-9976)

Launch DA-2 (3132)

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
138	4004-4020	112	025	---	R/Az	Mainscheme
138	4022-4038	112	025	---	R/Az	Mainscheme
138	4048-4050	112	025	---	R/Az	Mainscheme
138	4057-4061	112	025	---	R/Az	Mainscheme
139	4062-4068	042	029	---	020	Shoreline
139	4078-4089	042	029	---	020	Shoreline
139	4090-4091	042	29	---	020	Around ledge
139	4093-4097	042	029	---	020	Inshore/Mainscheme
139	4099	042	029	---	020	Detached position
139	4101	042	029	---	020	Detached position
139	4106-4136	042	029	---	020	Mainscheme
139	4139-4160	042	029	---	020	Mainscheme
139	4161	042	029	---	020	Detached position
139	4163-4165	042	029	---	020	Mainscheme
139	4166-4167	042	029	---	020	Detached positions
139	4172-4176	042	029	---	020	Mainscheme
139	4177-4178	042	029	---	020	Detached positions
139	4180	042	029	---	020	Detached position
148	4181-4193	042	040	---	020	Mainscheme
148	4194	042	040	---	020	Detached position
148	4197-4199	042	040	---	020	Mainscheme
148	4200-4203	042	040	---	020	X-line
148	4204-4205	042	040	---	020	Split
148	4206-4225	042	040	---	020	Mainscheme
148	4227-4228	042	040	---	020	X-line
148	4230-4234	042	040	---	020	X-line
148	4235-4237	042	040	---	020	Channel line
148	4238	042	040	---	020	Detached position
148	4243-4252	042	040	---	020	Shoreline
152	4253-4260	112	020	---	R/Az	Mainscheme running N.W.
152	4262-4274	112	020	---	R/Az	Mainscheme running N.W.
152	4275	112	020	---	R/Az	Detached position
152	4279-4280	112	010	---	R/Az	Detached positions
152	4287-4288	112	010	---	R/Az	Mainscheme running N.W.
153	4289-4290	042	022	---	029	Splits
153	4293-4294	042	022	---	029	Splits
153	4295-4304	042	029	---	040	Splits
153	4305-4313	042	029	---	039	X-line
153	4314-4322	042	029	---	039	Splits (Development)
153	4326-4330	042	039	---	022	X-line
153	5336-4340	042	029	---	039	X-line
153	4341-4142	042	029	---	039	Development
153	4353-4355	042	029	---	039	X-line
153	4356-4362	042	022	---	029	Splits
153	4363-4374	042	022	---	029	X-lines
153	4375-4380	042	022	---	029	Shoreline
153	4381-4412	042	022	---	029	Mainscheme
153	4415-4418	042	022	---	029	Mainscheme

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
154	4420-4429	042	022---		029	Mainscheme
154	4431-4433	112	010---	R/Az		Channel line
154	4438-4439	112	010---	R/Az		Inshore/Mainscheme
154	4441-4442	112	010---	R/Az		Inshore/Mainscheme
154	4444-4445	112	010---	R/Az		Inshore/Mainscheme
154	4446-4448	112	020---	R/Az		X-line
154	4449-4453	112	042---	R/Az		X-line
154	4454-4474	112	042---	R/Az		Channel line
162	4477	042	025---		029	Detached position
162	4478-4480	042	029---		039	Detached position
265	6086	112	010---	R/Az		Detached position
265	6087	112	018---	R/Az		Detached position
265	6088-6089	042	035---		028	Detached positions

ABSTRACT OF POSITIONS
DA-10-1-81 (H-9976)

Monark Skiff (3133)

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
133	6001-6009	042	017---		018	Detached positions
133	6010	092	017---	R/V		Detached positions
133	6011-6013	010	---	VIS---		Detached positions
146	6016	010	---	VIS---		Detached positions
146	6017-6066	042	029---		020	Detached positions
166	6067-6069	010	---	VIS---		Bottom samples
166	6070-6073	010	---	VIS---		Detached positions

SHIP (3130)

147	0001-0003	042	018---		022	Bottom samples
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NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

NONFLOATING AIDS ~~GREEN~~ 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)

REPORTING UNIT
(If field party, ship or office)

NOAA Ship DAVIDSON

STATE

AK

LOCALITY

Bay of Pillars

DATE

11/24/81

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

OPR PROJECT NO.

0353-DA-81

JOB NUMBER

N/A

DATUM

North American 1927

SURVEY NUMBER

H-9976

DESCRIPTION

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

Point Ellis Light 8

POSITION

LATITUDE

LONGITUDE

56 34 ° / 01.431 ° / 134 19 ' / 53.248 D.P. Meters

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

OFFICE

FIELD

F-3-6-L
9/19/82

CHARTS
AFFECTED

17370
17320

Ship File

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	J.M. Wintermyre CDR, NOAA Commanding Officer NOAA Ship DAVIDSON S-331
POSITIONS DETERMINED AND/OR VERIFIED	J.M. Wintermyre CDR, NOAA
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.)

TYPE OF ACTION	NAME	ORIGINATOR
OBJECTS INSPECTED FROM SEAWARD	J.M. Wintermyre CDR, NOAA Commanding Officer NOAA Ship DAVIDSON S-331	<input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
POSITIONS DETERMINED AND/OR VERIFIED	J.M. Wintermyre CDR, NOAA	FIELD ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		<input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

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
 L - Located
 V - Verified
 1 - Triangulation
 2 - Traverse
 3 - Intersection
 4 - Resection

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

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

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

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

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

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

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

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

VESSEL DAVIDSON LAUNCH DA-1 (3131)		PROJ. NO.	YEAR	DA-10-1-82 (H-9976)		CHECKED BY	DATE CHECKED	OBS. INIT.			
SERIAL NO.	DATE	SAMPLE POSITION		DEPTH	WEIGHT	AP. PROX. OF PENETRATION	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, density cutter, size, no., type of bottom relief low, slope, plain, disposition, etc.)	
		LATITUDE	LONGITUDE	(Fathoms)	OF SAMPLER	TR- TION	OF CORE	SEDI- MENT			
2911	JD 137	56134123.58	134118132.03	13.8	10 lbs	3 cm	—	gy gr	S, brk Sh	rocky	
2912	"	56134105.98	134119110.13	7.8	"	3 cm	—	—	hrd	slope probably hard, rocky	
3299	JD 140 20 MAY 82	56134159.07	134119105.75	16.3	"	1 cm	—	whi bk	brk Sh, cgs S	rugged meager sample	
3300	"	56135116.34	134119104.31	9.2	"	1 cm	—	—	brk Sh, cgs S	rugged meager sample	
3301	"	56135114.60	134119106.12	44.7	"	3 cm	—	spk gy	brk Sh, G, cgs S	rugged bottom	
3303	"	56135152.14	134120103.6	17.3	"	—	—	—	brk Sh	rugged bottom, sponge	
3304	"	56135135.20	134120111.37	14.6	"	—	—	—	brk Sh,	rugged bottom, sponge	
3305	"	56135117.37	134120113.0	21.9	"	3 cm	—	—	brk Sh	worm tubes, coralline bryozoan, rugged bottom	
3306	"	56134159.81	134120124.4	26.7	"	3 cm	—	—	brk Sh	coralline bryozoan rugged bottom	
3307	"	56134141.14	134120123.22	19.6	"	"	—	—	brk Sh	coralline bryozoan rugged bottom	
3308	"	56134123.88	134120112.11	15.8	"	2 cm	—	—	brk Sh, P	coralline bryozoan small vel and shrimp	
3309	"	56134104.99	13412013.23	16.1	"	2 cm	—	—	P, brk Sh	worm tubes barnacles	
3310	"	56133147.03	134120122.7	15.8	"	2 cm	—	—	brk Sh, P		
3311	"	56133143.81	134119139.12	8.6	"	—	—	—	P		
3347	"	56135133.92	134119139.18	35.6	"	3 cm	—	—	brk Sh, P	brittle star	
3348	"	56135115.20	134119139.28	27.9	"	3 cm	—	—	brk Sh, cgs S		
3349	"	56134158.39	134119140.85	21.2	"	3 cm	—	—	brk Sh	tube worm coralline bryozoan	

Use more than one line per sample if necessary.

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

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

VESS DAVIDSON LAUNCHES: DR-1 (3131), DR-2 (3132), 3133 PROJ. NO. OPR-0353-DR-81 YEAR 1982 DA-10-1-82 (H-9976) CHECKED BY ED DATE CHECKED 7/2/82

SERIAL NO.	DATE	SAMPLE POSITION		DEPTH (Fathoms)	WEIGHT OF SAM- PLER	AP. PROX. TRA- TION	LENGTH OF CORE	COLOR OF SEDI- MENT	FIELD DESCRIPTION	REMARKS <small>(Unusual conditions, cohesion, dented cutter, size, no. type of bottom relief etc., slope, plain, disposition, etc.)</small>	OBS. INIT.
		LATITUDE	LONGITUDE								
3682	23 MAY 82	56136130.84	134116162.58	10.0	10 lbs	2 in	-	gn gy	M, brk Sh, sm1 P		
	30 MAY 82										
3351	28 MAY 82	56136104.93	134117130.27	14.2	"	1 in	-	-	P, brk Sh	Spars sample probably hard bottom	
3353	"	56136109.6	134116155.00	34.2	"	2 in	-	gn gy	M, brk Sh	muddy, rocky bottom	
3354	"	56136107.4	134116123.09	21.8	"	2 in	-	gn gy	M, brk Sh	muddy bottom	
3360	"	56137125.44	134118122.39	12.8	"	2 in	-	gn gy	M, brk Sh	muddy bottom	
3361	"	56137101.85	134118134.92	12.0	"	-	-	gn gy	brk Sh		
4433	11 JUNE 82	56136135.37	134118154.4	9.6	-	-	-		hrd	rocky	
4438	"	56136112.33	134119113.39	3.8	-	-	-		hrd	rocky	
4439	"	56136114.03	134119139.85	9.7	-	-	-		hrd	rocky	
4480	5D 163	56136117.06	134119147.84	2.2	-	-	-		hrd	rocky	
3231	12 JUNE 82	56136134.35	134118102.44	5.1	-	-	-		hrd	rocky	
3234	"	56136148.31	134118103.54	2.1	-	-	-		hrd	rocky	
	5D 166										
6063	15 JUNE 82	56137140.34	134117152.98	21.5				gn	M, brk Sh		
6068	"	56137144.11	134117127.6	23.0					hrd	rocky tried three times	
6069	"	56137120.80	134118109.86	5.1					hrd	rocky tried three times	

Use more than one line per sample if necessary.

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

VESSEL DAVIDSON (3130), DA-1 (3131),		PROJ. NO. 0PR-0353-DA-81		YEAR 1982	DA-10-1-82 (H-9976)		CHECKED BY EP	DATE CHECKED 7/25/82			
SERIAL NO.	DATE	SAMPLE POSITION		DEPTH	WEIGHT	AP. PROX. PENE- TRATION	LENGTH OF CORE	COLOR OF SEDI- MENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, denied cutter, etc., no., type of bottom relief etc., slope, plain, disposition, etc.)	OBS. INIT.
		LATITUDE	LONGITUDE	(Fathoms)	OF SAM- PLER						
3350	20 MAY 82	56134142.04	13419138.38	14.1	10 lb	2 cm	-	-	brk Sh, crs P		
3351	"	56134141.09	13419105.32	14.3	"	-	-	-	hrd	rugged bottom	
3352	"	56134124.54	13419107.84	35.2	"	3 cm	-	gy gn	M, brk Sh		
3353	"	56134105.34	13419105.35	9.3	"	3 cm	-	spk	P, S, G, #		
3354	"	56134151.55	13418133.45	34.8	"	-	-	-	hrd		
3355	"	56134131.89	13418102.39	15.8	"	3 cm	-	gy gn	M, brk Sh		
0001	23 MAY 82	56135122.00	13412108.00	68.0	10 cm	-	-	-	crs S, G		
0002	"	56134134.00	13412106.00	57.0	10 cm	-	-	-	crs S, P, brk Sh		
0003	"	56134100.00	13412102.00	69.0	10 cm	-	-	-	crs S, brk sh, St		
7274	12 June 82	56136148.71	13418103.54	2.0					hrd		
7295	13 June 82	56136133.35	13419149.49	7.9					hrd		

Use more than one line per sample if necessary.

SURVEY APPROVAL SHEET

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

Records were checked and field work supervised daily by the Field Operations Officer. I inspected the records periodically and the sheets daily.

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

The survey is complete and adequate to supersede previous surveys for charting purposes. Shoreline revision photography was taken this summer and should be applied to the next edition of the chart.

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

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

Date: 11/6/82

Approved and forwarded by:



D. M. Wintermyre
CDR, NOAA
Commanding Officer

HYDROGRAPHIC SURVEY STATISTICS

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT
SMOOTH SHEET			SMOOTH OVERLAYS: POS., ARC, EXCESS ⁶ ³		9
DESCRIPTIVE REPORT			FIELD SHEETS AND OTHER OVERLAYS		7
DESCRIP- TION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR- GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS
ACCORDIAN FILES					
ENVELOPES					
VOLUMES	3				
CAHIERS	3				
BOXES					

SHORELINE DATA

- SHORELINE MAPS (List):
- PHOTOBATHYMETRIC MAPS (List):
- NOTES TO THE HYDROGRAPHER (List):
- SPECIAL REPORTS (List):
- NAUTICAL CHARTS (List): Enlarged Copy of Chart 17370 7th Edition

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			3901
POSITIONS REVISED	2171		2171
SOUNDINGS REVISED	1015		1015
CONTROL STATIONS REVISED			
	TIME - HOURS		
	VERIFICATION	EVALUATION	TOTALS
PRE-PROCESSING EXAMINATION <i>Verification</i>	13	0	13
VERIFICATION OF CONTROL	16	4	20
VERIFICATION OF POSITIONS	132	16	148
VERIFICATION OF SOUNDINGS	359	8	367
VERIFICATION OF JUNCTIONS	2	24	26
APPLICATION OF PHOTOBATHYMETRY	0	0	0
SHORELINE APPLICATION/VERIFICATION	0	0	0
COMPILATION OF SMOOTH SHEET	63	12	75
COMPARISON WITH PRIOR SURVEYS AND CHARTS	0	26	26
EVALUATION OF SIDESCAN SONAR RECORDS	0	0	0
EVALUATION OF WIRE DRAGS AND SWEEPS	0	0	0
EVALUATION REPORT	10	16	26
OTHER Update	0	4	4
Digitization	16	0	16
TOTALS	611	110	721

<i>Pre-processing Examination by</i>	<i>Beginning Date</i>	<i>Ending Date</i>
Verification of Field Data by J. Stringham, J. Shofner, C. Davies	XXXXXXXXX Beginning 6/18/82	Ending Date 2/3/84
XXXXXXXXX Checks by J. Stringham, T. Johns, J. Green	Time (Hours) 105 hours	Ending Date 7/20/84
Evaluation and Analysis by G. E. Kay	Time (Hours) 6/7/84	Ending Date 7/17/84
Inspection by	Time (Hours)	Ending Date

PACIFIC MARINE CENTER
EVALUATION REPORT

REGISTRY NO: H-9976

FIELD NO: DA-10-3-81

Alaska, Chatham Strait, Point Ellis to Rowan Bay

SURVEYED: October 8 - November 3, 1981 and May 13 - September 22, 1982

SCALE: 1:10,000

PROJECT NO: OPR-0353-DA-81

SOUNDINGS: Ross Fineline 5000 Fathometer

CONTROL: Range/Range
Range/Azimuth
Motorola Mini-Ranger III/
Wild T-2

Chief of Party.....CDR N. C. Austin and
CDR J. M. Wintermyre

Surveyed by.....LCDR D. MacFarland
LCDR D. Seidel
LT D. Dreves
LT S. Tullis
LT H. Ramm
LTJG S. Konrad
LTJG D. Actor
LTJG N. Bogue
ENS E. Hawk
ENS J. Duggan

Automated Plot by.....PMC Xynetics Plotter

Verified by.....J. Stringham
J. Shofner
C. Davis

Evaluated by.....Gordon E. Kay

1. INTRODUCTION

H-9976 is a Navigable Area Survey (NAS) conducted by the NOAA Ship DAVIDSON in accordance with the following:

- Project Instructions for OPR-0353-DA-81, dated June 15, 1981
- Change Number 1, dated July 1, 1981
- Change Number 2, dated March 11, 1982
- Change Number 3, dated August 26, 1982

H-9976 is a two-year survey situated in Chatham Strait, between Point Ellis to Rowan Bay.

The following data was changed during verification.

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

b) Tide levels - values are from observed tides, see form 712.

2. CONTROL AND SHORELINE

Horizontal control and hydrographic positioning are adequately addressed in the Ship's Descriptive Report (D.R.) paragraphs F and G and Horizontal and Electronic Control Reports for OPR-0353-DA-81, (1981 and 1982).

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

Shoreline is not shown on H-9976 because it conflicts with hydrography. Therefore, it is not shown on the smooth sheet in accordance with C35 letters on "Apparent Shoreline Discrepancies" dated July 27, 1982* and October 25, 1982* and Hydrographic Guideline Number 17, Section B.6. (*appended at end of this report).

3. HYDROGRAPHY

Soundings at crosslines are in good agreement. The hydrography contained within this survey is adequate to determine the bottom configuration and least depths.

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

4. CONDITION OF SURVEY

The hydrographic records and final reports adequately conform to the requirements of the Hydrographic Manual (H.M.), 4th Edition, revised through Change number 3, with the following exception.

A discussion with field personnel indicates that some or all of the original sounding volumes were re-written. This copying over of the original recorded field notes was performed to "pretty up" the volume or to reject substandard work. While it does accomplish this, valuable data can be lost or errors can develop, which lowers the overall survey quality.

"Recorded data must never be erased . . . entries rejected for any reason are indicated by an "R" written boldly over the entry." Hydrographic Manual, Section 4.8.3.1 paragraph 11.

5. JUNCTIONS

H-9976 junctions the following:

<u>Survey</u>	<u>Year</u>	<u>Scale</u>	<u>Note</u>	<u>Color</u>	<u>Junctions on</u>
H-9977	1981	1:10,000	Joins	Red	Northeast
H-10050	1982	1:10,000	Joins	Orange	East
H-10085	1983	1:10,000	Joins	Violet	North

The junctions have been adequately effected.

6. COMPARISON WITH PRIOR SURVEYS

H-2334 (1897) 1:20,000 compares well to H-9976. The 50-fathom curve on H-9976 is in general agreement with the 50-fathom curve on H-2334, but slightly shoaler depths (1 to 2 fathoms) can be found on H-9976. These differences are attributed to data acquisition and positioning techniques on the prior. Inshore of the 20-fathom curve, H-9976 contains a more complete development of shoals than H-2334. The present survey should supersede H-2334 over the area of common coverage.

7. COMPARISON WITH CHART

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

a) Hydrography — Charted depths come from the before mentioned prior survey and are in general agreement with H-9976. Present survey contains more data and better delineates numerous uncharted shoals and least depths. All charted rocks can be accounted for on the present survey and H-9976 should become the new charting source.

There are three presurvey review items within the limits of H-9976, as listed in the Automated Wreck and Obstruction Information System file (AWOIS) of March 4, 1982.

AWOIS

Item No.	Description	Latitude North	Longitude West
1.	rock	56°34'24.1" ✓	134°19'38.0" ✓
2.	sunken rock	56°37'30.0" ✓	134°20'06.0" ✓
3.	rock	56°38'12.4" ✓	134°18'23.0" ✓

H-9976

Item No.	Found	Latitude North	Longitude West
1.	Pos#6001	56°34'21.7" ✓	134°19'38.7" ✓
*2.	1.9Rk Pos#3416	56°37'36.7" ✓	134°20'15.9" ✓
*3.	3.3Rk Pos#3428	56°38'11.9" ✓	134°18'22.1" ✓

The above AWOIS items were adequately investigated and should be charted as shown on H-9976.

* These items have been submitted for inclusion into the Local Notice to Mariners (LNM).

b) Controlling depths-- There are no controlling depths located within the limits of H-9976.

c) Aids to Navigation -- There are no floating aids and one fixed aid located within the limits of H-9976.

<u>Aid</u>	<u>Latitude North</u>	<u>Longitude West</u>	<u>L. L. Number</u>
Point Ellis Light 8, 1982	56°34'01.4"	134°19'53.2"	3187.60

This light adequately marks the feature intended.

There have been three "Dangers to Navigation" reports submitted as follows,

<u>Date</u>	<u>Originator</u>
December 4, 1981	NOAA Ship DAVIDSON
August 8, 1982	NOAA Ship DAVIDSON
December 22, 1982	Pacific Marine Center

Copies of these reports are appended in the Descriptive Report.

H-9976 is adequate to supersede hydrography on chart 17370 over the common area.

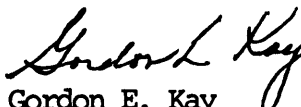
8. COMPLIANCE WITH INSTRUCTIONS

H-9976 adequately complies with the instructions and changes listed in section one of this report, except where noted in section 4.

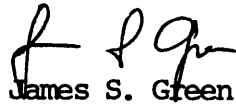
9. ADDITIONAL FIELD WORK

H-9976 is a good Navigable Area Survey; additional field work is neither required nor recommended at this time.

Respectfully submitted,


Gordon E. Kay
July 17, 1984

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



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, Lowan 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



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

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): 945-1277 Chatham Strait, AK
945-1353 Rowan Bay, AK

Period: October 8 - November 3, 1981

HYDROGRAPHIC SHEET: H-9976

OPR: 0353

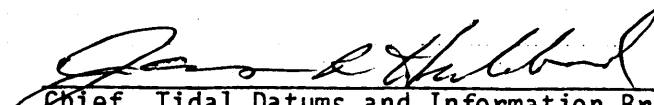
Locality: Entrance to Rowan Bay, Alaska and Bay of Pillars, Alaska

Plane of reference (mean lower low water): 945-1277 = 14.0 ft.
945-1353 = 5.1 ft.

Height of Mean High Water above Plane of Reference is 945-1277 = 11.3 ft.
945-1353 = 11.4 ft.

REMARKS: Recommended Zoning:

1. North of 56°37' zone direct on 945-1353, Rowan Bay, Alaska.
2. South of 56°37' zone direct on 945-1277, Chatham Strait, Alaska.


Chief, Tidal Datums and Information Branch

DATE: October 28, 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): 945-1278 Chatham Straits, Alaska

Period: May 13-June 15, 1982

HYDROGRAPHIC SHEET: H-9976

OPR: 0-353

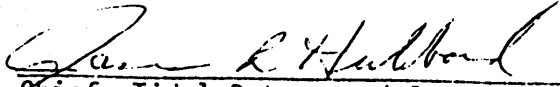
Locality: Entrance to Bay of Pillars, Alaska

Plane of reference (mean lower low water): 2.28 ft.

Height of Mean High Water above Plane of Reference is 11.8 ft.

REMARKS: Recommended Zoning:

1. West of longitude $134^{\circ}16'$ zone direct.
2. East of Longitude $134^{\circ}16'$ apply x0.98 apply range ratio.


Chief, Tidal Datums and Information Branch

DATE: May 12, 1983

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 945-1278 Chatham Straits #2, AK

Period: September 22 - October 6, 1982

HYDROGRAPHIC SHEET: H-9976

OPR: 0353

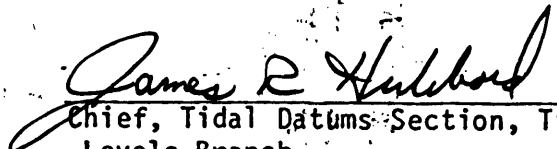
Locality: Chatham Straits - Rowan Bay, Alaska

Plane of reference (mean lower low water): 2.19 ft.

Height of Mean High Water above Plane of Reference is 11.8 ft.

REMARKS: Recommended Zoning:

1. North of $56^{\circ}38.0'$ apply x0.98 range ratio.
2. South of $56^{\circ}38.0'$
 - a. West of $134^{\circ}16.0'$ zone direct.
 - b. East of $134^{\circ}16.0'$ apply x0.98 range ratio.


Chief, Tidal Datums Section, Tides & Water
Levels Branch



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

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

December 22, 1982

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

Dear Sir:

The following uncharted shoals and rocks were noted during preliminary office review of the hydrographic survey near the Bay of Pillars in Chatham Strait, Alaska, and are submitted for inclusion into the local Notice to Mariners for NOAA Chart 17370. The indicated least depths are reduced to MLLW based on predicted tides.

1. A pinnacle rock covered 17.4 feet at latitude $56^{\circ}33'40''N$, longitude $134^{\circ}19'40''W$.
2. General shoaling to 1.6 fathoms at latitude $56^{\circ}33'47''N$, longitude $134^{\circ}19'51''W$.
3. A 3.4 fathom shoal at latitude $56^{\circ}34'16''N$, longitude $134^{\circ}19'59''W$.
4. A 2.8 fathom shoal at latitude $56^{\circ}34'17''N$, longitude $134^{\circ}19'33''W$.
5. A rock awash at latitude $56^{\circ}34'34''N$, longitude $134^{\circ}18'07''W$.
6. A 0.8 fathom shoal at latitude $56^{\circ}35'10''N$, longitude $134^{\circ}17'13''W$.
7. General shoaling to 2.9 fathoms at latitude $56^{\circ}35'21''N$, longitude $134^{\circ}16'42''W$.
8. A 3.2 fathom shoal at latitude $56^{\circ}35'34''N$, longitude $134^{\circ}18'56''W$.
9. A 5.2 fathom shoal at latitude $56^{\circ}36'07''N$, longitude $134^{\circ}19'12''W$.
10. A 1.0 fathom shoal at latitude $56^{\circ}36'09''N$, longitude $134^{\circ}18'29''W$.
11. A 3.8 fathom shoal at latitude $56^{\circ}36'18''N$, longitude $134^{\circ}19'14''W$.



12. A 1.7 fathom shoal at latitude 56°36'22"N, longitude 134°17'33"W.

13. A pinnacle rock covered 7.8 feet at latitude 56°36'27"N, longitude 134°19'48"W.

14. A 4.9 fathom shoal at latitude 56°36'35"N, longitude 134°18'10"W.

15. A 1.6 fathom shoal at latitude 56°36'41"N, longitude 134°18'58"W.

16. A 2.0 fathom shoal at latitude 56°36'48"N, longitude 134°18'04"W.

17. A 2.1 fathom shoal at latitude 56°36'57"N, longitude 134°18'13"W.

18. A 4.0 fathom shoal at latitude 56°37'09"N, longitude 134°18'26"W.

19. A 1.3 fathom shoal at latitude 56°37'33"N, longitude 134°17'38"W.

20. A 5.9 fathom shoal at latitude 56°38'15"N, longitude 134°18'49"W.

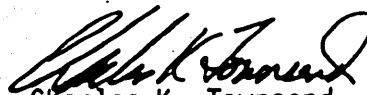
21. A 2.3 fathom shoal at latitude 56°38'22"N, longitude 134°17'43"W.

22. A 2.5 fathom shoal at latitude 56°38'37"N, longitude 134°19'23"W.

23. General shoaling to 3.5 fathoms at latitude 56°38'37"N, longitude 134°20'25"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

bcc: N/CG222

ATTACHMENT TO DESCRIPTIVE REPORT FOR H-9976

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.

David W. Jeger 8/2/84
Chief, Nautical Chart Branch (Date)

CLEARANCE:

N/MOP2:LWOrdock

SIGNATURE AND DATE:

Larry R. Mordock 8/14/84

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.

Robert L. Sargent
Director, Pacific Marine Center (Date)



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

Address reply to:
COMMANDER (oan)
Seventeenth Coast Guard District
P.O. Box 3-5000
Juneau, Alaska 99802

MOP Z RCR
copy to DANR 1/27
N/MOP 21 9/27
N/CG 221 1st

RECEIVED
SEP 20 1984

(907) 586-7368

16500

SEP 14 1984

ES
PACIFIC MARINE CENTER

RADM R. L. Sandquist
National Ocean Service
Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102-3767

Dear RADM Sandquist:

(H-9976, 1981-2)

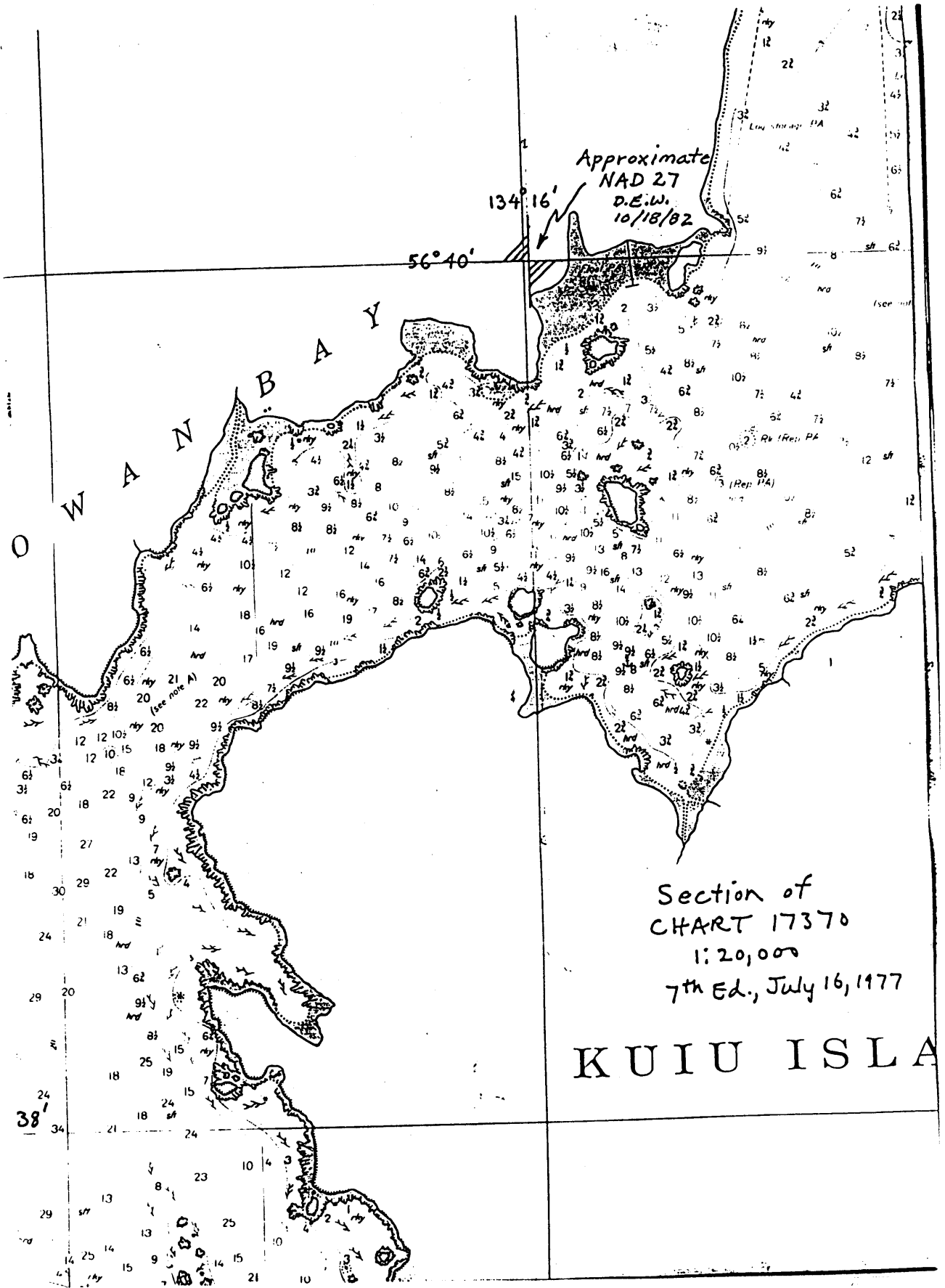
In response to the NOAA ship DAVIDSONS' recommendation to establish a floating aid at the mouth of Rowan Bay, (Latitude 56°37'36.6"N Longitude 134°20'15"W), our initial review indicates that due to low traffic volume and numerous other obstructions in the area, as cautioned on chart 17370, a Federal Aid to mark this particular shoal would not be justified.

The servicing buoy tender for this area, USCGC WOODRUSH, has been requested to provide their recommendation on this matter. Once their study is completed, and their recommendation received, we will advise you of our final decision.

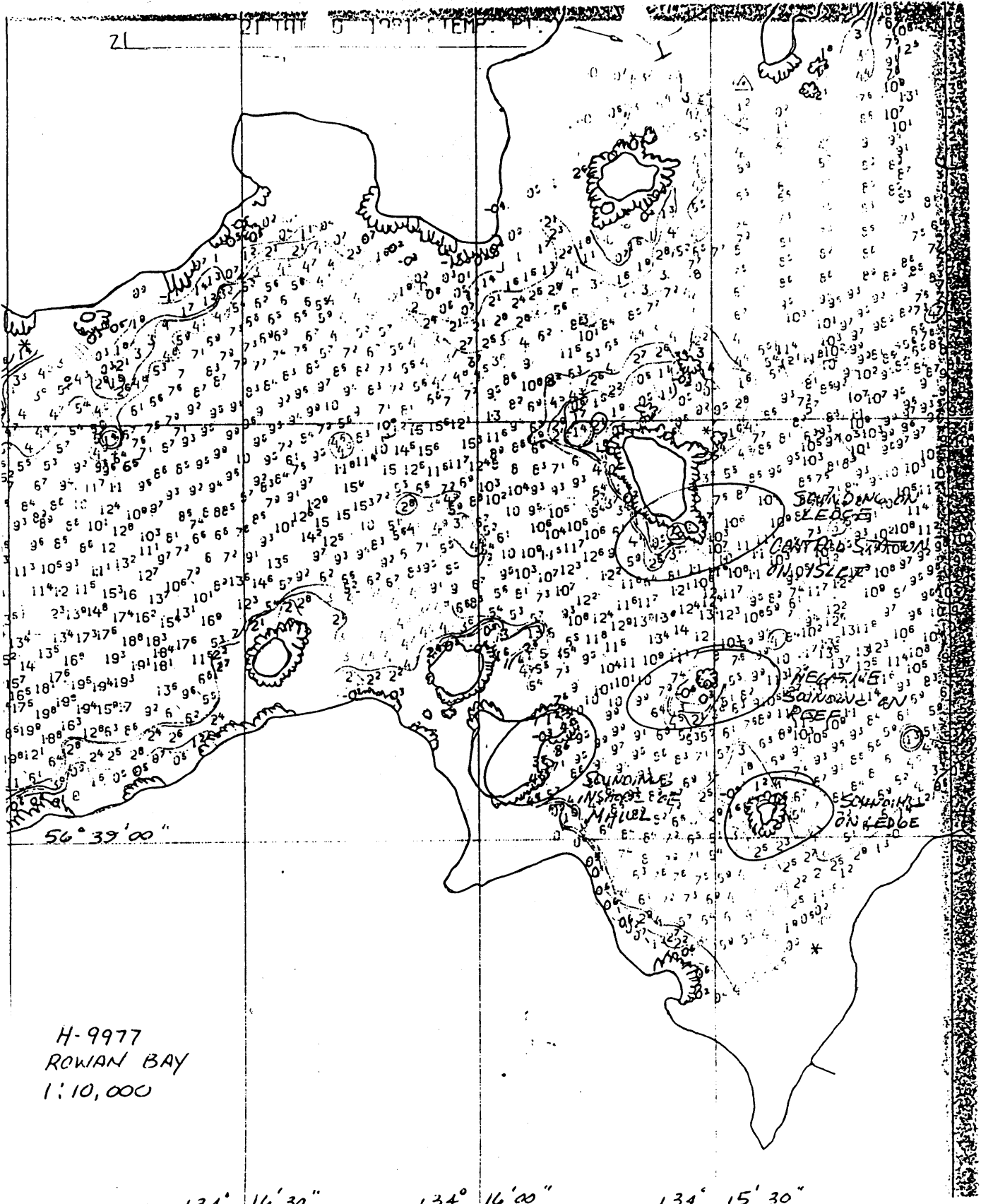
Sincerely,

J. S. Merrill
for J. S. MERRILL

Lieutenant Commander, U. S. Coast Guard
Chief, Aids to Navigation Branch
Seventeenth Coast Guard District
By direction of the District Commander



Section of
CHART 17370
1:20,000
7th Ed., July 16, 1977
KUIU ISLAND



H-9977
 ROWAN BAY
 1:10,000

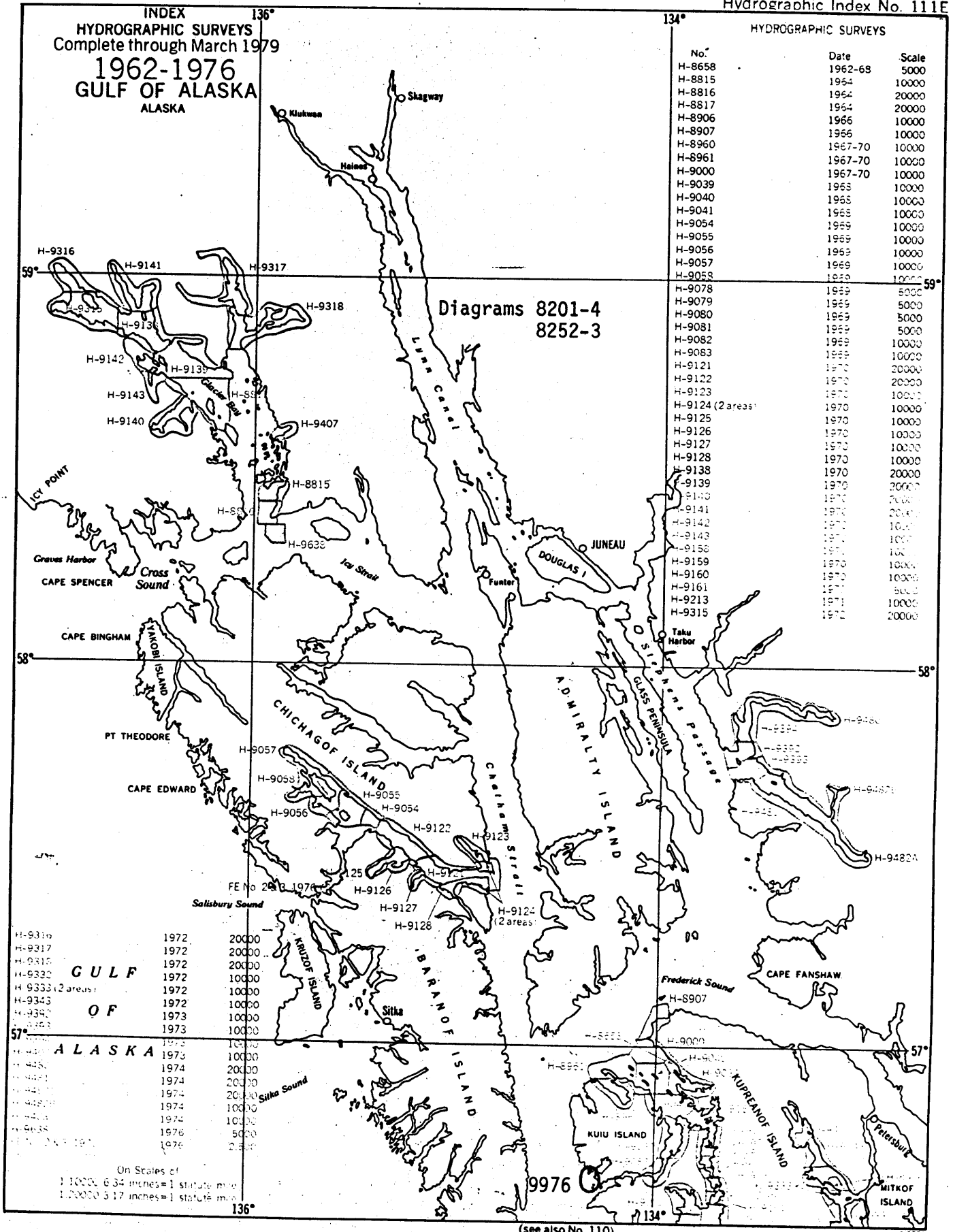
134° 16' 30"

134° 16' 00"

134° 15' 30"

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

Hydrographic Index No. 111E



INDEX
HYDROGRAPHIC SURVEYS
Complete through March 1979
1962-1976
GULF OF ALASKA
ALASKA

HYDROGRAPHIC SURVEYS

No.	Date	Scale
H-8658	1962-68	5000
H-8815	1964	10000
H-8816	1964	20000
H-8817	1964	20000
H-8906	1966	10000
H-8907	1966	10000
H-8960	1967-70	10000
H-8961	1967-70	10000
H-9000	1967-70	10000
H-9039	1968	10000
H-9040	1968	10000
H-9041	1968	10000
H-9054	1969	10000
H-9055	1969	10000
H-9056	1969	10000
H-9057	1969	10000
H-9058	1969	10000
H-9078	1969	5000
H-9079	1969	5000
H-9080	1969	5000
H-9081	1969	5000
H-9082	1969	10000
H-9083	1969	10000
H-9121	1970	20000
H-9122	1970	20000
H-9123	1970	10000
H-9124 (2 areas)	1970	10000
H-9125	1970	10000
H-9126	1970	10000
H-9127	1970	10000
H-9128	1970	10000
H-9138	1970	20000
H-9139	1970	20000
H-9140	1970	20000
H-9141	1970	20000
H-9142	1970	20000
H-9143	1970	10000
H-9156	1970	10000
H-9159	1970	10000
H-9160	1970	10000
H-9161	1970	5000
H-9213	1971	10000
H-9315	1972	20000

Diagrams 8201-4
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H-9316	1972	20000
H-9317	1972	20000
H-9318	1972	20000
H-9332	1972	10000
H-9343	1972	10000
H-9344	1972	10000
H-9345	1972	10000
H-9346	1972	10000
H-9347	1972	10000
H-9348	1972	10000
H-9349	1972	10000
H-9350	1972	10000
H-9351	1972	10000
H-9352	1972	10000
H-9353	1972	10000
H-9354	1972	10000
H-9355	1972	10000
H-9356	1972	10000
H-9357	1972	10000
H-9358	1972	10000
H-9359	1972	10000
H-9360	1972	10000
H-9361	1972	10000
H-9362	1972	10000
H-9363	1972	10000
H-9364	1972	10000
H-9365	1972	10000
H-9366	1972	10000
H-9367	1972	10000
H-9368	1972	10000
H-9369	1972	10000
H-9370	1972	10000
H-9371	1972	10000
H-9372	1972	10000
H-9373	1972	10000
H-9374	1972	10000
H-9375	1972	10000
H-9376	1972	10000
H-9377	1972	10000
H-9378	1972	10000
H-9379	1972	10000
H-9380	1972	10000
H-9381	1972	10000
H-9382	1972	10000
H-9383	1972	10000
H-9384	1972	10000
H-9385	1972	10000
H-9386	1972	10000
H-9387	1972	10000
H-9388	1972	10000
H-9389	1972	10000
H-9390	1972	10000
H-9391	1972	10000
H-9392	1972	10000
H-9393	1972	10000
H-9394	1972	10000
H-9395	1972	10000
H-9396	1972	10000
H-9397	1972	10000
H-9398	1972	10000
H-9399	1972	10000
H-9400	1972	10000
H-9401	1972	10000
H-9402	1972	10000
H-9403	1972	10000
H-9404	1972	10000
H-9405	1972	10000
H-9406	1972	10000
H-9407	1972	10000
H-9408	1972	10000
H-9409	1972	10000
H-9410	1972	10000
H-9411	1972	10000
H-9412	1972	10000
H-9413	1972	10000
H-9414	1972	10000
H-9415	1972	10000
H-9416	1972	10000
H-9417	1972	10000
H-9418	1972	10000
H-9419	1972	10000
H-9420	1972	10000
H-9421	1972	10000
H-9422	1972	10000
H-9423	1972	10000
H-9424	1972	10000
H-9425	1972	10000
H-9426	1972	10000
H-9427	1972	10000
H-9428	1972	10000
H-9429	1972	10000
H-9430	1972	10000
H-9431	1972	10000
H-9432	1972	10000
H-9433	1972	10000
H-9434	1972	10000
H-9435	1972	10000
H-9436	1972	10000
H-9437	1972	10000
H-9438	1972	10000
H-9439	1972	10000
H-9440	1972	10000
H-9441	1972	10000
H-9442	1972	10000
H-9443	1972	10000
H-9444	1972	10000
H-9445	1972	10000
H-9446	1972	10000
H-9447	1972	10000
H-9448	1972	10000
H-9449	1972	10000
H-9450	1972	10000
H-9451	1972	10000
H-9452	1972	10000
H-9453	1972	10000
H-9454	1972	10000
H-9455	1972	10000
H-9456	1972	10000
H-9457	1972	10000
H-9458	1972	10000
H-9459	1972	10000
H-9460	1972	10000
H-9461	1972	10000
H-9462	1972	10000
H-9463	1972	10000
H-9464	1972	10000
H-9465	1972	10000
H-9466	1972	10000
H-9467	1972	10000
H-9468	1972	10000
H-9469	1972	10000
H-9470	1972	10000
H-9471	1972	10000
H-9472	1972	10000
H-9473	1972	10000
H-9474	1972	10000
H-9475	1972	10000
H-9476	1972	10000
H-9477	1972	10000
H-9478	1972	10000
H-9479	1972	10000
H-9480	1972	10000
H-9481	1972	10000
H-9482	1972	10000
H-9483	1972	10000
H-9484	1972	10000
H-9485	1972	10000
H-9486	1972	10000
H-9487	1972	10000
H-9488	1972	10000
H-9489	1972	10000
H-9490	1972	10000
H-9491	1972	10000
H-9492	1972	10000
H-9493	1972	10000
H-9494	1972	10000
H-9495	1972	10000
H-9496	1972	10000
H-9497	1972	10000
H-9498	1972	10000
H-9499	1972	10000
H-9500	1972	10000

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

(see also No. 110)

