10257

Diagram No. 8202-3

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey ... Hydrographic

Field No. ... FA-10-6-87

Registery No. ... H-10257

LOCALITY

State ... Alaska

General Locality ... Icy Strait

Sublocality ... SE Entrance of Icy Passage

1987

CHIEF OF PARTY
CAPT G.R. Schaefer

LIBRARY & ARCHIVES

DATE ... September 21, 1988

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

10257

"EP"
DAT
17316
17302
17300
CARTOG SIGN OFF ON FM IN BACK

NOAA FORM 77-28 (11-72)

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

HYDROGRAPHIC TITLE SHEET

REGISTER NO.

H-10257

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 10-6-87

State Alaska

General locality Icy Strait

Locality SE Entrance to Icy Passage

Scale 1:10,000 Date of survey (DN 294) 21 Oct 87 to (DN 314) 10 Nov 87

Instructions dated 29 July 1986 w/changes 1-8 Project No. OPR-0186-FA-87

Vessel FAIRWEATHER (2020), (2023), (2024), (2025), (2026), (2010)

Chief of party CAPT Glen R. Schaefer

Surveyed by LCDR Kenny, LCDR Mason, LT Ruiz, LTJG Lynch, ENS Bernard, ENS Nodine, ENS Lemon, ENS Birk-Risheim, ENS Neander, CST Krick

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

Graphic record scaled by FAIRWEATHER Personnel

Graphic record checked by FAIRWEATHER Personnel

Verification by: ~~Protracted by~~ John Miller, C.R. Davies Automated plot by PMC Xynetics Plotter

Evaluation by: ~~Verification by~~ C.R. Davies

Soundings in fathoms ~~feet~~ at ~~MLW~~ MLLW and tenths of fathoms

REMARKS: All times UTC. Marginal notes in black generated during office processing. All separates are filed with the hydrographic data, as a result page numbering may be interrupted or non-sequential.

AWOIS/SURF MSM 12/9/88

EC 3-26-97

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

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

MONTHLY PROGRESS SKETCH

OPR-0186-FA-87

ICY STRAIT, ALASKA

NOAA SHIP FAIRWEATHER S-220

CAPT. GLEN R. SCHAEFER, CMDG

SCALE FROM NOS CHART 17300

MAY TO NOVEMBER 1987

	May	Oct	Nov
SQ NM SOUNDING LINE	5	15	11
LNM SOUNDING LINE	71	411	77
BOTTOM SAMPLES	0	86	29
HYDRO CONTROL STATIONS	2	16	9
SV/D NANSEN CAST	1	5	2
TIDE GAGE INSTALLATION	0	3	0
HYDROGRAPHY			

⊕ SV/D NANSEN CAST
⊖ TIDE GAGE
S/L VERIFICATION

△ STA. ESTABLISHED
⊙ STA. RECOVERED
◎ PHOTO STA. RECOVERED

H-10258

Excursion Inlet

H-10257

ICY PASSAGE

PLEASANT IS.

Porpoise Is.

LYNN CANAL

PT. HOWARD

H-10240

ICY STRAIT

Eagle Pt.

Scraggy Is.

58 20 00

58 10 00

135 40 00

135 20 00

135 00 00

Descriptive Report
To Accompany Hydrographic Survey H-10257
Field Number FA-10-6-87, Scale 1:10,000
NOAA Ship FAIRWEATHER S220
Captain Glen R. Schaefer
1987

A. Project

Survey H-10257 is a basic hydrographic survey conducted in accordance with Project Instructions OPR-0186-FA-87, dated July 29, 1986; Change Number 2, dated December 24, 1986; Change Number 3, dated February 2, 1987; Change Number 6, dated April 29, 1987; Change Number 7, dated July 28, 1987; and Change Number 8, dated October 5, 1987. The Hydrographic Manual (fourth edition) through Change Number 3, PMC OPORDER, and Hydrographic Survey Guidelines also apply.

The purpose of this survey is to provide contemporary hydrographic survey data for existing nautical charts that cover Icy Strait.

This sheet is designated "K" in the Project Instructions.

B. Area Surveyed

This survey was conducted in the general vicinity of Porpoise Islands, in Icy Passage, Icy Strait, Alaska.

The northern survey limit is latitude 58/24/20N and the southern survey limit is latitude 58/17/55N. The shoreline east of Porpoise Islands bounds the survey on the east. The western limit is longitude 135/29/10W.

The field work for this survey commenced on October 21, 1987, (DN 294) and was completed November 10, 1987 (DN 314).

C. Sounding Vessels

Hydrographic data for this survey were acquired using two vessel types. Jensen survey launches FA-3, FA-4, FA-5, and FA-6 were designated vessel numbers 2023, 2024, 2025, and 2026, respectively. Shoreline verification was completed using a 17-foot Boston Whaler, FA-10, designated as vessel number 2030. The ship FAIRWEATHER (vessel number 2020) was used for all sound velocity casts and to collect bottom samples in depths greater than 55 fathoms. The remainder of the bottom samples were collected by FA-5.

One unusual sounding vessel configuration was used for this survey. FAIRWEATHER personnel hand-held an EDMI prism on the bow of vessel number 2023. Positions were determined for a line of piles (position numbers 1765 and 1766) using an EDMI and theodolite (in effect a range/azimuth position).

D. Sounding Equipment and Corrections to Echo Soundings

FAIRWEATHER's four survey launches, equipped with dual-beam Raytheon DSF-6000N echo sounders, were used to obtain soundings for this survey. See Table I for a list of equipment by vessel and day number. One skiff (vessel number 2030) equipped with a sounding pole was used for shoreline verification.

Table I
Sounding Equipment
RAYTHEON DSF-6000N SERIAL NUMBERS

Date (DN)	2023	2024	2025	2026
294-299	A104N	A113N	B049	A121N
300-308	A104N	A113N	B049	B048N
308-314	A104N	A113N	B049	A121N

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

No mechanical problems that degraded data quality were encountered with the echo sounders during this investigation. Bar checks at three fathoms were done daily to ensure that the Raytheon DSF-6000N echo sounders were operating properly. Sounding corrections determined for this survey apply to both the high- and low-frequency sounding data.

The high-frequency beam data were digitized except in a limited number of cases. The low-frequency beam data were used when the high-frequency trace was lost due to the steepness of the bottom or suspended particles in the water column. Also, if side echoes were obtained over peaks and reduced line spacing was not needed because of depth (e.g., in 80 fathoms of water), the low-frequency side-echo depth was recorded. This is noted on the raw computer printout with the annotation "low-frequency trace" or "LFT."

Diver's least depths were obtained using a pneumatic depth gauge manufactured by 3-D Instrument, Inc. (s/n 8302079 N). System calibration data can be found in the separate Corrections to Echo Soundings Data package.

All of FAIRWEATHER's survey launches were tested for settlement and squat on May 22, 1987, (DN 142) in Womens Bay, Kodiak, Alaska. The test results were used to plot settlement and squat curves for each launch. Measurements were conducted in accordance with Section 4.9.4.2 of the Hydrographic Manual. It was determined that there were no applicable settlement and squat corrections for any launch at speeds run while surveying in fathoms. Refer to the Corrections to Echo Soundings Data package for details concerning settlement and squat determinations.

An accurate determination of launch transducer depths was obtained through physical measurement. An oversized carpenter's square was constructed of angle iron, with foot and tenth markings noted on the rise. Divers held the foot of the carpenter's square flush against the transducer while the rise was leveled by personnel on the pier using a circular bubble level. On March 27, 1987, a static transducer draft of 0.3 fathoms was recorded for all launches. All launch soundings on the final field sheet were plotted using this TRA value.

Velocity correctors were determined from four SV/D casts in accordance with section 4.9.5.2 of the Hydrographic Manual. Table II shows the dates and locations of the casts. Program VELTAB was used to compute tables from cast data. The results from the four SV/D casts were similar enough to average and combine into one table (Velocity Table 1). Velocity corrections using a preliminary velocity table (see Appendix IV) were applied to all echo-sounder depths plotted on the final field sheets.

Table II
Velocity Casts

Cast No.	Date (DN)	Latitude	Longitude
19	297	58/16.8 N	135/24.5 W
20	297	58/27.6 N	135/28.1 W
22	314	58/27.6 N	135/28.1 W
23	314	58/17.3 N	135/24.6 W

The SV/D casts were performed using a Plessy Model 9040 Environmental Profiling System (s/n 5653). This instrument was calibrated at Northwest Regional Calibration Center on September 22, 1987. XBTs and/or surface temperatures were taken during the SV/D casts as a check on the Plessy Systems.

TC/TI tapes were made in accordance with PMC OPORDER, Section 3.5.1. Printouts of TC/TI tapes are included in the appendix of this report.

Predicted tide correctors were applied to the soundings plotted on the final field sheets for this survey. The tide correctors used were from the Tide Tables 1987, West Coast of North and South America. Tide correctors use Juneau, Alaska, as the reference station using a height correction range ratio of "x0.92" and no time correction. For further information, refer to Appendix II, Field Tide Note.

E. Hydrographic Sheets

Final field sheets were plotted aboard the FAIRWEATHER using a DEC PDP/8e computer and Houston Instruments DP-3 plotter. The survey consists of four final field sheets (two each, east and west) and two 1:10,000-scale overlays.

Final field sheet requirements were modified for survey H-10257. Given the complexity of the shoreline in the survey area, the final field sheet was divided into two parts, plotted on separate sheets. One sheet has sounding lines, least depths from dive investigations and developments, and depth curves. The second sheet has shoreline, along-shore features, descriptive notes, detached positions not on the first sheet, and bottom samples.

All hydrographic data for the survey will be forwarded to the Pacific Marine Center, Seattle, Washington, for ~~verification~~ office processing and smooth plotting.

F. Control Stations

All horizontal control stations for this survey were recovered by FAIRWEATHER personnel. All geodetic positions are based on the North American Datum of 1927 and meet or exceed Third-order, Class I specifications. One aerotriangulation station was used for this survey (#13 DAY SUBPOINT). The position was verified by observing a check angle and distance from a Third-order, Class I geodetic station. A list of all control stations used for this survey can be found in Appendix V, List of Stations.

G. Hydrographic Position Control

Hydrographic position control was accomplished using the Motorola Mini-Ranger III system except as noted under Section C, Sounding Vessels. The control configuration consisted of range/range for all positioning. Table III contains a list of console and R/T units for each sounding vessel. Mini-Ranger base-line calibrations (BLCs) were conducted in accordance with PMC OPORDER, Section 3.3.1.1.

Beginning BLCs were performed on DNs 257 to 260 along a distance of 990.2 meters between two recoverable marks (Naval Reserve Pier to PMC Pier A) across Lake Union in Seattle, Washington. Ending BLCs were performed on DNs 321 and 322 at the same location. All combinations of codes and consoles were calibrated before commencing and after completing survey H-10257. Because the differences between beginning and ending BLCs were 5 meters or less, the beginning and ending calibrations were not averaged. The beginning correctors were used as the final correctors. Final base-line correctors and minimum signal strengths can be found in the Electronic Control Data package submitted for project OPR-0186-FA-87.

Table III
Mini-Ranger Equipment by Vessel

Vessel Number	Console/RT Number
2020	716/C1875
2023	703/B1108
2024	506042/E2716
2025	716/C1875
2026	B0323/B1398

Hydrographic positioning equipment was critically system checked at least once per week. Non-critical system checks were conducted once per day unless equipment malfunction prohibited it. All hydrographic positioning equipment was found to be accurate within the limits set forth by PMC OPORDER, Section 3.1.1.2. Critical system checks were accomplished using the theodolite cut method or by EDMI. Theodolites onboard the FAIRWEATHER are as follows: Wild T-1 theodolites with serial numbers 13008, 12932; Wild T-2 theodolites with serial numbers 26336, 85652, 257219, 276503; and Lietz TM1A theodolite with serial number 2151. The EDMI used was a Hewlett-Packard HP 3808A with serial number 1723A00172.

In all cases, the launch R/T units were located directly over the transducers, eliminating the need for ANDIST correctors.

H. Shoreline ✓ See Final Report Section 2

The shoreline for this survey was taken from 1:10,000-scale mylar enlargements of three 1:20,000-scale, Class III, registered shoreline maps. Shoreline map TP-01309 was used for shoreline north of latitude 58/22/00N; Shoreline map TP-01310 was used for shoreline to the south. Verified features from shoreline maps are shown in black on the final field sheet; changes are shown in red ink. New features (e.g., new rocks and foul limits) are shown in black ink.

There were no conflicts between hydrography and the Mean High Water Line (MHWL). A change to the shoreline map MHWL was found at latitude 58/20/17N, longitude 135/28/15W, where a finger-like extension of land was found to extend seaward (see ~~final field~~ smooth sheet).

It appears that the photography for the shoreline maps in this area was flown at a higher stage of tide. No ledges or reefs are shown on the maps. However, many of the shoreline map rocks were found to be reefs, foul areas, or ledges. (Rock symbols have been retained on ledges only if there are prominent high points at these positions.) These changes are adequately shown on the ~~final field~~ smooth sheet with supporting positional information and will not be discussed separately here.

See the final field sheet for new ledges (ledge limits were determined from lines of hydrography in most cases), foul areas, and rocks. These types of changes are too numerous to discuss separately in the descriptive report and are clearly shown on the ~~final field~~ Smooth sheets.

Hydrography was run inside the foul limits in some areas. These lines were run at higher tides when the nature of the foul area was not visible. Foul limits should be kept as shown on the ~~final field~~ Smooth sheets.

In some areas height information on shoreline map rocks was not obtained as the rocks were dry at the time of observation. These rocks are noted in the sounding volume as "dry."

Twelve rocks from shoreline maps TP-01310 and TP-01309 were not found. An echo-sounder and visual search (5 to 15 minutes) with lead-line probing was made over each location at low water. On all occasions no kelp or eddies were present and the bottom was visible. Position numbers 1223 and 1224 were taken over boulder-strewn beaches, where the shoreline map rocks were only slightly more prominent than surrounding boulders. These rocks are not hazards to navigation nor prominent enough to be charted. In many areas sandy patches close inshore contrasted against the surrounding darker bottom. It appears that from the air these patches may have been mistaken for rocks. It is recommended that the twelve rocks not be charted. The rocks are as follows: Concur

LATITUDE	LONGITUDE	DEPTH (fm)	POSITION
58/20/50.86	135/24/32.14	~~1.4~~ -0.6	1223
58/20/05.36	135/23/22 57.62	~~0.5~~ -1.3	1224
58/21/50.85	135/24/54.14	0.4 O	1225
58/21/48.06	135/24/53.19	~~0.3~~ -1.0	1226
58/21/46.43	135/24/53 2.90	~~1.1~~ 2.0	1227
58/21/37.61	135/24/48 7.31	1.1	1228
58/21/08.90	135/24/37.21	~~1.6~~ -1.0	1238
58/21/07 6.90	135/24/34 3.20	~~1.6~~ -2.0	1239
58/21/04.88	135/24/34 3.63	~~2.0~~ 0.0	1240
58/20/19.71	135/24/08.09	~~0.3~~ 1.4	1349
58/20/37 6.47	135/29/15 4.62	~~0.9~~ No depth	6241
58/19/29.45	135/27/05.80	~~0.4~~ No depth	6793

At latitude 58/24/04 (369) N, longitude 135/27/26 (444) W, the shoreline map indicates a rock awash 20 meters seaward of the MHWL (position number 3772). No rock was found after a 15-minute search. Bottom visibility was good, and no kelp or eddies were seen. The only rock found in the area was above the MHWL, next to the tree line, and was not significant or a danger to navigation. Do not chart the shoreline map rock. Concur

At latitude 58/19/32N, longitude 135/27/07W, the shoreline map indicates a rock awash. This rock was found to be at latitude 58/19/ (32.21) N, longitude 135/27/ (2.04) W (position number 3006). It is recommended that the position of this rock as found by survey H-10257 be charted. Rock uncovers 2 ft at MLLW Concur

A shoreline map rock at latitude 58/19/32N, longitude 135/23/46W, was found to be at latitude 58/19/~~35~~33N, longitude 135/23/~~46~~59W (position number 1000). It is recommended that the rock be charted at this location. concur
Rock uncovers -6.0 ft at MLLW.

A shoreline map rock at latitude 58/23/48N, longitude 135/25/44W, was found to be at latitude 58/23/~~47~~14N, longitude 135/25/44.~~5~~8W (position number 6489). It is recommended that the rock be charted at this location. concur
Rock uncovers -4.0 ft at MLLW.

In the vicinity of latitude 58/19/06N, longitude 135/26/50W, the shoreline map indicates several rocks awash. Extensive hydrography and an investigation of the area at low water revealed a very complex ledge and foul area. See the ~~final field~~ smooth sheet for configuration and limits of the ledge and foul areas. concur

Dolphins, indicated on the shoreline map at latitude 58/24/0.5N, longitude 135/25/45W, were not found after a visual search. However, a rock awash that resembled a dolphin was found at latitude 58/24/0.0N, longitude 135/25/~~45~~49W (position number 6497). It is recommended that a rock awash symbol be charted. Rock uncovers -15.0 ft at MLLW Revised to Subm dols concur

At latitude 58/24/01N, longitude 135/25/46W, the shoreline map indicates ruins. This area was investigated at low water and revealed non-prominent logs and a rusted pipe atop a ledge. It is recommended that the ledge limits shown on the ~~final field~~ smooth sheet be charted (position numbers 6498-6499). A high point of ledge, rock uncovers -12.0 ft at MLLW at 58°24'00.69"N, longitude 135°25'45.32"W, position number 6498. A descriptive note was added to the smooth sheet in the vicinity of this ledge, foul with ruins and debris. concur

I. Crosslines ✓

Crosslines were run at 90 degrees to main-scheme lines and account for 22% of main-scheme coverage. Soundings agree to within 1 fathom except in areas of steep relief. No systematic problem is evident that would account for these differences.

In some cases, the vessel used for a main-scheme line did not run the corresponding crossline. Common soundings at these crossings agree to within 1 fathom except in areas of steep relief. No systematic problem is evident that would account for these differences.

J. Junctions See Eval. Report, section 5 for junctions with H-10258 and H-10268.

Survey H-10257 junctions to the south with contemporary surveys ~~H-10234 (1986), scale 1:20,000, and~~ survey H-10231 (1986), scale 1:20,000. At the junctions the soundings agree within 1 to 2 fathoms except in areas with irregular and rapidly changing bottoms.

K. Comparison with Prior Surveys see Final Report, section 6

As per project instructions, comparisons between survey H-10257 and the following prior surveys were made:

1. Survey H-2562 (1901), Scale 1:40,000

Comparison with survey H-2562 was difficult; overlaying the 1901 survey with the present survey by correlating latitudes and longitudes was not practical. Therefore, the two surveys were compared by matching shoreline.

Sounding-by-sounding comparison shows that all soundings on survey H-2562 agree with the present survey within 1 to 3 fathoms (one exception is noted below). Due to the different survey methods used during the 1901 survey, this comparison is considered good. It is recommended that the present-survey depths supersede those from survey H-2562. concur

At latitude 58/18/16N, longitude 135/22/03W, prior survey H-2562 indicates a depth of 7.5 fathoms. Hydrography accomplished over this area (23- to 45-meter line spacing) detected a shoal in the area with a least depth that uncovers by 2 feet. There is a stream to the northeast that appears to be depositing sediment in the area. This shoal was reported as a danger to navigation. It is recommended that present-survey depths be charted. concur

The one non-sounding feature within present-survey limits originating from prior survey H-2562 is a rock located at latitude 58/19/07N, longitude 135/27/57W. The present survey found this rock to be a reef (see ~~final~~ smooth ~~field~~ sheet). Position number 6234, rock uncovers -11.0 ft at MLLW at latitude 58°19'06.59"N, longitude 135°27'45.01"W, high point of reef.

2. Survey H-3671 (1914), Scale 1:40,000

All soundings on survey H-10257 agree with survey H-3671 within 2 fathoms except as noted below. Given the different survey methods used in the early 1900's, this comparison is considered very good. Survey H-10257 is consistently 1-2 fathoms shoaler than the 1914 survey in areas of depths less than 25 fathoms.

In the vicinity of latitude 58/21/05N, longitude 135/26/00W, survey H-3671 indicates a shoal with a least depth of 38 fathoms. Hydrography accomplished over the area (45-meter line spacing) revealed a least depth of 27 fathoms in the area. In addition, this shoal extends further to the northwest than shown on the prior survey. It is recommended that the prior-survey depth be superseded by depths from survey H-10257. concur
Position number 3091/06 26.9 fathoms at latitude 58°21'03.07"N, longitude 135°25'52.89"W.

At latitude 58/22/23N, longitude 135/27/06W, prior survey H-3671 indicates a depth of 32 fathoms. Development over this area using 22-meter line spacing revealed a shoal with a least depth of 14 fathoms at latitude 58/22/24N, longitude 135/27/12W. It is recommended that the present-survey depths be charted. Position number 8936/03, 14.1 fathoms at latitude 58°22'24.22"N, longitude 135°27'12.08"W. concur

In the vicinity of latitude 58/22/20N, longitude 135/28/00W, prior survey H-3671 displays depths of 30 to 34 fathoms. Contemporary hydrography over this area (45-meter line spacing) indicates a shoal with a least depth of 24 fathoms. It is recommended that the prior-survey depth be superseded by the depths from survey H-10257. concur Position number 3425/03, 24.2 fathoms at latitude 58°22'18.64"N, longitude 135°27'58.78"W and position number 3947, 24.0 fathoms at latitude 58°22'16.75"N, longitude 135°28'04.45"W.

Due to the denser line spacing of the present survey, a shoal with a least depth of 32 fathoms was found at latitude 58/22/13N, longitude 135/26/51W. The prior survey indicates depths ranging from 56 to 61 fathoms. It is recommended that the present-survey depths be charted. concur Position number 3191, 32.4 fathoms at latitude 58°22'12.86"N, longitude 135°26'50.37"W.

All non-sounding features from survey H-3671 that fall within the limits of survey H-10257 were investigated. All rocks were found by this survey to be reefs of varying sizes (see ~~final field~~ smooth sheet).

3. Survey H-3672 (1914), Scale 1:20,000

Comparison between survey H-10257 and prior survey H-3672 indicates that the present-survey soundings are consistently 1 to 3 fathoms shallower than the prior-survey soundings. The majority of soundings on survey H-3672 fall within 200 meters of comparable soundings on the present survey. Taking into account the different survey methods used in the early 1900's and the possibility of change in bottom topography in nearly 75 years, this comparison is considered good. The following discrepancies were noted:

At latitude 58/18/46N, longitude 135/26/40W, the prior survey displays a depth of 46 fathoms. Hydrography over this area (90-meter line spacing) indicates depths on a steep slope ranging between 24 to 37 fathoms. It is recommended that the prior-survey depth be superseded by the depths from survey H-10257. concur

In the vicinity of latitude 58/23/15N, longitude 135/26/35W, prior survey H-3672 indicates depths ranging from 48 to 50 fathoms. Contemporary hydrography using 90-meter line spacing indicates depths of 55 to 57 fathoms. Extending 0.5 nautical miles to the north, a prior-survey crossline has soundings (52 to 60 fathoms) that are shoaler than the present survey (56 to 66 fathoms). Main-scheme lines from the prior survey, however, agree with the soundings obtained by survey H-10257. It is recommended that the present-survey depths supersede those from H-3672. concur

Three rocks from survey H-3672 in the vicinity of latitude 58/19/05N, longitude 135/26/50W (southeast corner of the Porpoise Islands grouping), were found to be part of a ledge and foul area. See the ~~final field~~ smooth sheet for the correct delineation.

4. Survey H-6855 (1943), Scale 1:5,000

Sounding-by-sounding comparison with survey H-6855 is good. The majority of soundings on the present survey were found to be equal to or 1 to 2 fathoms shoaler than the soundings on survey H-6855.

In the vicinity of latitude 58/24/18N, longitude 135/25/52W, prior survey H-6855 indicates a pier. A diver circle search of 25-meter radius and a compass/visual search of 25 meters were conducted (position numbers 9026-9028); no pier or pier ruins were found. However, several piles were found at the MHWL. These are clearly shown on the final field sheet. It is recommended that piles be charted* as shown on the final field sheet and the pier be deleted from the chart.** Do not concur

* referenced piles plot behind the HWL, therefore not shown S.S.
** concur, delete pier.

Several piles in the vicinity of latitude 58/24/05N, longitude 135/25/50W, were indicated on prior survey H-6855. Diver circle searches of 30-meter radius (position numbers 9024-9025) and a visual search inshore of the kelp line was conducted; no piles or ruins were found. It is recommended that these piles not be charted. Do not concur

Area noted as "foul with ruins and debris", see position number 6498 in volume V.

In the vicinity of latitude 58/23/52N, longitude 135/25/44W, prior survey H-6855 indicates a pier. A diver circle search of 25-meter radius and a compass/visual search of 25 meters were conducted (position numbers 9019-9021); no pier or pier ruins were found (position numbers 9019-9021). Several piles were found at the MHWL. It is recommended that these piles be charted as shown on the ~~final field~~ smooth sheet and the pier be deleted from the chart. South of the pier by 15 to 50 meters, prior survey H-6855 indicates three dolphins. A diver circle search of 30-meter radius was conducted (position number 9023); no dolphins or dolphin remains were found. It is recommended that the dolphin symbol not be charted.

concur
concur
concur

Position number 6488, MHW pile at latitude 58°23'52.13"N, longitude 135°25'41.52"W.

At latitude 58/23/47.5N, longitude 135/25/45W, prior survey H-6855 indicates a single dolphin. A diver compass/visual search of 35 meters was conducted (position number 9022). No dolphin or dolphin remains were found. It is recommended that this dolphin not be charted.

concur

L. Comparison with the Chart

See Evac Report Section 7

Comparisons were made between survey H-10257 and Chart 17302 (October 3, 1981, 14th Edition, 1:80,000) and a 1:10,000-scale enlargement of Chart 17316 (October 30, 1982, 14th Edition, 1:80,000). Comparison with charted soundings and non-sounding features that were derived from prior surveys discussed in Appendix K, Comparison with Prior Surveys, will not be repeated here.

Several dangers to navigation were noted during this survey. A list of these dangers including description, latitude and longitude, and position number may be found in the letter addressed to the Commander (OAN) of the Seventeenth Coast Guard District dated December 11, 1987. A copy of that letter is included in Appendix IX, Dangers to Navigation.

One charted sounding of 13 fathoms at latitude 58/18/22N, longitude 135/23/41W, does not originate from a prior survey discussed previously in this report. [Note: The chart markup identifies the source to be prior survey H-4310 (1923, scale 1:40,000, wire drag). This survey was not supplied to the FAIRWEATHER.] The present survey found a least depth of 11.8 fathoms in the area. Present-survey soundings should be charted.

A comparison with H-4310WD was made, see section 6 of Evac Report.

All charted rocks are within 100 meters of ledges, areas foul with rocks, or reefs. The present survey's delineation and location of these features should supersede the chart. concur

There were no AWOIS items located within survey limits. concur

M. Adequacy ✓

This survey is complete and fully adequate to supersede all prior surveys in common areas. No additional field work is necessary. concur

N. Aids to Navigation ✓

No aids to navigation or landmarks fall within survey limits.

O. Statistics ✓

Vessel	2020	2023	2024	2025	2026	Total
Positions	10	1014	1097	66	882	3069
Nautical Miles	-	90	109	-	75	274
Square Nautical Miles	-	-	-	-	-	15
Bottom Samples	10	-	-	56	-	66
Velocity Casts	4	-	-	-	-	4
Tide Stations	2	-	-	-	-	2
Days of Production (Hydrography only)	-	-	-	-	-	16

No current or magnetic stations were established during this survey.

P. Miscellaneous ✓

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

No anomalous tidal conditions or potentially dangerous currents were observed.

Q. Recommendations ✓

None. concur

R. Automated Data Processing

The following programs were used for data acquisition or processing:

Number	Program	Version Date
RK 112	Range-Range Real Time Plot	04/23/84
RK 116	Range-Azimuth Real Time Plot	03/01/86
RK 201	Grid, Signal, and Lattice Plot	04/18/75
RK 221	Range-Range Off-line Plot	07/25/86
RK 226	Range-Azimuth Off-line Plot	07/25/86
RK 300	Utility Computations	10/21/80
RA 362	330 / 602 Combined	08/20/84
AM 500	Predicted Tide Generator	11/10/72
AM 602	Elinore	12/08/82
	VELTAB	02/01/85

S. Referral to Reports

The following reports will be submitted separately:

Horizontal Control Report	January 1988
Electronic Control Data	December 1987
Corrections to Echo Soundings Data	January 1988
Coast Pilot Report	December 1987

Field Tide Note
Point Adolphus, Alaska
October to November, 1987

Field tide reduction of sounding data for surveys H-10257 and H-10258 was based on predicted tides from Juneau, Alaska (945-2210), and corrected to the survey area. Tide correctors were interpolated by PDP/8e computer using AM 500.

All calculated correctors were based on zone correctors supplied by project instructions and tabulated below.

Survey	Time Correction High Water	Time Correction Low Water	Height Correction Range Ratio
H-10257	0	0	x 0.92
H-10258	0	0	x 0.90

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

A Bristol Bubbler, Model 15 (gage s/n 68A14940) analog tide gage, (range 0 to 30 feet) was installed in support of surveys H-10257 and H-10258. Location and dates of operation are as follows:

Site	Location	Dates of Operation
Point Adolphus, Alaska (945-2516)	58/17.2N 135/46.2W	October 21 to November 9, 1987

Point Adolphus

The tide gage, staff and orifice were installed at Point Adolphus, Icy Strait, Alaska, on October 14; the first staff-to-gage comparison was made on October 21 at 0035 UTC. A three-hour observation on October 21 confirmed consistent gage-to-staff differences. Nitrogen flow to the gage was secured from November 3 at 2315 UTC to November 4 at 1945 UTC, rendering the gage inoperative until a faulty regulator was replaced. Data collection continued until November 9 at 2230 UTC, when the gage, staff, and orifice were removed.

The gage ran well throughout the project. The zero mark on the tide staff corresponded to 6.1 feet on the gage.

Levels

The comparison between opening and closing level runs indicates no significant staff movement.

Zoning Recommendations

None

Field Tide Note
Excursion Inlet, Alaska
October to November, 1987

Field tide reduction of sounding data for surveys H-10257 and H-10258 were based on predicted tides from Juneau, Alaska (945-2210) corrected to the survey area. Tide correctors were interpolated by PDP/8e computer using AM 500.

All calculated correctors were based on zone correctors supplied by project instructions and tabulated below.

Survey	Time Correction High Water	Time Correction Low Water	Height Correction Range Ratio
H-10257	0	0	x 0.92
H-10258	0	0	x 0.90

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

A Bristol Bubbler, Model 15 (gage s/n 73A229) analog tide gage (range 0 to 30 feet) was installed in support of surveys H-10257 and H-10258. Location and dates of operation are as follows:

Site	Location	Dates of Operation
Excursion Inlet, Alaska (945-2447)	58/29/51N 135/29/12W	October 15 to November 10, 1987

Excursion Inlet

The tide gage, staff, and orifice were installed on the eastern shore at the northern end of Excursion Inlet, Alaska, on October 15. A three-hour observation on October 21 confirmed consistent gage-to-staff differences. The gage and staff were removed on November 10. The orifice and tubing were left in place for possible use next field season.

A slight oscillation of the tide curve was noted that became prominent during periods of high winds and low tides. The maximum oscillation observed was 0.5 feet at approximately 1300 UTC on November 2 and 0400 UTC on November 6. At these times winds in Excursion Inlet were in excess of 40 knots. This seiche-like oscillation appears to be due to local conditions at the northern end of Excursion Inlet.

The gage ran well throughout the project. The zero mark on the tide staff corresponded to 8.7 feet on the gage.

Levels

The comparison between opening and closing level runs indicates no significant staff movement.

A discrepancy occurred between opening and closing levels. On October 20, opening levels showed bench mark 2447A to be 3.611 meters above the zero of the tide staff. Closing levels on November 9 showed an elevation of 4.275 meters. Levels run to the mark again on November 10 verified the elevation from the previous day. No movement of bench mark 2447A was observed to have occurred. Apparently a blunder occurred during the first leveling on October 20. Recommend only the closing leveling data be used for benchmark elevation determination.

Zoning Recommendations

None

Approval

Submitted by:

Michael Lemon
Ensign, NOAA

Reviewed by:

Maureen R. Kenny
Maureen R. Kenny
Lieutenant Commander, NOAA
Field Operations Officer

Date:

November 2, 1987

SIGNAL LISTING
OPR-Q186-FA-87
FA-10-6-87 ~~& FA-10-7-87~~
H-10257 ~~H-10250~~

SCRAGGY 1901 1044 581352
240 0 58 10 28805 135 28 16165 250 0009 000000
~~PORPOISE, 1906~~ ~~MT MITCHELL~~
~~260 0 58 19 02373 135 26 59103 139 0010 000000~~
EAGLE 1922 1019 581353
300 0 58 13 56068 135 38 35219 250 0004 000000
DAY 1922 1011 581352
302 0 58 16 12134 135 20 29222 250 0008 000000
#13 DAY SUBPOINT AEROTRIANGULATION CM-8405
303 0 58 19 32884 135 27 12683 254 0001 000000
ICE 1922 1022 581352
304 0 58 22 31763 135 28 55830 250 0008 000000
~~GENE~~ ~~PAGE 23 581352~~
~~306 0 58 27 02886 135 28 38038 250 0004 000000~~
SLIDE 1949 PAGE 55 58135240
308 0 58 25 32723 135 28 27828 250 0009 000000
HELP 1901 1027 581353
310 0 58 20 24592 135 32 04487 250 0006 000000
STEEP 1914 1050 581352
312 0 58 24 20131 135 27 21330 250 0003 000000
ROAD 1949 PAGE 48 58135240
314 0 58 24 09289 135 25 50415 250 0008 000000
~~TIDE 1949~~ ~~PAGE 61 581352~~
~~316 0 58 25 45749 135 27 03425 250 0006 000000~~
CAMP 1914 1005 581352
318 0 58 21 15376 135 24 37688 250 0008 000000
~~TC-21, 1987~~ ~~FAIRWEATHER~~
~~320 0 58 28 43273 135 30 34267 250 0008 000000~~
~~BEACH 1949~~ ~~PAGE 05 581352~~
~~322 0 58 27 49570 135 27 33980 250 0009 000000~~
~~LAG 1949~~ ~~PAGE 36 581352~~
~~324 0 58 29 19427 135 30 00355 139 0005 000000~~
~~QUARTZ 1949~~ ~~PAGE 46 581352~~
~~326 0 58 28 32093 135 27 54750 139 0002 000000~~
~~STREAM 1949~~ ~~PAGE 57 581352~~
~~330 0 58 29 03087 135 28 45944 139 0006 000000~~

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
NOAA Ship FAIRWEATHER
1801 Fairview Avenue East
Seattle, WA 98102-3767

December 11, 1987

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

Dear Sir:

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

The following uncharted dangers to navigation were found by NOAA Ship FAIRWEATHER during hydrographic survey operations (survey H-10257) in the vicinity of the southeast entrance to Icy Passage, Icy Strait, Alaska. All items are on charts 17316 and 17302. Depths are referenced to mean lower low water based on predicted tides. Positions are based on the North American Datum of 1927.

	DEPTH	LATITUDE	LONGITUDE	POSITION
A.	Rock covered 1.0 fm	58/19/06N	135/26/26W	9010
B.	Rock uncovers 6 ft	58/19/29N	135/27/00W	3007
C.	Rock uncovers 5 ft	58/19/36N	135/27/56W	6002
D.	Rock covered 3.7 fm	58/19/53N	135/27/43W	9016
E.	Reef uncovers 3 ft	58/20/14N	135/27/55W	1763 - 1764
F.	Rock awash	58/20/35N	135/28/31W	9013
G.	Rock covered 1.3 fm	58/22/31N	135/28/18W	9012

Shoaling has occurred between latitude 58/18/21N, longitude 135/22/09W, and latitude 58/18/06N, longitude 135/22/05W. The shoal is approximately 100 meters wide in an east-west direction with depths ranging from 1.3 fm to uncovered by 2 ft.

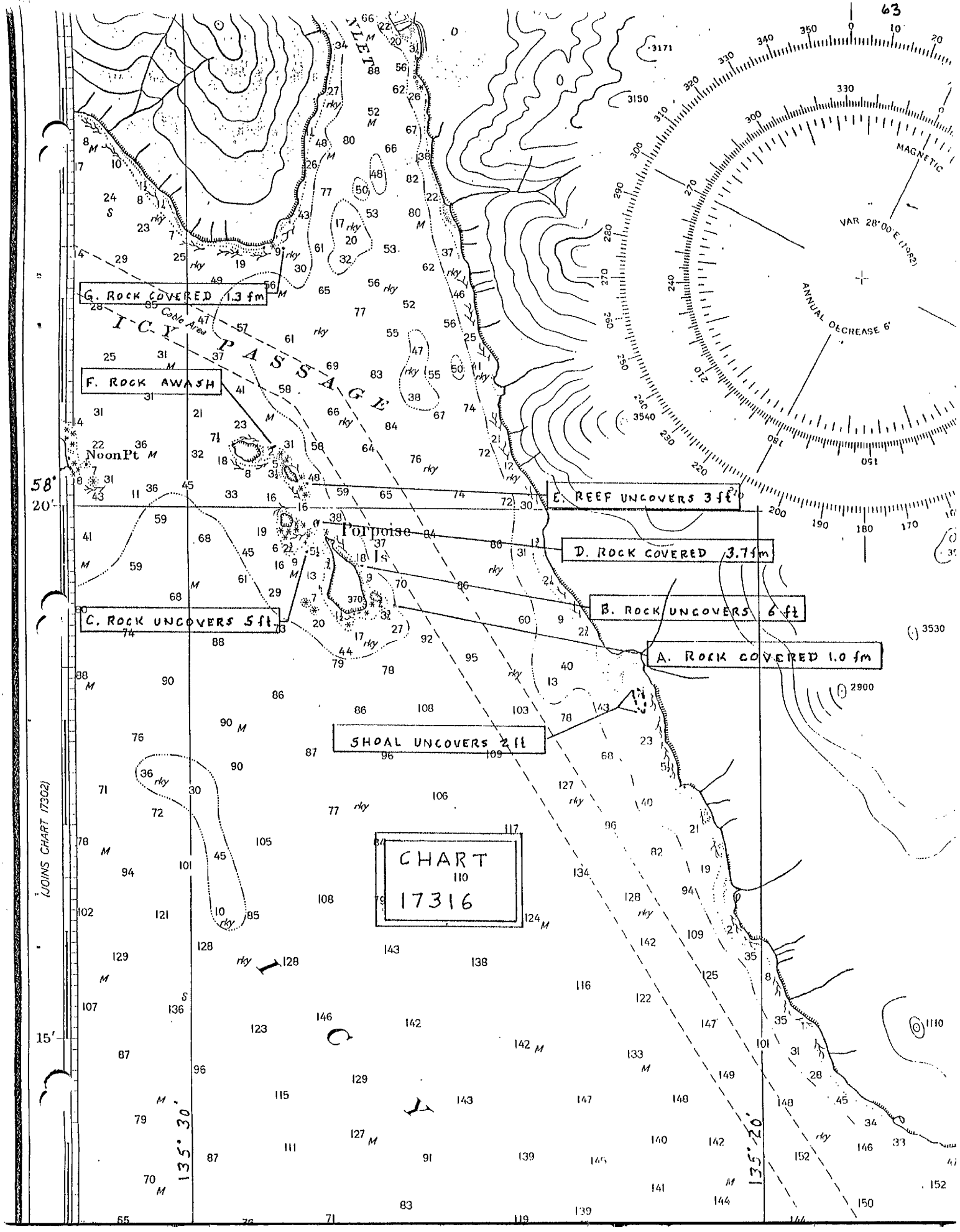
Questions concerning this survey may be directed to the Chief, Nautical Chart Branch, telephone (206) 526-6835.

Sincerely,

Glen R. Schaefer

Glen R. Schaefer
Captain, NOAA
Commanding Officer

bcc: N/CG222 w/chartlet
N/MOP21 w/chartlet
DMAHTC, Code NVS, Washington, D.C. 20315


G. ROCK COVERED 1.3 fm
F. ROCK AWASH
E. REEF UNCOVERS 3 ft
D. ROCK COVERED 3.7 fm
B. ROCK UNCOVERS 6 ft
C. ROCK UNCOVERS 5 ft
A. ROCK COVERED 1.0 fm
SHOAL UNCOVERS 2 ft
I C Y P A S S A G E
Cable Area
Noon Pt
Porpoise Is
CHART 110 17316
(JOINS CHART 17302)
58° 20'
15'
135° 30'
135° 20'
MAGNETIC
VAR 28° 00' E (1982)
ANNUAL DECREASE 6'

The final field sheets and accompanying records have been reviewed for accuracy, completeness, compliance with project instructions, and adherence to required standards and procedures. This survey is complete and requires no additional work. The data are forwarded for final review and processing.

Submitted by:

David O. Neander

David O. Neander
Ensign, NOAA

Reviewed by:

Maureen R. Kenny

Maureen R. Kenny
Lieutenant Commander, NOAA
Field Operations Officer

Approved by:

Glen R. Schaefer

Glen R. Schaefer
Captain, NOAA 11 Dec 87
Commanding Officer

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: March 1, 1988

MARINE CENTER: Pacific

OPR: 0186

HYDROGRAPHIC SHEET: H-10257

LOCALITY: Icy Strait, Alaska, Southeast Entrance to Icy Passage

TIME PERIOD: October 21 - November 9, 1987

TIDE STATION(S) USED: 945-2447 Excursion Inlet, AK

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.21 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 13.6 ft.

REMARKS: RECOMMENDED ZONING

1. Zone Direct

CHIEF, TIDAL DATUM QUALITY
ASSURANCE SECTION

NOAA FORM 76-155
(11-72)

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

SURVEY NUMBER

H-10257

GEOGRAPHIC NAMES

Name on Survey	A ON CHART NO. 17300, 17302, 17316	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
ALASKA (TITLE)	X									1
EXCURSION INLET	X									2
ICY PASSAGE (TITLE)	X									3
ICY STRAIT (TITLE)	X									4
PORPOISE ISLANDS	X									5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
				Approved:						17
										18
				Charles E. Harrington						19
				Chief Geographer - N/CG2x5						20
				MAY 17 1988						21
										22
										23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102-3767

January 26, 1988 N/MOP21x2/JM

TO: Commanding Officer
NOAA Ship FAIRWEATHER

FROM: N/MOP - Robert L. Sandquist

SUBJECT: Preprocessing Examination of H-10257 - Alaska,
Icy Strait, SE Entrance to Icy Passage

Hydrographic survey H-10257 has been reviewed in accordance with Hydrographic Survey Guideline No. 15, and the Preprocessing Examination Critique for this survey is attached. Survey H-10257 is accepted for Pacific Marine Center processing.

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

Attachments

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

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Pacific Marine Center
Nautical Chart Branch
7600 Sand Point Way NE
Seattle, Washington 98115-00700

January 21, 1988 N/MOP21x2/JM

TO: N/MOP - Robert L. Sandquist

FROM: N/MOP21 - Thomas W. Richards

SUBJECT: Preprocessing Examination for H-10257

I. SURVEY INFORMATION

A. Field No. FA-10-6-87 Registry No. H-10257

B. State: Alaska

General Locality: Icy Strait

Sublocality: SE Entrance to Icy Passage

C. Project Instructions: OPR-0186-FA-87

Original dated: July 29, 1986

Change No. 1 dated: August 4, 1986
No. 2 dated: December 24, 1986
No. 3 dated: February 2, 1987
No. 4 dated: March 17, 1987
No. 5 dated: April 13, 1987
No. 6 dated: April 29, 1987
No. 7 dated: July 28, 1987
No. 8 dated: October 5, 1987

D. Dates:

Field Work Commenced: October 21, 1987
Field Work Completed: November 10, 1987

plus 6 weeks: December 22, 1987

Data received at Marine Center: December 14, 1987

plus 2 months: February 12, 1988

Examination critique transmitted to field January 26, 1988

Target for completion of Marine Center processing July 26, 1988

II. PREPROCESSING EXAMINATION CRITIQUE

Hydrographic survey H-10257 was performed by personnel of the NOAA Ship FAIRWEATHER. Captain Glen R. Schaefer was the Commanding Officer. The following personnel supervised portions of the data acquisition: Lieutenant Commander Kenny, Lieutenant Commander Mason, Lieutenant Ruiz, Lieutenant (jg) Lynch, and Ensigns Bernard, Nodine, Lemon, Birk-Risheim, Neander.

In accordance with the Preprocessing Examination System set forth in Hydrographic Survey Guideline (HSG) No. 15, Section III, the following items are brought to your attention:

A. Danger to Navigation Report:

FAIRWEATHER reported eight dangers to navigation within the limits of H-10257. In referring to Charts 17302 and 17316, no mention was made of the chart editions or dates, either in the text of the letter or on the accompanying chartlet (HSG 63).

During the preprocessing examination three additional dangers were found and reported (see Attachments A, B).

B. Compliance with Instructions:

Survey H-10257 complies with the Project Instructions. FAIRWEATHER personnel are commended for a well-planned and well-executed survey.

There were no AWOIS items within the limits of H-10257.

C. Final Field Sheets:

The final field sheets for Survey H-10257 were neat and legible, with the following exceptions:

Between the eastern and western final field sheets, at latitude 58/21/04N, longitude 135/24/36W, the depth curves do not join.

On the eastern final field sheet, the lettering of the beach descriptions are upside down.

There is no requirement to plot X and Y grids on final field sheet overlays. These grids are not used by office processors.

D. Descriptive Report:

In Section A., Project, the hydrographer fails to list Changes to the Project Instructions, numbers 1, 4, and 5 (PMC OPORDER, fig. 3.5-1; HM, Section 5.3).

In Section F., Control Stations, the hydrographer states that station #13 DAY SUBPOINT, an aerotriangulation station used as an electronic control station, was verified by the observation of an angle and a distance from a Third-Order, Class I station. The records for these verification observations were not submitted with the hydrographic data package. Position computations and field notes for work of less than Third-Order accuracy shall

be retained by the field party for inclusion with the transmitted hydrographic records (HM, Section 3.1.3.1., pp. 3-7).

In Section N., Aids to Navigation, no mention was made of the charted cable area that runs through the survey. The charted cable area limits are not shown on the final field sheet (PMC OPORDER, fig. 3.5-1, pp. 10; HSG 29).

E. Echograms:

There are no apparent problems with the interpretation or annotations on the echograms.

F. Sounding Volumes and/or Raw Data Printouts:

No major problems were found within the sounding volumes or raw data printouts for this survey. In general, records and annotations were well kept.

A cursory examination of detached positions found that check rates are routinely observed. Check fix computations appear clear and orderly.

L. Automated Data Check:

FAIRWEATHER personnel are commended on their excellent job of data tape preparation and packaging. No significant problems occurred during the spooling of the survey.

N. Survey Acceptance:

The preprocessing examination for H-10257 was conducted under the time constraints of HSG 15. All comments contained herein are based on a spot check of the data, and it is possible that some problem areas have not been addressed.

Except for the items noted in the critique, survey H-10257 is in compliance with the Project Instructions. I recommend that H-10257 be accepted for Nautical Chart Branch processing.

Prepared by:

John A. Miller

John A. Miller

1801 Fairview Avenue East
Seattle, Washington 98102-3767

N/MOP21x2/JM

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

Dear Sir:

During the office review of hydrographic survey H-10257, SE Entrance to Icy Passage, Icy Strait, Alaska, a change was noted (see below) which affects the following charts:

17302 (14th ed., 10/03/81; datum: NAD 27)
17316 (14th ed., 10/30/82; datum: NAD 27)

Questions concerning the survey may be directed to Cdr. Thomas W. Richards, Chief, Nautical Chart Branch, telephone (206) 526-6835.

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

A. "An uncharted rock, covered by 0.6 fathoms (MLLW based on predicted tides), is at latitude 58/19/36N, longitude 135/28/16W."

B. "An uncharted rock, covered by 2.4 fathoms (MLLW based on predicted tides), is at latitude 58/20/16N, longitude 135/28/33W."

C. "An uncharted rock, covered by 1.3 fathoms (MLLW based on predicted tides), is at latitude 58/20/20N, longitude 135/28/27W."

Sincerely,

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

Enclosure
bc: N/CG222
✓ JTG

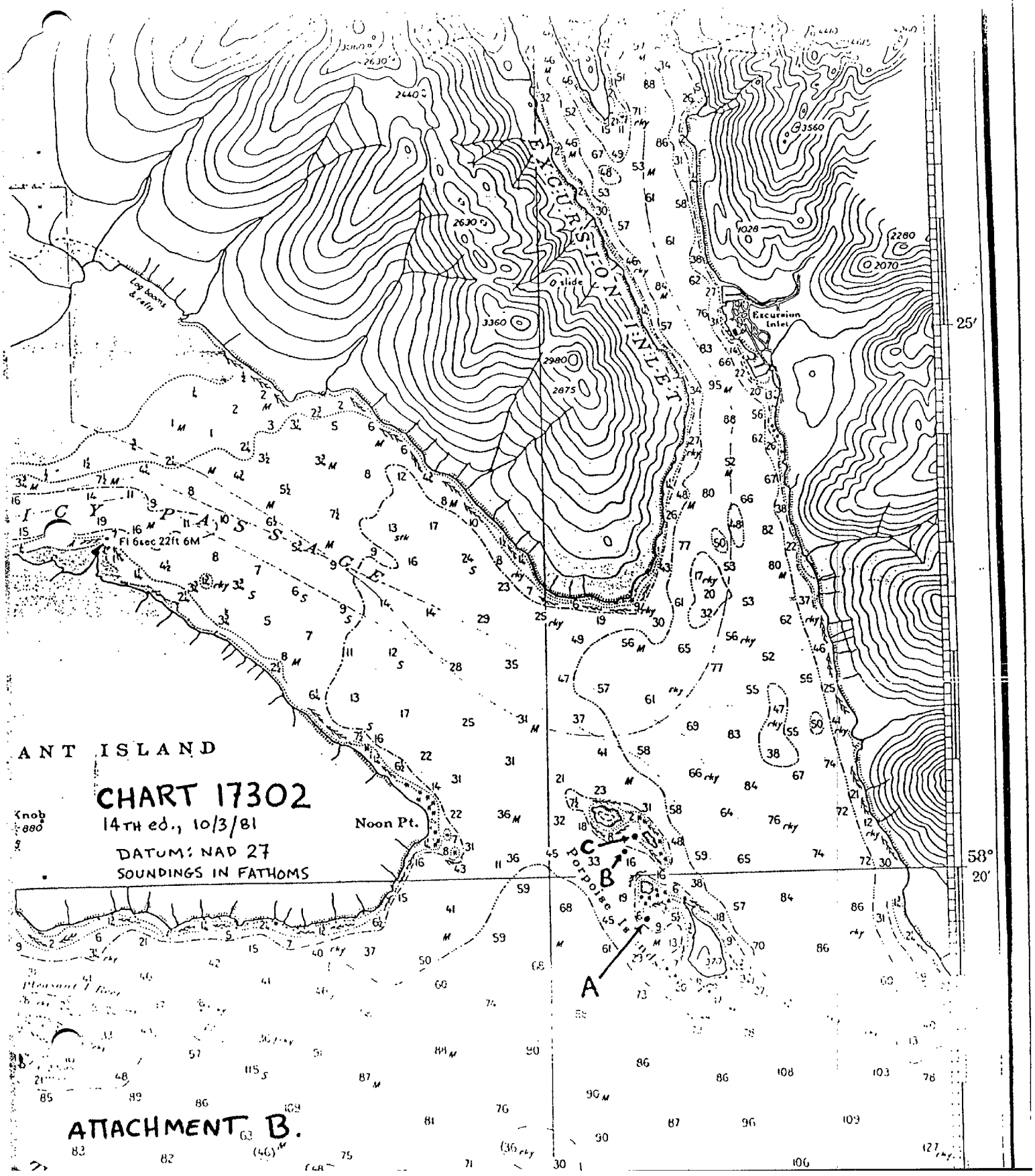
CODE	SURNAME	DATE	CODE	SURNAME	DATE
N/MOP2	Richards	1/14	N/MOP	Sandquist	1/14
N/MOP2	Mordock	1/13			
N/MOPx1	Carpenter	1/13			

NOAA FORM 61-2

FILE COPY

ATTACHMENT A.

* U.S. GPO: 1985-567-601


EXCURSION INLET
ICY PASSAGE
Fl 6sec 22ft 6M
Log booms & refts
slide
Excursion Inlet
Porpoise Is
A
B
C
D
25'
58° 20'
ANT ISLAND
CHART 17302
14TH ed., 10/3/81
DATUM: NAD 27
SOUNDINGS IN FATHOMS
Noon Pt.
Knob 880
ATTACHMENT B.

NOAA FORM 77-27(H)
(9-83)

U.S. DEPARTMENT OF COMMERCE

HYDROGRAPHIC SURVEY STATISTICS

REGISTRY NUMBER: H-10257

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	SMOOTH OVERLAYS: POS., ARC, EXCESS	8
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	6

DESCRIPTION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS	
ACCORDION FILES	2					
ENVELOPES						
VOLUMES	5					
CAHIERS						
BOXES						

SHORELINE DATA

SHORELINE MAPS (List): TP-01309, TP-01310

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List):

NAUTICAL CHARTS (List):

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	VERIFICATION	*EVALUATION*	*TOTALS*
POSITIONS ON SHEET			3069
POSITIONS REVISED			
SOUNDINGS REVISED			
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	*EVALUATION*	*TOTALS*
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	81		81
VERIFICATION OF SOUNDINGS	99		99
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	32		32
COMPARISON WITH PRIOR SURVEYS AND CHARTS		10	10
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		31	31
GEOGRAPHIC NAMES			
OTHER* Digitization			
*USE OTHER SIDE OF FORM FOR REMARKS — TOTALS	212	41	

Pre-processing Examination by LT J. Miller	*Beginning Date* 12/14/87	*Ending Date* 1/26/88
Verification of Field Data by B. Mihailov, J. Miller, C.R. Davies	*Time (Hours)*	*Ending Date* 7/18/88
Verification Check by B.A. Olmstead, S. Otsubo	*Time (Hours)* 38	*Ending Date* 7/27/88
Evaluation and Analysis by C.R. Davies	*Time (Hours)* 41	*Ending Date* 9/1/88
Inspection by D. Hill	*Time (Hours)* 6	*Ending Date* 9/02/88

☆ U.S. GOVT. PRINTING OFFICE 1983: 764-006/6061

PACIFIC MARINE CENTER
Evaluation Report
H-10257

1. INTRODUCTION

Survey H-10257 is a basic hydrographic survey accomplished by the NOAA Ship FAIRWEATHER under the following Project Instructions.

OPR-0186-FA-87, dated July 29, 1986

CHANGE No. 1, dated August 4, 1986
CHANGE No. 2, dated December 24, 1986
CHANGE No. 3, dated February 2, 1987
CHANGE No. 6, dated April 29, 1987
CHANGE No. 7, dated July 28, 1987
CHANGE No. 8, dated October 5, 1987

This survey is in Icy Strait, Alaska and covers the vicinity of the Porpoise Islands and the entrances to Icy Passage and Excursion Inlet. The surveyed area extends from latitude 58°24'30"N south to latitude 58°18'00"N and from longitude 135°21'30"W west to longitude 135°29'30"W. The shoreline of the islands and mainland is characterized by ledges, reefs and isolated off lying rocks with stretches of gravel, stone and boulder beaches. The bottom consists of mud, sand and gravel. Depths range from 0 fathoms along the shoreline to 108 fathoms in Icy Strait.

Predicted tides for Juneau, Alaska, were used for the reduction of soundings during field processing. Approved hourly heights zoned from Excursion Inlet, gage 945-2447, were used during office processing.

The field sheet parameters have been revised to center the hydrography on the smooth sheet and to change the projection to polyconic. The TRA, sound velocity and electronic control correctors are adequate. An accompanying computer printout contains the revised data.

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

2. CONTROL AND SHORELINE

Sections F and G of the hydrographer's report and the Horizontal and Electronic Control Reports for OPR-0186-FA-87 contain adequate discussions of horizontal control and hydrographic positioning.

Positions of horizontal control stations used during hydrography are published and aerotriangulated values based on NAD 27. These values were used during office processing for the computation of positions. The smooth sheet and accompanying overlays are annotated with NAD 83 adjustment ticks based on values determined by N/CG121. Geographic positions based on NAD 83

may be plotted on the smooth sheet utilizing the NAD 27 projection by applying the following corrections:

latitude: 1.212 seconds (37.5 meters)
longitude: -6.514 seconds (-106.0 meters)

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

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

The following shoreline maps apply to this survey.

	Photo Date	Class
TP-01309	June, July 1985	III
TP-01310	May, June, July 1985	III

A shoreline change was observed at latitude 58°20'17"N, longitude 135°28'15"W and is drawn in dashed red on the smooth sheet. This change was transferred from the final field sheet without supporting positional information. Although this revision is portrayed without supporting positional information, it is considered adequate to supersede the common photogrammetrically delineated shoreline.

A descriptive note "foul with ruins and debris" was added to survey H-10257 at latitude 58°24'06"N, longitude 135°25'09"W from comments found in the raw data, see position 6498, volume V.

3. HYDROGRAPHY

Hydrography is adequate to:

a. delineate the bottom configuration, determine least depths, and draw the standard depth curves;

b. reveal there are no significant discrepancies or anomalies requiring further investigation; and

c. show the survey was properly controlled and soundings are correctly plotted.

4. CONDITION OF SURVEY

The hydrographic records and reports received for processing are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through Change No. 3; the Hydrographic Survey Guidelines; and the PMC OPORDER, except as noted in the attached copy of the Preprocessing Examination, dated January 26, 1988.

5. JUNCTIONS

Survey H-10257 junctions with the following surveys.

Survey	Year	Scale	Area
H-10231	1986	1:20,000	south
H-10258	1987	1:10,000	north
H-10268	1988	1:10,000	west

The junction with H-10231 has been effected.

The junction with surveys H-10258 and H-10268 have not been formally completed since the surveys were recently forwarded from the field for office processing and approved tides were not available at the time of comparison. No significant discrepancies were noted in the junction areas of H-10258 and H-10268 final field sheets and survey H-10257.

6. COMPARISON WITH PRIOR SURVEYS

H-2562 (1901) 1:40,000
H-3671 (1914) 1:40,000
H-3672 (1914) 1:20,000
H-6855 (1943) 1:5,000

Comparisons with the prior surveys are discussed satisfactorily in section K of the hydrographer's report.

Survey H-10257 is adequate to supersede the prior surveys within the common area.

H-4310WD (1923) 1:40,000

A wire-drag sounding, 80 feet (13.3 fathoms) at latitude 58°18'24"N, longitude 135°23'40"W, originates with prior survey H-4310WD. A least depth of 11.8 fathoms was found during the present survey at latitude 58°18'22.13"N, longitude 135°23'39.83"W and supersedes the prior depth.

There are no conflicts between the present survey depths and the effective depths of wire-drag survey H-4310.

There are no AWOIS items originating with the prior surveys.

7. COMPARISON WITH CHART

Chart 17302, 14th Edition, dated October 3, 1981; scale 1:80,000.
Chart 17316, 15th Edition, dated August 29, 1987; scale 1:80,000.

a. Hydrography

Charted information originates with the prior surveys and requires no further discussion.

The cable area that is charted in the survey area was not specifically investigated and should be retained as charted.

Survey H-10257 is adequate to supersede charted hydrography within the common area.

b. AWOIS

There are no AWOIS items originating from miscellaneous sources.

c. Controlling Depths

There are no charted channels with controlling depths within the area of this survey.

d. Aids to Navigation

There are no fixed or floating aids located within the area of this survey.

e. Geographic Names

Names appearing on the smooth sheet and in the survey title have been approved by the Chief Geographer.

f. Dangers to Navigation

The hydrographer reported seven rocks and shoaling to the USCG, DMAHTC and N/CG222. Three additional dangers, rocks, were found during office processing and were reported to the USCG and DMA. Copies of the messages/reports are attached.

8. COMPLIANCE WITH INSTRUCTIONS

Survey H-10257 adequately complies with the Project Instructions.

9. ADDITIONAL FIELD WORK

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

Charles R Davies

C.R. Davies
Cartographer

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

Dennis Hill

Dennis Hill
Chief, Hydrographic Section

APPROVALS

I have reviewed the smooth sheet, accompanying data, and reports associated with hydrographic survey H-10257. This survey meets or exceeds Charting and Geodetic Services' standards for products in support of nautical charting.

For Dennis Hill 9-8-88
Chief, Nautical Chart Branch (Date)

CLEARANCE: SIGNATURE AND DATE:

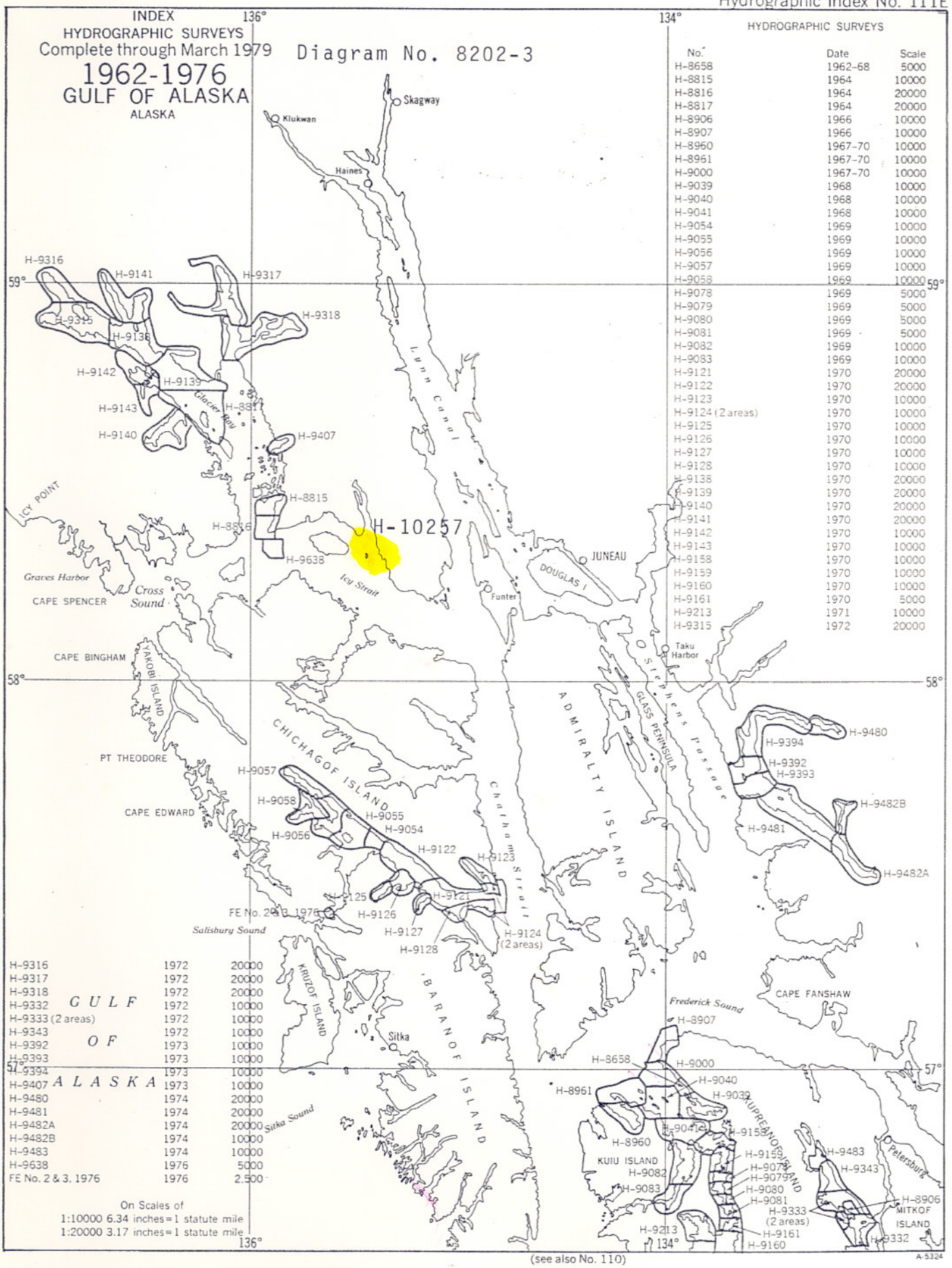
N/MOP2:LWMordock [signature] 9-8-88

After review of the smooth sheet and accompanying reports, I hereby certify this survey is accurate, complete, and meets appropriate standards.

Robert L. Saufler 9-8-88
Director, Pacific Marine Center (Date)

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

Hydrographic Index No. 111E



HYDROGRAPHIC SURVEYS

No.	Date	Scale
H-8658	1962-68	5000
H-8815	1964	10000
H-8816	1964	20000
H-8817	1964	20000
H-8906	1966	10000
H-8907	1966	10000
H-8960	1967-70	10000
H-8961	1967-70	10000
H-9000	1967-70	10000
H-9039	1968	10000
H-9040	1968	10000
H-9041	1968	10000
H-9054	1969	10000
H-9055	1969	10000
H-9056	1969	10000
H-9057	1969	10000
H-9058	1969	10000
H-9078	1969	5000
H-9079	1969	5000
H-9080	1969	5000
H-9081	1969	5000
H-9082	1969	10000
H-9083	1969	10000
H-9121	1970	20000
H-9122	1970	20000
H-9123	1970	10000
H-9124 (2 areas)	1970	10000
H-9125	1970	10000
H-9126	1970	10000
H-9127	1970	10000
H-9128	1970	10000
H-9138	1970	20000
H-9139	1970	20000
H-9140	1970	20000
H-9141	1970	20000
H-9142	1970	10000
H-9143	1970	10000
H-9158	1970	10000
H-9159	1970	10000
H-9160	1970	10000
H-9161	1970	5000
H-9213	1971	10000
H-9315	1972	20000

GULF OF ALASKA

H-9316	1972	20000
H-9317	1972	20000
H-9318	1972	20000
H-9332	1972	10000
H-9333 (2 areas)	1972	10000
H-9343	1972	10000
H-9392	1973	10000
H-9393	1973	10000
H-9394	1973	10000
H-9407	1973	10000
H-9480	1974	20000
H-9481	1974	20000
H-9482A	1974	20000
H-9482B	1974	10000
H-9483	1974	10000
H-9638	1976	5000
FE No. 2 & 3, 1976	1976	2,500

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

(see also No. 110)

A-5324

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

EXAMINED FOR NM
GDBU 3/15/90 RW
3-13-90 JB

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10257

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

Received for N/M 3/16/90
KBK

CHART	DATE	CARTOGRAPHER	REMARKS
17302	10-21-88	Ralph B. Ross RBR	(Full) Part Before (After) Marine Center Approval Signed Via
			Drawing No. 16 app'd in full
17316	12/11/89	STANLEY OTSUBO	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. FULL APPLICATION SDGS
~~17302~~	~~12/5/89~~	~~S H. OTSUBO~~	~~Full Part Before After Marine Center Approval Signed Via~~
			Drawing No. FULL APPLICATION OF SDGS reapplication thru 17316 accepted to prevent confusion EdM 5-30-91 Records Applyd ~~EdM 5-91~~
17300	2-15-90	ALMACEN	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 28 thru 17316
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
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			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.

appl to Std 9-26-88 RBR