

10010

Diagram No. 8202-3

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey ... Navigable Area Hydrographic...

Field No. FA-10-1-82

Office No. H-10010

LOCALITY

State Alaska

General Locality ... Port Frederick

Locality Burnt Point to the Narrows

1982

CHIEF OF PARTY

CDR W.F. Forster

LIBRARY & ARCHIVES

DATE January 26, 1984

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CHTS:

② 17300 } to sign off see
① 17302 } Record of Application

HYDROGRAPHIC TITLE SHEET

H-10010

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-10-1-82

State AlaskaGeneral locality Port FrederickLocality Burnt Point to The NarrowsScale 1:10,000Date of survey April 12 - May 23, 1982Instructions dated October 14, 1981Project No. OPR-0343-FA-82Vessel NOAA Ship FAIRWEATHER (2020) and Launches 2023, 2024, 2025Chief of party CDR W. F. Forster, Cmdg.Surveyed by ENS A. Francis, ENS R. Pingry, ENS C. Bailey, ENS P. SteeleSoundings taken by echo sounder, hand lead, pole Ross 5000 FinelineGraphic record scaled by Ship's PersonnelGraphic record checked by CDR W. Forster, CST E. Krick

Verified

Reviewed by I. AlmacénAutomated plot by PMC Xynetics Plotter

Evaluation

Verification by K. M. ScottSoundings in fathoms feet at MLW MLLWREMARKS: Revisions and marginal notes in black are by the Evaluator.Notes in red were appended during examination.STANDARDS CK'D 2-1-84C. LoyNOV 15 1982 2/3/82 51✓Misc. data culled from the D.R. are filed with
the survey records.

DESCRIPTIVE REPORT
H-10010 (FA-10-1-82)
OPR-0343-FA-82
Port Frederick, Alaska

A. Project

This hydrographic survey was conducted in accordance with Project Instructions OPR-0343-FA-82, Port Frederick, Alaska, dated 14 October 1981, and Supplements to Instructions: Change Number 1, dated 15 October 1981; Change Number 2, dated 23 November 1981; and, Change Number 3, dated 2 March 1982. The PMC OPORTER, Hydrographic Manual (Fourth Edition) and the Data Requirements Letter, dated 27 April 1981, are also applicable.

B. Area Surveyed

The area covered by this survey includes that portion of Port Frederick, Alaska bordered on the north by latitude $58^{\circ}03'27''N$ and on the south by latitude $57^{\circ}50'46''N$. The eastern and western limits of this survey are those delineated by the shoreline in this area. The general features of this area include Burnt Point (to the north), Neka Bay, North Bight and South Bight (to the west) and The Narrows (to the south). At low water, Seagull Creek mudflats are visible to the east. *SL is only on field sheets, not shown on smooth sheet*

C. Sounding Vessels

Hydrographic Data Acquisition, Bottom Samples, and Diving operations for this survey were conducted using Jensen survey launches 2023, 2024 and 2025. The NOAA Ship FAIRWEATHER (2020) was used for oceanographic casts and deep water bottom samples.

On 5 May 1982 (JD 125), survey launch 2024 experienced a damaged sonar transducer as a result of the launch running aground on a submerged rock. The entire transducer and fairing was replaced and the launch resumed operations. No depth correctors were needed for the new transducer, and no data was lost as a result of the accident. *See Eval Rpt Sect. 1*

D. Sounding Equipment and Corrections to Echo Soundings

All survey launches were equipped with Ross Fineline 5000 narrow beam echo sounders (See Table 1, Sounding Equipment). Phase checks were taken at the beginning and end of each day, when paper was changed and periodically during operations.

Fathometer initial was checked frequently during the day by the operator for correct paper alignment. All data was scanned to compare analog values to corresponding digitized values and to insert peaks and deeps

where they occurred between sounding marks. Depths ranged from -1.5 to 90 fathoms on this survey. On 9 May 1982 (JD 129), analog ^{recorder} 1054 was removed from launch 2023 due to a failure in the calibration mode of the unit, and was replaced by analog ^{recorder} 1047. On 19 May 1982 (JD 139), analog ^{recorder} 1054 was reinstalled into launch 2023 and resumed operations. (For further details, see Corrections to Echo Sounding Report, OPR-0343-FA-82.)

Table 1

Sounding Equipment

<u>Vessel</u>	<u>Instrument</u>	<u>Model</u>	<u>Analog</u>	<u>Digitizer</u>	<u>Inverter</u>	<u>Transducer</u>
2023	Ross Fineline	5000	1047 (JD102) 1054 (JD110-128) 1047 (JD129) 1054 (JD130-137) 1047 (JD138) 1054 (JD139-143)	1054	1046	1047
2024	Ross Fineline	5000	1097	1046	1054	1046
2025	Ross Fineline	5000	1036	1036	1053	1054

There were no faults in the echo sounding equipment affecting the accuracy of soundings. Malfunctions and equipment casualties (See Section C) were dealt with in a timely manner. Velocity of sound was calculated from five deep water Nansen casts taken within the limits of this survey. No velocity correctors were needed for this survey. Table 2, Locations of Nansen Casts, is a listing of Nansen Casts used for determination of correctors. See
Eval. Rpt
Sect. I

Table 2

Locations of Nansen Casts

<u>Date</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Vicinity</u>
9 April	58°03'06"N	135°35'00"W	Grassy Island
9 April	58°06'06"N	135°29'48"W	Neka Bay
4 May	58°03'12"N	135°35'06"W	Grassy Island
7 May	57°59'18"N	135°39'24"W	The Narrows
25 May	58°03'06"N	135°34'54"W	Neka Bay

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, in accordance with Section 4.9.4.2 of the Hydrographic Manual, 4th Edition. ✓

A Ziess 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. Table 3, Restrictive Launch Speeds, is a listing of speeds which each launch could not run hydrography without necessitating a settlement and squat corrector. For further details, see Corrections to Echo Sounding Report, OPR-0343-FA-82. ✓

Table 3

Restrictive Launch Speeds

<u>Launch</u>	<u>Restrictive Speeds</u>
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 01020) and two Complot plotters (S/N 5557-5 and 5848-17). Two main field sheets, FA-10-1N-82 and FA-10-1S-82, both 1:10,000 scale, were plotted showing all mainscheme hydrography, crosslines and critical depths taken from all developments and PSR items. Two main sheets and two development sheets were plotted; see Table 4, Hydrographic Sheets, for details. ✓

PSR #7, a 1:2500 scale development of a 5.5 fathom sounding shown on chart 17302 at position 58°02'15"N, 135°36'00"W. Twenty meter spaced lines were run in this area and a least depth of 4.5 fathoms was discovered (Hydrographic position number 4367). A 6.25 fathom shoal charted at position 58°02'07"N and 135°36'53"W was developed on the PSR #7 development sheet and a least depth of 4.5 fathom was found (Hydrographic position number 4402). A 5 fathom shoal not previously charted was discovered at 58°02'31"N, 135°36'15"W (Hydrographic position number 2895). All of the previously listed shoals appear on PSR #7 development sheet. *Blow-ups were not available in Rockville office* ✓

Development A, a 1:2500 scale blow-up of the entrance to South Bight, was plotted for clarity purposes.

Table 4

Hydrographic Sheets

<u>Field Number</u>	<u>Scale</u>
FA-10-1N-82 ✓	1:10,000 ✓
FA-10-1S-82 ✓	1:10,000
PSR #7	1:2500
Development A	1:2500

F. Control Stations

Horizontal control for the survey was performed by FAIRWEATHER personnel. Conventional traverse and triangulation methods were used throughout the project. Station AGAIN 1982 (S/N 461) was positioned by the A-Point method, Station TP-7 (S/N 467) was located by the One-Direct method. All control was based on the 1927 North American Datum. All field measurements and shipboard calculations were accomplished to third order class I accuracy or better. For further details, see Horizontal Control Report, OPR-0343-FA-82.

The following stations were used in support of this survey:

<u>Station Name</u>	<u>Signal Number</u>
CHIM 1923	243
NECK 1923	250
NECK RM1, 1981 1923, RM	251
GRASS 1981	450
VICKI 1981	452
GRADY 1981	454
NEKA 1981	455
HEAD 1982	456
NORA 1982	457
VIRGIL 1982	458
SOUTH 1982	459
AGAIN 1982 (A-Point)	461
**Seagull Creek Calibration Pole 1982	463
JOOD	464
ISLE 1982	465
*TP-6	466
*TP-7 1982 (One-Direct)	467
PING 1982	468
PASS 1982	469

*Non-monumented Stations

**Offshore control positions

All signals were located within the limits of this survey.

G. Hydrographic Position Control

Hydrographic positioning was controlled by both the Range-Range (R/R) and the Range-Azimuth (R/Az) methods using the Motorola Mini-Ranger III system.

Bottom samples taken using launch 2025 were positioned by either the Range-Range or Range-Azimuth control mode, with a third range or visual check angle. Ship bottom samples were positioned by a combination of visual bearing and sextant fixes, then reformatted to Range-Range mode for plotting purposes. See Appendix E, Abstract of Positions for Electronic Component Serial Numbers for Sounding Vessels, for further details.

Mini-Ranger Baseline Calibrations (BLC) were performed on baselines measured to third order accuracy by a Hewlett-Packard 3808A EDM.

An initial BLC was performed on 3 and 4 March 1982 (JD 63 and 64) in Seattle, Washington to provide initial correctors for all combinations of Mini-Ranger consoles and transponders. A final baseline calibration was performed on 22 May 1982 (JD 142), and all correctors for both BLCs were averaged for applied electronic control correctors (For more details, see Electronic Control Report, OPR-0343-FA-82).

During this survey, all M/R systems worked well until 12 May 1982 (JD 132) when Mini-Ranger transponder code 7 abruptly went off the air. Code 7 was found to have a defective magnetron and was removed from field use for the remainder of the project. Due to the instantaneous failure of the transponder, and the verification of operation by systems checks, all data collected by code 7 prior to 12 May 1982 was acceptable, using the initial BLC corrector values.

H. Shoreline

Shoreline for all field sheets was taken from U.S. Geological Survey (USGS) shoreline manuscripts provided by Rockville.

In numerous areas, shoreline from the USGS manuscript does not coincide with soundings taken in near shore areas. An adjustment to the shoreline has been made based on hydrographic data collected in the field, to more adequately portray the shoreline of this survey. Table 5, Shoreline Discrepancies, is a listing of shoreline displacements with the general area, and the indicated offset. Shoreline adjustments to the final field sheets were made on board the FAIRWEATHER to more accurately depict the shoreline. See Eval. Rpt Sect. 2

Table 5

Shoreline Discrepancies

<u>Position of Discrepancy Between Latitudes/Longitudes</u>	<u>General Vicinity</u>	<u>Offset</u>
57°59'36"N, 135°39'15"W to 58°00'05"N, 135°37'58"W	Along the northern shoreline of The Narrows near station PING.	Shoreline appears offset 20 meters to the south and east.

Table 5, Shoreline Discrepancies (Continued)

<u>Position of Discrepancy Between Latitudes/Longitudes</u>	<u>General Vicinity</u>	<u>Offset</u>
58°00'39"N, 135°37'59"W to 58°01'03"N, 135°37'26"W	Approximately 0.4 mile south of station CHIM along the western shoreline	Shoreline is offset 25 meters to the east. ✓
57°59'47"N, 135°36'30"W	Midway Island	Island is offset 45 meters to the south. ✓
58°02'30"N, 135°40'26"W to 58°02'09"N, 135°39'24"W	North shore of North Bight near station NORA	Shoreline offset 30 meters to south. ✓
58°03'18"N, 135°41'18"W to 58°03'18"N, 135°40'27"W	Along north shore of Neka Bay, 0.5 mile NW of station NEKA	Shoreline offset 30 meters to the south. ✓
58°03'07"N, 135°38'57"W to 58°02'59"N, 135°37'33"W	Along north shore of Neka Bay, at mouth of bay	Shoreline offset 35 meters to south. ✓

Other prominent shoreline features are the large mudflats which extend well offshore from the mouth of Seagull Creek. These mudflats are most prominent between latitudes 58°02'03"N and 57°59'15"N along the easternmost shore of this survey. The most extensive mudflat is located in the general vicinity of horizontal control station GRADY 1981 (S/N 454) and extends approximately 650 meters offshore in a westerly direction. A large mudflat area is also located at the head of Neka Bay. This flat begins in the general vicinity of station TP-7 (S/N 467) and extends westerly to the very head of Neka Bay. Numerous sandbars are also found in this area. ✓

In areas where tidal conditions did not allow mainscheme hydrography to be run into the two fathom curve, shoreline was run to delineate the depth contours. A total of 0.2 nm of shoreline was run on this survey. ✓

I. Crosslines

A total of 20.8 nm of crosslines was run on this survey comprising 8.8% of the total hydrography. All crosslines run on smooth bottoms or in areas where bottom contours did not change rapidly, are in agreement with mainscheme lines meeting the requirements put forth in Section 1.1.2 of the Hydrographic Manual, Fourth Edition.

All apparent crossline/mainscheme discrepancies are caused by slight positional differences where contours were rapidly changing. In all cases, the soundings conform to the shape of the contours in the area. See Table 6, Crossline (XL)/Mainscheme (MS) Discrepancies, for further details.

Table 6

Crossline (XL)/Mainscheme (MS) Discrepancies

<u>Sheet</u>	<u>Lat/Long</u>	<u>Position #</u>	<u>XL or MS</u>	<u>Depths (fathoms)</u>
1S	57°59'19"N	4519 (+1)	XL	16.5 16-XL
	135°37'09"W	2848 (+1)	MS	13.3 13-MS
1S	57°59'57"N	4523 (+2)	XL	30-XL
	135°37'11"W	2786 (+2) 4	MS	27-MS
1N	58°02'58"N	4440 (+3)	XL	51-XL
	135°34'08"W	4140	MS	47-MS
1N	58°01'59"N	4007	XL	32-XL
	135°36'10"W	2167 (+3)	MS	35 34-MS

J. Junctions

This survey junctions to the north with contemporary survey H-9987 (FA-10-5-81) which was run during the 1981 FAIRWEATHER field season. Junction to the south was with contemporary survey H-10013 (FA-10-2-82). The east and west limits of this survey are defined by shoreline.

No discrepancies were found for the junction to the north with survey H-9987 (FA-10-5-81). All line spacings and overlaps meet or exceed the requirements set forth in Section 4.3.4.2 of the Hydrographic Manual.

The junction to the south with H-10013 (FA-10-2-82) was good with one exception. At latitude 57°59'17"N, longitude 135°39'06"W, a sounding of 57 fathoms appears on survey FA-10-1-82 while a sounding of 64 fathoms appears on survey FA-10-2-82. This discrepancy appears on an area of rapidly changing contours and the lack of exact coincidence of soundings explains the discrepancy. No other discrepancies are found and the remainder of the junction meets or exceeds all requirements set forth in Section 4.3.4.2 of the Hydrographic Manual, Fourth Edition.

See
Eval. Rpt
Sect. 6

K. Comparison with Prior Surveys

The only prior survey available for comparison is a 1:20,000 scale survey designated H-4319, done in 1923. Numerous soundings from prior survey H-4319 fall within the limits of this survey. All soundings were checked for depth comparisons and it is apparent that a shoaling of 1-3 fathoms has occurred within certain areas of this contemporary survey. Table 7, Prior Survey Comparisons, is a correlation of depths between prior and contemporary soundings clearly indicating a shoaling trend. Tectonic activity in this area, accompanied by the large amount of sediment inflow from many streams, is a likely cause of this shoaling. *T-4048 & T-4049 of 1923 is source of inshore rks and charted elevations.*

Table 7

Prior Survey Comparisons

Position	Depth	Survey
		Prior - (H-4319) - 1923' Contemporary - (H-10010) - 1982'
57°59'31"N 135°38'01"W	63	Prior
	62	Contemporary
57°59'37"N 135°37'05"W	63	Prior
	60	Contemporary
58°00'20"N 135°36'50"W	55	Prior
	54	Contemporary
58°00'47"N 135°36'41"W	60	Prior
	59	Contemporary
57°59'36"N 135°36'39"W	49	Prior
	48	Contemporary
58°01'54"N 135°35'55"W	64	Prior
	63	Contemporary
58°02'49"N 135°37'34"W	17	Prior
	16	Contemporary
58°01'57"N 135°34'20"W	55	Prior
	53	Contemporary

One Pre-Survey Review item (PSR #7), was located within the limits of this survey. PSR #7, an indicated 5.5 fathom shoal, was found to have a 4.7 fathom peak (detached position #4367). This least depth (see Table 8; Chart Comparisons, for position) should appear on the next edition of chart 17302. A 1:2500 scale development sheet was used to define PSR #7 (See Section E, Table 4, Hydrographic Sheets). *See Eval. Rpt Sect 6*

L. Comparison with Chart

Comparisons were made with chart 17302, 14th edition, 3 October 1981, scale 1:80,000.

A notable discrepancy was discovered with all soundings in North and South Bight west of longitude 135°40'00"W. All charted soundings appear to be approximately 150-200 meters west of and 50 meters north of the H-10010 surveyed position for the corresponding depth of sounding. The position discrepancy appears to be the result of the datum shift of 1927 not being applied to the chart compilation for these Bays. Cartographic license may also have been exercised in the chart compilation to show soundings substantially seaward of their actual position to warn mariners of such hazards in these restricted waters.

A detailed list of charted features on NOS charts, USGS topographic maps and shoreline manuscripts of the area was compiled in Table 8, Chart Comparisons. A brief description of the features investigated, the position and a statement of adequacy or proposed change is included. Significant uncharted or unmapped features are also included for completeness.

Table 8

Chart Comparisons

<u>Position</u>	<u>Feature</u>	<u>Comment</u>
• 57°59'25"N 135°36'18"W Control position #2792	Rock on chart 17302	Rock is adequately charted at the edge of a foul limit. ✓ 1
• 58°00'01"N 135°37'18"W Control position #2770 and	Midway Rks. (Easternmost rk) on chart 17302	Rocks and foul limits are charted adequately. ✓ 2
• 58°00'04"N 135°37'23"W Control position #2771	Midway Rks (Westernmost rk) on chart 17302	Rocks and foul limits are charted adequately. ✓ 3
• 57°59'48"N 135°36'30"W Hydro positioned	Midway Island on chart 17302	Midway Island and limits of shoal areas around the island are charted adequately. ✓ 4
Between Latitudes • 57°59'54"N and 58°01'30"N Hydro positioned by Pos. #3543 marking the seawardmost pt. of the mudflat	Mudflats along eastern limits of survey on chart 17302	Mudflats are adequately charted, but, mention should be made as to the steep slope which preceeds the entrance to the mudflats. <i>(Ch't'd depth curves reflect steep slope)</i> ✓ 5

Table 8, Chart Comparisons (Continued)

Position	Feature	Comment
58°00'03"N 135°37'54"W Hydro positioned by Pos. #7682 marking seaward pt. of ledge	Rocky ledge on chart 17302 <i>Two minus sdgs are shown here on the sm. sheet - pos 3336 & 3683</i>	Adequately charted. <i>No such position number No indication of ledge in raw data. Chart from present survey</i>
58°01'03"N 135°37'10"W Hydro positioned by Pos. #4531 delineating ledge	Rocky ledge on chart 17302 <i>A minus 04 sdg is shown here on the smooth sheet</i>	Adequately charted. <i>No indication of ledge in raw data. Chart from present survey.</i>
58°01'24"N 135°36'40"W Triangulation and Hydro positioned	Chimney Rock on chart 17302 <i>recommend charting an elevation if available</i>	Adequately charted. ✓
58°01'32"N 135°36'39"W Control position - Hydro D.P. #2405	Rock due north of Chimney Rock on chart 17302 <i>charted rock (X) represents the northern limit of ledge shown on the smooth sheet</i>	Adequately charted. <i>No rock indicated, but northern limit of ledge defined Chart from present survey</i>
58°01'24"N 135°37'00"W Hydro positioned by Pos. 's 3303-3308 delineating ledge	Rock ledge west of Chimney Rock on chart 17302	Adequately charted. ✓ <i>Extends east Chart from present survey</i>
58°01'24"N 135°36'50"W Hydro positioned by Pos. 3159 (Sounding on sand bar)	.75 fathom sounding between Chimney Rock & ledge on headland to west on chart 17302 <i>bottom characteristic is not shown on S.S.</i>	This sounding should be removed from charts as <i>concur</i> a sand bar now prohibits passage through this <i>-ol sdg is plotted here on the smooth sheet</i> area at MLLW.
58°01'33"N 135°39'24"W Hydro positioned and verified by Pos. #6817 marking mid-channel entrance to South Bight	3.75 fathom sounding at entrance to South Bight area on chart 17302	This sounding should be changed to 1.5 fathom to more adequately depict the entrance into South Bight. ✓
58°01'34"N 135°39'05"W Hydro positioned - Pos. #3676(+1)	Rock at limit of ledge area at entrance to South Bight not charted	<i>reef</i> A rock symbol should be placed here to warn the mariner of such hazard. ✓

Table 8, Chart Comparisons (Continued)

Position	Feature	Comment
<ul style="list-style-type: none"> 58°02'16"N 135°40'28"W Hydro positioned - Pos. #6101(+5.5) 	<ul style="list-style-type: none"> 4.5 ⁵ fathom shoal at head of North Bight not charted 	<ul style="list-style-type: none"> If scale of new chart allows, this feature should be indicated. <i>Chart from present survey.</i> ok 14
<ul style="list-style-type: none"> 58°02'00"N 135°39'46.5"W Control position #6891 	<ul style="list-style-type: none"> 0.2 fathom rocky peak in North Bight discovered, not charted 	<ul style="list-style-type: none"> This feature is significantly offshore and is a hazard to navigation. concur 15
<ul style="list-style-type: none"> 58°01'52.6"N 135°38'42.0"W Visually observed at low water while conducting hydro operations 	<ul style="list-style-type: none"> Rock symbol on chart 17302 <i>No charted rock here, a subm. rock is charted in lat 58°01'47"N, long 135°38'11"W. chrt the reef shown on the present survey as a rock awash uncov 1 ft at MLLW</i> 	<ul style="list-style-type: none"> Rock well past 2 fathom curve into shore, suggest removal from chart. <i>Continue to chart from current survey.</i> 16
<ul style="list-style-type: none"> 58°01'52.5"N 135°38'42.0"W Hydro positioned - Pos #6768(+2.3) 	<ul style="list-style-type: none"> 4.0 fathom shoal discovered 	<ul style="list-style-type: none"> If scale of new chart allows, this shoal should be indicated. <i>Chart from present survey.</i> 17
<ul style="list-style-type: none"> 58°01'15.0"N 135°38'32.5"W Position control #3473 	<ul style="list-style-type: none"> Submerged reef at 0.7 fathom below surface 	<ul style="list-style-type: none"> This feature is due west of the charted rock awash symbol by approximately 300 meters, and, therefore, should be separately labeled on the chart as a reef awash. <i>Chart from present survey. OK</i> 18
<ul style="list-style-type: none"> 58°01'46.4"N 135°38'15.7"W Position control #6453 	<ul style="list-style-type: none"> <i>charted</i> Reef awash indicated between Neka Island and station HEAD 	<ul style="list-style-type: none"> Peak redefined as <i>uncov 1' MLLW</i>. 1.3 fathoms. Reef should be changed to reef that <i>uncover</i> bare at MLLW. 19
<ul style="list-style-type: none"> 58°02'06"N 135°38'39"W Hydro verified by Pos. #6465, mid-channel sounding in this vicinity 	<ul style="list-style-type: none"> 3.25 fathom sounding between Neka Island and headland to west on chart 17302 	<ul style="list-style-type: none"> This sounding should be changed to 2.8 fathoms as to more accurately depict the shallow channel at this location. concur 20
<ul style="list-style-type: none"> 58°02'05.7"N 135°38'35.3"W Position control #6455 	<ul style="list-style-type: none"> Submerged rock between Neka Island and headland to west, depth 0.2 fm 	<ul style="list-style-type: none"> Rock is mid-channel and appears to be seawardmost point of ledge extending from headland. concur 21

Table 8, Chart Comparisons (Continued)

<u>Position</u>	<u>Feature</u>	<u>Comment</u>
✓ 58°02'18"N 135°40'14"W Position control #3201	Mooring log in North Bight, not charted	A 20-meter log moored to the bottom by a chain attached in the center of the log, <i>concur</i> 22 add to chart.
✓ 58°02'42"N 135°39'03"W Position control #3189	Easternmost mooring buoy in Neka Bay on chart 17302	Buoy is approximately 3 meters in diameter, made of steel, white in color. <i>Chart from present survey.</i> 23
✓ 58°02'48"N 135°39'13"W Position control #3190	Westernmost mooring buoy in Neka Bay on chart 17302	Buoy is approximately 3 meters in diameter, made of steel, white in color. <i>Chart from present survey.</i> 24
✓ 58°02'54"N 135°38'36"W Hydro disproved	Easternmost mooring buoy on chart 17302 nearest north shore of Neka Bay	Unable to locate by hydrography and low water visual search, recommend removal <i>concur</i> 25 from chart 17302.
✓ 58°03'13"N 135°41'36"W Hydro positioned by Pos. #6588, sounding in general vicinity of sounding	2.25 fathom soundings at head of Neka Bay on chart 17302	Soundings should be changed to 1.5 fm to more accurately depict area. Numerous sand bars are present in this area. <i>Chart from present survey.</i> 26
✓ 58°03'06"N 135°41'00"W Hydro verified by Pos. #6698, rock inshore of this position	Rock at head of Neka Bay on chart 17302 <i>↑ Restore</i>	Rock's position is 30 meters shoreward of the 0 fm curve, suggest removal from chart 17302. <i>Continue charting from H-4319</i> 27
✓ 58°01'59"N 135°37'45"W Hydro positioned Pos. #3128 (+2.25)	3.75 fathom sounding just east of Neka Island on chart 17302	Sounding should be changed to 4.5 fathoms to more accurately depict peak of shoal area. <i>concur</i> 28
✓ 58°01'42"N 135°37'40"W Hydro positioned Pos. #3705 (+2.5)	9 fathom sounding just east of entrance to Bight area on chart 17302	Sounding should be changed to 7 fathoms to more accurately depict peak of shoal area. 29
✓ 58°02'07"N 135°36'53"W Position control #4402	6.25 fathom shoal just east of Neka Island on chart 17302	Sounding should be changed to 4.5 fathoms to more accurately depict peak of shoal area. <i>ok</i> 30

Table 8, Chart Comparisons (Continued)

Position	Feature	Comment
58°02'15"N 135°36'00"W Position control #4367 433803	5.5 fathom shoal east of Neka Island on chart 17302 (PSR #7)	Sounding should be changed to 4.3 fm to more accurately depict peak of shoal area. <i>See Eval Rpt Sect. 6 31</i>
58°02'31"N 135°36'15"W Position control #2895	5 fathom shoal discovered not on chart 17302	Shoal should be added. <i>ok</i> Presently not shown on existing charts. <i>32</i>
58°03'02.8"N 135°37'18.4"W #2342	<i>awash</i> Rock symbol on chart 17302	Adequately charted. <i>ok</i>
58°03'15"N 135°40'12"W Hydro verified by Pos. #6552, last position of hydro line, visually confirmed at low water	Submerged rock symbol on north shore of Neka Bay on chart 17302 <i>A ledge extending from shore to the point of the charted rock should be charted.</i> <i>9ps</i>	<i>Left as submerged</i> Rock is seawardmost point of a rocky ledge and should be charted. <i>ok</i> <i>Rocky point noted in raw records not rock or submerged rock.</i> <i>Chart as portrayed on SSS (nothing portrayed on S.S. except sdps)</i> <i>Do not concur</i> <i>9ps</i>
58°02'48"N 135°33'33"W Hydro verified by Pos. #3118(+1)	8 fathom sounding between Grassy Island and Burnt Point on chart 17302	A 5.5 fm shoal extends 150 meters NNW from Burnt Point and is more extensive than is indicated on the chart. A change from 8 to 5.5 fm sounding here would more accurately depict this area and warn the mariner to such a hazard. <i>Chart from present survey</i>
<i>715</i> 58°03'28"N 135°32'43"W Position control #4437	<i>awash</i> Rock symbol on chart 17302 NNW of Grassy Island Rock	This rock is adequately charted. Note: When the detached position for the rock was taken, a check fix was inadvertently misread and not found until hydro ceased. Hydrography and the unchecked position substantiate the position of the rock adequately. <i>35</i>
<i>The high point of a ledge connected to shore (rock uncovers 15 ft at MLLW) is shown on H-9987 (1981) in lat. 58°03.41'N, long. 135°32.65'W. It was transferred to the present survey in violet during verification. The hydrographer took a D.P. on a subm. rock (pos. 4437) 25 meters S.W. of the high point of the ledge. This rock cov. 1.5 fms at MLLW is shown on the smooth sheet. The rock awash ch'd from H-4319 (1923) should be repositioned as shown on H-9987(1981).</i> <i>9ps</i>		

All soundings, (Chart Comparisons and Discrepancies) were checked and met the limits of accuracy set forth by the Hydrography Manual, *4th Edition, Section's 1.1 through 1.12.

*A copy of a radio message to the USCG on dangers to navigation is included and the dangers discussed with a recommendation for charting.

M. Adequacy of Survey

with exceptions noted in the Examination Report,
This survey is adequate to supersede all prior surveys for charting. As was mentioned previously, the shoreline is in question over extensive areas. Controlled shoreline photography is recommended for future charts of this area. *concur*

N. Aids to Navigation

No aids to navigation are located within the limits of this survey. A permanent marker should be erected on the easternmost rock of Midway Rocks. The present logging and fishing traffic utilizing this area, plus the fact that these rocks are completely submerged at high to moderate tides, make a navigational aid useful while transiting the narrow channel which runs between Midway Island and Midway Rocks. *concur*

O. Statistics

	<u>2020</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>Totals</u>
Positions	-	1414	612	677	2703
Nautical Miles	-	130.8	74.4	42.7	247.9
Square Miles	-	15.5	10.5	8.6	34.6
Bottom Samples	12	-	-	48	60

No magnetic or current stations were performed within the limits of this survey. Tide stations 945-2441 (Hoonah Harbor) and 945-2484 (Salt Lake Bay) were both used for tide control on this survey. For further details, see Appendix B, Field Tide Note, OPR-0343-FA-82, for this survey. Five oceanographic casts for sound velocity determination were done within the limits of this survey. These positions are listed in Table 2, Locations of Nansen Casts, Section D, of this report.

P. Miscellaneous

Harbor of Refuge: NEKA BAY, located at the northwest limits of this survey is an excellent harbor of refuge from winds and waves from all directions except the southeast. The bay is void of significant natural hazards and the bottom has good holding qualities. Two large mooring buoys are located inside the bay and care should be taken to avoid these buoys when entering the Bay in limited visibility. The shoreline relief of Neka Bay provides for good radar navigation into this area in limited visibility. *This is already noted as such in the Coast Pilot Report.*

The entrance to North Bight is marked by numerous shoals and reefs and care should be taken while transiting into this area. The entrance into South Bight is a very narrow channel which is complicated by a strong current at times other than slack water. Transit into this area should be done as close to slack water as possible and should be limited to small, maneuverable craft. A memo, Current Anomalies, Port Frederick, Alaska, dated 4 June 1982, is appended to this section as reference. Memos also

appended to this section are: NOAA Chart User Evaluation, dated 7 June 1982, and a letter to Capt. Harold K. Elsensohn, President of Southeastern Alaska Pilots Association concerning available copies of contemporary surveys in Port Frederick, Alaska. ✓


• Q. Recommendations

Surveys warrant a chart inset of The Narrows area be made to assist navigation through this restricted area. (See letter dated 7 June 1982, NOAA Chart User Evaluation, submitted with report.) Controlled shoreline photography will be necessary for accurate shoreline compilation of charts with scale larger than 1:80,000 as is currently used on 17302. *concur* ✓



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA Ship FAIRWEATHER S220

CPM220/WFF:acm/A-02

DATE : June 7, 1982
TO : OA/C32 - Chief, Marine Chart Division
TRHU : OA/CPM - Director, Pacific Marine Center
FROM :  OA/CPM220 - Commanding Officer
NOAA Ship FAIRWEATHER S220

SUBJECT: NOAA Chart User Evaluation

Several local persons were interviewed by FAIRWEATHER personnel and questioned as to their opinion on the adequacy and usability of existing NOAA charts. Their comments concerning the Port Frederick chart were favorable; however, all agreed that a larger scale chart of Port Frederick and especially Hoonah Harbor would be preferred by local mariners.

An active logging industry operating in the headwaters of Port Frederick often requires the passage of larger vessels through the restriction known as The Narrows. An analysis of the hydrography completed on this survey reveals the most critical section of the pass to lie between Midway Island and Midway Rocks. A vessel splitting the distance between Midway Island and Midway Rocks would encounter a least depth of 34 fathoms.

This Command recommends that a 1:20,000 scale insert of The Narrows be included on the next edition of chart 17302. A proposed area of coverage is indicated on the enclosed chartlet.

A list of names and addresses of those local persons interviewed is also attached.



Local Information

George Dalton Jr.

Resident, 10 years

Box 175
Hoonah, Alaska 99829

Paul Dybdahle

Hoonah Harbor Master

Resident 10 years
General Delivery
Hoonah, Alaska 99829

Walter Jewell

Fisherman

In area 40 years
General Delivery
Hoonah, Alaska 99829

Gary Miner

Student, Eight Fathom Bight

Resident 3 years
General Delivery
Hoonah, Alaska 99829

Melinda Moore

Teacher, Eight Fathom Bight

General Delivery
Hoonah, Alaska 99829

Miles Murphy

Mayor of Hoonah

Lifetime Resident
City Hall
Hoonah, Alaska 99829

Ken Wicks

Teacher

Resident 10 years
P.O. Box 181
Hoonah, Alaska 99829



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

CPM220/WFF:rmw/A-17

10 June 1982

Captain H. R. Elsensohn
Southeastern Alaska Pilot Association
P.O. Box 6100
Ketchikan, Alaska 99901

Dear Captain Elsensohn:

The FAIRWEATHER has completed a Navigable Area Survey of Port Frederick as of 24 May 1982. The surveys will be forwarded to the Director, Pacific Marine Center, 1801 Fairview Avenue East, Seattle, Washington 98102, according to the following time table. By this letter, the FAIRWEATHER is requesting the Marine Center to copy these surveys and forward them for your information.

<u>Survey Number</u>	<u>Title of Survey</u>	<u>Scale</u>	<u>Date Forwarded to Pacific Marine Center</u>
H-9987	Hoonah Harbor and Approaches	1:10,000	1 December 1981
H-9990	Approaches to Port Frederick	1:10,000	12 June 1982
H-10010	Burnt Point to the Narrows	1:10,000	1 July 1982
H-10013	The Narrows to Portage	1:10,000	1 July 1982

The copies of H-9987, H-9990, H-10010 and H-10013 will bear the usual cautionary note "Advanced Information, subject to office review". The soundings on these sheets are based on predicted tides with the application of real tide correctors applied after office review.

Thank you for responding to our initial inquiry to mariners prior to the survey of Port Frederick.

Sincerely,

Walter F. Forster
Commander, NOAA
Commanding Officer

cc: Director, Pacific Marine Center



SUBMITTED BY:

Arthur E. Francis

ARTHUR E FRANCIS
ENS, NOAA

APPROVED BY:

Walter F. Forster II

WALTER F FORSTER II
CDR, NOAA
COMMANDING

001 OPR-0343-FA-82
002 PORT FREDERICK, AK SIGNAL LIST
003
004 ~~SCRAGGY 1923~~ 581352 1923
005 ~~190 0 58 10 28805 135 28 16165 250 0009 000000~~
006
007 ~~SCRAGGY GAL POLE~~ 581352 FAIRWEATHER 1982
008 ~~191 3 58 10 24571 135 28 13628 243 0000 000000~~
009
010 ~~SEENEY 1982~~ 581353 FAIRWEATHER 1982
011 ~~193 3 58 11 03200 135 31 04730 250 0009 000000~~
012
013 ~~HOGNAN 1982~~ 581352 FAIRWEATHER 1982
014 ~~194 4 58 11 01132 135 29 32520 250 0008 000000~~
015
016 ~~DAY 1922~~ 581352 1922
017 ~~195 3 58 16 12134 135 20 29222 250 0008 000000~~
018
019 ~~GUILL 2 1922~~ 581351 1922
020 ~~196 3 58 10 47069 135 15 25244 250 0008 000000~~
021
022 ~~THE SISTERS LIGHT 1959~~ 581351 1959
023 ~~197 0 58 10 47243 135 15 03497 139 0008 000000~~
024
025 ~~BUT 2 1923~~ 581352 1923
026 ~~200 3 58 09 00122 135 29 24716 250 0007 000000~~
027
028 ~~MESSY 1981~~ 581353 FAIRWEATHER 1981
029 ~~205 3 58 08 27817 135 31 08160 250 0006 000000~~
030
031 ~~PORT 1923~~ 581353 1923
032 ~~210 0 58 07 15173 135 31 11242 250 0007 000000~~
033
034 ~~HUMP 1923~~ 581353 1923
035 ~~220 0 58 06 04924 135 32 10627 250 0006 000000~~
036
037 ~~GAL POLE 1 1981~~ 581353 FAIRWEATHER 1981
038 ~~230 0 58 05 06145 135 33 54982 243 0000 000000~~
039
040 ~~TF1 1981~~ 581353 FAIRWEATHER 1981
041 ~~240 0 58 04 08122 135 35 34010 243 0004 000000~~
042
043 ~~TF1 ECC 1981~~ 581353 FAIRWEATHER 1981
044 ~~241 5 58 04 08441 135 35 34472 254 0004 000000~~
045
046 CHIM 1923 581353 1923
047 243 3 58 01 24583 135 36 36240 250 0002 000000
048
049 NECK 1923 581353²⁵⁰ 1923
050 250 0 58 03 16677 135 36 29915 ¹³⁷ 0000 000000
051
052 NECK RM 1981 581353 FAIRWEATHER 1981
053 251 5 58 03 16640 135 36 29929 ²⁵⁰ 0002 000000
054
055 ~~INNER POINT SOPHIA LIGHT~~ 581352 FAIRWEATHER 1981
056 ~~266 4 58 07 56664 135 27 48532 250 0009 000000~~
057
058 ~~SOPHIA 2 1923~~ 581352 1923
059 ~~262 7 58 05 35144 135 23 47230 250 0011 000000~~

060
 061 ~~INNER 2 1981~~ 581352 FAIRWEATHER 1981
 062 ~~265 4 58 07 56634 135 27 48505 250 0007 000000~~
 063
 064 ~~FERRY 1981~~ 581352 FAIRWEATHER 1981
 065 ~~270 4 58 07 01634 135 27 19565 250 0008 000000~~
 066
 067 ~~HOONAH CHURCH~~
 068 ~~HIGHER CROSS 1981~~ 581352 FAIRWEATHER 1981
 069 ~~280 2 58 06 47564 135 26 45670 139 0045 000000~~
 070
 071 ~~CHURCH CROSS~~
 072 ~~WITH BELL 1981~~ 581352 FAIRWEATHER 1981
 073 ~~285 2 58 06 34453 135 26 38457 139 0045 000000~~
 074
 075 ~~WIND SOCK 1981~~ 581352 FAIRWEATHER 1981
 076 ~~290 3 58 06 46163 135 26 51920 139 0002 000000~~
 077
 078 ~~RADIO TOWER 1981~~ 581352 FAIRWEATHER 1981
 079 ~~300 2 58 06 31502 135 26 36456 139 0055 000000~~
 080
 081 ~~PITT 1981~~ 581352 FAIRWEATHER 1981
 082 ~~320 7 58 06 36960 135 27 46310 139 0004 000000~~
 083
 084 ~~PITT FM2 1981~~ 581352 FAIRWEATHER 1981
 085 ~~322 5 58 06 36742 135 27 16565 250 0004 000000~~
 086
 087 ~~LEDGE 1981 (SEXTANT)~~ 581352 FAIRWEATHER 1981
 088 ~~330 6 58 06 35355 135 27 07820 243 0001 000000~~
 089
 090 ~~HOONAH BKWATER LT 2 1981~~ 581352 FAIRWEATHER 1981
 091 ~~340 2 58 06 31955 135 26 54651 139 0009 000000~~
 092
 093 ~~HOONAH BKWATER LT 3 1981~~ 581352 FAIRWEATHER 1981
 094 ~~350 3 58 06 26575 135 26 48881 139 0009 000000~~
 095
 096 ~~GAL POLE 3 1981~~ 581352 FAIRWEATHER 1981
 097 ~~360 3 58 06 23693 135 26 42029 243 0000 000000~~
 098
 099 ~~GAME 3 1981~~ 581352 FAIRWEATHER 1981
 100 ~~420 7 55 05 19709 135 29 39142 250 0004 000000~~
 101
 102 ~~GAL POLE 2 1981~~ 581353 FAIRWEATHER 1981
 103 ~~430 7 58 05 00523 135 30 00348 243 0000 000000~~
 104
 105 ~~FRED 2 1923~~ 581353 1923
 106 ~~440 5 58 03 45528 135 32 34015 250 0006 000000~~
 107
 108 ~~GRASS 1981~~ 581353 FAIRWEATHER 1981
 109 ~~450 7 58 02 53523 135 33 46677 250 0011 000000~~
 110
 111 ~~VICKI 1981~~ 581353 FAIRWEATHER 1981
 112 ~~452 4 58 00 24112 135 34 27864 250 0003 000000~~
 113
 114 ~~GRADY 1981~~ 581353 FAIRWEATHER 1981
 115 ~~454 4 58 00 51395 135 33 55399 250 0003 000000~~
 116
 117 ~~NERA 1981~~ 581353 FAIRWEATHER 1981
 118 ~~455 5 58 02 59020 135 40 06543 250 0004 000000~~

119
 120 HEAD 1982 581353 FAIRWEATHER 1982
 121 456 7 58 01 33284 135 38 26907 250 0007 000000
 122
 123 NORA 1982 581353 FAIRWEATHER 1982
 124 457 2 58 02 23911 135 40 07654 250 0005 000000
 125
 126 VIRGIL 1982 581353 FAIRWEATHER 1982
 127 458 5 58 02 30876 135 41 21247 250 0005 000000
 128
 129 SOUTH 1982 581353 FAIRWEATHER 1982
 130 459 5 58 01 31725 135 39 29010 250 0009 000000
 131
 132 ~~RED 1981~~ 581352 FAIRWEATHER 1981
 133 ~~460 0 58 06 31968 135 26 54622 250 0008 000000~~
 134
 135 AGAIN 1982 581353 FAIRWEATHER 1982
 136 461 6 58 01 48293 135 41 39210 250 0005 000000
 137
 138 ~~SOUTH RM2 1982~~ 581353 FAIRWEATHER 1982 ✓
 139 ~~462 5 58 01 31455 135 39 28806 250 0009 000000~~
 140
 141 SEAGULL CREEK CAL POL 1982 581353 FAIRWEATHER 1982
 142 463 4 58 01 21069 135 34 14248 250 0001 000000
 143 243
 144 JOOD 1982 581353 FAIRWEATHER 1982
 145 464 6 58 01 55292 135 39 48344 250 0003 000000
 146 139
 147 ISLE 1982 581353 FAIRWEATHER 1982
 148 465 1 58 01 58492 135 38 08234 250 0006 000000
 149 139
 150 TP6 1982 581353 FAIRWEATHER 1982
 151 466 1 58 03 17754 135 40 13171 250 0005 000000
 152 254
 153 TP7 1982 581353 FAIRWEATHER 1982
 154 467 1 58 03 19869 135 41 20230 250 0007 000000
 155 254
 156 PING 1982 571354 FAIRWEATHER 1982
 157 468 1 57 59 43201 135 38 16250 250 0001 000000
 158
 159 PASS 1982 571354 FAIRWEATHER 1982
 160 469 6 57 59 13359 135 38 13706 250 0004 000000
 161
 162 ~~SUNNY 1982~~ 571354 FAIRWEATHER 1982
 163 ~~470 2 57 59 29422 135 41 02600 250 0004 000000~~
 164
 165 ~~FOR 1923~~ 571354 1923
 166 ~~471 6 57 58 53008 135 42 07719 250 0007 000000~~ Stet
 167
 168 ~~EIGHT 1982~~ 571354 FAIRWEATHER 1982
 169 ~~472 2 57 59 54876 135 42 38068 250 0006 000000~~
 170
 171 ~~OLGA 1982~~ 571354 FAIRWEATHER 1982
 172 ~~473 6 57 59 25541 135 44 21164 250 0004 000000~~
 173
 174 ~~FATHOM 1982~~ 581353 FAIRWEATHER 1982
 175 ~~474 0 58 00 05899 135 44 37996 250 0003 000000~~
 176
 177 ~~SILVER 1982~~ 571354 FAIRWEATHER 1982
 178 ~~475 4 57 58 34984 135 38 55647 250 0004 000000~~

Replaces C&GS Form 567.

NON-FLOATING AIDS OR LANDMARKS FOR CHARTS

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

ORIGINATING ACTIVITY

- ☒ HYDROGRAPHIC PARTY
☐ GEODETIC PARTY
☐ PHOTO FIELD PARTY
☐ COMPILATION ACTIVITY
☐ FINAL REVIEWER
☐ QUALITY CONTROL & REVIEW GRP.
☐ COAST PILOT BRANCH
- (See reverse for responsible personnel)

- ☒ TO BE CHARTED
☐ TO BE REVISED
☐ TO BE DELETED

REPORTING UNIT
(If field party, ship or office)
FAIRWEATHERSTATE
AlaskaLOCALITY
Port FrederickDATE
6-9-82The following objects HAVE ☒ HAVE NOT ☐ been inspected from seaward to determine their value as landmarks.

JOB NUMBER

SURVEY NUMBER

DATUM

OPR PROJECT NO.

FA-10-1-82

1927 North American Datum

METHOD AND DATE OF LOCATION
(See instructions on reverse side)CHARTS
AFFECTEDCHARTING
NAMEDESCRIPTION
(Record reason for deletion of landmark or aid to navigation.
Show triangulation station name, where applicable, in parentheses.)POSITION
LATITUDE
° / ' " D.M. Meters
LONGITUDE
° / ' " D.P. Meters

OFFICE

FIELD

Grassy
IslandSmall grass-covered island, gently
sloping to southeast, surrounded by
rocky shoal (GRASS 1981)

58°02'53.523"

135°33'46.677"

F-L-1-6

17302

Chimney
RockFree-standing rock column
approximately 50 feet in height
(CHIM 1923)

58°01'24.583"

135°36'36.240"

F-L-1-6

17302

See L-153(84)

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	Ens. A. F. Francis
POSITIONS DETERMINED AND/OR VERIFIED	<i>[Signature]</i> CDR. W.F. Forster
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>OFFICE</p> <p>I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75</p> <p>FIELD</p> <p>I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 5 - Field Identified 6 - Theodolite 7 - Planetable 8 - Sextant</p> <p>A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75</p> <p>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</p> </div> <div style="width: 45%;"> <p>INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.)</p> <p>FIELD (Cont'd)</p> <p>B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982</p> <p>II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75</p> <p>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75</p> <p>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</p> </div> </div>	
<p>ORIGINATOR</p> <p><input type="checkbox"/> PHOTO FIELD PARTY</p> <p><input checked="" type="checkbox"/> HYDROGRAPHIC PARTY</p> <p><input type="checkbox"/> GEODETIC PARTY</p> <p><input type="checkbox"/> OTHER (Specify)</p> <p>FIELD ACTIVITY REPRESENTATIVE</p> <p>OFFICE ACTIVITY REPRESENTATIVE</p> <p><input type="checkbox"/> REVIEWER</p> <p><input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE</p>	

NMC DE WTEB

T

RTTUZYUW RUWNTEB0039 140200Z-UUUU--RUWNSUU.

ZNR UUUUU

R 202303Z MAY 82

FM NOAA'S FAIRWEATHER

TO CCGDSEVENTEEN JUNEAU AK

INFO NOAACPM SEATTLE WA

CM GRVC

BT

UNCLAS

PMC-023-FA

NOAACPM PLEASE PASS TO NOAA OA/C35 ROCKVILLE MD.

THE FOLLOWING DANGERS TO NAVIGATION HAVE BEEN LOCATED DURING HYDROGRAPHIC SURVEY OPERATIONS IN PORT FREDERICK AND ARE SUBMITTED FOR INCLUSION IN THE LOCAL NOTICE TO MARINERS:

REF CHART 17302

1. A 0.8 FATHOM SHOAL 0.3 NM NNW OF HOONAH ISLAND AT 58-11-39N, 135-30-00W.

2. A 2.4 FATHOM SHOAL 1.2 NM NW OF HOONAH ISLAND AT 58-11-53N, 135-31-54W.

3. A 2.6 FATHOM SHOAL 0.4 NM SE OF HOONAH ISLAND AT 58-10-41N, 135-23-53W, PREVIOUSLY CHARTED ON NOS 17302 AS A 5 FATHOM POSITION APPROXIMATE SHOAL.

4. A 1.1 FATHOM SHOAL 0.4 NM ESE OF CRIST POINT AT 58-39-59N, 135-23-58W, PREVIOUSLY CHARTED ON NOS 17302 AS A 1.8 FATHOM SHOAL.

5. PINTA ROCK CHANGED TO ROCK AWASH AT CHARTED POSITION 58-39-56N, 135-27-15W. BOUY POSITION IS CORRECT AS CHARTED.

6. A 4.8 FATHOM SHOAL 0.75 NM NNE OF PINTA ROCK AT 58-10-42N, 135-26-14W, PREVIOUSLY CHARTED ON NOS 17302 AT 7.0 FATHOMS.

7. A 2.2 FATHOM SHOAL 0.14 NM SOUTH OF SCRAGGY ISLAND AT 58-10-23.1N, 135-28-15.5W.

8. A 1.5 FATHOM SHOAL 0.16 NM EAST OF HALIBUT ISLAND AT 58-09-06N, 135-29-02.5W.

9. A ROCK AWASH 0.25 NM SSW OF NEKA ISLAND AT 58-01-49.5N, 135-33-32.8W.

10. A 90 FOOT LONG MOORING LOG ANCHORED TO THE BOTTOM IN NORTH BIGHT AT 53-02-18N, 135-40-13W.

11. A 1.1 FATHOM SHOAL 0.1 NM EAST OF NEKA ISLAND AT 58-32-32N, 135-37-43W.

12. A REVISED LEAST DEPTH OF 4.4 FATHOMS ON THE CHARTED SHOAL AT 53-02-14N, 135-36-02W.

13. DELETE CHARTED MOORING BOUY AT 58-02-54N, 135-38-32W.

14. SUBMERGED ROCK AT 58-01-46.3N, 135-33-14.5W CHANGED TO ROCK AWASH.

15. ROCK AWASH IN ENTRANCE CHANNEL TO SOUTHERN PORTION OF SALT LAKE BAY AT 57-57-27N, 135-39-12W.

16. CANCEL LNM ITEM VII, 20 APRIL 1982. SURVEY MARKER AT 58-01-20N, 135-34-03W, REMOVED.

BT

#0039


CO
XO
FOO

NMC | TOD
210042 MAY 82
M' | 4228



U.S. DEPARTMENT OF COMMERCE **703**
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA Ship FAIRWEATHER S220

CPM220/WFF:acm/A-01

DATE : June 4, 1982
TO : OA/C2 - Director, Office of Oceanography
THRU : OA/CPM - Director, Pacific Marine Center
FROM :  OA/CPM220 - Commanding Officer
NOAA Ship FAIRWEATHER S220
SUBJECT: Current Anomalies, Port Frederick, Alaska

Although significant tide related currents were found to exist at the restricted entrances of South Bight and Salt Chuck Bays, no anomalous currents that affect safe navigation were discovered within Port Frederick.

Interviews with several local persons confirmed that no current anomalies existed in the area. A list of those persons interviewed by FAIRWEATHER personnel is attached.



Local Information

George Dalton Jr.

Resident, 10 years

Box 175

Hoonah, Alaska 99829

Paul Dybdahle

Hoonah Harbor Master

Resident 10 years

General Delivery

Hoonah, Alaska 99829

Walter Jewell

Fisherman

In area 40 years

General Delivery

Hoonah, Alaska 99829

Gary Miner

Student, Eight Fathom Bight

Resident 3 years

• General Delivery

• Hoonah, Alaska 99829

Melinda Moore

Teacher, Eight Fathom Bight

General Delivery

Hoonah, Alaska 99829

Miles Murphy

Mayor of Hoonah

Lifetime Resident

City Hall

Hoonah, Alaska 99829

Ken Wicks

Teacher

Resident 10 years

P.O. Box 181

Hoonah, Alaska 99829



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

July 22, 1982

Commanding Officer
Seventeenth Coast Guard District
P. O. Box 3-5000
Juneau, Alaska 99802

Dear Sir:

The following dangers to navigation were located by the NOAA Ship FAIRWEATHER during hydrographic survey operations in Port Frederick, Alaska. These dangers to navigation are in addition to those previously reported by the FAIRWEATHER via radio message 202000Z May 82 and are submitted for inclusion in the local notice to mariners for NOAA Chart 17302:

1. A 5.0 fathom shoal (MLLW) at latitude 58°02'31"N, longitude 135°36'15"W. *No bottom sample taken.*
2. A revised least depth of 4.5 fathoms (MLLW) on charted shoal at latitude 58°02'07"N, longitude 135°36'53"W. *No bottom sample taken.*
3. A 0.8 fathom rocky peak (MLLW) in North Bight at latitude 58°02'0.5"N, longitude 135°39'46"W.
reef uncov 2 ft at MLLW
4. A ~~rock awash~~ at the entrance to South Bight at latitude 58°01'34"N, longitude 135°39'05"W.
5. A 1.8 fathom shoal (MLLW) at latitude 58°00'09"N, longitude 135°37'25"W. *(Midway Rocks)*

Sincerely,

K.W. Jeffers

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

cc: C322



FIELD TIDE NOTE

OPR-0343-FA-82 (Spring)

Port Frederick, Alaska

Field tide reduction of soundings was based on predicted tides from Juneau, Alaska, corrected as per project instructions OPR-0343-FA-82, dated 14 October 1981, amended by Change 1, dated 15 October 1981 and 23 November 1981. Correctors were as follows:

<u>Time Corrections</u>		<u>Height Correction Ratio</u>
High	Low	
0 minutes	+10 minutes	X 0.90

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

The tide station at Juneau, Alaska was the primary gage for this project. Levels were run to this gage on 15 April 1982 (JD105) and 14 May 1982 (JD134). Tide data was collected from the Hoonah Harbor tide station 945-2441, located at the Icy Strait Salmon Company pier at $58^{\circ} 07' 45'' \text{N}$, $135^{\circ} 27' 47'' \text{W}$ and also from the Salt Lake Bay tide gage 945-2484, located at $57^{\circ} 57' 36'' \text{N}$, $135^{\circ} 39' 18'' \text{W}$. Survey H-9990 was controlled by gage 945-2441, while surveys H-10010 and H-10013 were controlled by gages 945-2441 and 945-2482 together.

ADR gage 6402A4596M2 was installed on 9 April 1982 (JD099) at the Hoonah Harbor tide station and removed on 25 May 1982 (JD145) at the end of the field work. Three wire levels were run to four existing bench marks (2441A-2441D) to the tide staff stop and tied into horizontal control station FERRY 1981 on 9 April 1982 (JD099). On 21 May 1982 (JD111) three wire levels were run from the staff stop to the existing bench marks and tied into horizontal control station FERRY R1 and station FERRY at the end of field work. The entire run of 1.77 km closed within 2 mm.

For the Salt Lake Bay tide station, bubbler gage #67A-16205 was installed on 10 April 1982 (JD100). Three existing bench marks were recovered as described and two new bench marks stamped 2484A and 2484B were installed. Three wire levels were run to all five bench marks and to the tide staff stop. Closure for the 0.39 km run was 5.62 mm. Closing levels for this tide station were run on 24 May 1982 and closure was 5.09 mm for the same run.

An additional bubbler gage was installed at each tide station as a back up for each main gage. Back up tide gage data was not used, since no serious main gage problems developed. Data from the back up gages has been retained aboard.

OPERATIONAL PROBLEMS

On 27 April 1982 (JD117) the chart drive in the Salt Lake Bay bubbler gage #67A-16205 showed signs of malfunctioning. This chart drive was removed and replaced. Tidal data for the period 181000Z on 20 April 1982 (JD110) to 184500Z on 21 April 1982 (JD111) was recoverable by interpolation of the tide marogram. A malfunction also occurred in the back up gage at the Salt Lake Bay tide station on 29 April 1982 (JD119). A anomalis trace on the tide marogram appeared and was interpreted to be an internal problem and the gage was sent to the Pacific Tides Party for required maintenance. No gage problems were incurred at the Hoonah Harbor tide station.

MISCELLANEOUS

One day of hydrography was run on survey H-9990 (FA-10-6-81) during the 1981 FAIRWEATHER field season. Hydrography run on this day, (JD 347) will be controlled by tidal data collected during the 1981 field season. This information may be found in the Field Tide Note for the FAIRWEATHER'S 1981 season in Port Frederick (Copy Attached).

DATE: August 16, 1982

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center:

Hourly heights are approved for

945-2441 Hoonah Harbor, AK
Tide Station Used (NOAA Form 77-12): 945-2484 Salt Lake Bay, AK

Period: April 12-May 23, 1982

HYDROGRAPHIC SHEET: 10010

OPR: 0343

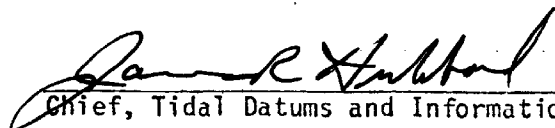
Locality: Port Frederick, Alaska

Plane of reference (mean lower low water):
945-2441 = 10.01 ft.
945-2484 = -3.82 ft.

Height of Mean High Water above Plane of Reference is
945-2441 = 14.17 ft.
945-2484 = 14.21 ft.

REMARKS: Recommended Zoning:

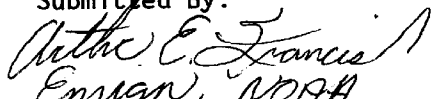
1. North of latitude 58°01.0' zone direct on 945-2441 Hoonah Harbor, Alaska.
2. South of latitude 58°01.0' zone direct on 945-2484 Salt Lake Bay, Alaska.


Chief, Tidal Datums and Information Branch

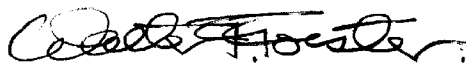
J. APPROVAL SHEET

The Commanding Officer inspected all field sheets and field 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 deemed necessary.

Submitted By:


Ensign, NOAA
Arthur E. Francis
Ensign, NOAA
NOAA Ship FAIRWEATHER S220

Approved By:

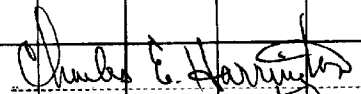

Walter F. Forster, II
Commander, NOAA
Commanding Officer
NOAA Ship FAIRWEATHER S220

GEOGRAPHIC NAMES

H-10010

Name on Survey	A ON CHART NO.	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP ATLAS	G GRAND McNALLY	H U.S. LIGHT LIST	K
ALASKA(state-title block)									1
BURNT POINT									2
CHIMNEY ROCK									3
GRASSY ROCK									4
MIDWAY ISLAND									5
MIDWAY ROCKS									6
NEKA BAY									7
NEKA ISLAND									8
NORTH BIGHT									9
PORT FREDERICK									10
SOUTH BIGHT									11
THE NARROWS									12
									13
									14
CHICHAGOF ISLAND	Added per TELECON with C. Harrington on 8/15/83 (JAW)								15
									16
									17
									18
									19
									20
									21
									22
									23
									24
									25

Approved:


Chief Geographer - N/Ch245

30 JUNE 1983

443-8360

HYDROGRAPHIC SURVEY STATISTICS

H-10010

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS & PRELIMINARY OVERLAYS	2
DESCRIPTIVE REPORT	1	SMOOTH OVERLAYS: POS. ARC, EXCESS	7

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES						
CAHIERS		2				
VOLUMES						
BOXES			1			

T-SHEET PRINTS (List) N/A

SPECIAL REPORTS (List) N/A

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	PRE-VERIFICATION	VERIFICATION	TOTALS
POSITIONS ON SHEET			3085
POSITIONS CHECKED		3085	
POSITIONS REVISED		100	
SOUNDINGS REVISED		139	
SOUNDINGS ERRONEOUSLY SPACED		3	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		-	
TIME - HOURS			
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	4	*(VER)/(EVAL)	4
VERIFICATION OF CONTROL		05/02	7
VERIFICATION OF POSITIONS		108/08	116
VERIFICATION OF SOUNDINGS		131/08	139
COMPILATION OF SMOOTH SHEET		52/07	59
APPLICATION OF TOPOGRAPHY		06/01	7
APPLICATION OF PHOTOBATHYMETRY		00/00	0
JUNCTIONS		03/01	4
COMPARISON WITH PRIOR SURVEYS & CHARTS		04/10	14
VERIFIER'S REPORT		03/48	51
OTHER		08/10	18
TOTALS	4	320/95	419

Pre-Verification by

G. E. Kay

Beginning Date

7/22/82

Ending Date

7/22/82

Verification by

I. A. Almacen

Evaluated by

K. M. Scott

Beginning Date

10/18/82

Ending Date

6/30/83

Verification Check by

S. H. Otsubo, J. S. Green

Time (Hours)

74

Date

7/7/83

Marine Center Inspection by

HIT

Time (Hours)

4

Date

7/27/83

Quality Control Inspection by

Time (Hours)

Date

Requirements Evaluation by

Time (Hours)

Date

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

PACIFIC MARINE CENTER
EVALUATION REPORT

REGISTRY NO: H-10010

FIELD NO: FA-10-1-82

Alaska, Port Frederick, Burnt Point to The Narrows

SURVEYED: April 12 - May 23, 1982

SCALE: 1:10,000

PROJECT NO: OPR-0343-FA-82

SOUNDINGS: Ross Fineline
Fathometer

CONTROL: Mini-Ranger
Range/Range
Range/Azimuth

Chief of Party.....CDR W. F. Forster

Surveyed By.....ENS A. Francis
ENS R. Pingry
ENS C. Bailey
ENS P. Steele

Automated Plot By.....PMC Xynetics Plotter

Verified By.....I. A. Almacen

Evaluated By.....K. M. Scott

1. INTRODUCTION

- H-10010 is a navigable area survey conducted in accordance with Project Instructions OPR-0343-FA-82, Port Frederick, Alaska, dated October 14, 1981, Change No. 1 dated October 15, 1981 and Change No. 2 dated November 23, 1981. ✓
- The area of coverage extends from Grassy Rock, Burnt Point and Neka Bay south to The Narrows. The fifty to sixty fathom channel is interrupted in the vicinity of Midway Island and Midway Rocks when the channel shoals to ten fathoms and narrows to 550m. Fifty fathom soundings resume southwest of there and continue through The Narrows. ✓
- Predicted tides based on the Juneau gage with time and range adjustments were utilized during shipboard processing. Tide correctors used for the reduction of final soundings reflect approved hourly heights with direct zoning from the Hoonah Harbor gage (945-2441) north of latitude 58°01.0' and the Salt Lake Bay gage south of that latitude. ✓
- Velocity correctors were not applicable to the survey data. Computation of velocity correctors from nine Nansen casts provided corrections less than 0.25% of the depth. A velocity table with the zero corrector is included in the smooth sounding printout. ✓
- Baseline calibration correctors for the applicable Mini-Ranger transponder units and their combinations are reflected in the tables appended to the

Descriptive Report. Annotations have been made to include omitted corrector combinations. ✓

- Projection parameters, revised velocity correctors, and expanded electronic correctors are shown in the smooth printouts accompanying the smooth sheet. ✓

2. CONTROL AND SHORELINE

- Geodetic positions for control stations used during hydrography are primarily field positions computed from published geodetic positions adjusted to the North American 1929 datum. Published positions of stations used for control include CHIM, 1923; NECK, 1923. ✓
- Mini-Ranger electronic control was employed in range/range and range/azimuth modes during hydrographic operations. Baseline calibrations were used to correct for system error. Calibration and system checks are discussed in section G of the Descriptive Report. ✓
- No shoreline has been applied to the smooth sheet because of conflicting information especially along the west shore. Furthermore, enlargements were more than 4 times the original scale. Enlargements of the U.S.G.S. 15-minute topographic maps were applied and adjusted for application to the final field sheet. (See section H, Descriptive Report.) ✓
- All rocks and reefs are supported by position and sounding data. Foul limit lines were transferred from the final field sheet. ✓

3. HYDROGRAPHY

- Crosslines incorporated within this survey are in good agreement. ✓
Discrepancies are attributed to the nature of the bottom.

The bottom configuration, development of shoal soundings, determination of least depths, and delineation of standard depth curves are adequate. Though hydrography generally delineated shoaler areas than the required 2 fathoms, the project instructions did not require as extensive inshore development. *Do not concur See examination report.* ✓

4. CONDITION OF SURVEY

The hydrographic records and reports are adequate and conform to the requirements of the Hydrographic Manual of July 4, 1976. ✓

5. JUNCTIONS

H-10010 joins H-9987 (1:10,000) 1981 to the north and H-10013 (1:10,000) 1982 to the south. Soundings, features and elevations have been transferred from H-9987 to complete that junction. Depth curves and junction notes are inked in agreement.

6. COMPARISON WITH PRIOR SURVEYS

H-4319 (1923) 1:20,000

The prior survey of this area employed sextant navigation and leadline soundings supplemented by wire drag. Shoreline was probably plane tabled.

Shoreline was transferred from T-4048 & T-4049 of 1923

For the most part, soundings ranging between 10 and 60 fathoms are comparable with differences of 1 to 3 fathoms. Considerable difference is noted between latitude 58°03'21"N, longitude 135°34'37"W and latitude 58°03'15"N, longitude 136°35'00"W where the present survey soundings are less deep as much as 9 fathoms. One other sounding of noteable difference is the 26 fathom sounding at latitude 58°00'58"N, longitude 135°36'37"W which lies between sounding lines of the prior in approximately 50 fathoms of water. In areas of 20 fathoms or less, several other shoal soundings were found between prior sounding lines.

North and South Bight and Neka Bay are generally shoaler by 2 fathoms. Neka Bay's sand bar at approximately latitude 58°03'21"N, longitude 135°41'45"W now extends eastward to latitude 58°03'18"N, longitude 135°41'29"W. A new sand bar has been located between latitude 58°03'15"N, longitude 135°41'17"W and latitude 58°03'14"N, longitude 135°40'45"W. North Bight has two peaks of 4.5 and 4.6 fathoms at latitude 58°02'16"N, longitude 135°40'27"W and latitude 58°02'19"N, longitude 135°40'27"W in waters of 6 fathoms and near a privately maintained mooring log. A reef uncovering 1 foot at MLLW at latitude 58°01'46.3"N, longitude 135°38'14.5"W and a rock with a depth of 0.8 fathoms at latitude 58°01'49.5"N, longitude 135°38'32.8"W have been located at the entrance. Another rock with a recorded depth of 0.8 fathoms lies at latitude 58°02'00.22"N, longitude 135°39'46.73"W. A channel three fathoms deep at the entrance of the South Bight is now found to be less than 2 fathoms.

A rock awash at latitude 58°03'27.5"N, longitude 135°32'45.0"W plotted on H-4319 now lies in approximately nineteen fathoms of water. That rock lies 30 meters north of H-10010 hydrography in the junction area with H-9987. The rock was not addressed during the evaluation of H-9987. No rock was located by the FAIRWEATHER during 1982 hydrographic operations. Additional references should be researched. If no further reference is found, the rock may be superseded by current hydrographic data. *(Cht. position of rock as shown on H-9987 (1981))* **Do not concur. See pg. 13 of D.E. for examiner's recommendation. 10n. 8/28/85 JFS**

The ledge north of Chimney Rock at latitude 58°01'30.5"N, longitude 135°36'41.3"W extends 70 meters further northward than indicated on H-4319. Future charting should reflect the survey results represented on H-10010.

There are other rocks depicted on H-4319 that would ordinarily be compared with a contemporary basic survey; however, the present survey is a navigable area survey and rocks shoreward of the hydrographic limits must be charted accordingly.

There is one pre-survey item, 7, a 5½ fathom shoal at latitude 58°02'14.8"N, longitude 135°35'58.2"W originating with prior survey H-4319. This area and the area west of there with 6½ and 7 fathom soundings at latitude 58°02'07.5"N, longitude 135°36'50.5"W were investigated but the area between was not developed as required by the pre-survey review. In these instances 4.3 and 4.4 fathom shoals were found at sounding position numbers 433802 and 4402 respectively. Since these wire drag soundings were deeper than present survey soundings, the prior soundings were not transferred (see Hydrographic Manual, section 6.3.6). Present survey soundings supersede the prior survey soundings and future charting should reflect the results of this survey.

H-10010 is adequate to supersede the prior survey within the common area.

The chart compiler may want to chart some bottom characteristics from H-4319 (1923).

7. COMPARISON WITH CHART

17302 (14th Ed., October 3, 1981)

a. Hydrography - Charted information, with the exception of the mooring buoys and shoreline, originate with the prior survey, H-4319. (Refer to section 6 of this report for details.) *Also T-4048 & T-4049 of 1923.*

The charted shoreline on the western side of Port Frederick including Neka Bay and the North and South Bights should be reviewed and updated for future charting. ✓

Three privately maintained mooring buoys are charted in Neka Bay. There were two mooring buoys located in Neka Bay during survey operations. One mooring log was located in North Bight. These should be charted as plotted on H-10010, the current survey. ✓

Shoal soundings posing dangers to navigation have been reported by the ship and during the preprocessing function at the Pacific Marine Center. (See message copy and memo appended to Descriptive Report.) ✓

H-10010 is adequate to supersede the charted hydrography within the common area. ✓

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

c. Aids to Navigation - There are no fixed or floating aids to navigation within the survey area. ✓

8. COMPLIANCE WITH PROJECT INSTRUCTIONS

H-10010 (FA-10-1-82) adequately complies with the project instructions as amended and noted in section 1 of this report. ✓

9. ADDITIONAL FIELD WORK

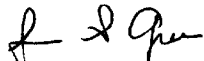
This is a good navigable area survey. No additional field work is required.
See examination report for future survey work.

Respectfully submitted,

Karol M. Scott

Karol M. Scott
Cartographer
June 28, 1983

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

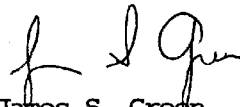

James S. Green
Supervisory Cartographer

ADDENDUM TO EVALUATION REPORT FOR H-10010

The Evaluation Report for this survey is supplemented by the following statement:

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

Respectfully submitted,



James S. Green
Supervisory Cartographer
November 22, 1983

APPROVED:



Ned C. Austin
Chief, Nautical Chart Branch

ATTACHMENT TO DESCRIPTIVE REPORT FOR H-10010

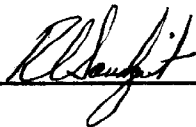
I have reviewed the smooth sheet, accompanying data, and reports of this hydrographic survey. Except as noted in the Evaluation Report, the hydrographic survey meets or exceeds Charting and Geodetic Services (C&GS) standards, complies with instructions, and is accurately and completely represented by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

 11/29/83
Chief, Nautical Chart Branch (Date)

CLEARANCE:

SIGNATURE AND DATE:

N/MOP2:RLSandquist



11/29/83

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

 11/29/83
Director, Pacific Marine Center (Date)



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF CHARTING AND GEODETIC SERVICES
ROCKVILLE, MARYLAND 20852

N/CG242:FPS

October 2, 1985

TO: N/CG24 - Roy K. Matsushige *RM*
FROM: N/CG242 - *George K. Myers, Jr.*
SUBJECT: Examination of Navigable Area Hydrographic Survey H-10010 (1982),
Alaska, Port Frederick, Burnt Point to the Narrows

Chief of Party W. F. Forster
Field Unit NOAA Ship FAIRWEATHER
Processed by Pacific Marine Center
Examined by F. P. Saulsbury

An examination of navigable area hydrographic survey H-10010 (1982) was accomplished to monitor the survey for adequacy with respect to data acquisition, conformance with applicable project instructions, delineation of the bottom, determination of least depths, navigational hazards, junctions, sounding line crossings, smooth plotting, digital data standards, decisions made and actions taken by the evaluator, and the cartographic presentation of data.

Cartographic deficiencies and constructive comments are noted on a 1/2-scale copy of the survey smooth sheet which will be forwarded to the marine center. Digital data and/or programming deficiencies are identified on a full-scale plot made from the magnetic tape transmitted by the marine center. This plot will also be forwarded to the marine center.

In general, the survey was found to conform to National Ocean Service standards and requirements except as stated in the Evaluation Report and as follows:

1. Bottom samples were generally not acquired on shoals. Bottom characteristics on two of these shoals, shown on H-4319 (1923), were not carried forward to the present survey during processing, are not now charted, and are listed so that they may be charted.

<u>Latitude (N)</u>	<u>Longitude (W)</u>	<u>Depth (fms)</u>	<u>Bottom Characteristic</u>
58°02.25'	135°36.03'	4.3	rky
58°02.11'	135°36.89'	4.4	rky



2. The following shoals were inadequately developed to ascertain that least depths were acquired. Also, there was no verification of acquired shoal depths by lead line or other suitable method.

<u>Latitude (N)</u>	<u>Longitude (W)</u>	<u>Depth (fms)</u>
58°03.02'	135°39.90'	3.1
58°02.52'	135°36.26'	5
58°02.54'	135°39.19'	8.7
58°02.26'	135°40.45'	4.5
58°02.37'	135°38.85'	10.1
58°02.29'	135°38.46'	1.5
58°02.37'	135°36.59'	11.8
58°02.48'	135°35.82'	14.5
58°01.85'	135°37.26'	9.6
58°01.27'	135°36.80'	10.5
58°00.97'	135°36.65'	26
58°00.44'	135°37.67'	3.4
58°00.34'	135°37.61'	9.1
58°00.44'	135°34.93'	6.7
57°59.60'	135°36.01'	14.8
57°59.44'	135°37.16'	20.1

Inadequate development in the area surrounding Midway Rocks, centered in latitude 57°58.05'N, longitude 135°37.40'W, compromised the delineation of portions of the 5-, 10-, and 20-fathom depth curves.

There is inadequate development in the vicinities of latitude 58°01.91'N, longitude 135°37.74'W and latitude 58°02.02'N, longitude 135°40.16'W to ascertain the offshore ends of shoals extending seaward from points of land.

3. The elevations of Grassy Rock, 20 feet, in latitude 58°02.89'N, longitude 135°33.77'W and Midway Island, 100 feet, in latitude 57°59.83'N, longitude 135°36.50'W are charted from T-4049 and T-4048 of 1923, respectively. These elevations were not addressed on the present survey and should be retained as charted.

Consideration should be given to charting an elevation on Chimney Rock located in latitude 58°01.41'N, longitude 136°36.60'W as an aid to the mariner. No accurate elevation of Chimney Rock was obtained on the present survey, but an approximate elevation of 50 feet was noted in the survey records. Perhaps the triangulation description or a U.S. Geological Survey quadrangle will provide an accurate elevation for charting.

4. A few minor oversights concerning the plotting and acquisition of bottom characteristics are noted.

Two bottom characteristics of "dk gn M" (position 6861 in latitude 58°02'59"N, longitude 135°39'26"W and position 6862 in latitude 58°02'29"N, longitude 135°38'42"W) are shown on the field sheet and recorded in the sounding volume. The adjective "dk" was apparently overlooked during processing. At these two locations, "gn M" only is shown on the smooth sheet.

The field descriptions of bottom characteristics are generally recorded in the sounding volumes, raw data listings, the Oceanographic Log M Sheet, and the field sheets. Occasionally these entries are in conflict. In all cases, except one, the processor plotted the bottom characteristic on the smooth sheet in the order recorded in the sounding volume. The one exception is found at position 6888 in latitude 57°59'34"N, longitude 135°35'46"W, where "gn M St G" is shown on the smooth sheet instead of "gn M G St" which is recorded in the sounding volume.

5. While no additional work is recommended, inadequately developed areas, addressed in item 2 of this examination, should be investigated on any future survey of the area.

6. The evaluator recommended that items inshore of survey coverage be charted from their originating sources. One of the principle responsibilities of the evaluator is to supersede prior surveys of the area, whenever possible, so that the chart compiler is relieved of this task. This particular survey, being a navigable area survey, did not verify or disprove some charted inshore rocks and elevations of bare features; also, it contained no shoreline. These items, few in number, could have been carried forward to the present survey, from their sources, with a minimum of effort during evaluation. This information, plus a few meaningful bottom characteristics carried forward to the smooth sheet, would have superseded prior surveys H-4319, T-4048, and T-4049 of 1923. A charting recommendation to chart shoreline from U.S. Geological Survey quadrangles would have completed the job.

7. Comparison of the digital data plot from Pacific Marine Center magnetic tape with the smooth sheet:

a. The digitizing of the low water curves is frequently imprecise and is an approximation rather than an exact reproduction of the low water delineation. Dashed portions of the low water curves on the smooth sheet were generally overlooked during digitizing and are shown on the digital graphic plot as solid lines.

b. The bottom characteristic "gn M brk Sh St" plotted on the smooth sheet in latitude 58°01.60'N, longitude 135°36.40'W is shown on the digitized graphic plot as "gn M brk Sh stk." The bottom characteristic "gn M St" plotted on the smooth sheet in latitude 57°59.78'N, longitude 135°37.10'W is shown on the digitized graphic plot as "M St." The bottom characteristic "gn M G" plotted on the smooth sheet in latitude 58°00.10'N, longitude 135°37.63'W is shown on the digitized graphic plot as "MG."

c. Foul areas are not labeled.

Soundings referred to datum of soundings (MLLW)			
Mean High Water	Mean Tide Level	Mean Lower Low Water	Extreme Low Water
feet	feet	feet	feet
9.6	5.5	0.0	-4.0
10.6	6.0	0.0	-4.0
10.9	6.1	0.0	-4.0
13.5	7.5	0.0	-4.5
13.9	7.7	0.0	-5.0

UNITED STATES ALASKA - SOUTHEAST COAST ICY STRAIT AND CROSS SOUND

Complete list of Symbols and Abbreviations, see Chart No. 1)

(A) otherwise indicated.)

(A) morse code OBSC. obscured Rot. rotation

occuluting WHIS. whistle SEC. sector

alternating DIA. diaphone m. minutes

k. interrupted quick M. nautical miles sec. second

N. nun B. black Or. orange W. whit

S. spar R. red G. green Y. yellow

mud hrd. hard bk. black gy. gray

rock rky. rocky br. brown rd. red

and sft. soft bu. blue wh. white

shells stk. sticky gn. green yl. yellow

on, or shoal swept clear to the depth indicated.

in cover, with heights in feet above datum of soundings.

R. Bn. radiobeacon C. G. Coast Guard station

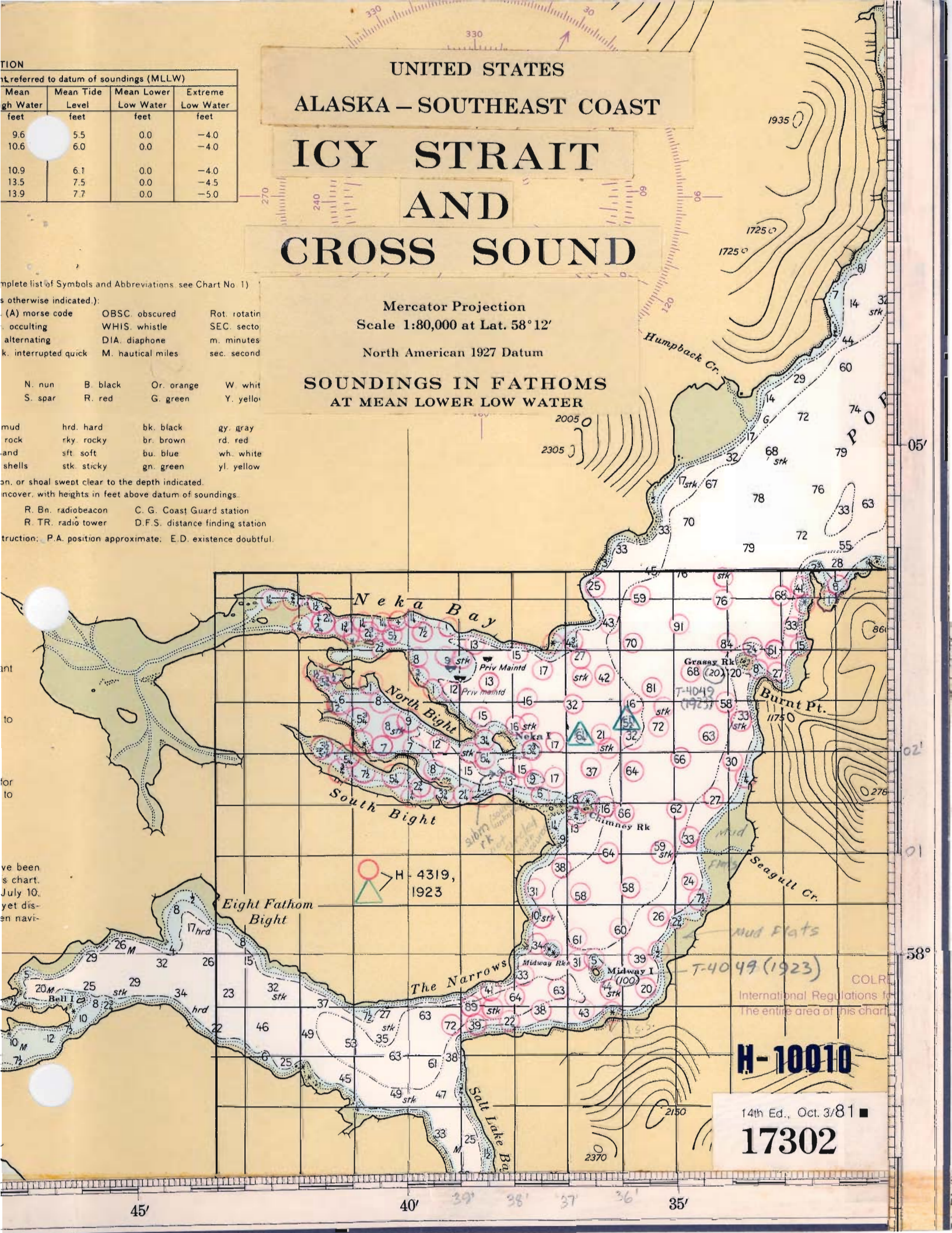
R. TR. radio tower D.F.S. distance finding station

struction: P.A. position approximate: E.D. existence doubtful.

Mercator Projection
 Scale 1:80,000 at Lat. 58°12'

North American 1927 Datum

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER



H-10010

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