10026

Diagram No. 8502-2

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. FA-10-5-82

Office No. H-10026

LOCALITY

State Alaska

General Locality Shelikof Strait

Locality Cape Kayakliut to West Channel Island

1982

CHIEF OF PARTY
CDR W.F. Forster

LIBRARY & ARCHIVES

DATE June 13, 1985

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

10026

Area 6
Cnt
16570
16568
16013
16006
INT 500
531

TO SIGN OFF SEE "RECORD OF APPLICATION"

NOAA FORM 77-28 (11-72) | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION | REGISTER NO.

HYDROGRAPHIC TITLE SHEET

H-10026

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

FIELD NO. FA 10-5-82

State Alaska

General locality Shelikof Strait

Locality Cape Kayakliut to West Channel Island

Scale 1:10,000 Date of survey 17 June - 7 August 1982

Instructions dated February 23, 1982 Project No. OPR-P146-FA-82

Vessel 2020, 2023, 2024, 2025

Chief of party Cdr. W. F. Forster, NOAA

Surveyed by Ens A.E. Francis, Ens C.L. Bailey, Ens F.J. Migaiolo, Ens P.T. Steele, CST E.R. Krick

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

Graphic record scaled by FAIRWEATHER Personnel

Graphic record checked by CST E.R. Krick, Ens C.L. Bailey, Lt T.A. Baxter

Verification by I.A. Almacen Automated plot by PMC Xynetics Plotter

~~Protracted by~~ Evaluated by ~~Verification by~~ C.R. Davies

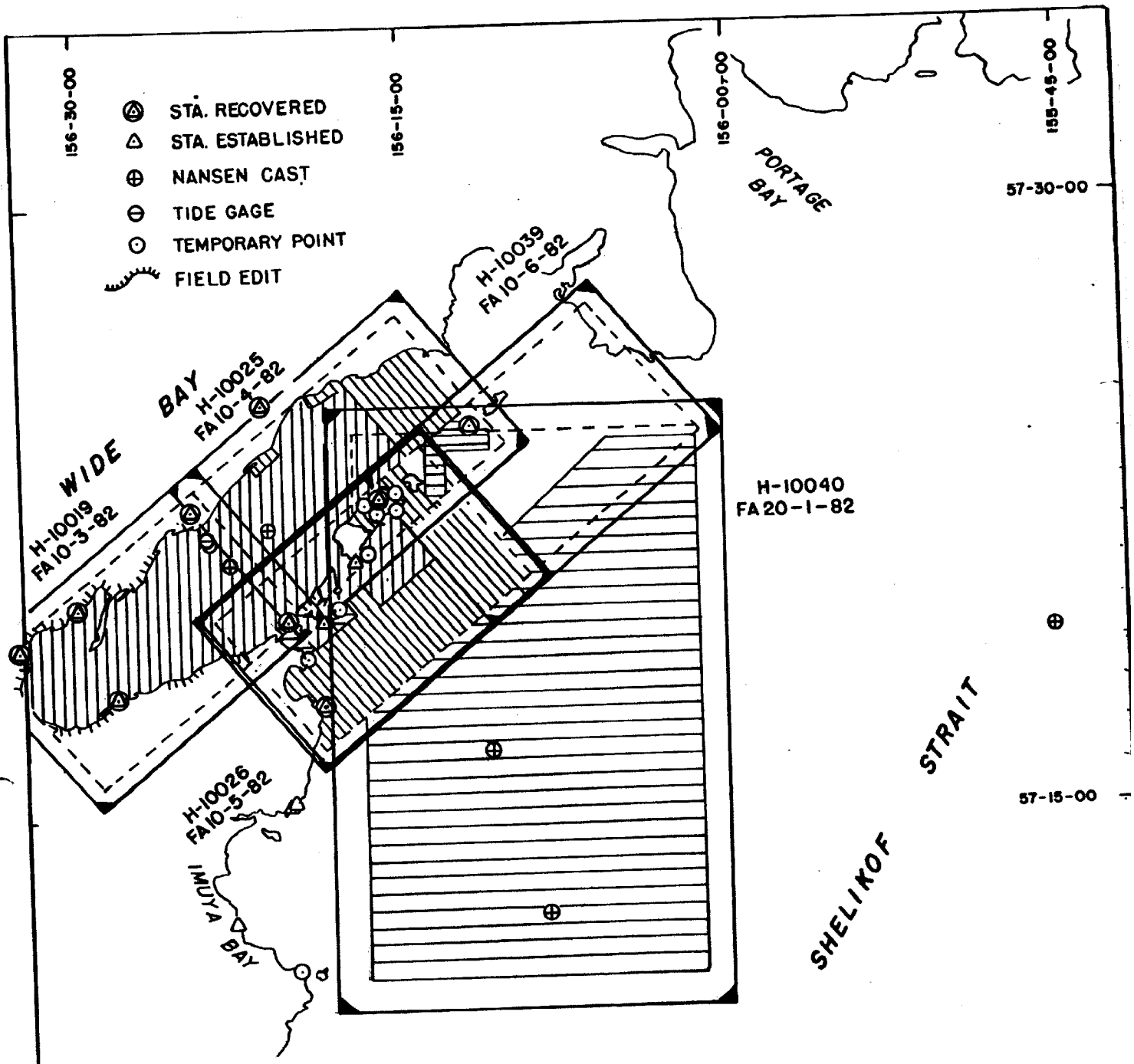
Soundings in fathoms feet at MLW MLLW and tenths

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

Awais / Surf Checks MSM 3/28/86

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1978-665-010-1174



MONTHLY PROGRESS SKETCH
OPR-P146-FA-82
SHELIKOF STRAIT, ALASKA
NOAA SHIP FAIRWEATHER (S-220)
CDR. WALTER F. FORSTER, CMDG

UGASHIK TOPO MAP 1:250,000

	JUNE	JULY	AUG
SQ NM SOUNDING LINE	31.5	14.7	94.3
LNM SOUNDING LINE	729.7	272.6	868.2
BOTTOM SAMPLES	53	53	65
NANSEN CAST	2	2	2
HYDRO CONTROL STATIONS	13	6	4
WATER SAMPLES ANALYZED	20	19	20
HYDROGRAPHY			
LNM SIDE SCAN SONAR		8.6	

HYDROGRAPHIC DESCRIPTIVE REPORT TO ACCOMPANY

SURVEY H-10026, FA-10-5-82

OPR-P146-FA-82

Vicinity of Cape Kayakliut

NOAA Ship FAIRWEATHER S220

A. PROJECT ✓

This hydrographic survey was conducted in accordance with Project Instructions OPR-P146-FA-82, Shelikof Strait, Alaska, dated February 23, 1982. The Supplement to Instructions Change Number 2, dated ~~June 3~~ May 25, 1982, the Hydrographic Manual 4th Edition, and the PMC OPORDER are also applicable.

B. AREA SURVEYED ✓

This survey is located in Shelikof Straits in the vicinity of Cape Kayakliut and West Channel Island. The western boundary lies within Wide Bay, the southern boundary is Cape Kayakliut, the northern boundary lies between West Channel Island and East Channel Island, and the eastern boundary is offshore.
There are five named islands within the limits of the survey. From north proceeding south the island names are: West Channel, Terrace, Hartman, Slaughter, and Titcliff. There are several other small, unnamed islands on this survey.

The islands and surrounding mainland have steep cliffs, with tundra covered bluffs.

The corner boundaries of this survey are:

Northwest:	Latitude	57°24'05" N	Longitude	156°16'00" W
Northeast:	"	57°21'12" N	"	156°09'40" W
Southwest:	"	57°21'04" N	"	156°22'30" W
Southeast:	"	57°16'55" N	"	156°19'00" W

This survey junctions with three contemporary surveys: to the west with H-10025; to the north with H-10039; and to the east with H-10040. See Section 4 of Evaluation Report.

Hydrography began on 17 June 1982 (JD 168) and finished on 7 August 1982 (JD 219).

C. SOUNDING VESSELS ✓

Hydrographic data acquisition and bottom samples were conducted with Jensen survey launches FA-3 (2023), FA-4 (2024) and FA-5 (2025). The FAIRWEATHER (2020) conducted all Nansen casts on the survey and bottom samples in waters deeper than 50 fathoms.

No unusual vessel configurations were used on this survey.

Noncritical systems checks were performed daily as weather permitted. These systems checks confirmed the electronic correctors.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

Ross Fineline 5000 narrow beam echo sounders were used on all launches in this survey (see Table I Sounding Equipment). Phase calibrations and belt tension checks were made at the beginning of each day and whenever paper was changed.

Launch personnel checked fathometer initial frequently during the day for correct paper alignment. All analog and digital data were scanned to compare values and to insert peaks and deeps where they occurred between sounding marks. Depths ranged from 0 to 120 fathoms on this survey.

There were no faults in the echo sounding equipment affecting the accuracy of soundings.

Velocity of sound was calculated from four (4) deep water Nansen casts. For dates and locations see Table 2, Nansen Casts.

Velocity corrector Tables 2, and 3 and 4 apply to this survey (see Table 3, Velocity Corrector Table Dates).

TABLE I

Sounding Equipment

Vessel 2023 Date	Instrument	Model	Analog	Digitizer	Inverter	Transceiver
JD 168-193	Ross Fineline	5000	1047	1054	1046	1047
JD 194-215	Ross Fineline	5000	1047	1047	1046	1047
JD 216-219	Ross Fineline	5000	1097	1047	1046	1047
Vessel 2024						
JD 168-219	Ross Fineline	5000	1097	1046	1054	1046
Vessel 2025						
JD 168-219	Ross Fineline	5000	1036	1036	1053	1054

Table 2

Location of Nansen Casts

Station No.	Date	Latitude	Longitude
002	21 June 1982 (JD 172)	57°21.3' N	156°23.5' W
003	7 July 1982 (JD 188)	57°22.1' N	156°21.3' W
004	15 July 1982 (JD 196)	57°19.4' N	156°45.6' W
005	11 August 1982 (JD 223)	57°12.3' N	156°08.9' W
006	19 August 1982 (JD 231)	57°16.3' N	156°11.2' W

TABLE 3

Velocity Corrector Table Dates

Table No.	Beginning Date	Ending Date
2	JD 166	JD 181
3	JD 189	JD 195
4	JD 215	JD 219

Nansen bottle thermometers and the Beckman Salinometer (s/n 59435) used for the velocity corrector calculations were calibrated by Northwest Calibration Center, Seattle, Washington in March 1982.

Due to foul weather and large swells, two bar checks per day were not always possible, but were attempted when conditions allowed. Bar checks were used to confirm fathometer systems function and to provide data to compute TRA correctors.

Settlement and squat for all launches was determined at Shilshole Bay Marina, Seattle, Washington in March 1982. Due to the addition of the side scan sonar winch to FA-4 (2024), settlement and squat were conducted again on July 30, 1982 in Woman's Bay, Kodiak, Alaska, on FA-4 (2024) and FA-3 (2023). These tests are in accordance with Section 4.9.4.2 of the Hydrographic Manual, 4th Edition.

A Zeiss level on shore, observing on a stadia rod held vertical, directly over the launch transducer, determined the settlement and squat for each launch at speed increments of 200 rpm.

Settlement and squat correctors are required at certain launch speeds (See Table 4, Restrictive Launch Speeds). Hydrography was not run at these restricted launch speeds, thereby eliminating the need for settlement and squat correctors.

TABLE 4

Restrictive Launch Speeds

Launch	Restrictive Speeds
2023	2250 to 2700 rpm
2024	2400 to 2700 rpm
2025	2300 to 2700 rpm

E. HYDROGRAPHIC SHEETS

All field sheets were plotted aboard the FAIRWEATHER using two PDP8/e computers (s/n 09524 and s/n 01020) and two Complot plotters (s/n 5557-5 and s/n 5848-17).

All hydrographic data from this survey will be sent to Pacific Marine Center, Seattle, Washington, for verification and smooth plotting.

The two final field sheets are plotted on mylar at a scale of 1:10,000 with a skew of 40°. The dimensions of the north sheet are 18 by 54 inches, and the south sheet dimensions are 19 by 54 inches.

Development A is plotted on a 1:2500 scale paper sheet 16 by 18 inches skewed 330°. Development B/C is plotted on a 1:2500 scale paper sheet 12 by 18 inches skewed 0°.

F. CONTROL STATIONS ✓

All control stations used during this survey meet or exceed Third Order Class I accuracies with the exception of TP-1, TP-8, and TP-9 which were located to Third Order Class II accuracies. A check position was computed for each station. All positions are considered adequate for hydrographic purposes. concur

Computations of geographic positions are based on the North American Datum of 1927. No unconventional survey methods were utilized.

Station Pipe is a drill casing approximately 3 feet in diameter located about 0.5 miles offshore. This casing was located to Third Order Class I accuracy and was used as a calibration pole, electronic control station, and support for tide station (945-8461). Pipe is the only station seaward of the shore line. Station Pipe does not plot on this survey. (See H-10025) and H-10019 for description of this station).
Appendix F, List of Signals, lists all horizontal control stations utilized during this survey.

Refer to Horizontal Control Report OPR-P146-FA-82 for detailed information on the techniques used to locate each individual station.

G. HYDROGRAPHIC POSITION CONTROL ✓

All electronic position control of the survey launches was with the Motorola Mini Ranger III system. Range/range (R/R) and range/azimuth (R/Az) methods were used exclusively on this survey.

There were no signal strengths below the minimum set from the BLC and no poor geometric configurations.

Excessive Mini Ranger rate jumps were encountered on a few occasions. Where excessive rate jumps occurred, hydrography was rejected and rerun. The excessive rate jumps were the result of high station elevation and poor weather conditions.

Four Mini Ranger Baseline Calibrations (BLC) were performed on a baseline measured to Third Order accuracy by a Hewlett-Packard 3808A EDMI. See Table 5, Mini Ranger Baseline Calibrations, for dates.

Due to this survey being interrupted for a two-week period to survey St. Paul Harbor, Kodiak, Alaska, there are two sets of Corrections to Electronic Position

Control. See Appendix E, Corrections to Electronic Position Control, and Table 6, Mini Ranger Electronic Correctors.

On July 9, 1982 (JD 190) MR Code 8 began responding to interrogations of all Mini Ranger codes. Only FA-4 (2024) Mini Ranger console s/n 701 was using Code 8 for positioning on this day. Survey launch FA-4 was conducting reconnaissance work and did not gather any hydrographic data with Code 8. Code 8 was taken off the air and found to have water inside. Repairs were made and the unit was not used again until the intermediate BLC on July 30, 1982 (JD 211).

During the intermediate BLC, Mini Ranger console 702 was inadvertently adjusted on Code 8 yielding a 30-meter corrector. Mini Ranger consoles 701, 703 and B0323 had acceptable correctors with this code. Console 702 in combination with Code 8 was used on June 23, 1982 (JD 173). A non-critical systems check on this date shows this combination to be within the acceptable limits of BLC correctors. At the time of hydrography, J.D. 173, console 702 and Code 8 were correctly adjusted. No adverse correctors were necessary.

No other problems with the electronic positioning instruments were encountered.

H. SHORELINE ✓

Shoreline was taken from 1:10,000 scale digitized shoreline manuscripts compiled by Pacific Marine Center from 1:20,000 scale shoreline manuscripts TP-00717, TP-00927 and TP-00927. Shoreline agreed well with compiled manuscripts. Hydrography run in this area supercedes field edit which was done in this area. See EVAL Report Section 2

There are no control stations located seaward of the shoreline on this survey. See paragraph F of this report - Station Pipe

I. CROSSLINES ✓

Crosslines all appear to be in good agreement with main scheme hydrography. Soundings in areas of rapidly changing bottom show some disagreement, but this is due to the lack of exact coincidence of soundings in these areas.

J. JUNCTIONS ✓

Survey H-10026 (FA-10-5-82) junctions to the north with survey H-10025 (FA-10-4-82), to the south with survey H-10040 (FA-20-1-82) ~~83~~ Junctions were in good agreement and no noticable discrepencies were seen. See EVAL Report Section 4,5.

K. COMPARISON WITH PRIOR SURVEYS ✓

A comparison was done with prior survey 4384, date 1924. Good agreement with soundings and significant features was seen on the entire north sheet (FA-10-5N-82) of the survey. On the south sheet (FA-10-5S-82) all significant features appear to be in good agreement with prior survey features, but a shoaling of one to three fathoms can be seen seaward of the islands located within this survey. Table 7, Prior Survey Comparisons, shows this shoaling by comparison of soundings having exact coincidence. See EVAL Report Section 4,5 concur

TABLE 5

Mini Ranger Baseline Calibrations

	Date	Julian Date	Location
Initial	22 May 1982	142	Port Frederick, Alaska
Final	30 July 1982	211	Kodiak, Alaska
Initial	30 July 1982	211	Kodiak, Alaska
Final	12 August 1982	224	Kodiak, Alaska

TABLE 6

Mini Ranger Electronic Correctors

Initial
JD 142-211

Console	Code 5	Code 6	Code 7	Code 8	Code 9	Code A	Code B	Code C
701	-1	-2	6	-2	0	0	0	0
702	0	-1	6	-1	0	-2	0	0
703	-1	-1	4	0	0	1	0	1
B0323	2	1	10	1	2	0	0	2

Final
JD 211-224

Console	Code 5	Code 6	Code 7	Code 8	Code 9	Code A	Code B	Code C
701	0	0	2	-2	0	0	0	0
702	0	0	7	-1	0	-2	0	0
703	0	2	2	0	0	1	0	1
B0323	0	0	0	1	2	0	0	2

TABLE 7

Prior Survey Comparison

Position	Depth (fathoms)	Survey
57°20'03"N	15.7	Contemporary
156°14'50"W	16	Prior
57°19'24"N	~~13~~ 20	Contemporary
156°15'09"W	16	Prior
57°19'18"N	13.8	Contemporary
156°16'52"W	14	Prior

This shoaling appears to be the result of sediment inflow from rivers, streams, and glaciers located in Wide Bay. concur

L. COMPARISON WITH CHART ✓

A comparison with Chart 16570, 8th ED., Dated 1978 at a scale of 1:50,000, reveals good overall agreement with Survey H-10026. A signifigant shoaling trend extending south and east from the Wide Bay Island chain 1 to 1 1/2 miles is evident. The moderate scale difference and reasonable coincidence of soundings support this observation. See Evaluation Report section 6

M. ADEQUACY OF SURVEY ✓

This survey is adequate to supercede all prior surveys. The Commanding Officer inspected data on a daily basis. No further work is necessary. concur

N. AIDS TO NAVIGATION ✓

There are no aids to navigation located within the limits of this survey. concur

O. STATISTICS ✓

	2020	2023	2024	2025	TOTAL
Positions	2	~~3149~~ 2679	~~1111~~ 986	2087 ~~32~~	5699
Nautical Miles	--	298.5	145.7	112.9	557.1
Square Miles	--	17	12	10.5	39.5
Bottom Samples	2	--	--	50	52

No current or magnetic stations were performed within the limits of this survey. Tide control for this survey was from tide station 945-8461. For further details see Field Tide Note for OPR-P146-FA-82.

Four velocity casts were made. See Section D, Sounding Equipment and Corrections to Echo Soundings.

P. MISCELLANEOUS

There are no anomalous tidal currents or races in the area.

The area is used by the commercial fishing industry as a fishing ground and as a harbor of refuge.

On survey sheet FA-10-5S-82, two shoals were discovered after hydrography ceased. Developements were not run on these shoals. However, surrounding waters show no indication of shoaler soundings in the vicinity and therefore no inadequacy is seen in these areas or on the remainder of the survey. Table 8, Undeveloped Shoals, shows the position, depth of shoal,and surrounding depths in the area. see EVAL Report Section 3

The two soundings shown in table 8 are plotted on the smooth sheet

Table 8
Undeveloped Shoals

Position	Shoal Depth	Surrounding Depth
57/18/27.9N 156/17/29.0W 30.0	8 3/4 fm	11.0 fm
57/19/22.0N 156/16/46.0W 3	9 5/8 fm	13-14 12.0 fm

Q. RECOMMENDATIONS

This survey should be used to update existing charts of Wide Bay and along with other contemporay surveys be used to produce new 1:50,000 scale charts of the area.

R. AUTOMATED DATA PROCESSING

The following is a list of the Hydroplot programs used for data acquisition and processing during this survey.

Number	Program Name	Version Date
RK 112	R/R Real Time Plot	3/19/81
RK 201	Grid, Signal and Lattice Plot	4/18/75
RK 211	R/R Non-real Time Plot	2/2/82
RK 212	Visual Stations Load and Plot	4/1/74
RK 216	R/Az Non-real Time Plot	10/21/80
RK 300	Utility Package	10/21/80
RK 330	Data Reformat and Check	5/4/76
PM 360	Electronic Corrector Abstract	2/2/76
AM 500	Predicted Tide Generator	11/10/72
RK 530	Velocity Correctors	5/10/76
RK 561	Geodetic Calibrations	2/19/75
AM 602	Elinore	5/21/75

S. REFERRAL TO REPORTS ✓

The following seperate reports covering the 1982 season in Wide Bay can be referred to for further detail on specific items.

OPR-P146-FA-82

Horizontal Control Report
Electronic Control Report
Field Edit Report
Corrections To Echo Soundings Report
Geographic Names Report
Field Tide Note

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA Ship FAIRWEATHER S220
Fleet Post Office
Seattle, Washington 98799

26 August 1982

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

Dear Sir:

The NOAA Ship FAIRWEATHER has recently completed hydrographic surveys of NW Wide Bay to West Channel Island and offshore surveys between Imuya Bay to Cape Igvak on the south Alaska peninsula.

The following hazards to navigation were found at the entrance to Imuya Bay to be uncharted:

not on H-10026

1. A 0.7 fathom shoal in a charted area of 14 fathoms at Lat. 57°12'01"N, Long. 156°17'00.3"W.
2. A 1.9 fathom shoal in 14 fathoms of charted water at Lat. 57°11'58.9"N, Long. 156°17'07.5"W.
3. A 3.0 fathom shoal in 10 fathoms of charted water at Lat. 57°12'31.0"N, Long. 156°15'12.9"W.
4. A 5.7 fathom shoal in 16 fathoms of charted water at Lat. 57°11'56"N, Long. 156°16'03"W.

Mariners are to exercise caution when entering Imuya Bay. Imuya Bay may have additional rocks or shoals that are not charted. Surveys in Imuya Bay will continue in 1983. Charts affected are 16568 and 16013.

The following hazards to navigation were discovered between Cape Kayakliut to East Channel Island and are uncharted:

not on H-10026

5. Two rocks at 57°19'57"N, 156°20'09"W and 57°19'58"N, 156°20'09.5"W, located on the edge of the shallow draft passage between Titcliff and Slaughter Islands. The passage between Slaughter and Titcliff Island at the northern portion has a controlling depth of 2.3 fathoms and is restricted to a channel width of 40 yards.
6. A 1.7 fathom shoal located at the western edge of a reef at 57°19'57.5"N 156°20'00"W.
7. A 4.8 fathom shoal in 8 fathoms of charted water at 57°21'05.0"N, 156°17'35.5"W.
8. A 5.0 fathom shoal in 6 fathoms of charted water at 57°21'04.6"N, 156°17'30.1"W.

Mariners are to note items 7 and 8 constitute the controlling least depths for the shallow draft passage between Slaughter and Hartman Island.

noaa H-10026

9. An 8.6 fathom isolated sounding in 20 fathoms charted depth at 57°23'37.6"N, 156°13'21.2"W between West Channel Island and Channel Rock leading to Wide Bay.

10. A 7.3 fathom sounding in 9 fathoms of charted water at 57°22'57"N, 156°13'24.5"W.

11. A 2.~~2~~ 3 fathom sounding on a charted 5 fathom curve at 57°23'14.5"N, 156°15'~~28~~ 30.0"W between Terrace and West Channel Island.

12. A 0.~~8~~ 6 fathom sounding on a 5.5 fathom charted sounding at 57°19'51.5"N, 156°17'52.5"W.

13. A ~~9.7~~ 10.2 fathom sounding on a 20 fathom charted depth at 57°22'15"N, 156°12'47"W.

14. A 2.~~4~~ 5 fathom sounding near a charted 6.5 fathom depth at 57°18'41.4"N, 156°17'56.5"W.

15. A 4.~~6~~ 8 fathom sounding on a charted 8 fathom depth at 57°19'08.5"N, 156°18'09.5"W.

Charts affected are 16568, 16570, and 16013.

The following hazards to navigation were found on a reconnaissance survey line running to Aniakchak Bay or reported to the FAIRWEATHER by fishing vessels.

noaa H-10026

16. A 7.5 fathom shoal at position approximate 56°41.9'N, 157°20.25'W at the entrance to Aniakchak Bay.

17. The fishing vessel, WESTERN DAWN, reported a rock awash 3.3 miles south by east of Cape Kunmik at position approximate Lat. 56°43.18'N, Long. 157°08.70'W.

18. The fishing vessel, EAGLE, reported a shoal 4.8 miles SSE of Cape Kunmik at position approximate Lat. 56°41.78'N, Long. 157°07.17'W.

Charts affected are 16568 and 16013.

Sincerely,

Walter F. Forster

Cdr. Walter F. Forster, NOAA
Commanding Officer
NOAA Ship FAIRWEATHER

Attachments

cc: Director; Pacific Marine Center
C351, Chief, Requirements Branch

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

November 19, 1982

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

Dear Sir:

A preliminary office review of survey data revises information about dangers to navigation on NOAA Chart 16570, Cape Kayakliut to West Channel Island, Shelikof Strait, Alaska submitted by the NOAA Ship FAIRWEATHER (Radio Message R241900Z AUG 82 and letter dated August 26, 1982) as follows:

(Item 7) New Position

A 4.5 fathom shoal in 8 fathoms of charted water at latitude 57°21'05"N, longitude 156°17'47"W

(Item 12) New Least Depth

A 0.4 fathom sounding on a 5.5 fathom charted sounding at latitude 57°19'51.5"N, longitude 156°17'52.5"W.

Additional dangers to navigation noted during preliminary office review are submitted for inclusion in the local Notice to Mariners for NOAA Chart 16570. Indicated least depths are reduced to MLLW based on predicted tides.

1. A 3.2 fathom shoal at latitude 57°17'53.5"N, longitude 156°17'24"W.
2. A 1.9 fathom shoal at latitude 57°22'05"N, longitude 156°15'21"W.
3. A 0.2 fathom shoal at latitude 57°23'13"N, longitude 156°15'00"W.
4. A 1.2 fathom shoal at latitude 57°23'20"N, longitude 156°15'33"W.
5. A 4.5 fathom shoal at latitude 57°23'32"N, longitude 156°15'19"W.

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

Sincerely,

/S/

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

RUSS DAVIES

CO
XO
FOO

NOJ DE WTEB

T

RTTUZYUW RUHPTEB0102 2152000-UUUU--RUHPSUU.
ZNR UUUUU
P 032000Z AUG 82
FM NOAAS FAIRWEATHER
TO NOAACPM SEATLE WA
CM GRNC.
BT
UNCLAS
PMC-59-FA/CPM3/C351
PRESENT PROJECT ACCOMPLISHMENT WARRENTS CHANGES TO PSR SIDE SCAN REQUIREMENTS. IN ADDITION, BASED UPON SIDE SCAN OPERATIONS IN ST. PAUL HARBOR AND BASIC HYDROGRAPHY IN WIDE BAY THE FOLLOWING CHANGES ARE WARRENTED TO PSR SIDE SCAN REQUIREMENTS:

1. PSR NR 27 AND 28- INITIAL SIDE SCAN IN 10 PER CENT OF AREA INDICATES NOTHING OF SIGNIFICANCE. FURTHUR STUDY IS NOT PRODUCTIVE UNLESS DIRECTED OTHERWISE.
2. PSR NR 25 AND 26- SIDE SCAN AREA IS TOO EXTENSIVE FOR WORKING AREA DUE TO WEATHER AND TYPE OF BOTTOM. ONE RECONIASSANCE LINE SHOWS NO SIGIFICANT FEATURES ON PSR NR 26. UNLESS OTHERWISE DIRECTED REDUCING AREA TO ACTUAL CHANNEL AREAS AND DEPTHS LESS THAN 10 FATHOMS. REQUEST ACKNOWLEDGED AGREEMENT.

BT
#0102

NNNN

	TOD
NOJ	032044 Z AUG 82
M	FREQ- C42J

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102-3767

April 17, 1985 N/MOP211C/CRD

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

Dear Sir:

During office review of hydrographic survey H-10026, Cape Kayakliut to West Channel Island, Shelikof Strait, Alaska, the following changes affecting Chart 16570 were noted. Questions concerning the survey may be directed to Lt. Cdr. David W. Yeager, Chief, Nautical Chart Branch, telephone (206) 526-6835.

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

A rock awash at MLLW exists at latitude 57°17'36"N, longitude 156°18'24"W on Chart 16570; 7.0 nautical miles, 203 degrees true from the charted position of Channel Rock.

A 2.3-fathom sounding at MLLW exists at latitude 57°19'48"N, longitude 156°17'54"W on Chart 16570; 7 nautical miles, 200 degrees true from the charted position of Channel Rock.

A 5.8-fathom sounding at MLLW exists at latitude 57°17'36"N, longitude 156°17'45"W on Chart 16570; 5 nautical miles, 210 degrees true from the charted position of Channel Rock.

A 4.5-fathom shoal at latitude 57°21'05"N, longitude 156°17'45.5"W on Chart 16570 was reported by the NOAA Ship FAIRWEATHER on August 26, 1982. The depth should be revised to 4.0-fathoms at MLLW, 3.9 nautical miles, 218 degrees true from the charted position of Channel Rock.

Sincerely,

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

Approval Sheet

The Commanding Officer inspected all field sheets and data on a daily basis. All survey sheets, reports, and records are complete. This survey is adequate for charting purposes and no additional field work is necessary.

Submitted by;

Craig Bailey

Craig Bailey
Ensign, NOAA

Approved by;

Walter F. Forster
Commander, NOAA
Commanding Officer

```
001                SHELIKOF SIGNAL LISTING
002                   OPR-P146-FA-82
003                FA-10-5-82   (H-10026)
004
005 PIPE 1982                 1                  2 571562 FAIRWEATHER
006 208 2  57 21 54092 156 24 07131  250 0005 000000
007
008 SHANNON 1923          399          37.601 571562 1020
009 230 0  57 25 02307 156 21 36568  250 0169 000000
010
011 EAST CHANNEL 1923 9                   13 571562 1006
012 276 0  57 24 34100 156 11 55721  250 0026 000000
013
014 TITCLIFF 1923                          571562 1023
015 301 7  57 19 50910 156 20 21839  250 0034 000000
016
017 KAYAK 1944                             571564 1011
018 302 3  57 17 46575 156 18 43595  250 0024 000000
019
020 JERRY 1982                6          17  571564 FAIRWEATHER
021 303 6  57 19 51168 156 18 53833  250 0036 000000
022
023 HELEN 1982            492          28 571562 FAIRWEATHER
024 306 6  57 21 17504 156 17 12425  250 0028 000000
025
026 HELEN RM-2 1982 694                 6 571562 FAIRWEATHER
027 308.1  57 21 17706 156 17 12936  250 0028 000000
028
029 TERRACE 1923                           571562 1022
030 310 3  57 22 48321 156 16 12267  250 0095 000000
031
032 TP-1 1982                              571561 FAIRWEATHER
033 311 4  57 22 37162 156 16 51089  254 0019 000000
034
035 TP-2 1982                 1          5 571562 FAIRWEATHER
036 312 3  57 23 01320 156 15 24544  254 0024 000000
037
038 TP-3 1982                            8 571561 FAIRWEATHER
039 313 0  57 22 30575 156 15 27647  254 0018 000000
040
041 TP-4 1982                 2            571562 FAIRWEATHER
042 314 2  57 22 28301 156 16 09523  254 0026 000000
043
044 TP-5 1982                 2          82 571563 FAIRWEATHER
045 315 1  57 21 23530 156 16 50078  254 0014 000000
046
047 TP-6 1982                           08 571561 FAIRWEATHER
048 316 3  57 18 54132 156 19 29213  254 0021 000000
049
050 TP-7 1982                 2         505 571562 FAIRWEATHER
051 317 5  57 20 17191 156 18 12497  254 0035 000000
052
053 TP-8 1982                 4            2 571561 FAIRWEATHER
054 318 2  57 19 38906 156 20 30634  254 0019 000000
```

Titcliff, 1923, Rm2

309 57 19 50.910 156 20 21504 254

TP-9 319 57 21 14533 156 18 29352 254 FAIRWEATHER

FIELD TIDE NOTE

OPR-P146-FA-82

Wide Bay, Alaska

Tide Gage (945-5500) Seldovia, Alaska served as reference station for predicted tides for the entire Wide Bay project as stated in Project Instructions OPR-P146-FA-82. Because leveling was required at the beginning and end of project OPR-P114-RA-82, which was run concurrently with OPR-P146-FA-82, leveling of station (945-5500) Seldovia, Alaska was not conducted by FAIRWEATHER personnel. See Field Tide Note for P114-RA-82 for level data applicable to OPR-P146-FA-82.

Predicted tide correctors were interpolated by the hydroplot system using program AM 500. All times of both predicted and recorded tides were based on Universal Coordinated Time. All predicted tides were acceptable for hydrography with no discrepancies in data attributable to tides errors.

Tide station (945-8461) Wide Bay, Alaska (Mouth of Short Creek) located at latitude 57° 21' 54"N, longitude 156° 24' 07"W was the primary gage during this project. Opening levels were run to four existing Temporary Bench Marks (TBM's) on 04 June 1982 (J.D. 155). Two additional Bench Marks stamped 8461E and 8461F were established and included in leveling observations. A closure of 7.14mm was obtained for the entire run of 0.6km. Closing levels were run on 20 August 1982 (J.D. 232) to the above-mentioned marks resulting in a 27.10mm closure. This closure is 6.1mm above the acceptable limits set forth by the Hydrographic Manual, Fourth Edition, Section A.8.4. A comparison of opening to closing levels shows no sign of any vertical movement in the marks or tide staff. This error is presumed to be located at set-up number one between the staff stop and TBM #1. This area is a sand bar which covers at high water and is very soft sand, making stable set-ups difficult.

OPERATIONAL PROBLEMS

ADR Gage 6402A4596M2 operated well until 4 July 1982 (J.D. 185) when it was discovered that the gage was skip and double punching. On 15 July 1982 (J.D. 196) the gage was removed and replaced with ADR Gage 7404A0407M3 at 165400 (GMT +9). A new staff to gage comparison was taken and the new gage functioned well until projects end on 20 August 1982 (J.D. 232). Gage 6402A4596M2 was found to have bad punch block pins, which were replaced in the field. The gage was tested for three days without malfunction, and then stored aboard. Table I, Gage Malfunctions, is a listing of skip and double punches found on tidal records for the period of time. ADR Gage 6402A4596M2 was operating.

No hydrographic data was lost as a result of skipping or double punching by the ADR gage. Interpolation may be used to provide a tidal data record for the periods of gage malfunction.

MISCELLANEOUS

Overall, gage site (945-8461) proved to be a very convenient, useful location for a tide station. The ADR float well, and the tide staff, were both left at the station site to expedite gage installation for future work in the Wide Bay area.

TABLE I

Gage Malfunctions

Date	Time	Comments
29 June	183000	Restarted
30 June	183450	Guide roller was causing right edge of tape to fray. Adjusted and restarted at 184800.
01 July	230600-233600	Skipped punches.
02 July	004200-004800	Skipped punches.
03 July	003000	Double or more punches.
	003600-013000	Skipped punches.
	013600	Double or more punches.
	014200-023000	Skipped punches.
	045400-053000	Skipped punches.
	121800	Jammed and tore punch holes.
	150600-171200	Appears good.
	171900	Double punches.
	191200	Skipped.
	2012-2030	Skipped.
04 July	0024-0030	Skipped.
	0324-0348	Skipped.
	0400	Skipped.
	0454	Double punched and tore tape.
	0554	Good.
	0806	Double punched and tore tape.
	0830-0854	Good.
	0900	Skipped.
	1006	Double punched, then skipped.
	1100-1624	Good.
	1630-1654	Skipped.
	1730	Skipped.
	1754-1836	Skipped.
	1948	Double punched and skipped.

Table I, Gage Malfunctions, Cont.

Date	Time	Comments
05 July	0106	Good.
	0112	Double punched, skipped.
	0130-0342	Good.
	0348	Double punched, skipped.
	0436-0512	Good.
	0518	Double punched, skipped.
06 July	2142	Good.
	2148	Double punched, skipped.
	2224	Good.
07 July	0624	Good
	0630	Double punched, jammed.
08 July	031800	Restarted.
09 July	1700	Double punched, skipped.
	1718-2142	Good.
	2148	Skipped.
	2154	Good.
	2312-18	Skipped.
	2324	Good
10 July	0442-54	Skipped.
	0500	Good.
	2342	Skipped.
	2354	Skipped.
11 July	0518-30	Skipped.
	0542-54	Skipped.
	1000	Skipped.
	1706-12	Skipped.
	1824-36	Skipped.
	2242	Skipped.

Submitted by:

Arthur E. Francis

Arthur E. Francis
Ensign, NOAA

Approved by:

Walter F. Forster
Commander, NOAA
Commanding Officer

DATE: March 8, 1984

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Marine Center: Pacific

OPR: P146

Hydrographic Sheet: H-10026

Locality: Wide Bay, Alaska

Time Period: June 17-August 20, 1982

Tide Station Used: 945-8461 Wide Bay, Alaska

Plane of Reference (Mean Lower Low Water): 0.54 feet

Height of Mean High Water Above Plane of Reference: 11.0 feet

Remarks: Recommended Zoning:

Zone Direct

James R. Hubbard
Chief, Tidal Datums Section

DATE: August 29, 1983

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): 945-8461 Wide Bay, Alaska

Period: June 17 - August 20, 1982

HYDROGRAPHIC SHEET: H-10026

OPR: P-146

Locality: Wide Bay, Shelikof Straits, Alaska

Plane of reference (mean lower low water): 0.54 ft.

Height of Mean High Water above Plane of Reference is 11.0 ft.

REMARKS: Recommended Zoning:

1. Zone Direct
2. For J-Day 189-195, and J-Day 231 no smooth tides are available.

Chief, Tidal Datums Section, Tides & Water Levels Branch

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Rockville, Maryland 20852

March 1, 1984

TO: N/MOP21 - Pacific Marine Center

FROM: N/OMS123 - James R. Hubbard

SUBJECT: Tide Correctors for Wide Bay, Alaska, 945-8461

The Wide Bay (945-8461), tide gage recorded flat high waters from July 16 to August 20, 1982. The missing hourly heights have been inferred by making adjustments to the predicted tides. The inferred values are estimated to be accurate to within ±0.5 foot (95 percent confidence level). J.D. 197 - 232

The tide gage had severe malfunctions during the period 0400, July 8 to July 13, 1982, which required extensive hand processing of the tide roll. The hourly heights from 0000, July 7 through 0300, July 8, 1982, were inferred from predictions, but accuracy cannot be estimated due to the lack of observed data. J.D. 188 - 189

NOAA FORM 76-155
(11-72)

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

SURVEY NUMBER

FA-10-5-82
H-10026

FIELD GEOGRAPHIC NAMES

Name on Survey	A ON CHART NO. 16570 8th Ed.	B ON PREVIOUS SURVEY NO. 4296	C ON U.S. QUADRANGLE MAPS B-2	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. CHART OR MAP	G RAND MCNALLY ATLAS Chart 16568	H	K U.S. LIGHT LIST	
Vicinity of Cape Kayakliut Shelikof Strait, Alaska						H-4384				
Alaska Peninsula		X					X			1
Cape Kayakliut	X		X			X	X			2
Hartman Island	X	X	X			X	X			3
Shelikof Strait	X		X				X			4
Slaughter Island	X						X			5
Terrace Island	X	X	X			X	X			6
West Channel Island	X	X	X			X	X			7
Wide Bay	X	X	X				X			8
										9
										10
										11
										12
										13
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										21
										22
										23
										24
										25

U.S. DEPARTMENT OF COMMERCE | REGISTRY NUMBER

HYDROGRAPHIC SURVEY STATISTICS

H-10026

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	2

DESCRIPTION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS	
ACCORDIAN FILES	4					
ENVELOPES						
VOLUMES	3					
CAHIERS						
BOXES						

SHORELINE DATA

SHORELINE MAPS(List): TP-00627, 00629, 00717 (2 each)

PHOTOBATHYMETRIC MAPS(List):

NOTES TO THE HYDROGRAPHER(List):

SPECIAL REPORTS(List):

NAUTICAL CHARTS(List): Enlargement Chart 16570

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			5699
POSITIONS REVISED	26		
SOUNDINGS REVISED	602		18228
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	EVALUATION	TOTALS
PRE-PROCESSING EXAMINATION	4		4
VERIFICATION OF CONTROL	5		5
VERIFICATION OF POSITIONS	200		200
VERIFICATION OF SOUNDINGS	344		344
VERIFICATION OF JUNCTIONS	3.0		3.0
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION	25		25
COMPILATION OF SMOOTH SHEET	79.5		79.5
COMPARISON WITH PRIOR SURVEYS AND CHARTS	2.0	~~18~~.0	20.0
EVALUATION OF SIDESCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT	1.5	25.5	27.0
OTHER, Review, Rework		17.0	17.0
Digitization	22.0		22.0
TOTALS	686.0	60.5	746.5

Pre-processing Examination by	Beginning Date	Ending Date
Verification of Field Data by: I. Almacen	~~Verification~~ Begin 11/9/82	Ending Date 3/6/85
Verification Check by: S. Otsubo, B. Olmstead, J. Green	Time(Hours) 29	Ending Date 3/26/85
Evaluation and Analysis by: C.R. Davies	Time(Hours) Begin 3/9/85	Ending Date 3/26/85
Inspection by: D. Hill	Time(Hours) 2	Ending Date 4-15-85

PACIFIC MARINE CENTER

EVALUATION REPORT
H-10026

1. INTRODUCTION

H-10026 is a basic hydrographic survey conducted by the NOAA Ship FAIRWEATHER in accordance with the following:

Project Instruction for OPR-P146-FA-82, dated February 23, 1982
Change No. 1, dated May 25, 1982

The survey was conducted at the southwest entrance to Wide Bay in Shelikof Strait, Alaska. It extends from Cape Kayakliut northeast approximately 5 nautical miles to West Channel Island.

Predicted tides based on Seldovia, Alaska (945-5500) with time and range adjustments were utilized during shipboard processing. Tide correctors used for the reduction of the final soundings are computed from approved hourly heights from a temporary tide gage, Wide Bay (945-8461), except no smooth tides were available for J.D. 189-195 and 231 because of gage malfunction. For this period inferred values were applied by making adjustment to the predicted tides. (See attached N/OMS123 letter and Tide Notes.) Comparison with adjoining survey data and prior surveys confirmed the adequacy of the inferred data.

During office processing the projection parameters were changed to center the hydrography on the smooth sheet and to change the projection to polyconic.

Electronic corrections were revised to reflect the mean of the baseline correctors for four calibrations during the project.

Velocity correctors were revised to reflect all Nansen casts during survey operations.

2. CONTROL AND SHORELINE

Hydrographic control and positioning are adequately discussed in Descriptive Report paragraphs F and G, and Horizontal and Electronic Control Reports for OPR-P146-FA-82.

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

The following registered Class III shoreline manuscripts are applicable to this survey:

Manuscript Number	Date of Photography	Date of Field Edit
TP-00627	June 1976	None
TP-00629	June 1976	None
TP-00717	June 1976	None

Although the registered Class III manuscripts indicate that field edit was not done, in fact field edit was accomplished. However, field edit was not applied to the registered manuscripts. Instead, partial field edit was applied to "Hydrographic Maintenance Prints" which were used during hydrographic survey processing as a source of positions for topographic features. Elevations were obtained from the original Field Edit Masters and comments in the raw data by the hydrographer and were applied to rocks during hydrographic survey office processing.

The delineation of reefs, ledges and foul areas found on the smooth sheet originate from the "Hydrographic Maintenance Prints", Field Edit Masters, field sheets and comments from the hydrographers in the raw data.

Shoreline is not shown on H-10026 in accordance with N/CG memorandum, "Reduction of Marine Center Hydrographic Processing Backlog", dated February 16, 1982.

3. HYDROGRAPHY

Crossline soundings are in fair agreement. Small discrepancies can be attributed to the irregular nature of the bottom.

Hydrography within the limits of H-10026 was adequate to develop the bottom configuration and determine least depths with the following exceptions:

Soundings (fm)	Latitude (N)	Longitude (W)
$8\frac{4}{5}$	57°18'27"	156°17'30"
$9\frac{7}{2}$	57°19'22"	156°16'43"
$3\frac{2}{1}$	57°22'58"	156°14'05"
$2\frac{1}{2}$	57°22'05"	156°15'20"
$2\frac{2}{1}$	57°21'37.5"	156°16'20"
$2\frac{1}{2}$	57°17'56"	156°18'57"
$2\frac{2}{0}$	57°22'08"	156°15'25"
$2\frac{0}{2}$	57°20'01.5"	156°16'33"
$0\frac{2}{0}$	57°17'46.5"	156°18'22.0"
2	57°19'51"	156°18'06"
	57°21'37.5"	156°16'21"

Standard depth curves could be adequately drawn and developed in all areas except where hydrography was terminated due to foul areas.

4. CONDITION OF SURVEY

The hydrographic records and reports are adequate and conform to the requirements of the Hydrographic Manual with the exceptions found in the Preprocessing Examination Report, dated November 23, 1982 and the following:

a. Several soundings warrant further development to locate the least depths (see Section 3, Hydrography). The investigation of these features was incomplete (Hydrographic Manual, 4.3.4).

b. Junctions with H-10039 and H-10019 were not discussed. All junctional surveys shall be compared with the present survey and the quality of the

junction discussed. See section 5 of this report for the appropriate discussion (Hydrographic Manual 5.3.4, J).

c. Two prior surveys were not compared with the present survey. Most recent prior surveys covering the present survey area shall be compared and the quality of the comparison discussed by the hydrographer (Hydrographic Manual 5.3.4, K and Project Instructions 6.10). See section 6 of this report for the appropriate discussion.

d. Two hydrographic control stations, (Stations 309 and 319) were not listed in the Master Signal List included in the Descriptive Report. All stations shall be listed when used for positioning control (Hydrographic Manual 5.3.4, F).

e. Three charted features, two rocks at latitude 57°19'28.5"N longitude 156°18'16"W, and latitude 57°20'03.5"N longitude 156°16'40"W and an 8-fathom sounding at latitude 57°18'07.5"N, longitude 156°16'45"W, originating from the prior survey, were not investigated or discussed on H-10026. Charted information and prior survey findings in disagreement with or not supported by the present survey data should be thoroughly investigated and resolved (Hydrographic Manual 4.1).

5. JUNCTIONS

H-10026 is surrounded by four contemporary surveys.

H-10019	(1982)	1:10,000
H-10025	(1982)	1:10,000
H-10039	(1982-83)	1:10,000
H-10040	(1982-84)	1:20,000

Soundings, depth curves and junctional notes are inked in agreement. Several soundings from H-10040 and H-10039 have been transferred to H-10026 to facilitate the drawing of the depth curves.

6. COMPARISON WITH PRIOR SURVEYS

H-4295	(1923)	1:20,000
H-4384	(1924)	1:20,000
H-4398	(1924)	1:80,000

The present survey compares within ±1 to 2 fathoms with the prior surveys. These differences are attributed to the relative accuracy of data acquisition. H-10026 contains more complete development of the bottom configuration and numerous areas where shoaler depths and rocks were obtained. The following prior sounding and rocks were transferred to H-10026 from H-4384 to depict shoaler information:

Feature	Latitude (N)	Longitude (W)
* - rock	57°20'3.5"	156°16'40"
* - rock bares at LW	57°19'28.5"	156°18'16"
8-fm sounding	57°18'07.5"	156°16'45"

Presurvey review Item No. 28 required a side scan sonar investigation of the bay side of the islands of West Channel, Terrace and Hartman. Initial side scan data indicated nothing of significance and the side scan investigation was not continued (see attached FAIRWEATHER message). The area was covered by conventional hydrography at 50 meter line spacing with no indications of pinnacle rocks or submerged ledges. This area should be charted according to this survey.

Considering the items brought forward, the present survey supersedes the prior surveys within the limits of common coverage.

7. COMPARISON WITH CHART

Chart 16570 8th Edition, February 18, 1978

a. Hydrography - Charted information originates with the prior surveys discussed previously.

The smooth sheet is compiled with numerous kelp symbols in lieu of limit lines. Kelp symbols as portrayed on the smooth sheet for clarity in areas where hydrographic sounding lines were congested. The kelp is growing extensively inshore of most symbols and should be charted at the discretion of the compiler.

The area covered by H-10026 was examined for dangers to navigation; several were found and were forwarded by the NOAA Ship FAIRWEATHER and the Pacific Marine Center to the Seventeenth Coast Guard District (see letters attached).

b. Controlling Depths - There are no controlling depths within the limits of H-10026.

c. Aids to Navigation - There are no aids to navigation within the limits of H-10026.

The geographic names shown on the smooth sheet originated from this chart.

H-10026 is adequate to supersede the hydrography on Chart 16570 within the common area.

8. COMPLIANCE WITH INSTRUCTIONS

H-10026 adequately complies with the project instructions except as noted in Section 4, Condition of Survey.

9. ADDITIONAL FIELD WORK

H-10026 is an adequate basic hydrographic survey and no substantial additional work is required. However, an investigation of the features mentioned in Section 3, Hydrography and 6, Comparison with Prior Surveys should be considered on a low priority basis.

Respectfully submitted,

Charles R. Davies

Charles R. Davies
Cartographer
April 11, 1985

This survey has been examined by me and it meets the 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.

Dennis Hill
Chief, Hydrographic Section

ATTACHMENT TO DESCRIPTIVE REPORT FOR H-10026

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.

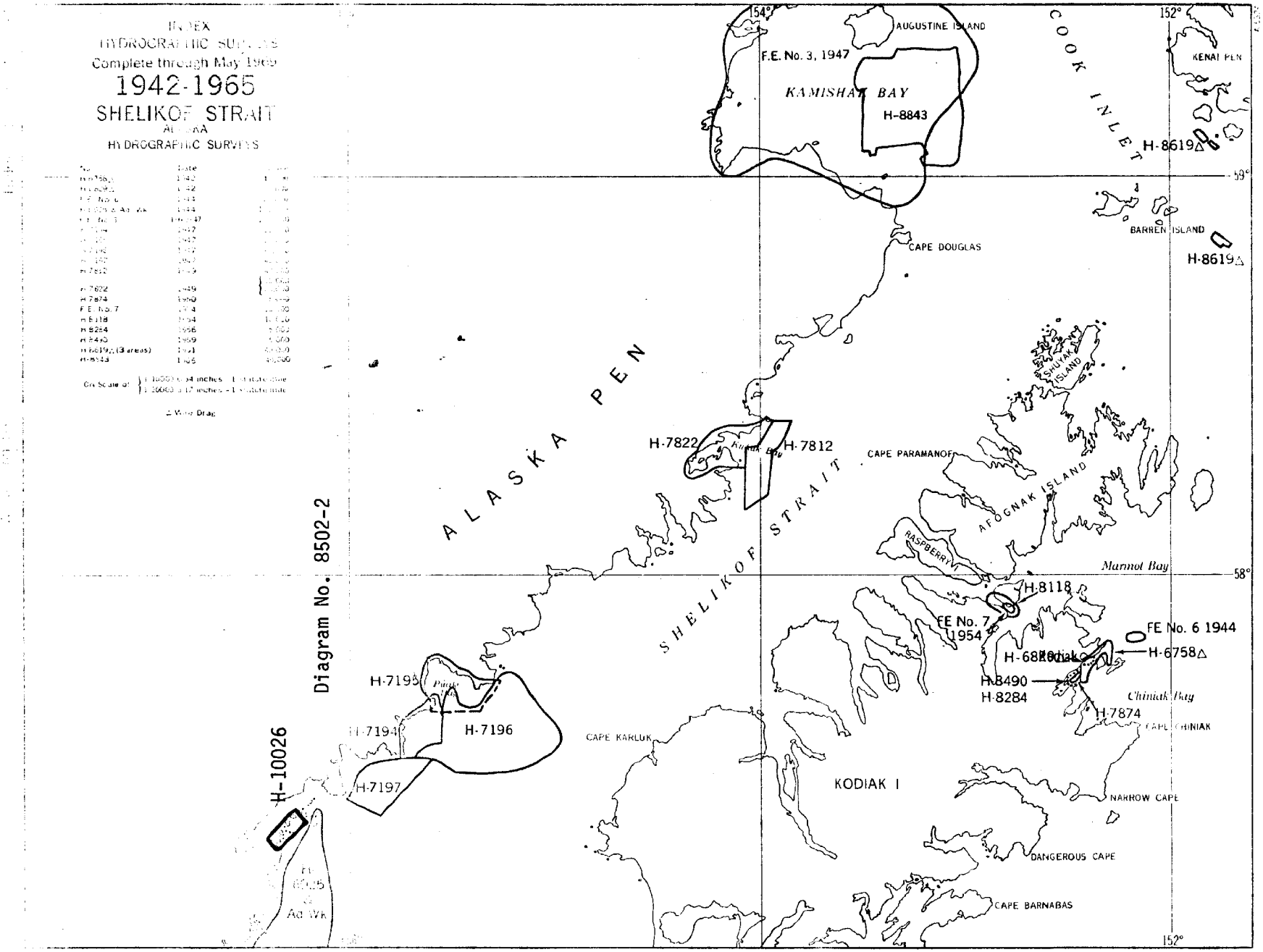
for Dennis Hill 4-16-85
Chief, Nautical Chart Branch (Date)

CLEARANCE: SIGNATURE AND DATE:

N/MOP2:LWMordock Larry W. Mordock 4/18/85

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. Sandgat 4-22-85
Director, Pacific Marine Center (Date)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154°
152°
59°
58°

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10026

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
16570	3-11-87	Ralph B Rasa	(Full) Part Before (After) Marine Center Approval ~~Signed Via~~
			Drawing No. 10 Appld in full
16570	3-12-87	Joseph Pinsi	(Full) Part Before (After) Marine Center Approval Signed Via
			Drawing No. 7 Applied in full
16013	2-21-89	ED MARTIN	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 28 EXAM NO CORRS
531	3-6-89	ED MARTIN	Full ~~Part Before~~ (After) Marine Center Approval Signed Via
			Drawing No. 19
500	7-25-89	John Pierce	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing N 6 Examined, no corrections/applied in full
16006	3-14-90	John Pierce	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 26 Examined, 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.
			APPLIED TO STANDARDS 6-20-85 C.Loy

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.