

10197

Diagram No. 8502-2

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey ... Hydrographic .....  
Field No. .... FA-20-2-85 .....  
Registry No. .... H-10197 .....

LOCALITY

State ..... Alaska .....  
General Locality .. South Entrance to Shelikof...  
Strait  
Sublocality ..... 7 Miles East of Agripina Bay.

19 85-86

CHIEF OF PARTY  
CAPT J.W. Carpenter

LIBRARY & ARCHIVES

DATE ..... October 28, 1987 .....

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

10197

Area 5  
CAT  
16568  
16906  
16013  
531  
530  
500  
CARTOG.  
SIGN OFF  
ON FM IN BACK

HYDROGRAPHIC TITLE SHEET

H-10197

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.

FA 20-2-85

State Alaska

General locality South Entrance to Shelikof Strait

Locality 7 Miles East of Agripina Bay

Scale 1:20,000 Date of survey Sept. 6, 1985 - Sept. 16, 1986

Instructions dated May 14, 1985 Project No. OPR-P180-FA-85

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

Chief of party CAPT J.W. Carpenter

Surveyed by LT Kenny, LT Moen, LTJG Timmons, LTJG Hurst, LTJG Brezinski, ENS Crozer, ENS Abbott, ENS Cone, ENS Lynch, ENS Bernard, ENS Nodine, CST Krick

Soundings taken by echo sounder, hand lead, pole DSF 6000N

Graphic record scaled by FAIRWEATHER Personnel

Graphic record checked by FAIRWEATHER Personnel

Verification by P. Niland-Iwanoto Automated plot by PMC Xynetics Plotter

Evaluation by A. Luceno

Soundings in fathoms ~~FMX~~ at ~~MLW~~ MLLW

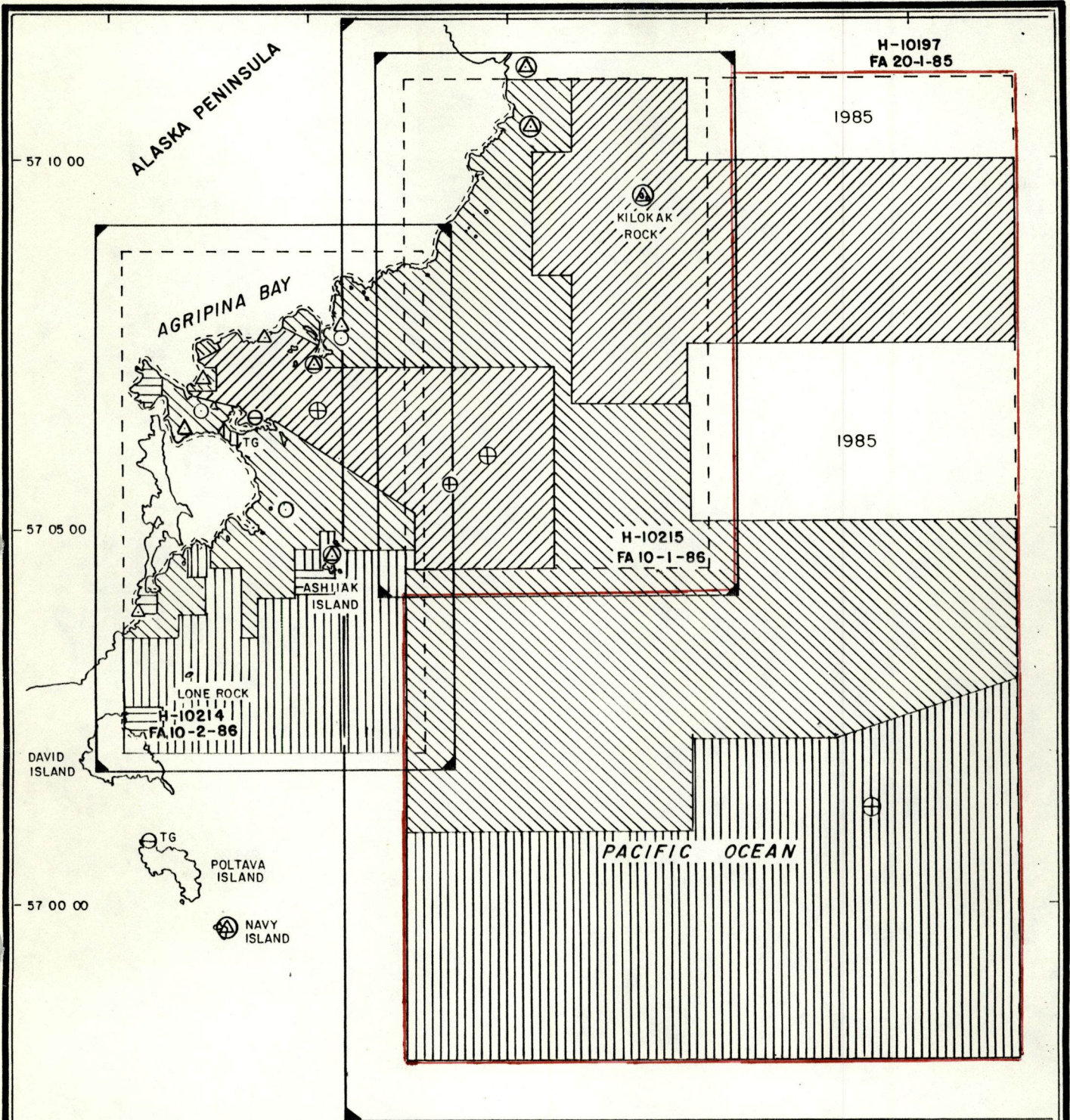
REMARKS: Marginal notes in black by Evaluator. Separates are filed with the hydrographic data.

STANDARDS CK'D 10-31-87

C. Loy

AWO15 / SURF Complete MSM 11/6/87

SC 4-15-91



H-10197  
FA 20-1-85

1985

1985

H-10215  
FA 10-1-86

H-10214  
FA 10-2-86

PACIFIC OCEAN

	JUNE	JULY	AUG	SEPT
SQ NM SOUNDING LINE	30	37	58	50
LN M SOUNDING LINE	352	818	583	401
BOTTOM SAMPLE	30	80	34	72
HYDRO CONTROL STATIONS	4	8	2	1
SV/D - NANSEN CAST	3	2	2	3
WATER SAMPLES ANALYZED	4	1	0	0
TIDE GAGE INSTALLATIONS	1	0	1	0
LN M S/L VERIFICATION	3.6	193	0	0
HYDROGRAPHY				

- ⊕ SV/D NANSEN CAST
- ⊙ STA RECOVERED
- ⊖ TIDE GAGE
- TG TIDE GAGE
- △ STA ESTABLISHED
- ⊕ S/L VERIFICATION

( Part one of two )  
**MONTHLY PROGRESS SKETCH**  
**OPR-P180-FA-86**  
**SOUTHERN ALASKA PENINSULA**

KILOKAK ROCKS TO DAVID ISLAND  
 NOAA SHIP FAIRWEATHER S-220  
 CAPT JOHN CARPENTER, CMDG

SCALE FROM NOS CHART 16568  
 - JUNE - SEPT 1986 -

156 30 00      156 25 00      156 20 00      156 15 00      156 10 00

57 10 00

57 05 00

57 00 00

56 55 00

ALASKA PENINSULA

AGRIPINA BAY

ASHIAK ISLAND

LONE ROCK

KILOKAK ROCK

DAVID ISLAND

POLTAVA ISLAND

NAVY ISLAND

I.

A. Project

Hydrographic survey H-10197 was conducted during the 1985 and 1986 field seasons in accordance with Project Instructions OPR-P180-FA-85, Southern Alaska Peninsula, Alaska dated May 14, 1985; Change No. 1 dated June 6, 1985; Change No. 2 dated June 26, 1985; Change No. 3 dated September 16, 1985; and Change No. 4 dated April 7, 1986. PMC OPORDER, the Hydrographic Manual (fourth edition) and the Hydrographic Survey Guidelines are also applicable. ✓

This sheet is designated as "A" in the project instructions (approved sheet layout dated March 21, 1986). ✓

B. Area Surveyed

Survey H-10197 was conducted in the state of Alaska on the southern side of the Alaska Peninsula in the vicinity of Kilokak Rocks. ✓

This survey is located within an area bounded on the north by latitude 57/11/00, east by longitude 156/07/30, south by latitude 56/58/00, and west by longitude 156/22/36. Survey H-10215 covers the northwest quadrant of this area. ✓

This survey commenced on September 6, 1985 (DN 249) and was completed on September 16, 1986 (DN 259) ✓

C. Sounding Vessels

Hydrographic data for this survey was collected using two vessel types. Jensen survey launches FA-3, FA-4, FA-5, and FA-6 were designated vessel numbers 2023, 2024, 2025, and 2026 respectively. The NOAA Ship FAIRWEATHER (vessel number 2020) was used for bottom samples, all sound velocity casts and all ship hydrography. ✓

D. Sounding Equipment and Corrections to Echo Sounding

All of FAIRWEATHER's survey launches, each equipped with dual-beam Raytheon DSF-6000N echo-sounders, were used to obtain soundings for this survey. See Table I for a list of equipment by vessel, year, and day number. ✓

-----  
 Table I  
 Sounding Equipment  
 RAYTHEON DSF-6000N SERIAL NUMBERS

1985						
<u>Date</u>	<u>2023</u>	<u>2024</u>				<u>2026</u>
249-254	A121N	B048N				B039N
1986						
<u>Date</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2020</u>	✓
168-247	A121N	B049N	A113N	A104N		
217-221					B048N	
248-259	A121N	B049N	A113N	B048N		
257-259					A113N	

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Echo-sounding equipment was monitored continuously while on line. All hydrographic data were scanned at least twice to insert peaks and deeps between soundings and to ensure proper depth digitization. ✓

Wind and sea conditions occasionally made it necessary to visually average the depth profile to correct for heave action. When heave averaging was required, soundings were corrected in accordance with Section 4.9.3.2 of the Hydrographic Manual and Hydrographic Survey Guideline Number 31. ✓

No mechanical problems that degraded data quality were encountered with the DSF-6000N echo sounders during this investigation. Bar checks at three fathoms were done daily, wind and seas permitting, to ensure that the Raytheon DSF-6000N echo sounders were operating properly. Sounding corrections determined for this survey apply to both the narrow- and wide-beam sounding data. ✓

For the 1985 field season FAIRWEATHER's three survey launches were tested for settlement and squat on March 12, 1985 (DN 71) in Shilshole Bay, Seattle, Washington. For the 1986 field season all of FAIRWEATHER's survey launches were tested for settlement and squat on June 10, 1986 (DN 161) and August 18, 1986 (DN 230) in Womens Bay, Kodiak, Alaska. The test results were used to plot settlement and squat curves for each launch (see Corrections to Echo Soundings Data submitted for OPR-P180-FA-86). Measurements were conducted in accordance with Section 4.9.4.2 of the Hydrographic Manual. ✓

It was determined that there were no applicable settlement and squat corrections for any launch when performing surveys in fathoms. Also, historical data shows that settlement and squat correctors need not be ✓

applied to FAIRWEATHER. The ship collected hydrographic data in depths greater than 38 fathoms.

An accurate determination of launch transducer depths was obtained through physical measurement. An oversized carpenter's square was constructed of angle iron, with foot and tenth markings noted on the rise. Divers held the foot of the carpenter's square flush against the transducer while the rise was leveled by personnel on the pier using a circular bubble level. On April 29, 1986 a transducer draft of 0.3 fathoms was recorded for all launches (full fuel tank, for both 0 people and 4 people on board. (See Corrections to Echo Sounders Data submitted for OPR-P180-FA-86.)

FAIRWEATHER's transducer depth is 2.3 fathoms based on 13.8-foot draft.

Velocity correctors were determined from seven SV/D casts in accordance with section 4.9.5.2 of the Hydrographic Manual. Program VELTAB was used to compute tables. The casts showed the water column to be changing significantly; therefore, seven velocity tables were necessary (plus an additional table computed for the ship's draft). Table II shows the dates and locations of all casts.

Table II  
Velocity Casts

<u>Cast No.</u>	<u>Date DN</u>	<u>1985</u>		<u>Table No.</u>	<u>Applicable Dates (DN)</u>
		<u>Latitude</u>	<u>Longitude</u>		
16	256	57/14.2N 156/16.4W		Table 10	249-254
<u>Cast No.</u>	<u>Date DN</u>	<u>1986</u>		<u>Table No.</u>	<u>Applicable Dates (DN)</u>
		<u>Latitude</u>	<u>Longitude</u>		
1	166	57/00.9N 155/58.5W		Table 1	168-170
3	179	57/04.0N 156/16.3W		Table 2	176-184
4	196	57/05.6N 156/21.7W		Table 3	188-199
6	212	57/05.6N 156/21.6W		Table 4	202-213
7	221	57/05.6N 156/21.6W		Table 5 Table 11 (ship)	216-227
9	249	57/06.0N 156/20.5		Table 7	247-263

The SV/D casts were performed using a Plessy Model 9040 Environmental Profiling System (s/n 5647). This instrument was calibrated at the Northwest Regional Calibration Center (NRCC) in February, 1985 for the 1985 field season, and on February 4, 1986 for the 1986 field season (see Corrections to Echo Soundings Data). Nansen bottles, sea surface temperatures, and/or XBT's were taken during the SV/D casts as a check on the Plessy System. The reversing thermometers used with the Nansen bottles were calibrated at the NRCC.

TC/TI tapes were made in accordance with PMC OPORDER, Appendix Q, dated May 12, 1986. Printouts of TC/TI tapes are included in the separates following the text of this report.

Predicted tide corrections were applied to the soundings plotted on the field sheets for this survey. The tide correctors used were from the 1985 West Coast of North and South America Tide Tables, and the 1986 West Coast of North and South America Tide Tables. H-10197 tide correctors use Kodiak, Alaska as the reference station using a height correction range ratio of "x1.32", a time correction of plus 0 hours 25 minutes at high water and plus 0 hours 40 minutes at low water. For further information, refer to the "Field Tide Note" in the separates following the Descriptive Report text.

E. Hydrographic Sheets

The field sheets were plotted aboard the FAIRWEATHER using a PDP/8e computer and complot plotter. All the hydrographic data for this survey will be forwarded to the Pacific Marine Center in Seattle, Washington for verification and smooth plotting.

<u>Sheet</u>	<u>Scale</u>	<u>Skew</u>	<u>Dimensions</u>
FA-20-2E-85	1:20,000	90	20 x 54 in.
FA-20-2W-85	1:20,000	90	20 x 54 in.

F. Control Stations

All horizontal control stations for this survey were established or recovered by FAIRWEATHER personnel. All new geodetic positions were established by conventional traverse methods and meet Third Order, Class I accuracy standards. All geodetic positions are based on the North American 1927 Datum. A list of all the control stations used can be found in Appendix VI.

There are no control stations within the area surveyed.

G. Hydrographic Position Control

Hydrographic position control was accomplished using the Motorola Mini-Ranger III system. Table III contains a list of console and R/T units for each sounding vessel. The control configuration consisted of range-

range for all positioning. All electronic control stations were positioned to Third Order, Class I accuracy or better.

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 Table III  
Mini-Ranger Equipment by Vessel

<u>1985</u>		
Vessel Number	DN	Console/RT Number
2023	249-254	B0323/B1398
2024	249-254	716/C1875
2026	249-254	703/E2716
<u>1986</u>		
Vessel Number	DN	Console/RT Number
2023	168-259	B0323/B1398
2024	168-207	716/C1875
	217-251	703/B1108
	252-259	506042/E2716
2025	168-192	506042/E2716
	193-197	703/B1108
	198-203	716/C1875
	204-208	703/B1108
	209-216	506042/E2716
	223-247	506042/E2716
	252-256	703/B1108
2026	168-192	703/B1108
	193-207	506042/E2716
	208-245	716/C1875
	248-259	506042/E2716
2020	217-222	506042/E2716
	257-259	703/B1108

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Mini-Ranger baseline calibrations (BLCs) were conducted in accordance with Appendices M and S of the PMC OORDER. ✓

Mini-Ranger correctors for data collected in 1985 were obtained from BLCs performed prior to the beginning and after the completion of work accomplished for this survey in 1985. On DNs 209, 210, 235 and 246-248 beginning calibrations were conducted along a distance of 1370.9 meters between two recoverable points at Imuya Bay, Alaska. Ending calibrations were conducted on DNs 266-268 along a distance of 1253.6 meters between two recoverable marks in Juneau, Alaska. ✓



For the 1986 field season, Mini-Ranger correctors were obtained from BLCs performed in May, July/August and October, 1986. On DNs 132-133 beginning calibrations were conducted along a distance of 1054.8 meters between two recoverable points across Lake Union in Seattle, Washington. Beginning calibrations continued on DNs 134-135 between two recoverable points at a distance of 990.2 meters across Lake Union. On DNs 199 and 202 BLCs were conducted at Womens Bay in Kodiak, Alaska between two recoverable marks along a distance of 855.4 meters. Calibrations continued on DNs 207-208 between two points set along a beach at a distance of 924.4 meters in Agripina Bay, Alaska. The distance was measured by a Tellurometer CA-1000 (serial nos. 1047 and 1048). Ending BLCs were performed on DNs 276, 277 and 279 along a distance of 1253.6 meters between two recoverable marks in Juneau, Alaska. Table IV contains a list of all calibrations performed in support of this survey.

On DN 245 (1986) the modulator in RT unit C1875 failed and had to be replaced. As a result, no ending BLCs were obtained for console/RT pair 716/C1875. Critical and non-critical system checks verified beginning calibration correctors until the failure occurred.

On DN 175 (1986) code 7 failed and could not be repaired in the field. This transponder was sent to PMC for repairs. As a result, no ending calibration was possible. Critical and non-critical system checks verified the beginning calibration correctors until the failure occurred. A new code 7 was recieved from PMC and was calibrated on DNs 199 and 202. This transponder was used for the remainder of the field season.

Final correctors for data collected in 1985 were determined by averaging the correctors obtained from the beginning and ending BLCs conducted in 1985. In 1986, final correctors for data collected on DNs 170-198 were determined using beginning BLC data only, as correctors obtained from BLCs conducted on DNs 199-208 agreed within 5 meters of the beginning correctors. Final correctors applied to data collected after DN 208 were determined from the BLCs conducted on DNs 199-208 only, as they differed from correctors obtained from ending BLCs by no more than 4 meters.

Final baseline correctors and minimum signal strengths can be found in the Electronic Control Data package submitted for OPR-P180-FA-86.

Electronic corrector abstracts are shown in Appendix V of this report.

Hydrographic positioning equipment was critically system checked at least once per week unless adverse weather prohibited it (at which point they were accomplished as soon as weather allowed). Non-critical system checks were conducted once per day except when equipment failures prohibited it. All hydrographic positioning equipment was found to be accurate within the limits set forth by the PMC OORDER. Critical system checks were accomplished using the theodolite cut method. The instruments used were Wild brand theodolites with serial numbers T2-85652, T2-276503, T2-26336, T2-257219, T1-19288 and T1-13008.

Table IV  
Mini-Ranger Baseline Calibrations

<b>1985</b>		
<u>DN</u>	<u>Console/RT Number</u>	<u>Transponder Codes</u>
209-210	716/C1875	C,5,9
235	B0323/B1398	9
246-248	B0323/B1398 703/E2716	C C,5
266-268	B0323/B1398 703/E2716 716/C1875	C,9 C,5 C,5,9
<b>1986</b>		
<u>DN</u>	<u>Console/RT Number</u>	<u>Transponder Codes</u>
132-133	506042/E2716 B0323/B1398	5,7,8,9,A,B 5,7,9,B,C,D
134	506042/E2716 B0323/B1398 703/B1108	6,C,D 6,8,A 5,6,7,8,9,A,B
135	703/B1108 716/C1875	C,D 5,6,7,8,9,A,B,C,D
199	716/C1875	5,7*,8,9,A,B,C
202	505042/E2716 B0323/B1398 703/B1108	5,7*,8,9,A,B,C 5,7*,8,9,A,B,C 5,7*,8,9,A,B,C
207-208	506042/E2716 B0323/B1398 703/B1108 716/C1875	6,D 6,D 6,D 6,D
275-279	506042/E2716 B0323/B1398 703/B1108 716/C1875	5,6,7*,8,9,A,B,C,D 5,6,7*,9,A,B,C,D 5,6,7*,8,9,A,B,C,D No Ending BLC
290	B0323/B1398	8

\* - This is a new code 7.

In all cases, the launch R/T units were located directly over the transducers, thus eliminating the need for ANDIST correctors. Only the forward transducer was used on FAIRWEATHER when running ship hydrography. No ANDIST correctors are needed for this transducer.

H. Shoreline

This survey is an offshore survey; there are no applicable shoreline manuscripts.

I. Crosslines

All crosslines were run at a minimum of 45 degrees with respect to the main scheme lines and they accounted for eight percent of total main scheme sounding lines. Agreement between crossline and main scheme hydrographic sounding lines is good; all soundings agree within one fathom.

J. Junctions

This survey junctions with four other surveys, H-10040 (1982-83) to the north, H-10214 and H-10215 (1986) to the west, and H-10225 (1986) to the south and west.

Agreement between this survey and the junction surveys is very good, with junction soundings agreeing within one fathom. *(except in steep or irregular areas where soundings differ by as much as 3 fms. in 28-fm depths.)*

To delineate the depth curves at the junction between sheet H-10215 and H-10197, a diver's least depth of 3.8 fathoms has been plotted on the H-10197 final field sheet at latitude 57/04/31.4, longitude 156/22/15.1. The survey data may be found with survey H-10215.

K. Comparison with Prior Surveys

Prior survey H-6925 (1943-44, scale 1:120,000) has depths within the limits of H-10197. Sounding agreement between this survey and survey H-6925 is generally good given the date and scale of the prior survey. Minor sounding discrepancies may be due to positional inadequacy of the 1943-44 survey.

The 14-fathom shoal on prior survey H-6925 at latitude 57/09/24<sup>3.3</sup>, longitude 156/13/34<sup>1.77</sup> was developed with 45-meter line spacing. A 15-fathom minimum depth was found at the approximate location. *Pos. 4813+02*  
*Investigation considered adequate.*

The 47-fathom sounding from H-6925 at latitude 57/01/30, longitude 156/21/45 was developed with 180-meter line spacing. In that area 100 fathoms of water was found; however, shoaling to 47 fathoms was found nearby at latitude 57/01/48, longitude 156/21/06. Differences between survey positional accuracies may be the cause of this discrepancy.

No general shoaling or deepening trends are noted. ✓

It is recommended that survey H-10197 supersede survey H-6925. ✓ CONCUR

L. Comparison with the Chart

This survey was compared to Preliminary Chart Number 16568, 5th edition, December 9, 1978 (scale 1:106,000). ✓

All soundings on the chart in the survey area originate from prior survey H-6925 and are discussed in section K, Comparison with Prior Survey. ✓

No AWOIS items are applicable to this survey. No dangers to navigation were noted. ✓

M. Adequacy

This survey is complete and fully adequate to supersede the prior survey in their common areas. No additional field work is necessary. ✓ CONCUR

N. Aids to Navigation

There are no aids to navigation or landmarks within the limits of this survey. ✓

O. Statistics

<u>Vessel</u>	<u>2020</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>Total</u>
Positions	238	812	606	11	750	24 <sup>3/4</sup> <del>37</del>
Nautical Miles	86.7	216.5	161.1	0	198.2	662.5
Square miles	-	-	-	-	-	94.7
Bottom Samples	26	-	-	11	-	37
Velocity Casts	8	-	-	-	-	7
Tide stations	-	-	-	-	-	1
Days of Production (Hydrography only)	-	-	-	-	-	35

P. Miscellaneous

No unusual submarine features or anomalous tidal conditions were observed during this survey. No current observations were made. ✓

Bottom samples were collected and forwarded to the Smithsonian Institution, Washinton, D.C. ✓

Q. Recommendations

None ✓

R. Automated Data Processing

The following programs were used for data acquisition or processing.

<u>Number</u>	<u>Program</u>	<u>Version Date</u>
RK 112	Range-Range Real Time Plot	04/23/84
RK 201	Grid, Signal and Lattice Plot	04/18/75
RK 221	Range-Range Non-Real Time Plot	07/25/86
RK 212	Visual Station Table Load	04/01/74
RK 300	Utility Computations	10/21/80
RK 330	Reformat and Data Checker	05/04/76
PM 360	Electronic Corrector Abstract	02/02/76
RA 362	330/602 Combined	08/20/84
AM 500	Predicted Tide Generator	11/10/72
RK 407	Geodetic Inverse/Direct Computations	09/25/78
AM 602	Elinore	12/08/82
RK 530	Layer Corrections for Velocity	05/10/76
RK 562	Theodolite Calibrations	09/05/84
	VELTAB	02/01/85

S. Referral to Reports

The following data and reports will be submitted separately:

<u>Report</u>	<u>Date</u>
Horizontal Control Report	11/86
Electronic Control Data	11/86
Corrections to Echo Soundings Data	11/86
Coast Pilot Report	11/86

## II. Field Tide Note 1986 Field Season

The tide gage located at Kodiak, Alaska (945-7283) served as the reference station for the predicted tides used for correctors on surveys H-10197, H-10214 and H-10215 as specified by Project Instructions OPR-P180-FA-85,86.

The controlling tide station is Sand Point, Alaska (945-9450), the operating station at Seldovia, Alaska (945-5500) will supply additional control for datum reduction.

Predicted tide correctors were interpolated aboard the FAIRWEATHER using data from the 1986 West Coast Tide Tables and program AM 500 dated November 10, 1972. All correctors calculated were based on zone correctors supplied by the project instructions and tabulated below.

Time Correction		Height Correction
High Water	Low Water	Range Ratio
+0hr 25min	+0hr 40min	x 1.32

All times of predicted and reported tides are expressed in Universal Coordinated Time. Predicted tides were acceptable for hydrography with no discrepancies in the data attributable to tide errors.

One field tide station, Agripina Bay (945-8464), was established in support of these surveys. The Agripina Bay Station, located at latitude 57/06/24, longitude 156/26/24, operated throughout the period of surveying on sheets H-10197, H-10214 and H-10215. The station was installed on June 17, 1986 (DN 168) and removed on September 27, 1986 (DN 270). Two Bristol Bubbler analog tide gages were installed in a cove on the northern side of the largest island in Agripina Bay. The gages, serial numbers 67A 16201 and 68A 9335, had a range of 0 to 30 feet. The orifices were bolted to a rock approximately 6 inches above the bay floor. The tubing was led across the bottom and weighted with rocks along its length. The staff was bolted to a 2x4 with stainless steel lag bolts. The staff was bolted to a rock face at the 3-foot mark; braced by a strongback at the 8-foot level with two guy wires which led from the top of the 2x4 to eyebolts set in rock. Zero of the tide staff equals 9.9 feet on gage A and 10.6 feet on gage B. For further information refer to the Tide Station Report #945-8464, Agripina Bay, Alaska.

### Gage A

At the start of the 3-hour observations on June 18, 1986 (DN 169), a leak was found at the orifice tube fitting, the leak was fixed and the observations were restarted.

At 1700UTC July 31, 1986 (DN 212) the gage paper jumped the sprockets, it was noted that the time was subsequently one hour fast, the time was reset on August 5, 1986 (DN 217).

On September 5, 1986 (DN 248) the gage paper was found to be jammed, it had jumped the sprockets and tore. It was noted and reset at 1650UTC on September 5, 1986. During this same time period the back-up gage was also jammed. Tides need to be interpolated for the period of 1520UTC to 1650UTC on September 5, 1986.

### Gage B

On July 7, 1986 (DN 188) the gage paper was found to have jammed, it was reset at 1632UTC on the same day.

From 2200UTC on July 19, 1986 (DN 200) to 0500UTC on July 20, 1986 (DN 201) the marigram shows a stepping pattern on the trace, apparently the gage corrected itself. No action was taken.

On July 23, 1986 (DN 204) at 2033UTCz the gage time was adjusted incorrectly to a 12 hour error. Time was correctly adjusted at 2127UTC on the same day.

On July 31, 1986 (DN 212) the gage time was again incorrectly set, 1 hour slow. Time was reset on August 5, 1986 (DN 217) at 1915UTC.

On September 4, 1986 (DN 247) the gage paper was installed incorrectly resulting in periodic jamming of the paper. This was corrected on September 11, 1986 (DN 254) at 1703z. During this time period the primary gage also malfunctioned resulting in the need for tide interpolation ( see gage A explanation).

### Levels

Opening levels were run on June 17, 1986 (DN 168) to five recovered standard NOS brass disks and one eyebolt (a temporary benchmark). Closing levels were run on September 27, 1986 (DN 270) over the same run. A maximum error of 0.003m between benchmark set-ups was obtained for both opening and closing levels. A difference of 0.012m was obtained between the opening and closing levels for the segment from the staff to the temporary benchmark. This difference may be due to the fact that the rodman has to stand on the staff support for this segment.

### Zoning Recommendations

None

Field Tide Note  
OPR-P180-FA-85  
Agrimina Bay, Alaska

The tide gauge at Kodiak, Alaska (945-7283) served as the reference station for the predicted tides used for correctors on survey H-10197 as stated in the project instructions, OPR-P180-FA-85. Leveling and maintenance of this station is performed by the Pacific Tide Party.

Predicted tide correctors were interpolated aboard FAIRWEATHER using data from the 1985 West Coast Tide Tables and program AM 500 dated November 10, 1972. The correctors used were provided in the project instructions (OPR-P180-FA-85). The correctors are +25 minutes for high water, +40 minutes for low water and a height ratio of  $x 1.32$ .

All times of predicted and reported tides are expressed in Universal Coordinated Time (UTC). Predicted tides were acceptable for hydrography with no discrepancies in the data attributable to tide errors.

Two field tide stations, Agrimina Bay (945-8464) and Imuya Bay (945-8427), were established in support of this survey (see the Field Tide Note for Imuya Bay, Alaska for further information). The Agrimina Bay station, located at latitude 57/06/30 N, longitude 155/26/24 W, operated throughout the period of operation on OPR-P180-FA-85. The station was installed on August 10, 1985 (DN 222) and removed on September 12, 1985 (DN 255). The gauge, a Bristol Bubbler analog tide gauge, was installed in a small inlet on the northern side of the largest island in Agrimina Bay. The gauge, serial number 68A 9333, had a range of 0 to 30 feet. The orifice was secured to a 150 pound rock and placed in approximately 17 feet of water at MLLW. The tubing was weighted with rocks along its entire length. The staff was a fiberglass staff secured to a 2x4 with stainless steel lag bolts. The staff was secured to a rock face by 4 guy wires and a strongback. Zero of the tide staff equalled 17.1 feet on the gauge. For further information refer to the Tide Station Report #945-8464, Agrimina Bay, AK.

Opening levels were run to five standard NOS brass benchmarks and one temporary benchmark (an eyebolt) on August 20, 1985 (DN 232) with a closure of 2 mm over the entire 0.5 mile run. Closing levels were run on September 12, 1985 (DN 255) with a closure of 2 mm over the same run. There is a difference in the elevation between the opening and the closing levels of BM 8464 D and BM 8464 E of 7 mm which will be resolved in the 1986 field season.

No zoning recommendations are forwarded.



VI. SIGNAL TAPE LISTING  
OPR-P180-FA-86  
FA-20-2-85  
H-10197

GUPPY RM1, 1985

415 0 57 11 12998 156 19 34715 250 0034 000000

ASH, 1944

419 0 57 04 36933 156 24 32675 250 0066 000000

FINA, 1944

420 0 57 07 17597 156 24 55949 250 0034 000000

NEAVY, 1944

470 0 56 59 43183 156 27 16748 250 0028 000000

ALDER, 1985

485 0 57 03 52078 156 29 14348 250 0046 000000

XI. Approval Sheet

The final field sheets and the accompanying records have been reviewed for accuracy, completeness, compliance with project instructions, and adherence to required standards and procedures. The Commanding Officer monitored field work and inspected selected portions of the data on a daily basis. This survey is complete and requires no additional field work. The data is forwarded for final review and processing.

Submitted by:

*Michael S. Abbott*

Michael S. Abbott  
Ensign, NOAA

Reviewed by:

*Maureen R. Kenny*

Maureen R. Kenny  
Lieutenant, NOAA  
Field Operations Officer

Approved by:

*John W. Carpenter*

John W. Carpenter  
Captain, NOAA  
Commanding Officer

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

**DATE:** February 25, 1987

**Marine Center:** Pacific

**OPR:** P180

**Hydrographic Sheet:** H-10197

**Locality:** South of Kilokak Rock, Shelikof Strait, Alaska

**Time Period:** June 19 - September 27, 1986

**Tide Station Used:** 945-8464 Agripina Bay, AK

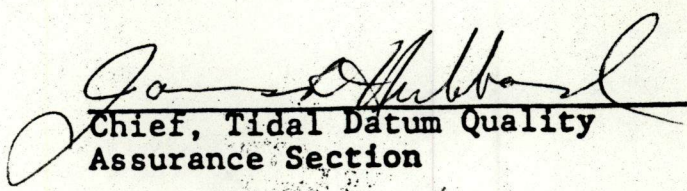
**Plane of Reference (Mean Lower Low Water):** 0.17 Ft.

**Height of Mean High Water Above Plane of Reference:** 10.2 Ft.

**Remarks:** Recommended Zoning:

This supercedes tide note dated January, 21, 1987

1. North of Latitude  $57^{\circ}09.0'$  apply a X1.06 range ratio to all heights.
2. South of Latitude  $57^{\circ}09.0'$  zone direct.

  
Chief, Tidal Datum Quality  
Assurance Section

GEOGRAPHIC NAMES

H-10197

(TITLE)  
ALASKA, SOUTH ENTRANCE TO  
Name on Survey  
SHELIKOF STRAIT  
7 MILES EAST OF AGRIPINA BAY

ON CHART NO. 16568  
ON PREVIOUS SURVEY  
CON U.S. QUADRANGLE MAPS  
FROM LOCAL INFORMATION  
ON LOCAL MAPS  
P.O. GUIDE OR MAP  
GRAND MCNALLY ATLAS  
U.S. LIGHT LIST

	A	B	C	D	E	F	G	H	K
ALASKA (TITLE)	X								1
SHELIKOF STRAIT	X								2
									3
									4
									5
									6
									7
									8
									9
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									24
									25

Approved:

*Charles B. Harrington*  
Chief Geographer - N/C6475

APR 7 1987



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL OCEAN SERVICE

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

DEC 10 1986

N/MOP21x2/MM

TO: Commanding Officer  
NOAA Ship FAIRWEATHER

FROM: *Robert L. Sandquist*  
N/MOP - Robert L. Sandquist

SUBJECT: Preprocessing Examination of H-10197, Alaska,  
Southern Entrance to Shelikof Strait, South of Kilokak Rocks

Hydrographic survey H-10197 has been reviewed in accordance with Hydrographic Survey Guideline No. 15, and the Preprocessing Examination Critique for this survey is attached. Survey H-10197 is accepted for Pacific Marine Center processing.

The Preprocessing Examination Critique is designed to provide information which will be useful to the Command for maintaining the quality of future hydrographic surveys. I encourage you to use this information constructively. Your comments on specific critique items are welcome.

Attachments

cc: N/MOP2x1  
N/MOP21x2  
N/MOP211 ✓  
N/CG2





UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE  
Pacific Marine Center  
Nautical Chart Branch  
7600 Sand Point Way NE  
BIN C15700  
Seattle, Washington 98115-0070

December 10, 1986

N/MOP21/TWR

TO: N/MOP - Robert L. Sandquist  
FROM: *Thomas W. Richards*  
N/MOP 21 - Thomas W. Richards  
SUBJECT: Preprocessing Examination for H-10197

I. SURVEY INFORMATION

A. Field No. FA-20-2-85 Registry No. H-10197

B. State: Alaska  
General Locality: Southern Entrance to Shelikof Strait  
Sublocality: South of Kilokak Rocks

C. Project Instructions: OPR-P180-FA-85  
Original dated: May 14, 1985  
Change No. 1 dated: June 6, 1985  
Change No. 2 dated: July 26, 1985  
Change No. 3 dated: September 16, 1985  
Change No. 4 dated: April 7, 1986  
Change No. 5 dated: June 9, 1986  
Change No. 6 dated: September 26, 1986

D. Date:  
Field Work Commenced: September 6, 1985  
Field Work Completed: September 16, 1986  
plus 6 weeks = October 29, 1986  
Data received at Marine Center: November 7, 1986  
plus 1 month = December 8, 1986  
Examination critique transmitted to field December 10, 1986  
Target for completion of Marine Center processing June 10, 1987



## II. PREPROCESSING EXAMINATION CRITIQUE

Hydrographic survey H-10197 was performed by personnel of the NOAA Ship FAIRWEATHER, CAPT John W. Carpenter, Commanding Officer. The following personnel supervised portions of the data acquisition: LT Kenny, LT Moen, LT(jg) Timmons, LT(jg) Hurst, LT(jg) Brezinski, ENS Crozer, ENS Abbott, ENS Cone, ENS Lynch, ENS Bernard, ENS Nodine and CST Krick.

In accordance with the Preprocessing Examination System set forth in Hydrographic Survey Guideline HSG 15, Section III, the following items are brought to your attention:

### A. Danger to Navigation Report

There were no dangers to navigation reported by FAIRWEATHER as a part of survey H-10197. A least depth of 3.9 fm at 57°04.5'N, 156°22.3'W in the junctional area between surveys H-10197 and H-10215 was developed as part of survey H-10215 and is plotted on the field sheets for both surveys. A Danger to Navigation report is included with the H-10215 survey data.

No additional dangers were identified during the preprocessing examination.

### B. Compliance with Instructions

Survey H-10197 complies with the Project Instructions and Changes #1-6 except that the Descriptive Report contained no discussion of the gathering of Loran-C data required by Section 8.3 of the Project Instructions.

### C. Final Field Sheets

In areas of congested hydrography, numerous soundings are plotted on top of each other resulting in illegible soundings. In areas of less than 20 fathoms the tenths of fathoms values are frequently illegible. The field sheet must neatly and legibly portray preliminary field sounding data (HM 4.2.1 and 1.5.6).

A 13.7 fathom least depth is plotted on an overlay at 57°06.5'N, 156°14.9'W but is not brought forward onto the final field sheet. The final field sheet should reflect the least depths from all investigations (HM 1.5.6, 4.5.7.2 and PMC OORDER Appendix Q).

Poor intersection angles (less than 30 degrees or greater than 150 degrees) were found for 97 positions covering 30 nm of sounding lines (see Attachment A). The minimum angle of intersection should not be less than 30 degrees (HM 4.4.3.2.2).

In some areas depth curves do not include all depths within the particular depth range (see Attachment B). Depth curves shall be drawn to include soundings equal to and less than the curve value (HM 4.5.7.3 and 7.3.9).

Bottom sample spacing exceeds the required spacing in some areas. The northwest section of the east field sheet was void of any bottom samples. The distance between bottom samples should not exceed 12 cm (HM 1.6.3).

#### D. Descriptive Report

The purpose of the survey should be included in Section A of the Descriptive Report (HM 5.3.4A; PMC OORDER Appendix Q).

The Descriptive Report for this survey states all mainscheme soundings agree within 1 fathom of the crossline soundings. Two areas with steep bottom topography have differences between mainscheme and crossline soundings of 10-11 fathoms. A discussion of the cause for discrepancies should be included in the descriptive report. If the magnitude of discrepancy varies widely over the sheet, make a quantitative evaluation of the disagreements area by area (HM 5.3.4I).

The Descriptive Report states the soundings for junction surveys H-10197 and H-10040 agree within 1 fathom. Three soundings from H-10197 between 57°11.0'N, 156°08.0-12.0'W are 3-7 fathoms deeper than the corresponding soundings from H-10040. "Comprehensive statements must be made on the agreement or disagreement of soundings between the new survey and other contemporary surveys in the area" (HM 5.3.4J).

The Abstract of Positions does not describe the specific type of hydrography run. The abstract should include a Remarks column describing the type of hydrography completed (i.e., mainscheme, crosslines, etc.) (PMC OORDER Appendix Q, Section VII. 3, pp.27).

#### E. Echograms

Some non-standard abbreviations are used in annotating echograms (i.e., LFT). A listing of unusual abbreviations and their definitions should be defined at the beginning of the sounding records (HM 4.8.2).

Occasionally, when both wide- and narrow-beam traces were simultaneously traced on the echograms, the shoaler (wide-beam) depths were scanned and inserted in the sounding line. Section D of the Descriptive Report does not describe the procedures used to select wide- or narrow-beam depths from the echograms. "The hydrographer shall have a predefined method to avoid random mixing of narrow- and wide-beam soundings on the same sheet. Section D, Sounding Equipment, of the Descriptive Report shall adequately describe the procedure used" (DSF-6000N Echo Sounder Operating and Processing Instruction, Section 1.5.1).

#### F. Sounding Volumes and/or Raw Data Printout

Corrections were made to some bottom sample data by writing over the incorrect entries (see Attachment C). "Recorded data must be completely legible. ...Corrections must be made by crossing out erroneous entries and making corrections above or to one side..." (HM 4.8.3.1).



#### G. Sounding Correctors

TC/TI tape listing does not reflect all days during which hydrography was conducted (see Attachment D).

The last record within the 1985 velocity table for FAIRWEATHER is a regular short record. The last entry on tape must be a depth of "999999" (Program RK210/211.18 documentation).

#### H. Tide Data

The 1985 Field Tide Note for Agripina Bay, Alaska (945-8464) states a 7-mm discrepancy between opening and closing levels of BM 8464D and BM 8484E would be resolved during the 1986 field season. The 1986 Descriptive Report does not address this item.

#### K. Special and/or Ancillary Reports

The Corrections to Echo Soundings Report and the Electronic Control Report are not available for consideration in this critique.

#### N. Survey Acceptance

The preprocessing examination for H-10197 was conducted under the time constraints of HSG 15. All comments contained herein are based on a spot check of the data, and it is possible that some problem areas have not been addressed.

Except for the items noted in the critique, H-10197 is in compliance with the project instructions. I recommend that H-10197 be accepted for Nautical Chart Branch processing.

Prepared by:

*Marlene Mozgala*

Marlene Mozgala  
Lieutenant, NOAA Corps

ATTACHMENT A

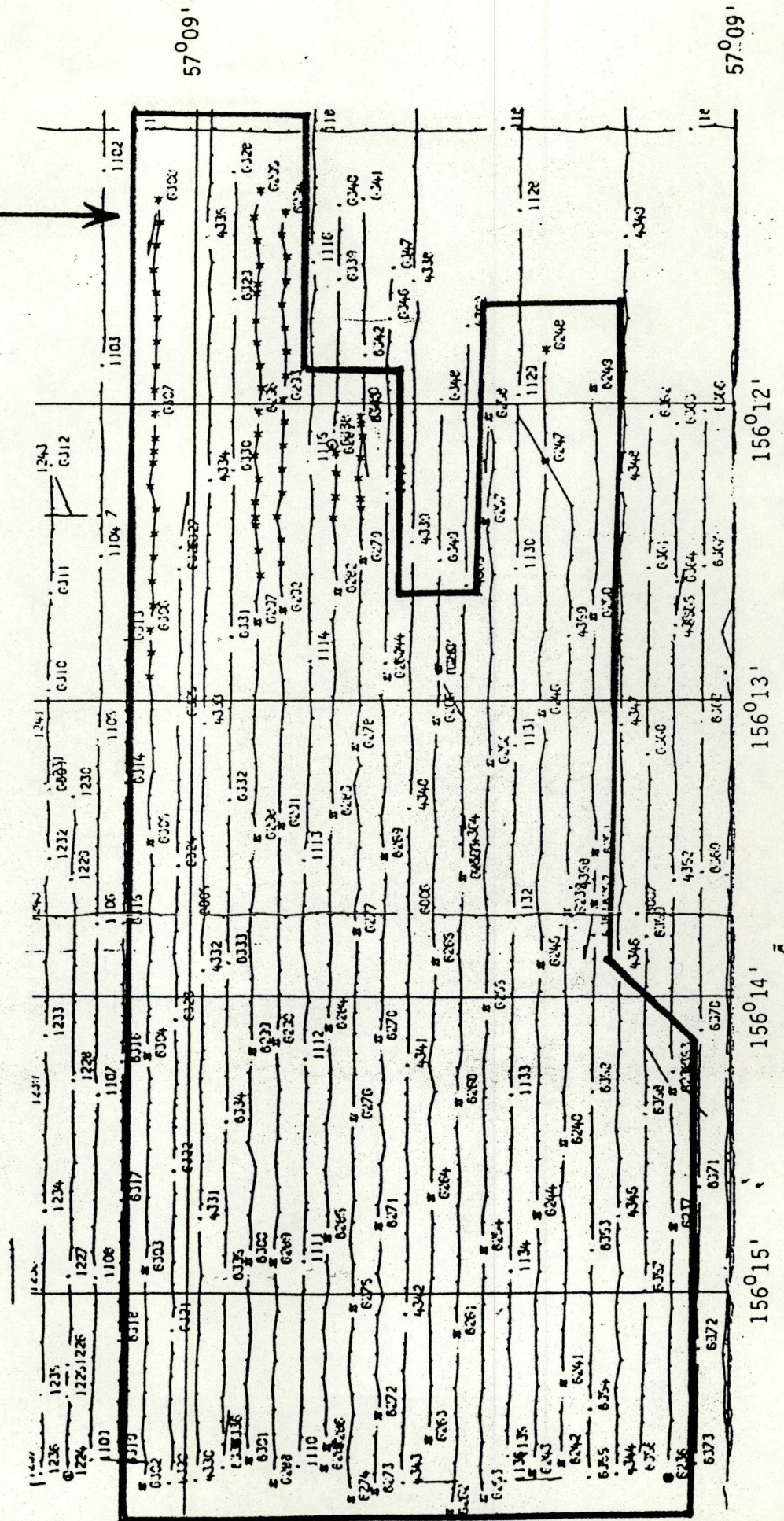
VESNO 2026

DN 189/190 1986

POS #6236 - 6308

FIX STRENGTH SYMBOL LEGEND

- -STANDARD POSITION SYMBOL [41-139 DEGREES] (5-9 IFXSTR)
- ✕ -MARGINALLY ACCEPTABLE [31-40 OR 140-149 DEGREES] (4 IFXSTR)
- ✱ -MARGINALLY WEAK [21-30 OR 150-159 DEGREES] (3 IFXSTR)
- ✶ -WEAK POSITION SYMBOL [ 0-20 OR 160-180 DEGREES] (1-2 IFXSTR)







TC/II TAPE LISTING  
 QPR-F180-FA-R3  
 FA-20-2-85  
 H-10197

1985 HYDRO

175129	0	0003	0010	254	202300	000000
233800	0	0000	0000	254	000000	000000
224647	0	0003	0010	249	202400	000000
000000	0	0000	0000	255	000000	000000
221133	0	0003	0010	249	202600	000000
224400	0	0000	0000	251	000000	000000

1986 HYDRO

205951	0	0000	0000	178	202000	000000
190842	0	0023	0011	217	202000	000000
210145	0	0000	0000	221	202000	000000
<del>211910</del>	0	0000	0000	<del>221</del>	000000	000000
211910				258		

ATTACHMENT D

165824	0	0003	0001	170	202300	000000
224258	0	0003	0002	183	202300	000000
192301	0	0003	0003	194	202300	000000
200702	0	0003	0004	205	202300	000000
194236	0	0003	0005	217	202300	000000
<del>195841</del>	0	0000	0000	<del>225</del>	000000	000000
195841				259		

← 171145, 0, 0003, 0007, 252, 202300, 000000

190459	0	0003	0002	176	202400	000000
173019	0	0003	0003	195	202400	000000
210025	0	0003	0007	251	202400	000000
<del>223238</del>	0	0000	0000	<del>252</del>	000000	000000
223238				255		

170900	0	0000	0000	224	202500	000000
<del>171900</del>	0	0000	0000	<del>224</del>	000000	000000
215641				255		

194400	0	0003	0003	187	202600	000000
192909	0	0003	0004	205	202600	000000
170144	0	0003	0005	218	202600	000000
234600	0	0000	0000	224	000000	000000

**HYDROGRAPHIC SURVEY STATISTICS**

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT
SMOOTH SHEET		1	SMOOTH OVERLAYS: POS., ARC, EXCESS		5
DESCRIPTIVE REPORT		1	FIELD SHEETS AND OTHER OVERLAYS		4
DESCRIP-TION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/SOURCE DOCUMENTS
ACCORDION FILES	3				
ENVELOPES					
VOLUMES	1				
CAHIERS					
BOXES					

- SHORELINE DATA**
- SHORELINE MAPS (List):
- PHOTOBATHYMETRIC MAPS (List):
- NOTES TO THE HYDROGRAPHER (List):
- SPECIAL REPORTS (List):**
- NAUTICAL CHARTS (List):**

**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			2431	
POSITIONS REVISED				
SOUNDINGS REVISED				
CONTROL STATIONS REVISED				
	TIME-HOURS			
	VERIFICATION	EVALUATION	TOTALS	
PRE-PROCESSING EXAMINATION				
VERIFICATION OF CONTROL				
VERIFICATION OF POSITIONS	60.5			
VERIFICATION OF SOUNDINGS	138.5			
VERIFICATION OF JUNCTIONS				
APPLICATION OF PHOTOBATHYMETRY				
SHORELINE APPLICATION/VERIFICATION				
COMPILATION OF SMOOTH SHEET		84.0		
COMPARISON WITH PRIOR SURVEYS AND CHARTS		19.0		
EVALUATION OF SIDE SCAN SONAR RECORDS				
EVALUATION OF WIRE DRAGS AND SWEEPS				
EVALUATION REPORT		36.0		
GEOGRAPHIC NAMES				
OTHER' <b>Digitizing</b>				
*USE OTHER SIDE OF FORM FOR REMARKS	TOTALS	199.0	139.0	338.0

Pre-processing Examination by <b>LT M. Mozgala</b>	Beginning Date	Ending Date <b>12/10/86</b>
Verification of Field Data by <b>P. Niland-Iwamoto, A. Luceno (SS)</b>	Time (Hours) <b>282.5</b>	Ending Date <b>8/11/87</b>
Verification Check by <b>S. Otsubo, B. Olmstead</b>	Time (Hours) <b>82.0</b>	Ending Date <b>8/31/87</b>
Evaluation and Analysis by <b>A. Luceno</b>	Time (Hours) <b>45.0</b>	Ending Date <b>8/19/87</b>
Inspection by <b>D. Hill</b>	Time (Hours) <b>4</b>	Ending Date <b>9/4/87</b>

PACIFIC MARINE CENTER  
EVALUATION REPORT  
H-10197

1. INTRODUCTION

H-10197 is a basic hydrographic survey accomplished by the NOAA Ship FAIRWEATHER under the following project instructions.

OPR-P180-FA-85, dated May 14, 1985  
Change No. 1, dated June 6, 1985  
Change No. 2, dated July 26, 1985  
Change No. 3, dated September 16, 1985  
Change No. 4, dated April 7 1986

This survey covers the area offshore and east of the Alaska Peninsula from east of Kilokak Rocks southward to east of Navy Island. The surveyed area extends from longitude 156°07'36"W in the east to longitude 156°22'30"W in the west. The northwest corner of this area is covered by H-10215, a junction survey. Depths in the surveyed area range from 3.8 to 135 fathoms.

The bottom is smooth in areas where depths are greater than 50 fathoms and very irregular in lesser depths. The bottom is composed of sand and broken shells.

Field processing used predicted tides for Kodiak, Alaska. Office processing used approved hourly heights zoned from the Agripina Bay gage (945-8464).

The field sheet parameters have been revised to center the hydrography on the smooth sheet and to change the projection to polyconic. TRA and electronic control correctors are adequate. Revised velocity correctors are extrapolated eleven percent to 135 fathoms. An accompanying computer printout contains the revised data.

A digital file, generated for this survey, includes categories of information required to comply with N/CG2 Hydrographic Survey Guidelines No. 23, Completion of Digital Hydrographic Surveys, September 7, 1983. Certain descriptive information, however, may not be in the digital record due to the restrictions of the presently available cartographic codes. The user should refer to the smooth sheet for complete information.

2. CONTROL AND SHORELINE

Sections F and G of the hydrographer's report and the Horizontal and Electronic Control Reports for OPR-P180-FA-85 and OPR-P180-FA-86 contain adequate discussions of horizontal control and hydrographic positioning.

Positions of horizontal control stations used during hydrography are 1944 published and 1985 field values based on NAD 1927. The computation of positions accomplished during office processing used these same values. The smooth sheet and accompanying overlays are annotated with NAD 1983 adjustment ticks based on values determined by N/CG121. Geographic positions based on the NAD 1983 may be plotted on the smooth sheet utilizing the NAD 1927 projection by applying the following corrections:

Latitude: 2.603 seconds (80.5 meters)  
 Longitude: -7.416 seconds (-124.6 meters).

The year of establishment of the control station shown on the smooth sheet originates with the hydrographer's signal list and is subject to change pending certification of the data by NGS.

There are 719 weak fixes (angles of intersection less than 30 degrees or more than 150 degrees) noted on this survey. However, there are no significant plotting differences between the soundings located by these fixes and those in adjacent areas. Also, none of these fixes are used to position dangers to navigation. These fixes are considered acceptable.

There are no shoreline manuscripts applicable to this survey.

### 3. HYDROGRAPHY

Hydrography within the limits of this survey is adequate to:

- a. Delineate the bottom configuration, determine least depths and draw the standard depth curves;
- b. Reveal there are no significant discrepancies or anomalies requiring further investigation and;
- c. Show the survey had been properly controlled and soundings are plotted correctly.

### 4. CONDITION OF SURVEY

The hydrographic records and reports received for processing are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through Change No.3, the Hydrographic Survey Guidelines, and the PMC OORDER, except as noted in the attached copy of Preprocessing Examination Report, dated December 10, 1986.

### 5. JUNCTIONS

H-10197 junctions with the following surveys.

<u>Survey</u>	<u>Year</u>	<u>Scale</u>	<u>Area</u>
H-10040	1982-83	1:20,000	North
H-10215	1986	1:10,000	Northwest
H-10214	1986	1:10,000	West
H-10225	1986	1:10,000	Southwest

Soundings have been transferred from all the junction surveys and with the exception of H-10040 all junctions are complete. The junction with H-10040 has not been formally completed. H-10040 was previously processed and forwarded for charting. The junction comparison was made using a copy. Soundings are in good agreement; however, portions of the depth curves on H-10040 should be adjusted to conform with those on H-10197.



## 6. COMPARISON WITH PRIOR SURVEYS

H-6925 (1943-44) 1:120,000

H-6925 covers the entire area of the present survey. Taking into consideration the differences in the scales of the surveys and the methods of surveying, comparison with this prior survey is satisfactory. Some discrepancies between the two surveys were noted, however, and are discussed in Section K of the hydrographer's report and as follows.

The 18-fathom sounding originating with the prior survey at latitude 57°01'48"N, longitude 156°20'42"W, is disproven. A least depth of 17.2 fathoms was found nearby at latitude 57°01'43.89"N, longitude 156°20'18.15"W, position 1764+05, about 400 meters east of the 18-fathom depth.

There are no AWOIS items originating from H-6925 applicable to the present survey.

H-10197 is adequate to supersede the prior survey within the common area.

## 7. COMPARISON WITH CHART

Chart 16568, 5th Edition, dated December 9, 1978; scale 1:106,000.

a. Hydrography - All charted information originates from H-6925 and requires no further discussion. H-10197 is adequate to supersede charted hydrography within the common area.

b. AWOIS - There are no AWOIS items originating from miscellaneous sources.

c. Controlling Depths - There are no charted channels with controlling depths within the area of this survey.

d. Aids to Navigation - There are no fixed or floating aids located within the limits of this survey.

e. Geographic Names - Names appearing on the smooth sheet have been approved by the Chief Geographer and are plotted in accordance with this chart.

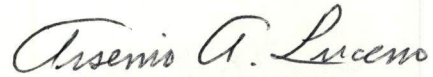
f. Dangers to Navigation - No reports of dangers to navigation were generated during the survey or office processing.

## 8. COMPLIANCE WITH INSTRUCTIONS

H-10197 adequately complies with the project instructions mentioned in Section 1 of this report.

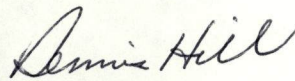
9. ADDITIONAL FIELD WORK

This is a good basic hydrographic survey. No additional field work is recommended.



Arsenio A. Luceno  
Cartographer

This survey has been examined and it meets Charting and Geodetic Services' standards and requirements for use in nautical charting. Approval is recommended.



Dennis Hill  
Chief, Hydrographic Section

ATTACHMENT TO DESCRIPTIVE REPORT FOR H-10197

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.

Thomas W. Parsons 9/11/87  
Chief, Nautical Chart Branch (Date)

CLEARANCE:

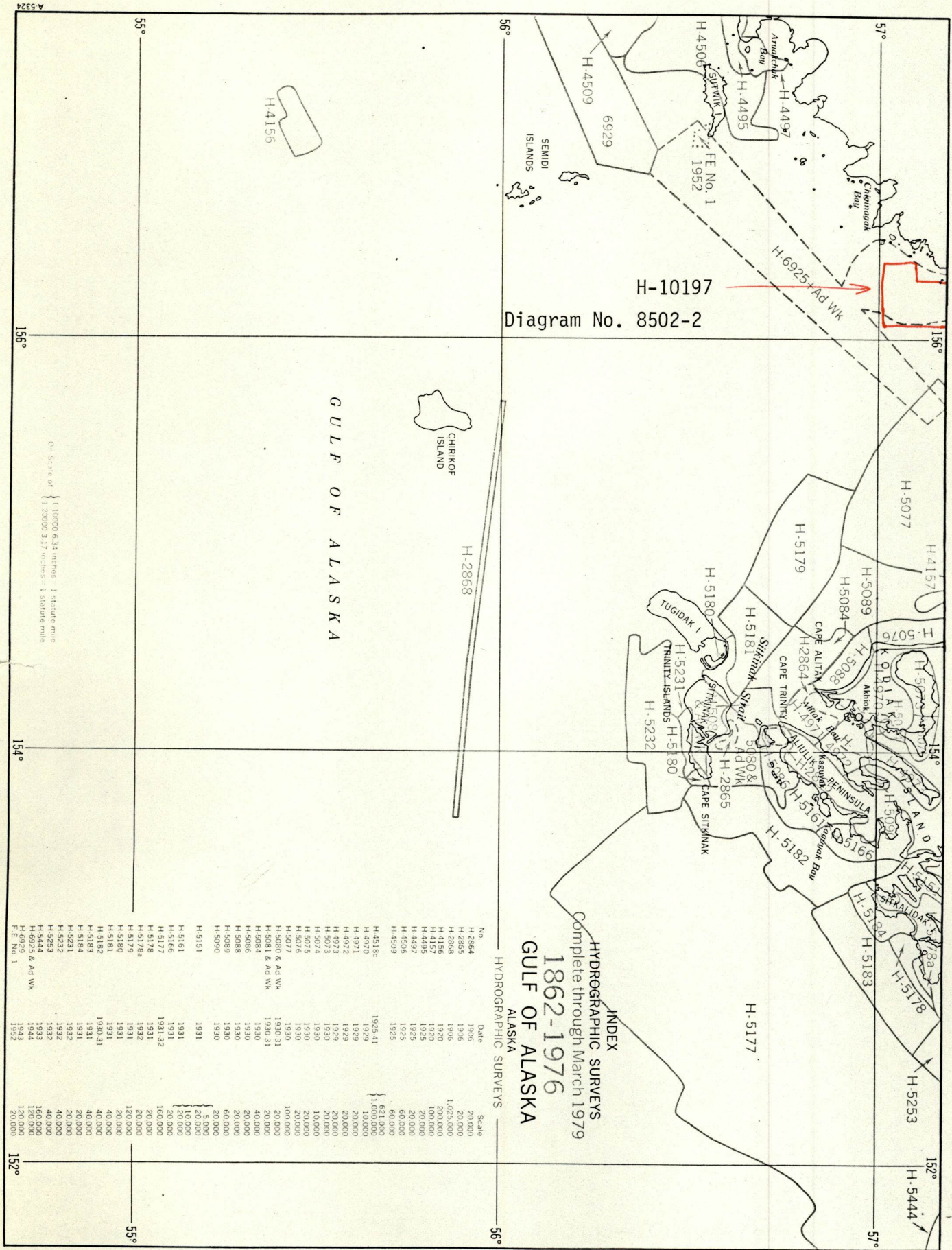
N/MOP2:LWMordock

SIGNATURE AND DATE:

Langford Mordock 9/11/87

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. Sault 9/11/87  
Director, Pacific Marine Center (Date)



H-10197  
Diagram No. 8502-2

INDEX  
HYDROGRAPHIC SURVEYS  
Complete through March 1979  
1862-1976  
GULF OF ALASKA  
ALASKA

No.	Date	Scale
H-2864	1906	20,000
H-2865	1906	20,000
H-2866	1906	20,000
H-2867	1906	20,000
H-4157	1920	100,000
H-4495	1925	20,000
H-4497	1925	20,000
H-4506	1925	20,000
H-4509	1925	20,000
H-4518c	1925.41	621,000
H-4518d	1925.41	621,000
H-4518e	1925.41	621,000
H-4518f	1925.41	621,000
H-4518g	1925.41	621,000
H-4518h	1925.41	621,000
H-4518i	1925.41	621,000
H-4518j	1925.41	621,000
H-4518k	1925.41	621,000
H-4518l	1925.41	621,000
H-4518m	1925.41	621,000
H-4518n	1925.41	621,000
H-4518o	1925.41	621,000
H-4518p	1925.41	621,000
H-4518q	1925.41	621,000
H-4518r	1925.41	621,000
H-4518s	1925.41	621,000
H-4518t	1925.41	621,000
H-4518u	1925.41	621,000
H-4518v	1925.41	621,000
H-4518w	1925.41	621,000
H-4518x	1925.41	621,000
H-4518y	1925.41	621,000
H-4518z	1925.41	621,000
H-4519	1930	20,000
H-4520	1930	20,000
H-4521	1930	20,000
H-4522	1930	20,000
H-4523	1930	20,000
H-4524	1930	20,000
H-4525	1930	20,000
H-4526	1930	20,000
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H-4531	1930	20,000
H-4532	1930	20,000
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H-4541	1930	20,000
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H-4544	1930	20,000
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H-4553	1930	20,000
H-4554	1930	20,000
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H-4574	1930	20,000
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H-4591	1930	20,000
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H-4596	1930	20,000
H-4597	1930	20,000
H-4598	1930	20,000
H-4599	1930	20,000
H-4600	1930	20,000

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

Hydrographic Index No. 117A

Scale of 1:20,000  
1:100,000 & 3:4 inches = 1 statute mile

MARINE CHART BRANCH  
**RECORD OF APPLICATION TO CHARTS**

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10197

**INSTRUCTIONS**

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
<del>16568</del>	6-2-88	<i>P. P. P.</i>	Full <del>Part</del> <del>Before</del> After Marine Center Approval Signed Via Drawing No. 7
16013	2-17-89	ED MARTIN	Full <del>Part</del> <del>Before</del> After Marine Center Approval Signed Via Drawing No. 28 Exam No Corr's at Scale
<del>53531</del>	3-6-89	Ed Martin	Full <del>Part</del> <del>Before</del> After Marine Center Approval Signed Via Drawing No. 19
530	6-7-89	R. A. Lillis	Full <del>Part</del> <del>Before</del> After Marine Center Approval Signed Via Drawing No. 34
16006	3-14-90	John Pierce	Full <del>Part</del> <del>Before</del> After Marine Center Approval Signed Via Drawing No. 26 Exam, no corrections applied
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
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