

9146

Diag. Cht. No. 8102-3

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT (HYDROGRAPHIC)

Type of Survey ... HYDROGRAPHIC

Field No. FA-10-8-72

Office No. H-9146

LOCALITY

State ... ALASKA

General Locality ... FELICE STRAIT

Locality ... VICINITY OF PERCY IS. AND HOTSPUR IS.

1972-73

CHIEF OF PARTY

R. H. Houlder & M. H. Fleming

LIBRARY & ARCHIVES

DATE ... 2/5/76

☆U.S. GOVERNMENT PRINTING OFFICE: 1974-763-098

9146

Area 6
Chart

* 8075

* 8086

* 8102

* 8074 1:40000

HYDROGRAPHIC TITLE SHEET

H-9146

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-10-8-72

State ALASKA

General locality FELICE STRAIT
SOUTHEAST ALASKA

Locality Vicinity of Percy Islands - Nichols Passage and Felice Strait

*See 1973 sheet
Title also*

Scale 1:10,000 Date of survey 26 Oct - 07 Nov 1972

Instructions dated 07 June 1972 Project No. OPR 424

Vessel NOAA Ship FAIRWEATHER (MSS 20), Launch FA-1, Launch FA-3, Launch FA-5, Launch FA-6

Chief of party Capt. R. H. Houlder

Surveyed by Cdr. S. Miller, Lcdr D. Nortrup, Lcdr F. Rossi, Lt R. Hopkins, Ens. Wert, Ltjg F. Arbusto, Ltjg T. Crane, Ltjg K. Underwood, Ltjg R. Schmid.

Soundings taken by echo sounder, hand lead, pole Echo Sounder

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

Positions verified by PMC Harris/Zyrticos

~~RECORDED~~ by C.R. Lehman Automated plot by ~~RECORDED~~

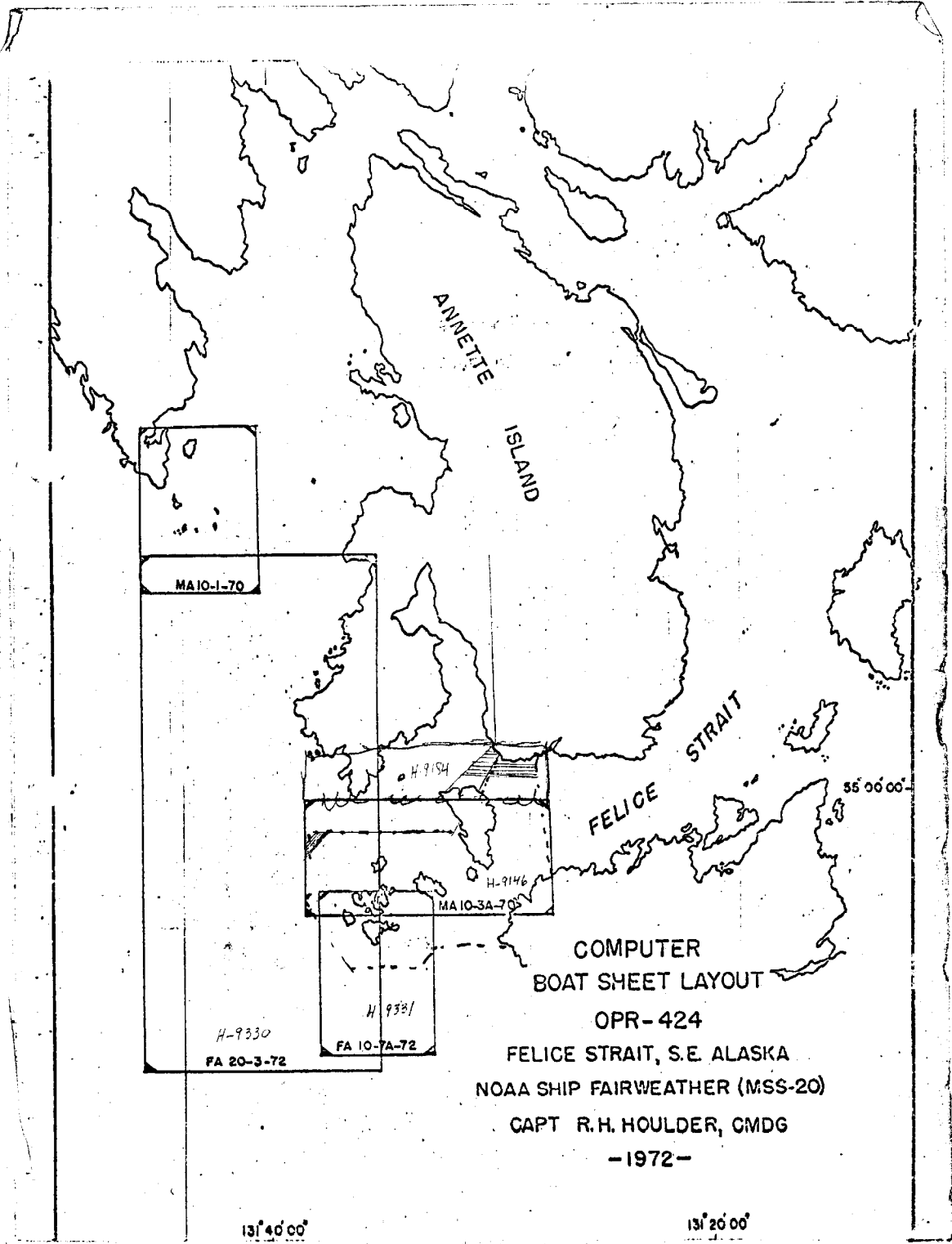
Soundings ~~RECORDED~~ verified by C.R. Lehman

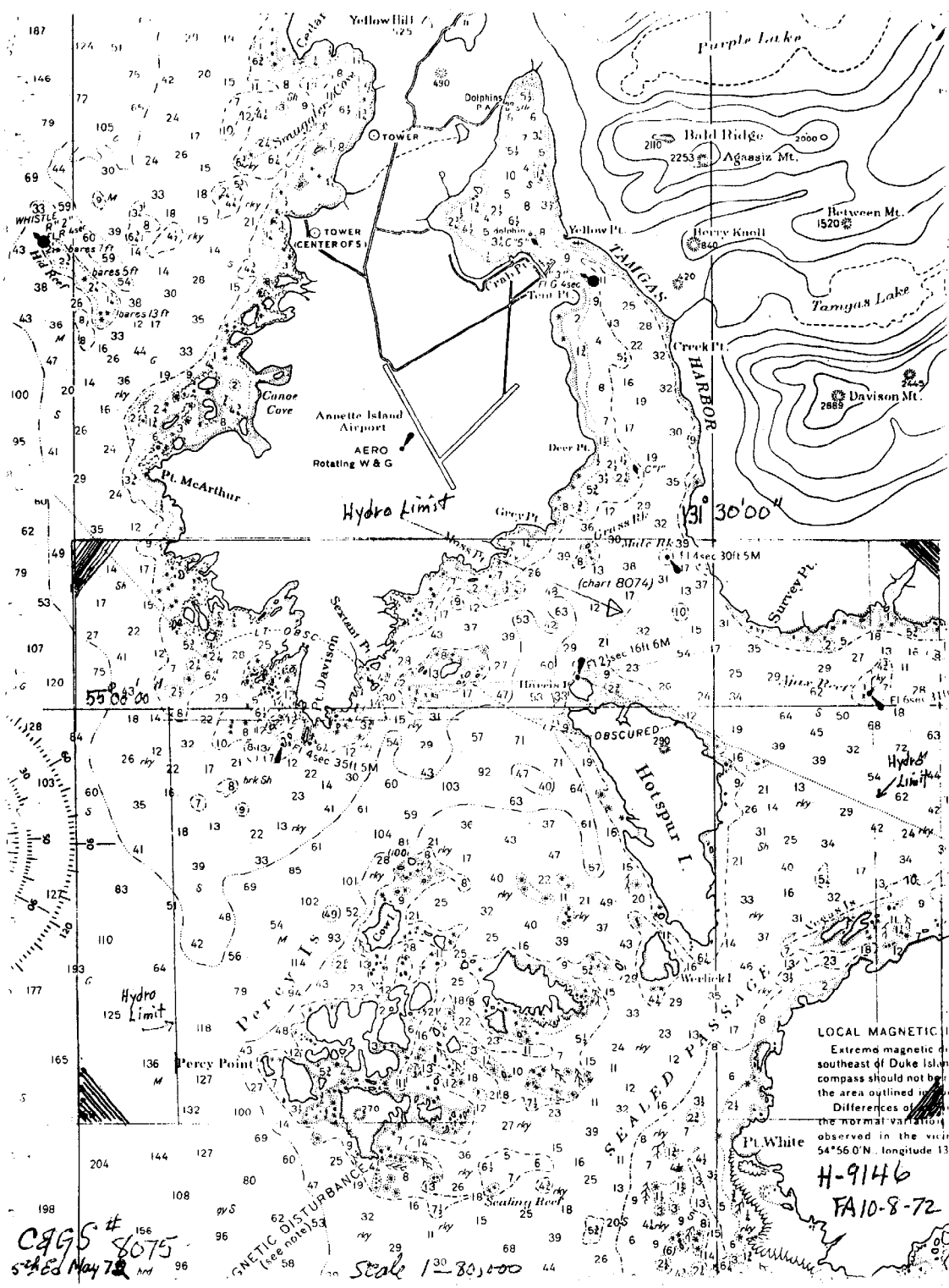
Soundings in ~~XXX~~ fathoms ~~XXX~~ at ~~XXX~~ MLLW

REMARKS: Hydrographic sheet incomplete (completed in 1973)

*Applied to study 7/24/76
GAB*

*D/K
7/24/76*





CAGS # 156
 8075
 SEALED May 72

MAGNETIC DISTURBANCE
 (see note 53)
 Scale 1-80,000

LOCAL MAGNETIC II
 Extreme magnetic dis-
 turbance southeast of Duke Island
 compass should not be used in
 the area outlined in red.
 Differences of 10° from
 the normal variation
 observed in the vicinity
 54°56'0"N. longitude 133°

H-9146
 FA10-8-72

Descriptive Report
to accompany ~~46~~ FA 5 2
Hydrographic Survey H-9184 (MA 10-3-70)
Nichols Passage and Felice Strait
Alaska
OPR-424

A. PROJECT

This survey is a continuation of work begun by NOAA ship McArthur in 1970. The survey was accomplished under Project Instructions OPR-424-FA-72, Nichols Passage and Felice Strait, Alaska, dated 07 June 1972 and with the Pacific Marine Center OORDER.

B. AREA SURVEYED

The area surveyed includes the northwest portion of the Percy Islands. The western boundary is the junction with FA 20-3-72 at approximately longitude 131° 38' 00" W. The northern boundary is the junction with H-9184, the McArthur's portion of MA 10-3-70 completed in 1970. The eastern boundary is approximately longitude 131° 34' 00"W. The southern boundary is approximately latitude 54° 57' 00" N. Prior surveys of this area are H-9184 (1:10,000, 1970), H-3712 (1:20,000, 1914), and H-3781 (1:20,000, 1915).

Hydrography began on 26 October and ended 07 November 1972.

C. SOUNDING VESSEL

Launches FA-3, FA-5, and FA-6 were used to obtain soundings for this survey. Launch FA-1 and the Ship FAIRWEATHER collected bottom samples in the area. No boat sheet colors are specified for launches, as computer sheets will be replotted in black ink exclusively. Position numbers used are as follows:

FAIRWEATHER	Positions 0001-0005
Launch FA-1	Positions 8001-8004
Launch FA-3	Positions 2001-2567
Launch FA-5	Positions 4001-4194
Launch FA-6	Positions 6001-6379

D. SOUNDING EQUIPMENT

Launch FA-3 used a Raytheon DE-723 fathometer, S/N 558, Launch FA-5 used a Ross fineline model 5000 fathometer, S/N 1046, in conjunction with the hydrolog system. Launch FA-6 used a Ross 200A fineline fathometer, S/N 204065. Depths measured by the launches were FA-3, 0-88 fathoms, FA-5, 0-81 fathoms, and FA-6, 0-120 fathoms.

Velocity corrections to soundings were determined by one Nansen cast taken 16 October 1972 at latitude 54° 59' 22"N, longitude 131° 43' 16" W to 380 meters depth (208 fathoms). Velocity correction abstract is appended hereto. For details and substantiation see Fathometer and Velocity corrections Report, OPR-424, NOAA Ship FAIRWEATHER, 1972.

TRA and instrument error corrections for the launches were determined by bar check. An abstract of daily TRA correctors is appended hereto.

E. SMOOTH SHEET

All data was plotted by the Hydrolog system, discrepancies located and rectified, and data replotted in final boat sheet form. All data has been logged in the hydroplot master data tape format for smooth plotting at PMC.

F. CONTROL

Most of the hydrography in this survey was controlled by Hastings-Raydist electronic positioning equipment. Raydist base stations were installed over existing triangulation stations "Drick 1912-21" and "Wedge 1912" located respectively in the Kendrick and Wedge Island groups. See appended Raydist Note for specifics.

Calibration of Raydist navigators was accomplished by three point fixes with check angles. Conversion of fix to Raydist lane count was made by PDP8/e computer using program AM-560. Daily calibrations were made prior to beginning hydrography and at day's end.

Signals for control of visual hydrography were constructed on either triangulation stations or points located by photogrammetric methods. Photo-hydro signals were transferred to boat sheets from 1:10,000 incomplete manuscripts T-12456 and T-12457.

G. SHORELINE

The transfer of shoreline details from 1:10,000 incomplete manuscripts was made and verified prior to hydrography. Changes have been noted on the boat sheet -- the dashed lines offshore are the approximate limits of ledges and foul areas as indicated. Incomplete manuscripts T-12456 and T-12457 were field edited during the project. See Field Edit Report for details.

H. CROSSLINES

Crosslines constitute 8.0% of the hydrography accomplished. Agreement between crossline and main scheme soundings was

excellent with a maximum difference of 3 fathoms in 91 fathoms.

I. JUNCTIONS

Junction sounding comparison with H-9184, northern junction, shows good agreement, with discrepancies of no greater than 1 fathom and an average difference of 0.6 fathoms greater in the present survey. Good agreement was obtained between FAIRWEATHER AND Launch FA-5 on sheet FA 20-3-72 to the west. Agreement was very good between the sounding launches FA-3, FA-5, and FA-6 on this sheet.

J. COMPARISON WITH PRIOR SURVEYS

The overlap of this survey with H-3781 (1:20,000, 1915) is in the immediate vicinity of the Percy Islands. The area has a rocky bottom. Prior survey soundings are generally 5% greater than present soundings, increasing to 10% at 50 fathoms.

Prior survey H-3712 (1:20,000, 1914) overlaps the western half of the present survey. Prior survey soundings are generally within $\pm 7\%$ of the present survey soundings.

Unnumbered Pre-survey Review Items:

This Survey

Depth Position

Depth Position

9 54° 59' 05" ✓
131° 37' 25"

11 ✓ same ✓

49 54° 58' 09"
131° 36' 08"

⁴
9.2 54° 59' 04" plots approx. 120.
131° 37' 27" SW of prior pos.

~~44~~
~~59~~ same

24 54° 57' 40" ✓
131° 35' 52"

³⁷
~~38~~ 54° 59' 11" plots approx. 50 m
131° 36' 00" N of prior sdg.

~~10~~ ~~same~~

⁸
1.0 54° 57' 40.4"
131° 35' 49.5"

* 54° 58' 30" ✓
131° 34' 18"

⁵⁷
~~57~~ 54° 58' 31" ✓
Islet (7) 131° 34' 28"
₂

K. COMPARISON WITH THE CHART

A comparison was made with the only chart covering the

o (10) 54° 58' 30"
131° 34' 24"

o (7) 54° 58' 30"
131° 34' 28"

Notes:
3 Islets

area, C&GS 8075, 1:80,000 dated 13 May 1972. The small scale this chart precluded accurate comparison between the chart and survey.

L. ADEQUACY OF THE SURVEY

This survey is considered adequate to supersede prior surveys for charting, however, the eastern portion of this boat sheet has not been surveyed.

M. AIDS TO NAVIGATION

No floating or fixed aids to navigation are located in the survey area.

N. STATISTICS

Launches	Positions	Miles of sounding lines
FA-1	4	none
FA-3	445	40.9
FA-5	194	18.2
FA-6	379	58.6
FAIRWEATHER	5 (1007) + 8 (65)	none

Total miles of sounding lines- 117.7 nm.
Total area surveyed - 5.2 snm.
Number of bottom samples- 8

O. MISCELLANEOUS

No additional work is required in the area completed by this survey; however, due to lack of time the portion of this boatsheet east approximately 131° 34' 00" W to the boatsheet limit at 131° 27' 30" W was not completed.

P. RECOMMENDATIONS

The eastern portion of this boatsheet needs to be surveyed.

Q. REFERENCE TO REPORTS

Fathometer and Velocity Corrections Report, OPR-424, NOAA FAIRWEATHER 1972.

Field Edit Report, OPR-424, NOAA FAIRWEATHER 1972.

Respectfully submitted,

for Donald E. Marking
Frank Rossi
LCDR, NOAA

TIDE NOTE
OPR - 424

Reference tide gage for this project was the standard gage at Ketchikan. Field tide reduction of soundings was based on predicted tides for Metlakatla. Predicted tides were interpolated by PDP8/e computer using program AM 500.

Two Bristol Bubbler Tide Gages were installed in the project area. Location and period of operation are as follow:

<u>Site</u>	<u>Location</u>	<u>Period</u>
Metlakatla	55° 07.7' N 131° 34.1' W	44 days 28 Sept - 10 Nov
Tamgas Hbr.	55° 04.0' N 131° 32.6' W	22 days 19 Oct - 10 Nov

All gages operated on 105° W time for the entire period of operation. However, times as listed on the hourly heights abstracts, Form C&GS - 362, were based on 120° W after 0200 29 October with the change from daylight savings to standard time.

Metlakatla - Gage S/N 62A91

This site was previously occupied by NOAA McARTHUR in 1970. The staff and gage were installed and the gage began operation on 28 September. Levels were run between staff and marks on 04 October. Two new bench marks were established making a total of five recoverable marks at the site. The marigram read 0.8 feet higher than the staff. This value is the average of five comparison readings made during routine servicing periods. (Actually seven comparisons were made, the first and last of which were discounted. The first was made prior to the time that the gage had completely settled and the last after the gage had stopped operating.) The gage operated very well with only a slight time lag. This has been adjusted in scanning the marigram. The gage was removed and levels run to three of the marks on 10 November.

Tamgas Harbor - Gage S/N 63A10293

This site was previously occupied by NOAA McARTHUR in 1970. The gage was installed 19 October and the existing staff leveled the following day. Two new bench marks were established making a total of five recoverable marks at the site. The marigram read 3.8 feet lower than the staff, based on an average of five comparison readings. The gage was quite sensitive and it was necessary to mean out recorded wave action when scanning. This however was not a serious deficiency and the gage operation was very good. The gage was removed and levels run to three marks on 10 November.

55°10'00" N

131°40'00" W

NICHOLS
PASSAGE

METLAKATLA

TIDE GAGE

131°30'00" W

TIDE GAGE

ANNETTE
ISLAND

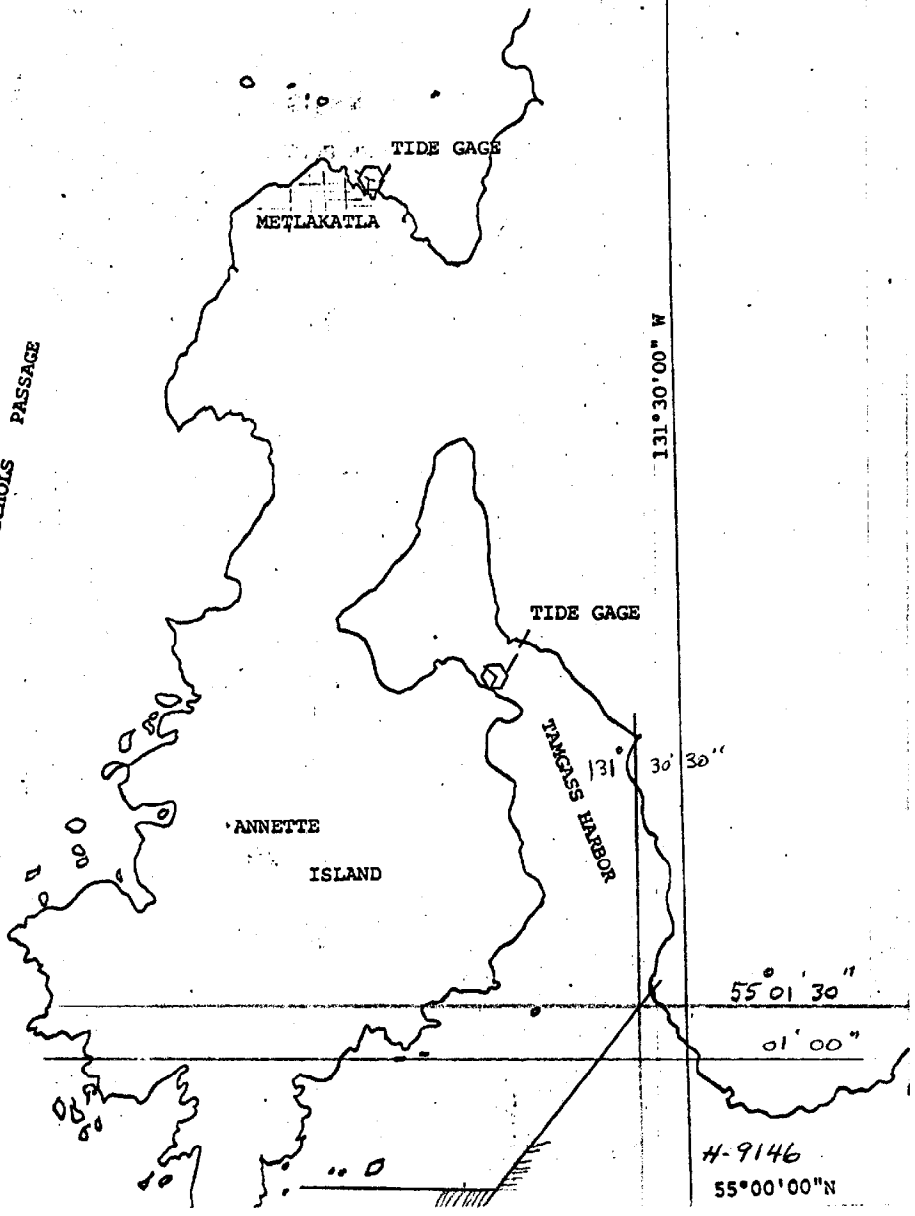
TANGERS
HARBOR

55°01'30"

01'00"

H-9146

55°00'00"N



SOUND VELOCITY CORRECTORS

<u>Depth (fathoms)</u>	<u>Correctors (fathoms)</u>
0.0 - 5.9	0.0
6.0 - 15.5	+0.1
15.6 - 25.5	+0.2
25.6 - 36.0	+0.3
36.1 - 51.9	+0.4
52.0 - 75.0	+0.6
75.2 - 97.5	+0.8
97.7 - 139.0	+1.0
139.5 - 197.0	+1.5
198.0 - 284.0	+2.0

RAYDIST NOTE

Raydist electronic positioning equipment, operating in range-range mode, was used to control hydrography on all of sheets FA 20-3-72, and FA 10-7-72 and portions of MA 10-1-70 and MA 10-7-70. The "red" base station was located over triangulation station "Drick 1912-21" at latitude $54^{\circ} 51' 59.168''$ N, longitude $131^{\circ} 58' 17.273''$ W. The "green" base station was located over triangulation station "Wedge 1912-21" at latitude $55^{\circ} 09' 14.028''$ N, longitude $131^{\circ} 57' 29.245''$ W.

Base station antennas consisted of 3 sections of 10' triangular aluminum tower sections and a telescoping 30' whip. Ground planes were twelve 50' sections of 24" wide 1" mesh "chicken wire" with copper wire connectors radiating from the antenna base plate.

Power to the base stations was provided by 12 volt batteries connected in series-parallel to yield 24 volt supply. Remote on-off switches were utilized to prolong battery life. Batteries were recharged aboard ship and base station batteries replaced as necessary.

Launches were equipped with Raydist transmitters, navigators, 12' fiberglass whip antennas, and stripchart recorders. Strip chart records were annotated at all times between beginning and end of day calibrations.

Calibration of Raydist navigators was accomplished by three-point fixes with check angle. All calibration signals were situated over triangulation stations. Sextant fix positions were converted to Raydist lane counts by PDP8/e computer using program AM-560.

Raydist rate calibration was generally made such that the corrector would be less than 0.1 lane. Daily correctors were determined by averaging the beginning and end of day calibration unless conditions dictated some other system of application. All lane jumps were detected and proper corrections applied.

Calibration for hydrolog equipped launch FA-5 was not kept to within the 0.1 lane corrector objective. Since electronic rate correctors are applied on-line by the hydrolog system, no compromise in quality of control resulted. Improved efficiency did result since not as much time was required for calibration. Beginning and end of day calibrations were consistent throughout the project.

Performance of the Raydist system during this project was very good, virtually no hydro time was lost due to Raydist failure. Both base stations were installed and operable in one day and removed in a half a day each. Hydro was begun on the 5th working day after the ship's arrival in the working area. Maximum range of control utilized during the survey was 19 nm.

Installation of an external antenna coupler, an isolated Raydist Dyna-Plate, and the insulating of teletype leads in launch FA-5 reduced

Raydist interference with the computer. It is now possible to operate the Raydist transmitter at full output on the low power setting, without affecting the computer operation.

Base Stations- Model AA-60

Unit	Green	Red
S/N	15	14
Frequency	1653.425 Khz	1653.015 Khz

Mobile Transmitters- Model TA-96

S/N	22	34	20
Frequency	3306.500 Khz	3306.400 Khz	3306.465 Khz

Mobile Navigators- Model ZA-67A

S/N	47	54	26
Freq. Filter	470 Hz	370 Hz	435 Hz
red			
Freq. Filter	350 Hz	450 Hz	385 Hz
green			

Lane width- 45.315 meters

An abstract of daily Raydist electronic rate correctors is include herewith. On any day when the corrector on either rate, for any portion of the day, exceeded 0.4 lanes a calibration record and strip chart for that day is included in the field data submitted.

Signal List
MA 10-3-70

003	54 58 3378	131 34 5695	TRIANGULATION STATION -- COW 1914
004	54 59 3961	131 36 4445	" " - DAVIS 1914
101	54 59 0530	131 31 3987	PHOTO IDENTIFIED T-12457
102	54 58 4291	131 31 2350	" " "
103	54 58 1643	131 32 3873	" " "
104	54 57 4847	131 33 1225	" " "
105	54 57 3939	131 32 4034	" " "
106	54 57 2991	131 32 1933	" " "
107	54 57 1468	131 32 1230	" " "
108	54 57 1032	131 32 3253	" " "
109	54 57 1226	131 32 5882	" " "
110	54 57 1675	131 33 1641	" " "
111	54 57 0786	131 33 1719	" " "
112	54 57 1200	131 33 3635	" " "
113	54 57 2542	131 33 3438	" " "
114	54 57 3486	131 33 3747	" " "
115	54 57 4312	131 34 1960	CUT IN WITH SEXTANT FIX ✓
116	54 57 3163	131 34 2809	PHOTO IDENTIFIED T-12457
117	54 57 2244	131 34 2764	" " "
118	54 57 0980	131 34 2023	" " "
119	54 56 5895	131 33 5380	" " "
120	54 57 0922	131 34 5332	" " "
121	54 56 5546	131 34 3594	" " "
122	54 57 5853	131 34 4090	" " "
123	54 57 4430	131 34 5472	" " "
124	54 57 3150	131 34 5292	" " "
125	54 57 2506	131 35 0787	" " T-12456
126	54 57 2335	131 35 1663	" " "
127	54 57 2099	131 35 3096	" " "
128	54 57 3942	131 35 2034	" " "
129	54 57 1129	131 35 3865	" " "
130	54 57 2079	131 35 4478	" " "
131	54 58 1080	131 34 5609	" " T-12457
132	54 58 3609	131 34 3901	" " "
133	54 57 5494	131 34 1124	CUT IN WITH SEXTANT FIX ✓
134	54 57 2561	131 34 5056	PHOTO IDENTIFIED T-12457
135	54 57 5976	131 35 3090	" " T-12456
136	54 57 1698	131 35 0938	" " "
137	54 57 1245	131 35 1141	" " "
138	54 57 0639	131 35 1927	" " "
139	54 57 0236	131 35 2191	" " "
140	54 57 2973	131 34 4261	" " T-12457
141	54 56 5811	131 35 1438	" " T-12456
142	54 56 5465	131 35 1887	" " "
143	54 56 5465	131 35 3280	" " "
144	54 56 5556	131 35 2640	" " "

Sheet change FA 10 8-72

PARAMETER TAPE PRINTOUT - MA-10-3-70

FEST=93000
CLAT=6067000
QMER=131/30/0
GRID=30
R.SCL=10000
FLAT=54/56/47
FLON=131/38/39
SILAT=54/51/59.17
SILON=131/58/17.27
S2LAT=55/09/14.03
S2LON=131/57/29.24
Q=3306.45
VESNO=202X
YR=72

Transmittal Sheet

The field work was examined daily under the supervision of this command. The boatsheet was inspected daily for completeness and no additional work is considered necessary in the area surveyed; however, the eastern half of the boatsheet remains to be surveyed at a later date.

R. H. Houlder

R. H. Houlder
CAPT, NOAA
Cmdg, Ship FAIRWEATHER

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. FA-10-8-72 Office No. H-9146

LOCALITY

State ALASKA

General locality SOUTHEAST ALASKA

Locality Felice Strait, Vicinity of

Hotspur Island

1973...

CHIEF OF PARTY

Cdr. Michael H. Fleming

LIBRARY & ARCHIVES

DATE

HYDROGRAPHIC TITLE SHEET

H-9146

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-10-8-72

State ALASKA

General locality FELICE STRAIT
SOUTHEAST ALASKA

Locality Percy Ids and Hotspur I.
Felice Strait, Vicinity of Hotspur Island

Scale 1:10,000 Date of survey 21 March - 18 April 1973

Instructions dated 5 December 1972 Project No. OPR 424

Vessel NOAA Ship DAVIDSON, Launch DA-1, Launch DA-2, Skiff

Chief of party Cdr. Michael H. Fleming, Lcdr H.B. Milburn, Lt R.L. Crozier, Lt R.H. Hewitt

Surveyed by Eng. K.X. Gores

Soundings taken by echo sounder, hand lead, pole Raytheon DE-732 S/N 214, Ross 544 S/N 1046, 1048

Graphic record scaled by DAVIDSON Personnel

Graphic record checked by DAVIDSON Personnel

Positions verified ~~by~~ C.R. Lehman Automated plot by FMC Harris/Xynetics

Soundings ~~checked~~ ^{verified} ~~by~~ C.R. Lehman

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

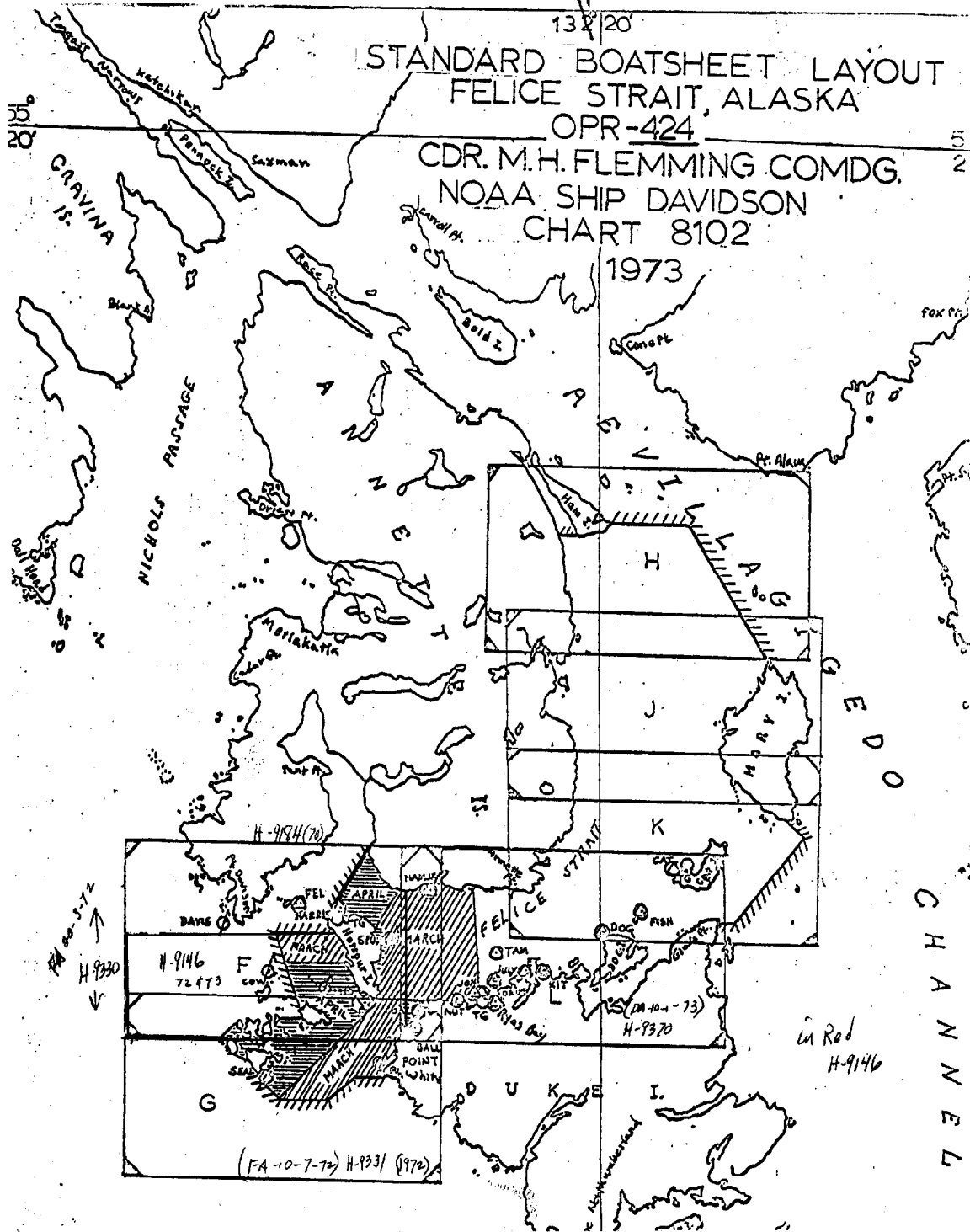
REMARKS:

STANDARD BOATSHEET LAYOUT
FELICE STRAIT, ALASKA

OPR-424

CDR. M.H. FLEMMING COMDG.
NOAA SHIP DAVIDSON
CHART 8102

1973



DESCRIPTIVE REPORT

FX
MA-10-~~3~~-70 (DAVIDSON, 1973)

(H-9184)⁴⁶

FELICE STRAIT, VICINITY OF HOTSPUR ISLAND, SOUTHEAST ALASKA

A. PROJECT

This survey was accomplished in accordance with Project Instructions OPR-424-DA-73, Felice Strait, Southeast Alaska dated 5 December 1972.

B. AREA SURVEYED

This survey is the completion of sheet MA-10-3-70 begun in 1970 by the MCARTHUR and continued in 1972 by the FAIRWEATHER.

The area surveyed by the DAVIDSON includes the Western portion of Felice Strait from Lat. 54° 57.8 to 55° 01.44 N and from Long. 131° 27.85'W to an oblique line directly connecting Mule Rock Light and Harris Island Light. On the west side of Hotspur Island, the area surveyed lies from Lat. 54° 57.5 to 54° 59.3'N and from Long. 131° 30.1 to 131° 34.8'W except those areas previously surveyed by the MCARTHUR and the FAIRWEATHER. This survey was carried out between 21 March 1973 and 18 April 1973.

C. SOUNDING VESSELS

The following vessels were used to accomplish this survey:

<u>VESSEL</u>	<u>POSITION</u>	<u>COLOR</u>
Launch DA-1		RED
LAUNCH DA-2		BLUE
Ship		BROWN
Skiff		GREEN

See Appendix for abstract of positions.

D. SOUNDING EQUIPMENT

The following fathometers were used to obtain soundings for this survey:

<u>VESSEL</u>	<u>FATHOMETER TYPE</u>	<u>FATHOMETER NUMBER</u>
Launch DA-1	Raytheon DE 723	214
Launch DA-2	Ross 544	1053 1046, 1048
Ship	Raytheon DE 723	1284

Echo sounder corrections were determined from daily bar checks and water conductivity measurements from a MARTEK metering system. (See

separate report "Corrections to Echo Sounders OPR-424 March-April 1973".) Fine arc was noted to be out of adjustment on DA-1, day 102, and attempts were made to adjust the error during the day. The Ross Analog was changed in DA-2 on day 107 and used only that day.

All soundings are in fathoms referenced to MLLW using predicted tides for Tamgas Harbor. Time meridian 120° W was used for the entire survey (See Tide Note).

E. SMOOTH SHEET

The smooth sheet will be constructed and plotted by the Processing Division, Pacific Marine Center.

F. CONTROL

Both visual three point fixes and electronic range-range measurements (Motorola Miniranger) were used for control on this survey. Seven signals were placed over existing triangulation or reference marks and twenty eight signals were located photo-grammetrically by shipboard personnel or placed over photo positions located by the FAIRWEATHER in 1972. Miniranger transponders were located at the following positions:

<u>STATION</u>	<u>POSITION</u>	<u>ARC COLOR</u>
DOG	Lat. 54°59.72 Long. 131°19.93	Green
NUT	Lat. 54°58.15 Long. 131°27.60	Red
NAMUR-RM1, 1973	Lat. 55°00.83 Long. 131°27.30	Blue

The position of NAMUR RM1 was originally plotted in-correctly on the boatsheet by approximately 1mm, and the arcs were plotted from this position. No attempt was made to replot the positions and this should be considered during verification.

Miniranger calibration was accomplished using three point sextant fixes and check angles. For further information see separate report "Miniranger Report OPR-424 March-April 1973".

G. SHORELINE

Shoreline features, ledges and reef areas were traced on the boatsheet from the following Manuscripts:

T-12551, T-12552, T-12557 and T-12558

Verification of the shoreline was carried out by shipboard personnel and is described in a separate report "Field Edit OPR-424-DA-73". All applicable changes have been applied to the boatsheet.

H. CROSSLINES

The percentage of crosslines to sounding lines is 7.5 per-cent or 15.0 n.m. compared to 200.0 including development lines. Lines are in good agreement with the sounding lines.

I. JUNCTIONS

This is a continuation of sheet 9184 begun by the MCARTHUR in 1970 and continued by the FAIRWEATHER in 1972. On the west side of Hotspur Island, junctions are made with FAIRWEATHER soundings to the west and MCARTHUR soundings to the north. A junction is also made with contemporary survey FA-10-7-72 (H-9331) to the south. On the north side of Hotspur Island a junction is made with MCARTHUR soundings and on the east side of the island junction is made with contemporary survey DA-10-1-73 (H-9370) to the east and FA-10-7-72 (H-9331) on the south. All junctions are in good agreement with soundings obtained during this survey.

J. COMPARISON WITH PRIOR SURVEYS H-3712

Eight pre-survey review items, ^{one numbered and 7 unnumbered,} were investigated during this survey.

758 # 18 (1) Sounding of 17 fathoms at 55°01.2' N, 131°30.45' W. The area was developed yet the shoalest depth found was 20 fathoms. This 17 fathom shoal is not considered a hazard since it is flanked by the 12 fathom shoal to the SW. *or South on Lat. 55°01'00" (See #2 below)* ✓ *Carried forward from H-3717 (197)*

(2) Sounding of 13 fathoms at 55°01.02' N 131°30.43' W. The area was developed and a shoal sounding of 12 fathoms was obtained. ✓

(3) Sounding of 10 fathoms at 55°00.81' N 131°30.5' W. The area was developed and a shoal sounding of 8.6⁸ fathoms was obtained. ✓ *7', 8', 8'* ✓ *DJK 7/12/76*

(4) Sounding of 29 fathoms at 55°00.71' N, 131°30.84' W. A sounding of 20 fathoms was obtained in the area. *15 fathoms within closed 20 fm curve.* ✓ ✓

(5) Sounding of 24 fathoms at 55°00.25' N, 131°30.64' W. The area was developed and the shoalest depth found was 25 fathoms. Not considered a hazard. ✓ ✓

(6) Sounding of 17 fathoms at 55°00.25⁵³' N, 131°29.95' W. The area was developed and a shoal sounding of 11 fathoms was obtained within 100m of the 17 fathom sounding. ✓ ✓

(7) Sounding of 25 fathoms at 55°00.31' N, 131°29.7⁶⁹' W. The area was developed and the shoalest depth found was 26 fathoms within 20m. ✓ ✓

(8) Sounding of 5-1/4 at 54°58.43'N, 131°28.3'W. The area was developed and a shoal sounding of 4.7 fathoms was obtained.

Discrepancies with prior survey H-3781

- (1) Previously reported 13 fathom shoal in the vicinity of 54°59.2'N, 131°28.8'W. Shoal depths of 8.0 and 7.8 fathoms were found at 54°59.2'N, 131°29.1'W and 54°59.3'N, 131°28.7'W respectively. A shoal depth of 8.2 fathoms was also located at 54°59.2', 131°28.55'W. Further, a shoal depth of 9.8 fathoms was located at Lat. 54°59.35, Long. 13129.7 $\left\{ \begin{array}{l} 8.2 \text{ fath. on Lat. } 55^{\circ}59'30'' \\ 4.5 \text{ fath. on Southern end of inside channel} \end{array} \right.$
- (2) Shoal sounding of 9.7 fathoms at 54°58.1'N, 131°31.8'W was not previously located. ✓
- (3) Shoal sounding of 8.0 fathoms at 54°58.25'N, 131°32.15'W was not previously located. ✓
- (4) Shoal sounding of 5.3 fathoms at 54°58.4', 131°33.9'W was not previously located. ✓
- (5) Several rocks on the boatsheet in the area west of Hotspur Island were not previously located or located in error. (See boatsheet and Field Edit manuscript) *some rocks added T-sheet not in hands - bkk*
- (6) Sounding of 45 fathoms at 54°59.6'N, 131°28.8'W. Shoaler sounding of 40 fathoms was obtained. *40 fath. curve is immediately North which means 45 fath. is not far.*
- (7) A shoaler sounding of 4.7 fathoms was determined at 54°58.4'N and 131°28.3'W than the 5-1/4 fathoms previously reported. See pre-survey review item (8). ✓
- (8) The passage between Werlick Island and Hotspur Island is not clear at 11 fathoms as previously shown. *9.2 & 9.2 @ N-Tip of ISL. 7.2 at SE corner - probably least depth for passage.*
- (9) A shoal sounding of 6.68 fathoms at 54°58.0'N, 131°33.9'W was not previously located. Agreement was made with 1972 FAIRWEATHER WORK in this area. ** (2) a closed, small, 6 fath. curve & a cross Lat 54°58'00" (NE-SW)*
- (10) A shoal sounding of 5.3 fathoms at 54°59.05'N, 131°29.5'W was not previously reported. *5.6 fathoms at MLLW - 10 fm curve extends offshore at this point.*
- (11) A shoal sounding of 9.4 fathoms at 54°58.65'N, 131°34.05'W was not previously located. *9.9 fathoms at MLLW - Very small closed 10 fm curve.*
- (12) A shoal sounding of 1.4 fathoms at 54°57.7'N, 131°33.6'W was not previously located. *1.7 fathoms MLLW.*
- (13) A shoal sounding of 8.2 fathoms at 54°57.8'N, 131°33.45'W was not previously located. *8.2 fath. MLLW AND just E of N of - is a 6.2 fath. within further one at 9.2 fath. These are three small (closed) 10 fm curves & lay offshore in rough NE-SW direction, within a 20 fath. curve, which is same direction (See 14 & 15)*

- (14) A shoal sounding of ⁴6.2 fathoms at 54°57.8'N, 131°33.4'W was not previously located. ✓
- (15) A shoal sounding of ²9.7 fathoms at 54°57.9'N, 131°33.15'W was not previously located. ✓
- (16) A 10 fathom shoal in the vicinity of 54°58.3'N, 131°31.35'W was not previously located. A shoal sounding of 2.3 fathoms was obtained at 54°58.25'N, 131°31.45', this shoal (10 fathom) constitutes a navigational hazard, as within its limits are several soundings of 7.0 fathoms or less and a rock at 54°57.35'N, 131°31.25'W. (6) X which is one of six individual shoals within an extension 10 fm shaded depth contour. ✓
- (17) A shoal sounding of ^{2.04}7.2 fathoms at 54°57.6'N, 131°31.15'W was not previously located. This is within a small 2 fath. curve separated from 2 fath. shoreward curve by 26 fm in extent. (See RK covered 2 ft. MLLW) ✓
- (18) A shoal sounding of ⁵4.6 fathoms at 54°57.45'N, 131°31.5'W was not previously located. 5 fathoms MLLW (see Junction Sheet H-9331) ✓

Discrepancies with prior survey H-3712

- (1) Sounding of 2.5 fathoms at Lat. 55°00.3'N Long. 131°31.8'W. The area was developed however the shoalest depth found was 9.0 fathoms within 50m. A sounding of 2.0 fathoms was noted 130m shoreward. 2 or 2.5 fath. are located close to shore. 9 fath. is 200-250m offshore. Disregard 2.5 ✓
- (2) Sounding of 34 fathoms at Lat. 55°00.6'N Long. 131°31.4'W. Shoal sounding of 30 fathoms was obtained. 21 fath. is high pt. within 30 fm curve. ✓
- (3) A shoaler sounding of ^{7.9}8.0 fathoms was located at Lat 55°00.9 and long 131° 30.75W than the previously reported 10 fathoms ✓

There was good agreement between this survey and H-3717.

K. COMPARISON WITH CHART

A comparison was made with C&GS chart 8075 1:80,000 5th Edition 13 May 1972. All discrepancies are covered in section J., Comparison with prior Surveys.

L. ADEQUACY OF SURVEY

This survey is considered complete and adequate to supercede all prior surveys.

M. AIDS TO NAVIGATION

Four fixed aids appear on the sheet. Harris Island Light was located by office photogrammetric methods, see signal 141; Ajax Reef Light was located by ground methods, see signal 140 and H-9370 for original records; Davison Point Light was not used for control and its present position determined adequate as per telecom with PMC operations, 04/23/73. Mule Rock Light was located by office photogrammetric methods, see signal 139. There are no floating aids to navigation within the limits of this survey.

N. STATISTICS

<u>VESSEL</u>	<u>NO. OF POSITIONS</u>	<u>N.M. OF SOUNDING LINES</u>	<u>B.S.</u>	<u>D.P.'s.</u>
Launch DA-1	823	91.5		1
Launch DA-2	1024	129.1	11	1
Ship			51	
Skiff				15

The total area surveyed is 7.72 square nautical miles. There are 13 volumes (tapes), 1 D.P. volume and 1 B.S. volume for this survey.

O. MISCELLANEOUS

Three rocks from MCARTHUR field edit located at Lat. 54°59.2 Long. 131°31.65, Lat. 54°59.3 Long. 131°31.75 and Lat. 54°59.35 Long. 131°31.05 have not been applied to Manuscript T-12457 (See Incomplete Manuscript T-12457). Two rocks located near Grass Rock at Lat. 55°01.35 Long. 131°31.8 and Lat. 55°01.45 Long. 131°31.8 have not been applied to Manuscript T-12451.

Beyond sounded area on this sheet

A rock at Lat. 54°58.6 Long. 131°34.5 was not previously located by FAIRWEATHER field edit (See detached position volume, position number 8001).

P. RECOMMENDATIONS

It is recommended that the 5-1/4 fathom sounding at 54°58.4'N, 131°28.3'W shown on C&GS Chart 8075 be changed to ~~5~~ ⁴ fathoms. The shoal in this area could represent a navigational hazard to ships with drafting more than 27 feet.

Q. REFERENCE TO REPORTS

Corrections to Echo Sounders OPR-424.
Field Edit Report OPR-424.
Miniranger Report OPR-424.

Respectfully submitted,

Kurt X. Gores

Kurt X. Gores
Ensign, NOAA

LIST OF ATTACHMENTS

Tide Note

Abstract of Positions

Form 1

Form 3

Signal Tape Listing

TRA/TC/TI Tape Listing

Velocity Table Printout

Approval Sheet

TIDE NOTE

OPR-424

The reference tide gage for this project was the Standard gage located at the U.S. Coast Guard Base, Ketchikan, Alaska. Field tide reduction of soundings was based on predicted tides for Tamgas Harbor, Annette Island.

Three Bristol bubbler tide gages were installed in the project area. Location and period of operation were as follows:

CAT ISLAND	55°01'42"N 131°16'06"W	8 Mar - 13 Apr 1973 37 Days
RYUS BAY	54°57'48"N 131°25'18"W	5 Mar - 20 Apr 1973 47 Days
HOTSPUR ISLAND	54°59'57"N 131°31'52"W	2 Mar - 20 Apr 1973 50 Days

All gages operated on 120°W time for the duration of this project.

Marigrams were corrected for time and height variations. Wave action was meaned where ever possible.

CAT ISLAND	- S/N 62A91; 0-30 ft range Five benchmarks connected on 8 March 1973 Marigram reading 5.0' above staff zero Gage removed 13 April 1973
RYUS BAY	- S/N 68A9337; 0-30 ft range Three benchmarks connected on 6 March 1973 Marigram reading 7.0' above staff zero Gage removed 20 April 1973
HOTSPUR ISLAND	- S/N 64A11028; 0-30 ft range Five benchmarks connected on 6 March 1973 Marigram reading 0.0' above staff zero Gage removed 20 April 1973

ABSTRACT OF POSITIONS

<u>DAY</u>	<u>LAUNCH DA-1</u>	<u>LAUNCH DA-2</u>	<u>SHIP</u>
080		1-241 (1)	
081		242-386 (2)	
085		377-494* (3)	
086		503-722** (4)	
089		723-825 (5)	
094	5005-5187*** (7)	826-913 (6)	
095	5188-537 (8)		
096			9001-9022 (BS)
099	5376-5481 (9)		9023-9040 (BS)
100	5482-5667 (10)		
102	5668-5750 (11)		
107		9201 (BS)	
		914-1042 (12)	
108	5751-5827 (13)	9203-9212****	
109			9041-9051 (BS)

* Positions 495-502 rejected (inclusive)
** Positions 514, 515, 522, 528-530, 549-522 (inclusive) rejected
*** Positions 5001-5004 rejected (inclusive)
**** Position 9202 not used

Numbers in parenthesis indicate volume numbers.

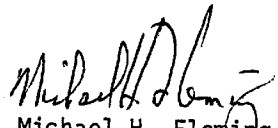
D.P.	DA-2	DAY 086	DP # 8001
	Skiff	DAY 094	DP # 8002-8016
	DA-1	DAY 099	DP # 8017

APPROVAL SHEET
HYDROGRAPHIC SURVEY

~~FR 8 3~~
~~MA-10-7-78~~
~~46~~
H-9184

Felice Strait, vicinity of
Hotspur Island
Southeast Alaska

The field work on this survey was accomplished under my supervision.
Frequent inspections were made of the boatsheet and other records.


Michael H. Fleming
Commander, NOAA
Commanding Officer
NOAA Ship DAVIDSON CSS-31

H-91146
Name on Survey

	On Coast No.	On No.	On U.S. Map	From Island	On No.	P. G. Chart	Rand No.	U.S. Lit.		
	A	B	C	D	E	F	G	H	K	
AJAX REEF										1
ANNETTE ISLAND										2
COW ISLAND										3
CLARENCE STRAIT										4
DUKE ISLAND										5
FELICE STRAIT										6
GRASS ROCK										7
HARRIS ISLAND										8
PERCY ISLANDS										9
SEALED PASSAGE										10
VEGAS ISLANDS										11
WERLICK ISLAND										12
HOTSPUR ISLAND										13
MULE ROCK										14
PERCY POINT										15
SURVEY POINT										16
TAMGAS HARBOR										17
										18
										19
										20
										21
										22
										23
										24
										25
										26

Approved
Chas. E. Harrington
 Staff Geographer
 21 Apr. 1976

HYDROGRAPHIC SURVEY STATISTICS
 HYDROGRAPHIC SURVEY NO. H-9146

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & PNO		1	BOAT SHEETS		2	
DESCRIPTIVE REPORT		1	OVERLAYS		7 8	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES			1			
CAHIERS	1 8					
VOLUMES	3					
BOXES			1			
T-SHEET PRINTS (List)						
T-12451 T-12452						
SPECIAL REPORTS (List)						

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS			TOTALS
	PRE-VERIFICATION	VERIFICATION	REVIEW INSPECTION	
POSITIONS ON SHEET				
POSITIONS CHECKED		3022		
POSITIONS REVISED		22		
DEPTH SOUNDINGS REVISED		60		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		82		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0		
		TIME (MANHOURS)		
Verification of Control		3		
Verification of Positions		86		
Verification of Soundings		345		
Smooth Sheet Compilation		350		
		175		
TOTALS		959	@PMC 19	
PRE-VERIFICATION BY		BEGINNING DATE	ENDING DATE	
VERIFICATION BY	<i>Clarence R. Lehman</i>	BEGINNING DATE	ENDING DATE	
REVIEW BY		5/22/74	12/22/75	
		BEGINNING DATE	ENDING DATE	

Reg. No. _____

The Computer and Excess Sounding Cards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

When the cards have been updated to reflect the final results of the survey the following shall be completed:

CARDS CORRECTED

DATE _____ TIME REQ'D _____ INITIALS _____

REMARKS:

Reg. No. _____

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

MAGNETIC TAPE CORRECTED

DATE _____ TIME REQ'D. _____ INITIALS _____

REMARKS:

VERIFIER'S REPORT

FA-10-8-72-73

H-9146

I. INTRODUCTION

This survey was plotted and verified at the Pacific Marine Center, Seattle, Washington. The items mentioned in this report are referenced by paragraph to the Provisional Hydrographic Manual (Verification Reports) and cross referenced to Form 76-97.

This basic hydrographic survey was initiated by the MCARTHUR in 1970 as H-9184 (MA-70-3-70). In order to expedite processing of this survey, the 1970 data was verified and the smooth sheet submitted in November 1973. The remaining data, by the FAIRWEATHER in 1972 and the DAVIDSON in 1973, was renumbered H-9146, FA-10-8-72. The FAIRWEATHER work in 1972 utilized Raydist for positioning control and the DAVIDSON in 1973 utilized MINI-RANGER. This survey covers the vicinity of Hotspur Island in Felice Strait, Alaska.

The List of Stations submitted in the Descriptive Reports was revised during verification because some stations sometimes had two numbers and sometimes duplicated numbers were used in the work of different years.

II. CONTROL AND SHORELINE

See Sections F and G in the Descriptive Reports for the description of the Horizontal control.

For shoreline information, the following is furnished by the verifier:

A. T-12451 (Class I)

Date of Photo - July 2, 1963
Field Edit - Sept & Oct 1970, ~~Nov 1971~~
Date of Compilation - Nov 22, 1971

B. T-12452 (Class I)

Date of Photo - July 1963 - 1969
Field Edit ~~Mar, Nov~~ & April 1973, ~~July 1974~~
Date of Compilation - ~~Aug 1970~~
~~June 1974~~

C. T-12456 (Class I)

Date of Photo - July 1963
Field Edit - Sept & Oct 1970, ~~Aug 1973~~
Date of Compilation - ~~none~~ Aug. 1973

D. T-12457 (Class I)

Date of Photo - July 1963
Field Edit - Oct & Nov 1970, Mar & April 1973
Final Compilation - Aug 1973

E. T-12458 (Class I)

Date of Photo - July 1969 & 1970
Field Edit - Mar & April 1973, Aug 1973
Final Compilation - June 1974

Unreviewed T-sheets were used on this (H-9146) survey.

III. HYDROGRAPHY (Summary Evaluation)

For surface commercial transport, this survey has adequate coverage. Depth curves beyond the 5 fm curve are well controlled by soundings. Inside the 5 fm curve, around rocks and reefs, islets and islands, and along shoreline, require larger scale coverage to be adequate for the 3, 2, 1 and 0 curves. At the scale of 10,000, this survey is adequate for the compiler.

There is a significant deficiency at Lat. $54^{\circ}58'00''$ ^{57'54''}, Long $131^{\circ}34'09''$, where two rocks are carried forward from H-3781, 1915. This survey (H-9146) does not disprove the existence of these rocks, as they fall between or outside survey lines.

IV. CONDITION OF SURVEY

Smooth sheet, accompanying overlays, hydrographic records and reports are adequate and conform to the requirements, except for locating of rocks. Rock position number 8001 was the only rock located by acceptable means, by check angle from hydro positions. This is the least dangerous method of locating dangers to navigation, and should be followed without any question.

V. JUNCTIONS

North - H-9184 (1970) verified very good
South - H-9331 (1972) not verified 12/1/75
East - H-9370 (1973) not verified 12/1/75
West - H-9330 (1972) verified from copy

The soundings in the junction area to the north (H-9184) are in very good agreement. Quite a few soundings from H-9184 were transferred to this sheet (H-9146) to define the curves clearly. The junction to the south with H-9331 is not accomplished because H-9331 soundings

have not been verified. However, H-9331 uses a tide gage common to both sheets and so should junction well. There is agreement with the unverified field sheet. Junctions on the east side with H-9370 were estimated and there should be very little disagreement, if any. This junction could not be completed because H-9370 soundings are not verified. Junction to the west with H-9330 (1972) has been completed. There is very good agreement between the three sheets at northwest corner and along the west edge of this survey. Several soundings again were transferred from H-9330 to this survey for clarity in defining depth curves.

VI. COMPARISON WITH PRIOR SURVEYS

Survey H-3781 (1 - 20,000) 1915 covers the same general area west of Hotspur Island, and also the southern half of the east side to Latitude $54^{\circ}59'30''$. Survey No. H-3712 (1 - 20,000) 1914 occupies the same area as the north part of this (H-9146) survey, northeast of Hotspur Island. The present survey fills in between the widely spaced lines of the 20,000 scale former surveys and adds some extra shoals. The new survey retains the general depth curve configuration, with some natural variations. Two rocks from H-3781 (1915) are carried forward to this new survey at $54^{\circ}58'00''$, $131^{\circ}34'09''$ and $54^{\circ}57'67''$, $131^{\circ}31'31''$. The hydrography in this area shows lines by-passing these immediate locations. Those areas of H-3712 and H-3781 covered by this survey are superseded with the carrying forward of the rocks previously noted.

The presurvey review items investigated by the field are adequate with the verifier's additions and corrections to the soundings for smooth tides, as noted in the Descriptive Report. The 17 fathom sounding, reference paragraph J(1) of the 1973 Descriptive Report, falls in a closed 20 fathom curve in 30 or more fathoms of water. Another 17 fathom sounding, un-numbered, ^{presurvey} review item at $55^{\circ}01'00''$, $131^{\circ}31'09''$, ~~that~~ falls just outside the limits of this sheet. On the border area of this survey, just opposite the 17 fathoms, at $55^{\circ}00'57''$, $131^{\circ}31'09''$, a 15 fathom sounding is indicated.

VII. COMPARISON WITH CHART (8075, 6th Ed., Jan 12, 1974) Felice Strait, Percy Islands)

- A. A copy or copies of the chart comparison are included at end of this report. Not all the soundings shown on the chart are checked as having been compared. Those that are either showing no change or are shoaler by 1 to 4 fms, or are in several cases deeper. The reason for apparent differences in depth on the chart, to those on the new smooth sheet, are chart sounding selection and of course, to heavier coverage by sounding lines

in present survey. Even so there are two rocks missed by the present survey (see VI = Comparison with Prior Surveys).

- B. Controlling depths are not specifically noted on the chart, as such. Where implied, the 11 fathoms, east of Werlick Island, the shoal sounding of 7 fathoms should be plotted.
- C. There are four fixed aids to navigation on or near this survey sheet. All of these aids are or will appear also on specific sheets bordering on this one:

Ajax Reef Light is on H-9370 (1973)
Point Davison Light, on H-9184 (1970)
Mule RK Light, on H-9184 (1970)
Harrison Island Light, on H-9184 (1970)

These lights are all on or near the junction areas of this survey. Consequently, these aids are all adequately shown.

VIII. COMPLIANCE WITH INSTRUCTIONS

This survey adequately complies with the project instructions.

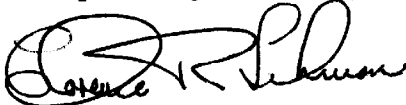
IX. ADDITIONAL FIELD WORK

This is a good survey, and covers the navigational channels used by commercial ships. To establish new lights, a small amount of additional field work may be needed for geodetic positioning only.

X. SUPPLEMENTAL INFORMATION TO THE COMPILER

Very shoal depths curves are sometime incomplete. Since these will probably not be charted anyway because the scale of the charts do not permit showing inshore detail, it may not be important.

Respectfully submitted,

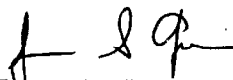


Clarence R. Lehman
Cartographic Technician
December 22, 1975

APPROVAL SHEET

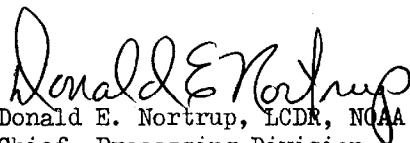
The smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic Manual, except as noted in the Verifier's Report.

Examined and approved,



James S. Green
Supervisory Cartographic Technician

Approved and forwarded,



Donald E. Nortrup, LCDR, NOAA
Chief, Processing Division
Pacific Marine Center



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

Date : 23 January 1976

Reply to Attn. of: CPM 3

To : H. R. Lippold, RADM
Director, Pacific Marine Center

Donald E. Nortrup
From : Donald E. Nortrup, LCDR
Chief, Processing Division

Subject: PMC Hydrographic Survey Inspection Team Report - H-9146

Basic Hydrographic Survey H-9146 of Felice Strait, Alaska was conducted by NOAA Ships FAIRWEATHER, in 1972, and DAVIDSON, in 1973, in compliance with Project Instructions OPR-424-FA-72 and OPR-424-DA-73 respectively. This survey was previously inspected in early January and returned to Verification Branch for further processing. A copy of the previous inspection report is attached. The deficiencies cited in the previous report have been resolved.

Much of the survey area is characterized by a large number of rocks, reefs, and small islands. Examination of these areas has indicated several shoal soundings which should have been further developed during the survey. The more conspicuous of the areas have been identified on a copy of the smooth sheet.

The DAVIDSON portion of this survey was controlled, in part, by MINI-RANGER. This was one of the early applications of MINI-RANGER and, at the time, formal calibration procedures had not been promulgated. As a result, the ship raised questions regarding the procedure and concluded that their efforts at calibration were sufficient to insure proper system operation and adequate positional data. The inspection team concurs in the ship's determination.

The inspection team finds H-9146 to be a good basic survey, adequate for charting purposes, and recommends that it receive final administrative approval.

Attachment

D. E. Nortrup

D. E. Nortrup, LCDR

James R. Seidel

D. R. Seidel, LCDR

John C. Albright

J. C. Albright, LCDR

R. D. Lynn

R. D. Lynn

07 January 1976

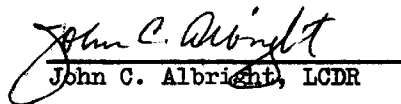
REPORT OF HYDROGRAPHIC INSPECTION TEAM - H-9146

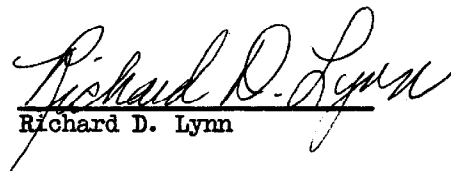
This survey is being returned to verification for further work as follows:

1. At $54^{\circ}57'30''$, $131^{\circ}36'30''$ dashed 90 ftm curve should be made solid.
2. At $54^{\circ}58'50''$, $131^{\circ}35'00''$, an apparently accidentally placed red line should be removed.
3. A large number of rocks are plotted without elevations. Rocks without elevations should be reexamined and elevations applied, if available. (See $54^{\circ}57'40''$, $131^{\circ}35'25''$; $54^{\circ}57'20''$, $131^{\circ}35'05''$; $54^{\circ}57'10''$, $131^{\circ}35'15''$; plus others)
4. At $54^{\circ}58'30''$, $131^{\circ}32'15''$, a very small reef is plotted with a 15 ft elevation. Is this a legitimate reef or a rock?
5. At $54^{\circ}58'55''$, $131^{\circ}37'15''$, a 10.4 ftm sounding should be enclosed by a dashed 10 ftm curve.
6. At $54^{\circ}57'20''$, $131^{\circ}33'50''$, a 5.2 ftm sounding should be enclosed by a dashed 5 ftm curve.
7. At $54^{\circ}58'20''$, $131^{\circ}32'30''$, the 3 ftm curve should be reshaped so as to enclose the nearby rock.
8. At $54^{\circ}58'20''$, $131^{\circ}35'25''$, the 20 ftm curve should be reshaped to enclose what is shown as an isolated 19 ftm sounding.
9. At $54^{\circ}58'30''$, $131^{\circ}28'20''$, the 10 ftm curve should be redrawn based on assumed shoal as opposed to assumed deep.
10. All manuscript transfers should be reexamined for oversights. A number of notes and symbols on T-12456 have not been transferred to the smooth sheet.


Donald E. Nortrup, LCDR


Dean R. Seidel, LCDR



John C. Albright, LCDR


Richard D. Lynn

ADMINISTRATIVE APPROVAL

H-9146

The smooth sheet and reports of this survey have been reviewed
and found to be complete and adequate for charting.


H. R. Lipfield, RIM
Director, Pacific Marine Center


Date

Information for Future Resurvey Reviews

The bottom is considered adequately developed on the present survey for current charting requirements.

Several unsupported shoals that arise on single sounding lines will warrant extra development on future surveys of this area.

<u>Position Index</u>		<u>Change</u>	<u>Use</u>	<u>Resurvey</u>
<u>Latitude</u>	<u>Longitude</u>	<u>Index</u>	<u>Index</u>	<u>Cycle</u>
545	1314	1	1	50 yrs.
545	1313	1	1	50 yrs.
550	1313	2	1	50 yrs.



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

C352

March 15, 1976

TO: A. J. Patrick, Chief
Marine Surveys Division *cl of P*

THRU: Chief, Quality Control Branch

FROM: D. J. Romesburg
Quality Evaluator *Dennis J. Romesburg*

SUBJECT: Quality Control Report for H-9146 (1972-73),
Felice Strait, Vicinity of Percy Islands and
Hotspur Island, Alaska

A quality control inspection of H-9146 has been accomplished to evaluate the accuracy and adequacy of the survey with respect to data acquisition, delineation of the bottom, determination of least depths and navigation hazards, junctions, shoreline transfer, decisions and actions by the verifier, and cartographic presentation of data.

The following deficiencies are noted:

1. Standard depth curves, including the zero depth curve, were not always drawn where possible on the smooth sheet.
2. Ledges, reefs, and rock awash elevations are shown in areas beyond the limits of the hydrography. These features should not be depicted outside the survey area. Refer to section 7.3.7.1 and 7.3.7.5 of the Provisional Manual.
3. Three lights, identified on the photographs and used as control signals, had their names duplicated on the present survey in vertical and slanted letters. The signal number followed by the light name in slanting letters will suffice on the smooth sheet if the aid is not a triangulation station. Refer to Appendix B, Cartographic Codes and Symbols in the Provisional Manual.
4. A rock awash that bares 8 feet at MLLW at latitude 54°57.66', longitude 131°33.7' was added to the smooth sheet from the hydrographic records during quality control inspection. In



addition, several rock elevations also from the hydrographic records were either omitted from or shown incorrectly on the smooth sheet.

5. Elevations for many reefs, islets, and rocks awash were placed in ambiguous locations rather than near the referenced feature as specified in section 7.3.7.5 of the Provisional Manual.

6. The black ink used to depict the reef and ledge symbols is of poor quality and appears to be pencil on the smooth sheet. Pelikan Drawing Ink, Special Shades, 50 Series should be used on the plastic smooth sheets.

7. Some bottom characteristics were entered on the smooth sheet incorrectly. Adjectives were capitalized, the characteristics were positioned so they were difficult to read, and one sample was entered inside the HWL without a leader to indicate its proper position.

8. The junctional 40- and 50-fathom depth curves were not brought into agreement with the curves on H-9330 (1972) on the west. In the overlapping area, the curves should be charted from the present survey.

9. Unnecessary supplemental curves, 60 to 90 fathoms, were added to the present survey. These curves do not significantly improve the delineation of the bottom configuration nor will they be beneficial for charting purposes as the largest scale chart in this area is 1:80,000.

10. Many ledges, rocks awash, rock elevations, islets, and low water line determinations were not transferred to the present survey from the photogrammetric manuscripts.

11. Several junctional soundings used to position depth curves on the northwest were transferred in error from H-9184 (1970) to the present survey. One sounding was in error by 10 fathoms. In addition, a rock awash that bares 7 feet at MLLW was not transferred to the present survey in the junctional area. In this overlapping area, the hydrographic data should be charted from survey H-9184 (1970).

12. The verifier's report did not include a complete discussion of the comparison between the present survey and Charts 8074 and 8075. These comparisons are necessary to supersede the charted hydrography within the common area. Comparisons

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with Charts 8074 12th Ed., dated August 4, 1973, and 8075, 6th Ed., dated January 12, 1974, was accomplished during quality control inspection. Most of the charted hydrography originates with the prior surveys and is thereby superseded. Attention is directed to the 2 3/4 fathoms sounding charted slightly out of position in latitude 55°0.15', longitude 131°31.53' on Chart 8075. This sounding originates with H-3781 (1915) and can be disregarded for charting as it is apparently recorded in error in the field records of the prior survey. Present survey depths adequately portray the bottom configuration in this area.

Except as noted above, the field surveying, smooth plotting, processing, and cartographic presentation of survey data are adequate and conform to the standards of the National Ocean Survey.

